

C-Lin



欣灵电气股份有限公司
XINLING ELECTRICAL CO., LTD

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欣灵电气股份有限公司
XINLING ELECTRICAL CO., LTD

Company Profile

企业简介

Xinling Electrical Co., Ltd. is a well-known enterprise in the industrial control electrical industry, which has been committed to the research and development, manufacture and service of industrial control electrical system solutions and related electrical components for more than 30 years. The business involves sensors, servo controls, PLC programmable controllers, human-machine interfaces, inverters, soft starters, motor protection, instrumentation and other electrical control systems and industrial control components, which are widely used in industrial control, fire protection, machine tools, machinery and equipment, electric power systems and public utilities.

Over the years, Xinling has been awarded as "Science and Technology Growing Enterprise", "Patent Demonstration Enterprise", "National High-tech Enterprise", "Zhejiang Famous Trade Name", "Zhejiang Patent Demonstration Enterprise", etc., and has been listed in the National Torch Plan Project.

Xinling Electrical's sensor products include: proximity switches, photoelectric switches, slotted photoelectric switches, fibre optic sensors, colour sensors, light curtain sensors, encoders, etc., to meet customer needs in various automation fields.

Xinling Electrical's sensor products are deeply trusted and widely used by users in the field of automation, such as machinery manufacturing, packaging, plastics processing, industrial automation, printing, textile, light industry and so on.

With the development of society, Xinling has timely launched a new series of products based on its own technological and service advantages, and is offering at special prices to manufacturers. We welcome inquiries from all complementary manufacturers and companies.

C-lin 欣灵电气

实验中心

C-lin Electric Experimental Center

Since 2012



Xinling Electrical Experimental Centre was built in August 2004, as the main component of the R&D Centre, it has been awarded as Wenzhou Industrial Design Centre, Provincial High-tech Enterprise Research and Development Centre, Zhejiang Province Enterprise Technology Centre, and undertakes the projects of National Torch Plan, Industry-University-Research, University-Enterprises Cooperation, the company's new product R&D, the development of product standards, and other projects.

The laboratory covers an area of more than 2,000 square metres, with a total investment of more than RMB 20 million by 2022. The main test capabilities include EMC test, 8kV lightning surge test, 3kA short-circuit breaking test at rated voltage, 1.5kV high-voltage DC load test, reliability test of relays with resistive and inductive loads, environmental tests such as high temperature, low temperature, alternating current, humidity, salt spray, sulphurisation, etc., environmentally friendly ROHS2.0 test, vibration and shock test, IP test of dust and waterproof, and explosion-proof test of relays. It is also capable of material analysis, physical and chemical testing, and metrology.

The laboratory was qualified as UL Witness Laboratory in 2013, accredited by China National Accreditation Service for Conformity Assessment (CNAS) in 2020 and TUV Witness Laboratory in 2021. After more than ten years of construction, the laboratory has developed into a fully functional, well-equipped, advanced equipment, and well-qualified testing laboratory.

Experimental Center

实验中心

Sensor SERIES

传感器系列



产品目录

CONTENTS

01-03 Inductive Sensors

- 01 LJAS Cylindrical Upgrade Series
- 02 CHJY Remote Enhanced Series
- 03 LJE/LJE-W Angle column type series

04-04 Capacitive Sensors

- 04 CM Cylindrical Series

05-05 Hall Sensors

- 05 SJM Cylindrical Series

06-21 Photoelectric Sensors

- 06 C3-SX67 Waterproof groove type series
- 07 C3F Cylindrical Anti-Light Interference Series
- 08 C3JK Anti-Light Interference Square Series
- 09 C3Z Small Square Series
- 10 C3Z-TOF Laser principle anti-interference series
- 11 E3Z-BG Background Suppression Series

12-13 Other Sensors

- 12 C6-F21 series with Fibre Optic Probes
- 13 C8 Light curtain sensors serious

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- 14 CHB38S/H Rotary encoders
- 15 CHB48T Incremental encoders

Cylindrical upgraded proximity switches



Product Features

1. Simple connection for easy installation and application
2. Multi-protection: polarity protection, over-current protection
3. Dual light indicator: Power indicator green, action indicator red

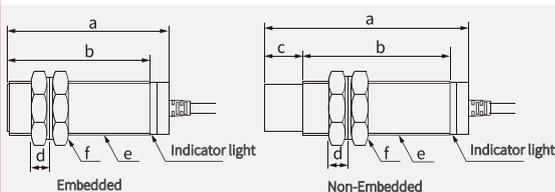
4. Protection structure IP67
5. Operating temperature -25~+70
6. Good oil resistance

Main technical parameters

Sepecification		LJA8 □ S series		LJA12 □ S series		LJA18 □ S series		LJA30 □ S series		
D C	NPN	NO	LJA8S-1.5N1	LJA8MS-2N1	LJA12S-2N1	LJA12MS-4N1	LJA18S-5N1	LJA18MS-8N1	LJA30S-10N1	LJA30MS-15N1
		NC	LJA8S-1.5N2	LJA8MS-2N2	LJA12S-2N2	LJA12MS-4N2	LJA18S-5N2	LJA18MS-8N2	LJA30S-10N2	LJA30MS-15N2
	PNP	NO	LJA8S-1.5P1	LJA8MS-2P1	LJA12S-2P1	LJA12MS-4P1	LJA18S-5P1	LJA18MS-8P1	LJA30S-10P1	LJA30MS-15P1
		NC	LJA8S-1.5P2	LJA8MS-2P2	LJA12S-2P2	LJA12MS-4P2	LJA18S-5P2	LJA18MS-8P2	LJA30S-10P2	LJA30MS-15P2
A C	2-wire	NO	LJA8S-1.5D1	LJA8MS-2D1	LJA12S-2D1	LJA12MS-4D1	LJA18S-5D1	LJA18MS-8D1	LJA30S-10D1	LJA30MS-15D1
		NC	LJA8S-1.5D2	LJA8MS-2D2	LJA12S-2D2	LJA12MS-4D2	LJA18S-5D2	LJA18MS-8D2	LJA30S-10D2	LJA30MS-15D2
		NO	LJA8S-1.5A1	LJA8MS-2A1	LJA12S-2A1	LJA12MS-4A1	LJA18S-5A1	LJA18MS-8A1	LJA30S-10A1	LJA30MS-15A1
		NC	LJA8S-1.5A2	LJA8MS-2A2	LJA12S-2A2	LJA12MS-4A2	LJA18S-5A2	LJA18MS-8A2	LJA30S-10A2	LJA30MS-15A2
Detection distance ※1		1.5mm 2mm		2mm 4mm		5mm 8mm		10mm 15mm		
Setting distance		0 ~ 1.275mm 0 ~ 1.7mm		0 ~ 1.7mm 0 ~ 3.4mm		0 ~ 4.25mm 0 ~ 6.8mm		0 ~ 8.5mm 0 ~ 12.75mm		
Standard detection object		8*8*1mm Iron		12*12*1mm Iron		18*18*1mm Iron 25*25*1mm Iron		30*30*1mm Iron 45*45*1mm Iron		
Response frequency 2		N / P : 1200Hz、DC:400Hz、AC:25Hz		N / P : 1200Hz、DC:200Hz、AC:25Hz		N / P : 600Hz、DC:200Hz、AC:25Hz		N / P : 100Hz、DC:100Hz、AC:25Hz		
Return Difference		Less than 15 % of detection distance								
Detectable objects		Magnetic metals (shorter detection distances for non-magnetic metals)								
Supply Voltage		DC : Rated voltage DC12~24V (use range voltage DC10~30V);AC : M8:AC90~250V,M12-M30:AC24~250V								
Operating current		Load current 200mA								
Residual voltage		NPN : ≤ 1.5V;PNP : ≤ 2.5V; DC 2-wire: ≤ 4V; AC 2-wire: ≤ 7V								
Leakage current		When 24VDC, max 0.1mA								
Protection circuit		DC: polarity, overcurrent protection; AC: surge absorption protection								
Indicator light		Dual light display: power indicator green, action indicator red								
Temperature range		Operating: -25 to +70°C (no icing, condensation); Storage: -40 to +85°C (no icing, condensation)								
Humidity range		Operation, storage: 35~95% (no condensation)								
Temperature effect (drift)		-25~+70 temperature range, the detection distance is within ±10% of the detection distance at +23 .								
Protective structure		IP67								
Housing Material		Chrome Plated Brass								
Sensing surface material		PBT								

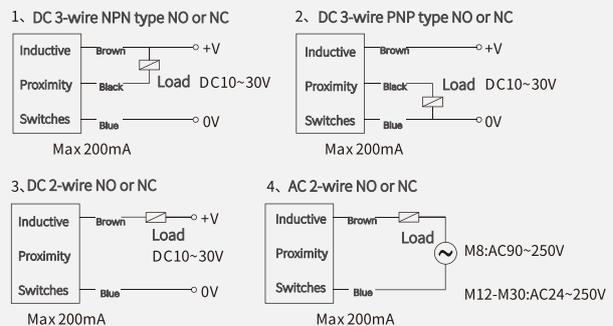
1. Detection distance range value ±10% 2. Response frequency is average value.Measurement conditions: Use a standard detection object and set the distance to 1/2 of the detection distance.

