CNTD ELECTRIC TECHNOLOGY CO., LTD.

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THE CATALOGUE IS FOR REFERENCE ONLY

* CNTD Electric Technology Co., Ltd. keeps innovating. The information in this catalogue is for reference only. Please do not use the catalogue as a formal installation guide.For installation, operation and maintenance of unconventional applications, please consult the service personnel of CNTD Electric Technology Co., Ltd. for further support.

PROPER USE OF PRODUCT

* The product must be used in an environment ensures that the product's operating parameters do not exceed the rating value. The risks associated with the system in which the product is used should be analyzed and controlled by multiple measures. Do not singly use the product in situations involving personal safety and property safety such as emergency stop device.

Promotional Video

www.cntd.com

INDUSTRIAL AUTOMATION

CNTD ELECTRIC TECHNOLOGY CO., LTD.

PRODUCT CATALOG 2023

CNTD®

CNTD Introduction

CNTD Electric Technology Co., Ltd., located at Yueqing Economic development zone, Zhejiang, China, has been specializing in industrial automation used switches since 2000, and is now an exemplary enterprise in our industry. As a leading industrial automation switch manufacturer and partner of many world top 500 companies, CNTD has been devoting to serving customers with both professional switch and sensor solutions.

CNTD Electric Technology Co., Ltd. has been led by the experienced R&D team and equipped with abundant developing devices. Innovation and perfectionism are our creeds. Guided by advanced designing theories and methods, we are able to provide various of cost-efficient products including Vertical Limit Switches, Horizontal Limit Switches, Pushbutton Switches, Power Pushbutton Switches, Monolever Switches, Foot Switches, Toggle Switches, Proximity Sensors, Photoelectronic Sensors, Control Boxes and Terminal Blocks.

CNTD's products now have certifications including China Compulsory Certification and CE certificates by TÜV Rheinland. Due to our continuing exploration in technology, we have strong ability to customize products for harsher using environment and outfit corresponding ROHS, RECAH, UL or any other required certificates. Satisfying customers' needs utilizing our technical strength has always been our persistent pursuit.

As a reliable supplier of our customers, CNTD has quite strict control on quality and efficiency. CNTD has established a tracible management system from product designing, material purchasing, workblank producing, accessories processing, product assembling to finished product delivery. Professional quality control team supervises all the quality details from R&D, production to outbound. PMC team oversees supply chain management by thorough planning on purchasing, warehousing and dispatching. Industrial team is acting as the backbone of high production efficiency and stability by updating production equipment and lines. Strict control over quality cost, constant supply chain improvements and high production efficiency are always what enabling us to provide cost-efficient switches and sensors.

Excellent Service is a value adding for our high-quality products. We now have specialized teams serving Chinese customers, foreign customers and large projects customers, all supported by our experienced field service engineers. No matter which country our customers are coming from and what industry our customers are in, we can always response timely with our thoughtful service. For this reason, CNTD has now become a strong partner for more and more customers.

Ingenuity designs, Perfectionism makes. CNTD Electric Technology Co., Ltd.

R&D / Manufacture / Quality Control / Support

R&D

CNTD only focus on industrial automation. For R&D, we have a professional team to make our product both crystallization of science and work of art.

QUALITY CONTROL

Good quality is always based on strict quality control. No tolerance on quality problem is our principle to keep CNTD's brand image. For this, we have set a series of rigorous tests. We believe "0.0% failure rate" is our duty both to our customer and ourselves.

MANUFACTURE

To present our designs and solutions to our customer, winning a good reputation, we have organized a professional production team supported by advanced manufacturing and testing equipment.

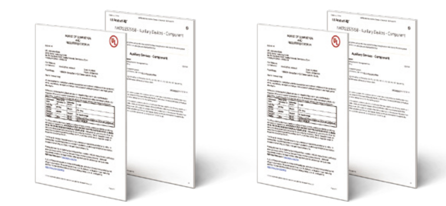
SUPPORT

To ensure the trouble-free using of our product, our professional customer-service teams are always ready to communicate with our customer and provide any kind of support. To solve our customers' problem is our eternal pursuit.

CERTIFICATION

ISO9001:2008 quality management system certificate

UL Underwriters Laboratories



China CCC product quality certificate

CE certificate（LVD）by TUV Rheinland

CE certificate（LVD）by CTS

Product Contents

A Limit Switch Division

Vertical Limit Switch

Horizontal Limit Switch

B Industrial Control Division

Toggle Switch

Miniature General Purpose Relay

Solid State Relay

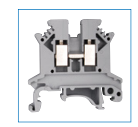
Foot Switch

Power Pushbutton Switch

Monolever Switch

Warning Lamp

Motor Siren



Connection Terminal

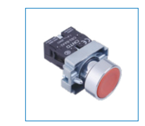
C Pushbutton Switch Division

LA38 Pushbutton Switch Ø22

LA36 Pushbutton Switch Ø22

LA38M Pushbutton Switch Ø22

LA36M Pushbutton Switch Ø22



CB2 Pushbutton Switch Ø22

LD16 Indicator Light Ø22

C2、C3 Pushbutton Switch

CNTD

D Smart Meter Division

E Sensor Division

CNTD®

A

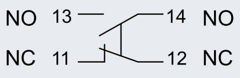
Limit Switch Division

TZ-8 Vertical Limit Switch

Features

- Double circuit type of limit switch
- High mechanical strength, consists of intensive plastic and aluminum cast
- Small size, water-proof and oil-proof construction
- Built-in contact box has double-spring and long mechanical life
- Smooth operation with larger over travel distance
- Conduit design for convenient cabling
- Various actuators for different applications

Contact Form



Ratings

Rated Voltage	Noninductive Load (A)				Inductive Load (A)			
	Resistance Load		Lamp Load		Inductive Load		Motor Load	
	NC	NO	NC	NO	NC	NO	NC	NO
125VAC 250VAC	5 5	5 5	1.5 1	0.7 0.5	3 3	3 3	2 1.5	1 0.8
8VDC 14VDC 30VDC 125VDC 250VDC	5 5 5 0.4 0.2	5 5 5 0.4 0.2	3 3 3	3 3 3	5 4 4	4 4 4	3 3 3	3 3 3
Inrush Current	N.C: below 24A, N.O: below 12A							

NOTES: 1.Inductive load has a power factor of 0.4 min.(AC) and a time constant of 7 msec. max.(DC).
2.Lamp load has an inrush current of 10 times the steady-state current,while motor load has an inrush current of 6 times the steady-state current.
3.Product with spring, its usable range of operating part is within one third of the whole spring length from the front end of spring.

Specifications

Operation speed	5mm-0.5m/s
Operating frequency	Electical: 30 operations/min
Contact resistance	25mΩ max. (initial value）
Insulation resistance	100mΩ min. （below 500VDC）
Dielectric strength	1000VAC, 50/60 Hz for 1 minute between terminals of the same polarity
	1500VAC, 50/60 Hz for 1 minute between current-carrying and non-current-carrying metal parts
	1500VAC, 50/60 Hz for 1 minute between each terminal and ground
Vibration	10-55Hz,1.5mm double amplitude
Shock	Mechanical durable: 1, 000m/Sec^2 (about 100G'S) Malfunction: 300m/Sec^2 (about 30G'S)
Ambient temperature	Using: -20~+70℃ （With no icing）
Humidity	<95% RH
Electrical life	500,000 operations above
Degree of protection	IP65

Operating Characteristics

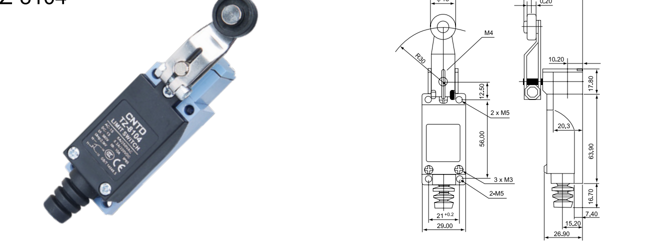
Model	TZ-8	TZ-8104 TZ-8105	TZ-8108 TZ-8109	TZ-8107	TZ-8111	TZ-8112/8122	TZ-8166/8167/8168/8169
Operating force	OF(Max.)	750g	750g	750g	900g	900g	150g
Release force	RF(Min.)	100g	100g	100g	150g	150g	-
Pre-travel	PT(Max.)	20°	20°	20°	1.5mm	1.5mm	30mm
Over travel	OT(Min.)	50°	50°	50°	4mm	4mm	-
Movement differential	MD(Max.)	12°	12°	12°	1mm	1mm	-
Operating position	OP(mm.)	-	-	-	26 ± 0.8mm	37 ± 0.8mm	-

