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# PRODUCT CATALOGUE

## PROFESSIONAL MANUFACTURER OF INDUSTRIAL CONTROL COMPONENTS

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# RELAY

## SERIES

- Time relay series A03
- Counting relay/Meter counter/  
Tachometer/Line speed meter A09
- Liquid level relay series A13
- Time control switch series A14
- Miniature electromagnetic relay  
and socket series A16
- Three-phase power regulator series A23
- Solid-state relay series A25
- Relay module series A29





## HHS Time relay series

HHS time relay is suitable for use as a delay element in control circuit with frequency of AC 50/60Hz, rated voltage of 380V and below or DC voltage of 24V, and it's used to connect or disconnect the circuit according to the preset time.

This series of relay not only has the characteristics of high delay accuracy and wide delay range, but also has two display modes: increasing and decreasing; there are multiple work modes including power-on delay, power-off delay, cycle delay, disconnection delay, star-delta start delay, release delay, etc. With great variety and novel appearance design, it is widely used in industrial automation control circuit.

This series of relay complies with GB/T14048.5 and JB/T10047 standards, and the products have passed CCC self-declaration.

### Precautions For time relay operation

- A. Please confirm the supply voltage level of the product before use
- B. When used in strong electric and magnetic field environments, please use shielded wires for reset and pause lines, and keep them as short as possible.
- C. Reset, pause and control terminals are all switch inputs. Please do not input voltage, current or other signals externally.

### Model description



**HHS1(JS14S)**  
Time relay



|                     |                                                                           |
|---------------------|---------------------------------------------------------------------------|
| Supply voltage      | DC24V; AC24V, AC220V, AC380V                                              |
| Time delay range    | 9.9s 99s 99m 99.9s 9m59s<br>999s 999m 99.99s 9h59m<br>9999s 99m59s 99h59m |
| Repeat error        | ≤ 1%                                                                      |
| Operation mode      | Power-on delay                                                            |
| Timing method       | Positive count, digital display                                           |
| Contact form        | 2 sets of delay with reset and pause function                             |
| Contact capacity    | 3A AC250V(resistive)                                                      |
| Dimension           | 52×104×114mm                                                              |
| Hole size           | 45×77mm                                                                   |
| Installation method | Panel type                                                                |

**HHS1(JS14S) Improved**  
Time relay



|                     |                              |
|---------------------|------------------------------|
| Supply voltage      | DC24V; AC24V, AC220V, AC380V |
| Time delay range    | 0.01s-99h99m h-min-s setting |
| Repeat error        | ≤ 1%                         |
| Operation mode      | Power-on delay               |
| Timing method       | Countdown, digital display   |
| Contact form        | 2 sets of delay (8-pin)      |
| Contact capacity    | 3A AC250V(resistive)         |
| Dimension           | 52×104×99mm                  |
| Hole size           | 45×77mm                      |
| Installation method | Panel type                   |

**HHS1-1(DH14S)**  
Time relay



|                     |                                               |
|---------------------|-----------------------------------------------|
| Supply voltage      | DC24V; AC24V, AC220V, AC380V                  |
| Time delay range    | 0.01s-99h99m h-min-s setting                  |
| Repeat error        | ≤ 1%                                          |
| Operation mode      | Power-on delay                                |
| Timing method       | Positive count, digital display               |
| Contact form        | 2 sets of delay with reset and pause function |
| Contact capacity    | 3A AC250V(resistive)                          |
| Dimension           | 52×104×114mm                                  |
| Hole size           | 45×77mm                                       |
| Installation method | Panel type                                    |

**HHS1-1(DH14S) Improved**  
Time relay



|                     |                                               |
|---------------------|-----------------------------------------------|
| Supply voltage      | DC24V; AC24V, AC220V, AC380V                  |
| Time delay range    | 0.01s-99h99m h-min-s setting                  |
| Repeat error        | ≤ 1%                                          |
| Operation mode      | Power-on delay                                |
| Timing method       | Countdown, digital display                    |
| Contact form        | 2 sets of delay with reset and pause (11-pin) |
| Contact capacity    | 3A AC250V(resistive)                          |
| Dimension           | 52×104×110mm                                  |
| Hole size           | 45×77mm                                       |
| Installation method | Panel type                                    |

**HHS2(DH48L)**  
Time counter



|                     |                                                         |
|---------------------|---------------------------------------------------------|
| Supply voltage      | DC24V; AC24V, AC220V, AC380V                            |
| Counting range      | 999m59s 999h59m<br>9999.9m 9999.9h Optional             |
| Display mode        | 5-digit display, with timing                            |
| Power-off memory    | 10 years                                                |
| Control mode        | Equipped with startup control terminal                  |
| Reset method        | External terminal short-circuited or panel button reset |
| Dimension           | 48×48×118mm                                             |
| Hole size           | 45×45mm                                                 |
| Installation method | Panel type, screw mounting type, 35mm DIN rail type     |

**HHS3-M(AH2-Y)**  
Time relay



|                     |                                                                                                 |
|---------------------|-------------------------------------------------------------------------------------------------|
| Supply voltage      | DC24V; AC24V, AC220V, AC380V                                                                    |
| Time delay range    | 1s, 5s, 10s, 30s, 60s, 5min<br>10min, 30min, 60min, 5h, 10h                                     |
| Repeat error        | ≤ 1%                                                                                            |
| Operation mode      | HHS3-M: Power-on delay<br>HHS3G-M: Release delay<br>HHS3C-M: Power-on delay with instant action |
| Contact form        | HHS3-M, HHS3G-M<br>HHS3C-M: 1 set of delay contact and 1 set of instant contact                 |
| Contact capacity    | 3A AC250V(resistive)                                                                            |
| Dimension           | 57×87×92mm                                                                                      |
| Hole size           | 51×63mm 75.5-2×Φ4.5mm                                                                           |
| Installation method | Panel type                                                                                      |

**HHS2-1(DHC3L)**  
Time counter



|                     |                                                                                       |
|---------------------|---------------------------------------------------------------------------------------|
| Supply voltage      | Self-contained power supply (with built-in lithium battery)                           |
| Counting range      | 99999.9h 99h59m59s<br>9999h59m 9999d23h<br>999999h59m 9999h59m59s                     |
| Display mode        | 6/8-digit LCD display, with timing                                                    |
| Power-off memory    | 6 years                                                                               |
| Control mode        | 1, 2 terminals connected for timing<br>3, 4 terminals short-circuited or button reset |
| Reset method        | 3, 4 terminals short-circuited or button reset                                        |
| Dimension           | 48×28×55mm                                                                            |
| Hole size           | 45×22mm                                                                               |
| Installation method | Panel type                                                                            |

**HHS3(AH2-N)**  
Time relay



|                     |                                                                                           |
|---------------------|-------------------------------------------------------------------------------------------|
| Supply voltage      | DC24V; AC24V, AC220V, AC380V                                                              |
| Time delay range    | 1s, 5s, 10s, 30s, 60s, 5min<br>10min, 30min, 60min, 5h, 10h                               |
| Repeat error        | ≤ 1%                                                                                      |
| Operation mode      | HHS3: Power-on delay<br>HHS3G: Release delay<br>HHS3C: Power-on delay with instant action |
| Contact form        | HHS3, HHS3G: 2 sets of delay<br>HHS3C: 1 set of delay with 1 set of instant action        |
| Contact capacity    | 3A AC250V(resistive)                                                                      |
| Dimension           | 50×78×92mm                                                                                |
| Hole size           | 75.5-2×Φ4.5mm                                                                             |
| Installation method | Screw mounting type                                                                       |

**HHS2-2(DHC6J-L)**  
Time counter  
Replace for HHS2-3



|                     |                                                         |
|---------------------|---------------------------------------------------------|
| Supply voltage      | DC24V; AC24V, AC220V, AC380V                            |
| Counting range      | 9999h59m 99999.9m<br>99999.9h 9999m59s                  |
| Display mode        | 6-digit display, with timing                            |
| Power-off memory    | 10 years                                                |
| Control mode        | 5, 8 terminals connected for timing                     |
| Reset method        | External terminal short-circuited or panel button reset |
| Dimension           | 96×48×84mm                                              |
| Hole size           | 92×44mm                                                 |
| Installation method | Panel type                                              |

**HHS4P**  
Time relay  
Replace for JS14P series



|                     |                                                           |
|---------------------|-----------------------------------------------------------|
| Supply voltage      | DC24V; AC24V, AC220V, AC380V                              |
| Time delay range    | 0.99s 9.9s 99s 9.9m 99m 99h<br>99.9s 999s 99.9m 999m 999h |
| Repeat error        | ≤ 1%                                                      |
| Operation mode      | Power-on delay                                            |
| Contact form        | 2 sets of delay contacts                                  |
| Contact capacity    | 3A AC250V(resistive)                                      |
| Dimension           | 45×82×90mm                                                |
| Hole size           | 56-2×Φ4.5mm                                               |
| Installation method | Screw mounting type or 35mm DIN rail type                 |

**HHS2-3(CSY-5E)**  
Time counter



|                     |                                                             |
|---------------------|-------------------------------------------------------------|
| Supply voltage      | DC24V; AC24V, AC220V, AC380V                                |
| Counting range      | 999.999s 9999.99s<br>99999.9s 999999s<br>9999m59s 99h59m59s |
| Display mode        | 6-digit display                                             |
| Power-off memory    | None                                                        |
| Operation mode      | Automatic reset and cumulative timing for selection         |
| Control mode        | Level (magnetic ring) and contact timing                    |
| Reset method        | External terminal short-circuited or panel button reset     |
| Dimension           | 96×48×84mm                                                  |
| Hole size           | 92×44mm                                                     |
| Installation method | Panel type                                                  |

**HHS4PF**  
Time relay



|                     |                                            |
|---------------------|--------------------------------------------|
| Supply voltage      | DC24V; AC24V, AC220V, AC380V               |
| Time delay range    | 9.9s 99s 99.9s 199s                        |
| Repeat error        | ≤ 5%                                       |
| Operation mode      | Power-off delay                            |
| Contact form        | 2 sets of delay contacts                   |
| Contact capacity    | 3A AC250V(resistive)                       |
| Dimension           | 45×82×90mm                                 |
| Hole size           | 56-2×Φ4.5mm                                |
| Installation method | Screw mounting type and 35mm DIN rail type |

RELAY SERIES  
 SWITCH SERIES  
 ELECTRIC DRIVE AND CONTROL SERIES  
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 AUTOMATION INDUSTRY APPLICATION  
 POWER SUPPLY AND OTHERS

# RELAY SERIES

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**HHS4(JS14A, JS20)**  
Time relay



|                     |                                                                                                              |
|---------------------|--------------------------------------------------------------------------------------------------------------|
| Supply voltage      | DC24V; AC24V, AC220V, AC380V                                                                                 |
| Time delay range    | 0.5s-3600s                                                                                                   |
| Repeat error        | ≤ 1%                                                                                                         |
| Operation mode      | HHS4(JS14A, JS20):Power-on delay with instant action<br>HHS4C(JS20/03):Power-on delay<br>HHS4G:Release delay |
| Contact form        | HHS4,HHS4G: 2 sets of delay<br>HHS4C:1 set of delay contact and 1 set of instant contact                     |
| Contact capacity    | 3A AC250V(resistive)                                                                                         |
| Dimension           | 45×82×83mm                                                                                                   |
| Hole size           | 56-2×Φ4.5mm                                                                                                  |
| Installation method | Screw mounting type or 35mm DIN rail type                                                                    |

**HHS5R(ST3PR)**  
Time relay  
Replace for JSZ3R



|                     |                                                                                                                                |
|---------------------|--------------------------------------------------------------------------------------------------------------------------------|
| Supply voltage      | DC24V; AC24V, AC220V, AC380V                                                                                                   |
| Time delay range    | 6s/60s 10s/10min<br>30s/30min 60s/60min                                                                                        |
| Repeat error        | ≤ 1%                                                                                                                           |
| Operation mode      | Cycle delay                                                                                                                    |
| Contact form        | 1 set of delay contacts                                                                                                        |
| Contact capacity    | 3A AC250V(resistive)                                                                                                           |
| Dimension           | 40.5×54×86mm                                                                                                                   |
| Installation method | By combining different sockets and accessories, screw mounting type, panel type and 35mm DIN rail installation can be achieved |

**HHS5, C, G(ST3PA, C, G)**  
Time relay



|                     |                                                                                                                                |
|---------------------|--------------------------------------------------------------------------------------------------------------------------------|
| Supply voltage      | DC24V; AC24V, AC220V, AC380V                                                                                                   |
| Time delay range    | 0.05s-24h classified into 7 specifications: -A, -B, -C, -D, -E, -F, -G                                                         |
| Repeat error        | ≤ 1%                                                                                                                           |
| Operation mode      | HHS5(ST3PA):Power-on delay<br>HHS5C(ST3PC):Power-on delay with instant action<br>HHS5G(ST3PG):Release delay                    |
| Contact form        | HHS5, HHS5G: 2 sets of delay<br>HHS5C: 1 set of delay contact and 1 set of instant contact                                     |
| Contact capacity    | 3A AC250V(resistive)                                                                                                           |
| Dimension           | 40.5×54×84mm                                                                                                                   |
| Installation method | By combining different sockets and accessories, screw mounting type, panel type and 35mm DIN rail installation can be achieved |

**HHS5P**  
Time relay



|                     |                                                                                                                                |
|---------------------|--------------------------------------------------------------------------------------------------------------------------------|
| Supply voltage      | DC24V; AC24V, AC220V, AC380V                                                                                                   |
| Time delay range    | 0.01s-0.99s, 0.01s-9.99s,<br>0.1s-9.9s, 0.1s-99.9s,<br>1s-99s, 1s-999s, 0.1m-9.9m<br>0.1m-99m, 1m-99m.....                     |
| Repeat error        | ≤ 1%                                                                                                                           |
| Operation mode      | Power-on delay                                                                                                                 |
| Contact form        | 2 sets of delay contacts                                                                                                       |
| Contact capacity    | 3A AC250V( resistive)                                                                                                          |
| Dimension           | 40.5×54×75.5mm                                                                                                                 |
| Installation method | By combining different sockets and accessories, screw mounting type, panel type and 35mm DIN rail installation can be achieved |

**HHS5F(ST3PF)**  
Time relay  
Replace for JSZ3F



|                     |                                                                                                                                           |
|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| Supply voltage      | DC24V; AC24V, AC220V, AC380V                                                                                                              |
| Time delay range    | 1s 5s 10s 30s 60s 120s 180s                                                                                                               |
| Repeat error        | ≤ 5%                                                                                                                                      |
| Operation mode      | Power-off delay                                                                                                                           |
| Contact form        | HHS5F:set of delay contacts with reset<br>HHS5F1:2 sets of delay contacts<br>HHS5F2:1 set of delay contacts and 1 set of instant contacts |
| Contact capacity    | 3A AC250V(resistive)                                                                                                                      |
| Dimension           | 40.5×54×84mm                                                                                                                              |
| Installation method | By combining different sockets and accessories, screw mounting type, panel type and 35mm DIN rail installation can be achieved            |

**HHS5PA**  
Time relay  
replaces ST3PA and ST3PC products



|                     |                                                                                                                                |
|---------------------|--------------------------------------------------------------------------------------------------------------------------------|
| Supply voltage      | DC24V; AC24V, AC220V, AC380V                                                                                                   |
| Time delay range    | 0.1s-99h, 6 time bases adjustable                                                                                              |
| Repeat error        | ≤ 1%                                                                                                                           |
| Operation mode      | Power-on delay                                                                                                                 |
| Contact form        | A: 2 sets of delay contacts<br>B: 1 set of delay contact and 1 set of instant contact                                          |
| Contact capacity    | 3A AC250V(resistive)                                                                                                           |
| Dimension           | 40.5×54×75.5mm                                                                                                                 |
| Installation method | By combining different sockets and accessories, screw mounting type, panel type and 35mm DIN rail installation can be achieved |

**HHS5F3(ST3PFT3) Long delay**  
Time relay  
Replace for JSZ3F



|                     |                                                                                                                                |
|---------------------|--------------------------------------------------------------------------------------------------------------------------------|
| Supply voltage      | DC24V; AC24V, AC220V, AC380V                                                                                                   |
| Time delay range    | 180s 300s 600s 1800s 3600s                                                                                                     |
| Repeat error        | ≤ 5%                                                                                                                           |
| Operation mode      | Power-off delay                                                                                                                |
| Contact form        | 1 set of delay contacts with reset                                                                                             |
| Contact capacity    | 3A AC250V(resistive)                                                                                                           |
| Dimension           | 40.5×54×84mm                                                                                                                   |
| Installation method | By combining different sockets and accessories, screw mounting type, panel type and 35mm DIN rail installation can be achieved |

**HHS5PK, HHS5PY**  
Time relay  
Replace for ST3PK and ST3PY products



|                     |                                                                                                                                |
|---------------------|--------------------------------------------------------------------------------------------------------------------------------|
| Supply voltage      | DC24V; AC24V, AC220V, AC380V                                                                                                   |
| Time delay range    | 0.1s-99h, 6 time bases adjustable                                                                                              |
| Repeat error        | ≤ 1%                                                                                                                           |
| Operation mode      | HHS5PK: Disconnection delay<br>HHS5PY: Star-delta start delay                                                                  |
| Contact form        | HHS5PK: 1 set of delay contacts<br>HHS5PY: 1 set of star-delta transfer contacts                                               |
| Contact capacity    | 3A AC250V(resistive)                                                                                                           |
| Dimension           | 41×55×76mm                                                                                                                     |
| Installation method | By combining different sockets and accessories, screw mounting type, panel type and 35mm DIN rail installation can be achieved |

**HHS5PR**  
 Time relay  
 Replace for ST3PR product



|                     |                                                                                                                                |
|---------------------|--------------------------------------------------------------------------------------------------------------------------------|
| Supply voltage      | DC24V; AC24V, AC220V, AC380V                                                                                                   |
| Time delay range    | 0.1s-99h, 6 time bases adjustable                                                                                              |
| Repeat error        | ≤ 1%                                                                                                                           |
| Operation mode      | Cycle delay                                                                                                                    |
| Contact form        | 1 set of delay contacts                                                                                                        |
| Contact capacity    | 3A AC250V(resistive)                                                                                                           |
| Dimension           | 40.5×54×75.5mm                                                                                                                 |
| Installation method | By combining different sockets and accessories, screw mounting type, panel type and 35mm DIN rail installation can be achieved |

**HHS6-1**  
 Time relay  
 replaces DH48S



|                     |                                                     |
|---------------------|-----------------------------------------------------|
| Supply voltage      | DC24V; AC24V, AC220V, AC380V                        |
| Time delay range    | 0.01s-99h99m h-min-s setting                        |
| Repeat error        | ≤ 1%                                                |
| Operation mode      | Power-on delay                                      |
| Contact form        | 1 set of delay with reset and pause terminal        |
| Contact capacity    | 3A AC250V(resistive)                                |
| Dimension           | 48×48×105mm                                         |
| Hole size           | 45×45mm                                             |
| Installation method | Panel type, screw mounting type, 35mm DIN rail type |

**HHS5PF**  
 Time relay  
 Replace for ST3PF product



|                     |                                                                                                                                |
|---------------------|--------------------------------------------------------------------------------------------------------------------------------|
| Supply voltage      | DC24V; AC24V, AC220V, AC380V                                                                                                   |
| Time delay range    | 0.1s-9.9s, 1s-99s, 0.1s-99.9s 1s-199s                                                                                          |
| Repeat error        | ≤ 5%                                                                                                                           |
| Operation mode      | Power-off delay                                                                                                                |
| Contact form        | 2 sets of delay contacts                                                                                                       |
| Contact capacity    | 3A AC250V(resistive)                                                                                                           |
| Dimension           | 40.5×54×75.5mm                                                                                                                 |
| Installation method | By combining different sockets and accessories, screw mounting type, panel type and 35mm DIN rail installation can be achieved |

**HHS6N-2**  
 Time relay  
 Replace for DH48S-2Z and DH48S-2Z instant action



|                     |                                                                                       |
|---------------------|---------------------------------------------------------------------------------------|
| Supply voltage      | DC24V; AC24V, AC220V, AC380V                                                          |
| Time delay range    | 0.01s-99h99m h-min-s setting                                                          |
| Repeat error        | ≤ 1%                                                                                  |
| Operation mode      | Power-on delay                                                                        |
| Contact form        | A: 2 sets of delay contacts<br>B: 1 set of delay contact and 1 set of instant contact |
| Contact capacity    | 3A AC250V(resistive)                                                                  |
| Dimension           | 48×48×105mm                                                                           |
| Hole size           | 45×45mm                                                                               |
| Installation method | Panel type, screw mounting type, 35mm DIN rail type                                   |

**HHS5PG**  
 Time relay



|                     |                                                                                                                                |
|---------------------|--------------------------------------------------------------------------------------------------------------------------------|
| Supply voltage      | DC24V; AC24V, AC220V, AC380V                                                                                                   |
| Time delay range    | 0.1s-99h, 6 time bases adjustable                                                                                              |
| Repeat error        | ≤ 1%                                                                                                                           |
| Operation mode      | HHS5PG: Release delay                                                                                                          |
| Contact form        | HHS5PG: 2 sets of delay                                                                                                        |
| Contact capacity    | 3A AC250V(resistive)                                                                                                           |
| Dimension           | 40.5×54×75.5mm                                                                                                                 |
| Installation method | By combining different sockets and accessories, screw mounting type, panel type and 35mm DIN rail installation can be achieved |

**HHS6R**  
 Time relay  
 Replace for DH48S-S



|                     |                                                                                                       |
|---------------------|-------------------------------------------------------------------------------------------------------|
| Supply voltage      | DC24V; AC24V, AC220V, AC380V                                                                          |
| Time delay range    | 0.1s-990h, 7 time bases adjustable                                                                    |
| Repeat error        | ≤ 1%                                                                                                  |
| Operation mode      | Infinite cycle delay (regular)<br>1-15 cycle work times can be ordered (please specify when ordering) |
| Contact form        | HHS6R: 1 set of delay with reset and pause terminal<br>HHS6R-2: 2 sets of delay contacts              |
| Contact capacity    | 3A AC250V(resistive)                                                                                  |
| Dimension           | 48×48×105mm                                                                                           |
| Hole size           | 45×45mm                                                                                               |
| Installation method | Panel type, screw mounting type, 35mm DIN rail type                                                   |

**HHS6**  
 Time relay  
 Replace for JSS48A



|                     |                                                        |
|---------------------|--------------------------------------------------------|
| Supply voltage      | DC24V; AC24V, AC220V, AC380V                           |
| Time delay range    | 0.01s-99h99m h-min-s setting                           |
| Repeat error        | ≤ 1%                                                   |
| Operation mode      | Power-on delay                                         |
| Contact form        | 2 sets of delay with reset and pause terminal (11-pin) |
| Contact capacity    | 3A AC250V(resistive)                                   |
| Dimension           | 48×48×115mm                                            |
| Hole size           | 45×45mm                                                |
| Installation method | Panel type, screw mounting type, 35mm DIN rail type    |

**HHS6S-2**  
 Time relay  
 Replace for JSS20-48AMS



|                     |                                                                                                |
|---------------------|------------------------------------------------------------------------------------------------|
| Supply voltage      | DC24V; AC24V, AC220V, AC380V                                                                   |
| Time delay range    | 0.01s-9990h (10 time bases adjustable)                                                         |
| Repeat error        | For time delay range greater than 1s, Er ≥ 1%;<br>For time delay range less than 1s, Dr ≤ 50ms |
| Operation mode      | Power-on delay                                                                                 |
| Contact form        | 2 sets of delay contacts                                                                       |
| Contact capacity    | 3A AC250V(resistive)                                                                           |
| Dimension           | 48×48×105mm                                                                                    |
| Hole size           | 45×45mm                                                                                        |
| Installation method | Panel type, screw mounting type, 35mm DIN rail type                                            |

RELAY SERIES

SWITCH SERIES

ELECTRIC DRIVE AND CONTROL SERIES

INSTRUMENT & METER SERIES

DISTRIBUTION CONTROL SERIES

AUTOMATION INDUSTRY APPLICATION

POWER SUPPLY AND OTHERS

**DH48S Improved**  
Time relay



|                     |                                                                                                                                                                                                                                                 |
|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Supply voltage      | DC24V; AC24V, AC220V, AC380V                                                                                                                                                                                                                    |
| Time delay range    | 0.01s~99h99m h-min-s setting                                                                                                                                                                                                                    |
| Repeat error        | ≤ 1%                                                                                                                                                                                                                                            |
| Operation mode      | Power-on delay                                                                                                                                                                                                                                  |
| Timing method       | Countdown, digital display                                                                                                                                                                                                                      |
| Contact form        | DH48S: 1 set of delay with reset and pause function<br>DH48S-2Z: 2 sets of delay contacts<br>DH48S-S: 1 set of delay with reset and pause terminal, 2 sets of delay contacts<br>DH48S-2: 2 sets of delay with reset and pause terminal (11-pin) |
| Contact capacity    | 3A AC250V(resistive)                                                                                                                                                                                                                            |
| Dimension           | 48×48×101.5mm                                                                                                                                                                                                                                   |
| Hole size           | 45×45mm                                                                                                                                                                                                                                         |
| Installation method | Panel type, screw mounting type, 35mm DIN rail type                                                                                                                                                                                             |

**HHS8**  
Time relay



|                     |                                                                                                                                |
|---------------------|--------------------------------------------------------------------------------------------------------------------------------|
| Supply voltage      | DC24V; AC24V, AC220V, AC380V                                                                                                   |
| Time delay range    | 1s 5s 10s 30s 60s 120s 180s<br>5m 10m 30m 60m                                                                                  |
| Repeat error        | ≤ 1%                                                                                                                           |
| Operation mode      | HHS8(AH3-2): Power-on delay<br>HHS8C(AH3-3, ST2P): Power-on delay with instant action<br>HHS8G: Release delay                  |
| Contact form        | HHS8G, HHS8(AH3-2): sets of delay contacts<br>HHS8C(AH3-3, ST2P): 1 set of delay contact and 1 set of instant contact          |
| Contact capacity    | 3A AC250V(resistive)                                                                                                           |
| Dimension           | 40.5×50.5×82mm                                                                                                                 |
| Installation method | By combining different sockets and accessories, screw mounting type, panel type and 35mm DIN rail installation can be achieved |

**HHS6A**  
Time relay



|                     |                                                                                                                                                    |
|---------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| Supply voltage      | DC24V; AC24V, AC220V, AC380V                                                                                                                       |
| Time delay range    | 0.01s~99990h h-min-s setting                                                                                                                       |
| Repeat error        | ≤ 1%                                                                                                                                               |
| Operation mode      | Power-on delay, release delay, memory/non-memory function optional                                                                                 |
| Timing method       | Positive count/countdown, dual row display                                                                                                         |
| Contact form        | HHS6A: 2 sets of delay with reset and start function<br>HHS6A-1: 1 set of delay with reset and start function<br>HHS6A-2: 2 sets of delay contacts |
| Contact capacity    | 3A AC250V(resistive)                                                                                                                               |
| Installation method | 48×48×115mm                                                                                                                                        |
| Hole size           | 45×45mm                                                                                                                                            |
| Installation method | Panel type, screw mounting type, 35mm DIN rail type                                                                                                |

**HHS13S**  
(ST6P-2) / 13S-1 (ST6P-4)  
Time relay



|                     |                                                                        |
|---------------------|------------------------------------------------------------------------|
| Supply voltage      | DC24V; AC24V, AC220V                                                   |
| Time delay range    | 0.1s-100h time base optional                                           |
| Repeat error        | ≤ 1%                                                                   |
| Operation mode      | Power-on delay                                                         |
| Contact form        | HHS13S: 2 sets of delay contacts<br>HHS13S-1: 4 sets of delay contacts |
| Contact capacity    | HHS13S: 5A AC250V(resistive)<br>HHS13S-1: 3A AC250V(resistive)         |
| Dimension           | 22×28×70mm                                                             |
| Installation method | 35mm DIN rail installation                                             |

Note: The supporting base fixed hook is dedicated HHS13S stainless steel hook

**HHS6D/M**  
Multi-circuit time relay



|                     |                                                                         |
|---------------------|-------------------------------------------------------------------------|
| Supply voltage      | DC24V; AC24V; AC220V                                                    |
| Time delay range    | 0.01s-9999h                                                             |
| Repeat error        | ≤ 0.5%, with Repeat error of less than 50ms when the delay time is ≤ 1s |
| Operation mode      | ① Power-on delay ② Release delay ③ Cycle delay                          |
| Control circuit     | 1 circuit, 2 circuits, 3 circuits, 4 circuits                           |
| Contact capacity    | 3A AC250V(resistive)                                                    |
| Dimension           | 48×48×77.5mm                                                            |
| Hole size           | 45×45mm                                                                 |
| Installation method | Panel type                                                              |

**HHS11(JS11S) Improved**  
Time relay



|                     |                                               |
|---------------------|-----------------------------------------------|
| Supply voltage      | DC24V; AC24V, AC220V, AC380V                  |
| Time delay range    | 0.01s~99h99m h-min-s setting                  |
| Repeat error        | ≤ 1%                                          |
| Operation mode      | Power-on delay                                |
| Timing method       | Countdown, digital display                    |
| Contact form        | 2 sets of delay and 1 set of instant contacts |
| Contact capacity    | 3A AC250V(resistive)                          |
| Dimension           | 95×95×101mm                                   |
| Hole size           | 4-Φ5/70×70mm Φ81.2mm                          |
| Installation method | Panel type                                    |

**HHS8-N □ (AH3-N □)**  
Time relay



|                     |                                                                                                                                |
|---------------------|--------------------------------------------------------------------------------------------------------------------------------|
| Supply voltage      | DC24V; AC24V, AC220V, AC380V                                                                                                   |
| Time delay range    | NA: 1s/10s/1m/10m<br>NB: 3s/30s/3m/30m<br>NC: 6s/60s/6m/60m<br>ND: 1m/10m/1h/10h<br>NE: 3m/30m/3h/30h                          |
| Repeat error        | ≤ 1%                                                                                                                           |
| Operation mode      | Mode A: Power-on delay<br>Mode B: Power-on delay with instant action                                                           |
| Contact form        | Mode A: 2 sets of delay contacts<br>Mode B: 1 set of delay contact and 1 set of instant contact                                |
| Contact capacity    | 3A AC250V(resistive)                                                                                                           |
| Dimension           | 40.5×50.5×82mm                                                                                                                 |
| Installation method | By combining different sockets and accessories, screw mounting type, panel type and 35mm DIN rail installation can be achieved |

**JS11S**  
Time relay



|                     |                                                                 |
|---------------------|-----------------------------------------------------------------|
| Supply voltage      | DC24V; AC24V, AC220V, AC380V                                    |
| Time delay range    | 0.01s~9.99s 0.01s~99.99s;<br>0.01s~99990h(h, min, s adjustable) |
| Contact form        | 2 sets of delay and 1 set of instant contacts                   |
| Contact capacity    | 3A AC250V(resistive)                                            |
| Dimension           | 85×85×83mm                                                      |
| Hole size           | 4-Φ5/70×70mm Φ81.2mm                                            |
| Installation method | Panel type                                                      |

Note: If the delay requirement is not specified during the order, the product should be sent in the range of 0.01s~99990h (h, min, s adjustable)

**HHS16F**  
Multi-circuit time relay



|                     |                                            |
|---------------------|--------------------------------------------|
| Supply voltage      | DC24V; AC24V, AC220V, AC380V               |
| Time delay range    | 0.01s-9999h                                |
| Repeat error        | ≤ 1%                                       |
| Operation mode      | Power-on delay, release delay, cycle delay |
| Control circuit     | 1-8 circuits optional                      |
| Contact capacity    | 3A AC250V(resistive)single circuit         |
| Dimension           | 72×27×78mm                                 |
| Hole size           | 68×68mm                                    |
| Installation method | Panel type                                 |

**HHS17P/HHS17PR**  
Time relay



|                     |                                            |
|---------------------|--------------------------------------------|
| Supply voltage      | AC/DC24V; AC/DC100V-240V                   |
| Time delay range    | 0.1s-99h                                   |
| Repeat error        | ≤ 1%                                       |
| Operation mode      | HHS17P:Power-on delay; HHS17PR:Cycle delay |
| Contact form        | 2 sets of delay contacts                   |
| Contact capacity    | 3A AC250V(resistive)                       |
| Dimension           | 33×78×68.5mm                               |
| Installation method | Screw mounting type or 35mm DIN rail type  |

**HHS16B**  
Time relay



|                     |                                                                                                                                                                                         |
|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Supply voltage      | DC24V; AC24V, AC220V, AC380V                                                                                                                                                            |
| Time delay range    | 0.01s-99990h<br>10 time bases optional                                                                                                                                                  |
| Repeat error        | ≤ 1%                                                                                                                                                                                    |
| Operation mode      | Power-on delay                                                                                                                                                                          |
| Timing method       | Positive count, digital display<br>HHS16B: 2 sets of delay with reset and pause function<br>HHS16B-C: 1 set of delay contact and 1 set of instant contact with reset and pause function |
| Contact form        |                                                                                                                                                                                         |
| Contact capacity    | 3A AC250V(resistive)                                                                                                                                                                    |
| Dimension           | 72×72×83mm                                                                                                                                                                              |
| Hole size           | 68×68mm                                                                                                                                                                                 |
| Installation method | Panel type                                                                                                                                                                              |

**HHS18**  
Time relay



|                     |                                                                           |
|---------------------|---------------------------------------------------------------------------|
| Supply voltage      | DC24V; AC24V, AC220V, AC380V                                              |
| Time delay range    | 0.1s-120h                                                                 |
| Repeat error        | ≤ 1%                                                                      |
| Operation mode      | 8 modes including power-on delay, release delay, etc                      |
| Contact form        | HHS18: 2 sets of delay<br>HHS18C: 1 set of delay, 1 set of instant action |
| Contact capacity    | 1A AC240V(resistive)                                                      |
| Dimension           | 24.5×85.5×90.5mm                                                          |
| Installation method | Screw mounting type or 35mm DIN rail type                                 |
| Replace for         | H3DS, RE11, DHC19-M, NJB1-S                                               |

**HHS16R**  
Time relay



|                     |                                                                                                         |
|---------------------|---------------------------------------------------------------------------------------------------------|
| Supply voltage      | DC24V; AC24V, AC220V, AC380V                                                                            |
| Time delay range    | 0.1s-990h, 7 time bases adjustable                                                                      |
| Repeat error        | ≤ 1%                                                                                                    |
| Operation mode      | Infinite cycle delay (regular)<br>1-15 cycle work times can be customized, please specify when ordering |
| Contact form        | 2 sets of delay contacts with reset and pause terminal                                                  |
| Contact capacity    | 3A AC250V(resistive)                                                                                    |
| Dimension           | 72×72×83mm                                                                                              |
| Hole size           | 68×68mm                                                                                                 |
| Installation method | Panel type                                                                                              |

**HHS18R**  
Time relay



|                     |                                                                             |
|---------------------|-----------------------------------------------------------------------------|
| Supply voltage      | DC24V; AC24V, AC220V, AC380V                                                |
| Time delay range    | 0.1s-100h                                                                   |
| Repeat error        | ≤ 1%                                                                        |
| Operation mode      | Cycle delay                                                                 |
| Contact form        | HHS18R: 2 sets of delay<br>HHS18RC: 1 set of delay, 1 set of instant action |
| Contact capacity    | 3A AC250V(resistive)                                                        |
| Dimension           | 24.5×85.5×90.5mm                                                            |
| Installation method | Screw mounting type or 35mm DIN rail type                                   |
| Replace for         | DHC19S-S                                                                    |

**HHS18F**  
Time relay



|                     |                                                       |
|---------------------|-------------------------------------------------------|
| Supply voltage      | DC24V; AC24V, AC220V, AC380V                          |
| Time delay range    | 1s, 5s, 10s, 30s, 60s<br>120s, 180s                   |
| Repeat error        | ≤ 5%                                                  |
| Operation mode      | Power-off delay                                       |
| Contact form        | 2 sets of delay transfer contacts with reset function |
| Contact capacity    | 1A AC250V(resistive)                                  |
| Dimension           | 24.5×85.5×90.5mm                                      |
| Installation method | Screw mounting type or 35mm DIN rail type             |

**HHSC10**  
Steel bar cutting machine controller



|                     |                                                                      |
|---------------------|----------------------------------------------------------------------|
| Supply voltage      | AC220V, AC380V                                                       |
| Time delay range    | 0.01s-0.99s                                                          |
| Repeat error        | ≤ 1%                                                                 |
| Operation mode      | Power-on delay                                                       |
| Contact form        | 2 sets of delay transfer contacts; 1 set of counting signal contacts |
| Contact capacity    | 10A AC250V(resistive)                                                |
| Dimension           | 45×82×108mm                                                          |
| Hole size           | 56-2× diameter 4.5mm                                                 |
| Installation method | Screw mounting type and 35mm DIN rail type                           |

RELAY SERIES

SWITCH SERIES

ELECTRIC DRIVE AND CONTROL SERIES

INSTRUMENT & METER SERIES

DISTRIBUTION CONTROL SERIES

AUTOMATION INDUSTRY APPLICATION

POWER SUPPLY AND OTHERS

## Counting relay/Meter counter/Tachometer/Line speed meter

Counter/meter counter is suitable for use as a counting element in control circuit with frequency of AC 50Hz, rated working voltage of 380V and below, or DC working voltage of 24V. It connects and disconnects the circuit according to preset numbers. The counter/meter counter adopts single chip microcomputer (SCM) circuit and high-performance counting chip, which has the advantages of wide counting range, positive count/countdown, multiple counting methods and counting signal inputs, stable and reliable counting performance, etc. It is widely used in industrial automation control.

This series of counters/meter complies with GB/T14048.5 and JB/T 8794 standards, and the products have passed CCC self-declaration.

**ZN48**  
Counting and measuring relay



|                      |                                                                                                                 |
|----------------------|-----------------------------------------------------------------------------------------------------------------|
| Supply voltage       | AC/DC24V;AC220V;AC/DC 100-240V;AC380V                                                                           |
| Function description | 16 functions including time relay, time counter, tachometer, frequency meter, etc., totally 9 Time delay ranges |
| Power-off memory     | 10 years                                                                                                        |
| Contact form         | 1 set of NO and NC contacts                                                                                     |
| Contact capacity     | 3A AC250V(resistive)                                                                                            |
| Dimension            | 48×48×77.5mm                                                                                                    |
| Hole size            | 45×45mm                                                                                                         |
| Installation method  | Panel type                                                                                                      |

**HHJ1(with base)**  
Counting relay  
Replace for JDM1-48  
Both contact signal and photoelectric/proximity switch can be counted



|                     |                                                                  |
|---------------------|------------------------------------------------------------------|
| Supply voltage      | AC/DC24V; AC220V; AC/DC100-240V; AC380V                          |
| Operation mode      | Positive count, 4-digit LED display                              |
| Counting speed      | High frequency 100 times/s; low frequency 30 times/s             |
| Counting range      | (1-9999)×1,×10,×100 magnification                                |
| Input signal        | Contact signal, PNP normally open photoelectric/proximity switch |
| Output mode         | N, C, F, R, X system                                             |
| Power-off memory    | Memory settable                                                  |
| Dimension           | 48×48×115mm                                                      |
| Hole size           | 45×45mm                                                          |
| Installation method | Panel type                                                       |

**DH48J**  
Counting relay  
Only for contact signal counting, if photoelectric switch/proximity switch counting is required, please choose the HHJ1 type



|                     |                                                      |
|---------------------|------------------------------------------------------|
| Supply voltage      | AC/DC24V; AC/DC100-240V; AC380V                      |
| Operation mode      | Positive count, 4-digit LED display                  |
| Counting speed      | High frequency 100 times/s; low frequency 30 times/s |
| Counting range      | (1-9999)×1,×10,×100 magnification                    |
| Input signal        | Contact signal counting                              |
| Output mode         | N, C, F, R, X system                                 |
| Power-off memory    | Memory settable                                      |
| Dimension           | 48×48×105mm                                          |
| Hole size           | 45×45mm                                              |
| Installation method | Panel type                                           |

**HHJ1-B(new type), HHJ1-F(rear-panel wiring)**  
Counting relay



N/C/F/R system combination type

|                     |                                                                  |
|---------------------|------------------------------------------------------------------|
| Supply voltage      | DC24V; AC24V;AC220V;AC380V                                       |
| Operation mode      | Positive count/countdown                                         |
| Counting speed      | High frequency 1000 times/s; Low frequency 30 times/s            |
| Counting range      | (1-99999)×1,×10,×100 magnification                               |
| Input signal        | Contact signal, PNP normally open photoelectric/proximity switch |
| Output mode         | N, C, F, R, X system                                             |
| Power-off memory    | 10 years                                                         |
| Contact form        | 1 set of NO and NC contacts                                      |
| Contact capacity    | 3A AC250V(resistive)                                             |
| Dimension           | 48×48×115(90)mm                                                  |
| Hole size           | 45×45mm                                                          |
| Installation method | Panel type                                                       |

**ZN72**  
Counting and measuring relay



|                      |                                                                                                                                                                                |
|----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Supply voltage       | AC/DC24V;AC220V;AC/DC 100-240V;AC380V                                                                                                                                          |
| Function description | 16 functions including time relay, time counter, tachometer, frequency meter, etc., totally 9 Time delay ranges, reducing inventory specifications for dealers and saving cost |
| Power-off memory     | 10 years                                                                                                                                                                       |
| Contact form         | 1 set of NO and NC contacts                                                                                                                                                    |
| Contact capacity     | 3A AC250V(resistive)                                                                                                                                                           |
| Dimension            | 72×72×78mm                                                                                                                                                                     |
| Hole size            | 68×68mm                                                                                                                                                                        |
| Installation method  | Panel type                                                                                                                                                                     |

**HHJ2-8, HHJ2-8U**  
Counter  
Replace for H7EC, DHC3J, JDM3



|                     |                                                                 |
|---------------------|-----------------------------------------------------------------|
| Supply voltage      | Self-contained power supply (built-in non-rechargeable battery) |
| Operation mode      | Positive count, 8-digit LCD display                             |
| Counting speed      | High frequency 1000 times/s; low frequency 30 times/s           |
| Counting range      | 1-99999999                                                      |
| Input signal        | HHJ2-8: Contact signal<br>HHJ2-8U: Level signal (DC4-30V)       |
| Battery life        | 1 year                                                          |
| Dimension           | 48×22×55mm                                                      |
| Hole size           | 45×22mm                                                         |
| Installation method | Panel type                                                      |

**HHJ3**  
Counter

Replace for JDM11-6H  
 Only for contact or level signal counting, if photoelectric switch/proximity switch counting is required, please choose the HHJ3-A type



|                      |                                                                                          |
|----------------------|------------------------------------------------------------------------------------------|
| Supply voltage       | AC/DC24V; AC/DC100~240V                                                                  |
| Operation mode       | Positive count, 6-digit LED display                                                      |
| Counting speed       | 10, 30, 1000 times/s adjustable                                                          |
| Counting range       | 1-999999                                                                                 |
| Function description | HHJ3 replaces for JDM11-6H                                                               |
| Input signal         | Contact signal (voltage-free type)<br>Level signal (customized for voltage type DC4-30V) |
| Power-off memory     | 10 years                                                                                 |
| Dimension            | 58×42×82mm                                                                               |
| Hole size            | 50×25mm                                                                                  |
| Installation method  | Panel type                                                                               |

**JDM15B**  
Counting relay  
Replace for JDM15G and AN-15



N/C/F/R system combination type

|                     |                                                                                                 |
|---------------------|-------------------------------------------------------------------------------------------------|
| Supply voltage      | DC24V; AC24V,AC220V,AC380V                                                                      |
| Operation mode      | Positive count, countdown, reversible A, B, C                                                   |
| Counting speed      | High frequency 1000 times/s<br>Low frequency 30 times/s                                         |
| Counting range      | (1-999999)×1,×10,×100 magnification                                                             |
| Input signal        | Contact signal, meter wheel, rotary encoder<br>PNP normally open photoelectric/proximity switch |
| Output mode         | N, C, F, R system                                                                               |
| Power-off memory    | 10 years                                                                                        |
| Contact form        | 2 sets of NO and NC contacts                                                                    |
| Contact capacity    | 3A AC250V(resistive)                                                                            |
| Dimension           | 72×72×81mm                                                                                      |
| Hole size           | 68×68mm                                                                                         |
| Installation method | Panel type                                                                                      |

**HHJ3-A**  
Counter

Contact and NPN normally open photoelectric switch/proximity switch counting



|                     |                                                                  |
|---------------------|------------------------------------------------------------------|
| Supply voltage      | AC/DC24V; AC/DC100~240V                                          |
| Operation mode      | Positive count, 6-digit LED display                              |
| Counting speed      | 10, 30, 1000 times/s adjustable                                  |
| Counting range      | 1-999999                                                         |
| Input signal        | Contact signal, NPN normally open photoelectric/proximity switch |
| Power-off memory    | 10 years                                                         |
| Dimension           | 58×42×82mm                                                       |
| Hole size           | 50×25mm                                                          |
| Installation method | Panel type                                                       |

**HHJ5-F, HHJ5-K**  
Counting relay



Total quantity without output



Total quantity with output

|                     |                                                                              |
|---------------------|------------------------------------------------------------------------------|
| Supply voltage      | AC/DC24V; AC/DC100~240V;AC380V                                               |
| Work form           | Positive count                                                               |
| Operation mode      | Automatic component reset<br>Total cumulative quantity or number of packages |
| Counting speed      | High frequency 1000 times/s;<br>low frequency 30 times/s                     |
| Counting range      | 1-999999                                                                     |
| Input signal        | Contact signal, PNP normally open photoelectric/proximity switch             |
| Power-off memory    | 10 years                                                                     |
| Contact form        | 1 set of NO and NC contacts                                                  |
| Contact capacity    | 3A AC250V(resistive)                                                         |
| Dimension           | 72×72×81mm                                                                   |
| Hole size           | 68×68mm                                                                      |
| Installation method | Panel type                                                                   |

**HHJ4-A**  
Counting relay



N/C/F/X/R system combination type

|                     |                                                                  |
|---------------------|------------------------------------------------------------------|
| Supply voltage      | DC24V; AC24V, AC220V, AC380V                                     |
| Operation mode      | Positive count, countdown                                        |
| Counting speed      | High frequency 1000 times/s<br>Low frequency 30 times/s          |
| Counting range      | (1-999999)×1,×10,×100 magnification                              |
| Input signal        | Contact signal, PNP normally open photoelectric/proximity switch |
| Output mode         | N, C, F, X, R system                                             |
| Power-off memory    | 10 years                                                         |
| Contact form        | 1 set of NO and NC contacts                                      |
| Contact capacity    | 3A AC250V(resistive)                                             |
| Dimension           | 96×48×114mm                                                      |
| Hole size           | 92×45mm                                                          |
| Installation method | Panel type                                                       |

**HHJM-72F, HHJM-72K**  
Counting relay  
HHJM-72F total quantity without output;  
HHJM-72K total quantity with output  
HHJM-72F replaces for HHJ5-F and HHJ5-G;  
HHJM-72K replaces for HHJ5-K



|                     |                                                                                   |
|---------------------|-----------------------------------------------------------------------------------|
| Supply voltage      | AC/DC24V; AC220V;AC/DC100~240V;AC380V                                             |
| Operation mode      | Automatic component reset<br>Total cumulative quantity or number of packages      |
| Counting speed      | 1, 10, 30, 300, 1000 times/s                                                      |
| Counting range      | 1-999999                                                                          |
| Input signal        | Contact signal, normally open photoelectric/proximity switch                      |
| Output mode         | N, C system                                                                       |
| Power-off memory    | 10 years                                                                          |
| Contact form        | [HHJM-72F] 1 set of NO and NC contacts<br>[HHJM-72K] 2 sets of NO and NC contacts |
| Dimension           | 72×72×78mm                                                                        |
| Hole size           | 68×68mm                                                                           |
| Installation method | Panel type                                                                        |

**HHJ4-D**  
Counting relay  
With pre-delay and post-delay function



|                     |                                                                         |
|---------------------|-------------------------------------------------------------------------|
| Supply voltage      | DC24V; AC220V, AC380V                                                   |
| Work form           | Positive count                                                          |
| Counting speed      | High frequency 1000 times/s;<br>low frequency 30 times/s                |
| Counting range      | 1-99999999                                                              |
| Input signal        | Contact signal, PNP normally open photoelectric switch/proximity switch |
| Output mode         | C system, Power-off memory 10 years                                     |
| Operation mode      | Pre-delay: 0.01-99.9 s<br>Post-delay: 0.01-99.9 s                       |
| Contact form        | 1 set of NO and NC contacts                                             |
| Contact capacity    | 3A AC250V(resistive)                                                    |
| Dimension           | 96×48×114mm                                                             |
| Hole size           | 92×45mm                                                                 |
| Installation method | Panel type                                                              |

**JDM9-4A**  
Counting relay



|                     |                                                              |
|---------------------|--------------------------------------------------------------|
| Supply voltage      | AC/DC 24V;AC220V;AC/DC 100~240V;AC380V                       |
| Work form           | Positive count                                               |
| Counting speed      | 10, 30, 100, 300 times/s                                     |
| Counting range      | 1-9999                                                       |
| Input signal        | Contact signal, normally open photoelectric/proximity switch |
| Output mode         | N, C system                                                  |
| Power-off memory    | Settable                                                     |
| Contact form        | 1 set of NO and NC contacts,<br>2 sets customizable          |
| Dimension           | 72×72×78mm                                                   |
| Hole size           | 68×68mm                                                      |
| Installation method | Panel type                                                   |

RELAY SERIES  
 SWITCH SERIES  
 ELECTRIC DRIVE AND CONTROL SERIES  
 INSTRUMENT & METER SERIES  
 DISTRIBUTION CONTROL SERIES  
 AUTOMATION INDUSTRY APPLICATION  
 POWER SUPPLY AND OTHERS

# RELAY SERIES

**JDM9-4**  
Counting relay  
Counting speed 100 times/s



|                     |                                                                  |
|---------------------|------------------------------------------------------------------|
| Supply voltage      | AC/DC24V;AC220V;AC/DC100-240V;AC380V                             |
| Operation mode      | Positive count, 4-digit LED display                              |
| Counting speed      | 100 times/s                                                      |
| Counting range      | 1-9999                                                           |
| Input signal        | Contact signal, PNP normally open photoelectric/proximity switch |
| Output mode         | N or C system                                                    |
| Power-off memory    | 10 years                                                         |
| Contact form        | 1 set of NO and NC contacts                                      |
| Contact capacity    | 3A AC250V(resistive)                                             |
| Dimension           | 72×72×81mm                                                       |
| Hole size           | 68×68mm                                                          |
| Installation method | Panel type                                                       |

**SJ**  
Counter  
Replace for JDM1-6 and AN-6



|                     |                                                                  |
|---------------------|------------------------------------------------------------------|
| Supply voltage      | DC24V; AC220V, AC380V                                            |
| Operation mode      | Positive count                                                   |
| Counting speed      | High frequency 1000 times/s<br>Low frequency 30 times/s          |
| Counting range      | 1-999999                                                         |
| Input signal        | Contact signal, PNP normally open photoelectric/proximity switch |
| Power-off memory    | 10 years                                                         |
| Dimension           | 104×52×108mm                                                     |
| Hole size           | 76×45mm                                                          |
| Installation method | Panel type                                                       |

**JDM9-6**  
Counting relay  
T system needs to be customized



N/C/F/X/R system combination type

|                     |                                                                  |
|---------------------|------------------------------------------------------------------|
| Supply voltage      | AC/DC24V;AC220V;AC/DC100-240V;AC380V                             |
| Operation mode      | Positive count, countdown                                        |
| Counting speed      | High frequency 1000 times/s<br>Low frequency 30 times/s          |
| Counting range      | (1-999999)×1,×10,×100 magnification                              |
| Input signal        | Contact signal, PNP normally open photoelectric/proximity switch |
| Output mode         | N, C, F, R, X system                                             |
| Power-off memory    | 10 years                                                         |
| Contact form        | 1 set of NO and NC contacts                                      |
| Contact capacity    | 3A AC250V(resistive)                                             |
| Dimension           | 72×72×81mm                                                       |
| Hole size           | 68×68mm                                                          |
| Installation method | Panel type                                                       |

**JDM11-5H**  
Counter  
Contact and voltage signal counting, if proximity/photoelectric switch counting is required, please choose HHJ3-A



Supply voltage

|                     |                                                                             |
|---------------------|-----------------------------------------------------------------------------|
| Supply voltage      | DC24V; AC220V                                                               |
| Operation mode      | Positive count                                                              |
| Counting speed      | 30 times/s                                                                  |
| Counting range      | 1-99999                                                                     |
| Input signal        | Voltage-free type: contact signal<br>Voltage type: Voltage signal (DC4-30V) |
| Power-off memory    | 10 years                                                                    |
| Dimension           | 46.5×35×92mm                                                                |
| Hole size           | 38.5×27.5mm                                                                 |
| Installation method | Panel type                                                                  |

**XJ-4 (button type)**  
Counting relay



X/C system combination type

|                     |                                                                  |
|---------------------|------------------------------------------------------------------|
| Supply voltage      | AC220V                                                           |
| Operation mode      | Positive count                                                   |
| Counting speed      | Low frequency 30 times/s; high frequency 100 times/s             |
| Counting range      | 1-9999                                                           |
| Input signal        | Contact signal, PNP normally open photoelectric/proximity switch |
| Output mode         | X, C system                                                      |
| Power-off memory    | Memory settable                                                  |
| Contact form        | 1 set of NO and NC contacts                                      |
| Contact capacity    | 3A AC250V(resistive)                                             |
| Dimension           | 96×96×97.9mm                                                     |
| Hole size           | 92×92mm                                                          |
| Installation method | Panel type                                                       |