Dimension (Unit: mm)

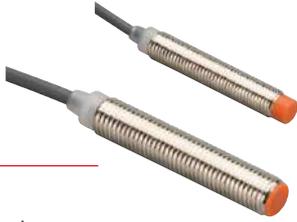


Item	Specification	a	b	c	d	e	f
Embedded	LJA8S	41.7±0.5	35±0.5	-	3.5	M8×1	AF12
Non-embedded	LJA8MS	45.2±0.5	35±0.5	4	3.5	M8×1	AF12
Embedded	LJA12S	51.6±0.5	40±0.5	-	3.9	M12×1	AF17
Non-embedded	LJA12MS	54.0±0.5	35±0.5	8	3.9	M12×1	AF17
Embedded	LJA18S	51.8±0.5	40±0.5	-	4	M18×1	AF24
Non-embedded	LJA18MS	58.0±0.5	35±0.5	12	4	M18×1	AF24
Embedded	LJA30S	52.0±0.5	40±0.5	-	4.7	M30×1.5	AF35.8
Non-embedded	LJA30MS	61.0±0.5	35±0.5	15	4.7	M30×1.5	AF35.8

Wiring diagram



► Remote Enhanced Proximity Switches



► Model Explanation

CHJY M 18 - 12 DN 1

① ② ③ ④ ⑤ ⑥ ⑦ ⑧

- ① Inductive
- ② Remote Enhanced
- ③ M: Non-Embedded, □: Embedded
- ④ Diameter Size: 8mm, 12mm, 18mm, 30mm
- ⑤ Detection distance: 2mm, 4mm, 8mm, 14mm, 15mm, 25mm
- ⑥ D: DC 10-30V
- ⑦ N: NPN Type P: PNP Type
- ⑧ 1: NO, 2: NC

► Product Features

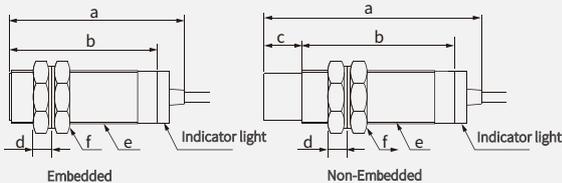
- 1、The indicator light can be seen whatever it is installed
- 2、Distance-enhanced products save cost and space
- 3、A full range of specifications from M 8 to M 30

► Main technical parameters

Specification		CHJY □ 8 series		CHJY □ 12 series		CHJY □ 18 series		CHJY □ 30 series		
D C	NPN	NO	CHJY8-2DN1	CHJYM8-4DN1	CHJY12-4DN1	CHJYM12-8DN1	CHJY18-8DN1	CHJYM18-14DN1	CHJY30-15DN1	CHJYM30-25DN1
		NC	CHJY8-2DN2	CHJYM8-4DN2	CHJY12-4DN2	CHJYM12-8DN2	CHJY18-8DN2	CHJYM18-14DN2	CHJY30-15DN2	CHJYM30-25DN2
	PNP	NO	CHJY8-2DP1	CHJYM8-4DP1	CHJY12-4DP1	CHJYM12-8DP1	CHJY18-8DP1	CHJYM18-14DP1	CHJY30-15DP1	CHJYM30-25DP1
		NC	CHJY8-2DP2	CHJYM8-4DP2	CHJY12-4DP2	CHJYM12-8DP2	CHJY18-8DP2	CHJYM18-14DP2	CHJY30-15DP2	CHJYM30-25DP2
Detection distance ※1		2mm	4mm	4mm	8mm	8mm	14mm	15mm	25mm	
Setting distance		0 ~ 1.6mm	0 ~ 3.2mm	0 ~ 3.2mm	0 ~ 6.4mm	0 ~ 6.4mm	0 ~ 11.2mm	0 ~ 12mm	0 ~ 20mm	
Standard detection object		8*8*1mm Iron	12*12*1mm Iron	12*12*1mm Iron	24*24*1mm Iron	24*24*1mm Iron	42*42*1mm Iron	45*45*1mm Iron	75*75*1mm Iron	
Response frequency 2		N / P :1kHz	N / P :800Hz	N / P :800Hz	N / P :500Hz	N / P :400Hz	N / P :300Hz	N / P :300Hz	N / P :150Hz	
Return Difference		Less than 15 % of detection distance								
Detectable objects		Magnetic metals (shorter detection distances for non-magnetic metals)								
Supply Voltage		DC10~30V								
Operating current		DC(NPN,PNP) : ≤ 180mA								
Residual voltage		NPN : ≤ 2.5V;PNP : ≤ 2.5V								
Leakage current		When 24VDC , max 0.1mA								
Protection circuit		Polarity, Overcurrent protection								
Indicator light		360° (yellow)								
Temperature range		Operating: -25~+70 (no icing, condensation); Storage: -40~+85 (no icing, condensation)								
Humidity range		Operation, storage: 35~95% (no condensation)								
Temperature effect (drift)		-25~+70 temperature range, the detection distance is within ±15% of the detection distance at +23°C								
Housing Material		Chrome Plated Brass								
Sensing surface material		ABS								

1. Detection distance range value ±10% 2. Response frequency is average value. Measurement conditions: Use a standard detection object and set the distance to 1/2 of the detection distance.

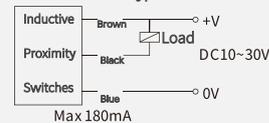
► Dimension (Unit: mm)



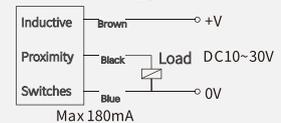
Item	Specification	a	b	c	d	e	f
Embedded	CHJY8	47.5±0.5	40±0.5	-	3.9	M8×1	AF12
Non-embedded	CHJYM8	51.0±0.5	40±0.5	4	3.9	M8×1	AF12
Embedded	CHJY12	51.4±0.5	42±0.5	-	3.9	M12×1	AF17
Non-embedded	CHJYM12	57.8±0.5	42±0.5	9.5	3.9	M12×1	AF17
Embedded	CHJY18	56.8±0.5	42±0.5	-	4.2	M18×1	AF24
Non-embedded	CHJYM18	68.0±0.5	42±0.5	12	4.2	M18×1	AF24
Embedded	CHJY30	58.0±0.5	42±0.5	-	4.7	M30×1.5	AF35.8
Non-embedded	CHJYM30	72.0±0.5	35±0.5	15	4.7	M30×1.5	AF35.8

► Wiring diagram

1. DC 3-wire NPN type NO or NC



2. DC 3-wire PNP type NO or NC



▶ Angle Pillar Proximity Switches



▶ Model Explanation



- ① Inductive
- ② Corner column type
- ③ Sensing direction: upwards
- ④ Detection distance : 5: 5mm
10: 8mm
- ⑤ N: NPN P: PNP
- ⑥ 1: NO、 2: NC

▶ Model Explanation



- ① Inductive
- ② Corner column type
- ③ Inspection surface dimensions: 17mm、 18mm、 25mm、 30mm
- ④ Detection distance : 5mm、 8mm、 10mm、 15mm
- ⑤ N: NPN P: PNP D: DC 2-wire、 A: AC 2-wire
- ⑥ 1: NO、 2: NC

▶ Product Features

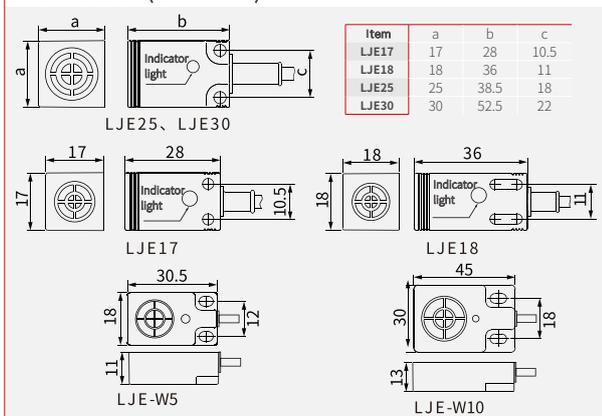
1. Simple connection for easy installation and application
2. Multi-protection: polarity protection over-current protection
3. Indicator is obvious: green
4. The product waterproof grade is high, up to IP67, can be used in harsh environments.
5. Operating temperature -25~+70°C