TZ-8 Vertical Limit Switch

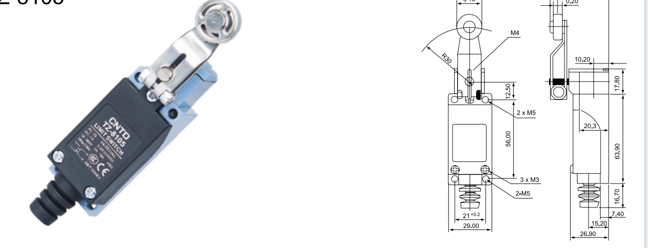
CNTD

Appearance and Dimension

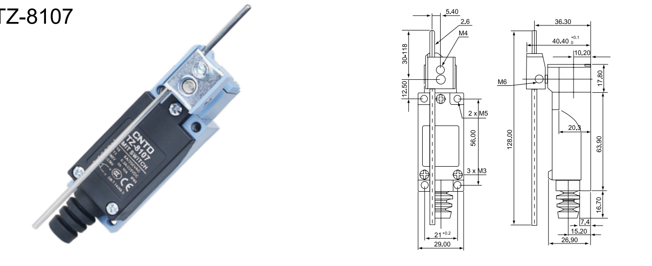
TZ-8104



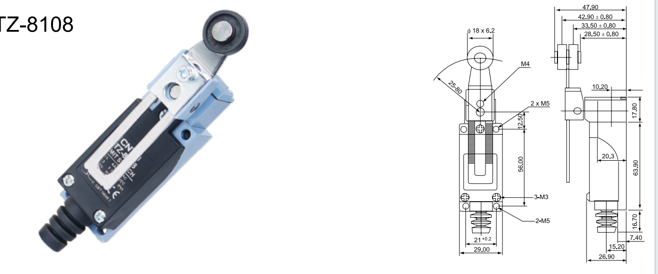
TZ-8105



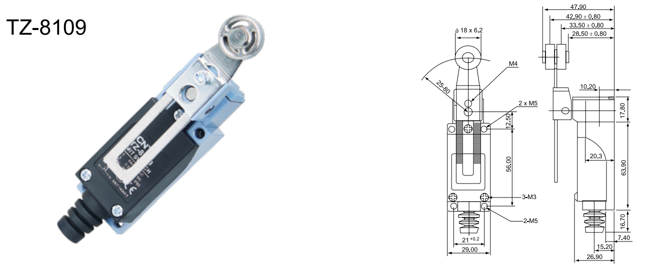
TZ-8107



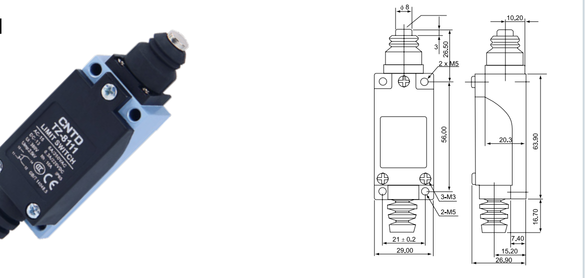
TZ-8108



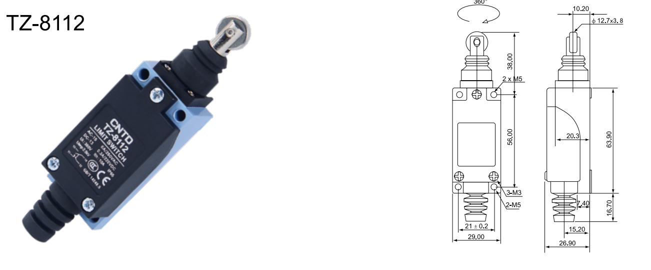
TZ-8109



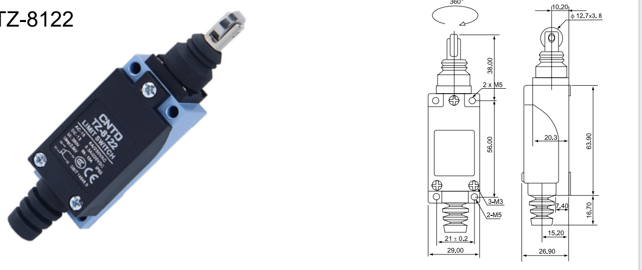
TZ-8111



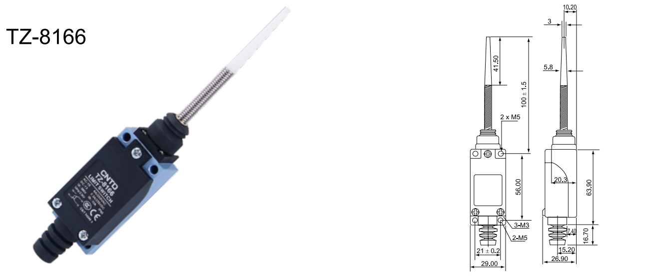
TZ-8112



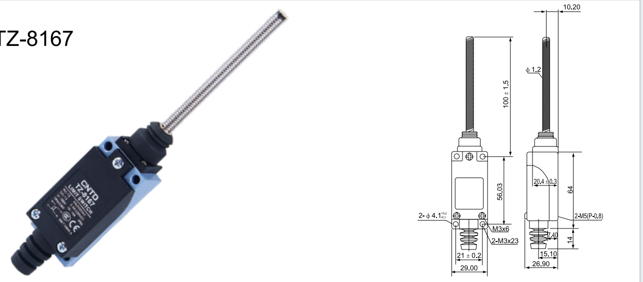
TZ-8122



TZ-8166

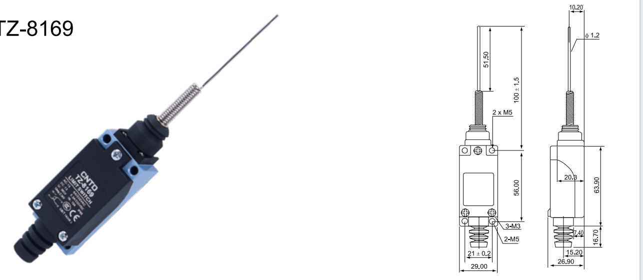


TZ-8167



TZ-8168

TZ-8169



CZ-8□N Vertical Limit Switch

Features

- Double circuit type of limit switch
- High mechanical strength, consists of intensive plastic and aluminum cast
- Small size, water-proof and oil proof construction
- Built-in contact box has double-spring and long mechanical life
- Smooth operation with larger over travel distance
- Various actuators for different application
- Optimize tail line design to improve sealing performance

Contact Form

NO 3 — 4 NO

NC 1 — 2 NC

Ratings

Rated Voltage	Noninductive Load (A)				Inductive Load (A)			
	Resistance Load		Lamp Load		Inductive Load		Motor Load	
	NC	NO	NC	NO	NC	NO	NC	NO
125VAC	5	5	1.5	0.7	3	3	2	1
250VAC	5	5	1	0.5	3	3	1.5	0.8
8VDC	5	5	3	3	5	4	3	3
14VDC	5	5	3	3	4	4	3	3
30VDC	5	5	3	3	4	4	3	3
125VDC	0.4	0.4						
250VDC	0.2	0.2						
Inrush Current	N.C: below 24A, N.O: below 12A							

NOTES: 1.Inductive load has a power factor of 0.4 min.(AC) and a time constant of 7 msec. max.(DC).
2.Lamp load has an inrush current of 10 times the steady-state current,while motor load has an inrush current of 6 times the steady-state current.
3.Product with spring, its usable range of operating part is within one third of the whole spring length from the front end of spring.

Specifications

Operation speed	5mm-0.5m/s
Operating frequency	Electical: 30 operations/min
Contact resistance	25mΩ max. (initial value)
Insulation resistance	100mΩ min.（below 500VDC）
Dielectric strength	1000VAC, 50/60 Hz for 1 minute between terminals of the same polarity
	1500VAC, 50/60 Hz for 1 minute between current-carrying and non-current-carrying metal parts
	1500VAC, 50/60 Hz for 1 minute between each terminal and ground
Vibration	10-55Hz,1.5mm double amplitude
Shock	Mechanical durable: 1, 000m/Sec^2 (about 100G'S) Malfunction: 300m/Sec^2 (about 30G'S)
Ambient temperature	Using: -20~+70℃（With no icing）
Humidity	<95% RH
Electrical life	500,000 operations above
Degree of protection	IP65

Operating Characteristics

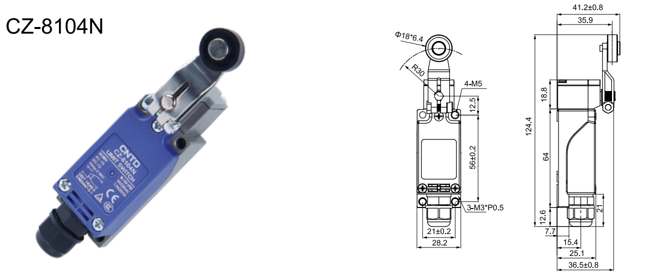
Model	CZ-8□N	CZ-8104N CZ-8105N	CZ-8108N CZ-8109N	CZ-8107N	CZ-8111N	CZ-8112N CZ-8122N	CZ-8166N/8167N/8168N/8169N
Operating force	OF(Max.)	750g	750g	750g	900g	900g	150g
Release force	RF(Min.)	100g	100g	100g	150g	150g	-
Pre-travel	PT(Max.)	20°	20°	20°	1.5mm	1.5mm	30mm
Over travel	OT(Min.)	50°	50°	50°	4mm	4mm	-
Movement differential	MD(Max.)	12°	12°	12°	1mm	1mm	-
Operating position	OP(mm.)	-	-	-	26 ± 0.8mm	37 ± 0.8mm	-