**HHM1-A**  
Counting relay



N/C/F/X/R system combination type

|                     |                                                                                      |
|---------------------|--------------------------------------------------------------------------------------|
| Supply voltage      | DC24V; AC220V, AC380V                                                                |
| Operation mode      | Positive count, countdown                                                            |
| Counting speed      | High frequency 1000 times/s<br>Low frequency 30 times/s                              |
| Counting range      | 1-999999                                                                             |
| Qty. value factor   | 0.001-9.999                                                                          |
| Input signal        | Contact signal, meter wheel, PNP normally open photoelectric switch/proximity switch |
| Output mode         | N, C, F, R, X system                                                                 |
| Power-off memory    | 10 years                                                                             |
| Contact form        | 1 set of NO and NC contacts                                                          |
| Contact capacity    | 3A AC250V(resistive)                                                                 |
| Dimension           | 96×48×114mm                                                                          |
| Hole size           | 92×45mm                                                                              |
| Installation method | Panel type                                                                           |

**DH14J**  
Counting relay  
Replace for JDM1-14



N or C system combination type

|                     |                                                                  |
|---------------------|------------------------------------------------------------------|
| Supply voltage      | DC24V; AC220V, AC380V                                            |
| Operation mode      | Positive count                                                   |
| Counting speed      | 100 times/s                                                      |
| Counting range      | (1-9999)×1,×10,×100 magnification                                |
| Input signal        | Contact signal, PNP normally open photoelectric/proximity switch |
| Output mode         | N or C format                                                    |
| Power-off memory    | 10 years                                                         |
| Contact form        | 1 set of NO and NC contacts                                      |
| Contact capacity    | 3A AC250V(resistive)                                             |
| Dimension           | 52×104×120mm                                                     |
| Hole size           | 45×76mm                                                          |
| Installation method | Panel type                                                       |

**HHM1-D**  
Counting relay



N/C/F/X/R system combination type

|                     |                                                                                      |
|---------------------|--------------------------------------------------------------------------------------|
| Supply voltage      | DC24V; AC220V, AC380V                                                                |
| Operation mode      | Positive count, countdown                                                            |
| Counting speed      | High frequency 1000 times/s<br>Low frequency 30 times/s                              |
| Counting range      | 1-999999                                                                             |
| Qty. value factor   | 0.001-9.999                                                                          |
| Input signal        | Contact signal, meter wheel, PNP normally open photoelectric switch/proximity switch |
| Output mode         | N, C, F, R, X system                                                                 |
| Power-off memory    | 10 years                                                                             |
| Contact form        | 1 set of NO and NC contacts                                                          |
| Contact capacity    | 3A AC250V(resistive)                                                                 |
| Dimension           | 72×72×81mm                                                                           |
| Hole size           | 68×68mm                                                                              |
| Installation method | Panel type                                                                           |

**HHM1-B**  
Counting relay



N/C/FX/R system combination type

|                     |                                                                                      |
|---------------------|--------------------------------------------------------------------------------------|
| Supply voltage      | DC24V; AC220V, AC380V                                                                |
| Operation mode      | Positive count, countdown                                                            |
| Counting speed      | High frequency 3000 times/s; low frequency 30 times/s                                |
| Counting range      | 1-99999999                                                                           |
| Qty. value factor   | 0.0001-9.9999                                                                        |
| Input signal        | Contact signal, meter wheel, PNP normally open photoelectric switch/proximity switch |
| Output mode         | N, C, F, R, X system                                                                 |
| Power-off memory    | 10 years                                                                             |
| Contact form        | 1 set of NO and NC contacts                                                          |
| Contact capacity    | 3A AC250V((resistive)                                                                |
| Dimension           | 96×48×114mm                                                                          |
| Hole size           | 92×45mm                                                                              |
| Installation method | Panel type                                                                           |

**HHJM-48**  
Counting relay

Replace for DH48J and HHJ1  
HHJ1-B, HHJ1-F



|                     |                                                                                           |
|---------------------|-------------------------------------------------------------------------------------------|
| Supply voltage      | AC/DC24V;AC220V;AC/DC100-240V;AC380V                                                      |
| Operation mode      | Positive count, reversible A, B, C                                                        |
| Counting speed      | 1, 10, 30, 300, 1000, 3000 times/s                                                        |
| Counting range      | 1-9999999                                                                                 |
| Input signal        | Contact signal, normally open photoelectric/proximity switch, meter wheel, rotary encoder |
| Output mode         | N, C, F, R, X, T-N, T-C system                                                            |
| Power-off memory    | Settable                                                                                  |
| Contact form        | 1 set of NO and NC contacts and 1 set of NO contacts                                      |
| Dimension           | 48×48×77.5mm                                                                              |
| Hole size           | 45×45mm                                                                                   |
| Installation method | Panel type                                                                                |

**HHM1-E**  
Counting relay



|                     |                                                                                      |
|---------------------|--------------------------------------------------------------------------------------|
| Supply voltage      | DC24V; AC220V, AC380V                                                                |
| Operation mode      | Positive count, countdown                                                            |
| Counting speed      | High frequency 1000 times/s; low frequency 30 times/s                                |
| Counting range      | 1-9999999                                                                            |
| Qty. value factor   | 0.001-9.999                                                                          |
| Input signal        | Contact signal, meter wheel, PNP normally open photoelectric switch/proximity switch |
| Output mode         | N, C, F system                                                                       |
| Power-off memory    | 10 years                                                                             |
| Contact form        | 1 set of NO and NC contacts                                                          |
| Dimension           | 72×72×81mm                                                                           |
| Hole size           | 68×68mm                                                                              |
| Installation method | Panel type                                                                           |

**HHJM-96B**  
Counting relay

Replace for HHM1-A, HHM1-B, HHJ4-A



|                     |                                                                                           |
|---------------------|-------------------------------------------------------------------------------------------|
| Supply voltage      | AC/DC24V, AC220V;AC/DC100 ~ 240V, AC380V                                                  |
| Operation mode      | Positive count, reversible A, B, C                                                        |
| Counting speed      | 1, 10, 30, 300, 1000, 3000 times/s                                                        |
| Counting range      | 1-9999999                                                                                 |
| Input signal        | Contact signal, normally open photoelectric/proximity switch, meter wheel, rotary encoder |
| Output mode         | N, C, F, R, X, T-N, T-C system                                                            |
| Power-off memory    | Settable                                                                                  |
| Contact form        | 1 set of NO and NC contacts and 1 set of NO contacts                                      |
| Dimension           | 96×48×90mm                                                                                |
| Hole size           | 92×44mm                                                                                   |
| Installation method | Panel type                                                                                |

**HHM2-H**  
Counting relay

High speed counting: 5000 times/s  
When equipped with encoder and meter wheel, it can realize increasing counting in forward rotation and decreasing counting in reverse of the motor



|                     |                                                                                      |
|---------------------|--------------------------------------------------------------------------------------|
| Supply voltage      | DC24V; AC220V, AC380V                                                                |
| Operation mode      | Reversible B count, reversible C count                                               |
| Counting speed      | High frequency 5000 times/s; low frequency 30 times/s                                |
| Counting range      | 1-99999999                                                                           |
| Qty. value factor   | 0.0001-9.9999                                                                        |
| Input signal        | Rotary encoder, meter wheel, PNP normally open photoelectric switch/proximity switch |
| Output mode         | N, C, F, R, X system                                                                 |
| Power-off memory    | 10 years                                                                             |
| Contact form        | 1 set of NO and NC contacts                                                          |
| Dimension           | HHM2-H: 96×48×114mm                                                                  |
| Hole size           | HHM2-H: 92×45mm                                                                      |
| Installation method | Panel type                                                                           |

**HHJM-72**  
Counting relay

Replace for JDM9-4, JDM9-6, JDM15B, HHM1-D, HHM1-E



|                     |                                                                                           |
|---------------------|-------------------------------------------------------------------------------------------|
| Supply voltage      | AC/DC24V, AC220V;AC/DC100 ~ 240V, AC380V                                                  |
| Operation mode      | Positive count, reversible A, B, C                                                        |
| Counting speed      | 1, 10, 30, 300, 1000, 3000 times/s                                                        |
| Counting range      | 1-9999999                                                                                 |
| Input signal        | Contact signal, normally open photoelectric/proximity switch, meter wheel, rotary encoder |
| Output mode         | N, C, F, R, X, T-N, T-C system                                                            |
| Power-off memory    | Settable                                                                                  |
| Contact form        | 2 sets of NO and NC contacts                                                              |
| Dimension           | 72×72×88mm                                                                                |
| Hole size           | 68×68mm                                                                                   |
| Installation method | Panel type                                                                                |

**HHM3-H**  
Counting relay

High speed counting: 5000 times/s  
When equipped with encoder and meter wheel, it can realize increasing counting in forward rotation and decreasing counting in reverse of the motor



|                     |                                                                                      |
|---------------------|--------------------------------------------------------------------------------------|
| Supply voltage      | AC/DC24V;AC220V;AC/DC100-240V;AC380V                                                 |
| Operation mode      | Reversible B count, reversible C count                                               |
| Counting speed      | High frequency 5000 times/s; low frequency 30 times/s                                |
| Counting range      | 1-99999999                                                                           |
| Qty. value factor   | 0.0001-9.9999                                                                        |
| Input signal        | Rotary encoder, meter wheel, PNP normally open photoelectric switch/proximity switch |
| Output mode         | N, C, F, R, X, T system                                                              |
| Power-off memory    | 10 years                                                                             |
| Contact form        | 1 set of NO and NC contacts, and 1 set of NO contacts                                |
| Dimension           | 72×72×81mm                                                                           |
| Hole size           | 68×68mm                                                                              |
| Installation method | Panel type                                                                           |

**HXX1, HHZ1**  
Line speed meter/tachometer  
Without control output



|                     |                                                                          |
|---------------------|--------------------------------------------------------------------------|
| Supply voltage      | DC24V; AC220V, AC380V                                                    |
| Rev. speed          | Max rev. speed: 1000 rps, 60000 rpm;<br>Min rev. speed: 1 rps, 60 rpm;   |
| Display Range       | 1-999999                                                                 |
| Qty. value factor   | 0.001-9.999(HHZ1: none)                                                  |
| Input signal        | PNP normally open Hall switch/proximity switch<br>DC0-10V voltage signal |
| Dimension           | 96×48×114mm                                                              |
| Hole size           | 92×45mm                                                                  |
| Installation method | Panel type                                                               |

RELAY SERIES  
 SWITCH SERIES  
 ELECTRIC DRIVE AND CONTROL SERIES  
 INSTRUMENT & METER SERIES  
 DISTRIBUTION CONTROL SERIES  
 AUTOMATION INDUSTRY APPLICATION  
 POWER SUPPLY AND OTHERS

## Liquid level relay series

The HHY series liquid level relay can be used as liquid level control component in control circuit with frequency of AC 50Hz and rated working voltage of 380V and below. It can connect and disconnect the water pump control circuit as required to achieve automatic water supply and drainage functions. It is widely used for automatic control between water tower and well in schools, industrial and mining enterprises, households and other places.

This series of liquid level relay complies with the GB/T14048.5 standard, and the product has passed the CCC self-declaration.

**C61F-GP**  
Liquid level relay



|                        |                                            |
|------------------------|--------------------------------------------|
| Supply voltage         | AC220V, AC380V                             |
| Operation mode         | Water supply and drainage type             |
| Water control distance | ≤ 100m                                     |
| Contact form           | 1 set of NO and NC contacts                |
| Contact capacity       | 3A AC250V(resistive)                       |
| Dimension              | 40×55×79mm                                 |
| Installation method    | Screw mounting type and 35mm DIN rail type |

**HHY11PG**  
Liquid level relay



|                        |                                                                    |
|------------------------|--------------------------------------------------------------------|
| Supply voltage         | AC/DC 100~240V                                                     |
| Operation mode         | Water supply and drainage type (short-circuited terminal optional) |
| Water control distance | ≤ 500m                                                             |
| Contact form           | 1 set of NO and NC contacts                                        |
| Contact capacity       | 1A AC240V(resistive)                                               |
| Dimension              | 24.5×85.5×90.5mm                                                   |
| Installation method    | Screw mounting type or 35mm DIN rail type                          |

**HHY2G, HHY2P**  
Liquid level relay



|                        |                                                  |
|------------------------|--------------------------------------------------|
| Supply voltage         | DC24V, AC24V, AC220V, AC380V                     |
| Operation mode         | HHY2P: drainage type<br>HHY2G: water supply type |
| Water control distance | ≤ 500m                                           |
| Contact form           | 1 set of NO and NC contacts                      |
| Contact capacity       | 3A AC250V(resistive)                             |
| Dimension              | 40×55×79mm                                       |
| Installation method    | 35mm DIN rail type and device type               |

**HHY11PG-A**  
Liquid level relay



|                        |                                                                                                                                                                                            |
|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Supply voltage         | AC/DC 100~240V                                                                                                                                                                             |
| Operation mode         | Water supply-ultra high alarm type<br>Drainage-ultra high double row type<br>Drainage-ultra low alarm type<br>Water supply-ultra low self-locking type (Short-circuited terminal optional) |
| Water control distance | ≤ 200m                                                                                                                                                                                     |
| Contact form           | Two NO contacts                                                                                                                                                                            |
| Contact capacity       | 1A AC240V(resistive)                                                                                                                                                                       |
| Dimension              | 24.5×85.5×90.5mm                                                                                                                                                                           |
| Installation method    | Screw mounting type or 35mm DIN rail type                                                                                                                                                  |

**HHY7G/7P**  
(JYB-714 water supply/drainage type)  
Liquid level relay



|                        |                                                                |
|------------------------|----------------------------------------------------------------|
| Supply voltage         | DC24V, AC24V, AC220V, AC380V                                   |
| Operation mode         | HHY7G(JYB-714)water supply type<br>HHY7P(JYB-714)drainage type |
| Water control distance | ≤ 100m                                                         |
| Contact form           | 1 set of NO and NC contacts                                    |
| Contact capacity       | 3A AC250V(resistive)                                           |
| Dimension              | 40×62×92mm                                                     |
| Installation method    | 35mm DIN rail type and screw mounting type                     |

**HHY14**  
Floating ball liquid level relay



|                        |                                                  |
|------------------------|--------------------------------------------------|
| Operation mode         | Floating ball contact type                       |
| Water control distance | 1 set of NO and NC contacts                      |
| Contact form           | 10A AC250V(resistive)                            |
| Contact capacity       | 1m, 2m, 3m, 4m, 5m 10m, other lengths customized |
| Dimension              | 160×80×45mm                                      |
| Installation method    | Fixed with heavy hammer                          |

## Time control switch series

The HHQ series time control switch adopts high-performance LCD display chip, which has the advantages of easy operation, clear display and high anti-interference capacity. It is a substitute product for various mechanical time control switches.

This series of product has a great variety, ranging from 8 groups per day to 80 groups per day, and it has various installation methods such as panel type, wall-mounted type, DIN rail type and socket type, which can meet the needs of various users. It is widely used in automatic control circuit for street lamps, neon lights, electric bells, broadcasting and television equipment, production equipment, and household appliances.

This series of time control switch complies with the GB/T 14048.5 standard or GB 14536.8 standard.

**KG316T**  
Time control switch



|                     |                                                       |
|---------------------|-------------------------------------------------------|
| Supply voltage      | AC220V, AC380V                                        |
| Time control range  | 1 min~168 h                                           |
| Timing error        | ≤ ±2 s/day                                            |
| Contact capacity    | ≤ 6kW (resistive load)                                |
| Programmable qty.   | 16 groups/day (with keyboard lock)                    |
| Battery             | 1 1.5V AAA battery                                    |
| Dimension           | 71×105×48mm                                           |
| Installation method | Screw mounting type, DIN rail type, wall-mounted type |

**HHQ4-G**  
Time control switch (light control/rain control)



|                                        |                                                       |
|----------------------------------------|-------------------------------------------------------|
| Supply voltage                         | AC/DC 100V-240V                                       |
| Time control range                     | 1m-168h                                               |
| Timing error                           | ≤ ±1s/day                                             |
| Contact capacity                       | 20A AC250V(resistive)                                 |
| Programmable qty.                      | 16 groups/day (with light control/ rain control)      |
| Battery                                | 1 1.5V AAA battery (external)                         |
| Dimension                              | 72×120×48mm                                           |
| Installation method                    | Screw mounting type, DIN rail type, wall-mounted type |
| Hole size of light/ rain control probe | 2×Φ3.4+0.2/29.5±0.2mm                                 |

**HHQ4-A**  
Time control switch



|                     |                                                       |
|---------------------|-------------------------------------------------------|
| Supply voltage      | AC220V 50Hz                                           |
| Time control range  | 1 min~168 h                                           |
| Timing error        | ≤ ±1s/day                                             |
| Contact capacity    | 20A AC250V(resistive)                                 |
| Programmable qty.   | 16 groups/day switch programming (with keyboard lock) |
| Battery             | 1 1.5V AAA battery (external)                         |
| Dimension           | 72×120×48mm                                           |
| Installation method | Screw mounting type, DIN rail type, wall-mounted type |

**HHQ4-J**  
Time control switch (latitude and longitude)



|                     |                                                       |
|---------------------|-------------------------------------------------------|
| Supply voltage      | AC220V                                                |
| Operation mode      | Longitude and latitude, time control                  |
| Timing error        | ≤ ±1s/day                                             |
| Programmable qty.   | 16 groups/day                                         |
| Time control range  | 1m-16h                                                |
| Contact capacity    | 3A AC250V(resistive)                                  |
| Battery             | 1.5V AAA battery (external)                           |
| Dimension           | 72×120×48mm                                           |
| Installation method | Screw mounting type, DIN rail type, wall-mounted type |

**HHQ4-D**  
Time control switch (fully automatic bell)



|                     |                                                       |
|---------------------|-------------------------------------------------------|
| Supply voltage      | AC220V 50Hz                                           |
| Ring duration       | 1s-23h59m59s                                          |
| Timing error        | ≤ ±1s/day                                             |
| Contact capacity    | 20A AC250V(resistive)                                 |
| Programmable qty.   | 80 times/day                                          |
| Battery             | 1 1.5V AAA battery (external)                         |
| Dimension           | 72×120×48mm                                           |
| Installation method | Screw mounting type, DIN rail type, wall-mounted type |

**HHQ8-1, HHQ8-2**  
Time controller



|                     |                                                                                                |
|---------------------|------------------------------------------------------------------------------------------------|
| Supply voltage      | AC220V 50Hz                                                                                    |
| Time control range  | 1 min~168 h                                                                                    |
| Timing error        | ≤ ±1s/day                                                                                      |
| Programmable qty.   | HHQ8-1: programming for 40 groups of switches<br>HHQ8-2: programming for 40 groups of switches |
| Contact output      | HHQ8-1: 1-circuit output<br>HHQ8-2: 2-circuit output                                           |
| Contact capacity    | HHQ8-1 for 16A AC250V(resistive)<br>HHQ8-2 for 3A AC250V(resistive)                            |
| Battery             | Built-in high-energy lithium battery                                                           |
| Dimension           | 49.5×100×74mm                                                                                  |
| Installation method | 35mm DIN rail type                                                                             |

RELAY SERIES  
 SWITCH SERIES  
 ELECTRIC DRIVE AND CONTROL SERIES  
 INSTRUMENT & METER SERIES  
 DISTRIBUTION CONTROL SERIES  
 AUTOMATION INDUSTRY APPLICATION  
 POWER SUPPLY AND OTHERS

**HHQ8-4, HHQ8-6**  
Multi-circuit time controller



|                      |                                                      |
|----------------------|------------------------------------------------------|
| Working power supply | AC220V 50Hz                                          |
| Time control range   | 1 min~168 h                                          |
| Timing error         | $\leq \pm 1s/day$                                    |
| Programmable qty.    | Totally 40 groups                                    |
| Active output        | HHQ8-4: 4-circuit output<br>HHQ8-6: 6-circuit output |
| Contact capacity     | Single circuit $\leq 500W$                           |
| Battery              | Built-in high-energy lithium battery                 |
| Dimension            | 49.5×100×74mm                                        |
| Installation method  | 35mm DIN rail type                                   |

**HHQ14(KG-2)**  
Automatic street light switch



|                                          |                                                         |
|------------------------------------------|---------------------------------------------------------|
| Working power supply                     | AC220V 50Hz                                             |
| Control mode                             | ON at night and OFF at day time; sensitivity adjustable |
| Wiring length of light control component | $\leq 100m$                                             |
| Active output                            | 6-pin, 5-pin output                                     |
| Contact capacity                         | 3A AC250V(resistive)                                    |
| Dimension                                | 42×75×116mm                                             |
| Installation method                      | Screw mounting type and 35mm DIN rail type              |
| Hole size of light control probe         | $\Phi 16 \pm 0.2mm$                                     |

**HHQ9-1, HHQ9-2**  
Time controller



|                      |                                                                                                |
|----------------------|------------------------------------------------------------------------------------------------|
| Working power supply | AC220V 50Hz                                                                                    |
| Time control range   | 1 min~168 h                                                                                    |
| Timing error         | $\leq \pm 1s/day$                                                                              |
| Programmable qty.    | HHQ9-1: programming for 40 groups of switches<br>HHQ9-2: programming for 40 groups of switches |
| Contact output       | HHQ9-1: 1-circuit output<br>HHQ9-2: 2-circuit output                                           |
| Contact capacity     | HHQ9-1 为 16A AC250V(resistive)<br>HHQ9-2 为 3A AC250V(resistive)                                |
| Battery              | Built-in high-energy lithium battery                                                           |
| Dimension            | 51×51×108mm                                                                                    |
| Hole size            | 45×45mm                                                                                        |
| Installation method  | Panel type, screw mounting type, 35mm DIN rail type                                            |

**HHQ15(DHC15)**  
Time controller



|                      |                                      |
|----------------------|--------------------------------------|
| Working power supply | AC220V 50Hz                          |
| Time control range   | 1 min~168 h                          |
| Timing error         | $\leq \pm 1s/day$                    |
| Contact capacity     | 16A AC250V(resistive)                |
| Programmable qty.    | 16 groups/day switch programming     |
| Battery              | Built-in high-energy lithium battery |
| Dimension            | 36×78×68.5mm                         |
| Installation method  | 35mm DIN rail type                   |

**HHQ9-4, HHQ9-6**  
Multi-circuit time controller



|                      |                                                      |
|----------------------|------------------------------------------------------|
| Working power supply | AC220V 50Hz                                          |
| Time control range   | 1 min~168 h                                          |
| Timing error         | $\leq \pm 1s/day$                                    |
| Programmable qty.    | Totally 40 groups                                    |
| Active output        | HHQ9-4: 4-circuit output<br>HHQ9-6: 6-circuit output |
| Contact capacity     | Single circuit $\leq 500W$                           |
| Battery              | Built-in high-energy lithium battery                 |
| Dimension            | 51×51×108mm                                          |
| Hole size            | 45×45mm                                              |
| Installation method  | Panel type, screw mounting type, 35mm DIN rail type  |

**HHQ16(SDK-6)**  
Latitude and longitude street light controller



|                      |                                                                                                                                     |
|----------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| Working power supply | AC220V 50Hz                                                                                                                         |
| Operation mode       | It automatically adjusts the time for turning on and off lights according to seasonal changes based on local latitude and longitude |
| Timing error         | $\leq \pm 0.5 s/day$                                                                                                                |
| Control model        | Full night light, automatic midnight light, two-stage light                                                                         |
| Contact form         | A,B 2-circuit output                                                                                                                |
| Contact capacity     | 10A AC250V(resistive)                                                                                                               |
| Battery              | Built-in high-energy lithium battery                                                                                                |
| Dimension            | 165×111×63mm                                                                                                                        |
| Installation method  | Screw mounting type, wall-mounted type                                                                                              |

**HHQ12-1(GUK-81)  
HHQ12-2(GUK-82)**  
Street light control switch



|                      |                                                                        |
|----------------------|------------------------------------------------------------------------|
| Working power supply | AC220V 50Hz                                                            |
| Time control range   | ON at night and OFF at day time; sensitivity adjustable                |
| Contact capacity     | HHQ12-1:<br>10A AC250V(resistive)<br>HHQ12-2:<br>40A AC250V(resistive) |
| Dimension            | 50×78×59mm                                                             |
| Installation method  | Screw mounting type or 35mm DIN rail type                              |

**HHQ16-A**  
Latitude and longitude street light controller



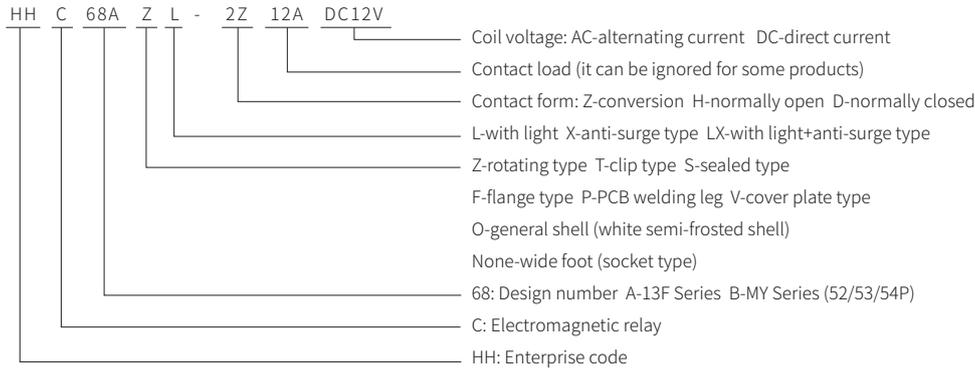
|                      |                                                                                                                                                                                        |
|----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Working power supply | AC100-240V 50/60HZ                                                                                                                                                                     |
| Operation mode       | It automatically adjusts the time for turning on and off lights according to seasonal changes based on local latitude and longitude                                                    |
| Timing error         | $\leq \pm 2min/year$                                                                                                                                                                   |
| Control model        | Full night light, automatic midnight light, two-stage light, light control probe can be equipped to form light control type latitude and longitude intelligent street light controller |
| Contact form         | Two-circuit solid-state relay output                                                                                                                                                   |
| Ambient temp.        | -50°C ~+70°C                                                                                                                                                                           |
| Contact capacity     | 3A AC250V(resistive)                                                                                                                                                                   |
| Dimension            | 88×126×51mm                                                                                                                                                                            |
| Installation method  | Screw mounting type, wall-mounted type                                                                                                                                                 |

## Miniature electromagnetic relay and socket series

The HHC series miniature electromagnetic relay is suitable for electronic control equipment, household appliances, smart homes, office automation, security series, commercial machinery, communication equipment, automobiles, machine tools, construction, transportation equipment, instruments and meters. It can be used as remote control intermediate conversion or amplification element. The outlet terminal spacing and Dimension have been standardized and widely used both domestically and internationally.

This series of small electromagnetic relay complies with the GB/T14048.5 standard. The product has passed CCC self-declaration and UL certification in the United States.

### Model description



**HHC67E**  
(T90)



|              |                                                                                              |
|--------------|----------------------------------------------------------------------------------------------|
| Contact form | 1H, 1D, 1Z                                                                                   |
| Contact load | NC: 30A/240VAC 28VDC<br>NO: 40A/240VAC 28VDC<br>NC: 20A/240VAC 28VDC<br>NO: 30A/240VAC 28VDC |
| Coil power   | DC: 0.93W, AC: 1.5VA                                                                         |
| Coil spec.   | DC: 5V-110V<br>AC: 6V-220V                                                                   |
| Dimension    | 32×27.5×19.8mm                                                                               |

**HHC67G**  
(T92 short)



|              |                                                                                              |
|--------------|----------------------------------------------------------------------------------------------|
| Contact form | 1H, 1D, 1Z                                                                                   |
| Contact load | NC: 30A/240VAC 28VDC<br>NO: 40A/240VAC 28VDC<br>NC: 20A/240VAC 28VDC<br>NO: 30A/240VAC 28VDC |
| Coil power   | DC: 0.93W, AC: 1.5VA                                                                         |
| Coil spec.   | DC: 5V-110V<br>AC: 6V-220V                                                                   |
| Dimension    | 32.4×27.4×28.6mm                                                                             |

**HHC67F**  
(T91)



|              |                                                                                              |
|--------------|----------------------------------------------------------------------------------------------|
| Contact form | 1H, 1D, 1Z                                                                                   |
| Contact load | NC: 30A/240VAC 28VDC<br>NO: 40A/240VAC 28VDC<br>NC: 20A/240VAC 28VDC<br>NO: 30A/240VAC 28VDC |
| Coil power   | DC: 0.93W, AC: 1.5VA                                                                         |
| Coil spec.   | DC: 5V-110V<br>AC: 6V-220V                                                                   |
| Dimension    | 32×27×28.6mm                                                                                 |

**HHC68ASP-2Z**  
(JQX-13F/2Z,LY2) sealed type



|              |                            |
|--------------|----------------------------|
| Contact form | 2H, 2D, 2Z                 |
| Contact load | 10A/240VAC 28VDC           |
| Coil power   | DC: 0.9W, AC: 1.2VA        |
| Coil spec.   | DC: 6V-220V<br>AC: 6V-380V |
| Dimension    | 27.8×21.7×38.1mm           |

**HHC67G**  
(T92 short)



|              |                                                                                              |
|--------------|----------------------------------------------------------------------------------------------|
| Contact form | 1H, 1D, 1Z                                                                                   |
| Contact load | NC: 30A/240VAC 28VDC<br>NO: 40A/240VAC 28VDC<br>NC: 20A/240VAC 28VDC<br>NO: 30A/240VAC 28VDC |
| Coil power   | DC: 0.93W, AC: 1.5VA                                                                         |
| Coil spec.   | DC: 5V-110V<br>AC: 6V-220V                                                                   |
| Dimension    | 32.4×27.4×28.6mm                                                                             |

**HHC68AS-3H**  
(JQX-13F/3H,LY3) sealed type



|              |                            |
|--------------|----------------------------|
| Contact form | 3H, 3D, 3Z                 |
| Contact load | 10A/240VAC 28VDC           |
| Coil power   | DC: 0.9W, AC: 1.2VA        |
| Coil spec.   | DC: 6V-220V<br>AC: 6V-380V |
| Dimension    | 31.8×28×36.8mm             |

HHC68A-1Z  
(JQX-13F/1Z,LY1)



|              |                            |
|--------------|----------------------------|
| Contact form | 1H, 1D, 1Z                 |
| Contact load | 15A/240VAC 28VDC           |
| Coil power   | DC: 0.9W, AC: 1.2VA        |
| Coil spec.   | DC: 6V-220V<br>AC: 6V-380V |
| Dimension    | 27.3×21×35mm               |

HHC68AZL-2Z  
(JQX-13FZ/2Z)



|              |                            |
|--------------|----------------------------|
| Contact form | 2H, 2D, 2Z                 |
| Contact load | 12A/240VAC 28VDC           |
| Coil power   | DC: 0.9W, AC: 1.2VA        |
| Coil spec.   | DC: 6V-220V<br>AC: 6V-380V |
| Dimension    | 27.3×21×36.5mm             |

HHC68A-2Z  
(JQX-13F/2Z,LY2)



|              |                            |
|--------------|----------------------------|
| Contact form | 2H, 2D, 2Z                 |
| Contact load | 10A/240VAC 28VDC           |
| Coil power   | DC: 0.9W, AC: 1.2VA        |
| Coil spec.   | DC: 6V-220V<br>AC: 6V-380V |
| Dimension    | 27.3×21×35mm               |

HHC68AZL-4Z  
(JQX-13FZ/4Z,LY4)



|              |                            |
|--------------|----------------------------|
| Contact form | 4H, 4D, 4Z                 |
| Contact load | 12A/240VAC 28VDC           |
| Coil power   | DC: 1.5W; AC: 3.0VA        |
| Coil spec.   | DC: 6V-220V<br>AC: 6V-380V |
| Dimension    | 27.3×41×36.5mm             |

HHC68A-3Z  
(JQX-13F/3Z,LY3)



|              |                            |
|--------------|----------------------------|
| Contact form | 3H, 3D, 3Z                 |
| Contact load | 10A/240VAC 28VDC           |
| Coil power   | DC: 1.5W; AC: 2.5VA        |
| Coil spec.   | DC: 6V-220V<br>AC: 6V-380V |
| Dimension    | 27.3×31×35mm               |

HHC68B-2Z  
(HH52P,MY2)



|              |                            |
|--------------|----------------------------|
| Contact form | 2H, 2D, 2Z                 |
| Contact load | 5A/240VAC 28VDC            |
| Coil power   | DC: 0.9W AC: 1.2VA         |
| Coil spec.   | DC: 3V-220V<br>AC: 3V-380V |
| Dimension    | 27.3×21×35mm               |

HHC68A-4Z  
(JQX-13F/4Z,LY4)



|              |                            |
|--------------|----------------------------|
| Contact form | 4H, 4D, 4Z                 |
| Contact load | 10A/240VAC 28VDC           |
| Coil power   | DC: 1.5W; AC: 3.0VA        |
| Coil spec.   | DC: 6V-220V<br>AC: 6V-380V |
| Dimension    | 27.3×41×35mm               |

HHC68B-3Z  
(HH53P,MY3)



|              |                            |
|--------------|----------------------------|
| Contact form | 3H, 3D, 3Z                 |
| Contact load | 5A/240VAC 28VDC            |
| Coil power   | DC: 0.9W AC: 1.2VA         |
| Coil spec.   | DC: 3V-220V<br>AC: 3V-380V |
| Dimension    | 27.3×21×35mm               |

HHC68AVL-2Z  
(JQX-13F/2Z)



|              |                            |
|--------------|----------------------------|
| Contact form | 2H, 2D, 2Z                 |
| Contact load | 12A/240VAC 28VDC           |
| Coil power   | DC: 0.9W, AC: 1.2VA        |
| Coil spec.   | DC: 6V-220V<br>AC: 6V-380V |
| Dimension    | 27.3×21×36.5mm             |

HHC68B-4Z  
(HH54P,MY4)



|              |                            |
|--------------|----------------------------|
| Contact form | 4H, 4D, 4Z                 |
| Contact load | 3A/240VAC 28VDC            |
| Coil power   | DC: 0.9W; AC: 1.2VA        |
| Coil spec.   | DC: 3V-220V<br>AC: 3V-380V |
| Dimension    | 27.3×21×35mm               |

HHC68BVL-2Z 10A  
(HH52P,MY2)



|              |                            |
|--------------|----------------------------|
| Contact form | 2H, 2D, 2Z                 |
| Contact load | 10A/240VAC 28VDC           |
| Coil power   | DC: 0.9W, AC: 1.2VA        |
| Coil spec.   | DC: 6V-220V<br>AC: 6V-380V |
| Dimension    | 27.3×21×36.2mm             |

HHC68BZL-2Z 10A  
(HH52P,MY2)



|              |                            |
|--------------|----------------------------|
| Contact form | 2H, 2D, 2Z                 |
| Contact load | 10A/240VAC 28VDC           |
| Coil power   | DC: 0.9W, AC: 1.2VA        |
| Coil spec.   | DC: 6V-220V<br>AC: 6V-380V |
| Dimension    | 27.3×21×36.2mm             |

HHC68BVL-2Z  
(HH52P)



|              |                            |
|--------------|----------------------------|
| Contact form | 2H, 2D, 2Z                 |
| Contact load | 6.5A/240VAC 28VDC          |
| Coil power   | DC: 0.9W, AC: 1.2VA        |
| Coil spec.   | DC: 6V-220V<br>AC: 6V-380V |
| Dimension    | 27.3×21×36.2mm             |

HHC68BZL-2Z  
(HH52PZ)



|              |                            |
|--------------|----------------------------|
| Contact form | 2H, 2D, 2Z                 |
| Contact load | 6.5A/240VAC 28VDC          |
| Coil power   | DC: 0.9W, AC: 1.2VA        |
| Coil spec.   | DC: 6V-220V<br>AC: 6V-380V |
| Dimension    | 27.3×21×36.2mm             |

HHC68BVL-4Z  
(HH54P)



|              |                            |
|--------------|----------------------------|
| Contact form | 4H, 4D, 4Z                 |
| Contact load | 5A/240VAC 28VDC            |
| Coil power   | DC: 0.9W, AC: 1.2VA        |
| Coil spec.   | DC: 6V-220V<br>AC: 6V-380V |
| Dimension    | 27.3×21×36.2mm             |

HHC68BZL-4Z  
(HH54PZ)



|              |                            |
|--------------|----------------------------|
| Contact form | 4H, 4D, 4Z                 |
| Contact load | 5A/240VAC 28VDC            |
| Coil power   | DC: 0.9W, AC: 1.2VA        |
| Coil spec.   | DC: 6V-220V<br>AC: 6V-380V |
| Dimension    | 27.3×21×36.2mm             |

HHC68BSL-2Z  
(HH52P,MY2) sealed type



|              |                            |
|--------------|----------------------------|
| Contact form | 2H, 2D, 2Z                 |
| Contact load | 5A/240VAC 28VDC            |
| Coil power   | DC: 0.9W, AC: 1.2VA        |
| Coil spec.   | DC: 3V-220V<br>AC: 3V-380V |
| Dimension    | 27.8×21.7×38.1mm           |

HHC69KTL-1Z



|              |                                              |
|--------------|----------------------------------------------|
| Contact form | 1H, 1D, 1Z                                   |
| Contact load | NC: 12A/240VAC 28VDC<br>NO: 15A/240VAC 28VDC |
| Coil power   | DC: 0.53W, AC: 1.0VA                         |
| Coil spec.   | DC: 5V-110V<br>AC: 6V-380V                   |
| Dimension    | 34×12.7×28.8mm                               |

HHC68BSL-4Z  
(HH54P,MY4) sealed type



|              |                            |
|--------------|----------------------------|
| Contact form | 4H, 4D, 4Z                 |
| Contact load | 3A/240VAC 28VDC            |
| Coil power   | DC: 0.9W, AC: 1.2VA        |
| Coil spec.   | DC: 3V-220V<br>AC: 3V-380V |
| Dimension    | 27.8×21.7×38.1mm           |

HHC69KTL-2Z



|              |                            |
|--------------|----------------------------|
| Contact form | 2H, 2D, 2Z                 |
| Contact load | 8A/240VAC 28VDC            |
| Coil power   | DC: 0.53W, AC: 1.0VA       |
| Coil spec.   | DC: 5V-110V<br>AC: 6V-220V |
| Dimension    | 34×12.7×28.8mm             |

RELAY  
SERIES

SWITCH  
SERIES

ELECTRIC DRIVE AND  
CONTROL SERIES

INSTRUMENT &  
METER SERIES

DISTRIBUTION  
CONTROL SERIES

AUTOMATION INDUSTRY  
APPLICATION

POWER SUPPLY  
AND OTHERS

HHC69K-1Z



|              |                                              |
|--------------|----------------------------------------------|
| Contact form | 1H, 1D, 1Z                                   |
| Contact load | NC: 12A/240VAC 28VDC<br>NO: 15A/240VAC 28VDC |
| Coil power   | DC: 0.53W, AC: 1.0VA                         |
| Coil spec.   | DC: 5V-110V<br>AC: 6V-380V                   |
| Dimension    | 27×12.7×28.8mm                               |

HHC69K-2Z



|              |                            |
|--------------|----------------------------|
| Contact form | 2H, 2D, 2Z                 |
| Contact load | 8A/240VAC 28VDC            |
| Coil power   | DC: 0.53W, AC: 1.0VA       |
| Coil spec.   | DC: 5V-110V<br>AC: 6V-220V |
| Dimension    | 27×12.7×28.8mm             |

HHC69KP-1Z



|              |                            |
|--------------|----------------------------|
| Contact form | 1H, 1Z                     |
| Contact load | 16A/277VAC 30VDC           |
| Coil power   | DC: 0.53W; AC: 1.0VA       |
| Coil spec.   | DC: 5V-110V<br>AC: 6V-220V |
| Dimension    | 29×12.7×27.5mm             |

HHC69KP-2Z



|              |                                            |
|--------------|--------------------------------------------|
| Contact form | 2H, 2Z                                     |
| Contact load | NO:12A 277VAC/30VDC<br>NC:10A 277VAC/30VDC |
| Coil power   | DC: 0.53W; AC: 1.0VA                       |
| Coil spec.   | DC: 5V-110V<br>AC: 6V-220V                 |
| Dimension    | 29×12.7×27.5mm                             |

HHC70A(2Z)  
(JQX-10F; JTX)



|              |                            |
|--------------|----------------------------|
| Contact form | 2H, 2D, 2Z                 |
| Contact load | 10A/240VAC 28VDC           |
| Coil power   | DC: 1.8W; AC: 2.7VA        |
| Coil spec.   | DC: 6V-220V<br>AC: 6V-380V |
| Dimension    | 35×35×53mm                 |

HHC70A(3Z)  
(JQX-10F; JTX)



|              |                            |
|--------------|----------------------------|
| Contact form | 3H, 3D, 3Z                 |
| Contact load | 10A/240VAC 28VDC           |
| Coil power   | DC: 1.8W; AC: 2.7VA        |
| Coil spec.   | DC: 6V-220V<br>AC: 6V-380V |
| Dimension    | 35×35×53mm                 |

HHC70B  
(MK 2P)



|              |                            |
|--------------|----------------------------|
| Contact form | 2H, 2D, 2Z                 |
| Contact load | 10A/240VAC 28VDC           |
| Coil power   | DC: 1.8W; AC: 2.7VA        |
| Coil spec.   | DC: 6V-220V<br>AC: 6V-380V |
| Dimension    | 35×35×53mm                 |

HHC70B  
(MK 3P)



|              |                            |
|--------------|----------------------------|
| Contact form | 3H, 3D, 3Z                 |
| Contact load | 10A/240VAC 28VDC           |
| Coil power   | DC: 1.8W; AC: 2.7VA        |
| Coil spec.   | DC: 6V-220V<br>AC: 6V-380V |
| Dimension    | 35×35×53mm                 |

HHC71A  
(JQX-30F)



|              |                            |
|--------------|----------------------------|
| Contact form | 1H, 1D, 1Z, 2H, 2D, 2Z     |
| Contact load | 30A/240VAC 28VDC           |
| Coil power   | DC: 2.0W; AC: 4.0VA        |
| Coil spec.   | DC: 6V-220V<br>AC: 6V-380V |
| Dimension    | 51.5×35.6×42mm             |

HHC71A1  
(JQX-12F)



|              |                            |
|--------------|----------------------------|
| Contact form | 1H, 1D, 1Z, 2H, 2D, 2Z     |
| Contact load | 30A/240VAC 28VDC           |
| Coil power   | DC: 2.0W; AC: 4.0VA        |
| Coil spec.   | DC: 6V-220V<br>AC: 6V-380V |
| Dimension    | 53×46×41.3mm               |

**HHC71B**  
(JQX-38F)



|              |                                      |
|--------------|--------------------------------------|
| Contact form | 2H, 2D, 2Z, 3H, 3D, 3Z               |
| Contact load | 40A/240VAC 28VDC<br>50A/240VAC 28VDC |
| Coil power   | DC: 2.5W; AC: 6VA                    |
| Coil spec.   | DC: 6V-220V<br>AC: 6V-380V           |
| Dimension    | 42×50×58mm                           |
| Dimension    | 42.7×37.5×59.5mm                     |

**HHC71K-2H**  
(JQX-116F-2H)



Sharp foot  
sealed type

|              |                                                      |
|--------------|------------------------------------------------------|
| Contact form | 1H, 2H                                               |
| Contact load | 30A/277VAC 30VDC<br>1.5A/220VDC                      |
| Coil power   | DC: 2.0W; AC: 4.0VA                                  |
| Coil spec.   | DC: 6V-220V<br>AC: 6V-380V                           |
| Dimension    | General: 50.6×33.4×39mm<br>Flange type: 68×33.4×39mm |

**HHC71B(JQX-38F)**  
Sealed type



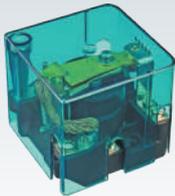
|              |                            |
|--------------|----------------------------|
| Contact form | 2H, 2D, 2Z, 3H, 3D, 3Z     |
| Contact load | 40A/240VAC 28VDC           |
| Coil power   | DC: 2.5W; AC: 6VA          |
| Coil spec.   | DC: 6V-220V<br>AC: 6V-380V |
| Dimension    | 42.7×37.5×59.5mm           |

**HHC41-101Z**  
**HHC41-6 1Z**



|              |                        |
|--------------|------------------------|
| Contact form | 1H, 1Z                 |
| Contact load | 6A/277VAC 24VDC 6A/10A |
| Coil power   | 0.17W/0.4W             |
| Coil spec.   | DC3-24V/DC3-60V        |
| Dimension    | 28×5×18.6mm            |

**HHC71F-1Z**  
(JQX-62F/1Z)



Improved

|              |                            |
|--------------|----------------------------|
| Contact form | 1H, 1D, 1Z                 |
| Contact load | 100A/240VAC 28VDC          |
| Coil power   | DC: 2.0W; AC: 10.0VA       |
| Coil spec.   | DC: 6V-220V<br>AC: 6V-380V |
| Dimension    | 67×67×60.5mm               |

**P41F05-E socket**  
**P41F05-S socket**



|              |           |
|--------------|-----------|
| Contact form | 8A        |
| Contact load | 300V      |
| Coil power   | 2500VAC/S |
| Coil spec.   | HHC41F-1Z |

**HHC71F-2Z**  
(JQX-62F/2Z)



Improved

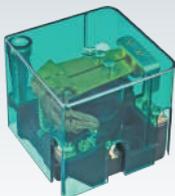
|              |                            |
|--------------|----------------------------|
| Contact form | 2H, 2D, 2Z                 |
| Contact load | 80A/240VAC 28VDC           |
| Coil power   | DC: 2.0W; AC: 10.0VA       |
| Coil spec.   | DC: 6V-220V<br>AC: 6V-380V |
| Dimension    | 85×68×65mm                 |

**PTF08A1**  
Socket



|                     |              |
|---------------------|--------------|
| Load current        | 12A          |
| Load voltage        | 300V         |
| Dielectric strength | 2500VAC/S    |
| Applied relay       | HH64P<br>LY2 |

**HHC71FS-1Z**  
(JQX-62FS/1Z)



Improved

|              |                            |
|--------------|----------------------------|
| Contact form | 1H, 1D, 1Z                 |
| Contact load | 120A/240VAC 28VDC          |
| Coil power   | DC: 2.0W; AC: 10.0VA       |
| Coil spec.   | DC: 6V-220V<br>AC: 6V-380V |
| Dimension    | 67×67×60.5mm               |

**PYF08A1**  
Socket



|                     |              |
|---------------------|--------------|
| Load current        | 10A          |
| Load voltage        | 300V         |
| Dielectric strength | 2500VAC/S    |
| Applied relay       | HH52P<br>MY2 |

RELAY SERIES  
 SWITCH SERIES  
 ELECTRIC DRIVE AND CONTROL SERIES  
 INSTRUMENT & METER SERIES  
 DISTRIBUTION CONTROL SERIES  
 AUTOMATION INDUSTRY APPLICATION  
 POWER SUPPLY AND OTHERS

**PYF14A1**  
Socket



|                     |              |
|---------------------|--------------|
| Load current        | 7A           |
| Load voltage        | 300V         |
| Dielectric strength | 2500VAC/S    |
| Applied relay       | HH54P<br>MY4 |

**PYF14A6**  
Socket



|                     |                                                       |
|---------------------|-------------------------------------------------------|
| Load current        | 7A                                                    |
| Load voltage        | 300V                                                  |
| Dielectric strength | 2500VAC/S                                             |
| Applied relay       | HHC68BZ-4Z<br>JQX-18F-4Z<br>HHC68B-4Z<br>HH54P<br>MY4 |

**PYF08A**  
Socket



|                     |                                                       |
|---------------------|-------------------------------------------------------|
| Load current        | 10A                                                   |
| Load voltage        | 300V                                                  |
| Dielectric strength | 2500VAC/S                                             |
| Applied relay       | HHC68BZ-2Z<br>JQX-18F-2Z<br>HHC68B-2Z<br>HH52P<br>MY2 |

**PTF08A**  
Socket



|                     |                                                                                     |
|---------------------|-------------------------------------------------------------------------------------|
| Load current        | 12A                                                                                 |
| Load voltage        | 300V                                                                                |
| Dielectric strength | 2500VAC/S                                                                           |
| Applied relay       | HHC68A-2Z<br>HHC68AZ-2Z<br>JQX-13F-1Z<br>JQX-13F-2Z<br>HH61P<br>HH62P<br>LY1<br>LY2 |

**PYF11A**  
Socket



|                     |                                                       |
|---------------------|-------------------------------------------------------|
| Load current        | 7A                                                    |
| Load voltage        | 300V                                                  |
| Dielectric strength | 2000VAC/S                                             |
| Applied relay       | HHC68BZ-3Z<br>JQX-18F-3Z<br>HHC68B-3Z<br>HH53P<br>MY3 |

**PTF11A**  
Socket



|                     |                                         |
|---------------------|-----------------------------------------|
| Load current        | 12A                                     |
| Load voltage        | 300V                                    |
| Dielectric strength | 2500VAC/S                               |
| Applied relay       | HHC68A-3Z<br>JQX-13F-3Z<br>HH63P<br>LY3 |

**PYF14A**  
Socket



|                     |                                                       |
|---------------------|-------------------------------------------------------|
| Load current        | 7A                                                    |
| Load voltage        | 300V                                                  |
| Dielectric strength | 2000VAC/S                                             |
| Applied relay       | HHC68BZ-4Z<br>JQX-18F-4Z<br>HHC68B-4Z<br>HH54P<br>MY4 |

**PTF14A**  
Socket



|                     |                                         |
|---------------------|-----------------------------------------|
| Load current        | 12A                                     |
| Load voltage        | 300V                                    |
| Dielectric strength | 2500VAC/S                               |
| Applied relay       | HHC68A-4Z<br>JQX-13F-4Z<br>HH64P<br>LY4 |

**PYF08A6**  
Socket



|                     |                                                       |
|---------------------|-------------------------------------------------------|
| Load current        | 10A                                                   |
| Load voltage        | 300V                                                  |
| Dielectric strength | 2500VAC/S                                             |
| Applied relay       | HHC68BZ-2Z<br>JQX-18F-2Z<br>HHC68B-2Z<br>HH52P<br>MY2 |

**38F-11A**  
Socket



|                     |                              |
|---------------------|------------------------------|
| Load current        | 40A                          |
| Load voltage        | 300V                         |
| Dielectric strength | 2000VAC/S                    |
| Applied relay       | HHC71B<br>HHC70-3<br>JQX-38F |

P69F05E3 Socket  
 P69F08E3 Socket



|                     |                                        |
|---------------------|----------------------------------------|
| Load current        | 10A/7A                                 |
| Load voltage        | 300V                                   |
| Dielectric strength | 2500VAC/S                              |
| Applied relay       | HHC69A (JQX-14FC)<br>HHC69B (JQX-14FF) |

PF083A-E Socket  
 PF083A Socket



|                     |                                                    |
|---------------------|----------------------------------------------------|
| Load current        | 12A                                                |
| Load voltage        | 300V                                               |
| Dielectric strength | 2500VAC/S                                          |
| Applied relay       | HHC70A(JQX-10F)<br>HHC70A(JTX-2C)<br>HHC70B1(MK2P) |

13F2C A  
 Socket



|                     |                                                                                                                 |
|---------------------|-----------------------------------------------------------------------------------------------------------------|
| Load current        | 12A                                                                                                             |
| Load voltage        | 300V                                                                                                            |
| Dielectric strength | 2500VAC/S                                                                                                       |
| Applied relay       | Welded small seat<br>HHC68A-1Z<br>HHC68A-2Z<br>HHC68AZ-2Z<br>JQX-13F-1Z<br>JQX-13F-2Z<br>HH61P HH62P<br>LY1 LY2 |

10F08B-E Socket  
 10F11B-E Socket



|                     |                                                                                       |
|---------------------|---------------------------------------------------------------------------------------|
| Load current        | 10A                                                                                   |
| Load voltage        | 300V                                                                                  |
| Dielectric strength | 2500VAC/S                                                                             |
| Applied relay       | HHC70A(JQX-10F)<br>HHC70A(JTX-2C)<br>HHC70A(JTX-3C)<br>HHC70B1(MK2P)<br>HHC70B1(MK3P) |

18F2C A<sub>2</sub> Socket  
 18F3C A<sub>2</sub> Socket  
 18F4C A<sub>2</sub> Socket



|                     |                                                                                                                            |
|---------------------|----------------------------------------------------------------------------------------------------------------------------|
| Load current        | 7A                                                                                                                         |
| Load voltage        | 300V                                                                                                                       |
| Dielectric strength | 2500VAC/S                                                                                                                  |
| Applied relay       | Welded small seat<br>HHC68B-2Z, 3Z, 4Z<br>HHC68BZ-2Z, 3Z, 4Z<br>JQX-18F-2Z, 3Z, 4Z<br>HH52P, HH53P, HH54P<br>MY2, MY3, MY4 |

14F1C-XZ1 Socket  
 14F2C-XZ1 Socket



|                     |                                        |
|---------------------|----------------------------------------|
| Load current        | 10A                                    |
| Load voltage        | 300V                                   |
| Dielectric strength | 2500VAC/S                              |
| Applied relay       | HHC69A (JQX-14FC)<br>HHC69B (JQX-14FF) |

PF113A-E Socket  
 PF113A Socket



|                     |                                                    |
|---------------------|----------------------------------------------------|
| Load current        | 12A                                                |
| Load voltage        | 300V                                               |
| Dielectric strength | 2500VAC/S                                          |
| Applied relay       | HHC70A(JQX-10F)<br>HHC70A(JTX-3C)<br>HHC70B1(MK3P) |

RELAY  
 SERIES

SWITCH  
 SERIES

ELECTRIC DRIVE AND  
 CONTROL SERIES

INSTRUMENT &  
 METER SERIES

DISTRIBUTION  
 CONTROL SERIES

AUTOMATION INDUSTRY  
 APPLICATION

POWER SUPPLY  
 AND OTHERS

## Three-phase power regulator series

The power regulator is a power controller based on thyristor module, with intelligent control circuit as the core, and it is also known as thyristor power regulator. The basic principle is to convert the DC signal output by the instrument into digital synchronous trigger signal to trigger the thyristor, change the conduction angle of the thyristor to regulate voltage and power, thereby achieving precise temperature control. It's widely used in heating industries such as industrial furnaces, glass melting furnaces, ovens, petrochemicals, shoe machines, etc.