▶ Main technical parameters

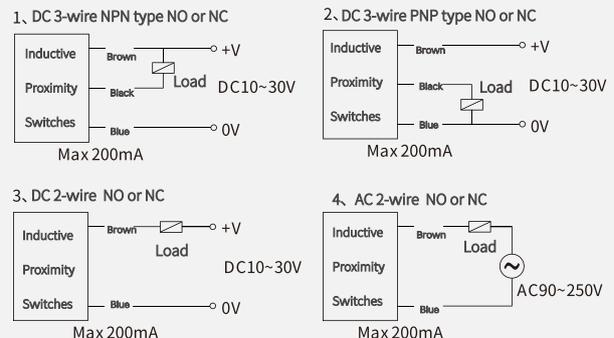
Specification		LJE17 series	LJE18 series		LJE25 series		LJE30 series	LJE-W5 series	LJE-W10 series	
DC	NPN	NO	LJE17-5N1	LJE18-5N1	LJE18-8N1	LJE25-8N1	LJE25-10N1	LJE30-15N1	LJE-W5N1	LJE-W10N1
		NC	LJE17-5N2	LJE18-5N2	LJE18-8N2	LJE25-8N2	LJE25-10N2	LJE30-15N2	LJE-W5N2	LJE-W10N2
	PNP	NO	LJE17-5P1	LJE18-5P1	LJE18-8P1	LJE25-8P1	LJE25-10P1	LJE30-15P1	LJE-W5P1	LJE-W10P1
		NC	LJE17-5P2	LJE18-5P2	LJE18-8P2	LJE25-8P2	LJE25-10P2	LJE30-15P2	LJE-W5P2	LJE-W10P2
2-wire	NO	LJE17-5D1	LJE18-5D1	LJE18-8D1	LJE25-8D1	LJE25-10D1	LJE30-15D1	/	/	
	NC	LJE17-5D2	LJE18-5D2	LJE18-8D2	LJE25-8D2	LJE25-10D2	LJE30-15D2	/	/	
AC	2-wire	NO	LJE17-5A1	LJE18-5A1	LJE18-8A1	LJE25-8A1	LJE25-10A1	LJE30-15A1	/	/
		NC	LJE17-5A2	LJE18-5A2	LJE18-8A2	LJE25-8A2	LJE25-10A2	LJE30-15A2	/	/
Detection distance ※1		5mm	5mm	8mm	8mm	10mm	15mm	5mm		
Setting distance		0 ~ 4.25mm	0 ~ 4.25mm	0 ~ 6.8mm	0 ~ 6.8mm	0 ~ 8.5mm	0 ~ 12.75mm	0 ~ 4.25mm	0 ~ 8.5mm	
Standard detection object		20*20*1mm Iron	20*20*1mm Iron	25*25*1mm Iron	25*25*1mm Iron	30*30*1mm Iron	45*45*1mm Iron	20*20*1mm Iron	25*25*1mm Iron	
Response frequency 2		N / P : 1000Hz; 2-wire : DC:300Hz, AC:25Hz			N / P : 500Hz; 2-wire: DC:200Hz, AC:25Hz		N / P : 200Hz; 2-wire: DC:100Hz, AC:25Hz	N / P : 500Hz		
Return Difference		<15%								
Detectable objects		Magnetic metals (shorter detection distances for non-magnetic metals)								
Supply Voltage		DC (NPN,PNP) : DC10 ~ 30V; DC 2-wire : DC10 ~ 30V; AC 2-wire: AC90 ~ 250V								
Operating current		≤ 200mA								
Residual voltage		NPN : ≤ 1.5V; PNP : ≤ 2.5V; DC 2-wire: ≤ 4V; AC 2-wire: 7V								
Protection circuit		DC : Polarity, Overcurrent protection; AC : Surge absorption								
Indicator light		Action indicator green; LJE-W series action indicator yellow								
Temperature range		Operating: -25~+70 (no icing, condensation); Storage: -40~+85 (no icing, condensation)								
Humidity range		Operation, storage: 35~95% (no condensation)								
Temperature effect (drift)		-25~+70 temperature range, the detection distance is within ±15% of the detection distance at +23°C								
Protective structure		IP67								

1. Detection distance range value ±10% 2. Response frequency is average value. Measurement conditions: Use a standard detection object and set the distance to 1/2 of the detection distance.

▶ Dimension (Unit: mm)



▶ Wiring diagram



► Cylindrical Proximity Switches



► Model Explanation

CM 30 - 15 A 1 □ - □

① ② ③ ④ ⑤ ⑥ ⑦

- ① Inductive
- ② Diameter Size: 12mm、18mm、30mm
- ③ Detection distance: 4mm、8mm、15mm
- ④ N: NPN、P: PNP、A: AC 2-wire
- ⑤ 1: NO、2: NC
- ⑥ □: Regular model Other letters: special order
- ⑦ □: NPN and PNP are DC 10-30V AC 2-wire is AC90-250V、G: AC200-380V

► Product Features

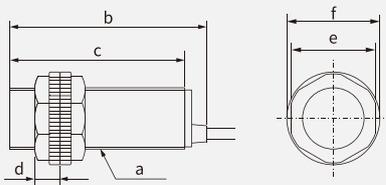
1. Simple connection for easy installation
2. Multi-protection: polarity protection, over-current protection
3. Protection structure IP67
4. Operating Temperature -25~+70
5. Stable and reliable detection

► Main technical parameters

Specification			CM12 series	CM18 series	CM30 series
DC	NPN	NO	CM12-4N1	CM18-8N1	CM30-15N1
		NC	CM12-4N2	CM18-8N2	CM30-15N2
	PNP	NO	CM12-4P1	CM18-8P1	CM30-15P1
NC		CM12-4P2	CM18-8P2	CM30-15P2	
AC	2-wire	NO	CM12-4A1	CM18-8A1	CM30-15A1
		NC	CM12-4A2	CM18-8A2	CM30-15A2
Detection distance ※1			0~4mm, Potentiometer adjustable	0~8mm, Potentiometer adjustable	0~15mm, Potentiometer adjustable
Setting distance			0~3.2mm	0~6.4mm	0~12mm
Standard detection object			12*12*1mm Iron	24*24*1mm Iron	45*45*1mm Iron
Response frequency 2			DC:200Hz;AC:25Hz	DC:200Hz;AC:25Hz	DC: 200Hz; AC: 25Hz
Return Difference			Less than 15% of detection distance		
Detectable objects			Any object: metal, plastic, glass, wood, water, oil, etc.		
Supply Voltage			DC (NPN,PNP) : DC10~30V; AC 2 wire: 90~250VAC 50/60Hz		
Operating current			≤ 200mA		
Residual voltage			DC (NPN,PNP) : ≤ 1.5V; AC 2 wire: ≤ 7V		
Protection circuit			Surge absorption , overcurrent protection		
Indicator light			Yellow		
Temperature range			Operating: -25~+70 (no icing, condensation); Storage: -40~+85 (no icing, condensation)		
Humidity range			Operation, storage: 35~95% (no condensation)		
Temperature effect (drift)			-25~+70 temperature range, the detection distance is within ±15% of the detection distance at +23°C		
Protective structure			IP67		

1. Detection distance range value ±10% 2. Response frequency is average value.Measurement conditions: Use a standard detection object and set the distance to 1/2 of the detection distance.

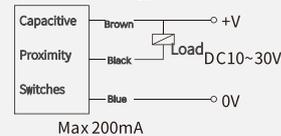
► Dimension (Unit: mm)



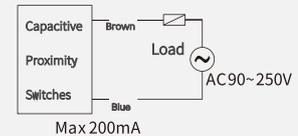
Specification	a	b	c	d	e	f
CM12 系列	M12x1	64±0.5	42±0.5	7.5	16	18
CM18 系列	M18x1	73±0.5	54±0.5	8.5	21.5	23.5
CM30 系列	M30x1.5	71±0.5	58±0.5	10	34.6	39.5

► Wiring diagram

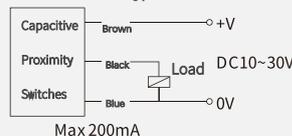
1. DC 3-wire NPN type NO or NC



3. AC 2-wire NO or NC



2. DC 3-wire PNP type NO or NC



Cylindrical Proximity Switches



Model Explanation

SJM12-10N1-N

① ② ③ ④ ⑤ ⑥ ⑦

- ① Hall
- ② Cylindrical
- ③ Diameter Size: 12mm、18mm
- ④ Detection distance: 10mm
- ⑤ N: NPN、P: PNP、D: DC 2-wire A: AC 2-wire
- ⑥ 1: NO、2: NC
- ⑦ □: Reed switch, N: Hall element

Product Features

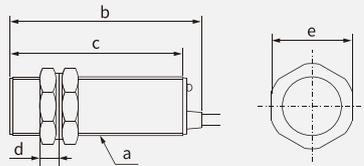
1. Simple connection for easy installation
2. Multi-protection: polarity protection, over-current protection
3. Operating Temperature -25~+70
4. Stable and reliable detection