CZ-8□N Vertical Limit Switch

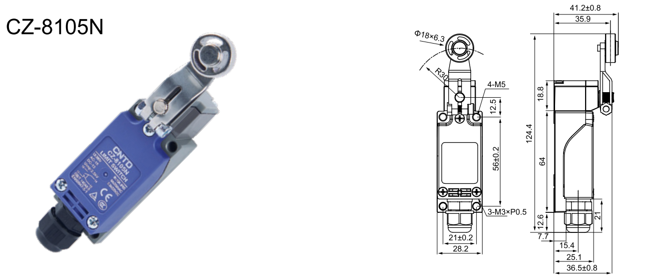
CNTD

Appearance and Dimension

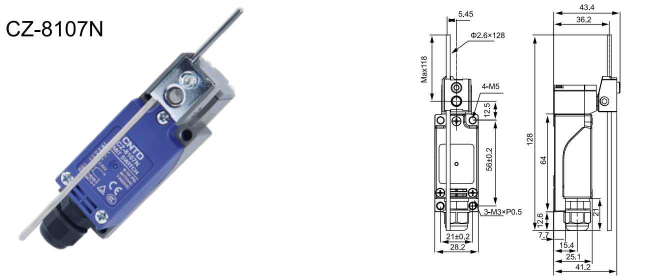
CZ-8104N



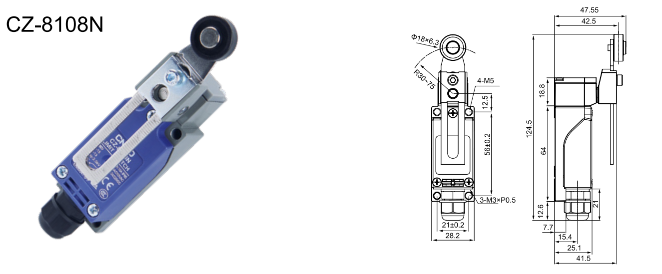
CZ-8105N



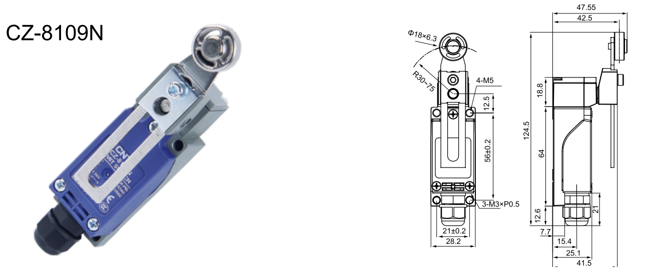
CZ-8107N



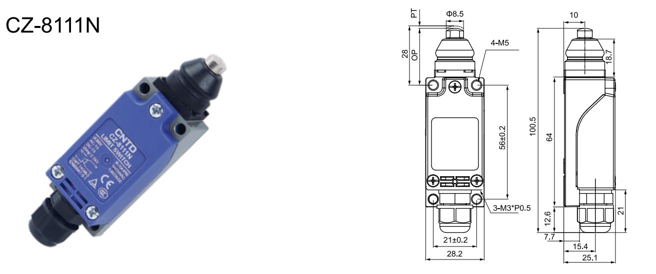
CZ-8108N



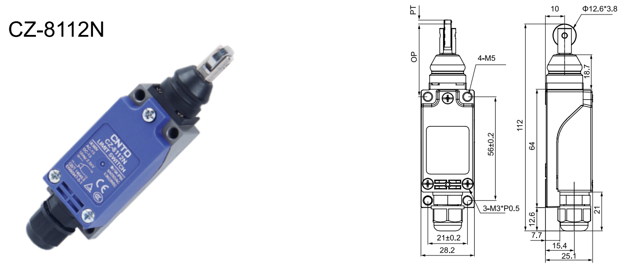
CZ-8109N



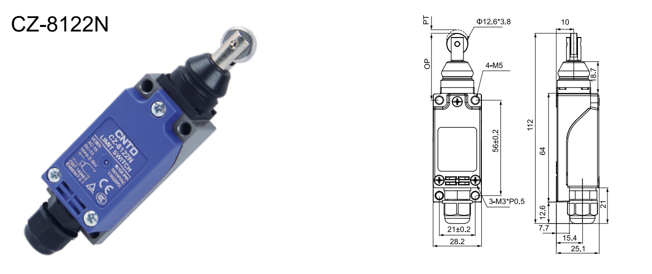
CZ-8111N



CZ-8112N



CZ-8122N



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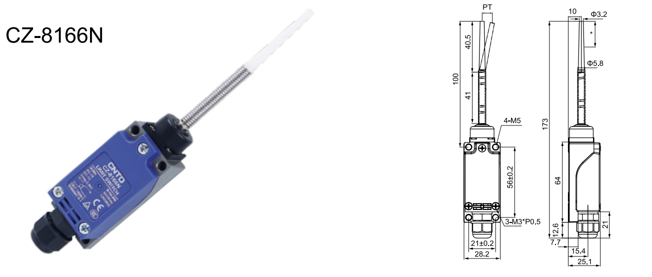
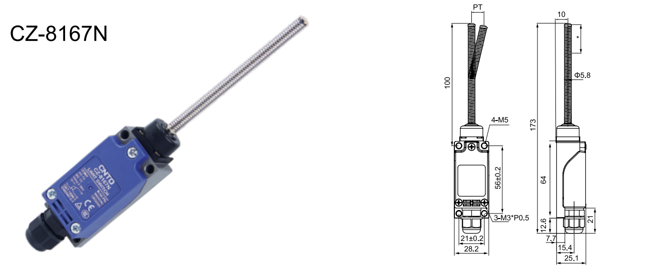
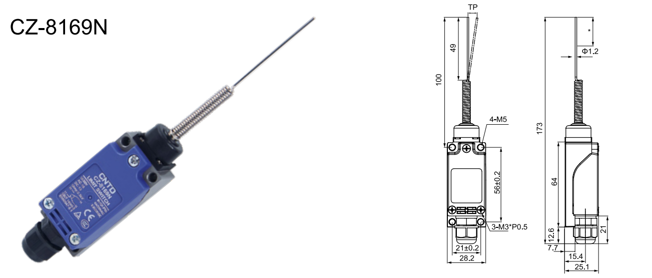


CZ-8167N

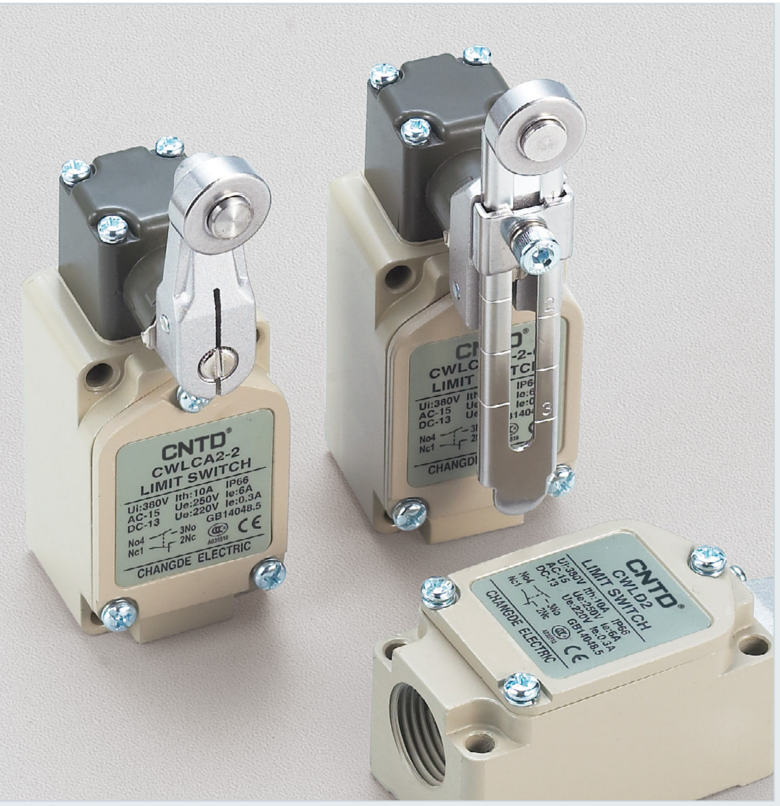


CZ-8168N

CZ-8169N



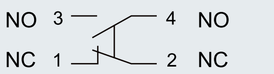
CWL Vertical Limit Switch



Features

- Double-circuit type of limit switch
- High mechanical strength, mainly consists of aluminum cast
- Water-proof and oil-proof construction
- Various actuators for different applications
- Built-in contact box with double spring mechanism, longer mechanical life

Contact Form



Ratings

Rated Voltage	Noninductive Load (A)				Inductive Load (A)			
	Resistance Load		Lamp Load		Inductive Load		Motor Load	
	NC	NO	NC	NO	NC	NO	NC	NO
125VAC	10		3	1.5	10		5	2.0
250VAC	5		2	1	5		3	1.0
480VAC	3		1.5	0.8	3		1.5	0.8
600VAC	1		1	0.5	1.5		1	0.5
8VDC	10		6	3	10		6	
14VDC	10		6	3	10		6	
30VDC	6		4	3	6		4	
125VDC	0.8		0.2	0.2	0.8		0.2	
250VDC	0.4		0.1	0.1	0.4		0.1	

NOTES: 1.Inductive load has a power factor of 0.4 min.(AC) and a time constant of 7 msec. max.(DC).
2.Lamp load has an inrush current of 10 times the steady-state current,while motor load has an inrush current of 6 times the steady-state current.
3.Product with spring, its usable range of operating part is within one third of the whole spring length from the front end of spring.

Specifications

Operation speed	1mm-1m/s
Operating frequency	Electical: 30 operations/min
Contact resistance	25mΩ max. (initial value)
Insulation resistance	100mΩ min. (below 500VDC)
Dielectric strength	1500VAC, 50/60 Hz for 1 minute between current-carrying and non-current-carrying metal parts
	1500VAC, 50/60 Hz for 1 minute between current-carrying and non-current-carrying metal parts
	1500VAC, 50/60 Hz for 1 minute between each terminal and ground
Vibration	10-55Hz,1.5mm double amplitude
Shock	Mechanical durable: 1, 000m/Sec^2 (about 100G'S) Malfunction: 300m/Sec^2 (about 30G'S)
Ambient temperature	Using: -20~+80℃ (With no icing)
Humidity	<95% RH
Electrical life	500,000 operations above
Protection level	IP66

NOTES: The default size of conduit connector is M20x1.5, outfitting cable connector. Conduit connector size is PG13.5, with product model number plus (-P), example:CWLCA2-2-P.

Operating Characteristics

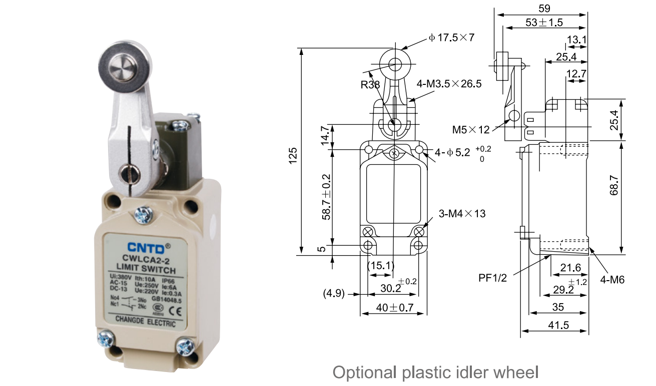
Model	CWL	CWLCA2-2	CWLD2	CWLNJ	CWLNJ-S2	CWLCA12-2-Q CWLCA12-2-QD	CWLCL	CWLCA32-41 CWLCA32-42	CWLD	CWLNJ-2	CWLNJ-30	CWLD1	CWLD3
Operating Force	OF(Max.)	1360g	2720g	150g	29g	1360g	142g	1200g	2720g	120g	80g	2720g	2720g
Release Force	RF(Min.)	227g	910g	-	-	227g	28g	-	910g	-	-	910g	910g
Pre-Travel	PT(Max.)	20°	1.7mm	28mm	28mm	20°	20°	55°	1.7mm	28mm	28mm	1.7mm	1.7mm
Over Travel	OT(Min.)	30°	5.6mm	-	-	30°	30°	35°	6.4mm	-	-	5.6mm	5.6mm
Movement Differential	MD(Max.)	12°	1mm	-	-	12°	12°	-	1mm	-	-	1mm	1mm
Total Force	TF(Max.)	2720g	-	-	-	2720g	200g	-	-	-	-	2720g	2720g
Total Travel	TT(Min.)	50°	6.5±0.8mm	-	-	50°	50°	OP:90±10°	OP:34±2.8mm	-	-	6.5±0.8mm	9±0.8mm