HHT4-4/3825P



|                     |                                                                  |
|---------------------|------------------------------------------------------------------|
| Control mode        | Three options: 4-20mA, 0-5V, 0-10V                               |
| Output method       | Phase output, phase shift range 0-150°                           |
| Load voltage        | 3-phase 380VAC (3-phase 3-wire)                                  |
| Load current        | 25A                                                              |
| Protection function | Quick fuse                                                       |
| Alarm function      | Phase failure, overtemp, relay output (1A/250VAC)                |
| Dielectric strength | ≥ 2000VAC                                                        |
| Display function    | LED panel displays SCR output percentage and work status         |
| Installation method | Bolt installation                                                |
| Use load            | Fixed impedance heating wire, IR far infrared, UV lamp tube, etc |
| Dimension           | 150×130×175mm                                                    |
| Cooling method      | Natural cooling                                                  |

HHT4-4/3840P



|                     |                                                                  |
|---------------------|------------------------------------------------------------------|
| Control mode        | Three options: 4-20mA, 0-5V, 0-10V                               |
| Output method       | Phase output, phase shift range 0-150°                           |
| Load voltage        | 3-phase 380VAC (3-phase 3-wire)                                  |
| Load current        | 40A                                                              |
| Protection function | Quick fuse                                                       |
| Alarm function      | Phase failure, overtemp, relay output (1A/250VAC)                |
| Dielectric strength | ≥ 2000VAC                                                        |
| Display function    | LED panel displays SCR output percentage and work status         |
| Installation method | Bolt installation                                                |
| Use load            | Fixed impedance heating wire, IR far infrared, UV lamp tube, etc |
| Dimension           | 150×130×175mm                                                    |
| Cooling method      | Forced air cooling                                               |

HHT4-4/3875P  
HHT4-4/38100P



|                     |                                                                  |
|---------------------|------------------------------------------------------------------|
| Control mode        | Three options: 4-20mA, 0-5V, 0-10V                               |
| Output method       | Phase output, phase shift range 0-150°                           |
| Load voltage        | 3-phase 380VAC (3-phase 3-wire)                                  |
| Load current        | 75, 100A                                                         |
| Protection function | Quick fuse                                                       |
| Alarm function      | Phase failure, overtemp, relay output (1A/250VAC)                |
| Dielectric strength | ≥ 2000VAC                                                        |
| Display function    | LED panel displays SCR output percentage and work status         |
| Installation method | Bolt installation                                                |
| Use load            | Fixed impedance heating wire, IR far infrared, UV lamp tube, etc |
| Dimension           | 218×130×175mm                                                    |
| Cooling method      | Forced air cooling                                               |

HHT4-4/38  
125P,150P,200P



|                     |                                                                  |
|---------------------|------------------------------------------------------------------|
| Control mode        | Three options: 4-20mA, 0-5V, 0-10V                               |
| Output method       | Phase output, phase shift range 0-150°                           |
| Load voltage        | 3-phase 380VAC (3-phase 3-wire)                                  |
| Load current        | 125, 150, 200A                                                   |
| Protection function | Quick fuse                                                       |
| Alarm function      | Phase failure, overtemp, relay output (1A/250VAC)                |
| Dielectric strength | ≥ 2000VAC                                                        |
| Display function    | LED panel displays SCR output percentage and work status         |
| Installation method | Bolt installation                                                |
| Use load            | Fixed impedance heating wire, IR far infrared, UV lamp tube, etc |
| Dimension           | 295×148×210mm                                                    |
| Cooling method      | Forced air cooling                                               |

PAK series three-phase SCR  
Power/Voltage regulating controller  
PAK06 (3-phase 3-wire)



|                            |                                                                                                                                  |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| Rated voltage              | 3-phase 380VAC (3-phase 3-wire)                                                                                                  |
| Trigger current            | 300mA can trigger thyristor of 1000A or below                                                                                    |
| Auxiliary power supply     | PCB board operation power supply AC220V ± 10% 50/60Hz control terminal The L/N and N wires must be connected to the neutral wire |
| Input signal               | Control signal (0-5VDC, 0-20mA, 1-5VDC, 4-20mA) optional                                                                         |
| Usage environment          | Temperature -10-55°C, humidity below 99% RH                                                                                      |
| Withstand voltage strength | Insulation withstand voltage AC2500V/1 min, input/output isolation voltage AC2000V                                               |
| Alarm output               | 1 set of NO/NC output point (1A/250VAC)                                                                                          |
| Start-stop time            | Soft start and soft stop time 1-4s adjustable                                                                                    |
| Protection function        | Load phase loss detection, auxiliary power supply L/N reversed connection                                                        |
| Dimension                  | 145×90×40mm                                                                                                                      |

Single-phase solid-state  
voltage regulator  
(Resistance type)

HHT1-R/22(SSR-VA)  
HHT1-R/38(SSR-VA)



|                           |                                                                                                                                 |
|---------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| Control mode              | 2W470-560KΩ potentiometer adjustment                                                                                            |
| Voltage regulation range  | 10-250VAC, 10-440VAC                                                                                                            |
| Load voltage              | 22: 220VAC<br>38: 380VAC                                                                                                        |
| Load current              | 10A, 15A, 20A, 25A<br>30A, 40A, 60A, 80A                                                                                        |
| Min. cut-off              | ≤ 10VAC                                                                                                                         |
| Isolation voltage         | Not isolated                                                                                                                    |
| Off-state leakage current | ≤ 10mA                                                                                                                          |
| Dielectric strength       | ≥ 2500VAC output terminal-heat dissipation board                                                                                |
| Ambient temp              | -30~80°C                                                                                                                        |
| Dimension                 | 60×45×29mm                                                                                                                      |
| Installation form         | Bolt installation                                                                                                               |
| Instruction               | A radiator must be installed for loads above 5A, and a fan of strong cooling or water cooling must be added for loads above 80A |

**Single-phase solid-state voltage regulator (Current type)**

HHT1-L/22(SSR-VA)  
 HHT1-L/38(SSR-VA)



|                           |                                                                                                                                |
|---------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| Control mode              | 4-20mA adjustment                                                                                                              |
| Phase shift range         | 0-175 degrees                                                                                                                  |
| Voltage regulation range  | 22:10-250VAC, 38: 10-440VAC                                                                                                    |
| Load voltage              | 250VAC, 440VAC                                                                                                                 |
| Load current              | 10A, 15A, 20A, 25A, 30A, 40A, 60A, 80A                                                                                         |
| Min. cut-off              | ≤ 3VAC                                                                                                                         |
| Isolation voltage         | Passive type fully isolated                                                                                                    |
| Off-state leakage current | ≤ 10mA                                                                                                                         |
| Dielectric strength       | ≥ 2500VAC                                                                                                                      |
| Ambient temp.             | -30~80°C                                                                                                                       |
| Dimension                 | 60×45×29mm                                                                                                                     |
| Installation form         | Bolt installation                                                                                                              |
| Instruction               | A radiator must be installed for loads above 5A;<br>A fan of strong cooling or water cooling must be added for loads above 80A |

**Intelligent solid-state voltage regulator**

HHT3-5/22 25-180A(SSR-VA)  
 3-phase 4-wire voltage regulation (2023 type)



|                           |                                                                                                                                |
|---------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| Control mode              | 0-5VDC, 0-10VDC, 4-20mA manual potentiometer control                                                                           |
| Rated voltage             | 220VAC                                                                                                                         |
| Phase shift angle         | 0~180°                                                                                                                         |
| Voltage regulation range  | 0-220VAC                                                                                                                       |
| Isolation voltage         | Active type fully isolated                                                                                                     |
| Load current              | 25A, 40A, 75A, 100A, 125A, 150A, 180A                                                                                          |
| Min. cut-off              | 40A 以下 ≤ 10VAC 60A 以上 ≤ 30VAC                                                                                                  |
| Off-state leakage current | ≤ 10mA                                                                                                                         |
| Dielectric strength       | ≥ 2000VAC                                                                                                                      |
| Ambient temp.             | -30~80°C                                                                                                                       |
| Dimension                 | 106.4×75.4×43.3mm                                                                                                              |
| Installation form         | Bolt installation                                                                                                              |
| Instruction               | A radiator must be installed for loads above 5A;<br>A fan of strong cooling or water cooling must be added for loads above 80A |

**Fully isolated single-phase AC voltage regulation module**

HHT3-U/22/38(SSR-VA)



|                           |                                                                                                |
|---------------------------|------------------------------------------------------------------------------------------------|
| Control mode              | 0-5VDC 0-10VDC 4-20mA                                                                          |
| Voltage regulation range  | 22:10-250VAC, 38: 10-380VAC                                                                    |
| Load voltage              | 250VAC, 380VAC                                                                                 |
| Load current              | 10A, 20A, 30A, 40A, 100A                                                                       |
| On-state voltage drop     | ≤ 1.6VAC                                                                                       |
| Isolation voltage         | Active type fully isolated                                                                     |
| Off-state leakage current | ≤ 10mA                                                                                         |
| Dielectric strength       | ≥ 2500VAC                                                                                      |
| Ambient temp.             | -30~80°C                                                                                       |
| Dimension                 | 106×75×35mm                                                                                    |
| Installation form         | Bolt installation                                                                              |
| Instruction               | A radiator must be installed for loads above 5A<br>0-5 (10) VDC manual or automatic adjustment |

**Intelligent solid-state voltage regulator**

HHT3-3/38(25-125A)  
 3-phase 3-wire voltage regulation (2023 model)



|                           |                                                                                                                                |
|---------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| Control mode              | Three options: 0-5VDC, 0-10VDC, 4-20mA                                                                                         |
| Rated voltage             | 380VAC                                                                                                                         |
| Phase shift angle         | 0~150°                                                                                                                         |
| Voltage regulation range  | 0-380VAC                                                                                                                       |
| Isolation voltage         | Active type fully isolated                                                                                                     |
| Load current              | 25A, 40A, 75A, 100A, 125A                                                                                                      |
| Min. cut-off              | ≤ 3.0VAC                                                                                                                       |
| Off-state leakage current | ≤ 10mA                                                                                                                         |
| Dielectric strength       | ≥ 2000VAC                                                                                                                      |
| Ambient temp.             | -30~80°C                                                                                                                       |
| Dimension                 | 106×75×41mm                                                                                                                    |
| Installation form         | Bolt installation                                                                                                              |
| Instruction               | A radiator must be installed for loads above 5A;<br>A fan of strong cooling or water cooling must be added for loads above 80A |

**Intelligent solid-state voltage regulator**

HHT3-3/38 25-180A (SSR-VA)  
 3-phase 3-wire voltage regulation (2023 type)



|                           |                                                                                                                                |
|---------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| Control mode              | 0-5VDC, 0-10VDC, 4-20mA manual potentiometer control                                                                           |
| Rated voltage             | 380VAC                                                                                                                         |
| Phase shift angle         | 0~150°                                                                                                                         |
| Voltage regulation range  | 0-380VAC                                                                                                                       |
| Isolation voltage         | Active type fully isolated                                                                                                     |
| Load current              | 25A, 40A, 75A, 100A, 125A, 150A, 180A                                                                                          |
| Min. cut-off              | 40A 以下 ≤ 10VAC 60A 以上 ≤ 30VAC                                                                                                  |
| Off-state leakage current | ≤ 10mA                                                                                                                         |
| Dielectric strength       | ≥ 2000VAC                                                                                                                      |
| Ambient temp.             | -30~80°C                                                                                                                       |
| Dimension                 | 106.4×75.4×43.3mm                                                                                                              |
| Installation form         | Bolt installation                                                                                                              |
| Instruction               | A radiator must be installed for loads above 5A;<br>A fan of strong cooling or water cooling must be added for loads above 80A |

RELAY SERIES

SWITCH SERIES

ELECTRIC DRIVE AND CONTROL SERIES

INSTRUMENT & METER SERIES

DISTRIBUTION CONTROL SERIES

AUTOMATION INDUSTRY APPLICATION

POWER SUPPLY AND OTHERS

## Solid-state relay series

The HHG series solid-state relay adopts internationally popular circuits and technologies: input includes linear control, constant current control and AC control, LED indicating work status, bidirectional thyristor output or unidirectional thyristor anti-parallel output, zero voltage connection, zero current disconnection. Optoelectronic isolation between input and output, with built-in absorption circuit. It's widely used in industrial automation control equipment, power plant and substation electromechanical protection system.

This series of solid-state relay complies with the GB/T14048.5 standard and has passed CCC self-declaration and UL certification in the United States.

### DC controls AC DC controls DC

HHG41-0/032F-06(SSR-DD)  
HHG41-1/032F-22/38(SSR-DA)



Adaptive socket41F-1Z-C2N 5V

|                           |                                                           |
|---------------------------|-----------------------------------------------------------|
| Control voltage           | 3-32VDC                                                   |
| Control current           | 5-20mA                                                    |
| Load voltage              | 06: 5-60VDC<br>22: 24-240VAC<br>38: 24-440VAC             |
| Load current              | 1A, 2A                                                    |
| On-state voltage drop     | DC ≤ 1.2V AC ≤ 1.6VAC                                     |
| On-off time               | DC ≤ 5ms AC ≤ 10ms                                        |
| Off-state leakage current | DC ≤ 5mA AC ≤ 10mA                                        |
| Dielectric strength       | ≥ 1500VAC                                                 |
| Ambient temp.             | -30~80°C                                                  |
| Dimension                 | 28×18.5×5mm                                               |
| Installation form         | Single line direct plug-in                                |
| Instruction               | Installed next to well ventilated heat dissipation window |

### DC controls AC DC controls DC

HHG1D-1/032F-22 (SSR-DA)  
HHG1D-1/032F-38 (SSR-DA)  
HHG1D-0/032F-20 (SSR-DD)



|                           |                                                           |
|---------------------------|-----------------------------------------------------------|
| Control voltage           | 3-32VDC                                                   |
| Control current           | 6-25mA                                                    |
| Load voltage              | 22: 24-240VAC<br>38: 24-440VAC<br>20: 12-200VDC           |
| Load current              | 3A, 4A                                                    |
| On-state voltage drop     | DC ≤ 1.2V AC ≤ 1.6VAC                                     |
| On-off time               | DC ≤ 5ms AC ≤ 10ms                                        |
| Off-state leakage current | DC ≤ 5mA AC ≤ 10mA                                        |
| Dielectric strength       | ≥ 1500VAC                                                 |
| Ambient temp.             | -30~80°C                                                  |
| Dimension                 | 43×12×25.5mm                                              |
| Installation form         | Single line direct plug-in                                |
| Instruction               | Installed next to well ventilated heat dissipation window |

### DC controls AC DC controls DC

HHG41-0/032F-06-D(SSR-DD)  
HHG41-1/032F-22/38-D(SSR-DA)



|                           |                                                           |
|---------------------------|-----------------------------------------------------------|
| Control voltage           | 3-32VDC                                                   |
| Control current           | 5-20mA                                                    |
| Load voltage              | 06: 5-60VDC<br>22: 24-240VAC<br>38: 24-440VAC             |
| Load current              | 1A, 2A                                                    |
| On-state voltage drop     | DC ≤ 1.2V AC ≤ 1.6VAC                                     |
| On-off time               | DC ≤ 5ms AC ≤ 10ms                                        |
| Off-state leakage current | DC ≤ 5mA AC ≤ 10mA                                        |
| Dielectric strength       | ≥ 1500VAC                                                 |
| Ambient temp.             | -30~80°C                                                  |
| Dimension                 | 97×82×6.2mm                                               |
| Installation form         | -D: DIN Rail installation                                 |
| Instruction               | Installed next to well ventilated heat dissipation window |

### DC controls AC DC controls DC

HHG1D-1/032F-22 (SSR-DA)  
HHG1D-1/032F-38 (SSR-DA)  
HHG1D-0/032F-20 (SSR-DD)



|                           |                                                           |
|---------------------------|-----------------------------------------------------------|
| Control voltage           | 3-32VDC                                                   |
| Control current           | 6-25mA                                                    |
| Load voltage              | 22: 24-240VAC<br>38: 24-440VAC<br>20: 12-200VDC           |
| Load current              | 5A (with heat dissipation plate)                          |
| On-state voltage drop     | DC ≤ 1.2V AC ≤ 1.6VAC                                     |
| On-off time               | DC ≤ 5ms AC ≤ 10ms                                        |
| Off-state leakage current | DC ≤ 5mA AC ≤ 10mA                                        |
| Dielectric strength       | ≥ 1500VAC                                                 |
| Ambient temp.             | -30~80°C                                                  |
| Dimension                 | 43×12×34mm                                                |
| Installation form         | Single line direct plug-in                                |
| Instruction               | Installed next to well ventilated heat dissipation window |

### DC controls AC DC controls DC

HHG1D-0/032F-06 1A/2A(SSR-DD)  
HHG1D-1/032F-22/38 1A/2A(SSR-DA)



|                           |                                                           |
|---------------------------|-----------------------------------------------------------|
| Control voltage           | 3-32VDC                                                   |
| Control current           | 5-20mA                                                    |
| Load voltage              | 06: 5-60VDC<br>22: 24-240VAC<br>38: 24-440VAC             |
| Load current              | 1A, 2A                                                    |
| On-state voltage drop     | DC ≤ 1.2V AC ≤ 1.6VAC                                     |
| On-off time               | DC ≤ 5ms AC ≤ 10ms                                        |
| Off-state leakage current | DC ≤ 5mA AC ≤ 10mA                                        |
| Dielectric strength       | ≥ 1500VAC                                                 |
| Ambient temp.             | -30~80°C                                                  |
| Dimension                 | 25×7×20mm                                                 |
| Installation form         | Single line direct plug-in                                |
| Instruction               | Installed next to well ventilated heat dissipation window |

### DC controls AC DC controls DC

HHG1-1/032F-22 (SSR-DA)  
HHG1-1/032F-38 (SSR-DA)  
HHG1-0/032F-20 (SSR-DD)



|                           |                                                           |
|---------------------------|-----------------------------------------------------------|
| Control voltage           | 3-32VDC                                                   |
| Control current           | 6-25mA                                                    |
| Load voltage              | 22: 24-240VAC<br>38: 24-440VAC<br>20: 12-200VDC           |
| Load current              | 1A                                                        |
| On-state voltage drop     | DC ≤ 1.2V AC ≤ 1.6VAC                                     |
| On-off time               | DC ≤ 5ms AC ≤ 10ms                                        |
| Off-state leakage current | DC ≤ 5mA AC ≤ 10mA                                        |
| Dielectric strength       | ≥ 1500VAC                                                 |
| Ambient temp.             | -30~80°C                                                  |
| Dimension                 | 32.5×17.5×18.5mm                                          |
| Installation form         | Dual line direct plug-in                                  |
| Instruction               | Installed next to well ventilated heat dissipation window |

**DC controls AC  
DC controls DC**

HHG1-1/032F-22 (SSR-DA)  
 HHG1-1/032F-38 (SSR-DA)  
 HHG1-0/032F-20 (SSR-DD)



|                           |                                                           |
|---------------------------|-----------------------------------------------------------|
| Control voltage           | 3-32VDC                                                   |
| Control current           | 6-25mA                                                    |
| Load voltage              | 22: 24-240VAC<br>38: 24-440VAC<br>20: 12-200VDC           |
| Load current              | 2A, 3A, 4A                                                |
| On-state voltage drop     | DC ≤ 1.2V AC ≤ 1.6VAC                                     |
| On-off time               | DC ≤ 5ms AC ≤ 10ms                                        |
| Off-state leakage current | DC ≤ 5mA AC ≤ 10mA                                        |
| Dielectric strength       | ≥ 1500VAC                                                 |
| Ambient temp.             | -30~80°C                                                  |
| Dimension                 | 34×26.5×18mm                                              |
| Installation form         | Dual line plug-in                                         |
| Instruction               | Installed next to well ventilated heat dissipation window |

**DC controls AC  
DC controls DC**

HHG1-1/032F-22 (SSR-DA)  
 HHG1-1/032F-38 (SSR-DA)  
 HHG1-0/032F-20 (SSR-DD)



|                           |                                                           |
|---------------------------|-----------------------------------------------------------|
| Control voltage           | 3-32VDC                                                   |
| Control current           | 6-25mA                                                    |
| Load voltage              | 22: 24-240VAC<br>38: 24-440VAC<br>20: 12-200VDC           |
| Load current              | 5A                                                        |
| On-state voltage drop     | DC ≤ 1.2V AC ≤ 1.6VAC                                     |
| On-off time               | DC ≤ 5ms AC ≤ 10ms                                        |
| Off-state leakage current | DC ≤ 5mA AC ≤ 10mA                                        |
| Dielectric strength       | ≥ 1500VAC                                                 |
| Ambient temp.             | -30~80°C                                                  |
| Dimension                 | 42×31×20mm                                                |
| Installation form         | Dual line direct plug-in                                  |
| Instruction               | Installed next to well ventilated heat dissipation window |

**DC controls AC  
DC controls DC**

HHG62-1/032F-22 (SSR-DA)  
 HHG62-1/032F-38 (SSR-DA)  
 HHG62-0/032F-20 (SSR-DD)  
 Adaptive socket RX78624



|                           |                                                           |
|---------------------------|-----------------------------------------------------------|
| Control voltage           | 3-32VDC                                                   |
| Control current           | 5-25mA                                                    |
| Load voltage              | 22: 24-240VAC<br>38: 24-440VAC<br>20: 12-200VDC           |
| Load current              | 1A, 2A, 3A, 4A                                            |
| On-state voltage drop     | DC ≤ 1.2V AC ≤ 1.6VAC                                     |
| On-off time               | DC ≤ 5ms AC ≤ 10ms                                        |
| Off-state leakage current | DC ≤ 5ms AC ≤ 10ms                                        |
| Dielectric strength       | ≥ 1500VAC                                                 |
| Ambient temp.             | -30~80°C                                                  |
| Dimension                 | 29×12.6×28mm                                              |
| Installation form         | Dual line direct plug-in and DIN rail installation        |
| Instruction               | Installed next to well ventilated heat dissipation window |

**DC controls AC  
DC controls DC**

HHG63-0/032F-20 (SSR-DD)  
 HHG63-1/032F-22/38 (SSR-DA)  
 Adaptive socket P69F05E/P69F05A1



|                           |                                                           |
|---------------------------|-----------------------------------------------------------|
| Control voltage           | 3-32VDC                                                   |
| Control current           | 5-25mA                                                    |
| Load voltage              | 22: 24-240VAC<br>38: 24-440VAC<br>20: 12-200VDC           |
| Load current              | 1A, 2A, 3A, 4A                                            |
| On-state voltage drop     | DC ≤ 1.2V AC ≤ 1.6VAC                                     |
| On-off time               | DC ≤ 5ms AC ≤ 10ms                                        |
| Off-state leakage current | DC ≤ 5mA AC ≤ 10mA                                        |
| Dielectric strength       | ≥ 1500VAC                                                 |
| Ambient temp.             | -30~80°C                                                  |
| Dimension                 | 30.6×12.8×33mm                                            |
| Installation form         | Dual line direct plug-in and DIN rail installation        |
| Instruction               | Installed next to well ventilated heat dissipation window |

**DC controls AC  
DC controls DC**

HHG63-0/032F-20 (SSR-DD)  
 HHG63-1/032F-22/38 (SSR-DA)  
 Adaptive socket P69F05E/P69F05A1



**New type**

|                           |                                                           |
|---------------------------|-----------------------------------------------------------|
| Control voltage           | 3-32VDC                                                   |
| Control current           | 5-25mA                                                    |
| Load voltage              | 22: 24-240VAC<br>38: 24-440VAC<br>20: 12-200VDC           |
| Load current              | 5A (aluminum shell)                                       |
| On-state voltage drop     | DC ≤ 1.2V AC ≤ 1.6V                                       |
| On-off time               | DC ≤ 5ms AC ≤ 10ms                                        |
| Off-state leakage current | DC ≤ 5mA AC ≤ 10mA                                        |
| Dielectric strength       | ≥ 1500VAC                                                 |
| Ambient temp.             | -30~80°C                                                  |
| Dimension                 | 28.8×12.8×38.5mm                                          |
| Installation form         | Dual in-line insertion and rail installation              |
| Instruction               | Installed next to well ventilated heat dissipation window |

**Dual output solid-state relay**

HHG68-0/032F-20 1-5A-2 (SSR-DD)(DC controls DC)  
 HHG68-1/032F-22, 38 1-5Z-2 (SSR-DA)(DC controls AC)



**New type**

|                           |                                                           |
|---------------------------|-----------------------------------------------------------|
| Control voltage           | 3-32VDC                                                   |
| Control current           | Each circuit < 5-25mA                                     |
| Load voltage              | 24-240VAC<br>24-440VAC<br>12-200VDC                       |
| Load current              | 1A, 2A, 3A, 4A, 5A (dual output) aluminum shell           |
| On-state voltage drop     | DC ≤ 1.2V AC ≤ 1.5V                                       |
| On-off time               | DC ≤ 5ms AC ≤ 10ms                                        |
| Off-state leakage current | DC ≤ 5mA AC ≤ 10mA                                        |
| Dielectric strength       | ≥ 1500VAC                                                 |
| Ambient temp.             | -30~80°C                                                  |
| Installation form         | Dual line direct plug-in and DIN rail installation        |
| Dimension                 | 27×21×39.5mm                                              |
| Instruction               | Installed next to well ventilated heat dissipation window |

**Single output solid-state relay**

HHG68-0/032F-06 3-8A-1 (SSR-DD)(DC controls DC)  
 HHG68-1/032F-22, 38 3-8Z-1 (SSR-DA)(DC controls AC)



**New type**

|                           |                                                           |
|---------------------------|-----------------------------------------------------------|
| Control voltage           | 3-32VDC                                                   |
| Control current           | DA < 5-25mA DD < 7-45mA                                   |
| Load voltage              | 24-240VAC<br>24-440VAC<br>5-60VDC                         |
| Load current              | 3A, 5A, 8A (single output) aluminum shell                 |
| On-state voltage drop     | DC ≤ 1.2V AC ≤ 1.5V                                       |
| On-off time               | DC ≤ 5ms AC ≤ 10ms                                        |
| Off-state leakage current | DC ≤ 5mA AC ≤ 10mA                                        |
| Dielectric strength       | ≥ 1500VAC                                                 |
| Ambient temp.             | -30~80°C                                                  |
| Installation form         | Dual line direct plug-in and DIN rail installation        |
| Dimension                 | 27×21×39.5mm                                              |
| Instruction               | Installed next to well ventilated heat dissipation window |

**DC controls AC  
(Small volume)**

HHG5-1/032F-22 (SSR-DA)  
 HHG5-1/032F-38 (SSR-DA)



|                           |                                                 |
|---------------------------|-------------------------------------------------|
| Control voltage           | 3-32VDC                                         |
| Control current           | 6-25mA                                          |
| Load voltage              | 22: 24-240VAC<br>38: 24-440VAC                  |
| Load current              | 5A, 10A, 15A                                    |
| On-state voltage drop     | ≤ 1.6VAC                                        |
| On-off time               | ≤ 10ms                                          |
| Off-state leakage current | ≤ 10mA                                          |
| Dielectric strength       | ≥ 2500VAC                                       |
| Ambient temp.             | -30~80°C                                        |
| Dimension                 | 38.5×28.7×18mm                                  |
| Installation form         | Bolt installation                               |
| Instruction               | A radiator must be installed for loads above 5A |

RELAY  
SERIES

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## Single-phase solid-state relay (DC controls DC)

HHG1-0/032F-20(SSR-DD)  
HHG1-0/032F-06(SSR-DD)



|                           |                                                   |
|---------------------------|---------------------------------------------------|
| Control voltage           | 5-32VDC                                           |
| Control current           | 10-45mA                                           |
| Load voltage              | 20: 12-250VDC 06: 5-60VDC                         |
| Load current              | 20: 10A, 15A, 20A, 25A, 30A, 40A, 60A<br>06: 100A |
| On-state voltage drop     | ≤ 1.2VDC                                          |
| On-off time               | ≤ 5ms                                             |
| Off-state leakage current | ≤ 5mA                                             |
| Dielectric strength       | ≥ 2000VAC                                         |
| Ambient temp.             | -30~80°C                                          |
| Dimension                 | 60×45×29mm                                        |
| Installation form         | Bolt installation                                 |
| Instruction               | A radiator must be installed for loads above 5A   |

## Single-phase solid-state relay (DC controls AC)

HHG1-1/032F-22 (SSR-DA)  
HHG1-1/032F-38 (SSR-DA)



|                           |                                                                                                                             |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| Control voltage           | 3-32VDC                                                                                                                     |
| Control current           | 6-25mA                                                                                                                      |
| Load voltage              | 22: 24-240VAC<br>38: 24-440VAC                                                                                              |
| Load current              | 10A, 15A, 20A, 25A, 30A<br>40A, 60A, 80A, 100A                                                                              |
| On-state voltage drop     | ≤ 1.6VAC                                                                                                                    |
| On-off time               | ≤ 10ms                                                                                                                      |
| Off-state leakage current | ≤ 10mA                                                                                                                      |
| Dielectric strength       | ≥ 2500VAC                                                                                                                   |
| Ambient temp.             | -30~80°C                                                                                                                    |
| Dimension                 | 60×45×29mm                                                                                                                  |
| Installation form         | Bolt installation                                                                                                           |
| Instruction               | A radiator must be installed for loads above 5A; A fan of strong cooling or water cooling must be added for loads above 80A |

## Single-phase solid-state relay (AC controls AC)

HHG1-1/250F-22 (SSR-AA)  
HHG1-1/250F-38(SSR-AA)



|                           |                                                                                                                             |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| Control voltage           | 90-250VAC                                                                                                                   |
| Control current           | 6-20mA                                                                                                                      |
| Load voltage              | 22: 24-240VAC<br>38: 24-440VAC                                                                                              |
| Load current              | 10A, 15A, 20A, 25A, 30A<br>40A, 60A, 80A, 100A                                                                              |
| On-state voltage drop     | ≤ 1.6VAC                                                                                                                    |
| On-off time               | ≤ 10ms                                                                                                                      |
| Off-state leakage current | ≤ 10mA                                                                                                                      |
| Dielectric strength       | ≥ 2500VAC                                                                                                                   |
| Ambient temp.             | -30~80°C                                                                                                                    |
| Dimension                 | 60×45×29mm                                                                                                                  |
| Installation form         | Bolt installation                                                                                                           |
| Instruction               | A radiator must be installed for loads above 5A; A fan of strong cooling or water cooling must be added for loads above 80A |

## Dual control solid-state relay (DC controls AC)

HHG1-2/032F-38 (SSR-DA)



|                           |                                                 |
|---------------------------|-------------------------------------------------|
| Control voltage           | 3-32VDC                                         |
| Control current           | Single circuit < 15mA                           |
| Load voltage              | 38: 24-440VAC                                   |
| Load current              | 10A, 15A, 20A, 25A, 30A, 40A(single-circuit)    |
| On-state voltage drop     | ≤ 1.6VAC                                        |
| On-off time               | ≤ 10ms                                          |
| Off-state leakage current | ≤ 10mA                                          |
| Dielectric strength       | ≥ 2500VAC                                       |
| Ambient temp.             | -30~80°C                                        |
| Dimension                 | 57×44×30mm                                      |
| Installation form         | Bolt installation                               |
| Instruction               | A radiator must be installed for loads above 5A |

## DC controls AC (Anti-interference type)

HHG1M-1/032F-22(SSR-DA)  
HHG1M-1/032F-38(SSR-DA)



|                           |                                                                                                                             |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| Control voltage           | 3-32VDC                                                                                                                     |
| Control current           | 6-25mA                                                                                                                      |
| Load voltage              | 22: 24-240VAC<br>38: 24-440VAC                                                                                              |
| Load current              | 10A, 15A, 20A, 25A, 30A, 40A, 60A, 80A, 100A                                                                                |
| On-state voltage drop     | ≤ 1.6VAC                                                                                                                    |
| On-off time               | ≤ 10ms                                                                                                                      |
| Off-state leakage current | ≤ 10mA                                                                                                                      |
| Dielectric strength       | ≥ 2500VAC                                                                                                                   |
| Ambient temp.             | -30~80°C                                                                                                                    |
| Dimension                 | 60×45×29mm                                                                                                                  |
| Installation form         | Bolt installation                                                                                                           |
| Instruction               | A radiator must be installed for loads above 5A; A fan of strong cooling or water cooling must be added for loads above 80A |

## Three-phase solid-state relay (DC controls AC)

HHG1-3/032F-38 (SSR-DA)



|                           |                                                                                                                             |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| Control voltage           | 3-32VDC                                                                                                                     |
| Control current           | 16-30mA                                                                                                                     |
| Load voltage              | 24-440VAC                                                                                                                   |
| Load current              | 10A, 15A, 20A, 25A, 30A, 40A, 60A, 80A, 100A, 120A                                                                          |
| On-state voltage drop     | ≤ 1.6VAC                                                                                                                    |
| On-off time               | ≤ 10ms                                                                                                                      |
| Off-state leakage current | ≤ 10mA                                                                                                                      |
| Dielectric strength       | ≥ 2500VAC                                                                                                                   |
| Ambient temp.             | -30~80°C                                                                                                                    |
| Dimension                 | 106×75×40mm                                                                                                                 |
| Installation form         | Bolt installation                                                                                                           |
| Instruction               | A radiator must be installed for loads above 5A; A fan of strong cooling or water cooling must be added for loads above 80A |

## DC controls AC (Single-phase thyristor anti-parallel)

HHG1H-1/032F-38(SSR-DA)  
HHG1H-1/032F-120(SSR-DA)



|                           |                                                                                                                             |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| Control voltage           | 3-32VDC                                                                                                                     |
| Control current           | 6-25mA                                                                                                                      |
| Load voltage              | 22: 24-440VAC<br>38: 40-1200VAC                                                                                             |
| Load current              | 60A, 80A, 100A, 120A                                                                                                        |
| On-state voltage drop     | ≤ 1.6VAC                                                                                                                    |
| On-off time               | ≤ 10ms                                                                                                                      |
| Off-state leakage current | ≤ 10mA                                                                                                                      |
| Dielectric strength       | ≥ 2500VAC                                                                                                                   |
| Ambient temp.             | -30~80°C                                                                                                                    |
| Dimension                 | 60×45×29mm                                                                                                                  |
| Installation form         | Bolt installation                                                                                                           |
| Instruction               | A radiator must be installed for loads above 5A; A fan of strong cooling or water cooling must be added for loads above 80A |

## Three-phase solid-state relay (AC controls AC)

HHG1-3/250F (SSR-AA)



|                           |                                                                                                                             |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| Control voltage           | 90-250VAC                                                                                                                   |
| Control current           | 8-30mA                                                                                                                      |
| Load voltage              | 24-440VAC                                                                                                                   |
| Load current              | 10A, 15A, 20A, 25A, 30A, 40A, 60A, 80A, 100A, 120A                                                                          |
| On-state voltage drop     | ≤ 1.6VAC                                                                                                                    |
| On-off time               | ≤ 10ms                                                                                                                      |
| Off-state leakage current | ≤ 10mA                                                                                                                      |
| Dielectric strength       | ≥ 2500VAC                                                                                                                   |
| Ambient temp.             | -30~80°C                                                                                                                    |
| Dimension                 | 106×75×40mm                                                                                                                 |
| Installation form         | Bolt installation                                                                                                           |
| Instruction               | A radiator must be installed for loads above 5A; A fan of strong cooling or water cooling must be added for loads above 80A |

**DC controls AC  
(Three-phase forward and reverse)**

HHG1F-3/005F-38(SSR-DA)  
 HHG1F-3/024F-38(SSR-DA)



|                           |                                                                                                                             |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| Control voltage           | 5VDC/12-32VDC                                                                                                               |
| Control current           | ≤ 50mA                                                                                                                      |
| Load voltage              | 24-440VAC                                                                                                                   |
| Load current              | 10A, 15A, 20A, 25A, 30A, 40A, (60A, 80A enhanced type)                                                                      |
| On-state voltage drop     | ≤ 1.6VAC                                                                                                                    |
| On-off time               | Input terminal forward and reverse interlock delay of 100ms                                                                 |
| Off-state leakage current | ≤ 10mA                                                                                                                      |
| Dielectric strength       | ≥ 2500VAC                                                                                                                   |
| Ambient temp.             | -30~80°C                                                                                                                    |
| Dimension                 | 106×75×41mm                                                                                                                 |
| Installation form         | Bolt installation                                                                                                           |
| Instruction               | A radiator must be installed for loads above 5A; A fan of strong cooling or water cooling must be added for loads above 80A |

**DC controls AC  
(Three-phase forward and reverse)**

HHG1F-3/024F-38(common-anode)



|                           |                                                             |
|---------------------------|-------------------------------------------------------------|
| Control voltage           | 12-32VDC                                                    |
| Control current           | ≤ 60mA                                                      |
| Load voltage              | 24-440VAC                                                   |
| Load current              | 10A, 15A, 20A, 25A, 30A, 40A                                |
| On-state voltage drop     | ≤ 1.6VAC                                                    |
| On-off time               | Input terminal forward and reverse interlock delay of 100ms |
| Off-state leakage current | ≤ 10mA                                                      |
| Dielectric strength       | ≥ 2500VAC                                                   |
| Ambient temp.             | -30~80°C                                                    |
| Dimension                 | 106×75×32mm                                                 |
| Installation form         | Bolt installation                                           |
| Instruction               | A radiator must be installed for loads above 5A             |

**DC controls AC  
(Industrial grade)**

HHG1S-1/032F-120  
 (SSR-DA) water-cooled type



|                           |                                                                                                                             |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| Control voltage           | 3-32VDC                                                                                                                     |
| Control current           | 5-25mA                                                                                                                      |
| Load voltage              | 120: 60-1200VAC                                                                                                             |
| Load current              | 500A, 600A, 800A, 1000A                                                                                                     |
| On-state voltage drop     | < 1.6VAC                                                                                                                    |
| On-off time               | ≤ 10ms                                                                                                                      |
| Off-state leakage current | ≤ 10mA                                                                                                                      |
| Dielectric strength       | ≥ 2500VAC                                                                                                                   |
| Ambient temp.             | -30~80°C                                                                                                                    |
| Dimension                 | 500-600A: 150×53×68mm<br>800A: 160×63×75mm<br>1000A: 185×66×81mm                                                            |
| Installation form         | Bolt installation                                                                                                           |
| Instruction               | A radiator must be installed for loads above 5A; A fan of strong cooling or water cooling must be added for loads above 80A |

**DC controls AC  
(Industrial grade)**

HHG1A-1/032F-38(SSR-DA)  
 HHG1C-1/032F-120(SSR-DA)



|                           |                                                                                                                             |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| Control voltage           | 3-32VDC                                                                                                                     |
| Control current           | 5-25mA                                                                                                                      |
| Load voltage              | 38: 40-440VAC<br>120: 60-1200VAC                                                                                            |
| Load current              | 60A, 80A, 100A, 120A, 150A                                                                                                  |
| On-state voltage drop     | ≤ 1.6VAC                                                                                                                    |
| On-off time               | ≤ 10ms                                                                                                                      |
| Off-state leakage current | ≤ 10mA                                                                                                                      |
| Dielectric strength       | ≥ 2500VAC                                                                                                                   |
| Ambient temp.             | -30~80°C                                                                                                                    |
| Dimension                 | 94×25×38mm                                                                                                                  |
| Installation form         | Bolt installation                                                                                                           |
| Instruction               | A radiator must be installed for loads above 5A; A fan of strong cooling or water cooling must be added for loads above 80A |

**DC controls AC  
(Industrial grade)**

HHG1A-1/032F-38(SSR-DA)  
 HHG1C-1/032F-120(SSR-DA)



|                           |                                                                                                                             |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| Control voltage           | 3-32VDC                                                                                                                     |
| Control current           | 5-25mA                                                                                                                      |
| Load voltage              | 38: 40-440VAC<br>120: 60-1200VAC                                                                                            |
| Load current              | 200A, 250A, 300A, 350A, 400A                                                                                                |
| On-state voltage drop     | ≤ 1.6VAC                                                                                                                    |
| On-off time               | ≤ 10ms                                                                                                                      |
| Off-state leakage current | ≤ 10mA                                                                                                                      |
| Dielectric strength       | ≥ 2500VAC                                                                                                                   |
| Ambient temp.             | -30~80°C                                                                                                                    |
| Dimension                 | (200-350A)94×34×43mm<br>(400A)96×39×43mm                                                                                    |
| Installation form         | Bolt installation                                                                                                           |
| Instruction               | A radiator must be installed for loads above 5A; A fan of strong cooling or water cooling must be added for loads above 80A |

**DC controls AC  
(Industrial grade)**

HHG1K-1/032F-120  
 (SSR-DA) air-cooled type



|                           |                                                                                                                             |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| Control voltage           | 3-32VDC                                                                                                                     |
| Control current           | 5-25mA                                                                                                                      |
| Load voltage              | 120: 60-1200VAC                                                                                                             |
| Load current              | 500A, 600A, 800A, 1000A                                                                                                     |
| On-state voltage drop     | < 1.6VAC                                                                                                                    |
| On-off time               | ≤ 10ms                                                                                                                      |
| Off-state leakage current | ≤ 10mA                                                                                                                      |
| Dielectric strength       | ≥ 2500VAC                                                                                                                   |
| Ambient temp.             | -30~80°C                                                                                                                    |
| Dimension                 | 500-600A: 115×53×60mm<br>800A: 125×63×70mm<br>1000A: 149×66×76mm                                                            |
| Installation form         | Bolt installation                                                                                                           |
| Instruction               | A radiator must be installed for loads above 5A; A fan of strong cooling or water cooling must be added for loads above 80A |

RELAY  
SERIES

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## HHN-RA □ Signal relay module

### Model description

|                                                                                                                                     |   |                                                                |                                                                                                                                              |                                               |                                                                                   |
|-------------------------------------------------------------------------------------------------------------------------------------|---|----------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|-----------------------------------------------------------------------------------|
| HHN                                                                                                                                 | - | R                                                              | A1                                                                                                                                           |                                               | 04                                                                                |
| Enterprise code                                                                                                                     |   | Relay type<br>R: Electromagnetic relay                         | Design number<br>A: Signal relay<br>A1: 50mm width signal relay module<br>A2: 80mm width signal relay module<br>A3: 3124 signal relay module |                                               | Number of relay control units<br>02: 2-bit<br>04: 4-bit<br>06: 6-bit<br>08: 8-bit |
| A                                                                                                                                   | - |                                                                | N                                                                                                                                            | D24                                           | /                                                                                 |
| Input/output port type<br>A: Screw type terminal<br>B: MIL connector<br>T: T-shaped spring leaf type terminal<br>C: B+A combination |   | D: B+T combination<br>F: A+B combination<br>G: T+B combination | Output end protection method<br>N: Without protection<br>C: Surge suppression                                                                | Operating voltage<br>D12: 12VDC<br>D24: 24VDC | Configured relay brand<br>PAN: Panasonic<br>OMR: Omron<br>TYC: Tyco<br>HF: Hongfa |

### HHN-RA1 Signal relay module



### Specification parameter

|                      |                                                   |                        |                     |
|----------------------|---------------------------------------------------|------------------------|---------------------|
| Rated voltage        | DC24V                                             | Contact material       | Silver alloy        |
| Rated current        | 7.5mA, 8.3mA                                      | Electrical performance | 5A/250VAC, 5A/30VDC |
| Operating voltage    | ≥ 75% (normal temperature environment)            | Mechanical durability  | 5000000 times       |
| Release voltage      | ≤ 5% (normal temperature environment)             |                        |                     |
| Operation time       | 20ms or less                                      |                        |                     |
| Release time         | 10ms or less                                      |                        |                     |
| Contact resistance   | 30mΩ or less (DC6V 1A)<br>100mΩ or less (DC6V 1A) |                        |                     |
| Insulation impedance | 1000mΩ(500VDC)                                    |                        |                     |

### HHN-RA2 signal relay module



### Specification parameter

|                      |                                                   |                        |                     |
|----------------------|---------------------------------------------------|------------------------|---------------------|
| Rated voltage        | DC24V                                             | Contact material       | Silver alloy        |
| Rated current        | 7.5mA, 8.3mA                                      | Electrical performance | 5A/250VAC, 5A/30VDC |
| Operating voltage    | ≥ 75% (normal temperature environment)            | Mechanical durability  | 5000000 times       |
| Release voltage      | ≤ 5% (normal temperature environment)             |                        |                     |
| Operation time       | 20ms or less                                      |                        |                     |
| Release time         | 10ms or less                                      |                        |                     |
| Contact resistance   | 30mΩ or less (DC6V 1A)<br>100mΩ or less (DC6V 1A) |                        |                     |
| Insulation impedance | 1000mΩ(500VDC)                                    |                        |                     |

### HHN-RA3 Signal relay module



### Specification parameter

|                      |                                                   |                        |                     |
|----------------------|---------------------------------------------------|------------------------|---------------------|
| Rated voltage        | DC24V                                             | Contact material       | Silver alloy        |
| Rated current        | 7.5mA, 8.3mA                                      | Electrical performance | 5A/250VAC, 5A/30VDC |
| Operating voltage    | ≥ 75% (normal temperature environment)            | Mechanical durability  | 5000000 times       |
| Release voltage      | ≤ 5% (normal temperature environment)             |                        |                     |
| Operation time       | 20ms or less                                      |                        |                     |
| Release time         | 10ms or less                                      |                        |                     |
| Contact resistance   | 30mΩ or less (DC6V 1A)<br>100mΩ or less (DC6V 1A) |                        |                     |
| Insulation impedance | 1000mΩ(500VDC)                                    |                        |                     |

## HHN-RA □ Signal relay module

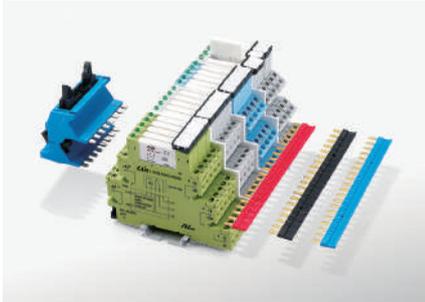
HHN-RA4 Signal relay module



Specification parameter

|                                |                                                               |                      |
|--------------------------------|---------------------------------------------------------------|----------------------|
| Contact resistance             | 100mΩ or less                                                 |                      |
| Operation time (effectiveness) | 10ms or less (approx. 3ms)                                    |                      |
| Reset time (effectiveness)     | 15ms or less (approx. 4ms)                                    |                      |
| Insulation resistance          | 100mΩ or above (DC500V megohmmeter)                           |                      |
| Shock                          | Duration                                                      | 1000m/s <sup>2</sup> |
|                                | Misoperation                                                  | 100m/s <sup>2</sup>  |
| Mechanical life                | ≥ 500000 times (switching frequency 18000 times/h)            |                      |
| Electrical life                | ≥ 100000 times (rated load, switching frequency 1800 times/h) |                      |

HHN-RA5 Signal relay module



Specification parameter

|                    |                                                      |
|--------------------|------------------------------------------------------|
| Contact            | 1 CO                                                 |
| Switching current  | 6A 250V AC                                           |
| Minimum load       | 100mA / 12V                                          |
| Switching Capacity | DC-1 30V: 180W; AC-1 230V: 1500VA; DC-15 230V: 300VA |
| Surge current      | 15A / 2.5ms                                          |
| Mechanical life    | 10 × 10 <sup>6</sup>                                 |
| Electrical life    | 3 × 10 <sup>4</sup>                                  |
| Operating voltage  | 0.8~1.25Un                                           |
| Delay/release time | 7 / 15ms                                             |

HHN-RA6/7 Signal relay module



Specification parameter

|                                            |                                                      |
|--------------------------------------------|------------------------------------------------------|
| Rated voltage                              | 24VDC (with permissible variation range of 80%~110%) |
| Single circuit operating power consumption | Approx. 216mW                                        |
| Polarity requirement for wiring            | No polarity requirement                              |
| Number of control channels                 | 4,8,12,16                                            |
| Relay model                                | 41F                                                  |
| Contact type                               | RA6: 1H; RA7: 1Z                                     |
| Rated voltage                              | 250VAC/30VDC                                         |
| Rated current                              | 6A/circuit                                           |
| Operation time                             | <6ms                                                 |
| Release time                               | <3.0ms                                               |

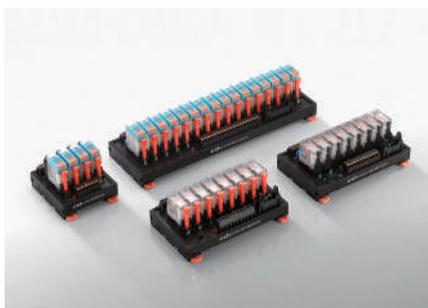
## HHN-RB □ /RC □ /RD □ Power relay module

### Model description

| HHN             | - | R                        | B1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|-----------------|---|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Enterprise code |   | Relay type               | Design number<br>B1: C-Lin 69KTL-1Z relay (socket RB69-1Z)<br>B2: C-Lin 69KTL-2Z relay (socket RB69-2Z)<br>B3: C-Lin 69K-1Z relay (socket RB69-1Z)<br>B4: C-Lin 69K-2Z relay (socket RB69-2Z)<br>B5: C-Lin 69K-1Z relay (socket HT1S-61)<br>B6: C-Lin 69K-2Z relay (socket HT2S-61)<br>C1: C-Lin 69KP-1Z relay (socket HT2S-62-2)<br>C2: C-Lin 69KP-2Z relay (socket HT2S-62-2)<br>C3: C-Lin 115F-1Z relay (socket HT2S-62-1)<br>C4: C-Lin 115F-2Z relay (socket HT2S-62-1)<br>C5: C-Lin 69KP-1Z relay (socket 14F-2Z-A1+14F-H3)<br>C6: C-Lin 69KP-2Z relay (socket 14F-2Z-A1+14F-H3)<br>C7: C-Lin 115-2Z relay (socket 14F-2Z-A1+14F-H3)<br>D1: C-Lin 68AVL-2Z relay (socket 13F-2Z-A2)<br>D5: C-Lin 68AVL-2Z relay (socket HT2S-A2/13F)<br>D2: C-Lin 68BVL-2Z relay (socket 18F-2Z-A2)<br>D6: C-Lin 68BVL-2Z relay (socket HT2S-A2)                                                                      |
|                 |   | R: Electromagnetic relay | D3: C-Lin 68BVL-3Z relay (socket 18F-3Z-A2)<br>D7: C-Lin 68BVL-3Z relay (socket HT3S-A2)<br>RE1:HHC66A-1Z/10A universal type<br>RE1:HHC66A-1Z/10A optocoupler isolation type<br>RE1:HHC66A-1Z/15A universal type<br>RE1:HHC66A-1Z/15A optocoupler isolation type<br>RF1:HHC67E-1Z/30A universal type<br>RF2:HHC67E-1Z/30A optocoupler isolation type<br>RF3:HHC67E-1Z/40A universal type<br>RF4:HHC67E-1Z/30A optocoupler isolation type<br>H1:HHC69K-1Z conversion type<br>H2:HHC69K-2Z conversion type<br>H3:HHC69KP-1Z(275) conversion type<br>H4:HHC69KP-2Z(275) conversion type<br>H5:HHC69KP-1Z conversion type<br>H6:HHC69KP-2Z conversion type<br>I1:HHC69D-1H/10A universal type<br>I2:HHC69D-1H/10 optocoupler isolation type<br>I3:HHC69D-1H/12A universal type<br>I4:HHC69D-1H/12 optocoupler isolation type<br>I5:HHC69D-1H/16A universal type<br>I6:HHC69D-1H/16A optocoupler isolation type |

| 04                                               | A                                                                                                                      | - | N                                                                   | D24 | /                                        | ***                                                     |
|--------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|---|---------------------------------------------------------------------|-----|------------------------------------------|---------------------------------------------------------|
| Number of relay control units                    | Input/output port type                                                                                                 |   | Output protection method                                            |     | Operating voltage                        | Configured relay brand                                  |
| 02: 2-bit<br>04: 4-bit<br>06: 6-bit<br>08: 8-bit | A: Screw type terminal<br>T: T-shaped spring leaf type terminal<br>Q: Plug-in type terminal<br>V: Grille type terminal |   | N: Without protection<br>C: Surge suppression<br>F: Fuse protection |     | D12: 12VDC<br>D24: 24VDC<br>A220: 220VAC | OMR: Omron<br>TYC: Tyco<br>IDE: Izumi<br>HON: Honeywell |

### HHN-RB1/2/3/4 Power relay module Specification parameter



|                                        |                                                                  |                    |                                                                                   |
|----------------------------------------|------------------------------------------------------------------|--------------------|-----------------------------------------------------------------------------------|
| Drive mode                             | NPN/PNP compatible                                               | Contact type       | 1Z NO: 15A 277VAC/30VDC;<br>1Z NC: 12A 277VAC/30VDC;<br>2Z: 8A 277VAC/30VDC 1/3HP |
| Rated voltage                          | 5VDC, 12VDC, 24VDC, 36VDC<br>12VAC, 24VAC, 36VAC, 110VAC, 220VAC | Electrical life    | 1 × 10 <sup>5</sup>                                                               |
| Single circuit rated power consumption | DC:0.53W AC:1.0VA                                                | Mechanical life    | 1 × 10 <sup>7</sup>                                                               |
| Operating voltage                      | Rated voltage × 70%                                              | Contact material   | Silver alloy                                                                      |
| Release voltage                        | Rated voltage × 10%                                              | Contact resistance | ≤ 100mΩ(6VDC 1A)                                                                  |
| Operation time                         | ≤ 15ms                                                           | Protection circuit | RC, varistor, fuse optional                                                       |
| Release time                           | ≤ 10ms                                                           |                    |                                                                                   |