Main technical parameters

Specification		SJM12 series		SJM18 series		
DC	NPN	NO	SJM12-10N1	SJM12-10N1-N	SJM18-10N1	SJM18-10N1-N
		NC	SJM12-10N2	SJM12-10N2-N	SJM18-10N2	SJM18-10N2-N
	PNP	NO	SJM12-10P1	SJM12-10P1-N	SJM18-10P1	SJM18-10P1-N
		NC	SJM12-10P2	SJM12-10P2-N	SJM18-10P2	SJM18-10P2-N
2-wire	NO	SJM12-10D1	SJM12-10D1-N	SJM18-10D1	SJM18-10D1-N	
	NC	SJM12-10D2	SJM12-10D2-N	SJM18-10D2	SJM18-10D2-N	
AC	2-wire	NO	SJM12-10A1	SJM12-10A1-N	SJM18-10A1	SJM18-10A1-N
		NC	SJM12-10A2	SJM12-10A2-N	SJM18-10A2	SJM18-10A2-N
Detection distance ※1		10mm		10mm		
Setting distance		0 ~ 8mm		0 ~ 8mm		
Standard detection object		permanent magnet $\phi 12 \times 2\text{mm}$				
Response frequency 2		DC: 300Hz; AC: 25Hz		DC: 300Hz; AC: 25Hz		
Return Difference		Less than 15% of detection distance				
Detectable objects		Magnets, magnetic metals				
Supply Voltage		DC(NPN,PNP,2-wire): DC6 ~ 36V; AC: AC90 ~ 250V				
Operating current		$\leq 200\text{mA}$				
Residual voltage		DC(NPN,PNP): $\leq 1.5\text{V}$; DC 2-wire: $\leq 3\text{V}$; AC 2-wire: $\leq 7\text{V}$				
Protection circuit		Surge absorption protection, overcurrent protection, polarity protection				
Indicator light		Red				
Temperature range		Operating: -25~+70 (no icing, condensation); Storage: -40~+85 (no icing, condensation)				
Humidity range		Operation, storage: 35~95% (no condensation)				
Temperature effect (drift)		-25~+70 temperature range, the detection distance is within $\pm 15\%$ of the detection distance at +23°C				
Housing Material		Chrome Plated Brass				

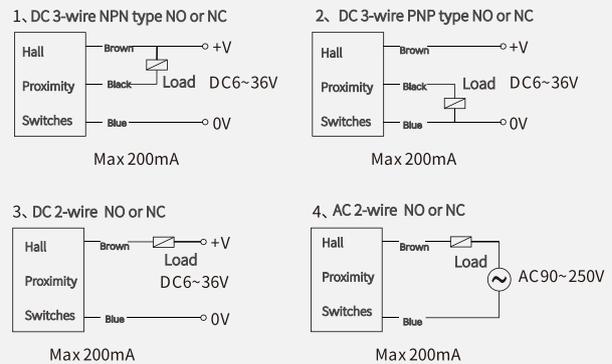
1. Detection distance range value $\pm 15\%$ 2. Response frequency is average value. Measurement conditions: Use a standard detection object and set the distance to 1/2 of the detection distance.

Dimension (Unit: mm)



Specification	a	b	c	d	e
SJM12	M12×1	53±0.5	47±0.5	4	17
SJM18	M18×1	62±0.5	53±0.5	4	24

Wiring diagram



▶ Waterproof slot type photoelectric switch



▶ Model Explanation

C3 - SX 670 □ - WR

① ② ③ ④ ⑤

- ① C3 Series Photoelectric
- ② Slot Photoelectric Switch Designer
- ③ Design code: 670、671、672、673、674
- ④ □: NPN type light is on when light is entering (Initial state light is on)
A: NPN type light is off (initial state light is off)
P: PNP type light on (initial state light on)
R: PNP type light is off (initial state light is off).
- ⑤ □: Plug-in type (not yet produced), WR: Leaded wire type

▶ Product Features

- 1、Has a high waterproof rating of IP67 and it can be used in harsh environments.
- 2、Variety of installation methods can be used in different spaces.
- 3、Frequency 1kHz with high speed response

- 4、ON with shadng /ON with entering light (switchable type) operation mode
- 5、Voltage range 5-24VDC

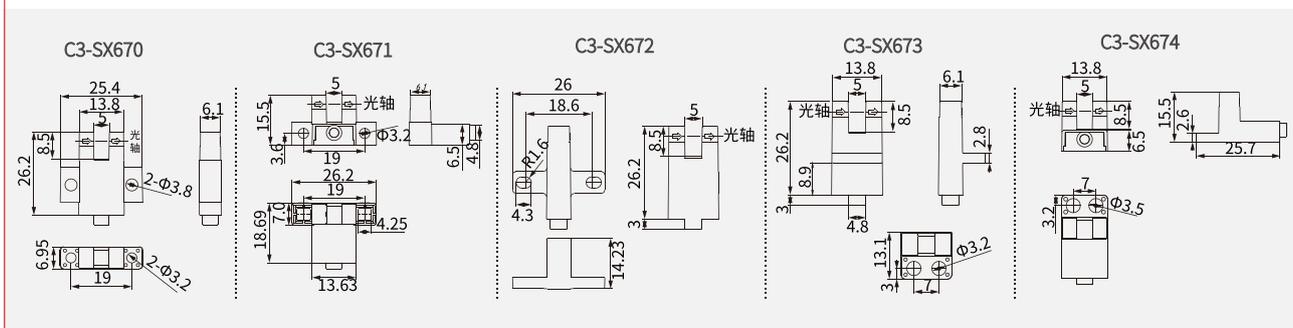
Note: Motion mode:L.on (white line of incoming light action connected to +V) or D.on(white line of blackout action hanging, configure two outputs).

▶ Main technical parameters

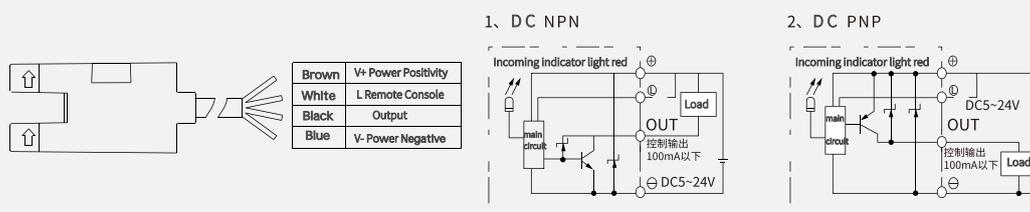
Specification		C3-SX670 series	C3-SX671 series	C3-SX672 series	C3-SX673 series	C3-SX674 series
DC	NPN	C3-SX670-WR	C3-SX671-WR	C3-SX672-WR	C3-SX673-WR	C3-SX674-WR
	NO/NC	C3-SX670A-WR	C3-SX671A-WR	C3-SX672A-WR	C3-SX673A-WR	C3-SX674A-WR
	PNP	C3-SX670P-WR	C3-SX671P-WR	C3-SX672P-WR	C3-SX673P-WR	C3-SX674P-WR
	NO/NC	C3-SX670R-WR	C3-SX671R-WR	C3-SX672R-WR	C3-SX673R-WR	C3-SX674R-WR
Detection distance	5mm (notch width)					
Sensitivity adjustment	Irreconcilable					
Min detected object	0.8mm×2mm Non-transparent objects					
Response frequency※1	1kHz(Max 3kHz)					
Supply Voltage	DC5~24V					
Operating current	Load current ≤ 100mA; Static current: ≤ 25mA					
Residual voltage	≤ 1V(Load current at 50mA)					
Protection circuit	Polarity, overload protection					
Indicator light	Red					
Ambient illuminance range	Incandescent : spot intensity below 1,000Lx					
Temperature range	Operating: -25~+70 (no icing, condensation); Storage: -30~+80 (no icing, condensation)					
Humidity range	Operation, storage: 35~95% (no condensation)					
Protective structure	IP67					

※1 Response frequency is average value. Measurement conditions: Use 0.8mmx2mm opaque objects.

▶ Dimension (Unit: mm)



▶ Wiring diagram



► Cylindrical photoelectric switches with one-touch setting



► Model Explanation

C3 F - D 50 N 4

① ② ③ ④ ⑤ ⑥

- ① C3 Series Photoelectric
- ② Material: F: Plastic
- ③ D: Diffuse reflective type (unit cm)、R: Reflectional type(unit cm)
T: Directional(unit m)、TH: Visible light counterpoise type (unit m)
- ④ Detection distance: 50cm, 100cm, 2m, 10m, 20m
- ⑤ N: NPN、P: PNP
- ⑥ 4: NO+NC

► Product Features

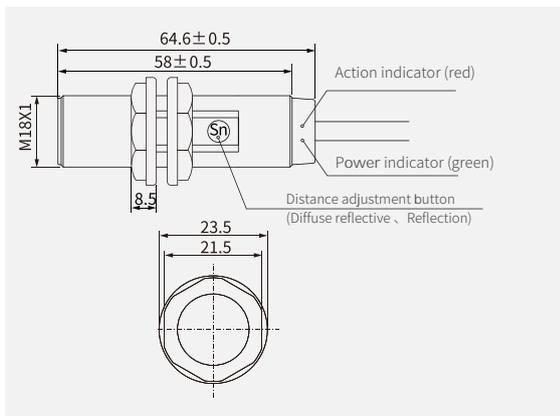
1. Simple connection for easy installation
2. Multi-protection: polarity protection, over-current protection
3. Stable and reliable detection, strong resistance to light
4. Detecting distance is easy to set
5. Strong resistance to EMC interference
6. Bi-Colour Light Indicator