CWL Vertical Limit Switch

CNTD

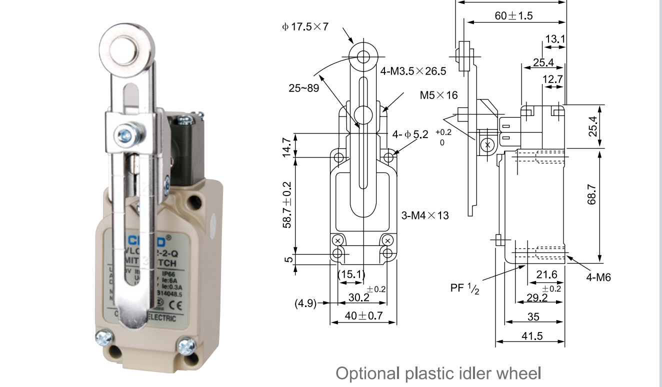
Appearance and Dimension

CWLCA2-2



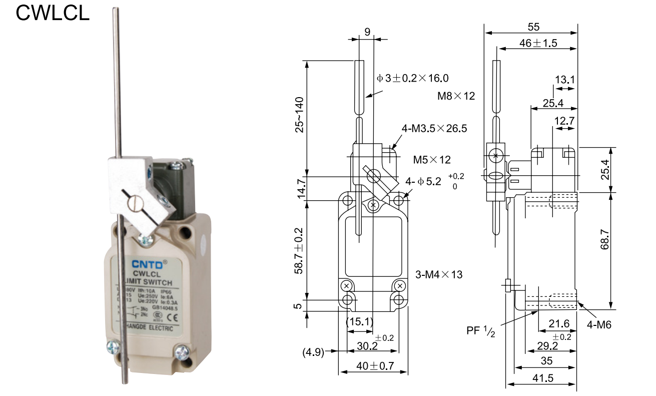
Optional plastic idler wheel

CWLCA12-2-Q

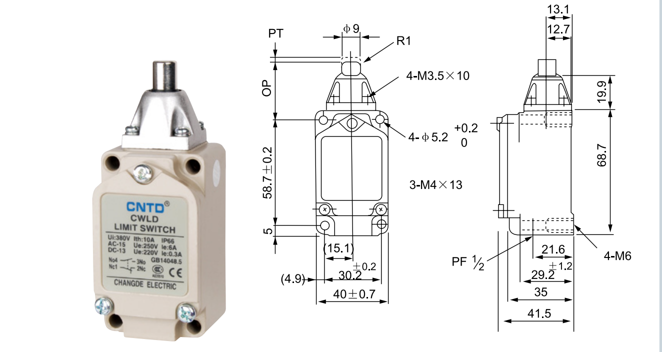


Optional plastic idler wheel

CWLCL



CWLD



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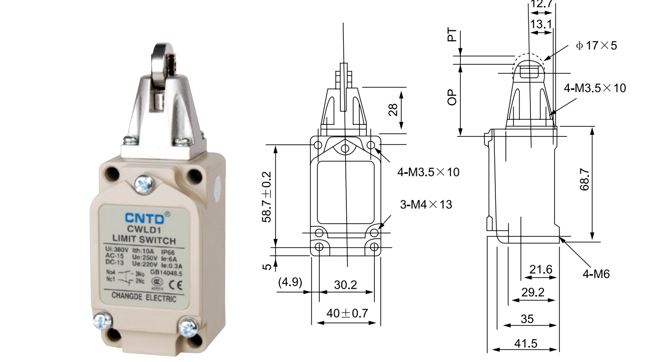

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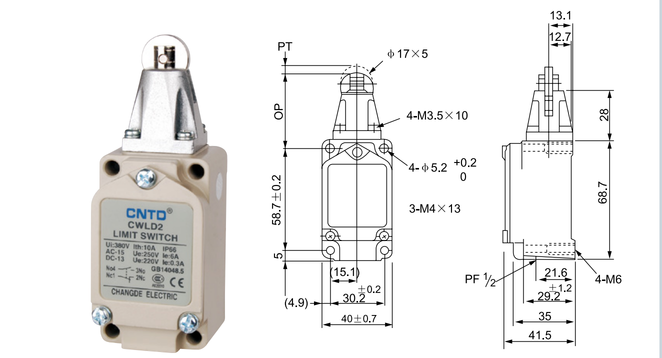
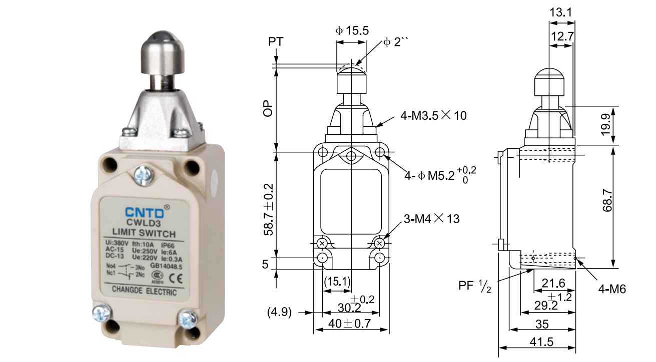
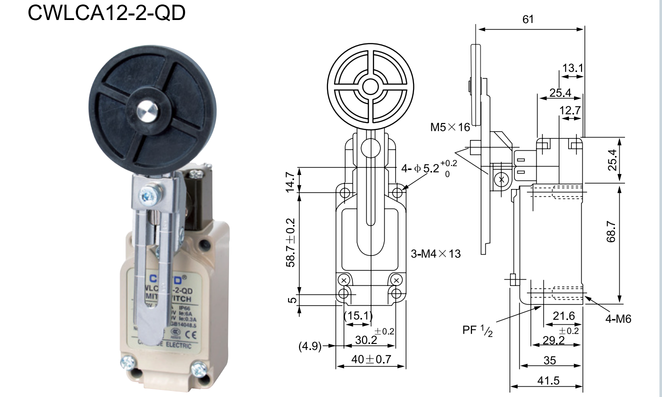