### HHN-RB5/6 Power relay module Specification parameter



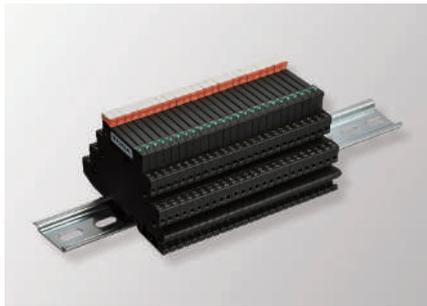
|                                        |                                                                  |                    |                                                                                   |
|----------------------------------------|------------------------------------------------------------------|--------------------|-----------------------------------------------------------------------------------|
| Drive mode                             | NPN/PNP compatible                                               | Contact type       | 1Z NO: 15A 277VAC/30VDC;<br>1Z NC: 12A 277VAC/30VDC;<br>2Z: 8A 277VAC/30VDC 1/3HP |
| Rated voltage                          | 5VDC, 12VDC, 24VDC, 36VDC<br>12VAC, 24VAC, 36VAC, 110VAC, 220VAC | Electrical life    | 1 × 10 <sup>5</sup>                                                               |
| Single circuit rated power consumption | DC:0.53W AC:1.0VA                                                | Mechanical life    | 1 × 10 <sup>7</sup>                                                               |
| Operating voltage                      | Rated voltage × 70%                                              | Contact material   | Silver alloy                                                                      |
| Release voltage                        | Rated voltage × 10%                                              | Contact resistance | ≤ 100mΩ(6VDC 1A)                                                                  |
| Operation time                         | ≤ 15ms                                                           | Protection circuit | RC, varistor, fuse optional                                                       |
| Release time                           | ≤ 10ms                                                           |                    |                                                                                   |

# HHN-SG □ /SM □ /SL □ Optical MOS and solid-state relay module

## Model description

|                                                                                   |                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                             |                                                                                                                                                                                                                                                                                                 |
|-----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| HHN                                                                               | -                                                                                                                                                                  | S                                                                                                                                                                                                                                                                                                                                                                                           | G1                                                                                                          |                                                                                                                                                                                                                                                                                                 |
| Enterprise code                                                                   | Relay type                                                                                                                                                         | Design number                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                             | L1: PLC DC amplification type<br>L2: PLC AC amplification type<br>L3: PLC DC high-power amplification type<br>L4: PLC AC high-power amplification type<br>L5: PLC DC amplification type with short-circuit protection<br>L6: PLC DC high-power amplification type with short-circuit protection |
|                                                                                   | Optical MOS and solid-state relay modules                                                                                                                          | G1: C-Lin HHG41 port type solid-state relay module<br>G2: C-Lin HHG63 solid-state relay module<br>G3: C-Lin HHG41 solid-state relay module<br>M1: Optical MOS relay module (1.2A/60V-4590A)<br>M2: Optical MOS relay module (2A/100V-3546A)<br>M3: Optical MOS relay module (3.5A/100V-3546A)<br>M4: Optical MOS relay module (4A/60V-3545A)<br>M5: Optical MOS relay module (5A/30V-3543A) |                                                                                                             |                                                                                                                                                                                                                                                                                                 |
| 04                                                                                | A                                                                                                                                                                  | -                                                                                                                                                                                                                                                                                                                                                                                           | N                                                                                                           | D24 / ***                                                                                                                                                                                                                                                                                       |
| Number of relay control units<br>02: 2-bit<br>04: 4-bit<br>06: 6-bit<br>08: 8-bit | Input/output port type                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                             | Output end protection method                                                                                | Operating voltage<br>5VDC<br>12DC<br>24DC<br><br>Configured relay brand<br>C-Lin: HHC                                                                                                                                                                                                           |
|                                                                                   | A: Screw type terminal<br>B: MIL connector<br>T: T-shaped spring leaf type<br>C: B+A combination<br>D: B+T combination<br>F: A+B combination<br>G: T+B combination |                                                                                                                                                                                                                                                                                                                                                                                             | N: Without protection<br>C: Surge suppression<br>F: Fuse protection<br>R: Surge suppression+fuse protection |                                                                                                                                                                                                                                                                                                 |

### HHN-SG1 Solid-state relay module



### Specification parameter

|                             |                                            |                  |
|-----------------------------|--------------------------------------------|------------------|
| Product model               | HHN-SG101 □□ D24/DA                        | HHN-SG101 □□ D24 |
| Operation time              | 1/2 cycle of load power supply+1ms or less | 1ms or less      |
| Reset time                  | 1/2 cycle of load power supply+1ms or less | 1ms or less      |
| Insulation resistance       | 100MΩ or above (500V megohmmeter)          |                  |
| Control voltage             | 3-32VDC                                    |                  |
| Control current             | 5-20mA                                     |                  |
| Load voltage                | 24-240VAC 24-440VAC 5-60VDC                |                  |
| Load current                | 1A, 2A                                     |                  |
| On-state voltage drop       | DC ≤ 1.2V AC ≤ 1.6V                        |                  |
| Off-state leakage current   | DC ≤ 5mA AC ≤ 10mA                         |                  |
| Dielectric strength         | ≥ 1500VAC                                  |                  |
| Isolation withstand voltage | AC2500V 50/60Hz 1 min                      |                  |

### HHN-SG2 Solid-state relay module

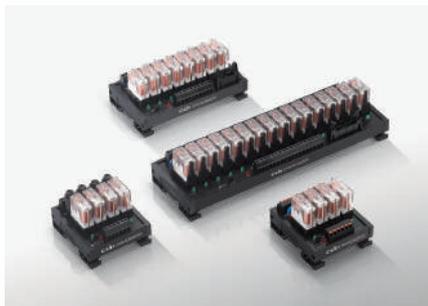


### Specification parameter

|                            |                                                                                 |  |
|----------------------------|---------------------------------------------------------------------------------|--|
| Rated operating voltage    | 3-32VDC                                                                         |  |
| Rated operating current    | 5-25mA                                                                          |  |
| Wiring polarity            | No polarity requirement (NPN/PNP double polarity compatible)                    |  |
| Wiring type                | European type terminal, spring leaf type direct plug-in terminal, MIL connector |  |
| Load voltage               | 24~220VAC; 24~400VAC (50/60Hz) ; 12-200VDC                                      |  |
| Load current               | 0.1~5A (AC-12) 0.1~5A                                                           |  |
| Surge current              | ≤ 10ms for 60A, ≤ 10ms for 30A                                                  |  |
| Peak voltage               | 900V 400V                                                                       |  |
| Number of control channels | 2, 4, 8, 10, 12, 16, 32                                                         |  |

RELAY SERIES  
 SWITCH SERIES  
 ELECTRIC DRIVE AND CONTROL SERIES  
 INSTRUMENT & METER SERIES  
 DISTRIBUTION CONTROL SERIES  
 AUTOMATION INDUSTRY APPLICATION  
 POWER SUPPLY AND OTHERS

## HHN-RC1/2/5/6 Power relay module



### Specification parameter

|                                        |                           |                    |                                                  |
|----------------------------------------|---------------------------|--------------------|--------------------------------------------------|
| Drive mode                             | NPN/PNP compatible        | Contact type       | 1Z NO: 16A 250VAC/30VDC;<br>2Z: 10A 250VAC/30VDC |
| Rated voltage                          | 5VDC, 12VDC, 24VDC, 36VDC | Electrical life    | 1×10 <sup>5</sup>                                |
| Single circuit rated power consumption | DC: 0.53W AC: 1.0VA       | Mechanical life    | 1×10 <sup>7</sup>                                |
| Operating voltage                      | Rated voltage × 70%       | Contact material   | Silver alloy                                     |
| Release voltage                        | Rated voltage × 10%       | Contact resistance | ≤ 100mΩ(6VDC 1A)                                 |
| Operation time                         | ≤ 15ms                    | Protection circuit | RC, varistor, fuse optional                      |
| Release time                           | ≤ 10ms                    |                    |                                                  |

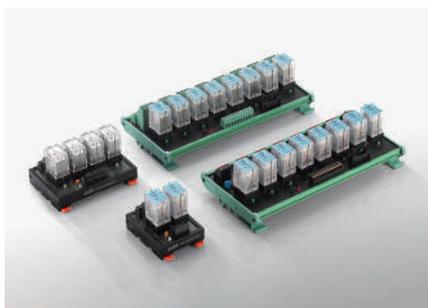
## HHN-RC3/4/7/8 Power relay module



### Specification parameter

|                                        |                           |                    |                                                  |
|----------------------------------------|---------------------------|--------------------|--------------------------------------------------|
| Drive mode                             | NPN/PNP compatible        | Contact type       | 1Z NO: 16A 250VAC/30VDC;<br>2Z: 10A 250VAC/30VDC |
| Rated voltage                          | 5VDC, 12VDC, 24VDC, 36VDC | Electrical life    | 1×10 <sup>5</sup>                                |
| Single circuit rated power consumption | DC: 0.53W AC: 1.0VA       | Mechanical life    | 1×10 <sup>7</sup>                                |
| Operating voltage                      | Rated voltage × 70%       | Contact material   | Silver alloy                                     |
| Release voltage                        | Rated voltage × 10%       | Contact resistance | ≤ 100mΩ(6VDC 1A)                                 |
| Operation time                         | ≤ 15ms                    | Protection circuit | RC, varistor, fuse optional                      |
| Release time                           | ≤ 10ms                    |                    |                                                  |

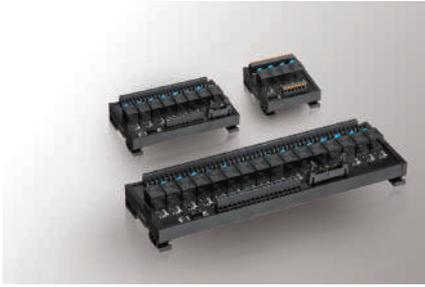
## HHN-RD □ Power relay module



### Specification parameter

|                                             |                                                                               |       |        |        |       |       |        |        |
|---------------------------------------------|-------------------------------------------------------------------------------|-------|--------|--------|-------|-------|--------|--------|
| Model                                       | HHN-RD1,2,3,4,5,6,7,8                                                         |       |        |        |       |       |        |        |
| Contact composition                         | 2Z; 3Z; 4Z                                                                    |       |        |        |       |       |        |        |
| Contact resistance (initial)                | ≤ 100mΩ                                                                       |       |        |        |       |       |        |        |
| Contact material                            | Silver alloy                                                                  |       |        |        |       |       |        |        |
| Rated control capacity (resistive load)     | 6.5A(HHN68B), 10A(HHN68BVL),12A(HHN68AVL)<br>5A 240VAC 28VDC(HHN68B,HHN68BVL) |       |        |        |       |       |        |        |
| Maximum allowable voltage of contact        | 240VAC 28VDC                                                                  |       |        |        |       |       |        |        |
| Insulation resistance (initial)             | 1000mΩ (500VDC)                                                               |       |        |        |       |       |        |        |
| Coil temperature rise value (at 70°C)       | ≤ 85K                                                                         |       |        |        |       |       |        |        |
| Operation time (at 20°C)                    | ≤ 20ms                                                                        |       |        |        |       |       |        |        |
| Reset time (at 20°C)                        | ≤ 15ms (DC type), ≤ 25ms (AC type)                                            |       |        |        |       |       |        |        |
| Mechanical life                             | ≥ 10 <sup>7</sup> (frequency 300 times/min)                                   |       |        |        |       |       |        |        |
| Electrical life (at rated control capacity) | ≥ 10 <sup>5</sup> (frequency 1s on, 1s off)                                   |       |        |        |       |       |        |        |
| Rated voltage (V)                           | DC12V                                                                         | DC24V | DC110V | DC220V | AC12V | AC24V | AC110V | AC220V |
| Rated current ±10% (MA)                     | 75                                                                            | 37.5  | 8      | 4      | 100   | 50    | 10.9   | 5.4    |
| Coil resistance ±10% (Ω)                    | 160                                                                           | 640   | 13750  | 55000  | 42    | 168   | 3532   | 14259  |
| Rated power consumption (W)                 | 0.9W                                                                          |       |        |        | 1.2VA |       |        |        |
| Maximum pull-on voltage (V)                 | ≤ 75%                                                                         |       |        |        | ≤ 80% |       |        |        |
| Maximum release voltage (M)                 | ≥ 10%                                                                         |       |        |        | ≥ 30% |       |        |        |
| Maximum allowable voltage (V)               | Rated voltage × 110%                                                          |       |        |        |       |       |        |        |

### RE Power relay module



### Specification parameter

|                                        |                             |                    |                                    |
|----------------------------------------|-----------------------------|--------------------|------------------------------------|
| Drive mode                             | NPN/PNP compatible          | Contact type       | 1C: 10A 15A 250VAC/30VDC           |
| Rated voltage                          | 12VDC/24VDC/220VAC          | Electrical life    | $1 \times 10^5$                    |
| Single circuit rated power consumption | DC:0.36W                    | Mechanical life    | $1 \times 10^7$                    |
| Operating voltage                      | Rated voltage $\times 80\%$ | Contact material   | Silver alloy                       |
| Release voltage                        | Rated voltage $\times 10\%$ | Contact resistance | $\leq 100\text{m}\Omega$ (6VDC 1A) |
| Action time                            | $\leq 10\text{ms}$          | Protection circuit | RC, varistor, fuse optional        |
| Release time                           | $\leq 15\text{ms}$          |                    |                                    |

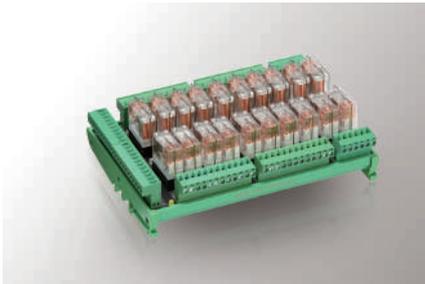
### RF Power relay module



### Specification parameter

|                                        |                             |                    |                                    |
|----------------------------------------|-----------------------------|--------------------|------------------------------------|
| Drive mode                             | NPN/PNP compatible          | Contact type       | 30A 40A 250VAC/30VDC               |
| Rated voltage                          | 12VDC/24VDC/220VAC          | Electrical life    | $1 \times 10^5$                    |
| Single circuit rated power consumption | DC:0.93W                    | Mechanical life    | $1 \times 10^7$                    |
| Operating voltage                      | Rated voltage $\times 80\%$ | Contact material   | Silver alloy                       |
| Release voltage                        | Rated voltage $\times 10\%$ | Contact resistance | $\leq 100\text{m}\Omega$ (6VDC 1A) |
| Action time                            | $\leq 10\text{ms}$          | Protection circuit | RC, varistor, fuse optional        |
| Release time                           | $\leq 15\text{ms}$          |                    |                                    |

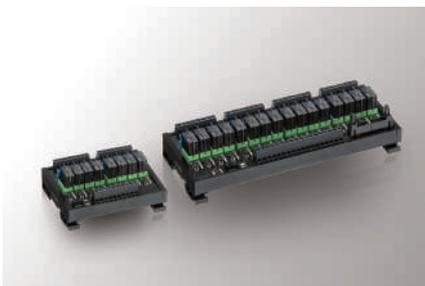
### RH Power relay module



### Specification parameter

|                                        |                             |                    |                                                   |
|----------------------------------------|-----------------------------|--------------------|---------------------------------------------------|
| Drive mode                             | NPN/PNP compatible          | Contact type       | 1Z:16A 15A 250VAC/30VDC<br>2Z:10A 8A 250VAC/30VDC |
| Rated voltage                          | 12VDC/24VDC/220VAC          | Electrical life    | $1 \times 10^5$                                   |
| Single circuit rated power consumption | DC:0.93W AC:1.0VA           | Mechanical life    | $1 \times 10^7$                                   |
| Operating voltage                      | Rated voltage $\times 70\%$ | Contact material   | Silver alloy                                      |
| Release voltage                        | Rated voltage $\times 10\%$ | Contact resistance | $\leq 100\text{m}\Omega$ (6VDC 1A)                |
| Action time                            | $\leq 15\text{ms}$          | Protection circuit | RC, varistor, fuse optional                       |
| Release time                           | $\leq 10\text{ms}$          |                    |                                                   |

### RI Relay module



### Specification parameter

|                                        |                             |                    |                                    |
|----------------------------------------|-----------------------------|--------------------|------------------------------------|
| Drive mode                             | NPN/PNP compatible          | Contact type       | 1A:10A 12A 15A<br>250VAC/30VDC     |
| Rated voltage                          | 12VDC/24VDC/220VAC          | Electrical life    | $1 \times 10^5$                    |
| Single circuit rated power consumption | DC:0.45W                    | Mechanical life    | $1 \times 10^7$                    |
| Operating voltage                      | Rated voltage $\times 80\%$ | Contact material   | Silver alloy                       |
| Release voltage                        | Rated voltage $\times 10\%$ | Contact resistance | $\leq 100\text{m}\Omega$ (6VDC 1A) |
| Action time                            | $\leq 10\text{ms}$          | Protection circuit | RC, varistor, fuse optional        |
| Release time                           | $\leq 15\text{ms}$          |                    |                                    |

## HHN-SG3 Solid-state relay module



### Specification parameter

|                              |                                            |                  |
|------------------------------|--------------------------------------------|------------------|
| Product model                | HHN-SG3 □□□□ D24/DA                        | HHN-SG3 □□□□ D24 |
| Operation time               | 1/2 cycle of load power supply+1ms or less | 1ms or less      |
| Reset time                   | 1/2 cycle of load power supply+1ms or less | 1ms or less      |
| Insulation resistance        | 100MΩ or above (500V megohmmeter)          |                  |
| Control voltage              | 3-32VDC                                    |                  |
| Control current              | 5-20mA                                     |                  |
| Load voltage                 | 24-240VAC 24-440VAC                        | 5-60VDC          |
| Load current                 | 1A, 2A                                     |                  |
| On-state voltage drop        | DC ≤ 1.2V                                  | AC ≤ 1.6V        |
| Off-state leakage current    | DC ≤ 5mA                                   | AC ≤ 10mA        |
| Dielectric withstand voltage | ≥ 1500VAC                                  |                  |
| Isolation withstand voltage  | AC2500V 50/60Hz 1min                       |                  |

## HHN-SM Optical MOS module



### Specification parameter

|                                  |                                                      |        |        |       |       |
|----------------------------------|------------------------------------------------------|--------|--------|-------|-------|
| Rated operating voltage          | 5VDC, 12VDC, 24VDC                                   |        |        |       |       |
| Rated operating current          | 5mA                                                  |        |        |       |       |
| Wiring polarity                  | With polarity (pay attention to the wiring sequence) |        |        |       |       |
| Load current                     | 1A                                                   | 2A     | 3A     | 4A    | 5A    |
| Load voltage                     | 60VDC                                                | 100VDC | 100VDC | 60VDC | 30VDC |
| Surge current                    | 1A                                                   | 2A     | 3A     | 4A    | 5A    |
| Maximum working frequency        | 1kHz                                                 |        |        |       |       |
| Maximum voltage drop (-40~100°C) | 0~0.8V                                               |        |        |       |       |
| Peak voltage                     | 2500V                                                |        |        |       |       |
| Number of control channels       | 4, 8, 16, 32                                         |        |        |       |       |
| Insulation resistance            | 100MΩ (500VDC)                                       |        |        |       |       |
| Conduction time (10~90%)         | 0.5ms                                                |        |        |       |       |
| Off time (10~90%)                | 0.03ms                                               |        |        |       |       |
| Isolation withstand voltage      | 3750Vrms                                             |        |        |       |       |

## HHN-SL1 PLC DC amplifier board



### Specification parameter

|                               |                                                                                                |
|-------------------------------|------------------------------------------------------------------------------------------------|
| Control component             | Original imported MOS transistor                                                               |
| Input voltage                 | 24V (default 24V, control range 3V~24V, please specify if other requirements are needed)       |
| Input signal                  | Compatible with NPN (valid 0V input signal) and PNP (valid 24V input signal)                   |
| Installation method           | Standard DIN rail installation (can be installed on NS35/7.5 or NS32 guide slot)               |
| Load current (per circuit)    | Resistive load ≤ 3A (instant 8A, customizable); inductive load ≤ 2A (instant 8A, customizable) |
| Input minimum driving current | ≥ 15mA                                                                                         |
| Input response time           | ≥ 0.2ms                                                                                        |
| Mechanical life               | ≥ 1 亿次                                                                                         |
| Circuit insulation            | Optocoupler isolation                                                                          |
| Short circuit protection      | 10A                                                                                            |

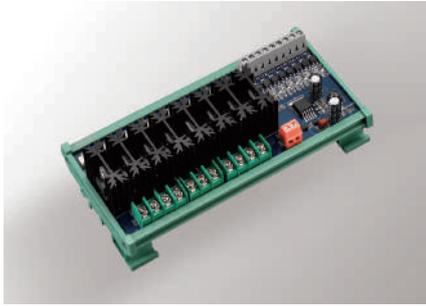
## HHN-SL2 PLC AC amplifier board



### Specification parameter

|                               |                                                                                                  |
|-------------------------------|--------------------------------------------------------------------------------------------------|
| Control component             | Original imported thyristor                                                                      |
| Input voltage                 | 24V (default 24V, control range 3V~24V, please specify if other requirements are needed)         |
| Contact form                  | Contactless                                                                                      |
| Input signal                  | Compatible with NPN (valid 0V input signal) and PNP (valid 24V input signal)                     |
| Installation method           | Standard DIN rail installation (can be installed on NS35/7.5 or NS32 guide slot)                 |
| Load current (per circuit)    | Resistive load ≤ 2A (instant 5A, customizable); inductive load ≤ 1.5A (instant 5A, customizable) |
| Input minimum driving current | ≥ 15mA                                                                                           |
| Input response time           | ≥ 20ms                                                                                           |
| Mechanical life               | ≥ 100 million times                                                                              |
| Circuit insulation            | Optocoupler isolation                                                                            |
| Short circuit protection      | 10A                                                                                              |

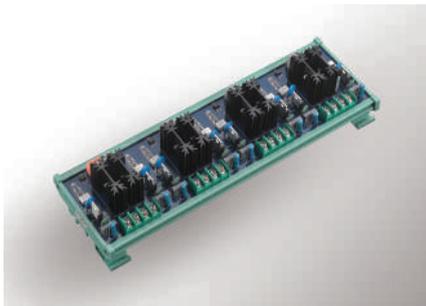
### HHN-SL3 PLC DC High-power amplifier board



#### Specification parameter

|                               |                                                                                               |
|-------------------------------|-----------------------------------------------------------------------------------------------|
| Input form                    | Compatible with PNP or NPN (positive and negative control compatible)                         |
| Output form                   | Low level output (OV)                                                                         |
| Input minimum driving current | ≥ 15mA                                                                                        |
| Switching frequency           | ≤ 50K                                                                                         |
| Control component             | Original imported IR2807 (max. driving current of 82A and withstand voltage of 75V for US IR) |
| Service life                  | ≥ 100 million times (1 million hours for driving tube)                                        |
| Load current                  | Long term 6A                                                                                  |

### HHN-SL4 PLC AC High-power amplifier board



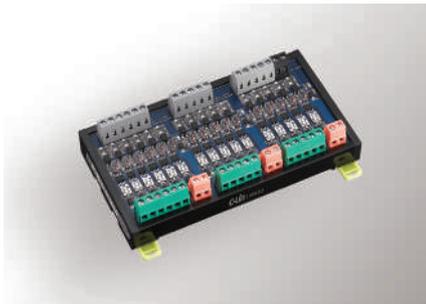
#### Specification parameter

|                                            |                                                                                             |
|--------------------------------------------|---------------------------------------------------------------------------------------------|
| Input form                                 | Compatible with PNP or NPN                                                                  |
| Output form                                | 220VAC                                                                                      |
| Input signal voltage                       | 24V (default 24V, control range is 3V-24V, please specify if other requirements are needed) |
| Input response time                        | ≤ 0.2ms                                                                                     |
| Working frequency                          | 50Hz-60Hz                                                                                   |
| Non-repetitive surge peak on-state current | 65-72A                                                                                      |
| Input minimum driving current              | ≥ 15mA                                                                                      |
| Switching frequency                        | ≤ 50K                                                                                       |
| Control component                          | Original imported thyristor (TR2807)                                                        |
| Service life                               | ≥ 100 million times (1 million hours for driving tube)                                      |
| Load current                               | Long term 10A (instant 30A)                                                                 |

### HHN-SL5/SL6

PLC DC Amplifier board with short-circuit protection

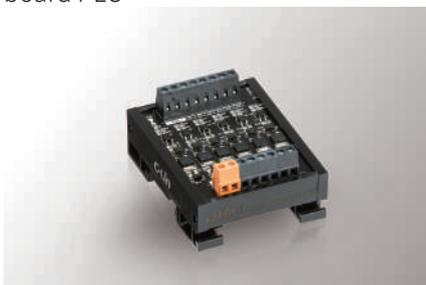
PLC DC High-power amplifier board with short-circuit protection



#### Specification parameter

|                                     |                                                                                          |
|-------------------------------------|------------------------------------------------------------------------------------------|
| Control component                   | Imported high-power MOSEFET                                                              |
| Input voltage                       | 24V (default 24V, control range 3V-24V, please specify if other requirements are needed) |
| Input signal                        | Compatible with NPN (valid OV input signal) and PNP (valid 24V input signal)             |
| Installation method                 | Standard DIN rail installation (can be installed on NS35/7.5 or NS32 guide slot)         |
| Load current (per circuit)          | Resistive load ≤ 2.5A (instant 10A); inductive load ≤ 2A (instant 10A)                   |
| Input minimum driving current       | ≥ 5mA                                                                                    |
| Input response time                 | ≥ 0.3ms                                                                                  |
| Mechanical life                     | ≥ 100 million times                                                                      |
| Circuit insulation                  | Optocoupler isolation                                                                    |
| Short circuit protection            | SL5: 3A SL6: 5A                                                                          |
| Instant impulse current             | 10A                                                                                      |
| self-reset protection (per circuit) | ≥ 3A                                                                                     |
| Continuous operating current        | Within 2A                                                                                |

### SL7/SL8 transistor DC amplification board PLC



#### Specification parameter

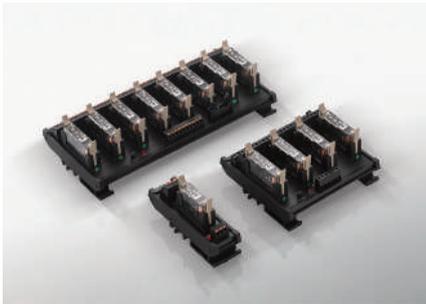
|                               |                                                                                          |
|-------------------------------|------------------------------------------------------------------------------------------|
| Control component             | Original imported MOS transistor                                                         |
| Input voltage                 | 24V (default 24V, control range 3V-24V, please specify if other requirements are needed) |
| Input signal                  | Compatible with NPN (valid OV input signal) and PNP (valid 24V input signal)             |
| Installation method           | Standard DIN rail installation (can be installed on NS35/7.5 or NS32 guide slot)         |
| Load current (per circuit)    | Resistive load ≤ 2A; inductive load ≤ 1A                                                 |
| Input minimum driving current | ≥ 15mA                                                                                   |
| Input response time           | ≥ 0.2ms                                                                                  |
| Mechanical life               | ≥ 100 million times                                                                      |
| Circuit insulation            | Optocoupler isolation                                                                    |
| Short circuit protection      | 10A                                                                                      |

## HHN-RQ safety relay module

### Model description

|                                                                                          |   |                                              |                                                                                                                                                                                                        |                                                                                   |
|------------------------------------------------------------------------------------------|---|----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| HHN                                                                                      | - | R                                            | Q1                                                                                                                                                                                                     | Q4                                                                                |
| Enterprise code                                                                          |   | Relay type<br>Electromagnetic relay          | Design number<br>Q1: 3A1B type safety relay module<br>Q2: 2A2B type safety relay module Q3:<br>3A3B type safety relay module<br>Q4: 4A2B type safety relay module<br>Q5: 5A1B type safety relay module | Number of relay control units<br>02: 2-bit<br>04: 4-bit<br>06: 6-bit<br>08: 8-bit |
| A                                                                                        | - | N                                            | D24 /                                                                                                                                                                                                  | ***                                                                               |
| Input/output port type<br>A: Screw type terminal<br>T: T-shaped spring leaf type termina |   | Output protection method<br>N: No protection | Operating voltage<br>D12 12VDC<br>D24 24VDC                                                                                                                                                            | Configured relay brand<br>None: Omron G7SA relay                                  |

### HHN-RQ safety relay module



### Specification parameter

|                                   |                                                          |       |       |       |       |           |
|-----------------------------------|----------------------------------------------------------|-------|-------|-------|-------|-----------|
| Drive mode                        | NPN/PNP compatible                                       |       |       |       |       |           |
| Rated voltage                     | DC12V                                                    | DC18V | DC21V | DC24V | DC48V | DC100V    |
| 4P rated current (mA)             | 30                                                       | 20    | 17.1  | 15    | 7.5   | 3.8       |
| 4P power consumption (mW)         | About 360                                                |       |       |       |       | About 420 |
| 6P rated current (mA)             | 41.7                                                     | 27.8  | 23.8  | 20.8  | 10.4  | 5.3       |
| 6P power consumption (mW)         | About 500                                                |       |       |       |       | About 580 |
| Operating voltage                 | Around 75% of rated voltage                              |       |       |       |       |           |
| Release voltage                   | Around 10% of rated voltage                              |       |       |       |       |           |
| Operation time                    | ≤ 20ms                                                   |       |       |       |       |           |
| Release time                      | ≤ 10ms                                                   |       |       |       |       |           |
| Resistive load                    | AC250V 6A ; DC30V 6A                                     |       |       |       |       |           |
| Inductive load switch performance | AC15V AC240V 2A; DC13V DC24V 1A; DC48V 0.5A; DC110V 0.2A |       |       |       |       |           |
| Electrical life                   | ≥ 100000 times (rated load)                              |       |       |       |       |           |
| Mechanical life                   | ≥ 10 million times                                       |       |       |       |       |           |
| Maximum switching frequency       | Mechanical 36000 times/h Rated load 1800 times/h         |       |       |       |       |           |
| Contact material                  | Silver alloy                                             |       |       |       |       |           |
| Contact resistance                | ≤ 100mΩ                                                  |       |       |       |       |           |



## LXW-5 Micro switch series

### Scope of application

The LXW-5 series micro switch is widely used in food machinery, automatic packaging machines, machine tools, conveying machinery, automatic production line control, and light industrial machinery with strict protection requirements.

This series of micro switch complies with GB/T14048.5 and IEC 60947-5-1 standards.

### Model description

|                 |               |                                        |                                                    |
|-----------------|---------------|----------------------------------------|----------------------------------------------------|
| LXW             | -             | 5                                      | □                                                  |
| Enterprise code | Design number | Types of actuators                     |                                                    |
| Micro switch    |               | 11D: Spring button type                | 11G1: Pivot roller handle type                     |
|                 |               | 11G2: Pivot roller short handle type   | 11M: Panel-mounted button type                     |
|                 |               | 11N1: Pivot handle button type         | 11N2: Micro pivot handle type                      |
|                 |               | 11Q1: Panel-mounted roller buckle type | 11Q2: Panel-mounted roller button type             |
|                 |               | 11Z: Pin button type                   | 15B: Unidirectional pivot roller short handle type |
|                 |               | 15C: Spring thin button type           | 15R: Micro pivot cable handle type                 |
|                 |               | 15S: Roller reed type                  | 15X: Reed type                                     |

### Main parameter and technical performance

|                        |                                                                                                                                                                       |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Operation speed        | 0.01mm~1m/s                                                                                                                                                           |
| Working frequency      | Mechanical: 240 times/min Electrical: 20 times/min                                                                                                                    |
| Contact resistance     | 15mΩ or less (initial value)                                                                                                                                          |
| Insulation resistance  | 100MΩ or above( ≤ DC500V)                                                                                                                                             |
| Agreed heating current | 15A                                                                                                                                                                   |
| Electrical parameter   | AC380V, AC220V/1.5A DC220V/0.3A                                                                                                                                       |
| Withstand voltage      | 1890V, 50/60Hz 1min between non-connected terminals<br>2500V, 50/60Hz 1min between terminal and non-charged metal<br>2500V, 50/60Hz, 1min between terminal and ground |
| Vibration              | Misoperation durability: 10Hz~55Hz, 1.5mm dual amplitude                                                                                                              |
| Shock                  | Mechanical durability: 1000m/S <sup>2</sup> , misoperation durability: 300m/S <sup>2</sup>                                                                            |
| Usage environment      | Temperature: -10°C ~+80°C (non-freezing) Humidity: 35-95% RH                                                                                                          |
| Mechanical life        | ≥ 10 million times                                                                                                                                                    |
| Electrical life        | Contact spacing G and H: ≥ 500000 times; contact spacing E: ≥ 100000 times                                                                                            |

### Operation characteristics

| Model     | Operation force (OF) max | Operation travel (PT) max | Overtravel (OT) min | Operation position |
|-----------|--------------------------|---------------------------|---------------------|--------------------|
| LXW-511D  | 3.4N(0.35kgf)            | 0.4mm                     | 1.6mm               | 21.5±0.5mm         |
| LXW-511G1 | 1N(0.1kgf)               | 7.1mm                     | 4mm                 | 30.2±0.8mm         |
| LXW-511G2 | 1.6N(0.16kgf)            | 2.7mm                     | 2.4mm               | 30.2±0.4mm         |
| LXW-511M  | 3.4N(0.35kgf)            | 0.4mm                     | 5.6mm               | 21.8±0.8mm         |
| LXW-511N1 | 0.7N(0.07kgf)            | 10mm                      | 5.6mm               | 19±0.8mm           |
| LXW-511N2 | 1.6N(0.16kgf)            | 5mm                       | 2mm                 | 19±0.4mm           |
| LXW-511Q1 | 3.4N(0.35kgf)            | 0.4mm                     | 3.58mm              | 33.4±1.2mm         |
| LXW-511Q2 | 3.4N(0.35kgf)            | 0.4mm                     | 3.58mm              | 33.4±1.2mm         |
| LXW-511Z  | 3.4N(0.35kgf)            | 0.4mm                     | 0.13mm              | 15.9±0.4mm         |
| LXW-515B  | 1.6N(0.16kgf)            | 2.7mm                     | 2.4mm               | 43.1±0.8mm         |
| LXW-515C  | 3.4N(0.35kgf)            | 0.1mm                     | 1.6mm               | 28.2±0.5mm         |
| LXW-515R  | 1N(0.1kgf)               | 20 mm                     | 5.6mm               | 19±0.4mm           |
| LXW-515S  | 3.0N(0.3kgf)             | 4mm                       | 1.6mm               | 28.6±0.8mm         |
| LXW-515X  | 3.0N(0.3kgf)             | 4mm                       | 1.6mm               | 17.4±0.8mm         |



LXW-5 Sheath



LXW-511Q2  
(Customizable small wheels)



LXW-511D



LXW-511Z



LXW-511G1



LXW-515B



LXW-511G2



LXW-515C



LXW-511M



LXW-515R



LXW-511N1



LXW-515S



LXW-511N2



LXW-515X



LXW-511Q1  
(Customizable small wheels)

# LXW-AZ Micro switch series

## Scope of application

The LXW-AZ series micro switch is widely used in food machinery, automatic packaging machines, machine tools, conveying machinery, automatic production line control, and light industrial machinery with strict protection requirements.

This series of micro switch complies with GB/T14048.5 and IEC 60947-5-1 standards.

## Model description

|                 |               |   |
|-----------------|---------------|---|
| LXW -           | AZ /          | □ |
| Enterprise code | Design number |   |
| Micro switch    |               |   |

|                                                      |                                               |
|------------------------------------------------------|-----------------------------------------------|
| 7100: Short plunger type                             | 7110: Long plunger type                       |
| 7120: Pivot handle type                              | 7121: Pivot roller handle type                |
| 7124: Unidirectional action pivot roller handle type | 7140: Pivot short handle type                 |
| 7141: Pivot roller short handle type                 | 7144: Unidirectional roller short rod type    |
| 7166: Spring coil resin type                         | 7310: Panel-mounted plunger type              |
| 7311: Panel-mounted roller plunger type              | 7312: Panel-mounted cross roller plunger type |

## Main parameter and technical performance

|                        |                                                                                            |
|------------------------|--------------------------------------------------------------------------------------------|
| Operation speed        | 0.5mm~0.5m/s                                                                               |
| Working frequency      | Mechanical: 120 times/min Electrical: 20 times/min                                         |
| Contact resistance     | 50mΩ or less (initial value)                                                               |
| Insulation resistance  | 100MΩ or above ( ≤ DC500V)                                                                 |
| Agreed heating current | 10A                                                                                        |
| Electrical parameter   | AC380V, AC220V/1A DC220V/0.3A                                                              |
| Withstand voltage      | 1890V, 50/60Hz 1min between non-connected terminals                                        |
|                        | 2500V, 50/60Hz 1min between terminal and non-charged metal                                 |
|                        | 2500V, 50/60Hz, 1min between terminal and ground                                           |
| Vibration              | Misoperation durability: 10Hz~55Hz, 1.5mm dual amplitude                                   |
| Shock                  | Mechanical durability: 1000m/S <sup>2</sup> , misoperation durability: 300m/S <sup>2</sup> |
| Usage environment      | Temperature: -10°C ~+80°C (non-freezing) Humidity: 35-95% RH                               |
| Service life           | Mechanical: ≥ 10 million times Electrical: ≥ 100000 times                                  |
| Protection level       | IP63                                                                                       |

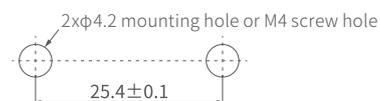
## Operation characteristics

| Model      | Operation force (OF) max | Operation travel (PT) max | Overtravel (OT) min | Operation position |
|------------|--------------------------|---------------------------|---------------------|--------------------|
| LXW-AZ7100 | 5.9N(0.6kgf)             | 2.0mm                     | 0.8mm               | 30.5±0.8mm         |
| LXW-AZ7110 | 5.9N(0.6kgf)             | 2.0mm                     | 5.0mm               | 44.5±1.2mm         |
| LXW-AZ7120 | 1.5N (0.15kgf)           | 13.5mm                    | 4.0mm               | 25±1mm             |
| LXW-AZ7121 | 1.8N(0.18kgf)            | 11.0mm                    | 3.0mm               | 40±1mm             |
| LXW-AZ7124 | 2.0N(0.2kgf)             | 11.0mm                    | 3.0mm               | 50±1.2mm           |
| LXW-AZ7140 | 2.2N(0.22kgf)            | 8.5mm                     | 2.5mm               | 25±1mm             |
| LXW-AZ7141 | 2.0N(0.2kgf)             | 6.5mm                     | 2.0mm               | 40±1mm             |
| LXW-AZ7144 | 2.7N(0.28kgf)            | 6.5mm                     | 2.0mm               | 50±1.2mm           |
| LXW-AZ7310 | 5.9N(0.6kgf)             | 2.0mm                     | 6.0mm               | 21.8±1.2mm         |
| LXW-AZ7311 | 5.9N(0.6kgf)             | 2.0mm                     | 6.0mm               | 33.3±1.2mm         |
| LXW-AZ7312 | 5.9N(0.6kgf)             | 2.0mm                     | 6.0mm               | 33.3±1.2mm         |
| LXW-AZ7166 | 1.2N(0.12kgf)            | 250mm                     | 11.0mm              |                    |

## Contact form



## Mounting hole and machining dimension



LXW-AZ7100



LXW-AZ7110



LXW-AZ7120



LXW-AZ7121



LXW-AZ7124



LXW-AZ7140



LXW-AZ7141



LXW-AZ7144



LXW-AZ7310



LXW-AZ7311



LXW-AZ7312



LXW-AZ7166



# ELECTRIC

## DRIVE AND CONTROL SERIES

- PLC, remote I/O module, gateway series C03
- Inverter series C04
- Soft starter series C09
- Electric motor protector series C11
- Motor speed regulator series C16



## PLC, remote I/O module, gateway series

The CZA/CZD series programmable logic controller has powerful functions such as logic operation, data operation and high-speed processing. In order to better meet the control needs on site, the CZA/CZD series PLC can be externally expanded with 10 modules per basic unit, making it widely used in process control systems such as temperature, flow rate, liquid level and pressure.

The CDAM series remote I/O module is an industrial grade remote acquisition and control module. The module can be controlled by remote command. It uses industrial grade component, 24VDC voltage input, and can work normally within the range of -20°C ~50°C. It supports CAN and RS485 communication modes and has the characteristics of fast response, high reliability and convenient use.

The CBOX series gateway module is an industrial grade wireless communication module designed to connect to the C-Lin Cloud platform. With LTE 4G wireless network as the carrier network, it provides wireless data transmission channels over TCP/MQTT for industrial users to achieve remote monitoring.

**CZA1 Series**  
Programmable logic controller



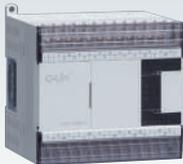
|                      |                                                                                     |
|----------------------|-------------------------------------------------------------------------------------|
| Supply voltage       | DC24V                                                                               |
| Computing speed      | 0.05μs                                                                              |
| Output method        | Relay output, transistor output                                                     |
| Extension module     | External extension unsupported                                                      |
| High speed interface | 2-circuit high-speed pulse output                                                   |
| Interface            | 1-circuit RS232 and 1-circuit RS485                                                 |
| Comm. protocol       | Standard Modbus Rtu protocol, Free-port communication, C-Lin communication protocol |
| Optional function    | Analog function                                                                     |
| Dimension            | 14 points: 96×107×44mm<br>22 points: 126×120×44mm                                   |
| Installation method  | Screw mounting type, DIN rail type                                                  |
| Ambient temp.        | -20°C~ +50°C                                                                        |

**CAM1 series (motion bus type)**  
Programmable logic controller



|                      |                                                                                                          |
|----------------------|----------------------------------------------------------------------------------------------------------|
| Supply voltage       | AC220V                                                                                                   |
| Computing speed      | 0.04μs                                                                                                   |
| Output method        | Relay output, transistor output                                                                          |
| Extension module     | 10 modules extensible                                                                                    |
| High speed interface | 2-circuit high-speed counting input, 2-circuit or 4-circuit high-speed pulse output                      |
| Interface            | USB Type-C, RS232 port, RS485 port, Ethernet port                                                        |
| Comm. protocol       | Standard Modbus Rtu protocol, Free-port communication, C-Lin communication protocol                      |
| Optional function    | CAN bus, EtherCAT bus, G-code, electronic cam                                                            |
| Dimension            | 16 points: 71×100×88mm<br>24 points and 32 points: 109×100×88mm<br>48 points and 60 points: 177×100×88mm |
| Installation method  | Screw mounting type, DIN rail type                                                                       |
| Ambient temp.        | -20°C~ +50°C                                                                                             |

**CZD1 Series (standard type)**  
Programmable logic controller



|                      |                                                                                                          |
|----------------------|----------------------------------------------------------------------------------------------------------|
| Supply voltage       | AC220V                                                                                                   |
| Computing speed      | 0.04μs                                                                                                   |
| Output method        | Relay output, transistor output                                                                          |
| Extension module     | 10 modules extensible                                                                                    |
| High speed interface | 2-circuit high-speed counting input                                                                      |
| Interface            | USB Type-C, RS232, RS485 interface                                                                       |
| Comm. protocol       | Standard Modbus Rtu protocol, Free-port communication, C-Lin communication protocol                      |
| Optional function    | Analog function                                                                                          |
| Dimension            | 16 points: 71×100×88mm<br>24 points and 32 points: 109×100×88mm<br>48 points and 60 points: 177×100×88mm |
| Installation method  | Screw mounting type, DIN rail type                                                                       |
| Ambient temp.        | -20°C~ +50°C                                                                                             |

**CDAM4100 Series**  
Remote I/O module



|                     |                                                                                         |
|---------------------|-----------------------------------------------------------------------------------------|
| Supply voltage      | DC24V                                                                                   |
| Input method        | Switching quantity (optional), analog quantity (optional)                               |
| Output method       | Relay (optional), transistor (optional)                                                 |
| Comm. interface     | Optoelectronic isolation, RS485                                                         |
| Comm. protocol      | Modbus-RTU, it supports 8-bit data bit, 1-bit stop bit, no/odd/even parity configurable |
| Baud rate           | 1200bps~115200bps                                                                       |
| Power consumption   | < 2000mW                                                                                |
| Dimension           | 103×72×34.5mm                                                                           |
| Installation method | DIN rail type                                                                           |
| Ambient temp.       | -20°C~ +50°C                                                                            |

**CZD3 Series (enhanced)**  
Programmable logic controller



|                      |                                                                                                          |
|----------------------|----------------------------------------------------------------------------------------------------------|
| Supply voltage       | AC220V                                                                                                   |
| Computing speed      | 0.04μs                                                                                                   |
| Output method        | Relay output, transistor output                                                                          |
| Extension module     | 10 modules extensible                                                                                    |
| High speed interface | 2-circuit high-speed counting input, 2-circuit or 4-circuit high-speed pulse output                      |
| Interface            | USB Type-C, RS232, RS485 interface                                                                       |
| Comm. protocol       | Standard Modbus Rtu protocol, Free-port communication, C-Lin communication protocol                      |
| Optional function    | Analog function                                                                                          |
| Dimension            | 16 points: 71×100×88mm<br>24 points and 32 points: 109×100×88mm<br>48 points and 60 points: 177×100×88mm |
| Installation method  | Screw mounting type, DIN rail type                                                                       |
| Ambient temp.        | -20°C~ +50°C                                                                                             |

**CBOX Series**  
Gateway module



|                            |                                                                                                                               |
|----------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| Supply voltage             | DC24V                                                                                                                         |
| Supporting frequency bands | LTE-TDD: Max. downlink speed 7.5Mbps, max. uplink speed 1Mbps<br>LTE-FDD: Max. downlink speed 10Mbps, max. uplink speed 5Mbps |
| LTIE feature               | LTE-TDD: B34/B38/B39/B40/B41<br>LTE-FDD: B1/B3/B5/B8                                                                          |
| Transmission power         | Class3(23dBm±2dB) for LTE TDD bands<br>Class3(23dBm±2dB) for LTE FDD bands                                                    |
| Network protocol           | TCP/UDP/MQTT protocol supported                                                                                               |
| RF interface               | SMA-K (external thread internal hole)                                                                                         |
| Baud rate                  | Max. 460800 supported, default 115200bps                                                                                      |
| Data interface             | RS232/RS485                                                                                                                   |
| Dimension                  | CBOX1: 30×110×66mm<br>CBOX2: 75.3×90.7×21mm                                                                                   |
| Ambient temp.              | -30°C~ +75°C                                                                                                                  |

## Inverter series

C-Lin inverter integrates the latest domestic technologies, adopts modular design, uses high-quality components, and ensures more stable and reliable application through new production processes and high-precision detection equipment. It has energy-saving speed regulation operation, multiple motor protection and control functions, and built-in PLC and PID functions. This product is widely used in plastic, textile, printing, packaging, food and other machinery, as well as petrochemical, metallurgical, mining, heating, water supply and other fields, and has received unanimous praise from users.

For more details on model, specification and technical parameter, please visit our company website or contact our company.