► Main technical parameters

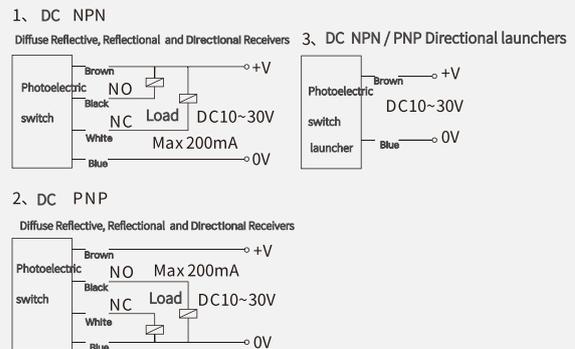
Specification	Diffuse reflective		Diffuse reflective	Reflectional	Directional	Directional	Visible light counterpoise
	NO+NC	NO+NC	C3F-D100N4	C3F-R2N4	C3F-T10N4	C3F-T20N4	C3F-TH10N4
DC	NO+NC	C3F-D50N4	C3F-D100P4	C3F-R2P4	C3F-T10P4	C3F-T20P4	C3F-TH10P4
Detection distance※1		50cm(Adjustable)	100cm(Adjustable)	2m(Adjustable)	≤ 10m	≤ 20m	≤ 10m
Sensitivity adjustment		One-touch button setting			Non-adjustable	Non-adjustable	Non-adjustable
Standard detection object		10×10cm White non-glossy paper		Reflector plate TD-08	5×5cm White non-glossy paper		
Detectable objects		Reflecting object		Non-transparent objects			
Response time		≤ 2ms					
Return Difference		Less than 15 % of detection distance					
Supply Voltage		DC10 ~ 30V					
Operating current		Load current ≤ 200mA; Static current: D C (NPN) ≤ 25mA、D C(PNP) ≤ 35mA					
Residual voltage		≤ 2V					
Protection circuit		DC(NPN,PNP) : Polarity, overcurrent protection					
Indicator light		Green power indicator, red action indicator					
Ambient illuminance range		Incandescent : Spot intensity 200,000lx or less					
Temperature range		Operating: -25~+70 (no icing, condensation); Storage: -30~+70 (no icing, condensation)					
Humidity range		Operation, storage: 35~95% (no condensation)					
Temperature effect (drift)		-25 ~ +70 temperature range, the detection distance is within ±10% of the detection distance at +23°C					
Sensing surface material		PC					

※1. Detection distance range value ±10%.

► Dimension (Unit: mm)



► Wiring diagram



▶ Anti-interference type photoelectric switch



▶ Model Explanation

C3 JK - D 30 NP

① ② ③ ④ ⑤

- ① C3 Series Photoelectric
- ② JK: square-shaped 50×50
- ③ D: Diffuse reflective (cm)、R: Reflective type(m)、T: Directional type (m)
- ④ Detection distance: 30cm, 100cm, 2m, 20m

▶ Product Features

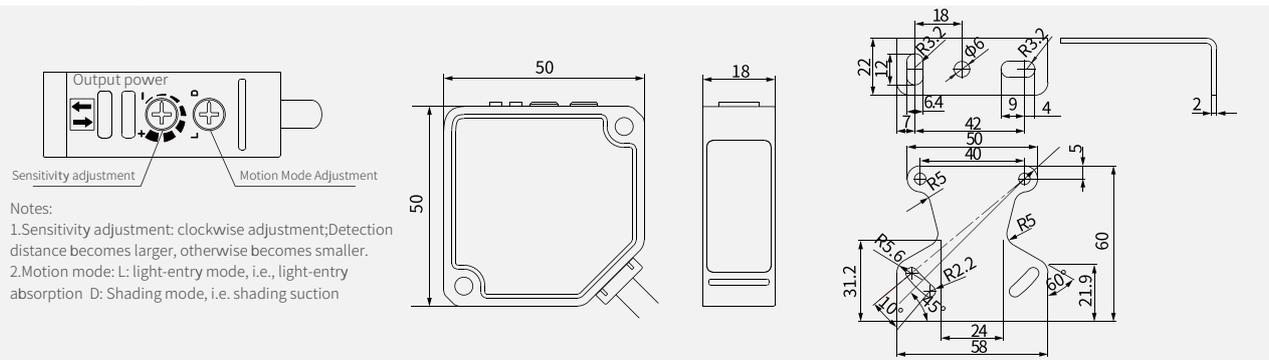
- 1、Simple connection for easy installation
- 2、Multi-protection: polarity protection, over-current protection
- 3、Mirror PMMA optical material, strong anti-light interference
- 4、The knob is sensitive and convenient for switching the mode of action
- 5、NPN + PNP one-piece output, easy for users to select type

▶ Main technical parameters

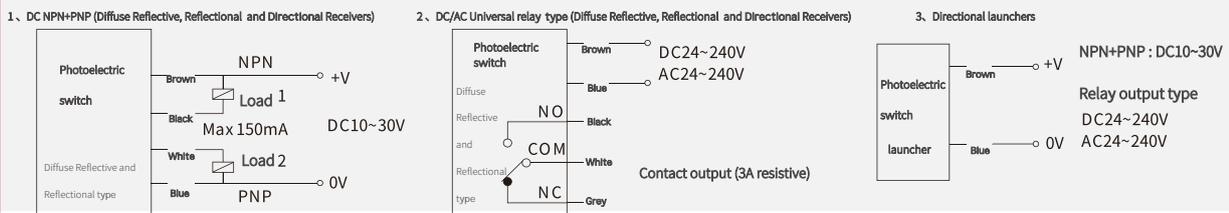
Specification	Diffuse reflective	Diffuse reflective	Reflective	Directional
DC NPN+PNP output type	C3JK-D30NP	C3JK-D100NP	C3JK-R2NP	C3JK-T20NP
AC/DC Universal output type	C3JK-D30M	C3JK-D100M	C3JK-R2M	C3JK-T20M
Detection distance※1	30cm (Adjustable)	100cm (Adjustable)	2m (Adjustable)	20m (Adjustable)
Sensitivity adjustment	Potentiometer Adjustment			
Standard detection object	10×10cm White non-glossy paper		Reflector plate TD-08	10×10cm White non-glossy paper
Detectable objects	Reflecting object		Non-transparent objects	
Response time	DC : <2ms; AC : <10ms			
Return Difference	Less than 15 % of detection distance			
Supply Voltage	DC NPN+PNP output: DC10-30V,AC/DC Universal: AC/DC24-240V			
Control output	DC NPN+PNP output load current ≤ 150mA,Relay output contact 3A resistive			
Current consumption	≤ 35mA(tested under DC24V condition; tested under AC220V condition)			
Residual voltage	DC (NPN,PNP) ≤ 1.5V			
Protection circuit	DC: Polarity, overcurrent protection; AC : surge protection			
Indicator light	Green power indicator, white action indicator			
Ambient illuminance range	Incandescent: Spot intensity under 3,000Lx; Sunlight: Spot intensity: under 10,000Lx			
Temperature range	Operating: -25~+70 (no icing, condensation); Storage: -30~+70 (no icing, condensation)			
Humidity range	Operation, storage: 35~85% (no condensation)			
Temperature effect (drift)	-25 ~ +70 temperature range, the detection distance is within ±10% of the detection distance at +23°C			
Sensing surface material	PMMA-VH112			

1. Detection distance range value ±10% 2. Response frequency is average value.Measurement conditions: Use a standard detection object and set the distance to 1/2 of the detection distance.

▶ Dimension (Unit: mm)



▶ Wiring diagram



► Square shaped One-touch setting of photoelectric switches



► Model Explanation

C3Z - D100N

① ② ③ ④

- ① C3Z Series Photoelectric
- ② D: Diffuse reflective(cm); R: Reflectional type(m); T: Directional type (m)
- ③ Detection distance: 100cm、 3m、 15m
- ④ N: NPN 、 P: PNP

► Product Features

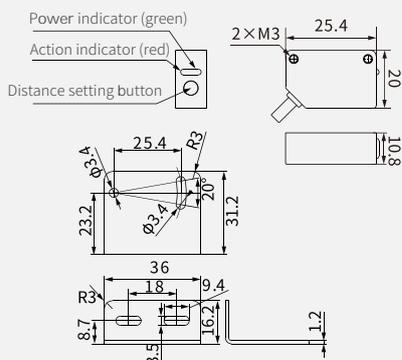
1. Simple connection for easy installation
2. Multi-protection: polarity protection, over-current protection
3. Stable detection and strong resistance to light interference
4. Detecting distance is easy to set with one button
5. Press 5 times to quickly switch NO / NC of Action mode