CWLD3



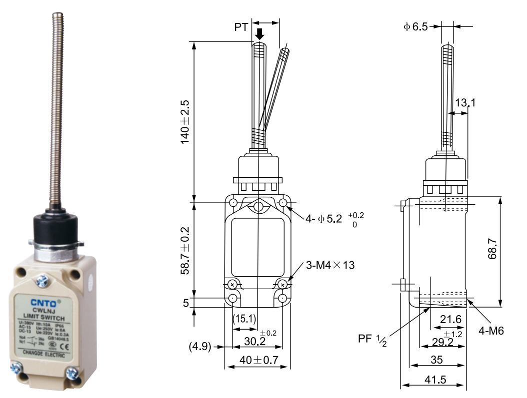
CWLCA12-2-QD



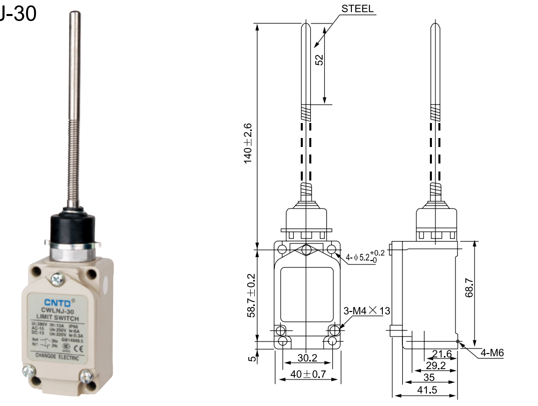
CWL Vertical Limit Switch

Appearance and Dimension

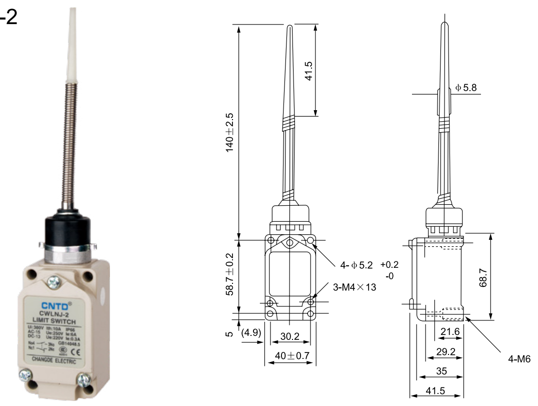
CWLNJ



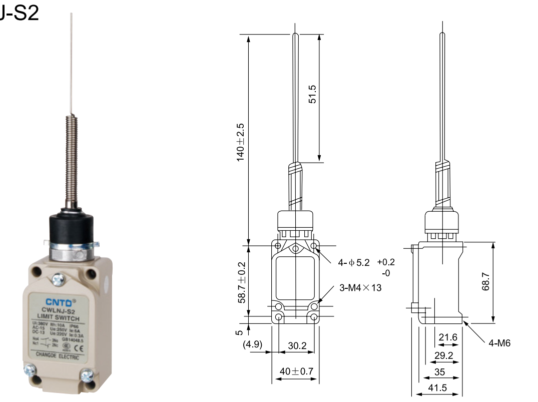
CWLNJ-30



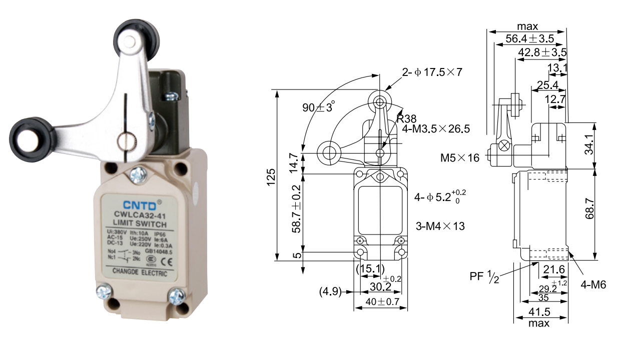
CWLNJ-2



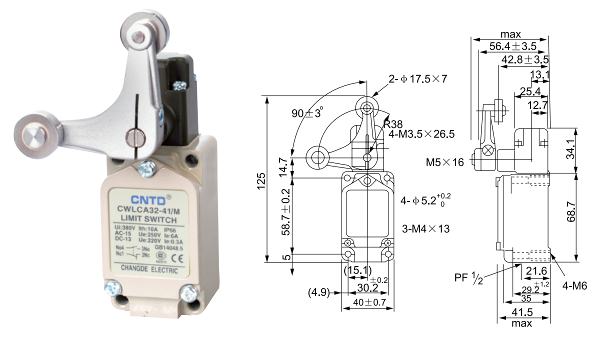
CWLNJ-S2



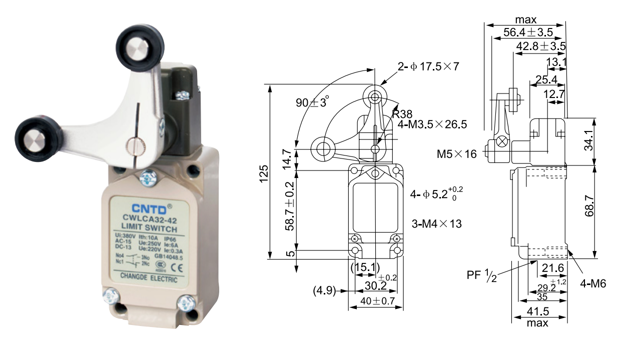
CWLCA32-41



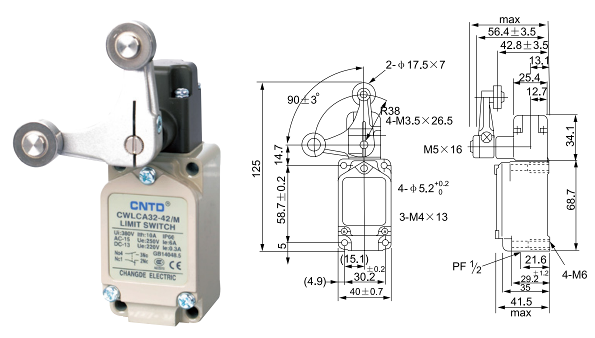
CWLCA32-41/M



CWLCA32-42

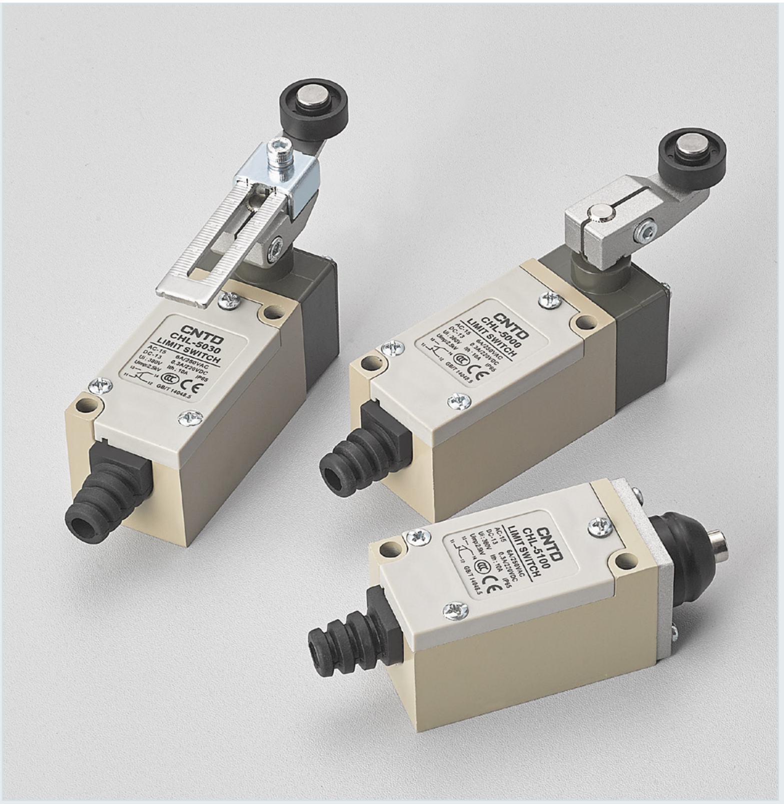


CWLCA32-42/M



CHL Vertical Limit Switch

CNTD



Features

- Various actuators for different applications
- Conduit design for convenient cabling
- Metal shell with high mechanical strength
- Built-in contact box has double-spring and long mechanical life

Contact Form

NO 3 — 4 NO

NC 1 — 2 NC

Ratings

Rated Voltage	Noninductive Load (A)				Inductive Load (A)			
	Resistance Load		Lamp Load		Inductive Load		Motor Load	
	NC	NO	NC	NO	NC	NO	NC	NO
125VAC 250VAC	5 5	5 5	1.5 1	0.7 0.5	3 3	3 3	2 1.5	1 0.8
8VDC 14VDC 30VDC 125VDC 250VDC	5 5 5 0.4 0.2	5 5 5 0.4 0.2	3 3 3	3 3 3	5 4 4	4 4 4	3 3 3	3 3 3
Inrush Current	N.C: below 24A, N.O: below 12A							

NOTES: 1.Inductive load has a power factor of 0.4 min.(AC) and a time constant of 7 msec. max.(DC).
2.Lamp load has an inrush current of 10 times the steady-state current,while motor load has an inrush current of 6 times the steady-state current.
3.Product with spring, its usable range of operating part is within one third of the whole spring length from the front end of spring.

Specifications

Operation speed	5mm-0.5m/s
Operating frequency	Electical: 30 operations/min
Contact resistance	25mΩ max. (initial value)
Insulation resistance	100mΩ min. (below 500VDC)
Dielectric strength	1000VAC, 50/60 Hz for 1 minute between terminals of the same polarity 1500VAC, 50/60 Hz for 1 minute between current-carrying and non-current-carrying metal parts 1500VAC, 50/60 Hz for 1 minute between each terminal and ground
Vibration	10-55Hz,1.5mm double amplitude
Shock	Mechanical durable: 1, 000m/Sec^2 (about 100G'S) Malfunction: 300m/Sec^2 (about 30G'S)
Ambient temperature	Using: -20~+70℃ (With no icing)
Humidity	<95% RH
Electrical life	500,000 operations above
Protection level	IP65

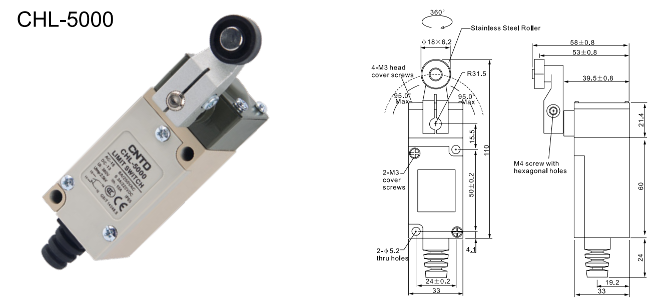
Operating Characteristics

Model	CHL	CHL-5000	CHL-5030	CHL-5050	CHL-5100	CHL-5200	CHL-5220	CHL-5300	CHL-5330	CHL-5381	CHL-5391
Operating force	OF (Max.)	750g	750g	750g	750g	900g	900g	150g	150g	150g	550g
Release force	RF (Min.)	100g	100g	100g	200g	200g	200g	30g	30g	30g	100g
Pre-travel	PT (Max.)	20°	20°	20°	1.8mm	1.8mm	1.8mm	30mm	30mm	30mm	20°
Tripping position	TP ± 10%	22.5°	22.5°	22.5°	2.0mm	2.0mm	2.0mm	22.5°	22.5°	22.5°	22.5°
Movement differential	MD (Max.)	10°	10°	10°	1.2mm	1.2mm	1.2mm	14°	14°	14°	14°
Over travel	OT (Min.)	75°	75°	75°	4.0mm	4.0mm	4.0mm	20mm	20mm	20mm	75°
Total travel	TT (Min.)	95°	95°	95°	5.8mm	5.8mm	5.8mm	50mm	50mm	50mm	95°