**XLP6500-2.2 type**  
 (Input single-phase 220V)  
 Vector type inverter



|                     |                                                                                                             |
|---------------------|-------------------------------------------------------------------------------------------------------------|
| Input voltage       | 1PH AC220V 50/60Hz                                                                                          |
| Output voltage      | 3PH AC0-220V 0-500Hz                                                                                        |
| Rated power         | 0.4kW 0.75kW 1.5kW 2.2kW                                                                                    |
| Rated current       | 2.3A 4A 7A 9.6A                                                                                             |
| Control mode        | V/F control, vector control                                                                                 |
| Overload capacity   | 150% rated current 60s;<br>190% rated current 1.5s;                                                         |
| Protection function | Overcurrent, overvoltage,<br>undervoltage, overheating, short circuit                                       |
| Protection level    | IP20                                                                                                        |
| Dimension           | 185×118×157mm                                                                                               |
| Installation size   | 175×107mm(4-M4)                                                                                             |
| Cooling method      | Forced air cooling                                                                                          |
| Using site          | Altitude ≤ 1000m, derating is required<br>if exceeding this altitude, no corrosive<br>gas or liquid indoors |

**XLP6500-7.5 type**  
 (Input three-phase 220V)  
 Vector type inverter



|                     |                                                                                                             |
|---------------------|-------------------------------------------------------------------------------------------------------------|
| Input voltage       | 3PH AC220V 50/60Hz                                                                                          |
| Output voltage      | 3PH AC0-220V 0-500Hz                                                                                        |
| Rated power         | 7.5kW                                                                                                       |
| Rated current       | 32A                                                                                                         |
| Control mode        | V/F control, vector control                                                                                 |
| Overload capacity   | 150% rated current 60s;<br>190% rated current 1.5s;                                                         |
| Protection function | Overcurrent, overvoltage,<br>undervoltage, overheating, short circuit                                       |
| Protection level    | IP20                                                                                                        |
| Dimension           | 335×217×194mm                                                                                               |
| Installation size   | 324×140mm(4-M5)                                                                                             |
| Cooling method      | Forced air cooling                                                                                          |
| Using site          | Altitude ≤ 1000m, derating is required<br>if exceeding this altitude, no corrosive<br>gas or liquid indoors |

**XLP6500-2.2 type**  
 (Input three-phase 220V)  
 Vector type inverter



|                     |                                                                                                             |
|---------------------|-------------------------------------------------------------------------------------------------------------|
| Input voltage       | 3PH AC220V 50/60Hz                                                                                          |
| Output voltage      | 3PH AC0-220V 0-500Hz                                                                                        |
| Rated power         | 0.4kW 0.75kW 1.5kW 2.2kW                                                                                    |
| Rated current       | 2.3A 3.8A 7.2A 9A                                                                                           |
| Control mode        | V/F control, vector control                                                                                 |
| Overload capacity   | 150% rated current 60s;<br>190% rated current 1.5s;                                                         |
| Protection function | Overcurrent, overvoltage,<br>undervoltage, overheating, short circuit                                       |
| Protection level    | IP20                                                                                                        |
| Dimension           | 185×118×157mm                                                                                               |
| Installation size   | 175×107mm(4-M4)                                                                                             |
| Cooling method      | Forced air cooling                                                                                          |
| Using site          | Altitude ≤ 1000m, derating is required<br>if exceeding this altitude, no corrosive<br>gas or liquid indoors |

**XLP6500-11 type**  
 (Input three-phase 220V)  
 Vector type inverter



|                     |                                                                                                             |
|---------------------|-------------------------------------------------------------------------------------------------------------|
| Input voltage       | 3PH AC220V 50/60Hz                                                                                          |
| Output voltage      | 3PH AC0-220V 0-500Hz                                                                                        |
| Rated power         | 11kW                                                                                                        |
| Rated current       | 45A                                                                                                         |
| Control mode        | V/F control, vector control                                                                                 |
| Overload capacity   | 150% rated current 60s;<br>190% rated current 1.5s;                                                         |
| Protection function | Overcurrent, overvoltage,<br>undervoltage, overheating, short circuit                                       |
| Protection level    | IP20                                                                                                        |
| Dimension           | 361×228×204mm                                                                                               |
| Installation size   | 349×139mm(4-M5)                                                                                             |
| Cooling method      | Forced air cooling                                                                                          |
| Using site          | Altitude ≤ 1000m, derating is required<br>if exceeding this altitude, no corrosive<br>gas or liquid indoors |

**XLP6500-5.5 type**  
 (Input three-phase 220V)  
 Vector type inverter



|                     |                                                                                                             |
|---------------------|-------------------------------------------------------------------------------------------------------------|
| Input voltage       | 3PH AC220V 50/60Hz                                                                                          |
| Output voltage      | 3PH AC0-220V 0-500Hz                                                                                        |
| Rated power         | 3.7kW 5.5kW                                                                                                 |
| Rated current       | 13A 25A                                                                                                     |
| Control mode        | V/F control, vector control                                                                                 |
| Overload capacity   | 150% rated current 60s;<br>190% rated current 1.5s;                                                         |
| Protection level    | Overcurrent, overvoltage,<br>undervoltage, overheating, short circuit                                       |
| Protection function | IP20                                                                                                        |
| Dimension           | 247×160×178mm                                                                                               |
| Installation size   | 235×148mm(4-M4)                                                                                             |
| Cooling method      | Forced air cooling                                                                                          |
| Using site          | Altitude ≤ 1000m, derating is required<br>if exceeding this altitude, no corrosive<br>gas or liquid indoors |

**XLP6500-15 type**  
 (Input three-phase 220V)  
 Vector type inverter



|                     |                                                                                                             |
|---------------------|-------------------------------------------------------------------------------------------------------------|
| Input voltage       | 3PH AC220V 50/60Hz                                                                                          |
| Output voltage      | 3PH AC0-220V 0-500Hz                                                                                        |
| Rated power         | 15kW                                                                                                        |
| Rated current       | 60A                                                                                                         |
| Control mode        | V/F control, vector control                                                                                 |
| Overload capacity   | 150% rated current 60s;<br>190% rated current 1.5s;                                                         |
| Protection function | Overcurrent, overvoltage,<br>undervoltage, overheating, short circuit                                       |
| Protection level    | IP20                                                                                                        |
| Dimension           | 463×285×224mm                                                                                               |
| Installation size   | 447×235mm(4-M6)                                                                                             |
| Cooling method      | Forced air cooling                                                                                          |
| Using site          | Altitude ≤ 1000m, derating is required<br>if exceeding this altitude, no corrosive<br>gas or liquid indoors |

RELAY SERIES  
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**XLP6500-3.7 type**  
Vector type inverter



|                     |                                                                                                             |
|---------------------|-------------------------------------------------------------------------------------------------------------|
| Input voltage       | 3PH AC380V 50/60Hz                                                                                          |
| Output voltage      | 3PH AC0-380V 0-500Hz                                                                                        |
| Rated power         | 0.75Kw, 1.5Kw, 2.2Kw, 3.7Kw                                                                                 |
| Rated current       | 2.1A, 3.8A, 5.1A, 9A,                                                                                       |
| Control mode        | V/F control, vector control                                                                                 |
| Overload capacity   | 150% rated current 60s;<br>190% rated current 1.5s;                                                         |
| Protection function | Overvoltage, overcurrent,<br>undervoltage, overheating, short circuit                                       |
| Protection level    | IP20                                                                                                        |
| Dimension           | 185×118×157mm                                                                                               |
| Installation size   | 175×107mm(4-M4)                                                                                             |
| Cooling method      | Forced air cooling                                                                                          |
| Using site          | Altitude ≤ 1000m, derating is required<br>if exceeding this altitude, no corrosive<br>gas or liquid indoors |

**XLP6500-37 type**  
Vector type inverter



|                     |                                                                                                             |
|---------------------|-------------------------------------------------------------------------------------------------------------|
| Input voltage       | 3PH AC380V 50/60Hz                                                                                          |
| Output voltage      | 3PH AC0-380V 0-500Hz                                                                                        |
| Rated power         | 30kW 37kW                                                                                                   |
| Rated current       | 60A 75A                                                                                                     |
| Control mode        | V/F control, vector control                                                                                 |
| Overload capacity   | 150% rated current 60s;<br>190% rated current 1.5s;                                                         |
| Protection function | Overcurrent, overvoltage,<br>undervoltage, overheating, short circuit                                       |
| Protection level    | IP20                                                                                                        |
| Dimension           | 463×285×224mm                                                                                               |
| Installation size   | 447×2335mm(4-M6)                                                                                            |
| Cooling method      | Forced air cooling                                                                                          |
| Using site          | Altitude ≤ 1000m, derating is required<br>if exceeding this altitude, no corrosive<br>gas or liquid indoors |

**XLP6500-11 type**  
Vector type inverter



|                     |                                                                                                             |
|---------------------|-------------------------------------------------------------------------------------------------------------|
| Input voltage       | 3PH AC380V 50/60Hz                                                                                          |
| Output voltage      | 3PH AC0-380V 0-500Hz                                                                                        |
| Rated power         | 5.5kW 7.5kW 11kW                                                                                            |
| Rated current       | 13A 17A 25A                                                                                                 |
| Control mode        | V/F control, vector control                                                                                 |
| Overload capacity   | 150% rated current 60s;<br>190% rated current 1.5s;                                                         |
| Protection function | Overcurrent, overvoltage,<br>undervoltage, overheating, short circuit                                       |
| Protection level    | IP20                                                                                                        |
| Dimension           | 247×160×178mm                                                                                               |
| Installation size   | 235×148mm(4-M5)                                                                                             |
| Cooling method      | Forced air cooling                                                                                          |
| Using site          | Altitude ≤ 1000m, derating is required<br>if exceeding this altitude, no corrosive<br>gas or liquid indoors |

**XLP6500-75 type**  
Vector type inverter



|                     |                                                                                                             |
|---------------------|-------------------------------------------------------------------------------------------------------------|
| Input voltage       | 3PH AC380V 50/60Hz                                                                                          |
| Output voltage      | 3PH AC0-380V 0-500Hz                                                                                        |
| Rated power         | 45kW 55kW 75kW                                                                                              |
| Rated current       | 91A 112A 150A                                                                                               |
| Control mode        | V/F control, vector control                                                                                 |
| Overload capacity   | 150% rated current 60s;<br>190% rated current 1.5s;                                                         |
| Protection function | Overcurrent, overvoltage,<br>undervoltage, overheating, short circuit                                       |
| Protection level    | IP20                                                                                                        |
| Dimension           | 613×305×294mm                                                                                               |
| Installation size   | 592×200mm(4-M10)                                                                                            |
| Cooling method      | Forced air cooling                                                                                          |
| Using site          | Altitude ≤ 1000m, derating is required<br>if exceeding this altitude, no corrosive<br>gas or liquid indoors |

**XLP6500-18.5 type**  
Vector type inverter



|                     |                                                                                                             |
|---------------------|-------------------------------------------------------------------------------------------------------------|
| Input voltage       | 3PH AC380V 50/60Hz                                                                                          |
| Output voltage      | 3PH AC0-380V 0-500Hz                                                                                        |
| Rated power         | 15kW 18.5kW                                                                                                 |
| Rated current       | 32A 37A                                                                                                     |
| Control mode        | V/F control, vector control                                                                                 |
| Overload capacity   | 150% rated current 60s;<br>190% rated current 1.5s;                                                         |
| Protection function | Overcurrent, overvoltage,<br>undervoltage, overheating, short circuit                                       |
| Protection level    | IP20                                                                                                        |
| Dimension           | 335×217×194mm                                                                                               |
| Installation size   | 324×140mm(4-M6)                                                                                             |
| Cooling method      | Forced air cooling                                                                                          |
| Using site          | Altitude ≤ 1000m, derating is required<br>if exceeding this altitude, no corrosive<br>gas or liquid indoors |

**XLP6500-132 type**  
Vector type inverter



|                     |                                                                                                             |
|---------------------|-------------------------------------------------------------------------------------------------------------|
| Input voltage       | 3PH AC380V 50/60Hz                                                                                          |
| Output voltage      | 3PH AC0-380V 0-500Hz                                                                                        |
| Rated power         | 90kW 110kW 132kW                                                                                            |
| Rated current       | 176A 210A 253A                                                                                              |
| Control mode        | V/F control, vector control                                                                                 |
| Overload capacity   | 150% rated current 60s;<br>190% rated current 1.5s;                                                         |
| Protection function | Overcurrent, overvoltage,<br>undervoltage, overheating, short circuit                                       |
| Protection level    | IP20                                                                                                        |
| Dimension           | 753×400×293mm                                                                                               |
| Installation size   | 732×280mm(4-M10)                                                                                            |
| Cooling method      | Forced air cooling                                                                                          |
| Using site          | Altitude ≤ 1000m, derating is required<br>if exceeding this altitude, no corrosive<br>gas or liquid indoors |

**XLP6500-22 type**  
Vector type inverter



|                     |                                                                                                             |
|---------------------|-------------------------------------------------------------------------------------------------------------|
| Input voltage       | 3PH AC380V 50/60Hz                                                                                          |
| Output voltage      | 3PH AC0-380V 0-500Hz                                                                                        |
| Rated power         | 22kW                                                                                                        |
| Rated current       | 45A                                                                                                         |
| Control mode        | V/F control, vector control                                                                                 |
| Overload capacity   | 150% rated current 60s;<br>190% rated current 1.5s;                                                         |
| Protection function | Overcurrent, overvoltage,<br>undervoltage, overheating, short circuit                                       |
| Protection level    | IP20                                                                                                        |
| Dimension           | 361×228×204mm                                                                                               |
| Installation size   | 349×139mm(4-M6)                                                                                             |
| Cooling method      | Forced air cooling                                                                                          |
| Using site          | Altitude ≤ 1000m, derating is required<br>if exceeding this altitude, no corrosive<br>gas or liquid indoors |

**XLP6500-220 type**  
Vector type inverter



|                     |                                                                                                             |
|---------------------|-------------------------------------------------------------------------------------------------------------|
| Input voltage       | 3PH AC380V 50/60Hz                                                                                          |
| Output voltage      | 3PH AC0-380V 0-500Hz                                                                                        |
| Rated power         | 160kW 185kW 200kW 220kW                                                                                     |
| Rated current       | 304A 350A 377A 426A                                                                                         |
| Control mode        | V/F control, vector control                                                                                 |
| Overload capacity   | 150% rated current 60s;<br>190% rated current 1.5s;                                                         |
| Protection function | Overcurrent, overvoltage,<br>undervoltage, overheating, short circuit                                       |
| Protection level    | IP20                                                                                                        |
| Dimension           | 865×520×343mm                                                                                               |
| Installation size   | 837×380mm(4-M12)                                                                                            |
| Cooling method      | Forced air cooling                                                                                          |
| Using site          | Altitude ≤ 1000m, derating is required<br>if exceeding this altitude, no corrosive<br>gas or liquid indoors |

**XLP6500-400 type**  
 Vector type inverter



|                     |                                                                                                             |
|---------------------|-------------------------------------------------------------------------------------------------------------|
| Input voltage       | 3PH AC380V 50/60Hz                                                                                          |
| Output voltage      | 3PH AC0-380V 0-500Hz                                                                                        |
| Rated power         | 250Kw, 280Kw, 315Kw, 355Kw, 400Kw                                                                           |
| Rated current       | 465A, 520A, 580A, 650A, 725A                                                                                |
| Control mode        | V/F control, vector control                                                                                 |
| Overload capacity   | 150% rated current 60s;<br>190% rated current 1.5s;                                                         |
| Protection function | Overvoltage, overcurrent,<br>undervoltage, overheating, short circuit                                       |
| Protection level    | IP20                                                                                                        |
| Dimension           | 1172×800×412mm                                                                                              |
| Installation size   | 1143×600mm(4-M14)                                                                                           |
| Cooling method      | Forced air cooling                                                                                          |
| Using site          | Altitude ≤ 1000m, derating is required<br>if exceeding this altitude, no corrosive<br>gas or liquid indoors |

**XLP6500-220 type**  
 (vertical cabinet type)  
 Vector type inverter



|                     |                                                                                                             |
|---------------------|-------------------------------------------------------------------------------------------------------------|
| Input voltage       | 3PH AC380V 50/60Hz                                                                                          |
| Output voltage      | 3PH AC0-380V 0-500Hz                                                                                        |
| Rated power         | 160Kw, 185Kw, 200Kw, 220Kw                                                                                  |
| Rated current       | 304A, 350A, 377A, 426A                                                                                      |
| Control mode        | V/F control, vector control                                                                                 |
| Overload capacity   | 150% rated current 60s;<br>190% rated current 1.5s;                                                         |
| Protection function | Overvoltage, overcurrent,<br>undervoltage, overheating, short circuit                                       |
| Protection level    | IP20                                                                                                        |
| Dimension           | 1219×520×343mm                                                                                              |
| Cooling method      | Forced air cooling                                                                                          |
| Using site          | Altitude ≤ 1000m, derating is required<br>if exceeding this altitude, no corrosive<br>gas or liquid indoors |

**XLP6500-400 type**  
 (vertical cabinet type)  
 Vector type inverter



|                     |                                                                                                             |
|---------------------|-------------------------------------------------------------------------------------------------------------|
| Input voltage       | 3PH AC380V 50/60Hz                                                                                          |
| Output voltage      | 3PH AC0-380V 0-500Hz                                                                                        |
| Rated power         | 250Kw, 280Kw, 315Kw, 355Kw, 400Kw                                                                           |
| Rated current       | 465A, 520A, 580A, 650A, 725A                                                                                |
| Control mode        | V/F control, vector control                                                                                 |
| Overload capacity   | 150% rated current 60s;<br>190% rated current 1.5s;                                                         |
| Protection function | Overvoltage, overcurrent,<br>undervoltage, overheating, short circuit                                       |
| Protection level    | IP20                                                                                                        |
| Dimension           | 1495×800×412mm                                                                                              |
| Cooling method      | Forced air cooling                                                                                          |
| Using site          | Altitude ≤ 1000m, derating is required<br>if exceeding this altitude, no corrosive<br>gas or liquid indoors |

**XLP6500-710 type**  
 (vertical cabinet type)  
 Vector type inverter



|                     |                                                                                                             |
|---------------------|-------------------------------------------------------------------------------------------------------------|
| Input voltage       | 3PH AC380V 50/60Hz                                                                                          |
| Output voltage      | 3PH AC0-380V 0-500Hz                                                                                        |
| Rated power         | 450Kw, 500Kw, 560Kw, 630Kw, 710Kw                                                                           |
| Rated current       | 820A, 900A, 1020A, 1120A, 1300A                                                                             |
| Control mode        | V/F control, vector control                                                                                 |
| Overload capacity   | 150% rated current 60s;<br>190% rated current 1.5s;                                                         |
| Protection function | Overvoltage, overcurrent,<br>undervoltage, overheating, short circuit                                       |
| Protection level    | IP20                                                                                                        |
| Dimension           | 1800×1080×500mm                                                                                             |
| Cooling method      | Forced air cooling                                                                                          |
| Using site          | Altitude ≤ 1000m, derating is required<br>if exceeding this altitude, no corrosive<br>gas or liquid indoors |

**XLP530-G2.2 type**  
 Single-phase universal inverter



|                     |                                                                                                             |
|---------------------|-------------------------------------------------------------------------------------------------------------|
| Input voltage       | 1PH AC220V 50/60Hz                                                                                          |
| Output voltage      | 3PH AC0-220V 0-500Hz                                                                                        |
| Rated power         | 0.75Kw 1.5Kw 2.2Kw                                                                                          |
| Rated current       | 4A 7A 9.6A                                                                                                  |
| Control mode        | V/F control, vector control                                                                                 |
| Overload capacity   | 150% rated current 60s;<br>190% rated current 1.5s;                                                         |
| Protection function | Overvoltage, overcurrent,<br>undervoltage, overheating, short circuit                                       |
| Protection level    | IP20                                                                                                        |
| Dimension           | 170.2×84.6×138.1mm                                                                                          |
| Installation size   | 67.3×157.5 and 35mm DIN installation                                                                        |
| Cooling method      | Forced air cooling                                                                                          |
| Using site          | Altitude ≤ 1000m, derating is required<br>if exceeding this altitude, no corrosive<br>gas or liquid indoors |

**XLP530-G2.2 type**  
 Three-phase universal inverter



|                     |                                                                                                             |
|---------------------|-------------------------------------------------------------------------------------------------------------|
| Input voltage       | 3PH AC380V 50/60Hz                                                                                          |
| Output voltage      | 3PH AC0-380V 0-500Hz                                                                                        |
| Rated power         | 0.75Kw 1.5Kw 2.2Kw                                                                                          |
| Rated current       | 2.1A 3.8A 5.1A                                                                                              |
| Control mode        | V/F control, vector control                                                                                 |
| Overload capacity   | 150% rated current 60s;<br>190% rated current 1.5s;                                                         |
| Protection function | Overvoltage, overcurrent,<br>undervoltage, overheating, short circuit                                       |
| Protection level    | IP20                                                                                                        |
| Dimension           | 170.2×84.6×138.1mm                                                                                          |
| Installation size   | 67.3×157.5 and 35mm DIN installation                                                                        |
| Cooling method      | Forced air cooling                                                                                          |
| Using site          | Altitude ≤ 1000m, derating is required<br>if exceeding this altitude, no corrosive<br>gas or liquid indoors |

**XLP530-G5.5 type**  
 Three-phase universal inverter



|                     |                                                                                                             |
|---------------------|-------------------------------------------------------------------------------------------------------------|
| Input voltage       | 3PH AC380V 50/60Hz                                                                                          |
| Output voltage      | 3PH AC0-380V 0-500Hz                                                                                        |
| Rated power         | 3.7Kw 5.5Kw                                                                                                 |
| Rated current       | 9A 13A                                                                                                      |
| Control mode        | V/F control, vector control                                                                                 |
| Overload capacity   | 150% rated current 60s;<br>190% rated current 1.5s;                                                         |
| Protection function | Overvoltage, overcurrent,<br>undervoltage, overheating, short circuit                                       |
| Protection level    | IP20                                                                                                        |
| Dimension           | 194×97×153.3mm                                                                                              |
| Installation size   | 85×184 and 35mm DIN rail installation                                                                       |
| Cooling method      | Forced air cooling                                                                                          |
| Using site          | Altitude ≤ 1000m, derating is required<br>if exceeding this altitude, no corrosive<br>gas or liquid indoors |

**XLP530-G11 type**  
 Three-phase universal inverter



|                     |                                                                                                             |
|---------------------|-------------------------------------------------------------------------------------------------------------|
| Input voltage       | 3PH AC380V 50/60Hz                                                                                          |
| Output voltage      | 3PH AC0-380V 0-500Hz                                                                                        |
| Rated power         | 7.5Kw, 11Kw,                                                                                                |
| Rated current       | 17A, 25A,                                                                                                   |
| Control mode        | V/F control, vector control                                                                                 |
| Overload capacity   | 150% rated current 60s;<br>190% rated current 1.5s;                                                         |
| Protection function | Overvoltage, overcurrent,<br>undervoltage, overheating, short circuit                                       |
| Protection level    | IP20                                                                                                        |
| Dimension           | 245×142×168mm                                                                                               |
| Installation size   | 107×235mm                                                                                                   |
| Cooling method      | Forced air cooling                                                                                          |
| Using site          | Altitude ≤ 1000m, derating is required<br>if exceeding this altitude, no corrosive<br>gas or liquid indoors |

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**XLP530-G22 type**  
Three-phase universal inverter



|                     |                                                                                                             |
|---------------------|-------------------------------------------------------------------------------------------------------------|
| Input voltage       | 3PH AC380V 50/60Hz                                                                                          |
| Output voltage      | 3PH AC0-380V 0-500Hz                                                                                        |
| Rated power         | 15Kw, 18.5Kw, 22Kw                                                                                          |
| Rated current       | 32A, 37A, 45A                                                                                               |
| Control mode        | V/F control, vector control                                                                                 |
| Overload capacity   | 150% rated current 60s;<br>190% rated current 1.5s;                                                         |
| Protection function | Overvoltage, overcurrent,<br>undervoltage, overheating, short circuit                                       |
| Protection level    | IP20                                                                                                        |
| Dimension           | 310x164.8x195.2                                                                                             |
| Installation size   | 147x298                                                                                                     |
| Cooling method      | Forced air cooling                                                                                          |
| Using site          | Altitude ≤ 1000m, derating is required<br>if exceeding this altitude, no corrosive<br>gas or liquid indoors |

**P6000-B**  
**P6000-E**

Dual display encoder adjustment  
Dual display potentiometer adjustment  
Finished product operation panel



|           |             |
|-----------|-------------|
| Dimension | 129×70×35mm |
| Hole size | 124×66.5mm  |

**XLP530-M1.5 type**  
(input single-phase 220V)  
Mini inverter



|                     |                                                                                                             |
|---------------------|-------------------------------------------------------------------------------------------------------------|
| Input voltage       | 1PH AC220V 50/60Hz                                                                                          |
| Output voltage      | 3PH AC0-220V 0-500Hz                                                                                        |
| Rated power         | 0.4Kw, 0.75Kw, 1.5Kw                                                                                        |
| Rated current       | 2.3A, 4A, 7A                                                                                                |
| Control mode        | V/F control, vector control                                                                                 |
| Overload capacity   | 150% rated current 60s;<br>190% rated current 1.5s;                                                         |
| Protection function | Overvoltage, overcurrent,<br>undervoltage, overheating, short circuit                                       |
| Protection level    | IP20                                                                                                        |
| Dimension           | 165×78×116mm                                                                                                |
| Installation size   | 65×155 and 35mm DIN rail installation                                                                       |
| Cooling method      | Forced air cooling                                                                                          |
| Using site          | Altitude ≤ 1000m, derating is required<br>if exceeding this altitude, no corrosive<br>gas or liquid indoors |

**P530-A**  
P530-A Single display  
potentiometer adjustment  
Finished product operation panel



|                |          |
|----------------|----------|
| Tray Dimension | 90×131mm |
| Tray hole size | 85×115mm |

**XLP530-M2.2 type**  
Mini inverter



|                     |                                                                                                             |
|---------------------|-------------------------------------------------------------------------------------------------------------|
| Input voltage       | 3PH AC380V 50/60Hz                                                                                          |
| Output voltage      | 3PH AC0-380V 0-500Hz                                                                                        |
| Rated power         | 0.75Kw, 1.5Kw, 2.2Kw                                                                                        |
| Rated current       | 2.1A, 3.8A, 5.1A                                                                                            |
| Control mode        | V/F control, vector control                                                                                 |
| Overload capacity   | 150% rated current 60s;<br>190% rated current 1.5s;                                                         |
| Protection function | Overvoltage, overcurrent,<br>undervoltage, overheating, short circuit                                       |
| Protection level    | IP20                                                                                                        |
| Dimension           | 165×78×116mm                                                                                                |
| Installation size   | 65×155 and 35mm DIN rail installation                                                                       |
| Cooling method      | Forced air cooling                                                                                          |
| Using site          | Altitude ≤ 1000m, derating is required<br>if exceeding this altitude, no corrosive<br>gas or liquid indoors |

**P6500-A**  
Single display potentiometer  
adjustment  
Finished product operation panel



|           |             |
|-----------|-------------|
| Dimension | 106×70×35mm |
| Hole size | 101×66.5mm  |

**P6000-A**  
**P6000-F**  
Single display encoder adjustment  
Single display potentiometer adjustment  
Finished product operation panel



|           |             |
|-----------|-------------|
| Dimension | 106×70×35mm |
| Hole size | 101×66.5mm  |

**P6500-B**  
Dual display potentiometer adjustment  
Finished product operation panel



|           |             |
|-----------|-------------|
| Dimension | 129×70×35mm |
| Hole size | 124×66.5mm  |

**P530-C**  
 Single display potentiometer adjustment  
 Finished product operation panel



|           |            |
|-----------|------------|
| Dimension | 97×65×33mm |
| Hole size | 94×62mm    |

**P530-M**  
 Single display potentiometer adjustment  
 Finished product operation panel



|           |             |
|-----------|-------------|
| Dimension | 78×63×35mm  |
| Hole size | 59.1×69.1mm |

**XLP6500-A**  
 Operation panel tray  
 Single display panel tray



|           |             |
|-----------|-------------|
| Dimension | 132×91×29mm |
| Hole size | 115×85mm    |

**XLP6500-B**  
 Operation panel tray  
 Dual display panel tray



|           |             |
|-----------|-------------|
| Dimension | 169×91×29mm |
| Hole size | 146.5×75mm  |

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## Soft starter series

The XLR5000 series intelligent soft starter integrates the latest motor control theory, proprietary motor protection technology and advanced software technology. The product is a new type of starting device at the internationally advanced level, with bypass delay function and standard 485 communication function. The product has passed CCC certification and is an ideal Replace for traditional star/delta starter, auto-coupling reduced-voltage starter, magnetic control reduced-voltage starter and so on.

This series of product is widely used in fields such as power generation, petrochemicals, metallurgy, environmental protection, fire protection, construction and agricultural irrigation.

For more details on model, specification and technical parameter, please visit our company website or contact our company.

**XLR5000-55 type**  
Soft starter



|                     |                                                                                                                          |
|---------------------|--------------------------------------------------------------------------------------------------------------------------|
| Supply voltage      | AC380V±10% 50/60Hz                                                                                                       |
| Rated power         | 5.5kW 7.5kW 11kW 15kW 18.5kW<br>22kW 30kW 37kW 45kW 55kW                                                                 |
| Rated current       | 11A 15A 23A 30A 37A<br>45A 60A 75A 90A 110A                                                                              |
| Start mode          | 7 modes: current limit, voltage ramp,<br>jump+current limit, jump+voltage, current<br>ramp, dual closed-loop, monitoring |
| Stop mode           | Soft stop, free stop                                                                                                     |
| Overload capacity   | Trip according to IEC60947-4-2<br>standard time                                                                          |
| Start frequency     | The specific frequency depends<br>on the load situation                                                                  |
| Protection function | Overcurrent, overheating, phase<br>loss, overload, etc                                                                   |
| Protection level    | IP20                                                                                                                     |
| Dimension           | 261×160×153mm                                                                                                            |
| Installation size   | 245×149mm(4-M5)                                                                                                          |
| Cooling method      | Natural air cooling                                                                                                      |
| Using site          | Altitude ≤ 2000m, derating is<br>required if exceeding this altitude,<br>no corrosive gas or liquid indoors              |

**XLR5000-200 type**  
Soft starter



|                     |                                                                                                                          |
|---------------------|--------------------------------------------------------------------------------------------------------------------------|
| Supply voltage      | AC380V±10% 50/60Hz                                                                                                       |
| Rated power         | 90kW 115kW 132kW 160kW 185kW 200kW                                                                                       |
| Rated current       | 180A 230A 260A 320A 370A 400A                                                                                            |
| Start mode          | 7 modes: current limit, voltage ramp,<br>jump+current limit, jump+voltage, current<br>ramp, dual closed-loop, monitoring |
| Stop mode           | Soft stop, free stop                                                                                                     |
| Overload capacity   | Trip according to IEC60947-4-2<br>standard time                                                                          |
| Start frequency     | The specific frequency depends<br>on the load situation                                                                  |
| Protection function | Overcurrent, overheating, phase<br>loss, overload, etc                                                                   |
| Protection level    | IP20                                                                                                                     |
| Dimension           | 530×260×210mm                                                                                                            |
| Installation size   | 380×196mm(4-M8)                                                                                                          |
| Cooling method      | Natural air cooling                                                                                                      |
| Using site          | Altitude ≤ 2000m, derating is<br>required if exceeding this altitude,<br>no corrosive gas or liquid indoors              |

**XLR5000-75 type**  
Soft starter



|                     |                                                                                                                          |
|---------------------|--------------------------------------------------------------------------------------------------------------------------|
| Supply voltage      | AC380V±10% 50/60Hz                                                                                                       |
| Rated power         | 75kW                                                                                                                     |
| Rated current       | 150A                                                                                                                     |
| Start mode          | 7 modes: current limit, voltage ramp,<br>jump+current limit, jump+voltage, current<br>ramp, dual closed-loop, monitoring |
| Stop mode           | Soft stop, free stop                                                                                                     |
| Overload capacity   | Trip according to IEC60947-4-2<br>standard time                                                                          |
| Start frequency     | The specific frequency depends<br>on the load situation                                                                  |
| Protection function | Overcurrent, overheating, phase<br>loss, overload, etc                                                                   |
| Protection level    | IP20                                                                                                                     |
| Dimension           | 363×210×185mm                                                                                                            |
| Installation size   | 298×156mm(4-M8)                                                                                                          |
| Cooling method      | Natural air cooling                                                                                                      |
| Using site          | Altitude ≤ 2000m, derating is<br>required if exceeding this altitude,<br>no corrosive gas or liquid indoors              |

**XLR5000-320 type**  
Soft starter



|                     |                                                                                                                          |
|---------------------|--------------------------------------------------------------------------------------------------------------------------|
| Supply voltage      | AC380V±10% 50/60Hz                                                                                                       |
| Rated power         | 250kW 280kW 320kW                                                                                                        |
| Rated current       | 500A 560A 630A                                                                                                           |
| Start mode          | 7 modes: current limit, voltage ramp,<br>jump+current limit, jump+voltage, current<br>ramp, dual closed-loop, monitoring |
| Stop mode           | Soft stop, free stop                                                                                                     |
| Overload capacity   | Trip according to IEC60947-4-2<br>standard time                                                                          |
| Start frequency     | The specific frequency depends<br>on the load situation                                                                  |
| Protection function | Overcurrent, overheating, phase<br>loss, overload, etc                                                                   |
| Protection level    | IP20                                                                                                                     |
| Dimension           | 564×290×214mm                                                                                                            |
| Installation size   | 460×260mm(4-M8)                                                                                                          |
| Cooling method      | Natural air cooling                                                                                                      |
| Using site          | Altitude ≤ 2000m, derating is<br>required if exceeding this altitude,<br>no corrosive gas or liquid indoors              |

**XLR5800-45 type**  
Online soft starter



|                     |                                                                                                       |
|---------------------|-------------------------------------------------------------------------------------------------------|
| Supply voltage      | 3PH AC380V(-10%, +15%), 50Hz                                                                          |
| Rated power         | 5.5Kw 7.5Kw 11Kw 15Kw 18.5Kw 22Kw 30Kw 37Kw 45Kw                                                      |
| Rated current       | 11A 15A 23A 30A 23A 30A 37A 45A 60A 75A 90A                                                           |
| Start mode          | Current limit, voltage ramp, jogging                                                                  |
| Stop mode           | voltage ramp+jump, voltage ramp+current limit                                                         |
| Overload capacity   | Soft stop, free stop                                                                                  |
| Start frequency     | Trip according to IEC60947-4-2 standard time                                                          |
| Protection function | Overcurrent, overheating, undervoltage, phase loss, short circuit, etc                                |
| Protection level    | IP20                                                                                                  |
| Dimension           | 250×155×190mm                                                                                         |
| Installation size   | 235×143mm(4-M6)                                                                                       |
| Cooling method      | Forced air cooling                                                                                    |
| Using site          | Altitude ≤ 2000m, derating is required if exceeding this altitude, no corrosive gas or liquid indoors |

**XLR5800-250 type**  
Online soft starter



|                     |                                                                                                       |
|---------------------|-------------------------------------------------------------------------------------------------------|
| Supply voltage      | 3PH AC380V(-10%, +15%), 50Hz                                                                          |
| Rated power         | 185Kw 200Kw 220Kw 250Kw                                                                               |
| Rated current       | 370A 400A 440A 500A                                                                                   |
| Start mode          | Current limit, voltage ramp, jogging                                                                  |
| Stop mode           | voltage ramp+jump, voltage ramp+current limit                                                         |
| Overload capacity   | Soft stop, free stop                                                                                  |
| Start frequency     | Trip according to IEC60947-4-2 standard time                                                          |
| Protection function | Overcurrent, overheating, undervoltage, phase loss, short circuit, etc                                |
| Protection level    | IP20                                                                                                  |
| Dimension           | 468×380×270mm                                                                                         |
| Installation size   | 400×320mm(4-M8)                                                                                       |
| Cooling method      | Forced air cooling                                                                                    |
| Using site          | Altitude ≤ 2000m, derating is required if exceeding this altitude, no corrosive gas or liquid indoors |

**XLR5800-75 type**  
Online soft starter



|                     |                                                                                                       |
|---------------------|-------------------------------------------------------------------------------------------------------|
| Supply voltage      | 3PH AC380V(-10%, +15%), 50Hz                                                                          |
| Rated power         | 55Kw 75Kw                                                                                             |
| Rated current       | 110A 150A                                                                                             |
| Start mode          | Current limit, voltage ramp, jogging                                                                  |
| Stop mode           | voltage ramp+jump, voltage ramp+current limit                                                         |
| Overload capacity   | Soft stop, free stop                                                                                  |
| Start frequency     | Trip according to IEC60947-4-2 standard time                                                          |
| Protection function | Overcurrent, overheating, undervoltage, phase loss, short circuit, etc                                |
| Protection level    | IP20                                                                                                  |
| Dimension           | 290×158×200mm                                                                                         |
| Installation size   | 270×100mm(4-M8)                                                                                       |
| Cooling method      | Forced air cooling                                                                                    |
| Using site          | Altitude ≤ 2000m, derating is required if exceeding this altitude, no corrosive gas or liquid indoors |

**XLR5800-320 type**  
Online soft starter



|                     |                                                                                                       |
|---------------------|-------------------------------------------------------------------------------------------------------|
| Supply voltage      | 3PH AC380V(-10%, +15%), 50Hz                                                                          |
| Rated power         | 280Kw 320Kw                                                                                           |
| Rated current       | 560A 630A                                                                                             |
| Start mode          | Current limit, voltage ramp, jogging                                                                  |
| Stop mode           | voltage ramp+jump, voltage ramp+current limit                                                         |
| Overload capacity   | Soft stop, free stop                                                                                  |
| Start frequency     | Trip according to IEC60947-4-2 standard time                                                          |
| Protection function | Overcurrent, overheating, undervoltage, phase loss, short circuit, etc                                |
| Protection level    | IP20                                                                                                  |
| Dimension           | 540×470×290mm                                                                                         |
| Installation size   | 460×335mm(4-M8)                                                                                       |
| Cooling method      | Forced air cooling                                                                                    |
| Using site          | Altitude ≤ 2000m, derating is required if exceeding this altitude, no corrosive gas or liquid indoors |

**XLR5800-90 type**  
Online soft starter



|                     |                                                                                                       |
|---------------------|-------------------------------------------------------------------------------------------------------|
| Supply voltage      | 3PH AC380V(-10%, +15%), 50Hz                                                                          |
| Rated power         | 90Kw                                                                                                  |
| Rated current       | 180A                                                                                                  |
| Start mode          | Current limit, voltage ramp, jogging                                                                  |
| Stop mode           | voltage ramp+jump, voltage ramp+current limit                                                         |
| Overload capacity   | Soft stop, free stop                                                                                  |
| Start frequency     | Trip according to IEC60947-4-2 standard time                                                          |
| Protection function | Overcurrent, overheating, undervoltage, phase loss, short circuit, etc                                |
| Protection level    | IP20                                                                                                  |
| Dimension           | 370×210×245mm                                                                                         |
| Installation size   | 330×150mm(4-M8)                                                                                       |
| Cooling method      | Forced air cooling                                                                                    |
| Using site          | Altitude ≤ 2000m, derating is required if exceeding this altitude, no corrosive gas or liquid indoors |

**XLR5800-500 type**  
Online soft starter



|                     |                                                                                                       |
|---------------------|-------------------------------------------------------------------------------------------------------|
| Supply voltage      | 3PH AC380V(-10%, +15%), 50Hz                                                                          |
| Rated power         | 400Kw 450Kw 500Kw                                                                                     |
| Rated current       | 800A 900A 998A                                                                                        |
| Start mode          | Current limit, voltage ramp, jogging                                                                  |
| Stop mode           | voltage ramp+jump, voltage ramp+current limit                                                         |
| Overload capacity   | Soft stop, free stop                                                                                  |
| Start frequency     | Trip according to IEC60947-4-2 standard time                                                          |
| Protection function | Overcurrent, overheating, undervoltage, phase loss, short circuit, etc                                |
| Protection level    | IP20                                                                                                  |
| Dimension           | 650×620×320mm                                                                                         |
| Installation size   | 660×560mm(4-M10)                                                                                      |
| Cooling method      | Forced air cooling                                                                                    |
| Using site          | Altitude ≤ 2000m, derating is required if exceeding this altitude, no corrosive gas or liquid indoors |

**XLR5800-160 type**  
Online soft starter



|                     |                                                                                                       |
|---------------------|-------------------------------------------------------------------------------------------------------|
| Supply voltage      | 3PH AC380V(-10%, +15%), 50Hz                                                                          |
| Rated power         | 115Kw 132Kw 160Kw                                                                                     |
| Rated current       | 230A 260A 320A                                                                                        |
| Start mode          | Current limit, voltage ramp, jogging                                                                  |
| Stop mode           | voltage ramp+jump, voltage ramp+current limit                                                         |
| Overload capacity   | Soft stop, free stop                                                                                  |
| Start frequency     | Trip according to IEC60947-4-2 standard time                                                          |
| Protection function | Overcurrent, overheating, undervoltage, overheating, short circuit                                    |
| Protection level    | IP20                                                                                                  |
| Dimension           | 435×323×246mm                                                                                         |
| Installation size   | 380×260mm(4-M8)                                                                                       |
| Cooling method      | Forced air cooling                                                                                    |
| Using site          | Altitude ≤ 2000m, derating is required if exceeding this altitude, no corrosive gas or liquid indoors |

## Electric motor protector series

The HDD series motor protector is used to form motor control circuit with AC contactors and other switching devices in power supply circuit with frequency of AC 50Hz, rated operating voltage of AC380V and below. When the main circuit of the motor experiences abnormal working conditions such as phase failure, overload, locked rotor, three-phase imbalance, overvoltage, undervoltage, short circuit, grounding, etc., the switching device contact should be open in a timely manner to disconnect the three-phase power supply of the motor and protect it quickly and reliably.

This series of motor protector complies with the GB/T14048.4 standard, and the product has passed the CCC self-declaration.

**HDD1-1A, 1, 1B**  
Motor protector



|                     |                                                                                |
|---------------------|--------------------------------------------------------------------------------|
| Supply voltage      | AC220V, AC380V 50Hz                                                            |
| Current range       | -1A:1-5A -1:4-20A -1B:16-80A                                                   |
| Protection function | Phase failure, three-phase imbalance, overload locked rotor, startup avoidance |
| Display mode        | LED displays max. phase current and memory fault status                        |
| Display accuracy    | Class 2.0                                                                      |
| Setting mode        | Static quantization setting of potentiometer                                   |
| Reset mode          | Panel reset or power-off reset                                                 |
| Release level       | 2, 5……40 continuously adjustable                                               |
| Contact form        | 1 set of NO and NC transfer contacts                                           |
| Contact capacity    | 3A AC380V(resistive)                                                           |
| Dimension           | 125×71×120mm                                                                   |
| Installation method | Compatible with both installation and DIN rail type                            |

**HDD1B-□ F**  
Motor protector



|                     |                                                                                                                                                                                                  |
|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Supply voltage      | AC220V, AC380V 50Hz                                                                                                                                                                              |
| Current range       | -1:2-100A -2:40-200A<br>-3:80-400A -4:160-800A                                                                                                                                                   |
| Protection function | Phase failure, three-phase imbalance, overload locked rotor, startup avoidance, short circuit, overvoltage, undervoltage, underload, grounding (it requires dedicated zero-sequence transformer) |
| Display mode        | LED circularly displays three-phase current and memory fault status and check                                                                                                                    |
| Display accuracy    | Class 2.0                                                                                                                                                                                        |
| Setting mode        | Button setting                                                                                                                                                                                   |
| Contact form        | 1 set of NO and 1 set of NC independent contacts                                                                                                                                                 |
| Contact capacity    | 3A AC380V(resistive)                                                                                                                                                                             |
| Dimension           | Display part 100×52.5×106mm                                                                                                                                                                      |
| Hole size           | 92.5 <sup>+0.5</sup> ×45 <sup>+0.5</sup> mm                                                                                                                                                      |
| Installation method | Panel type                                                                                                                                                                                       |
| Transformer         | HDD1B-3 and 4 require additional transformers                                                                                                                                                    |
| Optional feature    | RS-485 communication interface (code T), 4-20mA transmission output (code B)                                                                                                                     |

**HDD1-2, 3, 3A**  
Motor protector



|                     |                                                                                |
|---------------------|--------------------------------------------------------------------------------|
| Supply voltage      | AC220V, AC380V 50Hz                                                            |
| Current range       | -2:20-100A -3:40-200A -3A:60-300A                                              |
| Protection function | Phase failure, three-phase imbalance, overload locked rotor, startup avoidance |
| Display mode        | LED displays max. phase current and memory fault status                        |
| Display accuracy    | Class 2.0                                                                      |
| Setting mode        | Static quantization setting of potentiometer                                   |
| Reset mode          | Panel reset or power-off reset                                                 |
| Release level       | 2, 5……40 continuously adjustable                                               |
| Contact form        | 1 set of NO and 1 set of NC independent contacts                               |
| Contact capacity    | 3A AC380V(resistive)                                                           |
| Dimension           | 154×65×157mm                                                                   |
| Installation method | Screw mounting type                                                            |

**HDD1C-□ Z**  
Motor protector



|                     |                                                                                                                                                                                                  |
|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Supply voltage      | AC220V, AC380V 50Hz                                                                                                                                                                              |
| Current range       | -1:2-100A -2:40-200A<br>-3:80-400A -4:160-800A                                                                                                                                                   |
| Protection function | Phase failure, three-phase imbalance, overload locked rotor, startup avoidance, short circuit, overvoltage, undervoltage, underload, grounding (it requires dedicated zero-sequence transformer) |
| Display mode        | Chinese/English LCD display and memory fault status and check                                                                                                                                    |
| Setting mode        | Button setting                                                                                                                                                                                   |
| Contact form        | 1 set of NO and 1 set of NC independent contacts                                                                                                                                                 |
| Contact capacity    | 3A AC380V(resistive)                                                                                                                                                                             |
| Dimension           | HDD1C-1, 3, 4: 100×66×156mm;<br>HDD1C-2: 120×62.5×168.5mm                                                                                                                                        |
| Installation method | Compatible with both installation and DIN rail type                                                                                                                                              |
| Transformer         | HDD1C-3 and 4 require additional CT                                                                                                                                                              |
| Optional feature    | RS-485 communication interface (code T), 4-20mA transmission output (code B)                                                                                                                     |

**HDD1B-□ Z**  
Motor protector



|                     |                                                                                                                                                                                                    |
|---------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Supply voltage      | AC220V, AC380V 50Hz                                                                                                                                                                                |
| Current range       | -1:2-100A -2:40-200A<br>-3:80-400A -4:160-800A                                                                                                                                                     |
| Protection function | Phase failure, three-phase imbalance, overload, locked rotor, starting avoidance, short circuit, overvoltage, undervoltage, underload, grounding (it requires dedicated zero-sequence transformer) |
| Display mode        | LED circularly displays three-phase current and memory fault status and check                                                                                                                      |
| Display accuracy    | Class 2.0                                                                                                                                                                                          |
| Setting mode        | Button setting                                                                                                                                                                                     |
| Contact form        | 1 set of NO and 1 set of NC independent contacts                                                                                                                                                   |
| Contact capacity    | 3A AC380V(resistive)                                                                                                                                                                               |
| Dimension           | HDD1B-1, 3, 4: 100×66×156mm;<br>HDD1B-2: 120×62.5×168.5mm                                                                                                                                          |
| Installation method | Compatible with both installation and DIN rail type                                                                                                                                                |
| Transformer         | HDD1B-3 and 4 require additional CT                                                                                                                                                                |
| Optional feature    | RS-485 communication interface (code T), 4-20mA transmission output (code B)                                                                                                                       |

**HDD1C-□ F**  
Motor protector



|                     |                                                                                                                                                                                                  |
|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Supply voltage      | AC220V, AC380V 50Hz                                                                                                                                                                              |
| Current range       | -1:2-100A -2:40-200A<br>-3:80-400A -4:160-800A                                                                                                                                                   |
| Protection function | Phase failure, three-phase imbalance, overload locked rotor, startup avoidance, short circuit, overvoltage, undervoltage, underload, grounding (it requires dedicated zero-sequence transformer) |
| Display mode        | Chinese/English LCD display and memory fault status and check                                                                                                                                    |
| Setting mode        | Button setting                                                                                                                                                                                   |
| Contact form        | 1 set of NO and 1 set of NC independent contacts                                                                                                                                                 |
| Contact capacity    | 3A AC380V(resistive)                                                                                                                                                                             |
| Dimension           | Display part 100×52.5×106mm                                                                                                                                                                      |
| Hole size           | 92.5 <sup>+0.5</sup> ×45 <sup>+0.5</sup> mm                                                                                                                                                      |
| Installation method | Panel type                                                                                                                                                                                       |
| Transformer         | HDD1C-3 and 4 require additional CT                                                                                                                                                              |
| Optional feature    | RS-485 communication interface (code T), 4-20mA transmission output (code B)                                                                                                                     |

**HHD1F-A, B**  
 Motor protector  
 Replace for HHD1 series,  
 HHD3i series, HHD3H series



|                     |                                                                                                                                   |
|---------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| Supply voltage      | AC220V, AC380V 50Hz                                                                                                               |
| Current range       | -A: 0.5 ~ 6.5A<br>-B: 1 ~ 100A                                                                                                    |
| Protection function | Start avoidance, phase failure, three-phase imbalance, overload (definite/inverse time limit), locked rotor, underload, grounding |
| Display mode        | LED displays max. phase current and fault status indication                                                                       |
| Display accuracy    | Class 2.0                                                                                                                         |
| Setting mode        | Button setting                                                                                                                    |
| Reset mode          | Panel reset, power-off reset, and automatic reset                                                                                 |
| Contact form        | 1 set of independent NO and NC contacts                                                                                           |
| Contact capacity    | 3A AC380V (resistive)                                                                                                             |
| Dimension           | 125×71×120mm                                                                                                                      |
| Installation method | Compatible with both installation and 35mm DIN rail type                                                                          |
| Optional feature    | Grounding (code J requires dedicated zero-sequence transformer) or 4-20mA transmission output (code B)                            |

**HHD2-A~F/G**  
 Motor protector  
 Passive type



|                                   |                                                                                 |
|-----------------------------------|---------------------------------------------------------------------------------|
| Current range                     | -A/G: 1~2.5A -B/G: 2~5A<br>-C/G: 4~10A -D/G: 8~40A<br>-E/G: 16~40A -F/G: 32~80A |
| Protection function               | Phase failure, overload                                                         |
| Setting mode                      | Static quantization setting of potentiometer                                    |
| Display mode                      | LED indicates working status                                                    |
| Contact form                      | (solid-state switch) NC contact                                                 |
| Contact capacity                  | 1A AC380V(resistive)                                                            |
| Control circuit operating voltage | AC220V and AC380V are compatible                                                |
| Dimension                         | 53×64×104mm                                                                     |
| Installation method               | Screw mounting type and rail type compatible                                    |

**HHD1F-C**  
 Motor protector  
 Replace for HHD1 series,  
 HHD3i series, HHD3H series



|                     |                                                                                                                                   |
|---------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| Supply voltage      | AC220V, AC380V 50Hz                                                                                                               |
| Current range       | -C: 20 ~ 300A                                                                                                                     |
| Protection function | Start avoidance, phase failure, three-phase imbalance, overload (definite/inverse time limit), locked rotor, underload, grounding |
| Display mode        | LED displays max. phase current and fault status indication                                                                       |
| Display accuracy    | Class 2.0                                                                                                                         |
| Setting mode        | Button setting                                                                                                                    |
| Reset mode          | Panel reset, power-off reset, and automatic reset                                                                                 |
| Contact form        | 1 set of independent NO and NC contacts                                                                                           |
| Contact capacity    | 3A AC380V (resistive)                                                                                                             |
| Dimension           | 154×65×157mm                                                                                                                      |
| Installation method | Screw mounting type                                                                                                               |
| Optional feature    | Grounding (code J requires dedicated zero-sequence transformer) or 4-20mA transmission output (code B)                            |

**HHD3E-1P(JD-5), 2P(JD-5), ATP(JD-5), AP(JD-5), BP(JD-5), CP(JD-5)**

Motor protector  
 BHQ,JD-5(B),JD-6 Terminator



|                     |                                                                              |
|---------------------|------------------------------------------------------------------------------|
| Supply voltage      | AC220V, AC380V 50Hz                                                          |
| Current range       | -1P: 0.2~1A -2P: 0.4~2A<br>-ATP: 1~5A -AP: 2~10A<br>-BP: 8~40A -CP: 20~100A  |
| Protection function | Phase failure, three-phase imbalance, overload locked rotor, start avoidance |
| Display mode        | LED indicates the status                                                     |
| Setting mode        | Static quantization setting of potentiometer                                 |
| Start avoidance     | 2~60s continuously adjustable                                                |
| Reset mode          | Power-off reset                                                              |
| Contact form        | 1 NC contact                                                                 |
| Contact capacity    | 3A AC380V(resistive)                                                         |
| Dimension           | 125×66×92mm                                                                  |
| Installation method | Screw mounting type and DIN rail type compatible                             |

**HHD2-A~F**  
 Motor protector  
 Passive type



|                                   |                                                                     |
|-----------------------------------|---------------------------------------------------------------------|
| Current range                     | -A: 1~2.5A -B: 2~5A<br>-C: 4~10A -D: 8~20A<br>-E: 16~40A -F: 32~80A |
| Protection function               | Phase failure, overload                                             |
| Setting mode                      | Static quantization setting of potentiometer                        |
| Display mode                      | LED indicates working status                                        |
| Contact form                      | (solid-state switch) NC contact                                     |
| Contact capacity                  | 1A AC380V(resistive)                                                |
| Control circuit operating voltage | AC220V and AC380V are compatible                                    |
| Dimension                         | 76×43×74mm                                                          |
| Installation method               | Screw mounting type                                                 |

**HHD3E-DP(JD-6)**  
 Motor protector  
 BHQ,JD-5(B),JD-6 Terminator



|                     |                                                                              |
|---------------------|------------------------------------------------------------------------------|
| Supply voltage      | AC220V, AC380V 50Hz                                                          |
| Current range       | 40~160A                                                                      |
| Protection function | Phase failure, three-phase imbalance, overload locked rotor, start avoidance |
| Display mode        | LED indicates working status                                                 |
| Setting mode        | Static quantization setting of potentiometer                                 |
| Start avoidance     | 2~60s continuously adjustable                                                |
| Reset mode          | Power-off reset                                                              |
| Contact form        | 1 set of NC and NO transfer contacts                                         |
| Contact capacity    | 3A AC380V(resistive)                                                         |
| Dimension           | 155×60×111mm                                                                 |
| Installation method | Screw mounting type                                                          |

**HHD2-T, G**  
 Motor protector  
 Passive type



|                                   |                                                  |
|-----------------------------------|--------------------------------------------------|
| Current range                     | -T: 32~80A -G: 64~160A                           |
| Protection function               | Phase failure, overload                          |
| Setting mode                      | Static quantization setting of potentiometer     |
| Display mode                      | LED indicates working status                     |
| Contact form                      | (solid-state switch) NC contact                  |
| Contact capacity                  | 1A AC380V(resistive)                             |
| Control circuit operating voltage | AC220V and AC380V are compatible                 |
| Dimension                         | 84×57.5×100mm                                    |
| Installation method               | Screw mounting type and DIN rail type compatible |

**HHD3E-EP(JD-6), FP(JD-6)**  
 Motor protector  
 BHQ,JD-5(B),JD-6 Terminator



|                     |                                                                              |
|---------------------|------------------------------------------------------------------------------|
| Supply voltage      | AC220V, AC380V 50Hz                                                          |
| Current range       | -EP: 120~300A<br>-FP: 120~400A                                               |
| Protection function | Phase failure, three-phase imbalance, overload locked rotor, start avoidance |
| Display mode        | LED indicates the status                                                     |
| Setting mode        | Static quantization setting of potentiometer                                 |
| Start avoidance     | 2~60s continuously adjustable                                                |
| Reset mode          | Power-off reset                                                              |
| Contact form        | 1 set of NC and NO transfer contacts                                         |
| Contact capacity    | 3A AC380V(resistive)                                                         |
| Dimension           | 154×65×157mm                                                                 |
| Installation method | Screw mounting type                                                          |

RELAY SERIES

SWITCH SERIES

ELECTRIC DRIVE AND CONTROL SERIES

INSTRUMENT & METER SERIES

DISTRIBUTION CONTROL SERIES

AUTOMATION INDUSTRY APPLICATION

POWER SUPPLY AND OTHERS

**HHD3E-ATPL, APL, BPL, CPL**  
Motor protector  
Equipped with ammeter drive function



|                     |                                                                              |
|---------------------|------------------------------------------------------------------------------|
| Supply voltage      | AC220V, AC380V 50Hz                                                          |
| Current range       | -ATPL: 1~5A -APL: 2~10A<br>-BPL: 8~40A -CPL: 20~100A                         |
| Protection function | Phase failure, three-phase imbalance, overload locked rotor, start avoidance |
| Display mode        | LED indicates the status                                                     |
| Setting mode        | Static quantization setting of potentiometer                                 |
| Start avoidance     | 2~60s continuously adjustable                                                |
| Reset mode          | Power-off reset                                                              |
| Contact form        | 1 NC contact, 1 set of meter head drive                                      |
| Contact capacity    | 3A AC380V(resistive)                                                         |
| Dimension           | 125×71×92mm                                                                  |
| Installation method | Screw mounting type and DIN rail type compatible                             |
| DC meter head       | Purchase separately                                                          |

**HHD3E-DPL**  
Motor protector  
Equipped with ammeter drive function



|                     |                                                                              |
|---------------------|------------------------------------------------------------------------------|
| Supply voltage      | AC220V, AC380V 50Hz                                                          |
| Current range       | 40~160A                                                                      |
| Protection function | Phase failure, three-phase imbalance, overload locked rotor, start avoidance |
| Display mode        | LED indicates the status                                                     |
| Setting mode        | Static quantization setting of potentiometer                                 |
| Start avoidance     | 2~60s continuously adjustable                                                |
| Reset mode          | Power-off reset                                                              |
| Contact form        | 1 NC contact, 1 set of meter head drive                                      |
| Contact capacity    | 3A AC380V(resistive)                                                         |
| Dimension           | 155×60×111mm                                                                 |
| Installation method | Screw mounting type                                                          |
| DC meter head       | Purchase separately                                                          |

**EOCR-SS 05, 30, 60 type**  
Motor protector



|                              |                                                            |
|------------------------------|------------------------------------------------------------|
| Supply voltage               | AC220~380V 50Hz                                            |
| Current range                | 05type: 0.5~6.5A 30type: 3~30A<br>60type: 5~65A            |
| Start avoidance time         | D-Time: 0.2~38s±5%                                         |
| Phase failure operation time | O-Time: 2~17s                                              |
| Overload operation time      |                                                            |
| Start delay                  | ≤ 2s±5%                                                    |
| Reset mode                   | Panel reset or power-off reset                             |
| Contact form                 | 1 set of NO and NC transfer contacts                       |
| Contact status               | Power-on pull-on (code R)<br>Power-on non pull-on (code N) |
| Contact capacity             | 3A AC380V(resistive)                                       |
| Dimension                    | 55×72.5×66mm                                               |
| Installation method          | DIN rail type                                              |

**HHD5-A**  
Phase sequence protection relay



|                     |                                           |
|---------------------|-------------------------------------------|
| Supply voltage      | Three-phase AC380V 50Hz                   |
| Protection function | Phase sequence protection                 |
| Contact form        | 1 set of NO and NC contacts               |
| Contact capacity    | 3A AC250V(resistive)                      |
| Dimension           | 40.5×50.5×73mm                            |
| Installation method | Screw mounting type or 35mm DIN rail type |