► Main technical parameters

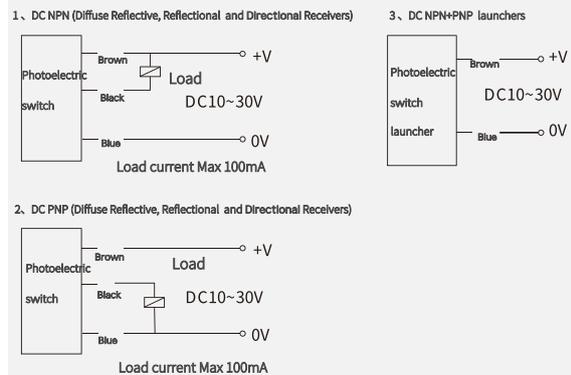
Specification		Diffuse reflective	Reflectional	Visible light Directional type
DC	NPN	C3Z-D100N	C3Z-R3N	C3Z-T15N
	PNP	C3Z-D100P	C3Z-R3P	C3Z-T15P
Detection distance※1		100cm (Adjustable)	3m (Adjustable)	15m (Adjustable)
Sensitivity adjustment		One-touch button setting		
Standard detection object		10×10cm White non-glossy paper	Reflector TD-08	5×5mm Non-transparent objects
Detectable objects		Reflecting object	Non-transparent objects	
Response time		2ms		
Return Difference		Less than 15 % of detection distance		
Supply Voltage		DC10 ~ 30V		
Operating current		Load current ≤ 100mA; Static current: DC(NPN) ≤ 25mA、 DC(PNP) ≤ 35mA		
Residual voltage		≤ 2V		
Protection circuit		DC(NPN,PNP) : Polarity, overcurrent protection		
Indicator light		Green power indicator, red action indicator		
Ambient illuminance range		Incandescent: Spot intensity under 3,000Lx; Sunlight: Spot intensity: under 10,000Lx		
Temperature range		Operating: -25~+70 (no icing, condensation); Storage: -30~+70 (no icing, condensation)		
Humidity range		Operation, storage: 35~85% (no condensation)		
Sensing surface material		PC		

1. Detection distance range value ±10% 2. Response frequency is average value. Measurement conditions: Use a standard detection object and set the distance to 1/2 of the detection distance.

► Dimension (Unit: mm)



► Wiring diagram



C3Z-TOF series

Photoelectric

▶ TOF anti-interference miniature photoelectric switch



▶ Model Explanation

C3Z - TOF1N

① ② ③ ④

- ① C3Z Series Photoelectric
- ② TOF Diffuse reflective type
- ③ Detection distance: 1: 50 ~ 1000mm, 2: 50 ~ 2000mm, 4: 50 ~ 4000mm
- ④ N:NPN、P:PNP

▶ Product Features

- 1、 Simple connection for easy installation
- 2、 Multi-protection: polarity protection, over-current protection
- 3、 TOF principle, stable detection
- 4、 Detecting distance is easy to set with one button

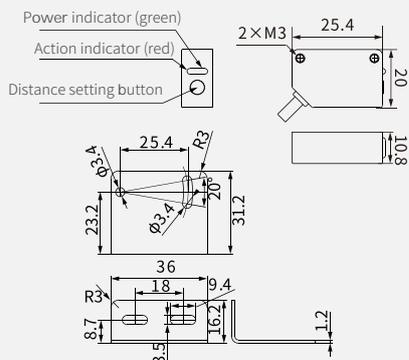
- 5、 With background suppression function, not affected by the material and colour of the detected object
- 6、 Good light resistance

▶ Main technical parameters

Specification		Diffuse reflective TOF		
DC	NPN	C3Z-TOF1N	C3Z-TOF2N	C3Z-TOF4N
	PNP	C3Z-TOF1P	C3Z-TOF2P	C3Z-TOF4P
Detection distance※1		50 ~ 1000mm(Adjustable)	50 ~ 2000mm(Adjustable)	50 ~ 4000mm(Adjustable)
Sensitivity adjustment		One-touch button setting		
Standard detection object		10×10cm White non-glossy paper		
Detectable objects		Reflecting object		
Response time		10ms		
Supply Voltage		DC12 ~ 24V		
Operating current		Load current ≤ 100mA; Static current: ≤ 20mA		
Residual voltage		≤ 2.5V		
Protection circuit		Polarity, overcurrent and overload protection		
Indicator light		Green power indicator, red action indicator		
Ambient illuminance range		Incandescent: Spot intensity under 10,000Lx		
Temperature range		Operating: -25~+55 (no icing, condensation); Storage: -30~+70 (no icing, condensation)		
Humidity range		Operation, storage: 35~85% (no condensation)		
Sensing surface material		PC		

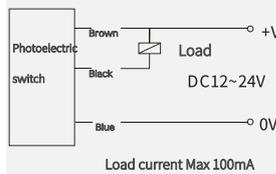
1. Detection distance range value ±10% 2. Response frequency is average value. Measurement conditions: Use a standard detection object and set the distance to 1/2 of the detection distance.

▶ Dimension (Unit: mm)

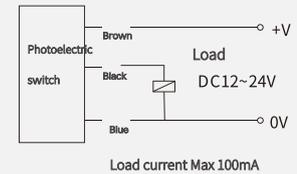


▶ Wiring diagram

1、 DC 3-Wire NPN NO/NC



2、 DC 3-Wire PNP NO/NC



E3Z-BG series

Photoelectric

▶ Background suppression photoelectric switches



▶ Model Explanation

E3Z - D30N(L) - BG

① ② ③ ④ ⑤ ⑥

- ① E3Z Series Photoelectric
- ② D: Diffuse reflective type
- ③ 30: Detection distance 30cm, 10: Detection distance 10cm
- ④ N: NPN, P: PNP
- ⑤ L: Barred spot, □: light spot
- ⑥ BG: Background suppression type

▶ Product Features

1. Simple connection for easy installation
2. Multiple protection: polarity, short circuit and overload protection
3. Two light indicators: power indicator green, action indicator orange

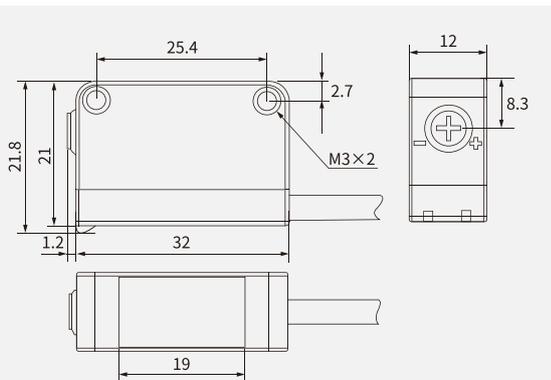
4. Not affected by the size and the colour of the detection object
5. Wide range of application scenarios
6. Product detection distance is arbitrarily adjusted, accurate positioning

▶ Main technical parameters

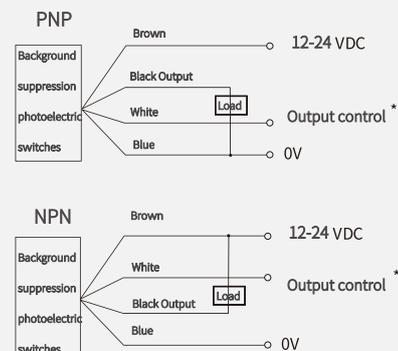
Specification	E3Z-D30N-BG	E3Z-D30P-BG	E3Z-D10N-BG	E3Z-D10P-BG	E3Z-D10NL-BG	E3Z-D10PL-BG
Detection distance※1	300mm		100mm			
Setting distance	30-300mm(White paper100*100mm) 30-295mm (Black paper 100*100mm)		25-100mm(White paper 100*100mm) 25-95mm (black paper 100*100mm)			
Standard detection object	10*10cm White non-glossy paper				PCB with cut-outs	
Response frequency	Action * Reset: below 200Hz					
Return Difference range	5% of full scale				8 % of full scale	
Detectable objects	Objects not limited to metal, plastic, glass (transparent), wood, paper					
Supply Voltage	DC12 ~ 24V					
Operating current	Load current ≤ 100mA; Current consumption: NPN: ≤ 25mA, PNP: ≤ 35mA					
Residual voltage	Residual voltage below 1V (load current less than 10mA); Residual voltage below 2V (load current less than 10~100mA)					
Indicator light	Green power indicator, Orange action indicator					
Protection circuit	Power reverse connection, load short circuit, output reverse connection protection					
Output method	NPN: NPN open collector output; PNP: PNP open emitter output					
Output Action	NO/NC can be switched, the switching mode is white wire and blue wire shorting					
Temperature range	Operating: -25~+55 (no icing, condensation); Storage: -40~+70 (no icing, condensation)					
Humidity range	Operation, storage: 35~95% (no condensation)					
Ambient illuminance range	Incandescent: Spot intensity under 3,000Lx; Sunlight: Spot intensity: under 10,000Lx					
Sensing surface material	PC					

※1. Detection distance range value ±10%, Response frequency is the average value Measure conditions: using standard detection objects.