CHL Vertical Limit Switch

Appearance and Dimension

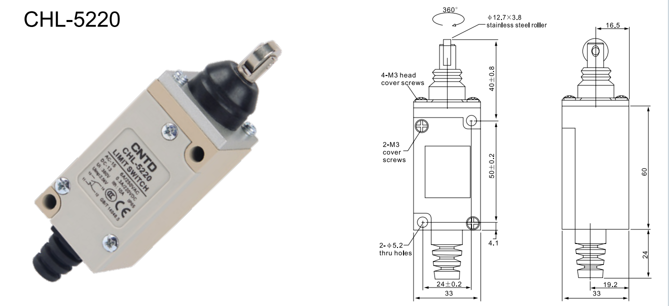
CHL-5000



Optional metal idler wheel

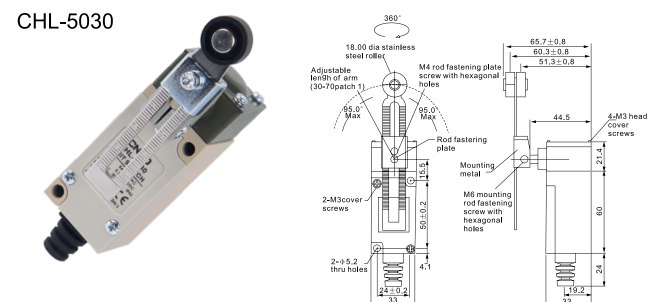
Nylon Roller LSN-5000P

CHL-5220



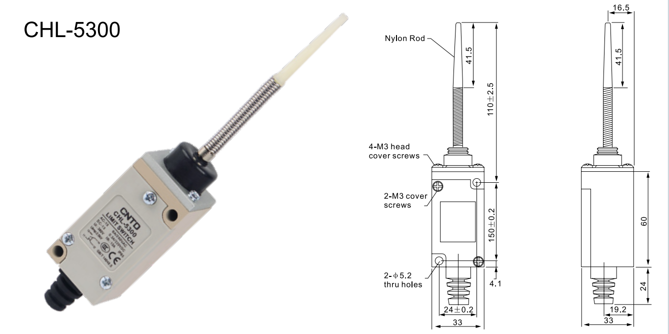
Direction of rotor CHL-5200

CHL-5030

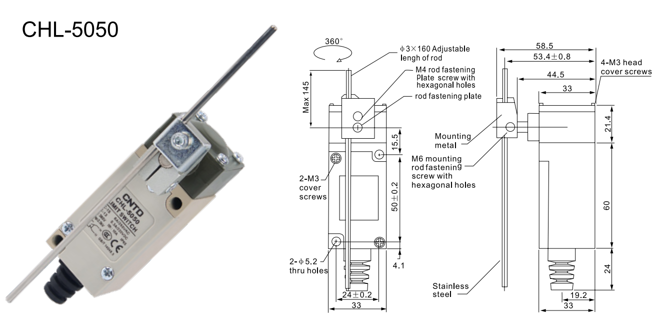


Optional metal idler wheel

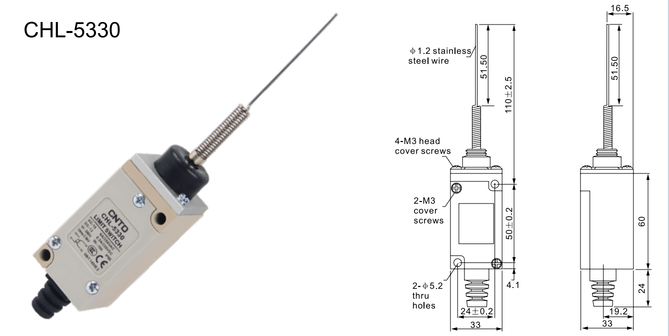
CHL-5300



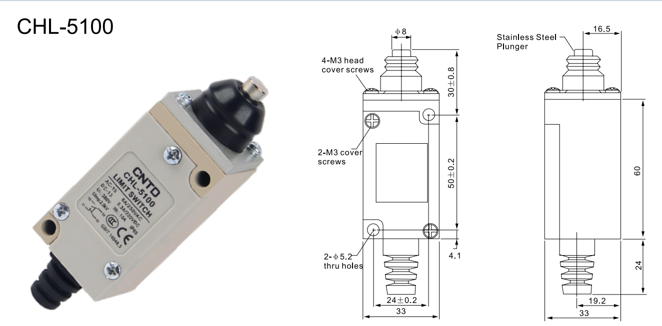
CHL-5050



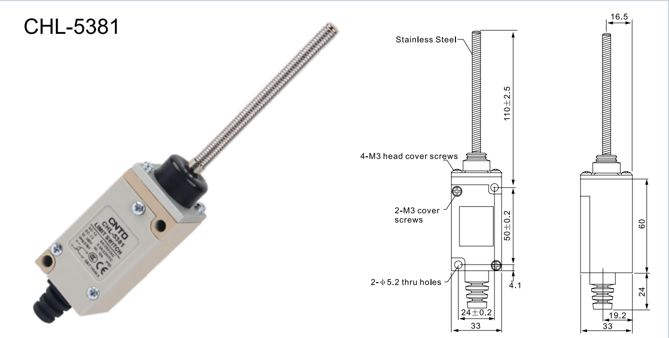
CHL-5330



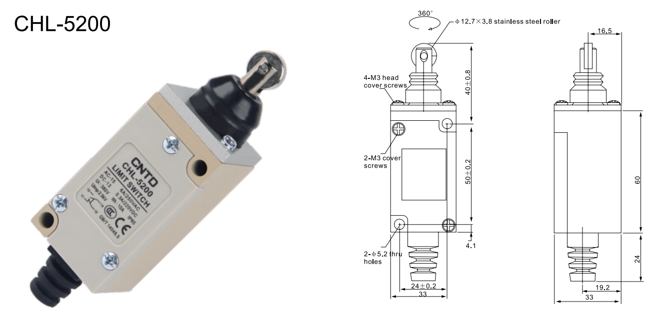
CHL-5100



CHL-5381

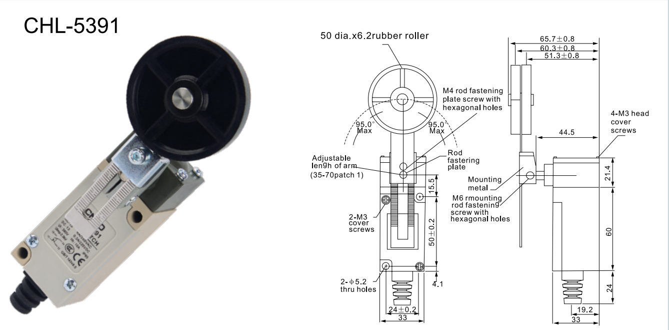


CHL-5200



Direction of rotor CHL-5220

CHL-5391



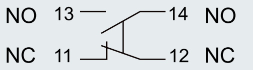
CSA Vertical Limit Switch

CNTD

Features

- Double circuit type of limit switch
- High mechanical strength, consists of intensive plastic and aluminum cast
- Water-proof and oil proof construction
- Built-in contact box has double-spring and long mechanical life
- Smooth operation with larger over travel distance
- Various actuators for different application

Contact Form



Ratings

Rated Voltage	Noninductive Load (A)				Inductive Load (A)			
	Resistance Load		Lamp Load		Inductive Load		Motor Load	
	NC	NO	NC	NO	NC	NO	NC	NO
125VAC 250VAC	5 5	5 5	1.5 1	0.7 0.5	3 3	3 3	2 1.5	1 0.8
8VDC 14VDC 30VDC 125VDC 250VDC	5 5 5 0.4 0.2	5 5 5 0.4 0.2	3 3 3	3 3 3	5 4 4	4 4 4	3 3 3	3 3 3
Inrush Current	N.C: below 24A, N.O: below 12A							

NOTES: 1.Inductive load has a power factor of 0.4 min.(AC) and a time constant of 7 msec. max.(DC).
2.Lamp load has an inrush current of 10 times the steady-state current,while motor load has an inrush current of 6 times the steady-state current.
3.Product with spring, its usable range of operating part is within one third of the whole spring length from the front end of spring.

Specifications

Operation speed	5mm-0.5m/s
Operating frequency	Electical: 30 operations/min
Contact resistance	25mΩ max. (initial value)
Insulation resistance	100mΩ min. （below 500VDC）
Dielectric strength	1500VAC, 50/60 Hz for 1 minute between current-carrying and non-current-carrying metal parts
	1500VAC, 50/60 Hz for 1 minute between current-carrying and non-current-carrying metal parts
	1500VAC, 50/60 Hz for 1 minute between each terminal and ground
Vibration	10-55Hz,1.5mm double amplitude
Shock	Mechanical durable: 1, 000m/Sec^2 (about 100G'S) Malfunction: 300m/Sec^2 (about 30G'S)
Ambient temperature	Using: -20~+70℃（With no icing）
Humidity	<95% RH
Electrical life	500,000 operations above
Protection level	IP66

NOTES: The default size of conduit connector is M18x1.5.Conduit connector size is PG11.5, with product model number plus (-P), example:CSA-012-P.

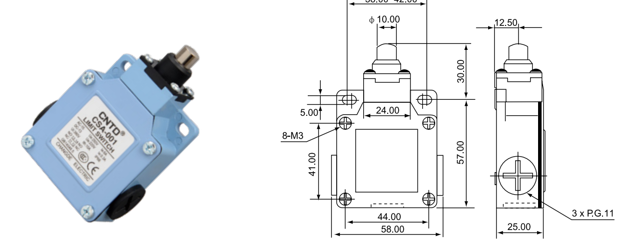
Operating Characteristics

Model	CSA	CSA-001	CSA-003	CSA-012	CSA-021 CSA-021M	CSA-041	CSA-031 CSA-031M	CSA-051	CSA-061	CSA-071	CSA-081
Operating force	OF (Max.)	800g	800g	800g	400g	400g	400g	400g	150g	150g	150g
Release force	RF (Min.)	400g	400g	400g	100g	100g	100g	100g	50g	50g	50g
Pre-travel	PT (Max.)	1.8mm	1.8mm	1.8mm	20°	20°	20°	20°	30mm	30mm	30mm
Tripping position	TP ± 10%	2.0mm	2.0mm	2.0mm	22.5°	22.5°	22.5°	22.5°	22.5°	22.5°	22.5°
Movement differential	MD (Max.)	1.2mm	1.2mm	1.2mm	10°	10°	10°	10°	14°	14°	14°
Over travel	OT (Min.)	4.0mm	4.0mm	4.0mm	75°	75°	75°	75°	20mm	20mm	20mm
Total travel	TT (Min.)	5.8mm	5.8mm	5.8mm	95°	95°	95°	95°	50mm	50mm	50mm
Rotary indexing					22.5°	22.5°	22.5°	22.5°			