**HHD5-C, E**  
Phase failure and phase sequence protection relay



|                     |                                                                                           |
|---------------------|-------------------------------------------------------------------------------------------|
| Supply voltage      | 三相 AC380V 50Hz                                                                            |
| Protection function | -C: Phase failure, phase sequence<br>-E: Phase failure, phase sequence, voltage imbalance |
| Contact form        | 1 NO and 1 NC contact                                                                     |
| Contact capacity    | 3A AC250V(resistive)                                                                      |
| Dimension           | 45×82×106mm                                                                               |
| Installation method | Screw mounting type or 35mm DIN rail type                                                 |
| Replace for         | XJ2, XJ3-G, XJ5                                                                           |

**HHD5-G**  
Phase failure and phase sequence overvoltage/undervoltage protection relay



|                     |                                                                             |
|---------------------|-----------------------------------------------------------------------------|
| Supply voltage      | Three-phase AC380V 50Hz                                                     |
| Protection function | Overvoltage, undervoltage, phase failure, phase sequence, voltage imbalance |
| Display mode        | LED indicates work status                                                   |
| Contact form        | 1 set of NO and NC contacts                                                 |
| Contact capacity    | 3A AC250V(resistive)                                                        |
| Dimension           | 50×87.5×70mm                                                                |
| Installation method | Screw mounting type or 35mm DIN rail type                                   |
| Replace for         | XJ11, ABJ1-18                                                               |

**HHD5-II**  
Self-reset overvoltage/undervoltage protection relay



|                     |                                                                     |
|---------------------|---------------------------------------------------------------------|
| Supply voltage      | AC220V 50Hz                                                         |
| Protection function | Overvoltage and undervoltage protection                             |
| Display mode        | LED indicates work status                                           |
| Wiring method       | Upper inlet lower outlet, lower inlet upper outlet (please specify) |
| Contact form        | Voltage output                                                      |
| Contact capacity    | 4 specifications: 20A, 32A, 40A and 60A                             |
| Dimension           | 36×80×65.5mm                                                        |
| Installation method | 35mm DIN rail type                                                  |

**HHD5-II 3P+N**  
Self-reset overvoltage/undervoltage protection relay



|                     |                                                                     |
|---------------------|---------------------------------------------------------------------|
| Supply voltage      | 3-phase 4-wire AC380V 50Hz                                          |
| Protection function | Overvoltage and undervoltage protection                             |
| Display mode        | LED displays work status                                            |
| Wiring method       | Upper inlet lower outlet, lower inlet upper outlet (please specify) |
| Contact form        | Voltage output                                                      |
| Contact capacity    | 60A, 80A, 100A                                                      |
| Dimension           | 73×91.5×66mm                                                        |
| Installation method | 35mm DIN rail type                                                  |

**HHD7-A/A1(JZF-01)**  
 Forward and reverse controller



|                     |                                                                       |
|---------------------|-----------------------------------------------------------------------|
| Supply voltage      | AC24V, AC220V, AC380V 50Hz                                            |
| Delay range         | -A: Forward/reverse 15s, stop 5s<br>-A1: Forward/reverse 25s, stop 5s |
| Repeat error        | ≤ 1%                                                                  |
| Operation mode      | Forward rotation → stop → reverse → stop → .....                      |
| Contact form        | -A, A1: 2 NO contacts                                                 |
| Contact capacity    | 3A AC250V(resistive)                                                  |
| Dimension           | 65×77.5×72.5mm                                                        |
| Installation method | Screw mounting type                                                   |

**HHD7-F**  
 Forward and reverse controller



|                                |                                                                         |
|--------------------------------|-------------------------------------------------------------------------|
| Supply voltage                 | DC24V; AC24V, AC220V, AC380V 50Hz                                       |
| Delay range                    | Forward/reverse: 1s-99m99s 0.1s-999.9s<br>1s-9999s<br>Stop: 0.1s-999.9s |
| Repeat error                   | ≤ 1%                                                                    |
| Operation mode                 | 1. Stop → forward rotation → stop → backward → .....                    |
| Number of Forward and reverses | Unlimited, 1~9999 times settable                                        |
| Contact form                   | 2 NO contacts with control reset terminal                               |
| Contact capacity               | 3A AC250V(resistive)                                                    |
| Dimension                      | 48×48×108mm                                                             |
| Installation method            | Panel type, screw mounting type, 35mm DIN rail type                     |

**HHD7-C(JZF-06)**  
 Forward and reverse controller



|                     |                                                         |
|---------------------|---------------------------------------------------------|
| Supply voltage      | AC24V, AC220V, AC380V 50Hz                              |
| Delay range         | Forward/reverse: 1, 2, 4, 8, 16s<br>Stop: 0.5, 1, 2, 4s |
| Repeat error        | ≤ 1%                                                    |
| Operation mode      | Forward rotation → stop → reverse → stop → .....        |
| Contact form        | 2 NO contacts                                           |
| Contact capacity    | 3A AC250V(resistive)                                    |
| Dimension           | 65×77.5×72.5mm                                          |
| Installation method | Screw mounting type                                     |

**HHD7-G**  
 Forward and reverse controller  
 Replace for JZF-04 series



|                     |                                                                                             |
|---------------------|---------------------------------------------------------------------------------------------|
| Supply voltage      | DC24V; AC24V, AC220V, AC380V 50Hz                                                           |
| Delay range         | Forward/reverse: 1s-999h settable<br>Stop: 1s-999h settable<br>Total time: 1s-999h settable |
| Operation mode      | Forward rotation → stop → reverse → stop → .....                                            |
| Contact form        | Forward/reverse: 2 NO contacts<br>Total time: 1 set of NO and NC contacts                   |
| Contact capacity    | 3A AC250V(resistive)                                                                        |
| Dimension           | 57×86×81mm                                                                                  |
| Hole size           | 53×61mm 75.5-2×Φ4.5mm                                                                       |
| Installation method | Panel type                                                                                  |

**HHD7-D/D1/D2 (JZF-07 15m/15s/225s)**  
 Forward and reverse controller



|                     |                                                                                                       |
|---------------------|-------------------------------------------------------------------------------------------------------|
| Supply voltage      | AC24V, AC220V, AC380V 50Hz                                                                            |
| Delay range         | Forward/reverse:<br>-D: 1, 2, 4, 8m<br>-D1: 1, 2, 4, 8s<br>-D2: (1, 2, 4, 8s)×15<br>Stop: 1, 2, 4, 8s |
| Repeat error        | ≤ 1%                                                                                                  |
| Operation mode      | Forward rotation → stop → reverse → stop → .....                                                      |
| Contact form        | 2 NO contacts                                                                                         |
| Contact capacity    | 3A AC250V(resistive)                                                                                  |
| Dimension           | 65×77.5×72.5mm                                                                                        |
| Installation method | Screw mounting type                                                                                   |

**HHD7-H1(JZF-01B)**  
 Forward and reverse controller



|                     |                                                                 |
|---------------------|-----------------------------------------------------------------|
| Supply voltage      | DC24V; AC24V, AC220V, AC380V                                    |
| Delay range         | Forward/reverse: 15s, stop 5s;<br>Forward/reverse: 25s, stop 5s |
| Repeat error        | ≤ 1%                                                            |
| Operation mode      | Forward rotation → stop → reverse → stop → .....                |
| Contact form        | 2 NO contacts                                                   |
| Contact capacity    | 3A AC250V(resistive)                                            |
| Dimension           | 50×78×80mm                                                      |
| Installation method | Screw mounting type or 35mm DIN rail type                       |

**HHD7-E**  
 Forward and reverse controller



|                     |                                                      |
|---------------------|------------------------------------------------------|
| Supply voltage      | DC24V; AC24V, AC220V, AC380V 50Hz                    |
| Delay range         | Forward/reverse: 0.1s~990h<br>Stop: 0.1s~990h        |
| Repeat error        | ≤ 1%                                                 |
| Operation mode      | Forward rotation → stop → flip → stop (Customizable) |
| Contact form        | 2 NO contacts with reset and pause terminal          |
| Contact capacity    | 3A AC250V(resistive)                                 |
| Dimension           | 48×48×105mm                                          |
| Installation method | Panel type, screw mounting type, 35mm DIN rail type  |

**HHD7-H4**  
 Forward and reverse controller for yarn dyeing machine



|                     |                                                                                              |
|---------------------|----------------------------------------------------------------------------------------------|
| Supply voltage      | DC24V; AC24V, AC220V, AC380V                                                                 |
| Delay range         | Spraying 10~99s settable<br>Forward and reverse 3s<br>Stop positioning time 0.1~24s settable |
| Counting times      | 1~9 times settable                                                                           |
| Repeat error        | ≤ 1%                                                                                         |
| Operation mode      | Cycle delay                                                                                  |
| Display mode        | Digital tube indication                                                                      |
| Contact form        | 2 voltage outputs                                                                            |
| Contact capacity    | 3A AC250V(resistive)                                                                         |
| Dimension           | 57×86×81mm                                                                                   |
| Hole size           | 53×61mm, 75.5-2×Φ4.5mm                                                                       |
| Installation method | Panel type                                                                                   |

RELAY SERIES

SWITCH SERIES

ELECTRIC DRIVE AND CONTROL SERIES

INSTRUMENT & METER SERIES

DISTRIBUTION CONTROL SERIES

AUTOMATION INDUSTRY APPLICATION

POWER SUPPLY AND OTHERS

**HHD10-A**  
Phase sequence protection relay



|                     |                                           |
|---------------------|-------------------------------------------|
| Supply voltage      | Three-phase AC380V 50Hz                   |
| Protection function | Phase sequence protection                 |
| Display mode        | LED indicates work status                 |
| Contact form        | 1 set of NO and NC contacts               |
| Contact capacity    | 3A AC250V(resistive)                      |
| Dimension           | 33×78×68.5mm                              |
| Installation method | Screw mounting type or 35mm DIN rail type |
| Replace for         | ABJ1-10W                                  |

**HHD11-A**  
Phase sequence protection relay



|                                                                                                                                                                 |                                           |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|
| Supply voltage                                                                                                                                                  | Three-phase AC380V 50Hz                   |
| Protection function                                                                                                                                             | Phase sequence protection                 |
| Display mode                                                                                                                                                    | LED indicates work status                 |
| Contact form                                                                                                                                                    | 1 set of NO and NC contacts               |
| Contact capacity                                                                                                                                                | 3A AC250V(resistive)                      |
| Dimension                                                                                                                                                       | 24.5×85.5×90.5mm                          |
| Installation method                                                                                                                                             | Screw mounting type or 35mm DIN rail type |
| Note: HHD11-A phase sequence protector is suitable for phase sequence protection of elevator power supply (replacing market elevator phase sequence protector). |                                           |

**HHD10-B**  
Phase failure, phase sequence protection relay



|                     |                                                  |
|---------------------|--------------------------------------------------|
| Supply voltage      | Three-phase AC380V 50Hz                          |
| Protection function | Phase failure, phase sequence, voltage imbalance |
| Display mode        | LED indicates work status                        |
| Contact form        | 1 set of NO and NC contacts                      |
| Contact capacity    | 3A AC250V(resistive)                             |
| Dimension           | 33×78×68.5mm                                     |
| Installation method | Screw mounting type or 35mm DIN rail type        |
| Replace for         | ABJ1-11W                                         |

**HHD11-B**  
Phase sequence protection relay



|                     |                                                  |
|---------------------|--------------------------------------------------|
| Supply voltage      | Three-phase AC380V 50Hz                          |
| Protection function | Phase failure, phase sequence, voltage imbalance |
| Display mode        | LED indicates work status                        |
| Contact form        | 1 set of NO and NC contacts                      |
| Contact capacity    | 3A AC250V(resistive)                             |
| Dimension           | 24.5×85.5×90.5mm                                 |
| Installation method | Screw mounting type or 35mm DIN rail type        |

**HHD10-C**  
Overvoltage/undervoltage, phase failure, phase sequence protection relay



|                     |                                                                             |
|---------------------|-----------------------------------------------------------------------------|
| Supply voltage      | Three-phase AC380V 50Hz                                                     |
| Protection function | Overvoltage, undervoltage, phase failure, phase sequence, voltage imbalance |
| Display mode        | LED indicates work status                                                   |
| Contact form        | 1 set of NO and NC contacts                                                 |
| Contact capacity    | 3A AC250V(resistive)                                                        |
| Dimension           | 33×78×68.5mm                                                                |
| Installation method | Screw mounting type or 35mm DIN rail type                                   |
| Replace for         | GMR-32B                                                                     |

**HHD11-C**  
Overvoltage/undervoltage, phase failure, phase sequence protection relay



|                     |                                                                             |
|---------------------|-----------------------------------------------------------------------------|
| Supply voltage      | Three-phase AC380V 50Hz                                                     |
| Protection function | Overvoltage, undervoltage, phase failure, phase sequence, voltage imbalance |
| Display mode        | LED indicates work status                                                   |
| Contact form        | 1 set of NO and NC contacts                                                 |
| Contact capacity    | 3A AC250V(resistive)                                                        |
| Dimension           | 24.5×85.5×90.5mm                                                            |
| Installation method | Screw mounting type or 35mm DIN rail type                                   |

**HHD10-D**  
Overvoltage/undervoltage, phase failure, phase sequence protection relay



|                     |                                                                                                       |
|---------------------|-------------------------------------------------------------------------------------------------------|
| Supply voltage      | Three-phase AC380V 50Hz                                                                               |
| Protection function | Overvoltage (adjustable), undervoltage (adjustable), phase failure, phase sequence, voltage imbalance |
| Display mode        | LED indicates work status                                                                             |
| Contact form        | 1 set of NO and NC contacts                                                                           |
| Contact capacity    | 3A AC250V(resistive)                                                                                  |
| Dimension           | 33×78×68.5mm                                                                                          |
| Installation method | Screw mounting type or 35mm DIN rail type                                                             |
| Replace for         | ABJ1-18, XJ11                                                                                         |

**HHD11-D**  
Overvoltage/undervoltage, phase failure, phase sequence protection relay



|                     |                                                                                                       |
|---------------------|-------------------------------------------------------------------------------------------------------|
| Supply voltage      | Three-phase AC380V 50Hz                                                                               |
| Protection function | Overvoltage (adjustable), undervoltage (adjustable), phase failure, phase sequence, voltage imbalance |
| Display mode        | LED indicates work status                                                                             |
| Contact form        | 1 set of NO and NC contacts                                                                           |
| Contact capacity    | 3A AC250V(resistive)                                                                                  |
| Dimension           | 24.5×85.5×90.5mm                                                                                      |
| Installation method | Screw mounting type or 35mm DIN rail type                                                             |

## Motor speed regulator series

The US-52A and SS-22 series AC motor speed regulators, with soft start and stepless speed regulation functions, are widely used in motor drive industries such as assembly lines, weaving machinery and packaging machinery.

The DC-51 and HHD6-E DC motor speed regulators have simple wiring and support multiple DC voltage outputs, widely used in control circuits for low-power motors.

The HHD6-G high-power DC motor speed regulator is suitable for regulating DC motors below 1200W.

### US-52A

#### AC motor speed regulator

(with soft start and stepless speed regulation functions) 3 types of plugs: square, flat, and C-shaped. The standard leave-factory type is flat plug



|                        |                                                                                                           |
|------------------------|-----------------------------------------------------------------------------------------------------------|
| Supply voltage         | AC220V 50Hz                                                                                               |
| Rated power            | 15W,25W,40W,60W,90W<br>120W,180W,200W,250W                                                                |
| Speed regulation range | 90~1400 rpm 50Hz;<br>90~1600 rpm 60Hz                                                                     |
| Control mode           | Forward/reverse optional:<br>Connecting COM to CW for forward rotation, connecting COM to CCW for reverse |
| Application scope      | YYDJ, YCJT, YYCJ, YCJFK series five-wire motors with speed measuring wire                                 |
| Dimension              | 60×99.6×104.2mm                                                                                           |
| Hole size              | 81×53mm 90.5-2×Φ4.5mm                                                                                     |
| Installation method    | Panel screw installation                                                                                  |

### HHD6-G

#### High-power DC motor speed regulator



|                           |                                                                                                               |
|---------------------------|---------------------------------------------------------------------------------------------------------------|
| Supply voltage            | AC220V 50/60Hz                                                                                                |
| Speed regulation power    | HHD6-G: 400W 1.8A<br>HHD6-G: 1200W 5.5A                                                                       |
| Armature output voltage   | DC0~220V                                                                                                      |
| Excitation output voltage | DC220V±10%                                                                                                    |
| Relative humidity         | ≤ 90%                                                                                                         |
| Altitude                  | ≤ 1000 米                                                                                                      |
| Dimension                 | 90×145×41mm                                                                                                   |
| Application               | When used in two-wire motor, the excitation output line is not connected, only the armature line is connected |

### DC-51A

#### DC motor speed regulator

(Suitable for two-in two-out DC motor)



|                     |                                                                                                 |
|---------------------|-------------------------------------------------------------------------------------------------|
| Supply voltage      | AC220V 50Hz                                                                                     |
| Rated power         | Power 60W for output DC0-24V<br>Power 120W for output DC0-90V<br>Power 120W for output DC0-180V |
| Control mode        | Forward rotation                                                                                |
| Application scope   | Suitable for two-wire DC motor with power less than 120W                                        |
| Dimension           | 100×60×112mm                                                                                    |
| Hole size           | 82×54mm 90-2×Φ4.5mm                                                                             |
| Installation method | Panel screw installation                                                                        |

### SS-22

#### Small AC motor speed regulator

(with soft start and stepless speed regulation functions)



|                        |                                                                           |
|------------------------|---------------------------------------------------------------------------|
| Supply voltage         | AC220V 50/60Hz                                                            |
| Rated power            | 15W,25W,40W,60W,90W<br>120W,180W,200W                                     |
| Speed regulation range | 90~1400r/min 50Hz; 90~2800r/min 60Hz                                      |
| Control mode           | Forward/reverse optional                                                  |
| Application scope      | YYDJ, YCJT, YYCJ, YCJFK series five-wire motors with speed measuring wire |
| Dimension              | 57×40×78mm                                                                |
| Installation method    | 35mm DIN rail                                                             |

# INSTRUMENT & METER

## SERIES

- Temperature controller/Temperature and humidity controller
- Digital charge gauge

D03

D09





## Temperature controller/Temperature and humidity controller

The temperature controller is a digital instrument developed by our company according to international DIN standard. It has stable performance, clear and accurate reading, high precision, vibration resistance, strong electromagnetic compatibility, and it is easy to observe at night. The control Alarm modes are diverse, and it has the level of current international similar products. Equipped with corresponding sensor, it can measure and control parameters such as temperature, pressure, flow rate, and liquid level in industrial processes. The product is widely used in industries such as chemical, textile, papermaking, petroleum, rubber, packaging machinery, food ovens and heat treatment.

**HY101 Series**  
Intelligent temperature controller  
Multiple sensor inputs for users to set freely



|                     |                                                                                                                        |
|---------------------|------------------------------------------------------------------------------------------------------------------------|
| Input signal        | Thermocouple: K, E, J<br>Thermal resistance: Pt100, Cu50                                                               |
| Control mode        | Two-position relay on-off control;<br>PID regulation relay on-off control;<br>PID regulation drive SSR voltage control |
| Alarm mode          | 1 set of alarm relay contact outputs                                                                                   |
| Supply voltage      | AC100~240V                                                                                                             |
| Dimension           | 48×48×78mm                                                                                                             |
| Hole size           | 45×45mm                                                                                                                |
| Typical application | Used in applications such as extruders, reflow soldering machines, shoe machines, etc                                  |

**HB101 Series**  
Intelligent temperature controller  
Multiple sensor inputs for users to set freely



|                     |                                                                                                                        |
|---------------------|------------------------------------------------------------------------------------------------------------------------|
| Input signal        | Thermocouple: K, E, J<br>Thermal resistance: Pt100, Cu50                                                               |
| Control mode        | Two-position relay on-off control;<br>PID regulation relay on-off control;<br>PID regulation drive SSR voltage control |
| Alarm mode          | 1 set of alarm relay contact outputs                                                                                   |
| Supply voltage      | AC100~240V                                                                                                             |
| Dimension           | 48×48×78mm                                                                                                             |
| Hole size           | 45×45mm                                                                                                                |
| Additional function | RS485 communication                                                                                                    |
| Typical application | Used in applications such as extruders, reflow soldering machines, shoe machines, etc                                  |

**HY401 Series**  
Intelligent temperature controller  
Multiple sensor inputs for users to set freely



|                     |                                                                                                                        |
|---------------------|------------------------------------------------------------------------------------------------------------------------|
| Measurement signal  | Thermocouple: K, E, J<br>Thermal resistance: Pt100, Cu50                                                               |
| Control mode        | Two-position relay on-off control;<br>PID regulation relay on-off control;<br>PID regulation drive SSR voltage control |
| Alarm mode          | 1 set of alarm relay contact outputs<br>2 set of alarm relay contact outputs                                           |
| Supply voltage      | AC100~240V                                                                                                             |
| Dimension           | 48×96×78mm                                                                                                             |
| Hole size           | 45×92mm                                                                                                                |
| Typical application | Used in applications such as extruders, reflow soldering machines, shoe machines, etc                                  |

**HB401 Series**  
Intelligent temperature controller  
Multiple sensor inputs for users to set freely



|                     |                                                                                                                        |
|---------------------|------------------------------------------------------------------------------------------------------------------------|
| Measurement signal  | Thermocouple: K, E, J<br>Thermal resistance: Pt100, Cu50                                                               |
| Control mode        | Two-position relay on-off control;<br>PID regulation relay on-off control;<br>PID regulation drive SSR voltage control |
| Alarm mode          | 1 set of alarm relay contact outputs<br>2 set of alarm relay contact outputs                                           |
| Supply voltage      | AC100~240V                                                                                                             |
| Dimension           | 48×96×78mm                                                                                                             |
| Hole size           | 45×92mm                                                                                                                |
| Additional function | Communication, transmission function                                                                                   |
| Typical application | Used in applications such as extruders, reflow soldering machines, shoe machines, etc                                  |

**HY701 Series**  
Intelligent temperature controller  
Multiple sensor inputs for users to set freely



|                     |                                                                                                                        |
|---------------------|------------------------------------------------------------------------------------------------------------------------|
| Measurement signal  | Thermocouple: K, E, J<br>Thermal resistance: Pt100, Cu50                                                               |
| Control mode        | Two-position relay on-off control;<br>PID regulation relay on-off control;<br>PID regulation drive SSR voltage control |
| Alarm mode          | 1 set of alarm relay contact outputs<br>2 set of alarm relay contact outputs                                           |
| Supply voltage      | AC100~240V                                                                                                             |
| Dimension           | 72×72×78mm                                                                                                             |
| Hole size           | 68×68mm                                                                                                                |
| Typical application | Used in applications such as extruders, reflow soldering machines, shoe machines, etc                                  |

**HB701 Series**  
Intelligent temperature controller  
Multiple sensor inputs for users to set freely



|                     |                                                                                                                        |
|---------------------|------------------------------------------------------------------------------------------------------------------------|
| Measurement signal  | Thermocouple: K, E, J<br>Thermal resistance: Pt100, Cu50                                                               |
| Control mode        | Two-position relay on-off control;<br>PID regulation relay on-off control;<br>PID regulation drive SSR voltage control |
| Alarm mode          | 1 set of alarm relay contact outputs<br>2 set of alarm relay contact outputs                                           |
| Supply voltage      | AC100~240V                                                                                                             |
| Dimension           | 72×72×78mm                                                                                                             |
| Hole size           | 68×68mm                                                                                                                |
| Additional function | Communication, transmission function                                                                                   |
| Typical application | Used in applications such as extruders, reflow soldering machines, shoe machines, etc                                  |

**HB901 Series**  
 Intelligent temperature controller  
 Multiple sensor inputs for users to set freely



|                     |                                                                                                                        |
|---------------------|------------------------------------------------------------------------------------------------------------------------|
| Measurement signal  | Thermocouple: K, E, J<br>Thermal resistance: Pt100, Cu50                                                               |
| Control mode        | Two-position relay on-off control;<br>PID regulation relay on-off control;<br>PID regulation drive SSR voltage control |
| Alarm mode          | 1 set of alarm relay contact outputs<br>2 set of alarm relay contact outputs                                           |
| Supply voltage      | AC100~240V                                                                                                             |
| Dimension           | 96×96×78mm                                                                                                             |
| Hole size           | 92×92mm                                                                                                                |
| Additional function | Communication, transmission function                                                                                   |
| Typical application | Used for temperature control applications such as extruders, reflow soldering machines, shoe machines, etc             |

**XMTG-5000 Series**  
 Intelligent temperature controller  
 Multiple sensor inputs for users to set freely



|                     |                                                                                                                        |
|---------------------|------------------------------------------------------------------------------------------------------------------------|
| Measurement signal  | Thermocouple: K, E, J<br>Thermal resistance: Pt100, Cu50                                                               |
| Control mode        | Two-position relay on-off control;<br>PID regulation relay on-off control;<br>PID regulation drive SSR voltage control |
| Alarm mode          | 1 set of alarm relay contact outputs                                                                                   |
| Supply voltage      | AC220V                                                                                                                 |
| Dimension           | 48×48×107mm                                                                                                            |
| Hole size           | 45×45mm                                                                                                                |
| Installation method | Panel type                                                                                                             |
| Typical application | Used for heating equipment such as drying boxes, ovens, plastic machines, etc                                          |

**HR101 Series**  
 Intelligent temperature controller  
 Multiple sensor inputs for users to set freely



|                     |                                                                                                                        |
|---------------------|------------------------------------------------------------------------------------------------------------------------|
| Input signal        | Thermocouple: K, E, J<br>Thermal resistance: Pt100                                                                     |
| Control mode        | Two-position relay on-off control;<br>PID regulation relay on-off control;<br>PID regulation drive SSR voltage control |
| Alarm mode          | ALM1 and ALM2 relays                                                                                                   |
| Supply voltage      | AC100~240V                                                                                                             |
| Dimension           | 48×48×78mm                                                                                                             |
| Hole size           | 45×45mm                                                                                                                |
| Installation method | Panel type                                                                                                             |
| Typical application | Used for temperature control applications such as extruders, reflow soldering machines, shoe machines, etc             |

**XMTD-5000 Series**  
 Intelligent temperature controller  
 Multiple sensor inputs for users to set freely



|                     |                                                                                                                        |
|---------------------|------------------------------------------------------------------------------------------------------------------------|
| Measurement signal  | Thermocouple: K, E, J<br>Thermal resistance: Pt100, Cu50                                                               |
| Control mode        | Two-position relay on-off control;<br>PID regulation relay on-off control;<br>PID regulation drive SSR voltage control |
| Alarm mode          | 1 set of alarm relay contact outputs<br>2 set of alarm relay contact outputs                                           |
| Supply voltage      | AC220V                                                                                                                 |
| Dimension           | 72×72×91mm                                                                                                             |
| Hole size           | 68×68mm                                                                                                                |
| Installation method | Panel type                                                                                                             |
| Typical application | Used for heating equipment such as drying boxes, ovens, plastic machines, etc                                          |

**HR401 Series**  
 Intelligent temperature controller  
 Multiple sensor inputs for users to set freely



|                     |                                                                                                                        |
|---------------------|------------------------------------------------------------------------------------------------------------------------|
| Measurement signal  | Thermocouple: K, E, J<br>Thermal resistance: Pt100, Cu50                                                               |
| Control mode        | Two-position relay on-off control;<br>PID regulation relay on-off control;<br>PID regulation drive SSR voltage control |
| Alarm mode          | ALM1 and ALM2 relays                                                                                                   |
| Supply voltage      | AC100~240V                                                                                                             |
| Dimension           | 48×96×78mm                                                                                                             |
| Hole size           | 45×92mm                                                                                                                |
| Installation method | Panel type                                                                                                             |
| Typical application | Used for temperature control applications such as extruders, reflow soldering machines, shoe machines, etc             |

**XMTA-5000 Series**  
 Intelligent temperature controller  
 Multiple sensor inputs for users to set freely



|                     |                                                                                                                        |
|---------------------|------------------------------------------------------------------------------------------------------------------------|
| Measurement signal  | Thermocouple: K, E, J<br>Thermal resistance: Pt100, Cu50                                                               |
| Control mode        | Two-position relay on-off control;<br>PID regulation relay on-off control;<br>PID regulation drive SSR voltage control |
| Alarm mode          | 1 set of alarm relay contact outputs<br>2 set of alarm relay contact outputs                                           |
| Supply voltage      | AC220V                                                                                                                 |
| Dimension           | 96×96×91mm                                                                                                             |
| Hole size           | 92×92mm                                                                                                                |
| Installation method | Panel type                                                                                                             |
| Typical application | Used for heating equipment such as drying boxes, ovens, plastic machines, etc                                          |

**HR701 Series**  
 Intelligent temperature controller  
 Multiple sensor inputs for users to set freely



|                     |                                                                                                                        |
|---------------------|------------------------------------------------------------------------------------------------------------------------|
| Measurement signal  | Thermocouple: K, E, J<br>Thermal resistance: Pt100                                                                     |
| Control mode        | Two-position relay on-off control;<br>PID regulation relay on-off control;<br>PID regulation drive SSR voltage control |
| Alarm mode          | ALM1 and ALM2 relays                                                                                                   |
| Supply voltage      | AC100~240V                                                                                                             |
| Dimension           | 72×72×78mm                                                                                                             |
| Hole size           | 68×68mm                                                                                                                |
| Installation method | Panel type                                                                                                             |
| Typical application | Used for temperature control applications such as extruders, reflow soldering machines, shoe machines, etc             |

**XMTE-5000 Series**  
 Intelligent temperature controller  
 Multiple sensor inputs for users to set freely



|                     |                                                                                                                        |
|---------------------|------------------------------------------------------------------------------------------------------------------------|
| Measurement signal  | Thermocouple: K, E, J<br>Thermal resistance: Pt100, Cu50                                                               |
| Control mode        | Two-position relay on-off control;<br>PID regulation relay on-off control;<br>PID regulation drive SSR voltage control |
| Alarm mode          | 1 set of alarm relay contact outputs<br>2 set of alarm relay contact outputs                                           |
| Supply voltage      | AC220V                                                                                                                 |
| Dimension           | 48×96×91mm                                                                                                             |
| Hole size           | 45×92mm                                                                                                                |
| Installation method | Panel type                                                                                                             |
| Typical application | Used for heating equipment such as drying boxes, ovens, plastic machines, etc                                          |

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AUTOMATION INDUSTRY APPLICATION

POWER SUPPLY AND OTHERS

## XMTF-5000 Series

Intelligent temperature controller  
Multiple sensor inputs for users to set freely



|                     |                                                                                                                        |
|---------------------|------------------------------------------------------------------------------------------------------------------------|
| Measurement signal  | Thermocouple: K, E, J<br>Thermal resistance: Pt100, Cu50                                                               |
| Control mode        | Two-position relay on-off control;<br>PID regulation relay on-off control;<br>PID regulation drive SSR voltage control |
| Alarm mode          | 1 set of alarm relay contact outputs<br>2 set of alarm relay contact outputs                                           |
| Supply voltage      | AC220V                                                                                                                 |
| Dimension           | 96×48×90mm                                                                                                             |
| Hole size           | 92×44mm                                                                                                                |
| Installation method | Panel type                                                                                                             |
| Typical application | Used for heating equipment such as drying boxes, ovens, plastic machines, etc                                          |

## HH-1

Heating and cooling controller



|                     |                                                                          |
|---------------------|--------------------------------------------------------------------------|
| Input signal        | Thermal resistance (specialized sensor, wiring)                          |
| Resolution          | ±0.1°C                                                                   |
| Control mode        | P1: Single limit, P2: Double limit                                       |
| Range               | -40~99.9°C                                                               |
| Supply voltage      | AC220V/50Hz                                                              |
| Dimension           | 72×120×46mm                                                              |
| Installation method | DIN rail type, wall-mounted type, hanging type                           |
| Typical application | Culturing farm, hatching, water temperature control, switchgear assembly |

## XMT-5000 Series

Intelligent temperature controller  
Multiple sensor inputs for users to set freely



|                     |                                                                                                                        |
|---------------------|------------------------------------------------------------------------------------------------------------------------|
| Measurement signal  | Thermocouple: K, E, J<br>Thermal resistance: Pt100, Cu50                                                               |
| Control mode        | Two-position relay on-off control;<br>PID regulation relay on-off control;<br>PID regulation drive SSR voltage control |
| Alarm mode          | 1 set of alarm relay contact outputs<br>2 set of alarm relay contact outputs                                           |
| Supply voltage      | AC220V                                                                                                                 |
| Dimension           | 160×80×94mm                                                                                                            |
| Hole size           | 152×76mm                                                                                                               |
| Additional function | RS485 communication                                                                                                    |
| Typical application | Used for heating equipment such as drying boxes, ovens, plastic machines, etc                                          |

## HWP-C703 Series

Single-circuit intelligent meter



|                     |                                                                                        |
|---------------------|----------------------------------------------------------------------------------------|
| Measurement signal  | Thermocouples, Thermal resistances<br>Standard current, voltage, and resistance signal |
| Transmission output | 0~5V (load RL ≥ 250KΩ);<br>0~10mA (≤ 750Ω);<br>4~20mA (≤ 500Ω)                         |
| Output method       | ① Relay output ② 4~20mA                                                                |
| Alarm mode          | 2-circuit relay contact control (C703)<br>4-circuit relay contact control (C704)       |
| Feed output         | 24VDC(30mA)                                                                            |
| Dimension           | 72×72×112mm                                                                            |
| Hole size           | 68×68mm                                                                                |
| Supply voltage      | AC220V                                                                                 |
| Installation method | Panel type                                                                             |

## XMTE-7000 Series

Intelligent temperature controller  
Multiple sensor inputs for users to set freely



|                     |                                                                                                                        |
|---------------------|------------------------------------------------------------------------------------------------------------------------|
| Measurement signal  | Thermocouple: : K, E, J                                                                                                |
| Control mode        | Two-position relay on-off control;<br>PID regulation relay on-off control;<br>PID regulation drive SSR voltage control |
| Alarm mode          | ALM1 and ALM2 relays                                                                                                   |
| Supply voltage      | AC110~240V                                                                                                             |
| Dimension           | 48×48×78mm                                                                                                             |
| Hole size           | 45×92mm                                                                                                                |
| Installation method | Panel type                                                                                                             |
| Typical application | Used for temperature control applications such as extruders, reflow soldering machines, shoe machines, etc             |

## HWP-C803 Series

Single-circuit intelligent meter



|                     |                                                                                        |
|---------------------|----------------------------------------------------------------------------------------|
| Measurement signal  | Thermocouples, Thermal resistances<br>Standard current, voltage, and resistance signal |
| Transmission output | 0~5V (load RL ≥ 250KΩ);<br>0~10mA (≤ 750Ω);<br>4~20mA (≤ 500Ω)                         |
| Output method       | ① Relay output ② 4~20mA                                                                |
| Alarm mode          | 2-circuit relay contact control (C803)<br>4-circuit relay contact control (C804)       |
| Feed output         | 24VDC(30mA)                                                                            |
| Dimension           | 160×80×94mm                                                                            |
| Hole size           | 152×76mm                                                                               |
| Supply voltage      | AC220V                                                                                 |
| Installation method | Panel type                                                                             |

## HD-C800 Series

Intelligent temperature itinerant detector



|                                   |                                                                                                          |
|-----------------------------------|----------------------------------------------------------------------------------------------------------|
| Measurement signal                | Thermocouple: : K, E<br>Thermal resistance: Pt100, Cu50                                                  |
| Itinerant detecting point circuit | 1~8 circuit                                                                                              |
| Itinerant detecting method        | Automatic and manual                                                                                     |
| Itinerant detecting time          | Automatic itinerant detecting time 0-100s                                                                |
| Alarm mode                        | Upper limit alarm, lower limit alarm                                                                     |
| Alarm output                      | Relay contact (control hysteresis adjustable)                                                            |
| Contact capacity                  | Passive AC 220V 3A (resistive load)                                                                      |
| Comm. interface                   | RS485 (optional)                                                                                         |
| Supply voltage                    | AC 220V                                                                                                  |
| Dimension                         | 160×80×103.5mm                                                                                           |
| Hole size                         | 152×76mm                                                                                                 |
| Installation method               | Panel type                                                                                               |
| Typical application               | Multi-point temperature monitoring for grain depots, switchgear assemblies, motor protection places etc. |

## HWP-C903 Series

Single-circuit intelligent meter



|                                |                                                                                                                                                                           |
|--------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Measurement signal             | Thermocouple: : S, B, K, E, T, J etc<br>Thermal resistance: Pt100, Cu50 etc<br>Current signal: 0-10mA, 4-20mA<br>Resistance signal: 0-400Ω<br>Voltage signal: 0-5V, 0-10V |
| Control mode                   | Relay contact on-off control                                                                                                                                              |
| Supply voltage                 | AC90~265V                                                                                                                                                                 |
| Transmission output (optional) | 0~5V (load RL ≥ 250KΩ);<br>0~10mA (≤ 750Ω);<br>4~20mA (≤ 500Ω)                                                                                                            |
| Feed output                    | 24VDC(30mA)                                                                                                                                                               |
| Dimension                      | 96×96×112mm                                                                                                                                                               |
| Hole size                      | 92×92mm                                                                                                                                                                   |
| Installation method            | Panel type                                                                                                                                                                |

**XMTG-1000**  
 Temperature controller



|                     |                                                                                                                        |
|---------------------|------------------------------------------------------------------------------------------------------------------------|
| Measurement signal  | Cu50, Pt100, K, E                                                                                                      |
| Control mode        | Relay contact on-off control (hysteresis adjustable)                                                                   |
| Supply voltage      | AC220V 50/60Hz                                                                                                         |
| Contact capacity    | Passive AC220V 3A (resistive load)                                                                                     |
| Dimension           | 48×48×90mm                                                                                                             |
| Hole size           | 45×45mm                                                                                                                |
| Installation method | Panel type                                                                                                             |
| Typical application | Used for heating equipment such as water heaters, incubators and heaters with general temperature control requirements |

**XMTD-3001/3002 (Improved)**  
 Digital temperature controller  
 Replace for dialing setting



|                     |                                                                                               |
|---------------------|-----------------------------------------------------------------------------------------------|
| Input signal        | Thermocouple: K, E<br>Thermal resistance: Pt100, Cu50                                         |
| Measurement error   | ≤ 1.0 class                                                                                   |
| Adjustment mode     | Two-position relay contact on-off control;<br>Time proportional relay contact on-off control; |
| Setting mode        | Touch switch setting                                                                          |
| Supply voltage      | AC220V, AC380V                                                                                |
| Dimension           | 72×72×90mm                                                                                    |
| Hole size           | 68×68mm                                                                                       |
| Installation method | Panel type                                                                                    |
| Typical application | Used for drying boxes, ovens, plastic machines etc.                                           |

**HH48-N-101, HH48-N-131**  
 Digital temperature controller



|                     |                                                                                                                                |
|---------------------|--------------------------------------------------------------------------------------------------------------------------------|
| Input signal        | Thermocouple: K, J                                                                                                             |
| Measurement error   | ≤ 1.0 class                                                                                                                    |
| Control mode        | Two-position relay contact on-off control;<br>Time proportional relay contact on-off control;                                  |
| Setting mode        | Touch switch setting                                                                                                           |
| Supply voltage      | AC220V, AC380V                                                                                                                 |
| Dimension           | 48×48×95mm                                                                                                                     |
| Hole size           | 45×45mm                                                                                                                        |
| Installation method | Panel type, DIN rail type                                                                                                      |
| Typical application | Used for heating equipment with general temperature control requirements such as drying ovens, ovens and plastic machines etc. |

**XMTD-2201/2202/2201F /2202F (Improved)**  
 Digital temperature controller  
 Replace for potentiometer setting



|                     |                                                                                                                                |
|---------------------|--------------------------------------------------------------------------------------------------------------------------------|
| Input signal        | Thermocouple: K, E<br>Thermal resistance: Pt100, Cu50                                                                          |
| Measurement error   | ≤ 1.0 class                                                                                                                    |
| Adjustment mode     | Three-position relay contact on-off control;<br>Hysteresis control (heating or cooling mode);                                  |
| Setting mode        | Touch switch setting                                                                                                           |
| Supply voltage      | AC220V, AC380V                                                                                                                 |
| Dimension           | 72×72×90mm                                                                                                                     |
| Hole size           | 68×68mm                                                                                                                        |
| Installation method | Panel type                                                                                                                     |
| Typical application | Used for heating equipment with general temperature control requirements such as drying ovens, ovens and plastic machines etc. |

**XMTG-3001/3002 (Improved)**  
 Digital temperature controller  
 Economical type



|                     |                                                                                                                                |
|---------------------|--------------------------------------------------------------------------------------------------------------------------------|
| Measurement signal  | Thermocouple: K, E<br>Thermal resistance: Pt100, Cu50                                                                          |
| Measurement error   | ≤ 1.0 class                                                                                                                    |
| Control mode        | Two-position relay contact on-off control;<br>Time proportional relay contact on-off control;                                  |
| Setting mode        | Touch switch setting                                                                                                           |
| Supply voltage      | AC220V, AC380V                                                                                                                 |
| Dimension           | 48×48×90mm                                                                                                                     |
| Hole size           | 45×45mm                                                                                                                        |
| Installation method | Panel type                                                                                                                     |
| Typical application | Used for heating equipment with general temperature control requirements such as drying ovens, ovens and plastic machines etc. |

**XMTA-2201/2202/2201F /2202F (Improved)**  
 Digital temperature controller  
 Replace for potentiometer setting



|                     |                                                                                                                                |
|---------------------|--------------------------------------------------------------------------------------------------------------------------------|
| Input signal        | Thermocouple: K, E<br>Thermal resistance: Pt100, Cu50                                                                          |
| Measurement error   | ≤ 1.0 class                                                                                                                    |
| Adjustment mode     | Three-position relay contact on-off control;<br>Hysteresis control (heating or cooling mode);                                  |
| Setting mode        | Touch switch setting                                                                                                           |
| Supply voltage      | AC220V, AC380V                                                                                                                 |
| Dimension           | 96×96×97mm                                                                                                                     |
| Hole size           | 92×92mm                                                                                                                        |
| Installation method | Panel type                                                                                                                     |
| Typical application | Used for heating equipment with general temperature control requirements such as drying ovens, ovens and plastic machines etc. |

**XMTD-D Series**  
 Digital temperature controller  
 Good-looking, economical and practical



|                     |                                                                                                                                |
|---------------------|--------------------------------------------------------------------------------------------------------------------------------|
| Measurement signal  | Thermocouple: K, E<br>Thermal resistance: Pt100, Cu50                                                                          |
| Measurement error   | ≤ 1.0 class                                                                                                                    |
| Control mode        | Two-position relay contact on-off control;<br>Time proportional relay contact on-off control;                                  |
| Supply voltage      | AC220V, AC380V                                                                                                                 |
| Dimension           | 72×72×72mm                                                                                                                     |
| Hole size           | 68×68mm                                                                                                                        |
| Installation method | Panel type                                                                                                                     |
| Typical application | Used for heating equipment with general temperature control requirements such as drying ovens, ovens and plastic machines etc. |

**XMTA-3001/3002 (Improved)**  
 Digital temperature controller  
 Replace for dialing setting



|                     |                                                                                                                                |
|---------------------|--------------------------------------------------------------------------------------------------------------------------------|
| Input signal        | Thermocouple: K, E<br>Thermal resistance: Pt100, Cu50                                                                          |
| Measurement error   | ≤ 1.0 class                                                                                                                    |
| Adjustment mode     | Two-position relay contact on-off control;<br>Time proportional relay contact on-off control;                                  |
| Setting mode        | Touch switch setting                                                                                                           |
| Supply voltage      | AC220V, AC380V                                                                                                                 |
| Dimension           | 96×96×99mm                                                                                                                     |
| Hole size           | 92×92mm                                                                                                                        |
| Installation method | Panel type                                                                                                                     |
| Typical application | Used for heating equipment with general temperature control requirements such as drying ovens, ovens and plastic machines etc. |

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**XMT-3001/3002 (Improved)**  
Digital temperature controller



|                     |                                                                                             |
|---------------------|---------------------------------------------------------------------------------------------|
| Input signal        | Thermocouple: K, E<br>Thermal resistance: Pt100, Cu50                                       |
| Measurement error   | ≤ 1.0 class                                                                                 |
| Adjustment mode     | Two-position relay contact on-off control<br>Time proportional relay contact on-off control |
| Setting mode        | Touch switch setting                                                                        |
| Supply voltage      | AC220V, AC380V                                                                              |
| Dimension           | 48×96×82mm                                                                                  |
| Hole size           | 45×92mm                                                                                     |
| Installation method | Panel type                                                                                  |
| Typical application | Used for drying boxes, ovens, plastic machines etc.                                         |

**TED Series**  
Temperature indication controller



|                     |                                                                                             |
|---------------------|---------------------------------------------------------------------------------------------|
| Input signal        | Thermocouple: K, E<br>Thermal resistance: Cu50                                              |
| Measurement error   | ≤ 1.5 class                                                                                 |
| Adjustment mode     | Two-position relay contact on-off control<br>Time proportional relay contact on-off control |
| Setting mode        | Potentiometer setting                                                                       |
| Supply voltage      | AC220V, AC380V                                                                              |
| Dimension           | 72×72×110mm                                                                                 |
| Hole size           | 68×68                                                                                       |
| Installation method | Panel type                                                                                  |

**XMT-101/102 (Improved)**  
Digital temperature controller



|                     |                                                                                             |
|---------------------|---------------------------------------------------------------------------------------------|
| Input signal        | Thermocouple: K, E<br>Thermal resistance: Pt100, Cu50                                       |
| Measurement error   | ≤ 1.0 class                                                                                 |
| Adjustment mode     | Two-position relay contact on-off control<br>Time proportional relay contact on-off control |
| Setting mode        | Touch switch setting                                                                        |
| Supply voltage      | AC220V, AC380V                                                                              |
| Dimension           | 160×80×92mm                                                                                 |
| Hole size           | 151×75mm                                                                                    |
| Installation method | Panel type                                                                                  |
| Typical application | Used for drying boxes, ovens, plastic machines etc.                                         |

**TEG Series**  
Temperature indication controller  
Economical type



|                     |                                                |
|---------------------|------------------------------------------------|
| Input signal        | Thermocouple: K, E<br>Thermal resistance: Cu50 |
| Measurement error   | ≤ 2.5 class                                    |
| Vontrol mode        | Two-position relay contact on-off control      |
| Setting mode        | Potentiometer setting                          |
| Supply voltage      | AC220V (other power supplies customizable)     |
| Dimension           | 48×48×106mm                                    |
| Hole size           | 45×45mm                                        |
| Installation method | Panel type                                     |
| Typical application | Plastic packaging machine, sealing machine     |

**XMT-121/122/121F/122F (Improved)**  
Digital temperature controller



|                     |                                                                                               |
|---------------------|-----------------------------------------------------------------------------------------------|
| Input signal        | Thermocouple: K, E<br>Thermal resistance: Pt100, Cu50                                         |
| Measurement error   | ≤ 1.0 class                                                                                   |
| Adjustment mode     | Three-position relay contact on-off control;<br>Hysteresis control (heating or cooling mode); |
| Setting mode        | Touch switch setting                                                                          |
| Supply voltage      | AC220V, AC380V                                                                                |
| Dimension           | 160×80×92mm                                                                                   |
| Hole size           | 151×75mm                                                                                      |
| Installation method | Panel type                                                                                    |
| Typical application | Used for drying boxes, ovens, plastic machines etc.                                           |

**TDA Series**  
Temperature indication controller



|                     |                                                                                             |
|---------------------|---------------------------------------------------------------------------------------------|
| Input signal        | Thermocouple: K, E<br>Thermal resistance: Cu50                                              |
| Measurement error   | ≤ 2.5 class                                                                                 |
| Adjustment mode     | Two-position relay contact on-off control<br>Time proportional relay contact on-off control |
| Setting mode        | Potentiometer setting                                                                       |
| Supply voltage      | AC220V, AC380V                                                                              |
| Dimension           | 60×120×90mm                                                                                 |
| Hole size           | 55×115                                                                                      |
| Installation method | Panel type                                                                                  |

**HH48-M**  
Non-indication temperature controller



|                     |                                           |
|---------------------|-------------------------------------------|
| Input signal        | Thermocouple: K                           |
| Display mode        | Non-indication                            |
| Adjustment mode     | Two-position relay contact on-off control |
| Setting mode        | Potentiometer setting                     |
| Supply voltage      | AC220V, AC380V                            |
| Dimension           | 48×48×107mm                               |
| Hole size           | 45×45mm                                   |
| Installation method | Panel type, DIN rail type                 |
| Typical application | Used for sealing machine                  |

**HCS-15**  
Intelligent dehumidifier



|                                    |                                                                                                                                                                               |
|------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Input spec.                        | 1-circuit temperature and humidity input module (built-in)                                                                                                                    |
| Measuring range                    | Temp.: -19°C~99°C<br>Humidity: 0%~99% RH                                                                                                                                      |
| Basic error                        | Temp.: ±1.5°C (0°C~100°C),<br>Humidity: +5% RH(10%~99%)                                                                                                                       |
| Resolution                         | Temp.: 1°C, Humidity: 1%RH                                                                                                                                                    |
| Supply voltage                     | 20VAC, 50/60Hz, default dehumidification power 15W, please specify for any other power                                                                                        |
| Recommended dehumidification space | 0.5 ~ 1m <sup>3</sup>                                                                                                                                                         |
| Work environment                   | Non-corrosive environment with temperature of 0-50°C and humidity ≤ 85% RH<br>High temperature resistant silicone hose, 1m standard length, please specify for any other size |
| Pipe length                        |                                                                                                                                                                               |

**TDK0302**  
 Intelligent temperature and humidity controller



|                         |                                                                                                                                        |
|-------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| Temperature measurement | -40~99.9°C                                                                                                                             |
| Humidity measurement    | 0~99.9%RH                                                                                                                              |
| Measurement error       | Temperature ( $\leq \pm 0.5\%$ FS)<br>Humidity ( $\leq \pm 4.5\%$ FS)                                                                  |
| control mode            | Heating and humidification mode, heating and dehumidification mode, cooling and humidification mode, cooling and dehumidification mode |
| Control output          | One-circuit temperature and one-circuit humidity relay contact                                                                         |
| Contact capacity        | 3A AC250V(resistive)                                                                                                                   |
| Supply voltage          | AC/DC 100-240V                                                                                                                         |
| Dimension               | 72×72×78mm                                                                                                                             |
| Hole size               | 68×68mm                                                                                                                                |
| Additional function     | RS485 communication, transmission output                                                                                               |

**HH-1DG**  
 Temperature and humidity (condensation) controller



|                     |                                                                                                                                                                                          |
|---------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Supply voltage      | AC220V power consumption $\leq 2W$                                                                                                                                                       |
| Control mode        | Heating and dehumidification, cooling and dehumidification                                                                                                                               |
| Control range       | Dehumidification start for ambient humidity $\geq 93\%$ RH<br>Dehumidification stop for ambient humidity $\leq 75\%$ RH<br>Temperature can be set through potentiometer (hysteresis 5°C) |
| Contact capacity    | 5A AC220V (resistive)                                                                                                                                                                    |
| Dimension           | 48×48×114mm                                                                                                                                                                              |
| Hole size           | 45×45mm                                                                                                                                                                                  |
| Installation method | Panel type, DIN rail type                                                                                                                                                                |
| Typical application | Used for temperature and humidity control of distribution cabinets, substations and switchgear assemblies etc.                                                                           |

**HCS-30**  
 Intelligent dehumidifier (30W)



|                                    |                                                                                                                                                                       |
|------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Supply voltage                     | 220VAC, 50Hz, standby power consumption 5VA                                                                                                                           |
| Measuring range                    | Temp.: -19°C~99°C<br>Humidity: 0%~99% RH                                                                                                                              |
| Basic error                        | Temp.: $\pm 0.5^\circ\text{C}$ (10°C~50°C) $\pm 1.5^\circ\text{C}$ (0°C~99°C)<br>Humidity: $\pm 3\%$ RH(10% RH~90% RH) $\pm 5\%$ RH(0% RH~99% RH)                     |
| Resolution                         | Temp.: 1°C, humidity: 1% RH                                                                                                                                           |
| Control mode                       | Humidity: high humidity control; temperature: low or high temperature control (optional); temperature output: 1-circuit relay output (passive), 250VAC/3A or 30VDC/3A |
| Fault output                       | One-circuit passive fault output                                                                                                                                      |
| Comm. mode                         | RS485 comm. (Modbus protocol)                                                                                                                                         |
| Work environment                   | Non-corrosive environment with temperature of 0~50°C and humidity $\leq 85\%$ RH                                                                                      |
| Working condition water output     | Default dehumidification power 30W, please specify for any other power                                                                                                |
| Recommended dehumidification space | 1~2 m <sup>3</sup>                                                                                                                                                    |
| Pipe length                        | High temperature resistant silicone hose, 1m standard length, please specify for any other size                                                                       |

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ELECTRIC DRIVE AND CONTROL SERIES

INSTRUMENT & METER SERIES

DISTRIBUTION CONTROL SERIES

AUTOMATION INDUSTRY APPLICATION

POWER SUPPLY AND OTHERS

## Digital charge gauge

The Digital charge gauge includes digital current, voltage, frequency, power, power factor, transmission meter etc. It takes the electric power measurement chip and single-chip microcomputer as the core, and is equipped with highly reliable components in the periphery. It owns advanced technology, stable performance, clear and accurate reading, low power consumption, high accuracy, and is convenient for observation at night. Equipped with corresponding transmission module or RS485 communication module, it realizes communication with computer. It is widely used for measuring and displaying voltage, current, power, power factor and transmission parameters of electromechanical equipment.