▶ Dimension (Unit: mm)



▶ Wiring diagram



► Digital Fibre Optic Sensors



► Model Explanation

C6 - F21 □

① ② ③

- ① C6 series
- ② Single output
- ③ Blank: NPN P: PNP

► Product Feature

1. Zero migration, saturation recovery and anti-light interference
2. The fastest response speed up to 25us
3. NO and NC interchangeable, and have a time delay function
4. NPN or PNP output
5. One-button operation with time delay detection function

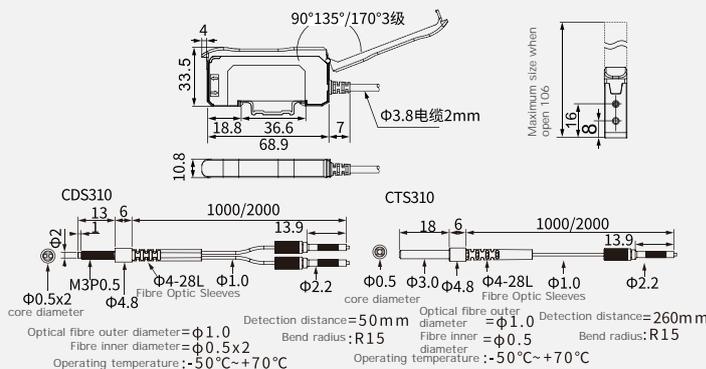
► Main technical parameters

Item	Output type	
Specification	C6-F21	C6-F21P
Output method	NPN	PNP
Light	Red modulated light 625nm	
Detection method	Light intensity (area detection, automatic sensitivity tracking function)	
Response time	Standard mode 200us, long distance mode 24ms, high speed mode 25us	
Timer function	On Delay, Off Delay, ONE SHOT Timer	
Switching mode	L.on (light-in action)/D.on (light-out action) can be set	
Supply Voltage	Rated voltage DC12~24V+10% pulsation (P-P) 10% or less	
Current consumption	≤ 30mA	
Basic value tracking	Standard	
Lighting frequency	Adjustable to prevent mutual interference	
Offset setting	Standard	
Area Detection	Standard	
Practical Functions	Parameter initialisation/key lock/threshold two points	
Setting Method	Manual setting/full automatic setting	
Protection circuit	Surge protection circuit, short circuit, reverse polarity protection	
Timing range	1 ~ 9999ms	
Temperature range	-20°C~ 55°C	
Humidity range	35 ~ 85% RH	
Sensing surface material	PC	

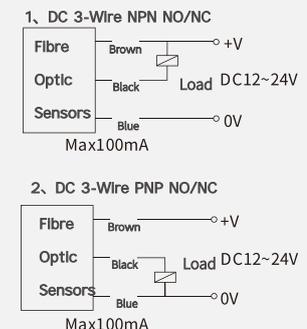
► Fibre Optic Probe Model Description

C Company identification	D D: Diffuse reflective T: Directional type	S S: Size 1.0mm/0.5 E: Size 1.0mm/0.25 D: Size 1.3mm/0.5 K: Size 2.2mm/1.5 B: Size 1.3mm/0.75 C: Size 2.2mm/16*0.25 A: Size 1.3mm/1.0 Blank: Size 2.2mm/1.0	3 6: Detection size 6mm 5: Detection size 5mm 4: Detection size 4mm 3: Detection size 3mm 2: Detection size 2mm 1: Detection size 1mm	H H: Premium Type Blank: Standard	10 05: Fibre optic line length 500mm 10: Fibre optic line length 1000mm 20: Fibre optic line length 2000mm 30: Fibre optic line length 3000mm	I I: Convex tube length 10mm S: Convex tube length 20mm M: Convex tube length 40mm L: Convex tube length 90mm	Q Q: Without screw threads R: Bendable L: Side detection TZ: 90° detection D: Short head J: Metal fibre
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► Dimension (Unit: mm)



► Wiring diagram



▶ Light curtain sensors



▶ Model Explanation

C8 006 C NC B C 03G - F

① ② ③ ④ ⑤ ⑥ ⑦ ⑧

- ① C8 series
- ② Number of optical axes: 4, 6, 8, 10, 12, 14, 16, 18, 20.....300
- ③ Optical axis spacing: C: 20mm, F: 40mm
- ④ NC: NPN N C、NO: NPN N O、PC: PNP N C、PO: PNP N O
SNC: Dual NPN NC, SNO: Dual NPN DO, SPC: Dual PNP NC
SPO: Dual PNP NO, MC: Relay NC, MO: Relay NO
- ⑤ B: 30mm×30mm
- ⑥ C: L-shaped side mounting bracket, E: up and down mounting brackets
- ⑦ 03G: Sensing Distance 3m、05G: Sensing Distance 5m
- ⑧ F: Waterproof and Dustproof、G: Light sync

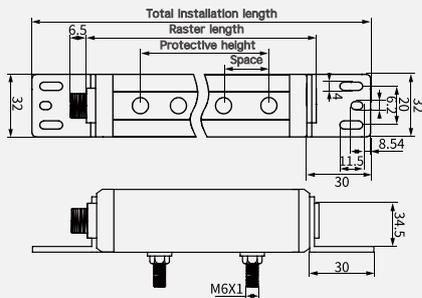
▶ Product Features

- 1、 Variety installations are available to suit different spaces
- 2、 Aluminium alloy shell
- 3、 Optical synchronisation technology
- 4、 Digital tube right indication, convenient for installation and debugging

▶ Main technical parameters

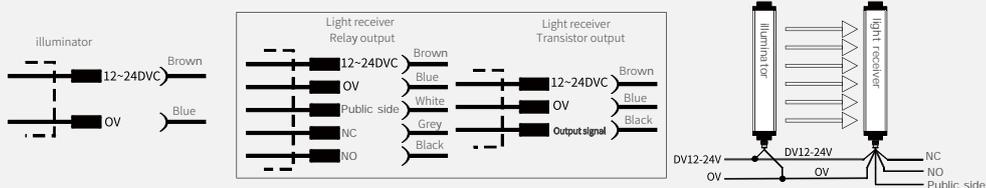
Specification	Light curtain sensors					
C series	C8004CNCBC03G	C8006CNCBC03G	C8008CNCBC03G	C8046CNCBC03G	C8048CNCBC03G
F series	C8004FNCBC03G	C8006FNCBC03G	C8008FNCBC03G	C8046FNCBC03G	C8048FNCBC03G
Note: The above models are several selections, if there are other models selections, please refer to the model Composition						
Series	C series			F series		
Number of optical axes	4, 6, 8.....46, 48			4, 6, 8.....46, 48		
Detection diameter mm	≥ φ25			≥ φ45		
Total mounting height	183、223、263.....1068			263、343、423.....2028		
Detection distance	0.1 ~ 5m					
Sensitivity adjustment	Non-adjustable					
Response time	10 ~ 34ms max					
Reset time	Output reset time < 200ms					
Response time	1kHz(Max 3kHz)					
Supply Voltage	24±10%VDC; Rippl (continuous wave) ±20% P-P max					
Current consumption	30mA					
Residual voltage	≤ 1V					
Protection circuit	Polarity protection and instantaneous reverse polarity protection					
Indicator light	Digital tube indicator					
Ambient illuminance	Incandescent: Spot intensity under 3,000Lx; Sunlight: Spot intensity: under 10,000Lx (Angle of incidence ≥ 5°)					
Temperature range	Operating: -5 to +55°C (no icing, condensation); Storage: -30 to +80°C (no icing, condensation)					
Humidity range	Operating, storage: 25 to 85% (no condensation)					
EMC Standard	ESD: 8KV(Aircharge(level3)/EN-61000-4-2;Burettest:2KV/EN61000-4-4 RF Interferenoe:10V/M/ENV50140					
Connection Method	Cable Inserts					
Material	Aluminium alloy, top and bottom cover: reinforced nylon					
Installation	Slotted installation					

▶ Dimension (Unit: mm)



Number	Optical axis distance 20mm			Optical axis distance 40mm			Number	Optical axis distance 20mm			Optical axis distance 40mm		
	Protective height	Raster length	Total installation length	Protective height	Raster length	Total installation length		Protective height	Raster length	Total installation length	Protective height	Raster length	Total installation length
04	60mm	133mm	183mm	120mm	213mm	263mm	28	540mm	618mm	668mm	1080mm	1178mm	1228mm
06	100mm	173mm	223mm	200mm	293mm	343mm	30	580mm	658mm	708mm	1160mm	1258mm	1308mm
08	140mm	213mm	263mm	280mm	373mm	423mm	32	620mm	698mm	748mm	1240mm	1338mm	1388mm
10	180mm	258mm	308mm	360mm	458mm	508mm	34	660mm	738mm	788mm	1320mm	1418mm	1468mm
12	220mm	298mm	348mm	440mm	538mm	588mm	36	700mm	778mm	828mm	1400mm	1498mm	1548mm
14	260mm	338mm	388mm	520mm	648mm	698mm	38	740mm	818mm	868mm	1480mm	1578mm	1628mm
16	300mm	378mm	428mm	600mm	728mm	778mm	40	780mm	858mm	908mm	1560mm	1658mm	1708mm
18	340mm	418mm	468mm	680mm	778mm	828mm	42	820mm	898mm	948mm	1640mm	1738mm	1788mm
20	380mm	458mm	508mm	760mm	858mm	908mm	44	860mm	938mm	988mm	1720mm	1818mm	1868mm
22	420mm	498mm	548mm	840mm	938mm	988mm	46	900mm	978mm	1028mm	1800mm	1898mm	1948mm
24	460mm	538mm	588mm	920mm	1018mm	1068mm	48	940mm	1018mm	1068mm	1880mm	1978mm	2028mm
26	500mm	578mm	628mm	1000mm	1098mm	1148mm							