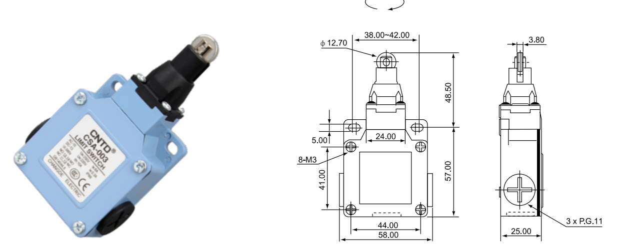
CSA Vertical Limit Switch

Appearance and Dimension

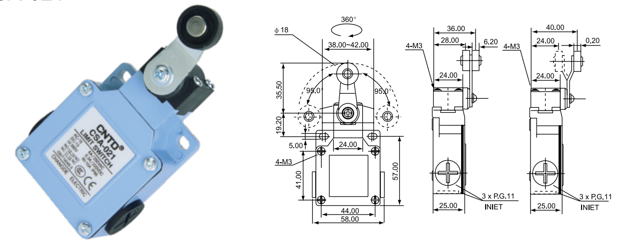
CSA-001



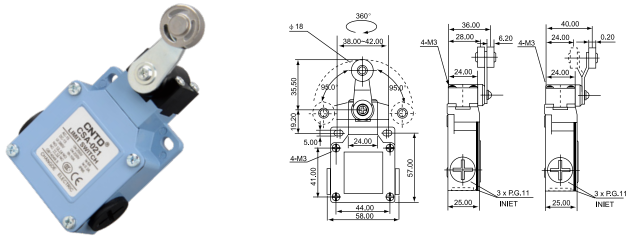
CSA-003



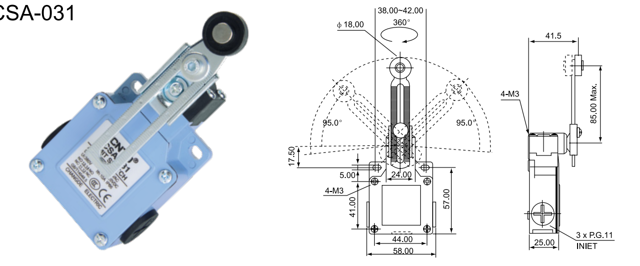
CSA-021



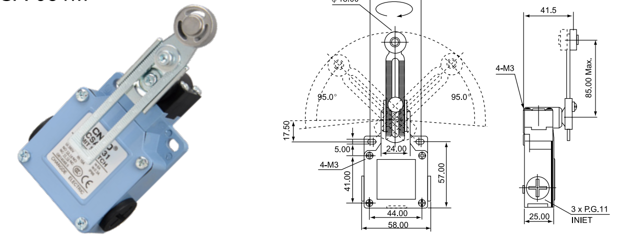
CSA-021M



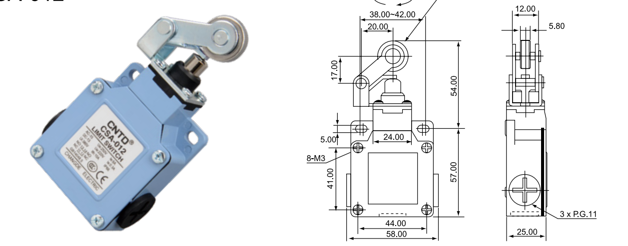
CSA-031



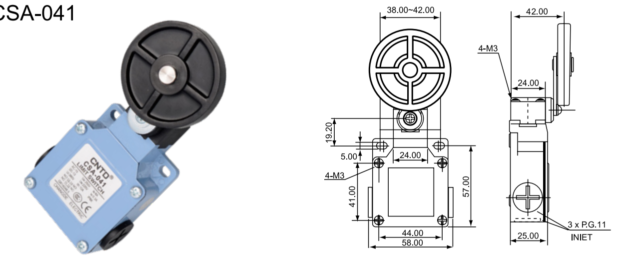
CSA-031M



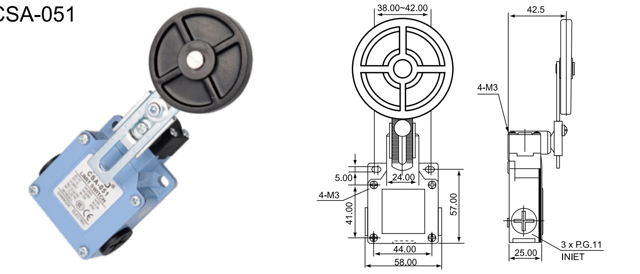
CSA-012



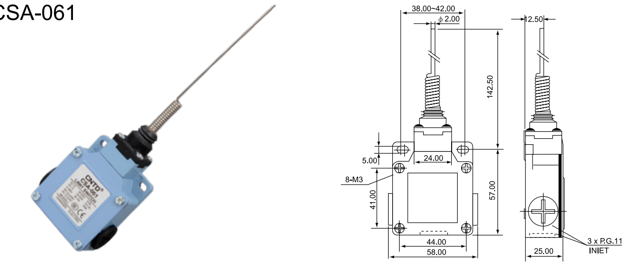
CSA-041



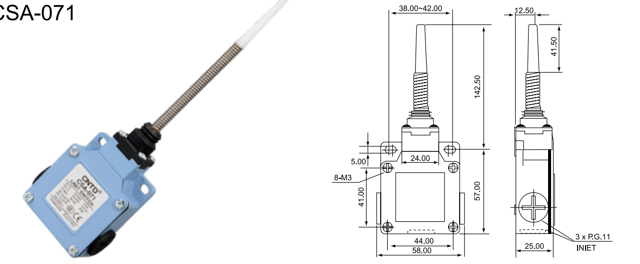
CSA-051



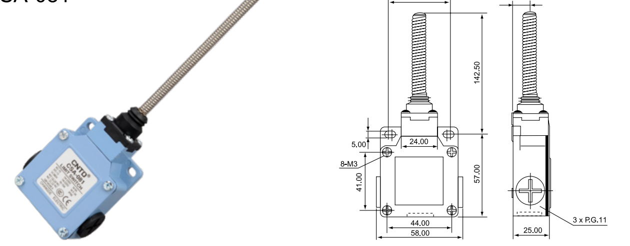
CSA-061



CSA-071



CSA-081



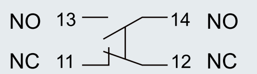
CLS Vertical Limit Switch

CNTD

Features

- Double circuit type of limit switch
- Economic plastic type of limit switch
- Small size, water-proof and oil-proof construction
- Built-in contact box has double-spring and long mechanical life
- Smooth operation with larger over travel distance
- Various actuators for different applications

Contact Form



Ratings

Rated Voltage	Noninductive Load (A)				Inductive Load (A)			
	Resistance Load		Lamp Load		Inductive Load		Motor Load	
	NC	NO	NC	NO	NC	NO	NC	NO
125VAC 250VAC	5 5	5 5	1.5 1	0.7 0.5	3 3	3 3	2 1.5	1 0.8
8VDC 14VDC 30VDC 125VDC 250VDC	5 5 5 0.4 0.2	5 5 5 0.4 0.2	3 3 3	3 3 3	5 4 4	4 4 4	3 3 3	3 3 3
Inrush Current	N.C: below 24A, N.O: below 12A							

NOTES: 1.Inductive load has a power factor of 0.4 min.(AC) and a time constant of 7 msec. max.(DC).
2.Lamp load has an inrush current of 10 times the steady-state current,while motor load has an inrush current of 6 times the steady-state current.
3.Product with spring, its usable range of operating part is within one third of the whole spring length from the front end of spring.

Specifications

Operation speed	5mm-0.5m/s
Operating frequency	Electical: 30 operations/min
Contact resistance	25mΩ max. (initial value）
Insulation resistance	100mΩ min. （below 500VDC）
Dielectric strength	1500VAC, 50/60 Hz for 1 minute between current-carrying and non-current-carrying metal parts
	1500VAC, 50/60 Hz for 1 minute between current-carrying and non-current-carrying metal parts
	1500VAC, 50/60 Hz for 1 minute between each terminal and ground
Vibration	10-55Hz,1.5mm double amplitude
Shock	Mechanical durable: 1, 000m/Sec^2 (about 100G'S) Malfunction: 300m/Sec^2 (about 30G'S)
Ambient temperature	Using: -20~+70℃（With no icing）
Humidity	<95% RH
Electrical life	500,000 operations above
Protection level	IP66

NOTES: The default size of conduit connector is M20x1.5, outfiting cable connector. Conduit connector size is PG13.5, with product model number plus (-P), example:CLS-103-P.

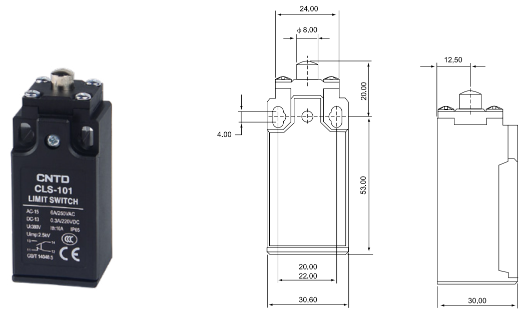
Operating Characteristics

Model	CLS	101 301	102/103 302/303	111 311	121/121M 321/321M	127 327	131/131M 331/331M	161 361	171 371	181 381	191 391
Operating force	OF (Max.)	700g	700g	700g	500g	700g	500g	100g	100g	100g	500g
Release force	RF (Min.)	200g	200g	200g	100g	200g	100g	40g	40g	40g	100g
Pre-travel	PT (Max.)	1.8mm	1.8mm	1.8mm	20°	1.8mm	20°	30mm	30mm	30mm	20°
Tripping position	TP ± 10%	2.0mm	2.0mm	2.0mm	22.5°	2.0mm	22.5°	22.5°	22.5°	22.5°	22.5°
Movement differential	MD(Max.)	1.2mm	1.2mm	1.2mm	10°	1.2mm	10°	14°	14°	14°	10°
Over travel	OT (Min.)	4.0mm	4.0mm	4.0mm	75°	4.0mm	75°	20mm	20mm	20mm	75°
Total travel	TT (Min.)	5.8mm	5.8mm	5.8mm	95°	5.8mm	95°	50mm	50mm	50mm	95°
Rotary indexing					22.5°		22.5°				22.5°