**SX-48 Series**  
Digital current and voltage meter



|                     |                                                                                                                  |
|---------------------|------------------------------------------------------------------------------------------------------------------|
| Input signal        | AC current and voltage<br>DC current and voltage                                                                 |
| Measurement error   | ≤ 1.0 class                                                                                                      |
| Display mode        | 0.39 inch digital tube                                                                                           |
| Range               | Range: 0-9999 settable                                                                                           |
| Supply voltage      | AC220V or AC380V                                                                                                 |
| Dimension           | 48×48×78mm                                                                                                       |
| Hole size           | 45×45mm                                                                                                          |
| Installation method | Panel type                                                                                                       |
| Typical application | Used for electrical signal measurement of calibration tables, distribution cabinets, switchgear assemblies, etc. |

**SX-96 Series**  
Digital current and voltage meter



|                     |                                                                                                                                                         |
|---------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| Measurement signal  | AC current and voltage<br>DC current and voltage                                                                                                        |
| Measurement error   | ≤ 1.0 class                                                                                                                                             |
| Display mode        | 0.56 inch digital tube                                                                                                                                  |
| Range               | Range: 0-9999 settable                                                                                                                                  |
| Supply voltage      | AC220V or AC380V                                                                                                                                        |
| Dimension           | 96×96×90mm                                                                                                                                              |
| Hole size           | 91×91mm                                                                                                                                                 |
| Installation method | Panel type                                                                                                                                              |
| Typical application | Used for electrical signal measurement of calibration tables, switchgear assemblies, voltage stabilization and regulation equipment, laboratories, etc. |

**SX-72 Series**  
Digital current and voltage meter



|                     |                                                                                                                  |
|---------------------|------------------------------------------------------------------------------------------------------------------|
| Input signal        | AC current and voltage<br>DC current and voltage                                                                 |
| Measurement error   | ≤ 1.0 class                                                                                                      |
| Display mode        | 0.56 inch digital tube                                                                                           |
| Range               | Range: 0-9999 settable                                                                                           |
| Supply voltage      | AC220V or AC380V                                                                                                 |
| Dimension           | 72×72×72mm                                                                                                       |
| Hole size           | 68×68mm                                                                                                          |
| Installation method | Panel type                                                                                                       |
| Typical application | Used for electrical signal measurement of calibration tables, distribution cabinets, switchgear assemblies, etc. |

**SX-96B Series**  
Digital current and voltage meter



|                     |                                                                                                                                                         |
|---------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| Measurement signal  | AC current and voltage<br>DC current and voltage                                                                                                        |
| Measurement error   | ≤ 1.0 class                                                                                                                                             |
| Display mode        | 0.56 inch digital tube                                                                                                                                  |
| Range               | Range: 0-9999 settable                                                                                                                                  |
| Supply voltage      | AC220V or AC380V                                                                                                                                        |
| Dimension           | 96×48×90mm                                                                                                                                              |
| Hole size           | 92×44mm                                                                                                                                                 |
| Installation method | Panel type                                                                                                                                              |
| Typical application | Used for electrical signal measurement of calibration tables, switchgear assemblies, voltage stabilization and regulation equipment, laboratories, etc. |

**SX-6L Series**  
Digital current and voltage meter



|                     |                                                                                                                  |
|---------------------|------------------------------------------------------------------------------------------------------------------|
| Input signal        | AC current and voltage<br>DC current and voltage                                                                 |
| Measurement error   | ≤ 1.0 class                                                                                                      |
| Display mode        | 0.56 inch digital tube                                                                                           |
| Range               | Range: 0-9999 settable                                                                                           |
| Supply voltage      | AC220V or AC380V                                                                                                 |
| Dimension           | 80×80×72mm                                                                                                       |
| Hole size           | 76×76mm                                                                                                          |
| Installation method | Panel type                                                                                                       |
| Typical application | Used for electrical signal measurement of calibration tables, distribution cabinets, switchgear assemblies, etc. |

**SX-42 Series**  
Digital current and voltage meter



|                     |                                                                                                                  |
|---------------------|------------------------------------------------------------------------------------------------------------------|
| Input signal        | AC current and voltage<br>DC current and voltage                                                                 |
| Measurement error   | ≤ 1.0 class                                                                                                      |
| Display mode        | 0.56 inch digital tube                                                                                           |
| Range               | Range: 0-9999 settable                                                                                           |
| Supply voltage      | AC220V or AC380V                                                                                                 |
| Dimension           | 123×123×96mm                                                                                                     |
| Hole size           | 112×112mm                                                                                                        |
| Installation method | Panel type                                                                                                       |
| Typical application | Used for electrical signal measurement of calibration tables, distribution cabinets, switchgear assemblies, etc. |

**HH5735B Serie**  
 Digital current and voltage meter  
 Dark brown filter is used  
 Clear digital display



|                     |                                                                                                                                                |
|---------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| Measurement signal  | AC current and voltage<br>DC current and voltage                                                                                               |
| Measurement error   | ≤ 1.0 class                                                                                                                                    |
| Display mode        | 0.56 inch digital display                                                                                                                      |
| Range               | 0-9999 settable                                                                                                                                |
| Supply voltage      | AC220V or AC380V                                                                                                                               |
| Dimension           | 79×43×50mm                                                                                                                                     |
| Hole size           | 76×39.5mm                                                                                                                                      |
| Installation method | Panel type                                                                                                                                     |
| Typical application | Used for electrical signal measurement of calibration tables, aging tables, voltage stabilization and regulation equipment, laboratories, etc. |

**DP35-S Serie**  
 Digital meter for inverter



|                     |                                                                                                                                                            |
|---------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Measurement signal  | Standard current: DC4-20mA (optional)<br>Standard voltage: DC0-10V (optional)                                                                              |
| Measurement error   | ≤ 1.0 class                                                                                                                                                |
| Display mode        | 0.56 inch digital display                                                                                                                                  |
| Range               | DC range: 0-9999                                                                                                                                           |
| Supply voltage      | AC220V or AC380V                                                                                                                                           |
| Dimension           | 96×48×90mm                                                                                                                                                 |
| Hole size           | 92×44mm                                                                                                                                                    |
| Installation method | Panel type                                                                                                                                                 |
| Typical application | Used for standard signal conversion devices such as inverters and transmitters, it can display current, voltage, frequency, rev. speed, and pressure, etc. |

**DP35-S-J Serie**  
 Digital meter for inverter



|                     |                                                                                                                                                                                                                                                                   |
|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Measurement signal  | Standard current: DC4-20mA DC 0-20mA (optional)<br>Standard voltage signal: DC0-10V (optional)                                                                                                                                                                    |
| Measurement error   | ≤ 1.0 class                                                                                                                                                                                                                                                       |
| Display mode        | 0.56 inch digital display                                                                                                                                                                                                                                         |
| Range               | 0-9999                                                                                                                                                                                                                                                            |
| Alarm output        | J1 and J2 relays                                                                                                                                                                                                                                                  |
| Supply voltage      | AC220V or AC380V                                                                                                                                                                                                                                                  |
| Dimension           | 96×48×90mm                                                                                                                                                                                                                                                        |
| Hole size           | 92×44mm                                                                                                                                                                                                                                                           |
| Installation method | Panel type                                                                                                                                                                                                                                                        |
| Typical application | Used for standard signal conversion devices such as inverters and transmitters, it can display current, voltage, frequency, rev. speed and pressure, used for electrical signal measurement of switchgear assemblies, distribution cabinets, and substations etc. |

**DP45-□□ Serie**  
 Digital meter for inverter



|                     |                                                                                 |
|---------------------|---------------------------------------------------------------------------------|
| Input signal        | AC current and voltage<br>DC current and voltage                                |
| Measurement error   | ≤ 0.5 class                                                                     |
| Display mode        | 0.56 inch 5-digit display                                                       |
| Range               | -1999~31000 settable                                                            |
| Supply voltage      | AC220V or AC380V                                                                |
| Dimension           | 48mm×96mm×87mm                                                                  |
| Hole size           | 44mm×92mm                                                                       |
| Installation method | Panel type                                                                      |
| Typical application | Used for PV, DC panels, new energy charging piles, energy storage devices, etc. |

**DP45-□□-J Serie**  
 Digital meter for inverter



|                     |                                                                                 |
|---------------------|---------------------------------------------------------------------------------|
| Input signal        | AC current and voltage<br>DC current and voltage                                |
| Measurement error   | ≤ 0.5 class                                                                     |
| Display mode        | 0.56 inch 5-digit display                                                       |
| Range               | -1999~31000 settable                                                            |
| Alarm output        | One-circuit relay output                                                        |
| Supply voltage      | AC220V or AC380V                                                                |
| Dimension           | 48mm×96mm×87mm                                                                  |
| Hole size           | 44mm×92mm                                                                       |
| Installation method | Panel type                                                                      |
| Typical application | Used for PV, DC panels, new energy charging piles, energy storage devices, etc. |

**DP45-□□-J-C4 Serie**  
 Digital meter for inverter



|                     |                                                                                 |
|---------------------|---------------------------------------------------------------------------------|
| Input signal        | AC current and voltage<br>DC current and voltage                                |
| Measurement error   | ≤ 0.5 class                                                                     |
| Display mode        | 0.56 inch 5-digit display                                                       |
| Range               | -1999~31000 settable                                                            |
| Alarm output        | One-circuit relay output                                                        |
| Comm. interface     | RS485                                                                           |
| Supply voltage      | AC220V or AC380V                                                                |
| Dimension           | 48mm×96mm×87mm                                                                  |
| Hole size           | 44mm×92mm                                                                       |
| Installation method | Panel type                                                                      |
| Typical application | Used for PV, DC panels, new energy charging piles, energy storage devices, etc. |

**PAS-A/PAS-V Serie**  
 AC current/voltage transmitter



|                     |                                                                                                                                                                           |
|---------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Measurement signal  | AC current (AC0-5A)<br>AC voltage (AC0-500V)<br>Other specifications customizable                                                                                         |
| Measurement error   | ≤ 0.5 class                                                                                                                                                               |
| Display mode        | It can be manually switched to display the measured primary electric quantity or transmitting output electric quantity                                                    |
| Display range       | Primary electric quantity 0-9999 settable                                                                                                                                 |
| Transmission output | DC0-10mA/0-20mA<br>4-20mA (settable)                                                                                                                                      |
| Load impedance      | ≤ 350Ω                                                                                                                                                                    |
| Supply voltage      | AC220V or AC380V                                                                                                                                                          |
| Dimension           | 79×50×105mm                                                                                                                                                               |
| Installation method | Standard DIN rail installation, fixed installation                                                                                                                        |
| Typical application | Used for isolation and measurement of high current and high voltage transmission in explosion-proof control boxes, distribution cabinets, substations and other equipment |

**HPZ96B-AI-J-M/AV-J-M Serie**  
 Programmable electric measurement and control meter

Upper limit control, lower limit control  
 Transmission output, communication  
 485 interface



|                     |                                                                                         |
|---------------------|-----------------------------------------------------------------------------------------|
| Measurement signal  | AC current and voltage                                                                  |
| Measurement error   | ≤ 1.0 class or 0.5 class                                                                |
| Display mode        | 0.56 inch digital tube                                                                  |
| Range               | 0-9999                                                                                  |
| Transmission output | M: (4-20mA) Impedance ≤ 350Ω                                                            |
| Alarm output        | J1 and J2 relays                                                                        |
| Comm. interface     | RS485 (optional)                                                                        |
| Operating voltage   | AC100-240V                                                                              |
| Dimension           | 96×48×90mm                                                                              |
| Hole size           | 92×44mm                                                                                 |
| Installation method | Panel type                                                                              |
| Typical application | Used for measuring, transmitting and controlling of single-phase AC current and voltage |

**HPZ72 Series**  
Programmable three-phase power meter



|                     |                                                                                                           |
|---------------------|-----------------------------------------------------------------------------------------------------------|
| Measurement signal  | AC current and voltage (three-phase)                                                                      |
| Measurement error   | ≤ 0.5 class                                                                                               |
| Display mode        | Integrated digital display                                                                                |
| Range               | 0-9999                                                                                                    |
| Current range       | AC 0-5A (straight-through) (range settable, CT equipped for ≥ AC5A)                                       |
| Voltage range       | AC0-500V (straight-through) (range settable, PT equipped for ≥ AC500V)                                    |
| Supply voltage      | AC220V or AC380V                                                                                          |
| Dimension           | 72×72×85mm                                                                                                |
| Hole size           | 68×68mm                                                                                                   |
| Installation method | Panel type                                                                                                |
| Typical application | Used for electrical signal measurement of switchgear assemblies, distribution cabinets, substations, etc. |

**HPZ80 Series**  
Programmable three-phase power meter



|                     |                                                                                                           |
|---------------------|-----------------------------------------------------------------------------------------------------------|
| Measurement signal  | AC current and voltage (three-phase)                                                                      |
| Measurement error   | ≤ 0.5 class                                                                                               |
| Display mode        | Integrated digital display                                                                                |
| Range               | 0-9999                                                                                                    |
| Current range       | AC 0-5A (straight-through) (range settable, CT equipped for ≥ AC5A)                                       |
| Voltage range       | AC0-500V (straight-through) (range settable, PT equipped for ≥ AC500V)                                    |
| Supply voltage      | AC220V or AC380V                                                                                          |
| Dimension           | 84×84×85mm                                                                                                |
| Hole size           | 76×76mm                                                                                                   |
| Installation method | Panel type                                                                                                |
| Typical application | Used for electrical signal measurement of switchgear assemblies, distribution cabinets, substations, etc. |

**HPZ96 Series**  
Programmable three-phase power meter



|                     |                                                                                                           |
|---------------------|-----------------------------------------------------------------------------------------------------------|
| Measurement signal  | AC current and voltage (three-phase)                                                                      |
| Measurement error   | ≤ 0.5 class                                                                                               |
| Display mode        | Integrated digital display                                                                                |
| Range               | 0-9999                                                                                                    |
| Comm. interface     | RS485 (optional)                                                                                          |
| Current range       | AC 0-5A (straight-through) (range settable) ≥ AC5A (CT equipped)                                          |
| Voltage range       | AC0-500V (straight-through); ≥ AC500V (PT equipped)                                                       |
| Supply voltage      | AC220V or AC380V                                                                                          |
| Dimension           | 96×96×96mm                                                                                                |
| Hole size           | 91×91mm                                                                                                   |
| Installation method | Panel type                                                                                                |
| Typical application | Used for electrical signal measurement of switchgear assemblies, distribution cabinets, substations, etc. |

**HPZ42 Series**  
Programmable three-phase power meter



|                     |                                                                                                           |
|---------------------|-----------------------------------------------------------------------------------------------------------|
| Measurement signal  | AC current and voltage (three-phase)                                                                      |
| Measurement error   | ≤ 0.5 class                                                                                               |
| Display mode        | Integrated digital display                                                                                |
| Range               | 0-9999                                                                                                    |
| Comm. interface     | RS485 (optional)                                                                                          |
| Current range       | AC 0-5A (straight-through) (range settable, CT equipped for ≥ AC5A)                                       |
| Voltage range       | AC0-500V (straight-through) (range settable, PT equipped for ≥ AC500V)                                    |
| Supply voltage      | AC220V or AC380V                                                                                          |
| Dimension           | 123×123×96mm                                                                                              |
| Hole size           | 112×112mm                                                                                                 |
| Installation method | Panel type                                                                                                |
| Typical application | Used for electrical signal measurement of switchgear assemblies, distribution cabinets, substations, etc. |

**HCD194E-9S4**  
Multifunctional power meter



|                       |                                                                                                        |
|-----------------------|--------------------------------------------------------------------------------------------------------|
| Input signal          | Three-phase AC current and voltage                                                                     |
| Display mode          | LCD display                                                                                            |
| Measurement parameter | Voltage, current, active power, reactive power, power factor, frequency, active energy, etc            |
| Measurement error     | Voltage: 0.5 class Current: 0.5 class Frequency: 0.5 class Power: 1.0 class Electric energy: 1.0 class |
| Input mode            | 3-phase 3-wire, 3-phase 4-wire (optional)                                                              |
| Output signal         | Comm. interface: RS485 Pulse output: 2-circuit electric energy pulse                                   |
| Variable ratio range  | Current CT (magnification), voltage PT (magnification)                                                 |
| Supply voltage        | AC220V                                                                                                 |
| Dimension             | 96×96×85mm                                                                                             |
| Hole size             | 91×91mm                                                                                                |
| Installation method   | Panel type                                                                                             |



**HCD194E-8S4**  
Multifunctional power meter



|                       |                                                                                                        |
|-----------------------|--------------------------------------------------------------------------------------------------------|
| Input signal          | Three-phase AC current and voltage                                                                     |
| Display mode          | Integrated digital display                                                                             |
| Measurement parameter | Voltage, current, active power, reactive power, power factor, frequency, active energy, etc            |
| Measurement error     | Voltage: 0.5 class Current: 0.5 class Frequency: 0.5 class Power: 1.0 class Electric energy: 1.0 class |
| Input mode            | 3-phase 3-wire, 3-phase 4-wire (optional)                                                              |
| Output signal         | Comm. interface: RS485                                                                                 |
| Pulse output          | 2-circuit electric energy pulse                                                                        |
| Variable ratio range  | Current CT (magnification), voltage PT (magnification)                                                 |
| Supply voltage        | AC220V                                                                                                 |
| Dimension             | 84×84×85mm                                                                                             |
| Hole size             | 76×76mm                                                                                                |
| Installation method   | Panel type                                                                                             |

**HCD194E-7S4**  
Multifunctional power meter



|                       |                                                                                                        |
|-----------------------|--------------------------------------------------------------------------------------------------------|
| Input signal          | Three-phase AC current and voltage                                                                     |
| Display mode          | Integrated digital display                                                                             |
| Measurement parameter | Voltage, current, active power, reactive power, power factor, frequency, active energy, etc            |
| Measurement error     | Voltage: 0.5 class Current: 0.5 class Frequency: 0.5 class Power: 1.0 class Electric energy: 1.0 class |
| Input mode            | 3-phase 3-wire, 3-phase 4-wire (optional)                                                              |
| Output signal         | Comm. interface: RS485                                                                                 |
| Pulse output          | 2-circuit electric energy pulse                                                                        |
| Variable ratio range  | Current CT (magnification), voltage PT (magnification)                                                 |
| Supply voltage        | AC220V                                                                                                 |
| Dimension             | 72×72×85mm                                                                                             |
| Hole size             | 68×68mm                                                                                                |
| Installation method   | Panel type                                                                                             |

**HCD194E-9S4**  
Multifunctional power meter



|                       |                                                                                                        |
|-----------------------|--------------------------------------------------------------------------------------------------------|
| Input signal          | Three-phase AC current and voltage                                                                     |
| Display mode          | Integrated digital display                                                                             |
| Measurement parameter | Voltage, current, active power, reactive power, power factor, frequency, active energy, etc            |
| Measurement error     | Voltage: 0.5 class Current: 0.5 class Frequency: 0.5 class Power: 1.0 class Electric energy: 1.0 class |
| Input mode            | 3-phase 3-wire, 3-phase 4-wire (optional)                                                              |
| Output signal         | Comm. interface: RS485                                                                                 |
| Pulse output          | 2-circuit electric energy pulse                                                                        |
| Variable ratio range  | Current CT (magnification), voltage PT (magnification)                                                 |
| Supply voltage        | AC220V                                                                                                 |
| Dimension             | 96×96×96mm                                                                                             |
| Hole size             | 91×91mm                                                                                                |
| Installation method   | Panel type                                                                                             |

**HCD194E-2S4**  
 Multifunctional power meter



|                       |                                                                                                              |
|-----------------------|--------------------------------------------------------------------------------------------------------------|
| Input signal          | Three-phase AC current and voltage                                                                           |
| Display mode          | Integrated digital display                                                                                   |
| Measurement parameter | Voltage, current, active power, reactive power, power factor, frequency, active energy, etc                  |
| Measurement error     | Voltage: 0.5 class Current: 0.5 class<br>Frequency: 0.5 class Power: 1.0 class<br>Electric energy: 1.0 class |
| Input mode            | 3-phase 3-wire, 3-phase 4-wire (optional)                                                                    |
| Output signal         | Comm. interface: RS485                                                                                       |
| Pulse output          | 2-circuit electric energy pulse                                                                              |
| Variable ratio range  | Current CT (magnification),<br>voltage PT (magnification)                                                    |
| Supply voltage        | AC220V                                                                                                       |
| Dimension             | 123×123×96mm                                                                                                 |
| Hole size             | 112×112mm                                                                                                    |
| Installation method   | Panel type                                                                                                   |

**HHKG-2/HHKD-2**  
 Silicon controlled voltage regulator



|                     |                                            |
|---------------------|--------------------------------------------|
| Voltage range       | AC0-200V                                   |
| Trigger method      | Silicon controlled phase-shift trigger     |
| Supply voltage      | AC220V                                     |
| Dimension           | 48×48×90mm (HHKG-2)<br>72×72×97mm (HHKD-2) |
| Hole size           | 45×45mm (HHKG-2)<br>68×68mm (HHKD-2)       |
| Installation method | Panel type                                 |
| Typical application | Used for bottle blowing machine            |

RELAY  
 SERIES

SWITCH  
 SERIES

ELECTRIC DRIVE AND  
 CONTROL SERIES

INSTRUMENT &  
 METER SERIES

DISTRIBUTION  
 CONTROL SERIES

AUTOMATION INDUSTRY  
 APPLICATION

POWER SUPPLY  
 AND OTHERS

# DISTRIBUTION

## CONTROL SERIES

- Dual power automatic transfer switch series E02
- Surge protective device series E06
- Miniature (residual current) circuit breaker series E10
- Molded case circuit breaker series E13
- Intelligent air circuit breaker series E16
- AC Contactor series E17
- Control and protection switch series E18



## XLDQ3 Dual power automatic transfer switch series

The XLDQ3 series dual power automatic transfer switch designed and produced by our company is a specialized product developed to meet the needs of customers. This product has two conversion functions: auto-transfer and auto-restoring, auto-transfer and nonauto-restoring. It simultaneously monitors the three-phase voltage of two power supplies in three-phase four-wire power grid. When any phase experiences overvoltage, undervoltage or phase loss, it can automatically transfer from abnormal voltage to normal power supply; the product used in the power grid-generation system can also send out power generation command. It is a dual power automatic transfer switch with complete performance, high safety and reliability, high degree of automation and wide range of application.

The product complies with the GB/T 14048.11 standard.

### XLDQ3

Dual power automatic transfer switch



|                                        |                                                                      |
|----------------------------------------|----------------------------------------------------------------------|
| Rated operating voltage                | AC400V                                                               |
| Rated operating current                | 6A, 10A, 16A, 20A, 25A, 32A, 40A, 50A, 63A                           |
| No. of poles                           | 3P/4P                                                                |
| Controller model                       | A/B/C                                                                |
| Operation mode                         | Auto/manual                                                          |
| Conversion mode                        | Auto-transfer and auto-restoring/auto-transfer and nonauto-restoring |
| Dimension Length×Width×Height (mm)     | 248×125×125mm (same size for 3P and 4P)                              |
| Mounting (hole) size Length×Width (mm) | 229×113mm (same size for 3P and 4P)                                  |
| Installation method                    | Vertical                                                             |

## XLDQ3NX Dual power automatic transfer switch series

The newly designed XLDQ3NX-A/B/C/D series dual power automatic transfer switch is based on in-depth research and development of power transfer switch technology. It has been redesigned in various aspects such as product structure, control unit, execution unit, electromagnetic compatibility, etc., completely subverting the design concept of traditional dual power automatic transfer switch. This is a dual power automatic transfer switch with smallest volume, which has compact product structure and is easy for installation; modular design improves the continuity of product power supply and has better energy-saving effects than other similar products.

The product complies with the GB/T 14048.11 standard.

### XLDQ3NX

Dual power automatic transfer switch



|                                        |                                                                                           |
|----------------------------------------|-------------------------------------------------------------------------------------------|
| Rated operating voltage                | AC400V                                                                                    |
| Rated operating current                | 6A, 10A, 16A, 20A, 25A, 32A, 40A, 50A, 63A                                                |
| No. of poles                           | 3P/4P                                                                                     |
| Controller model                       | A/B/C/D                                                                                   |
| Operation mode                         | Automatic/manual                                                                          |
| Conversion mode                        | Auto-transfer and auto-restoring/auto-transfer and nonauto-restoring/Power grid-generator |
| Dimension Length×Width×Height (mm)     | 3P: 212.5×125×121mm    4P: 248×125×121mm                                                  |
| Mounting (hole) size Length×Width (mm) | 3P: 193.5×113mm    4P: 229×113mm                                                          |
| Installation method                    | Vertical                                                                                  |

## XLDQ3NM Dual power automatic transfer switch series

The XLDQ3NM-A/B/D intelligent dual power automatic transfer switch adopts international industrial design concepts, it comprehensively improves the traditional molded case dual power automatic transfer switch from product structure, visual appearance, human-machine engineering, control circuit and other aspects, making it comparable to international first-class products in quality and extremely cost-effective. The product has normal and backup supply voltage measurement and display functions, which can save users the cost of cabinet type voltage measurement and display equipment, and integrate functions such as generator automatic start and stop, fire remote emergency control, remote communication, etc., with a higher degree of intelligence.

The product complies with the GB/T 14048.11 standard.

**XLDQ3NM**  
Dual power automatic transfer switch



|                                        |                                                                                           |                                     |                        |           |      |
|----------------------------------------|-------------------------------------------------------------------------------------------|-------------------------------------|------------------------|-----------|------|
| Frame current                          | 125A                                                                                      | 250A                                | 400A                   | 630A      | 800A |
| Rated operating voltage                | AC400V                                                                                    |                                     |                        |           |      |
| Rated operating current                | 80A,100A,125A                                                                             | 125A,160A<br>180A,200A<br>225A,250A | 250A,315A<br>350A,400A | 500A,630A | 800A |
| No. of poles                           | 3P/4P                                                                                     |                                     |                        |           |      |
| Controller model                       | A/B/D                                                                                     |                                     |                        |           |      |
| Operation mode                         | Automatic/manual                                                                          |                                     |                        |           |      |
| Conversion mode                        | Auto-transfer and auto-restoring/auto-transfer and nonauto-restoring/Power grid-generator |                                     |                        |           |      |
| Dimension Length×Width×Height (mm)     | 3P: 390×240×145 4P: 420×240×145 (125 type)                                                |                                     |                        |           |      |
| Mounting (hole) size Length×Width (mm) | 3P: 357×220 4P: 387×220 (125 type)                                                        |                                     |                        |           |      |
| Installation method                    | Vertical                                                                                  |                                     |                        |           |      |

## XLDS2 Dual power automatic transfer switch series

The XLDS2 series automatic transfer switch is mainly used for one main and one backup or mutual backup power transfer system in power distribution or motor network with frequency of AC 50Hz, operating voltage of AC230V/AC400V and rated current from 16A to 3200A, as well as load transfer between mains power and generator set. It can also be used for isolation of circuit that is not frequently connected or disconnected.

The product is widely used in the transmission and distribution system and automation system of important power supply places such as fire protection, hospitals, banks and high-rise buildings that do not allow power outages.

The product complies with the GB/T 14048.11 standard.

**XLDS2**  
Dual power automatic transfer switch



|                                           |                         |                                   |
|-------------------------------------------|-------------------------|-----------------------------------|
| Rated operating voltage                   | AC400V                  |                                   |
| Frame current                             | 100A, 160A, 250A, 630A  | 1000A, 1600A, 2000A, 2500A, 3200A |
| Rated impulse withstand voltage (Uimp)    | 8kV                     |                                   |
| Rated limiting short-circuit current (Iq) | 120kA                   |                                   |
| Utilization category                      | AC-33iB (PC class)      | AC-32B (PC class)                 |
| No. of poles                              | 3P/4P                   |                                   |
| Controller model                          | A/B/C/D/E/F             |                                   |
| Installation method                       | Vertical and horizontal |                                   |

## XLDS3 Dual power automatic transfer switch series

The XLDS3 series product belongs to the PC class dual power automatic transfer switch, it's mainly used in two neutral grounded power supply systems with frequency of AC 50Hz, rated voltage of 400V and below and rated operating current up to 630A. It transfers between power supplies to ensure the reliability and safety of power supply due to an abnormality in one power supply.

This automatic transfer switch has "normal power", "backup power" and "two-circuit off" positions, with high making and breaking capacity, which can satisfy the transfer of common loads, as well as transfer of high inductance or large motor load. Meanwhile, because of its high short-term withstand current capacity, it does not require specific SPCD, which does not affect the selectivity in the circuit, and it can also satisfy the application on the large capacity power supply side.

The product complies with the GB/T 14048.11 standard.

**XLDS3**  
Dual power automatic transfer switch



|                                                  |             |             |             |             |
|--------------------------------------------------|-------------|-------------|-------------|-------------|
| Model                                            | XLDS3-80    | XLDS3-125   | XLDS3-250   | XLDS3-630   |
| No. of poles                                     | 3/4         | 3/4         | 3/4         | 3/4         |
| Controller model                                 | B/C/D/E     |             |             |             |
| Rated operating voltage (V)Ue                    | 400         | 400         | 400         | 400         |
| Rated operating current (A)Ie                    | 16-80       | 80-125      | 140-250     | 315-630     |
| Rated insulation voltage (V)Ui                   | 690         | 690         | 690         | 690         |
| Rated impulse withstand voltage (kV)Uimp         | 8           | 8           | 8           | 8           |
| Utilization category                             | AC-33B      | AC-33B      | AC-33B      | AC-33B      |
| Rated short-time withstand current (kA, rms)Icw  | 10kA(30mS)  | 10kA(200mS) | 10kA(200mS) | 25kA(200mS) |
| Rated short-circuit making capacity (kA peak)Icm | 15kA        | 20kA        | 30kA        | 50kA        |
| Rated limiting short-circuit current (kA)Iq      | 120kA       | 120kA       | 120kA       | 120kA       |
| Rated control supply voltage (V)Us               | 230V/50Hz   | 230V/50Hz   | 230V/50Hz   | 230V/50Hz   |
| Contact transfer time (s)                        | 0.6         | 0.6         | 1           | 1.5         |
| Number of operation cycles                       | Power-off   | 8500        | 8500        | 7000        |
|                                                  | Power-on    | 1500        | 1500        | 1000        |
|                                                  | Total       | 10000       | 10000       | 8000        |
| Dimension(mm) Length×Width×Height                | 229×115×129 | 245×130×122 | 295×175×175 | 430×272×228 |
| Installation size (mm) Length×Width              | 212×100     | 230×113     | 275×152     | 400×240     |
| Weight (kg)                                      | 2.5         | 4.3         | 9           | 22.5        |
| Installation method                              | Vertical    |             |             |             |

## XLDS5 Dual power automatic transfer switch series

The XLDS5 series product belongs to PC class (excitation type) automatic transfer switch (hereinafter referred to as switch). It's suitable for two neutral grounded power supply systems with frequency of AC 50HZ/60HZ, rated voltage of 400V/415V and below and rated operating current from 16A to 630A. Its unique power monitoring device can distinguish the difference between two power supplies and quickly transfer when the transfer conditions are met, ensuring the reliability and safety of the power supply.

This switch has three positions: "Normal (I) ON", "Backup (II) ON", and "OFF(O)", and can be used for fire linkage and frequent on-off power supply system. It's mainly used in places where power outages are not allowed, such as hospitals, shopping malls, banks, chemical industries, metallurgy, high-rise buildings, military facilities and fire protection.

The product complies with the GB/T 14048.11 standard.

**XLDS5**  
Dual power automatic transfer switch



| Model and specification                            | XLDS5-125                            | XLDS5-250               | XLDS5-630               |
|----------------------------------------------------|--------------------------------------|-------------------------|-------------------------|
| No. of poles (P)                                   | 2, 3, 4                              | 3, 4                    | 3, 4                    |
| Rated operating current Ie(A)                      | 16, 20, 25, 32, 40, 63, 80, 100, 125 | 125, 160, 200, 225, 250 | 250, 315, 400, 500, 630 |
| Utilization category                               | AG-33A, AC-33iA, AG-33B              |                         | AC-33iA, AG-33B         |
| Rated operating voltage Ue(V)                      | AC400V/415V                          |                         |                         |
| Rated insulation voltage Ui(V)                     | 800                                  |                         |                         |
| Rated working frequency Hz                         | 50/60Hz                              |                         |                         |
| Rated impulse withstand voltage Uimp(kV)           | 8                                    |                         |                         |
| Rated limiting short-circuit current Iq(kA) (fuse) | 120                                  |                         |                         |
| Rated control power supply Us(V)                   | AC230V                               |                         |                         |
| Minimum transfer operation time (ms)               | ≤ 70                                 | ≤ 70                    | ≤ 100                   |
| Number of working positions of contact             | II or III                            | II or III               | II or III               |
| Number of operation cycles                         | Power-off                            | 10000                   | 10000                   |
|                                                    | Power-on                             | 6000                    | 6000                    |
|                                                    | Total                                | 16000                   | 16000                   |
| Dimension (mm) Length×Width×Height                 | 238X140X115                          | 292X190X132             | 375X285X195             |

## XLDS2T Dual power automatic transfer switch series

The XLDS2T series product belongs to PC class (three-stage type) automatic transfer switch (hereinafter referred to as switch). It's suitable for power supply system with frequency of AC 50HZ/60HZ, rated voltage of 400V and rated operating current from 16A to 630A. It transfers between power supplies to ensure the reliability and safety of power supply due to an abnormality in one power supply.

This switch has three positions: "Normal (I) ON", "Backup (II) ON", and "OFF(O)", and can be used for fire linkage and frequent on-off power supply system. It's mainly used in places where power outages are not allowed, such as hospitals, shopping malls, banks, chemical industries, metallurgy, high-rise buildings, military facilities and fire protection.

The product complies with the GB/T 14048.11 standard.

**XLDS2T**  
Dual power automatic transfer switch



| Model and specification                        | XLDS2T-125                               | XLDS2T-250              | XLDS2T-630              |
|------------------------------------------------|------------------------------------------|-------------------------|-------------------------|
| Rated operating current Ie(A)                  | 16, 20, 25, 32, 40, 50, 63, 80, 100, 125 | 125, 160, 200, 225, 250 | 250, 315, 400, 500, 630 |
| Rated supply voltage Us(v)                     | AC230V                                   |                         |                         |
| Rated insulation voltage Ui(M)                 | 690V                                     |                         |                         |
| Rated impulse withstand voltage Uimp(kV)       | 8kV                                      |                         |                         |
| Rated short-time making capacity Icm (KA peak) | 17kA                                     |                         | 26kA                    |
| Rated limiting short-circuit current Iq        | 100kA                                    |                         |                         |
| Contact transfer time (s)                      | 0.7s                                     | 0.9s                    | 1.2s                    |
| Transfer operation time (s)                    | 1.4s                                     | 2.0s                    | 2.5s                    |

## Surge protective device series

### Overview

The SP1 series surge protective device is suitable for power supply system such as TT, IT, TN-S, TN-C, TN-C-S with AC 50/60Hz, 230/400V and below.

It's generally installed in the low-voltage main distribution cabinet of building incoming line.

The product complies with the GB/T 18802.11 standard.

**SP1-D**  
Surge protective device



|                                                        |                        |       |          |       |          |       |          |       |
|--------------------------------------------------------|------------------------|-------|----------|-------|----------|-------|----------|-------|
| Protection grade                                       | Grade 3                |       |          |       |          |       |          |       |
| Rated operating voltage(Un)                            | 230V/400V              |       |          |       |          |       |          |       |
| Nominal discharge current In(8/20μs)                   | 5kA                    |       |          |       | 10kA     |       |          |       |
| Maximum discharge current I <sub>max</sub> (8/20μs)    | 10kA                   |       |          |       | 20kA     |       |          |       |
| Maximum continuous operating voltage (U <sub>c</sub> ) | 275V                   | 320V  | 385V     | 420V  | 275V     | 320V  | 385V     | 420V  |
| Protection level (U <sub>p</sub> )kV                   | < 1.0                  | < 1.2 | < 1.2    | < 1.2 | < 1.2    | < 1.5 | < 1.5    | < 1.5 |
| Leakage current (75%U <sub>c</sub> 1mA)                | < 20μA                 |       |          |       |          |       |          |       |
| Test class                                             | Class II               |       |          |       |          |       |          |       |
| Protection level                                       | IP20                   |       |          |       |          |       |          |       |
| Recommended fuse or circuit breaker                    | 10A~16A                |       |          |       |          |       |          |       |
| Installation method                                    | 35mm standard DIN rail |       |          |       |          |       |          |       |
| No. of poles                                           | 1P                     |       | 2P       |       | 3P       |       | 4P       |       |
| Outline and installation size (mm)                     | 90×18×67               |       | 90×36×67 |       | 90×54×67 |       | 90×72×67 |       |

**SP1-C**  
Surge protective device



|                                                        |                        |       |          |       |          |  |          |  |
|--------------------------------------------------------|------------------------|-------|----------|-------|----------|--|----------|--|
| Protection grade                                       | Grade 2                |       |          |       |          |  |          |  |
| Rated operating voltage(Un)                            | 230V/400V              |       |          |       |          |  |          |  |
| Nominal discharge current In(8/20μs)                   | 20kA                   |       |          |       |          |  |          |  |
| Maximum discharge current I <sub>max</sub> (8/20μs)    | 40kA                   |       |          |       |          |  |          |  |
| Maximum continuous operating voltage (U <sub>c</sub> ) | 275V                   | 320V  | 385V     | 420V  | 440V     |  |          |  |
| Protection level (U <sub>p</sub> )kV                   | < 1.5                  | < 1.6 | < 1.8    | < 2.0 | < 2.2    |  |          |  |
| Leakage current (75%U <sub>c</sub> 1mA)                | < 20μA                 |       |          |       |          |  |          |  |
| Test class                                             | Class II               |       |          |       |          |  |          |  |
| Protection level                                       | IP20                   |       |          |       |          |  |          |  |
| Recommended fuse or circuit breaker                    | 40A~63A                |       |          |       |          |  |          |  |
| Installation method                                    | 35mm standard DIN rail |       |          |       |          |  |          |  |
| No. of poles                                           | 1P                     |       | 2P       |       | 3P       |  | 4P       |  |
| Outline and installation size (mm)                     | 90×18×67               |       | 90×36×67 |       | 90×54×67 |  | 90×72×67 |  |

**SP1-B**  
Surge protective device



|                                                        |                        |      |          |      |          |      |           |      |
|--------------------------------------------------------|------------------------|------|----------|------|----------|------|-----------|------|
| Protection grade                                       | Grade 1                |      |          |      |          |      |           |      |
| Rated operating voltage(Un)                            | 230V/400V              |      |          |      |          |      |           |      |
| Nominal discharge current In(8/20μs)                   | 30kA                   |      |          | 40kA |          |      | 60kA      |      |
| Maximum discharge current I <sub>max</sub> (8/20μs)    | 60kA                   |      |          | 80kA |          |      | 100kA     |      |
| Maximum continuous operating voltage (U <sub>c</sub> ) | 320V                   | 385V | 420V     | 440V | 320V     | 385V | 420V      | 440V |
| Protection level (U <sub>p</sub> )kV                   | <2.0                   | <2.2 | <2.2     | <2.4 | <2.2     | <2.5 | <2.5      | <2.7 |
| Leakage current (75%U <sub>c</sub> 1mA)                | <2.5                   | <2.5 | <3.0     | <3.2 |          |      |           |      |
| Test class                                             | Class II               |      |          |      |          |      |           |      |
| Protection level                                       | IP20                   |      |          |      |          |      |           |      |
| Recommended fuse or circuit breaker                    | 40A~63A                |      |          |      |          |      |           |      |
| Installation method                                    | 35mm standard DIN rail |      |          |      |          |      |           |      |
| No. of poles                                           | 1P                     |      | 2P       |      | 3P       |      | 4P        |      |
| Outline and installation size (mm)                     | 90×27×67               |      | 90×54×67 |      | 90×81×67 |      | 90×108×67 |      |

RELAY SERIES  
 SWITCH SERIES  
 ELECTRIC DRIVE AND CONTROL SERIES  
 INSTRUMENT & METER SERIES  
 DISTRIBUTION CONTROL SERIES  
 AUTOMATION INDUSTRY APPLICATION  
 POWER SUPPLY AND OTHERS

**SP1-NPE**  
Surge protective device



|                                           |                        |       |       |                     |       |       |
|-------------------------------------------|------------------------|-------|-------|---------------------|-------|-------|
| Rated operating voltage (Un)              | 230V/400V              |       |       |                     |       |       |
| Nominal discharge current In(8/20μs)      | 5kA                    | 10kA  | 20kA  | 30kA                | 40kA  | 60kA  |
| Maximum discharge current Imax(8/20μs)    | 10kA                   | 20kA  | 40kA  | 60kA                | 80kA  | 100kA |
| Maximum continuous operating voltage (Uc) | 255V                   |       |       |                     |       |       |
| Protection level (Up)kV                   | < 1.0                  | < 1.1 | < 1.2 | < 1.5               | < 1.7 | < 2.0 |
| Leakage current (75%Uc1mA)                | < 20μA                 |       |       |                     |       |       |
| Test class                                | Class II               |       |       |                     |       |       |
| Protection level                          | IP20                   |       |       |                     |       |       |
| Recommended fuse or circuit breaker       | 10~16A, 40A~63A        |       |       |                     |       |       |
| Installation method                       | 35mm standard DIN rail |       |       |                     |       |       |
| No. of poles                              | 1P+N                   |       |       | 3P+N                |       |       |
| Outline and installation size (mm)        | 90×36×67, 90×54×67     |       |       | 90×72×67, 90×108×67 |       |       |

**SP7**  
Surge protective device



|                                           |                        |       |          |       |           |       |           |       |
|-------------------------------------------|------------------------|-------|----------|-------|-----------|-------|-----------|-------|
| Rated operating voltage (Un)              | 230V/400V              |       |          |       |           |       |           |       |
| Nominal discharge current In(8/20μs)      | 40kA                   |       | 50kA     |       | 60kA      |       | 100kA     |       |
| Maximum discharge current Imax(8/20μs)    | 80kA                   |       | 100kA    |       | 120kA     |       | 160kA     |       |
| Maximum continuous operating voltage (Uc) | 385V                   | 420V  | 385V     | 420V  | 385V      | 420V  | 385V      | 420V  |
| Protection level (Up)kV                   | < 2.4                  | < 2.5 | < 2.5    | < 2.8 | < 2.8     | < 3.0 | < 3.0     | < 3.5 |
| Leakage current (75%Uc1mA)                | < 20μA                 |       |          |       |           |       |           |       |
| Test class                                | Class II               |       |          |       |           |       |           |       |
| Protection level                          | IP20                   |       |          |       |           |       |           |       |
| Recommended fuse or circuit breaker       | 50A, 63A, 100A         |       |          |       |           |       |           |       |
| Installation method                       | 35mm standard DIN rail |       |          |       |           |       |           |       |
| No. of poles                              | 1P                     |       | 2P       |       | 3P        |       | 4P        |       |
| Outline and installation size (mm)        | 90×36×64               |       | 90×72×64 |       | 90×108×64 |       | 90×144×64 |       |

**SP9-I**  
Surge protective device



|                                           |                        |       |          |       |           |       |           |       |       |       |
|-------------------------------------------|------------------------|-------|----------|-------|-----------|-------|-----------|-------|-------|-------|
| Rated operating voltage (Un)              | 230V/400V              |       |          |       |           |       |           |       |       |       |
| Nominal discharge current In(8/20μs)      | 50kA                   |       |          |       | 50kA      |       |           |       | 50kA  |       |
| Impulse current Iimp(10/350μs)            | 15kA                   |       |          |       | 25kA      |       |           |       | 50kA  |       |
| Maximum continuous operating voltage (Uc) | 275V                   | 320V  | 385V     | 440V  | 275V      | 320V  | 385V      | 440V  | 275V  | 385V  |
| Voltage protection level (Up)kV           | < 1.5                  | < 1.6 | < 2.0    | < 2.2 | < 1.8     | < 2.0 | < 2.2     | < 2.4 | < 2.3 | < 2.5 |
| Maximum continuous operating voltage (Uc) | 385V                   |       |          |       |           |       |           |       |       |       |
| Test class                                | Class I                |       |          |       |           |       |           |       |       |       |
| Protection level                          | IP20                   |       |          |       |           |       |           |       |       |       |
| Installation method                       | 35mm standard DIN rail |       |          |       |           |       |           |       |       |       |
| No. of poles                              | 1P                     |       | 2P       |       | 3P        |       | 4P        |       |       |       |
| Outline and installation size (mm)        | 90×36×64               |       | 90×72×64 |       | 90×108×64 |       | 90×144×64 |       |       |       |

**SP5**  
Surge protective device



|                                                     |                                                                                                                                 |
|-----------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| Rated operating voltage(Un)                         | 230V/400V                                                                                                                       |
| Nominal discharge current In(8/20μs)                | 5kA, 10kA, 20kA, 30kA, 40kA                                                                                                     |
| Maximum discharge current I <sub>max</sub> (8/20μs) | 10kA, 20kA, 40kA, 60kA, 80kA                                                                                                    |
| Maximum continuous operating voltage (Uc)           | 275V, 320V, 385V, 460V                                                                                                          |
| Protection level (Up)kV                             | < 1.0 < 1.2 < 1.2 < 1.5 / < 1.2 < 1.3 < 1.5 < 1.8 / < 1.5 < 1.5 < 1.8 < 2.0 / < 1.6 < 1.8 < 2.0 < 2.2 / < 1.8 < 2.0 < 2.2 < 2.4 |
| Leakage current (75%Uc1mA)                          | < 20μA                                                                                                                          |
| Test class                                          | Level II                                                                                                                        |
| Protection level                                    | IP20 level                                                                                                                      |
| Recommended fuse or circuit breaker                 | 10A-63A                                                                                                                         |
| Installation method                                 | 35mm standard card rail                                                                                                         |
| No. of poles                                        | 1P, 2P, 3P, 4P                                                                                                                  |
| Outline and installation size (mm)                  | 91×18×71, 91×36×71, 91×54×71, 91×72×71                                                                                          |

**SP5-DC**  
PV surge protective device



|                                                     |                               |
|-----------------------------------------------------|-------------------------------|
| Rated operating voltage(Un)                         | 230V/400V                     |
| Nominal discharge current In(8/20μs)                | 20kA                          |
| Maximum discharge current I <sub>max</sub> (8/20μs) | 40kA                          |
| Maximum continuous operating voltage (Uc)           | 600V, 1000V, 1500V            |
| Protection level (Up)kV                             | < 2.4, < 3.2, < 3.5           |
| Leakage current (75%Uc1mA)                          | < 20μA                        |
| Test class                                          | Level II                      |
| Protection level                                    | IP20 level                    |
| Recommended fuse or circuit breaker                 | 40A                           |
| Installation method                                 | 35mm standard card rail       |
| No. of poles                                        | 1P                            |
| Outline and installation size (mm)                  | 91×36×71 (2P) , 91×54×71 (3P) |

**SP7ZN**  
Intelligent surge protective device



|                                             |                                    |
|---------------------------------------------|------------------------------------|
| Rated operating voltage(Un)                 | 230V/400V                          |
| Nominal discharge current In(8/20μs)        | 20kA, 30kA, 40kA, 50kA, 60kA       |
| Impulse current I <sub>imp</sub> (10/350μs) | 40kA, 60kA, 80kA, 100kA, 120kA     |
| Maximum continuous operating voltage (Uc)   | 275V, 320V, 385V, 440V             |
| Voltage protection level (Up)kV             | < 1.8- < 2.5                       |
| Leakage current (75%Uc1mA)                  | < 20μA                             |
| Test class                                  | Level II                           |
| Protection level                            | IP20 level                         |
| Recommended fuse or circuit breaker         | 10A-100A                           |
| Installation method                         | 35mm standard card rail            |
| No. of poles                                | 2P, 3P, 4P                         |
| Outline and installation size (mm)          | 96×90×68 (2P) , 144×90×68 (3P, 4P) |

**XLPSPI**  
Onboard surge protective device



|                                             |                   |
|---------------------------------------------|-------------------|
| Rated operating voltage (Un)                | 230V/400V         |
| Nominal discharge current In(8/20μs)        | 30kA              |
| Impulse current I <sub>imp</sub> (10/350μs) | 6kA               |
| Maximum continuous operating voltage (Uc)   | 275V, 385V        |
| Protection level (Up)kV                     | ≤ 2.0             |
| Test class                                  | ≤ 50ms            |
| Installation method                         | Class I, Class II |
| No. of poles                                | PCB onboard       |
| Outline and installation size (mm)          | 42.5×18×33.5      |

RELAY SERIES

SWITCH SERIES

ELECTRIC DRIVE AND CONTROL SERIES

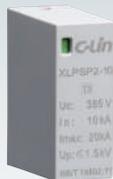
INSTRUMENT & METER SERIES

DISTRIBUTION CONTROL SERIES

AUTOMATION INDUSTRY APPLICATION

POWER SUPPLY AND OTHERS

**XLSP2**  
Onboard surge protective device



|                                           |             |
|-------------------------------------------|-------------|
| Rated operating voltage (Un)              | 230V/400V   |
| Nominal discharge current In(8/20μs)      | 10kA        |
| Maximum discharge current Imax(8/20μs)    | 20kA        |
| Maximum continuous operating voltage (Uc) | 275V, 385V  |
| Protection level (Up) kV                  | ±1.5        |
| Leakage current (75%Uc1mA)                | < 20μA      |
| Test class                                | Class II    |
| Installation method                       | PCB onboard |
| Outline and installation size (mm)        | 35×14×26.5  |

**XLSCB**  
Surge protective device



|                                                         |                                                   |
|---------------------------------------------------------|---------------------------------------------------|
| Non-trip impulse current Ie(8/20μs)                     | 10kA, 20kA, 40kA, 60kA, 80kA, 100kA, 120kA, 160kA |
| Non-trip impulse current Ie(10/350μs)                   | 15kA, 25kA                                        |
| Rated operating voltage Ue                              | 230/400VAC                                        |
| Current trip value Io                                   | 3±1A                                              |
| Power frequency short-circuit current breaking time Tos | ≤ 40ms                                            |
| Power frequency load current breaking time To           | ≤ 50ms                                            |
| Mechanical life                                         | 4000 times                                        |
| Electrical life                                         | 4000 times                                        |
| Normal work environment                                 | -25~+60°C                                         |
| Installation method                                     | 35mm standard DIN rail                            |
| No. of poles                                            | 2P, 3P, 4P                                        |
| Outline and installation size (mm)                      | 85×36×73.5(2P)    85×72×73.5(3P, 4P)              |

**XLSCB2**  
Backup protective device



|                                             |                                                                                                                                     |
|---------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| Non-trip impulse current Ie(8/20μs)         | 10kA, 20kA, 40kA, 60kA, 80kA, 100kA, 120kA, 160kA                                                                                   |
| Non-trip impulse current Ie(10/350μs)       | 15kA, 25kA                                                                                                                          |
| Rated operating voltage Ue                  | 230/400VAC                                                                                                                          |
| Current trip value Ii                       | 3±1A                                                                                                                                |
| Maximum short-circuit breaking capacity Icn | 25kA, 50kA, 100kA                                                                                                                   |
| Mechanical life                             | 10000 times                                                                                                                         |
| Electrical life                             | 4000 times                                                                                                                          |
| Normal work environment                     | -5~+40°C                                                                                                                            |
| Installation method                         | 35mm standard DIN rail                                                                                                              |
| No. of poles                                | 1P, 2P, 3P, 4P                                                                                                                      |
| Outline and installation size (mm)          | ≤ 80kA: 90×18×74(1P), 90×36×74(2P), 90×54×74(3P), 90×72×74(4P)<br>≥ 100kA: 90×36×74(1P), 90×72×74(2P), 90×108×74(3P), 90×144×74(4P) |

## Miniature (residual current) circuit breaker series

### Overview

This miniature circuit breaker is mainly used in circuit with frequency of AC 50Hz, rated operating voltage of 230V/400V and below, and rated current up to 63A. It's used for protection of electrical circuit and equipment in modern buildings against leakage, overload, short circuit, overvoltage, undervoltage, etc. It is also applicable for infrequent operation and isolation of circuit.

Altitude: ≤ 2000m; ambient temperature: -5°C ~+40°C .

Installation category: Class II and III.