▶ Wiring diagram



CHB38S/H

series

Encoders

▶ Rotary encoder



▶ Model Explanation

CHB 38 S - E - 100 - 2m

① ② ③ ④ ⑤ ⑥

- ① Design code: CHB38S、CHB38H
- ② Outer diameter: $\phi 38\text{mm}$
- ③ Shaft diameter type: S: Hollow shaft; H: Semi-hollow shaft
- ④ Output form: N: Open collector output(NPN); E: Voltage output; F: Complementary output; L: Drive output
- ⑤ Pulse: 100、200、300、360、400、500、600、800、1000、1024、1200、2000、2500
- ⑥ Cable length: Regularly 2 metres

▶ Product Features

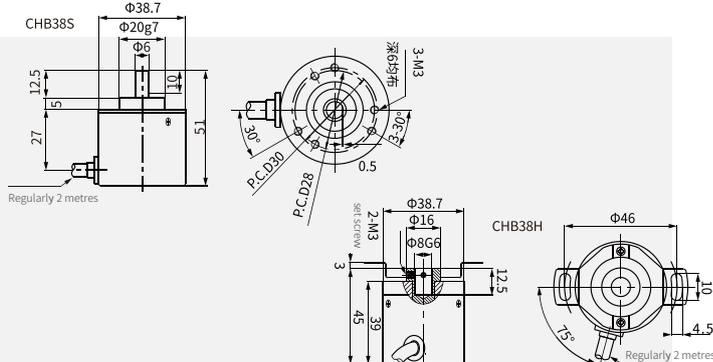
1. Stable and reliable performance with internal ASIC optoelectronic devices
2. Small shape, light weight, high precision, strong anti-interference ability, suitable for narrow space applications
3. Adoption of stainless steel nickel-plated shaft card: Hard to rust
4. Lightweight and robust aluminium
5. High utility

▶ Main technical parameters

Output form	E: Voltage output	N:NPN Output	F: Complementary output	L: Drive output
Specification	CHB38S-E-100-2m	CHB38S-N-100-2m	CHB38S-F-100-2m	CHB38S-L-100-2m
	CHB38S-E-200-2m	CHB38S-N-200-2m	CHB38S-F-200-2m	CHB38S-L-200-2m

Semi-hollow shaft	CHB38S-E-2500-2m	CHB38S-N-2500-2m	CHB38S-F-2500-2m	CHB38S-L-2500-2m
	CHB38H-E-100-2m	CHB38H-N-100-2m	CHB38H-F-100-2m	CHB38H-L-100-2m
	CHB38H-E-200-2m	CHB38H-N-200-2m	CHB38H-F-200-2m	CHB38H-L-200-2m
.....	
.....	CHB38H-E-2500-2m	CHB38H-N-2500-2m	CHB38H-F-2500-2m	CHB38H-L-2500-2m
Electrical parameters				
Output phase	A、B、Z、/A、B、Z、-A、-B、-Z			
Supply Voltage	DC5 ~ 24V	DC5 ~ 24V	DC5 ~ 24V	DC5V
Current consumption	$\leq 60\text{mA}$	$\leq 60\text{mA}$	$\leq 60\text{mA}$	$\leq 100\text{mA}$
VH Output Voltage	$\geq V_{cc}-2.5\text{V}$	/	$\geq V_{cc}-2.5\text{V}$	$\geq 2.5\text{V}$
VL Output Voltage	$\leq 0.5\text{V}$	/	$\leq 1\text{V}$	$\leq 0.5\text{V}$
Rise time	$\leq 1500\text{ns}$	/	$\leq 1500\text{ns}$	$\leq 200\text{ns}$
Decline time	$\leq 300\text{ns}$	/	$\leq 300\text{ns}$	$\leq 200\text{ns}$
Response frequency	0 ~ 100KHz			
Mechanical parameters				
Outlet Method	Side outlet			
Maximum speed	6000r/min			
Starting torque	$1.5 \times 10^{-3} \text{N} \cdot \text{m}$ (25°C)			
Allowable acceleration	$1.0 \times 10^4 \text{r/s}^2$			
Maximum radial load	20N			
Maximum axial load	10N			
Moment of inertia	$4 \times 10^{-8} \text{kgm}^2$			
environmental parameters				
Temperature range	Operating: -25 to +70°C (no icing, condensation); Storage: -25 to +85°C (no icing, condensation)			
Humidity range	Operation, storage: 35~85% RH(no condensation)			
Material	Aluminium			

▶ Dimension (Unit: mm)



▶ Wiring diagram

1. Open collector output、Voltage output、

Complementary output type

Wire Colour	Red	Black	Green	White	Yellow	Block
Define	Vcc	0V	A	B	Z	G

2. Drive output

Wire Colour	Red	Black	Green	White	Yellow	Brown	Grey	Block
Define	Vcc	0V	A	B	Z	/A	/B	/Z

▶ Rotary encoder



▶ Model Explanation



- ① Incremental design code: CHB
- ② Flange Outer Diameter: $\Phi 48\text{mm}$
- ③ Hole diameter: Taper hole: 09
- ④ Shaft diameter type: T: full hollow shaft
- ⑤ Pulse: 500, 1000, 2000, 2500, 5000
- ⑥ Magnetic pole pair number: 2P、3P、4P、5P
- ⑦ Connection piece: A、B
- ⑧ Cable length: standard 0.3M

5、Using NMB bearings imported from Japan, the highest speed can reach 12000rpm.

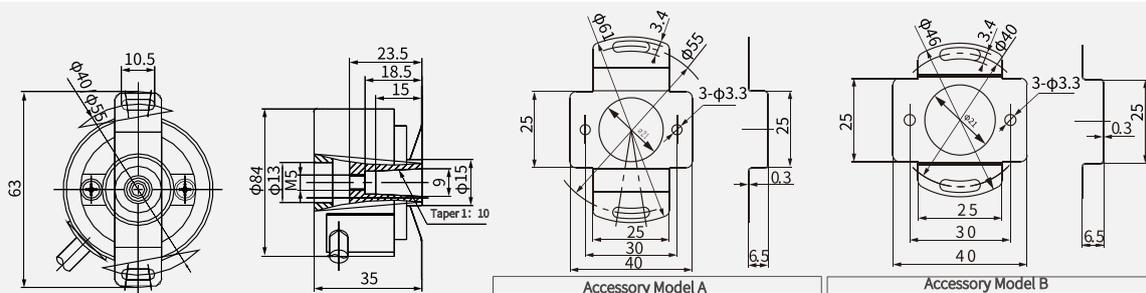
▶ Product Features

- 1、Product performance is stable and reliable
- 2、Using German blue light supporting phase array technology, stable and automatic adjustment of optical power
- 3、Incremental pulse number can be selected within 5000P/R.
- 4、Use four-layer PCB circuit design, high chip integration, electromagnetic interference resistance

▶ Main technical parameters

Specification	CHB4809T-500-2P-A	CHB4809T-1000-2P-A	CHB4809T-2000-2P-A	CHB4809T-2500-2P-A	CHB4809T-5000-2P-A
	CHB4809T-500-3P-A	CHB4809T-1000-3P-A	CHB4809T-2000-3P-A	CHB4809T-2500-3P-A	CHB4809T-5000-3P-A
	CHB4809T-500-4P-A	CHB4809T-1000-4P-A	CHB4809T-2000-4P-A	CHB4809T-2500-4P-A	CHB4809T-5000-4P-A
	CHB4809T-500-5P-A	CHB4809T-1000-5P-A	CHB4809T-2000-5P-A	CHB4809T-2500-5P-A	CHB4809T-5000-5P-A
	Note: Above is part of specifications , if you have other selection, please refer to the model composition.				
Electrical parameters					
Supply Voltage	5±0.25V				
Output Method (AM26C31)	Drive output				
Current consumption	≤ 60mA				
VH Output Voltage	> 3.4				
VL Output Voltage	< 3.4				
Output phase	A、B、Z、U、V、W / -A、-B、-Z、-U、-V、-W				
Response frequency	0-300KHz				
Mechanical parameters					
Maximum speed	6000r/min				
Starting torque	$5 \times 10^{-3} \text{N} \cdot \text{m}$ (25°C)				
Allowable acceleration	$1.0 \times 10^4 \text{r/s}^2$				
Maximum radial load	10N				
Maximum axial load	10N				
Moment of inertia	$1 \times 10^{-5} \text{kgm}^2$				
Environmental parameters					
Temperature range	Operating: -30°C to 85°C (no icing, condensation) Storage: -40°C to 120°C (no icing, condensation)				
Humidity range	Operation, storage: 35~85% RH(no condensation)				
Material	Aluminium				

▶ Dimension (Unit: mm)



▶ Wiring diagram

Colour	Red	Black	Blue	Green	Yellow	Brown	Grey	White	Blue-black	Green-black	Yellow-black	Brown-black	Grey-black	White-black
Define	5V	0V	A	B	Z	U	V	W	/A	/B	/Z	/U	/V	/W