**DZ47-63**  
Miniature circuit breaker



|                                             |                                                            |
|---------------------------------------------|------------------------------------------------------------|
| Rated operating voltage                     | AC230V/400V                                                |
| Rated frequency                             | 50Hz                                                       |
| Rated operating current                     | 1A, 2A, 3A, 4A, 6A, 10A, 16A, 20A, 25A, 32A, 40A, 50A, 63A |
| No. of poles                                | 1P, 2P, 3P, 4P                                             |
| Instantaneous release form                  | C type (5~10In), D type (10~20In)                          |
| Protection type                             | Distribution protection, motor protection                  |
| Rated short-circuit breaking capacity (Icu) | 4kA                                                        |
| Outline and installation size               | Refer to the user manual or selection manual               |
| Installation method                         | 35mm standard DIN rail installation                        |
| Product executive standard                  | GB/T 10963.1                                               |

**DZ47LE-32**  
Miniature residual current circuit breaker



|                                                    |                                                  |
|----------------------------------------------------|--------------------------------------------------|
| Rated operating voltage                            | AC230V/400V                                      |
| Rated frequency                                    | 50Hz                                             |
| Rated operating current                            | 6A, 10A, 16A, 20A, 25A, 32A                      |
| No. of poles                                       | 1P+N, 2P, 3P, 3P+N, 4P                           |
| Instantaneous release form                         | B type (3~5In), C type(5~10In), D type (10~20In) |
| Protection type                                    | Distribution protection, motor protection        |
| Rated leakage operating current (I <sub>Δn</sub> ) | 30mA, 50mA, 100mA                                |
| Rated short-circuit breaking capacity (Icu)        | 4kA                                              |
| Outline and installation size                      | Refer to the user manual or selection manual     |
| Installation method                                | 35mm standard DIN rail                           |
| Product executive standard                         | GB/T 16917.1                                     |

**DZ47LE-63**  
Miniature residual current circuit breaker



|                                                    |                                                  |
|----------------------------------------------------|--------------------------------------------------|
| Rated operating voltage                            | AC230V/400V                                      |
| Rated frequency                                    | 50Hz                                             |
| Rated operating current                            | 40A, 50A, 63A                                    |
| No. of poles                                       | 1P+N, 2P, 3P, 3P+N, 4P                           |
| Instantaneous release form                         | B type (3~5In), C type(5~10In), D type (10~20In) |
| Protection type                                    | Distribution protection, motor protection        |
| Rated leakage operating current (I <sub>Δn</sub> ) | 30mA, 50mA, 100mA                                |
| Rated short-circuit breaking capacity (Icu)        | 4kA                                              |
| Outline and installation size                      | Refer to the user manual or selection manual     |
| Installation method                                | 35mm standard DIN rail                           |
| Product executive standard                         | GB/T 16917.1                                     |

**XLDM7-100**  
Miniature circuit breaker



|                                             |                                              |
|---------------------------------------------|----------------------------------------------|
| Rated operating voltage                     | AC230V/400V                                  |
| Rated frequency                             | 50Hz                                         |
| Rated operating current                     | 63A, 80A, 100A                               |
| No. of poles                                | 1P, 2P, 3P, 4P                               |
| Protection type                             | Distribution protection, motor protection    |
| Rated short-circuit breaking capacity (Icu) | 10kA                                         |
| Outline and installation size               | Refer to the user manual or selection manual |
| Installation method                         | 35mm standard DIN rail                       |
| Product executive standard                  | GB/T14048.2                                  |

**XLDM7LE-100**  
Miniature residual current  
circuit breaker



|                                                |                                              |
|------------------------------------------------|----------------------------------------------|
| Rated operating voltage                        | AC230V/400V                                  |
| Rated frequency                                | 50Hz                                         |
| Rated operating current                        | 63A, 80A, 100A                               |
| No. of poles                                   | 1P+N, 2P, 3P, 3P+N, 4P                       |
| Protection type                                | Distribution protection, motor protection    |
| Rated leakage operating current (I $\Delta$ n) | 30mA, 50mA, 100mA                            |
| Rated short-circuit breaking capacity (Icu)    | 10kA                                         |
| Outline and installation size                  | Refer to the user manual or selection manual |
| Installation method                            | 35mm standard DIN rail                       |
| Product executive standard                     | GB/T14048.2                                  |

**XLB1-63**  
Miniature circuit breaker



|                                             |                                                            |
|---------------------------------------------|------------------------------------------------------------|
| Rated operating voltage                     | AC230V/400V                                                |
| Rated frequency                             | 50Hz                                                       |
| Rated operating current                     | 1A, 2A, 3A, 4A, 6A, 10A, 16A, 20A, 25A, 32A, 40A, 50A, 63A |
| No. of poles                                | 1P, 2P, 3P, 4P                                             |
| Instantaneous release form                  | B type, C type, D type                                     |
| Protection type                             | Distribution protection, motor protection                  |
| Rated short-circuit breaking capacity (Icu) | 6kA                                                        |
| Outline and installation size               | Refer to the user manual or selection manual               |
| Installation method                         | 35mm standard DIN rail                                     |
| Product executive standard                  | GB/T 10963.1                                               |

**XLB1LE-63**  
Miniature residual current  
circuit breaker



|                                                |                                                            |
|------------------------------------------------|------------------------------------------------------------|
| Rated operating voltage                        | AC230V/400V                                                |
| Rated frequency                                | 50Hz                                                       |
| Rated operating current                        | 1A, 2A, 3A, 4A, 6A, 10A, 16A, 20A, 25A, 32A, 40A, 50A, 63A |
| No. of poles                                   | 1P+N, 2P, 3P, 3P+N, 4P                                     |
| Instantaneous release form                     | B type, C type, D type                                     |
| Protection type                                | Distribution protection, motor protection                  |
| Rated leakage operating current (I $\Delta$ n) | 30mA, 50mA, 100mA                                          |
| Rated short-circuit breaking capacity (Icu)    | 6kA                                                        |
| Outline and installation size                  | Refer to the user manual or selection manual               |
| Installation method                            | 35mm standard DIN rail                                     |
| Product executive standard                     | GB/T 16917.1                                               |

**XLB2-32**  
Miniature circuit breaker



|                                             |                                              |
|---------------------------------------------|----------------------------------------------|
| Rated operating voltage                     | AC230V                                       |
| Rated frequency                             | 50Hz                                         |
| Rated operating current                     | 6A, 10A, 16A, 20A, 25A, 32A                  |
| No. of poles                                | 1P+N                                         |
| Instantaneous release form                  | B type, C type, D type                       |
| Protection type                             | Distribution protection, motor protection    |
| Rated short-circuit breaking capacity (Icu) | 4.5kA                                        |
| Outline and installation size               | Refer to the user manual or selection manual |
| Installation method                         | 35mm standard DIN rail                       |
| Product executive standard                  | GB/T 10963.1                                 |

**XLB2LE-32**  
Miniature residual current circuit breaker



|                                                |                                              |
|------------------------------------------------|----------------------------------------------|
| Rated operating voltage                        | AC230V                                       |
| Rated frequency                                | 50Hz                                         |
| Rated operating current                        | 6A, 10A, 16A, 20A, 25A, 32A                  |
| No. of poles                                   | 1P+N                                         |
| Instantaneous release form                     | B type, C type, D type                       |
| Protection type                                | Distribution protection, motor protection    |
| Rated leakage operating current (I $\Delta$ n) | 30mA, 50mA, 100mA                            |
| Rated short-circuit breaking capacity (Icu)    | 4.5kA                                        |
| Outline and installation size                  | Refer to the user manual or selection manual |
| Installation method                            | 35mm standard DIN rail                       |
| Product executive standard                     | GB/T 16917.1                                 |

**XLH2-125**  
Miniature isolation switch



|                               |                                                             |
|-------------------------------|-------------------------------------------------------------|
| Rated operating voltage       | AC230V/400V                                                 |
| Rated frequency               | 50Hz                                                        |
| Rated operating current       | 6A, 10A, 16A, 20A, 25A, 32A, 40A, 50A, 63A, 80A, 100A, 125A |
| No. of poles                  | 1P, 2P, 3P, 4P                                              |
| Outline and installation size | Refer to the user manual or selection manual                |
| Installation method           | 35mm standard DIN rail                                      |
| Product executive standard    | GB/T 14048.3                                                |

RELAY  
SERIES

SWITCH  
SERIES

ELECTRIC DRIVE AND  
CONTROL SERIES

INSTRUMENT &  
METER SERIES

DISTRIBUTION  
CONTROL SERIES

AUTOMATION INDUSTRY  
APPLICATION

POWER SUPPLY  
AND OTHERS

## XLCM1 Molded case circuit breaker

### Overview

The XLCM1 (CM1) series molded case circuit breaker is suitable for distribution network circuit with frequency of AC 50Hz, rated insulation voltage of 690V (500V for 63 type), rated operating voltage of 400V, and rated operating current from 16A to 800A. It is used to distribute electrical energy and protect circuit and power equipment from overload, short circuit, undervoltage and other faults. It can also serve as a protection for infrequent starting, overload, short circuit and undervoltage of electric motor.

The product complies with the GB/T14048.2 standard.

### Model description

|                 |                        |             |                     |                                                                                    |                                                                                                |              |                                 |                                                                                               |                                   |
|-----------------|------------------------|-------------|---------------------|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|--------------|---------------------------------|-----------------------------------------------------------------------------------------------|-----------------------------------|
| XL              | CM                     | 1 -         | □                   | □                                                                                  | □ /                                                                                            | □            | □                               | □                                                                                             | □                                 |
| Enterprise code | Molded circuit breaker | Design code | Rated frame current | Breaking capacity feature code: Standard type-L (L can be omitted) Moderate type-M | Operation mode code: handle direct operation-no code; electric operation-P; Rotating handle-Z; | No. of poles | Release mode and accessory code | Purpose code: circuit breaker for distribution-no code Circuit breaker for motor protection-2 | N pole type of 4P circuit breaker |

Note: There are four types of neutral pole (N pole) in the four-pole products:

A type: The N pole is not equipped with over-current release, and the N pole is always connected, not closed or opened with other three poles.

B type: N pole is not equipped with over-current release, and N pole is closed and opened together with other three poles (N pole is closed first and then opened).

C type: N pole is equipped with over-current release, and N pole is closed and opened together with other three poles (N pole is closed first and then opened).

D type: N pole is equipped with over-current release, and the N pole is always connected, not closed and opened with other three poles.

### Technical parameter

|                                                      |                                                                                                                      |
|------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|
| Rated operating voltage                              | AC400V                                                                                                               |
| Rated insulation voltage                             | 690V (500V for 63 type)                                                                                              |
| Frame size                                           | 63A, 125A, 250A, 400A, 630A, 800A                                                                                    |
| Rated current                                        | 16A, 20A, 25A, 32A, 40A, 50A, 63A, 80A, 100A, 125A, 160A, 180A, 200A, 225A, 250A, 315A, 350A, 400A, 500A, 630A, 800A |
| Overload protection (time delay)                     | Distribution protection, motor protection                                                                            |
| Rated ultimate short-circuit breaking capacity level | L (standard type); M (moderate breaking type)                                                                        |
| Installation method                                  | Vertical/horizontal                                                                                                  |
| Wiring method                                        | Front-panel wiring, rear-panel wiring, plug-in type                                                                  |
| No. of poles                                         | 3P, 4P                                                                                                               |
| Pollution degree                                     | Class 3                                                                                                              |
| Installation category                                | III                                                                                                                  |
| Protection level                                     | IP20                                                                                                                 |
| Ambient temperature                                  | Upper limit temperature: +40°C ; lower limit temperature: -5°C                                                       |
| Altitude                                             | ≤ 2000m                                                                                                              |

XLCM1  
Molded case circuit breaker



XLCM1  
Molded case circuit breaker



## XLCM1L Molded case residual current circuit breaker

**XLCM1L**  
 Molded case residual current circuit breaker



### Overview

The XLCM1L (CM1L) series residual current circuit breaker is suitable for use in neutral point solidly grounded power supply system with frequency of AC 50Hz, rated operating voltage up to 400V, and rated operating current from 16A to 800A. It is used for residual current protection and can also be used to prevent fire hazards caused by ground fault current due to equipment insulation damage. Meanwhile, it be used to distribute electrical energy and protect circuit and power equipment from damage caused by overload, short circuit and other faults. It can also be used for infrequent starting and overload/short circuit protection of electric motor.

The product complies with the GB/T14048.2 standard.

### Model description

|                 |                             |             |                                                                                |                     |                                                                                    |                                                                                                |                            |                                 |                                                                                                                                   |
|-----------------|-----------------------------|-------------|--------------------------------------------------------------------------------|---------------------|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|----------------------------|---------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| XL              | CM                          | 1           | L -                                                                            | □                   | □                                                                                  | □ /                                                                                            | □                          | □                               | □                                                                                                                                 |
| Enterprise code | Molded case circuit breaker | Design code | Special derivative code (electronic residual current operated circuit breaker) | Rated frame current | Breaking capacity feature code: Standard type-L (L can be omitted) Moderate type-M | Operation mode code: handle direct operation-no code; electric operation-P; Rotating handle-S; | No. of poles 3P; 4P; 3P+N; | Release mode and accessory code | Purpose code: Residual current circuit breaker for distribution-no code; residual current circuit breaker for motor protection-2; |

### Technical parameter

|                                                      |                                                                                                                      |
|------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|
| Rated operating voltage                              | AC400V                                                                                                               |
| Frame size                                           | 125A, 250A, 400A, 630A, 800A                                                                                         |
| Rated current                                        | 16A, 20A, 25A, 32A, 40A, 50A, 63A, 80A, 100A, 125A, 160A, 180A, 200A, 225A, 250A, 315A, 350A, 400A, 500A, 630A, 800A |
| Leakage current                                      | 30mA, 50mA, 100mA, 200mA, 300mA, 500mA, 1000mA                                                                       |
| Overload protection (time delay)                     | Distribution protection, motor protection                                                                            |
| Rated ultimate short-circuit breaking capacity level | L (standard type); M (moderate breaking type)                                                                        |
| Installation method                                  | Vertical/horizontal                                                                                                  |
| Wiring method                                        | Front-panel wiring, rear-panel wiring, plug-in type                                                                  |
| No. of poles                                         | 3P, 4P, 3P+N                                                                                                         |
| Pollution degree                                     | 3                                                                                                                    |
| Installation category                                | III                                                                                                                  |
| Protection level                                     | IP20                                                                                                                 |
| Ambient temperature                                  | Upper limit temperature: +40°C ; lower limit temperature: -5°C                                                       |
| Altitude                                             | ≤ 2000m                                                                                                              |

## XLCM1E Electronic molded case circuit breaker series

**XLCM1E**  
Electronic molded case  
circuit breaker



### Overview

The XLCM1E series electronic molded case circuit breaker is suitable for distribution network circuit with frequency of AC 50Hz, rated operating voltage of 400V, and rated working up to 800A. It is used to distribute electrical energy and protect line and power equipment from damage caused by overload, short circuit, undervoltage and other faults. It can also be used for infrequent starting operation for electric motor.

The intelligent overcurrent release of this circuit breaker is controlled by microprocessor and has three-stage protection characteristic, namely overload inverse time limit long time delay protection, short circuit time delay protection and short circuit instantaneous protection. Due to its adjustable artificial short-circuit short time delay protection characteristic, this series of circuit breaker can clearly achieve selective protection with another short-circuit protection device connected in series on the load side.

The overcurrent three-stage protection characteristic of this circuit breaker can be easily adjusted to meet the protection requirement of different loads and achieve optimal matching.

This circuit breaker has operation, pre-alarm and overload indication.

The product complies with the GB/T14048.2 standard.

### Model description

| XL              | CM                          | 1           | E -             | □                   | □ /                                                                                            | □            | □                               | □                                                                                                | □                                 |
|-----------------|-----------------------------|-------------|-----------------|---------------------|------------------------------------------------------------------------------------------------|--------------|---------------------------------|--------------------------------------------------------------------------------------------------|-----------------------------------|
| Enterprise code | Molded case circuit breaker | Design code | Electronic type | Rated frame current | Operation mode code: handle direct operation-no code; electric operation-P; Rotating handle-Z; | No. of poles | Release mode and accessory code | Purpose code: circuit breaker for distribution-no code<br>Circuit breaker for motor protection-2 | N pole type of 4P circuit breaker |

### Technical parameter

|                                  |                                                                                                                      |
|----------------------------------|----------------------------------------------------------------------------------------------------------------------|
| Rated operating voltage          | AC400V                                                                                                               |
| Rated insulation voltage         | AC1000V                                                                                                              |
| Frame size                       | 125A, 250A, 400A, 800A                                                                                               |
| Rated current                    | 16A, 20A, 25A, 32A, 40A, 50A, 63A, 80A, 100A, 125A, 160A, 180A, 200A, 225A, 250A, 315A, 350A, 400A, 500A, 630A, 800A |
| Overload protection (time delay) | Distribution protection, motor protection                                                                            |
| Installation method              | Vertical/horizontal                                                                                                  |
| Wiring method                    | Front-panel wiring, rear-panel wiring, plug-in type                                                                  |
| No. of poles                     | 3P, 4P                                                                                                               |
| Pollution degree                 | Class 3                                                                                                              |
| Installation category            | III                                                                                                                  |
| Protection level                 | IP20                                                                                                                 |
| Ambient temperature              | Upper limit temperature: +40°C ; lower limit temperature: -5°C                                                       |
| Altitude                         | ≤ 2000m                                                                                                              |

## XLDW1 (DW45) Intelligent air circuit breaker series

### Overview

The XLDW1(DW45) series intelligent air circuit breaker is used to control and protect low-voltage distribution networks. It's generally installed in low-voltage distribution cabinet as the main switch for overall protection. Circuit breaker with rated current of 4000A or below can also be used for infrequent starting of electric motor.

Classification by structure form: fixed type, draw-out type.

The product complies with the GB/T14048.2 standard.

### Model description

|                 |                     |             |                          |                                 |
|-----------------|---------------------|-------------|--------------------------|---------------------------------|
| XL              | DW                  | 1 -         | <input type="checkbox"/> | <input type="checkbox"/>        |
| Enterprise code | Air circuit breaker | Design code | Rated frame current      | Number of poles (3P is omitted) |

### Technical parameter

|                                                     |                                                                          |
|-----------------------------------------------------|--------------------------------------------------------------------------|
| Rated insulation voltage (Ui)                       | 690V                                                                     |
| Rated voltage (Ue)                                  | AC690V and below                                                         |
| Frame current (Inm)                                 | 2000A, 3200A, 4000A                                                      |
| Rated current (Ie)                                  | 400A, 630A, 800A, 1250A, 1600A, 2000A, 2500A, 2900A, 3200A, 3600A, 4000A |
| Rated service short-circuit breaking capacity (Ius) | 40kA~65kA                                                                |
| Ambient temperature                                 | Upper limit temperature: +40°C ; lower limit temperature: -5°C           |
| No. of poles                                        | 3P, 4P (only 3P for 4000A)                                               |
| Structure form                                      | Fixed type                                                               |
| Classification by controller                        | L type, M type, H type, 2M type, 2H type                                 |
| Pollution degree                                    | 3                                                                        |

|                                                     |                                                                          |
|-----------------------------------------------------|--------------------------------------------------------------------------|
| Rated insulation voltage (Ui)                       | 690V                                                                     |
| Rated voltage (Ue)                                  | AC690V and below                                                         |
| Frame current (Inm)                                 | 2000A, 3200A, 4000A                                                      |
| Rated current (Ie)                                  | 400A, 630A, 800A, 1250A, 1600A, 2000A, 2500A, 2900A, 3200A, 3600A, 4000A |
| Rated service short-circuit breaking capacity (Ius) | 40kA~65kA                                                                |
| Ambient temperature                                 | Upper limit temperature: +40°C ; lower limit temperature: -5°C           |
| No. of poles                                        | 3P, 4P (only 3P for 4000A)                                               |
| Structure form                                      | Draw-out type                                                            |
| Classification by controller                        | L type, M type, H type, 2M type, 2H type                                 |
| Pollution degree                                    | 3                                                                        |

XLDW1(DW45)

Fixed type intelligent air circuit breaker



XLDW1(DW45)

Draw-out type intelligent air circuit breaker



## CJX2 AC Contactor series

### Overview

The CJX2 series AC contactor (hereinafter referred to as the contactor) is mainly used in circuit with frequency of AC 50Hz, rated operating voltage of 400V, and rated operating current of 09~95A, and it's used for remote connection and disconnection of circuit and frequent starting of AC motor. This product can also be combined with auxiliary contact set, air delay contact, mechanical interlocking mechanism and other accessories to form time delay contactor and star-delta starter, and can be combined with appropriate thermal relay to form electromagnetic starter.

The product complies with the GB/T14048.4 standard.

### Model description

|              |           |             |                                                                                                                  |                                                                                                                                                                                         |                                    |
|--------------|-----------|-------------|------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|
| CJ           | X         | 2 -         | □                                                                                                                | □                                                                                                                                                                                       | □                                  |
| AC Contactor | Miniature | Design code | It indicates the rated operating current under the AC-3 utilization category and rated operating voltage of 400V | "10" -with 1 NO auxiliary contact<br>"01" -with 1 NC auxiliary contact<br>"11" -with 1 NO and 1 NC auxiliary contact<br>"004" -4 NO main contacts<br>"008" -2 NO and 2 NC main contacts | Coil voltage code:<br>Z-DC control |

### Technical parameter

|                               |                                                                                    |          |          |          |           |
|-------------------------------|------------------------------------------------------------------------------------|----------|----------|----------|-----------|
| Model and specification       | CJX2-09                                                                            | CJX2-12  | CJX2-18  | CJX2-25  | CJX2-32   |
| Rated operating current (Ie)  | 9A                                                                                 | 12A      | 18A      | 25A      | 32A       |
| Rated insulation voltage (Ui) | 690V                                                                               |          |          |          |           |
| Rated operating voltage       | 400V                                                                               |          |          |          |           |
| Rated control voltage         | AC: 24V, 36V, 48V, 96V, 110V, 127V, 220V, 380V                                     |          |          |          |           |
| Ambient temperature           | Upper limit temperature: +40°C ; lower limit temperature: -5°C                     |          |          |          |           |
| Auxiliary contact             | 01/NC (normally closed auxiliary contact), 10/NO (normally open auxiliary contact) |          |          |          |           |
| Utilization category          | AC-3, AC-4                                                                         |          |          |          |           |
| Installation method           | Vertical installation (screw installation, 35mm standard DIN rail)                 |          |          |          |           |
| Accessory                     | Auxiliary contact set, air delay contact, mechanical interlocking mechanism        |          |          |          |           |
| Dimension (mm)                | 47×76×82                                                                           | 47×76×82 | 47×76×87 | 58×86×96 | 58×86×101 |
| Installation size (mm)        | 35×50/60                                                                           | 35×50/60 | 35×50/60 | 40×50/60 | 40×50/60  |

|                               |                                                                                   |            |            |            |            |  |
|-------------------------------|-----------------------------------------------------------------------------------|------------|------------|------------|------------|--|
| Model and specification       | CJX2-40                                                                           | CJX2-50    | CJX2-65    | CJX2-80    | CJX2-95    |  |
| Rated operating current (Ie)  | 40A                                                                               | 50A        | 65A        | 80A        | 95A        |  |
| Rated insulation voltage (Ui) | 690V                                                                              |            |            |            |            |  |
| Rated operating voltage       | 400V                                                                              |            |            |            |            |  |
| Rated control voltage         | AC: 24V, 36V, 48V, 96V, 110V, 127V, 220V, 380V                                    |            |            |            |            |  |
| Ambient temperature           | Upper limit temperature: +40°C ; lower limit temperature: -5°C                    |            |            |            |            |  |
| Auxiliary contact             | 11(1 normally closed auxiliary contact+1 normally open auxiliary contact/1NC+NO); |            |            |            |            |  |
| Utilization category          | AC-3, AC-4                                                                        |            |            |            |            |  |
| Installation method           | Vertical installation (screw installation, 35mm/75mm standard DIN rail)           |            |            |            |            |  |
| Accessory                     | Auxiliary contact set, air delay contact, mechanical interlocking mechanism       |            |            |            |            |  |
| Dimension (mm)                | 84×129×116                                                                        | 84×129×116 | 84×129×116 | 96×129×127 | 96×129×127 |  |
| Installation size (mm)        | 40×100/110                                                                        | 40×100/110 | 40×100/110 | 40×100/110 | 40×100/110 |  |

CJX2-09  
AC Contactor



CJX2-65  
AC Contactor



## XLCP51 Control and protection switch series

**XLCP51**  
Control and protection switch



### Overview

The XLCP51 series Control and protection switch is mainly used in power system with frequency of AC 50Hz, rated operating voltage 690V, main rated current from 1A to 125A, intelligent controller adjustable operating current from 0.4A to 125A and control motor power from 0.12kW to 55kW. It can connect, carry and disconnect current under normal condition (including specified overload condition), and it can also connect, carry and disconnect current under abnormal condition (such as short circuit, undervoltage, etc.) within the specified time. XLCP51 realizes integrated and internally coordinated control and protection function on product of single mechanism form. It can Replace for various traditional separation components such as circuit breaker (fuse), contactor, starter, isolator, thermal relay, overload (or overcurrent, phase failure) protection relay, motor comprehensive protector, intelligent leakage relay, etc. It has the function of remote automatic control and local manual control for control operation, the characteristic of coordinated time-current protection, self coordination of control and protection, continuous operation after short circuit, high breaking capacity, small arcing distance, long service life, adjustable protection setting current, easy operation, and diverse and complete supporting accessory modules. It can realize the control and protection of motor load and distribution load.

The product complies with the GB/T14048.9 standard.

### Model description

| XL        | CPS1                                                   | □ -                                                                                                                                                                   | □                                    | □ /                                                  | □                                                                             | □ /                                                                                    | □                                                                        | □                                           | □                                                                                               |
|-----------|--------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|------------------------------------------------------|-------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|--------------------------------------------------------------------------|---------------------------------------------|-------------------------------------------------------------------------------------------------|
| rise Code | Control and protection switch (Multifunctional device) | Product combination type: basic type-no code<br>N-reversible type<br>D-Double speed type<br>J-star-delta reduced-voltage type<br>Z-auto-coupling reduced-voltage type | Rated frame current (Inm): 45A, 125A | Rated service breaking capacity Ics: 15kA<br>Y: 35kA | Load category code: M-motor protection type<br>L-Distribution protection type | Rated operating current: 1A,3A,6A<br>12A,16A<br>25A,32A<br>45A,63A<br>80A,100A<br>125A | Auxiliary contact code: 06-3<br>NO 2 NC+1<br>fault trip+1<br>fault alarm | Control supply voltage Us: M-230V<br>Q-400V | Derivative code: basic type-no code<br>F-Fire protection<br>L-Leakage<br>G-Isolation<br>T-Comm. |

### Technical parameter

|                                  |                                                                                                                                     |
|----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| Rated operating voltage (Ue)     | 400V, 690V                                                                                                                          |
| Control supply voltage (Us)      | AC230V, AC400V                                                                                                                      |
| Rated frame current (Inm)        | 45A, 125A                                                                                                                           |
| Rated operating current (Ie)     | 1A, 3A, 6A, 12A, 16A, 25A, 32A, 45A, 63A, 80A, 100A, 125A                                                                           |
| Ambient temperature              | Upper limit temperature: +40°C ; lower limit temperature: -5°C                                                                      |
| Installation environment         | Altitude ≤ 2000m, no moisture no corrosive gas                                                                                      |
| No. of poles                     | 3P                                                                                                                                  |
| Overload protection (time delay) | Distribution protection, motor protection                                                                                           |
| Breaking capacity                | C: 15KA, Y: 35KA                                                                                                                    |
| Auxiliary contact                | 06-3 NO 2 NC+1 fault trip+1 fault alarm                                                                                             |
| Derivative function              | F-fire protection, L-leakage, G-isolation, T-communication                                                                          |
| Installation method              | 45 type: Vertical installation (screw installation, 35mm standard DIN rail)<br>125 type: Vertical installation (screw installation) |
| Dimension (mm)                   | 45 type 3P: 202×78×140 125 type 3P: 245×104×180                                                                                     |

**XLCP51D Double speed type**  
Control and protection switch



|                                  |                                                                  |
|----------------------------------|------------------------------------------------------------------|
| Rated operating voltage (Ue)     | 400V, 690V                                                       |
| Control supply voltage (Us)      | AC230V, AC400V                                                   |
| Frame current (Inm)              | 45A, 125A                                                        |
| Rated operating current (Ie)     | 1A, 3A, 6A, 12A, 16A, 25A, 32A, 45A, 63A, 80A, 100A, 125A        |
| Ambient temperature              | Upper limit temperature: +40°C ; lower limit temperature: -5°C ; |
| Installation environment         | Altitude ≤ 2000m, no moisture, no corrosive gas                  |
| No. of poles                     | 3P                                                               |
| Overload protection (time delay) | Distribution protection, motor protection                        |
| Breaking capacity                | C: 15KA, Y: 35KA                                                 |
| Auxiliary contact                | 06-3 NO 2 NC+1 fault trip+1 fault alarm                          |
| Derivative function              | F-fire protection, L-leakage, G-isolation, T-communication       |
| Installation method              | Vertical installation (screw installation)                       |
| Dimension (mm)                   | 45 type 3P: 400×450 125 type 3P: 450×550                         |

**XLCP51J Star-delta type**  
Control and protection switch



|                                  |                                                                  |
|----------------------------------|------------------------------------------------------------------|
| Rated operating voltage (Ue)     | 400V, 690V                                                       |
| Control supply voltage (Us)      | AC230V, AC400V                                                   |
| Frame current (Inm)              | 45A, 125A                                                        |
| Rated operating current (Ie)     | 1A, 3A, 6A, 12A, 16A, 25A, 32A, 45A, 63A, 80A, 100A, 125A        |
| Ambient temperature              | Upper limit temperature: +40°C ; lower limit temperature: -5°C ; |
| Installation environment         | Altitude ≤ 2000m, no moisture, no corrosive gas                  |
| No. of poles                     | 3P                                                               |
| Overload protection (time delay) | Distribution protection, motor protection                        |
| Breaking capacity                | C: 15KA, Y: 35KA                                                 |
| Auxiliary contact                | 06-3 NO 2 NC+1 fault trip+1 fault alarm                          |
| Derivative function              | F-fire protection, L-leakage, G-isolation, T-communication       |
| Installation method              | Vertical installation (screw installation)                       |
| Dimension (mm)                   | 45 type 3P: 400×450 125 type 3P: 450×550                         |

**XLCP51N Reversible type**  
Control and protection switch



|                                  |                                                                  |
|----------------------------------|------------------------------------------------------------------|
| Rated operating voltage (Ue)     | 400V, 690V                                                       |
| Control supply voltage (Us)      | AC230V, AC400V                                                   |
| Frame current (Inm)              | 45A, 125A                                                        |
| Rated operating current (Ie)     | 1A, 3A, 6A, 12A, 16A, 25A, 32A, 45A, 63A, 80A, 100A, 125A        |
| Ambient temperature              | Upper limit temperature: +40°C ; lower limit temperature: -5°C ; |
| Installation environment         | Altitude ≤ 2000m, no moisture, no corrosive gas                  |
| No. of poles                     | 3P                                                               |
| Overload protection (time delay) | Distribution protection, motor protection                        |
| Breaking capacity                | C: 15KA, Y: 35KA                                                 |
| Auxiliary contact                | 06-3 NO 2 NC+1 fault trip+1 fault alarm                          |
| Derivative function              | F-fire protection, L-leakage, G-isolation, T-communication       |
| Installation method              | Vertical installation (screw installation)                       |
| Dimension (mm)                   | 45 type 3P: 400×450 125 type 3P: 450×550                         |

**XLCP51Z Auto-coupling reduced-voltage type**  
Control and protection switch



|                                  |                                                                  |
|----------------------------------|------------------------------------------------------------------|
| Rated operating voltage (Ue)     | 400V, 690V                                                       |
| Control supply voltage (Us)      | AC230V, AC400V                                                   |
| Frame current (Inm)              | 45A, 125A                                                        |
| Rated operating current (Ie)     | 1A, 3A, 6A, 12A, 16A, 25A, 32A, 45A, 63A, 80A, 100A, 125A        |
| Ambient temperature              | Upper limit temperature: +40°C ; lower limit temperature: -5°C ; |
| Installation environment         | Altitude ≤ 2000m, no moisture, no corrosive gas                  |
| No. of poles                     | 3P                                                               |
| Overload protection (time delay) | Distribution protection, motor protection                        |
| Breaking capacity                | C:15kA, Y:35kA                                                   |
| Auxiliary contact                | 06-3 NO 2 NC+1 fault trip+1 fault alarm                          |
| Derivative function              | F-fire protection, L-leakage, G-isolation, T-communication       |
| Installation method              | Vertical installation (screw installation)                       |
| Dimension (mm)                   | 45 type 3P: 400×450 125 type 3P: 450×550                         |

RELAY  
SERIES

SWITCH  
SERIES

ELECTRIC DRIVE AND  
CONTROL SERIES

INSTRUMENT &  
METER SERIES

DISTRIBUTION  
CONTROL SERIES

AUTOMATION INDUSTRY  
APPLICATION

POWER SUPPLY  
AND OTHERS

## XLCP2 Control and protection switch series

### Overview

The XLCP2 series Control and protection switch (hereinafter referred to as "switch" or CPS) is mainly used to control and protect the circuit of low-voltage distribution and motor with frequency of AC 50Hz, rated operating voltage of 690V and below, rated operating current from 0.3A~63A, and control motor power from 0.07kW to 30kW.

The XLCP2 switch is an integrated technology product with compact structure, small size, and it is eco-friendly and energy-saving, easy for installation and simple for operation; the digital electronic control system has high degree of intelligence and reliable and complete functions. The product structure has been optimized with eco-friendly new material, which has characteristics such as temperature resistance, high strength and strong arc resistance. The functional units of the product are modular, and each module has innovative highlights. It has multiple patents, and the standardized manufacturing of module greatly improves the reliability of the product.

The XLCP2 switch is a multifunctional device with circuit overload and short circuit protection capacity, and the rated service short-circuit breaking capacity is up to 50kA; it has on-off control function of circuit load, long service life and high reliability; it has various control modes including handle control (manual), terminal control (automatic) and keyboard control (menu), and the capacity to remotely control the closing and opening of switch (upper computer communication control and master switch control), it's suitable for both automatic and remote control system.

The protection function is comprehensive, including short circuit, overload, phase failure, imbalance, locked rotor, undercurrent, etc., which meets the needs of various circuit loads. The switch has fault alarm and other functions, and provides operation record, fault record and other memory data.

The product complies with the standard GB/T 14048.9.

XLCP2  
Control and  
protection switch



### Model description

|                 |                                                       |               |                        |                                                            |                                           |                                                                                        |                                                            |
|-----------------|-------------------------------------------------------|---------------|------------------------|------------------------------------------------------------|-------------------------------------------|----------------------------------------------------------------------------------------|------------------------------------------------------------|
| XL              | CPS                                                   | 2             | - □                    | / □                                                        | □                                         | □                                                                                      | □                                                          |
| Enterprise code | Product category: Control and protection switch (CPS) | Design number | Frame current Inm: 63A | Rated operating current Ie 1.2, 2.4, 6, 12, 18, 32, 45, 63 | M-230V Control supply voltage code M-230V | Controller type: S-standard type T-comm. type Su-standard type with voltage protection | Derivative product code (added with module) L-leakage type |

Note: If the user requires combination type product, please contact the manufacturer.

### Technical parameter

|                                                   |                                                                                                                                |
|---------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| Frame size                                        | 63                                                                                                                             |
| Rated operating voltage Ue                        | 400V, 690V                                                                                                                     |
| Utilization category                              | AC—43, AC—44                                                                                                                   |
| Agreed heating current Ith(A)                     | 12 32 63                                                                                                                       |
| Rated operating current Ie(A)                     | 1.2, 2.4, 6, 12 18, 32 45, 63                                                                                                  |
| Rated frequency                                   | 50Hz                                                                                                                           |
| No. of poles                                      | 3                                                                                                                              |
| Rated work system                                 | 8-hour work system, uninterrupted work system, intermittent work system<br>Intermittent work system level 300, load factor 40% |
| Rated service short-circuit breaking capacity Ics | 50kA (AC400V) , 4kA (AC690V)                                                                                                   |
| Breaking operation time                           | ≤ 2ms                                                                                                                          |
| Rated insulation voltage Ui                       | 690V                                                                                                                           |
| Rated impulse withstand voltage Uimp              | 6kV                                                                                                                            |
| Electric life (AC-43) (10000 times)               | 100 (AC400V)                                                                                                                   |
| Mechanical lifespan (10000 times)                 | 1000                                                                                                                           |
| Installation method                               | Vertical installation (screw installation, 35mm standard DIN rail)                                                             |
| Dimension (mm)                                    | 184×55×158                                                                                                                     |

# INDUSTRIAL

## EQUIPMENT AUTOMATION CONTROL SOLUTIONS

- Water supply and drainage equipment automation control solution F02
- Packaging equipment automation control solution F02
- Firefighting equipment automation control solution F03
- Machining equipment automation control solution F04



## Industrial equipment automation control solution

In order to better serve users, the R&D team of Xinling Electrical together with the marketing department, fully understands user needs in the market, combines the application sites and characteristics of various industries in the field of automation, introduces more advanced concepts and technologies, optimizes the original automation equipment control system, and launches numerous industry-specific automation application solutions from the aspects of system function integration, separate component reduction and system efficiency improvement.

Our company has developed various automation control solutions for industries such as water supply and drainage equipment, packaging equipment, firefighting equipment and machining equipment. Meanwhile, we can also provide secondary development and customized production service according to user needs to meet the personalized needs of users in various industries.

### XLP-HK10

Variable frequency constant pressure water supply controller

Models suffixed with S are equipped with timing function



|                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Supply voltage      | AC220V±10% 50/60Hz (380V customizable)                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Operation mode      | No.1 for use and No.2 for backup; No.2 for use and No.1 for backup; 1-variable frequency 1-power frequency; water supply and pressure relief; switch control; 2-pump circulation; 3-pump circulation; 1-variable frequency 2-power frequency; 1-variable frequency 3-power frequency; Fire protection 2-power frequency; 1-variable frequency 4-power frequency; No.1 pump and No.3 pump circulation; No.2 pump and No.3 pump circulation; No.3 pump timed circulation switching; 4-pump circulation; |
| Input signal        | 0-10V, 0-5V, 4-20mA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Contact form        | 8 sets of NO contacts                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Contact capacity    | 5A AC220V (resistive)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Dimension           | 160×80×90mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Hole size           | 151×75mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Installation method | Panel type                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

### XLP-HK10YSF

Variable frequency constant pressure water supply controller

Note: LCD Chinese/English display



|                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Supply voltage      | AC220V±10% 50/60Hz (380V customizable)                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Operation mode      | No.1 for use and No.2 for backup; No.2 for use and No.1 for backup; 1-variable frequency 1-power frequency; water supply and pressure relief; switch control; 2-pump circulation; 3-pump circulation; 1-variable frequency 2-power frequency; 1-variable frequency 3-power frequency; Fire protection 2-power frequency; 1-variable frequency 4-power frequency; No.1 pump and No.3 pump circulation; No.2 pump and No.3 pump circulation; No.3 pump timed circulation switching; 4-pump circulation; |
| Input signal        | 0-10V, 0-5V, 4-20mA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Contact form        | 8 sets of NO contacts                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Contact capacity    | 5A AC220V (resistive)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Dimension           | 96×96×120mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Hole size           | 91×91mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Installation method | Panel type                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

### XLP-HK10SF

Variable frequency constant pressure water supply controller



|                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Supply voltage      | AC220V±10% 50/60Hz (380V customizable)                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Operation mode      | No.1 for use and No.2 for backup; No.2 for use and No.1 for backup; 1-variable frequency 1-power frequency; water supply and pressure relief; switch control; 2-pump circulation; 3-pump circulation; 1-variable frequency 2-power frequency; 1-variable frequency 3-power frequency; Fire protection 2-power frequency; 1-variable frequency 4-power frequency; No.1 pump and No.3 pump circulation; No.2 pump and No.3 pump circulation; No.3 pump timed circulation switching; 4-pump circulation; |
| Input signal        | 0-10V, 0-5V, 4-20mA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Contact form        | 8 sets of NO contacts                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Contact capacity    | 5A AC220V (resistive)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Dimension           | 96×96×120mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Hole size           | 91×91mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Installation method | Panel type                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

### XLQ-SK101

Intelligent controller for water pump (XLQ-SK1101A Economical type)



|                     |                                                                                     |
|---------------------|-------------------------------------------------------------------------------------|
| Supply voltage      | AC220V±10% 50/60Hz                                                                  |
| Operation mode      | One controls one                                                                    |
| Control mode        | Manual/automatic                                                                    |
| Input signal        | Liquid level floating ball contact control, electric contact pressure gauge control |
| Contact capacity    | 5A AC220V (resistive)                                                               |
| Dimension           | 110×80×52mm                                                                         |
| Hole size           | 105×75mm                                                                            |
| Installation method | Panel type                                                                          |

### XLP-HK10YS

Variable frequency constant pressure water supply controller

Note: LCD Chinese/English display



|                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Supply voltage      | AC220V±10% 50/60Hz (380V customizable)                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Operation mode      | No.1 for use and No.2 for backup; No.2 for use and No.1 for backup; 1-variable frequency 1-power frequency; water supply and pressure relief; switch control; 2-pump circulation; 3-pump circulation; 1-variable frequency 2-power frequency; 1-variable frequency 3-power frequency; Fire protection 2-power frequency; 1-variable frequency 4-power frequency; No.1 pump and No.3 pump circulation; No.2 pump and No.3 pump circulation; No.3 pump timed circulation switching; 4-pump circulation; |
| Input signal        | 0-10V, 0-5V, 4-20mA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Contact form        | 8 sets of NO contacts                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Contact capacity    | 5A AC220V (resistive)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Dimension           | 160×80×90mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Hole size           | 151×75mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Installation method | Panel type                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

### XLQ-SK102

Intelligent controller for water pump (XLQ-SK102A Economical type)



|                     |                                                                                                                 |
|---------------------|-----------------------------------------------------------------------------------------------------------------|
| Supply voltage      | AC220V±10% 50/60Hz                                                                                              |
| Operation mode      | One controls two, 1 normal 1 backup, fault auto-transfer, automatic alternation, automatic pump plus and minus. |
| control mode        | Manual/automatic                                                                                                |
| Input signal        | Liquid level floating ball contact control, electric contact pressure gauge control                             |
| Contact capacity    | 5A AC220V (resistive)                                                                                           |
| Dimension           | 160×80×52mm                                                                                                     |
| Hole size           | 155×75mm                                                                                                        |
| Installation method | Panel type                                                                                                      |

**CKM100**  
 Constant pressure water supply controller



|                     |                                                                                                                                                                                                                                                                                     |
|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Supply voltage      | AC220±20V                                                                                                                                                                                                                                                                           |
| Operation mode      | Cycled soft start control, fixed variable frequency pump control, upper and lower limit control mode; Single pump, 1 normal 1 backup, 2-pump, 2 normal 1 backup, 3-pump; No.3 pump can be circulating pump or pressure relief pump, No.4 pump can be circulating pump or small pump |
| Input signal        | 0-5V, 4-20mA                                                                                                                                                                                                                                                                        |
| Contact form        | 8 sets of NO contacts                                                                                                                                                                                                                                                               |
| Contact capacity    | 5A AC220V (resistive)                                                                                                                                                                                                                                                               |
| Dimension           | 154×98×46mm                                                                                                                                                                                                                                                                         |
| Hole size           | 146×90mm                                                                                                                                                                                                                                                                            |
| Installation method | Panel snap-in installation                                                                                                                                                                                                                                                          |

**CKM101**  
 Intelligent constant pressure water supply controller



|                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Supply voltage      | AC220V±10% 50/60Hz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Operation mode      | No.1 for use and No.2 for backup; No.2 for use and No.1 for backup; 1-variable frequency 1-power frequency; water supply and pressure relief; switch control; 2-pump circulation; 3-pump circulation; 1-variable frequency 2-power frequency; 1-variable frequency 3-power frequency; Fire protection 2-power frequency; 1-variable frequency 4-power frequency; No.1 pump and No.3 pump circulation; No.2 pump and No.3 pump circulation; No.3 pump timed circulation switching; 4-pump circulation; |
| Input signal        | 0-10V, 0-5V, 4-20mA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Contact form        | 8 sets of NO contacts                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Contact capacity    | 5A AC220V (resistive)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Dimension           | 160×80×90mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Hole size           | 151×75mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Installation method | Panel type                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

**CKM201**  
 Shrinking machine controller



|                                     |                                                       |
|-------------------------------------|-------------------------------------------------------|
| Supply voltage                      | AC220V                                                |
| Temperature sensor                  | K type thermocouple (0-1300°C)                        |
| Temperature display error           | ≤ ±(1%FS+1 word)                                      |
| Temperature control mode            | PID regulation relay on-off control (passive contact) |
| Max. load of relay contact          | AC220V/3A                                             |
| Control single-phase AC motor spec. | AC220V, power ≤ 120W, rated rev. speed 1250 rpm       |
| Motor rev. speed adjustment range   | 10%-99% (controller displayed by percentage)          |
| Dimension                           | 72×72mm                                               |
| Hole size                           | 68×68mm                                               |
| Installation method                 | Panel type                                            |
| Ambient temp.                       | -10°C ~+50°C, relative humidity ≤ 85% RH              |

**CPH7-ALL Series**  
 Sealing and cutting machine controller



|                     |                                                                                                                                                                   |
|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Supply voltage      | DC24V                                                                                                                                                             |
| Control mode        | Manual/automatic                                                                                                                                                  |
| Main function       | 1-circuit temperature control, 2-circuit time, 1-circuit counting function, parameter can also be fine-tuned and optimized according to mechanical characteristic |
| Display mode        | 7 inch touch screen, resolution 800×480                                                                                                                           |
| Display brightness  | 400cd/ m <sup>2</sup>                                                                                                                                             |
| Input signal        | K type thermocouple<br>12-circuit on-off input signal                                                                                                             |
| Output signal       | 12-circuit output                                                                                                                                                 |
| Dimension           | 205×150×50mm                                                                                                                                                      |
| Hole size           | 193×139mm                                                                                                                                                         |
| Installation method | Panel type                                                                                                                                                        |
| Ambient temp.       | -20°C ~ +50°C                                                                                                                                                     |

**CPH7-ALL**  
 Fire itinerant detecting controller



|                            |                                                                                             |
|----------------------------|---------------------------------------------------------------------------------------------|
| Supply voltage             | DC24V                                                                                       |
| No. of water pumps         | Itinerant detection of 1-8 water pumps (settable)                                           |
| Itinerant detecting method | Manual/automatic                                                                            |
| Display mode               | 7 inch touch screen, resolution 800×480                                                     |
| Itinerant detecting mode   | Automatic Itinerant detection according to the set cycle                                    |
| Control input              | Safety protection, inverter failure, water shortage signal, Itinerant detection stop signal |
| Contact capacity           | 5A 250A(AC) or 5A 24V(DC)                                                                   |
| Dimension                  | 205×150×50mm                                                                                |
| Hole size                  | 193×139mm                                                                                   |
| Installation method        | Panel type                                                                                  |
| Work temp.                 | -20°C ~ +50°C                                                                               |
| Ambient temp.              | 10~90%RH(non-condensing)                                                                    |
| Protection level           | IP20                                                                                        |

**CPH7-ALL**  
 Constant pressure water supply controller



|                     |                                                              |
|---------------------|--------------------------------------------------------------|
| Supply voltage      | DC24V                                                        |
| No. of water pumps  | 1-4 main pumps and 1 auxiliary pump                          |
| Control mode        | Manual/automatic                                             |
| Display mode        | 7 inch touch screen, resolution 800×480                      |
| Operation mode      | Water tank constant pressure mode, no negative pressure mode |
| Input signal        | 0 ~ 5V, 4 ~ 20mA                                             |
| Contact capacity    | 5A 250A(AC) or 5A 24V(DC)                                    |
| Dimension           | 205×150×50mm                                                 |
| Hole size           | 193×139mm                                                    |
| Installation method | Panel type                                                   |
| Work temp.          | -20°C ~ +50°C                                                |

**GK70A**  
 Steel bar straightening and cutting machine controller



|                     |                                                                                                                                                                           |
|---------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Supply voltage      | AC220V, AC380V                                                                                                                                                            |
| Operation mode      | Positive count                                                                                                                                                            |
| Display             | Batch no. (single batch and multiple 10 batches settable)<br>Quantity (1-99999 pcs)<br>Length (1-99999mm)<br>Tool feed time (10-990ms)<br>Tool retracting time (10-990ms) |
| Input signal        | Travel switch, rotary encoder                                                                                                                                             |
| Power-off memory    | 10 years                                                                                                                                                                  |
| Output form         | Relay contact output                                                                                                                                                      |
| Output capacity     | 16A AC220V; 3A AC380V                                                                                                                                                     |
| Dimension           | 160×80×115mm                                                                                                                                                              |
| Hole size           | 150×75mm                                                                                                                                                                  |
| Installation method | Panel type                                                                                                                                                                |

**GK700A**  
 Fully automatic controller for steel bar straightening and cutting machine



|                     |                                                                                                                                                                          |
|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Supply voltage      | AC220V                                                                                                                                                                   |
| Load voltage        | AC220V                                                                                                                                                                   |
| Display             | Batch no. (single batch and multiple 20 batches settable)<br>Quantity (1-9999 pcs)<br>Length (1-99.99 m)<br>Tool feed time (10-990ms)<br>Tool retracting time (10-990ms) |
| Input signal        | Travel switch, rotary encoder                                                                                                                                            |
| Power-off memory    | 10 years                                                                                                                                                                 |
| Output format       | Relay contact output                                                                                                                                                     |
| Output capacity     | 30A AC220V                                                                                                                                                               |
| Dimension           | 235×160mm                                                                                                                                                                |
| Hole size           | 200×145mm                                                                                                                                                                |
| Installation method | Panel type                                                                                                                                                               |

RELAY SERIES

SWITCH SERIES

ELECTRIC DRIVE AND CONTROL SERIES

INSTRUMENT & METER SERIES

DISTRIBUTION CONTROL SERIES

AUTOMATION INDUSTRY APPLICATION

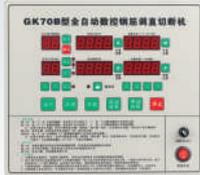
POWER SUPPLY AND OTHERS

## GK70B/GK70C

Fully automatic CNC steel bar straightening and cutting machine controller

GK70B is equipped with oil pump motor and main motor

GK70C is equipped with main motor



|                           |                                          |
|---------------------------|------------------------------------------|
| Supply voltage            | AC12V                                    |
| Load voltage              | AC220V                                   |
| Display                   | Batch no. (multiple 10 batches settable) |
|                           | Quantity (1-9999 pcs)                    |
|                           | Length (0.01-99.99 m)                    |
|                           | Tool feed time (10-990ms)                |
|                           | Tool retracting time (10-990ms)          |
| Correction value (1-99mm) |                                          |
| Input signal              | Travel switch, rotary encoder            |
| Power-off memory          | 10 years                                 |
| Output format             | Relay contact output                     |
| Output capacity           | 30A AC220V                               |
| Dimension                 | 290×255mm                                |
| Installation method       | Panel type                               |

## High speed container booking machine controller series



|                     |                                                                     |
|---------------------|---------------------------------------------------------------------|
| Supply voltage      | DC24V                                                               |
| No. of motors       | 2 servo motors                                                      |
| Control mode        | Manual/automatic                                                    |
| Control input       | Foot button, machine head original point, push plate original point |
| Display mode        | 7 inch touch screen, resolution 800×480                             |
| Dimension           | 200×146×35mm                                                        |
| Installation size   | 192×138mm                                                           |
| Installation method | Panel type                                                          |
| Work temp.          | -20 ~ 50°C                                                          |
| Ambient temp.       | 10-90%RH (non-condensing)                                           |
| Protection level    | IP20                                                                |

## GK700B/GK700C

Fully automatic CNC steel bar straightening and cutting machine controller

GK700B is equipped with oil pump motor and main motor

GK700C is equipped with main motor



|                     |                                           |
|---------------------|-------------------------------------------|
| Supply voltage      | AC12V                                     |
| Load voltage        | AC220V                                    |
| Display             | Batch no. ( multiple 20 batches settable) |
|                     | Quantity (1-9999 pcs)                     |
|                     | Length (0.01-99.99 m)                     |
|                     | Tool feed time (10-990ms)                 |
|                     | Tool retracting time (10-990ms)           |
| Input signal        | Travel switch, rotary encoder             |
| Power-off memory    | 10 years                                  |
| Output format       | Relay contact output                      |
| Output capacity     | 30A AC220V                                |
| Dimension           | 290×255mm                                 |
| Installation method | Panel type                                |

## Steel bar threading machine controller series



|                     |                                         |
|---------------------|-----------------------------------------|
| Supply voltage      | DC24V                                   |
| No. of motors       | 1 servo motor, 1 AC motor               |
| Control mode        | Manual/automatic                        |
| Control input       | Foot button, overcurrent signal         |
| Display mode        | 7 inch touch screen, resolution 800×480 |
| Dimension           | 200×146×35mm                            |
| Installation size   | 192×138mm                               |
| Installation method | Panel type                              |
| Work temp.          | -20 ~ 50°C                              |
| Ambient temp.       | 10-90%RH (non-condensing)               |
| Protection level    | IP20                                    |

## Truss robotic arm control system



|                                |                               |
|--------------------------------|-------------------------------|
| Input power supply             | DC24V                         |
| Bus mode                       | RS485                         |
| No. of control axes            | 4-axis                        |
| Control accuracy               | 0.01mm                        |
| Input interface                | 24-circuit (X0-X23)           |
| Output interface               | 24-circuit (Y0-Y23)           |
| Handheld teaching pendant      | 7 inch color LCD touch screen |
| Control card size              | 227mm×123mm×34mm              |
| Handheld teaching pendant size | 265mm×210mm×45mm              |

## Automatic drilling system (single axis/double axis)



|                           |                                                                                                                                                                                                  |
|---------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Operating voltage         | AC380V                                                                                                                                                                                           |
| Circuit protection        | Input power incorrect connection protection                                                                                                                                                      |
| Man-machine interface     | 7 inch color LCD touch screen                                                                                                                                                                    |
| Button switch             | Start/reset                                                                                                                                                                                      |
| Tool setting mode         | Handwheel/button                                                                                                                                                                                 |
| No. of control axes       | Single axis: Z-axis servo motor/main axis asynchronous motor (the main axis can be controlled by variable frequency)                                                                             |
|                           | Double axis: (both Z-axis and main axis are servo motors)                                                                                                                                        |
| Input                     | Single axis 4-circuit Double axis 18-circuit                                                                                                                                                     |
| Output                    | Single axis 6-circuit Double axis 12-circuit                                                                                                                                                     |
| Supporting operation mode | Single axis: drilling/reaming/dotting/chamfering/tapping/pneumatic slide table<br>Double axis: drilling/reaming/dotting/chamfering/tapping/drilling and tapping integrated/pneumatic slide table |
| Control box size          | Single axis: 345mm×275mm×275mm                                                                                                                                                                   |
|                           | Double axis: 600mm×275mm×275mm                                                                                                                                                                   |