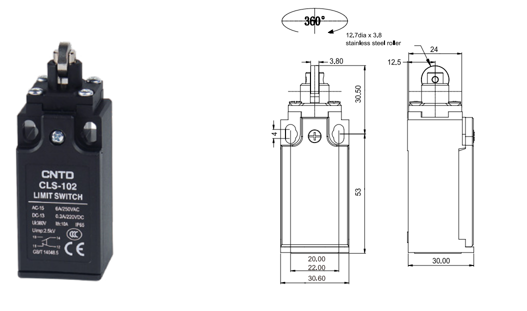
CLS-1 Vertical Limit Switch

Appearance and Dimension

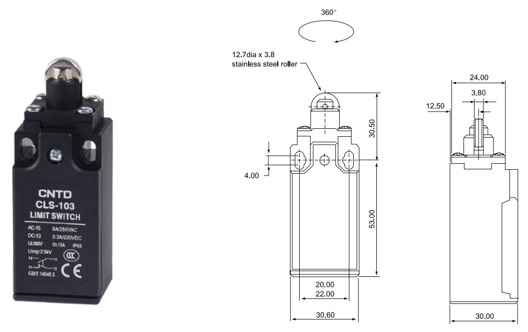
CLS-101



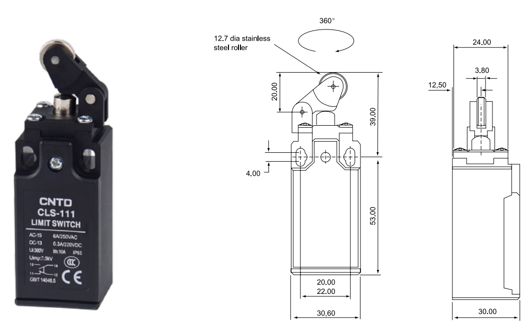
CLS-102



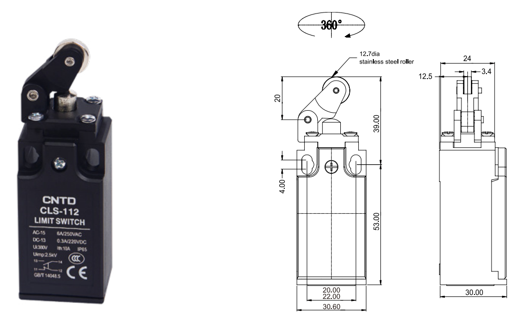
CLS-103



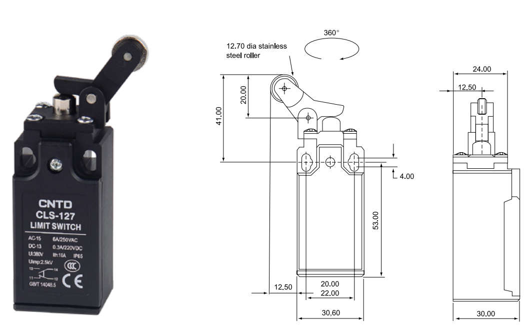
CLS-111



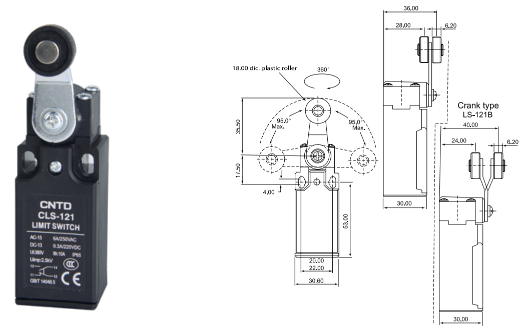
CLS-112



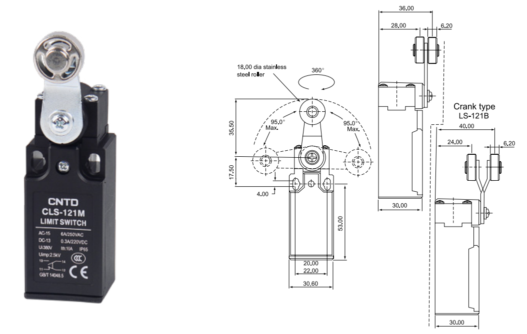
CLS-127



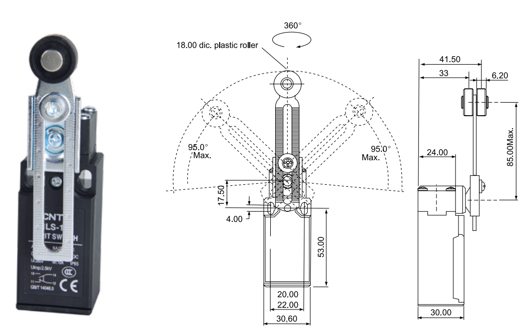
CLS-121



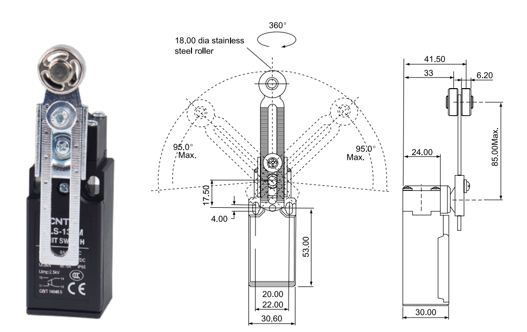
CLS-121M



CLS-131



CLS-131M

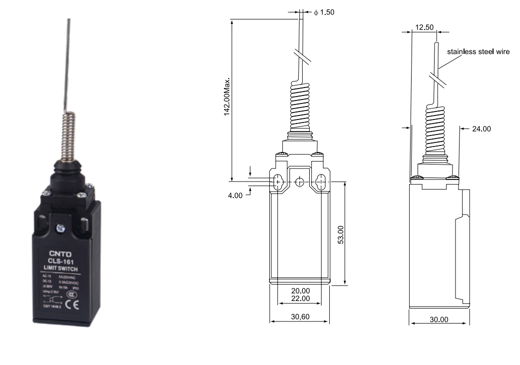


CLS-1 Vertical Limit Switch

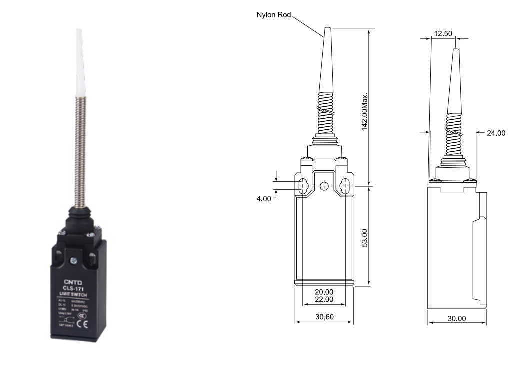
CNTD

Appearance and Dimension

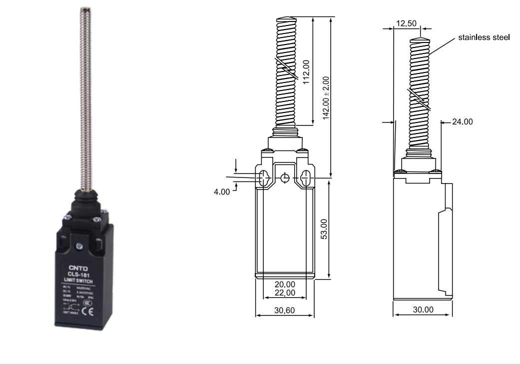
CLS-161



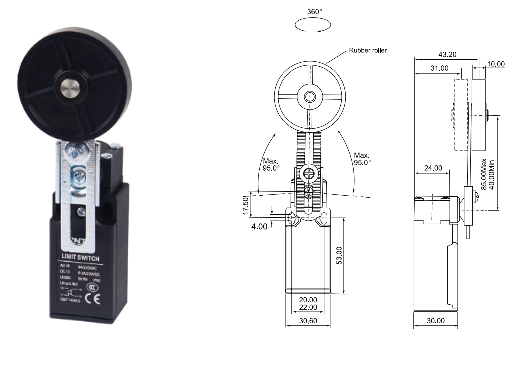
CLS-171



CLS-181



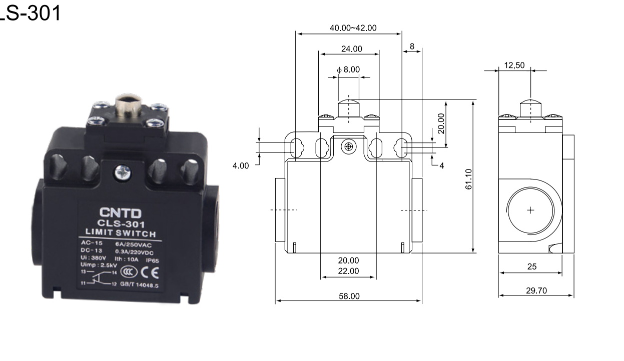
CLS-191



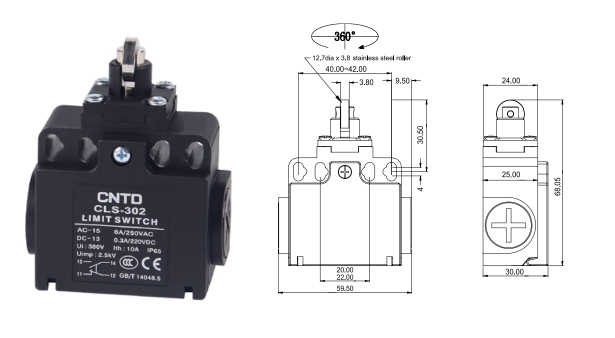
CLS-3 Vertical Limit Switch

Appearance and Dimension

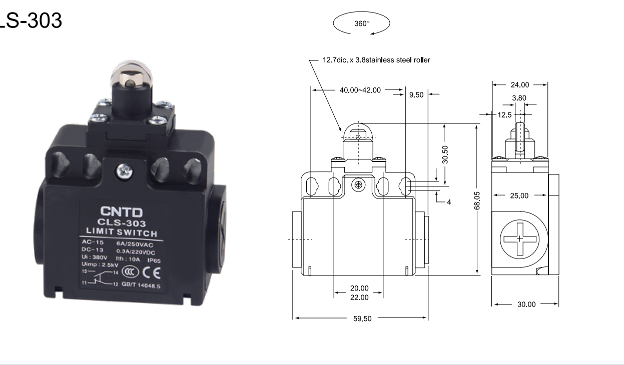
CLS-301



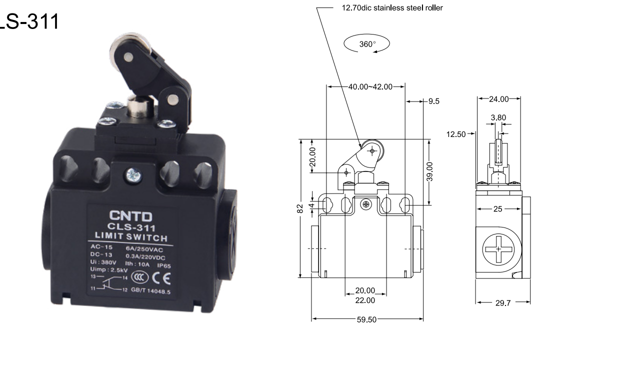
CLS-302



CLS-303



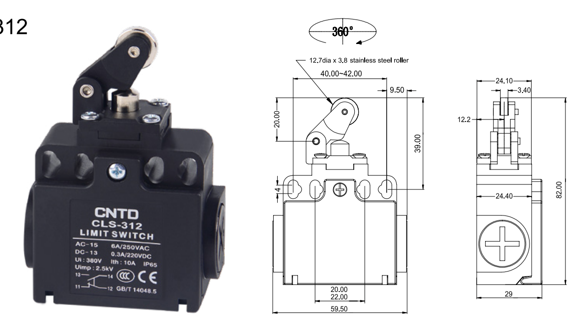
CLS-311



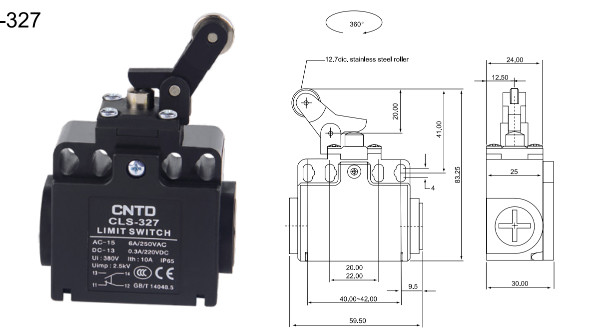
CLS-3 Vertical Limit Switch

Appearance and Dimension

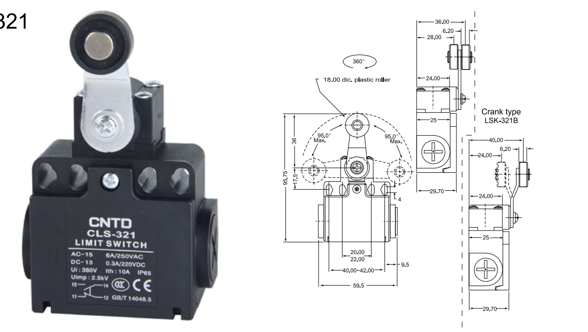
CLS-312



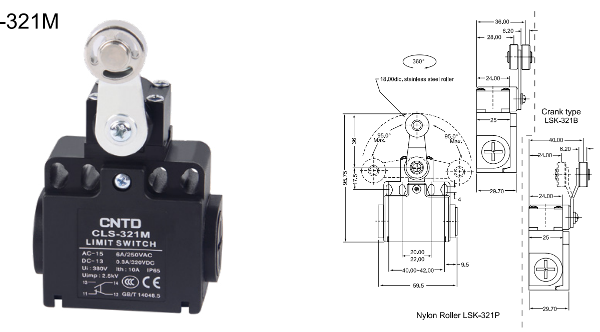
CLS-327



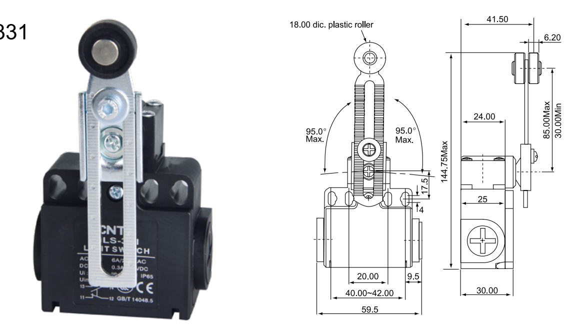
CLS-321



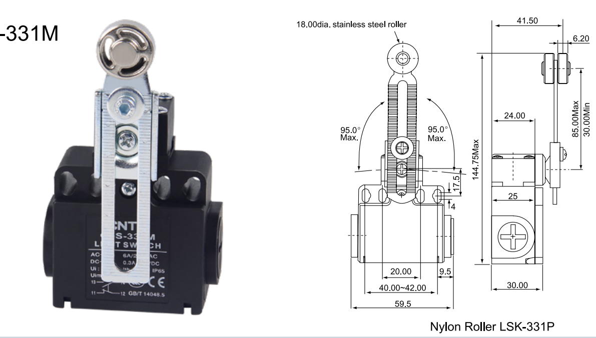
CLS-321M



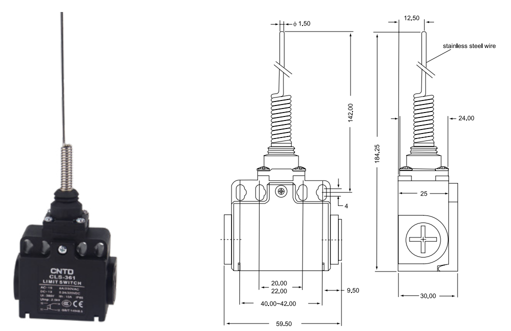
CLS-331



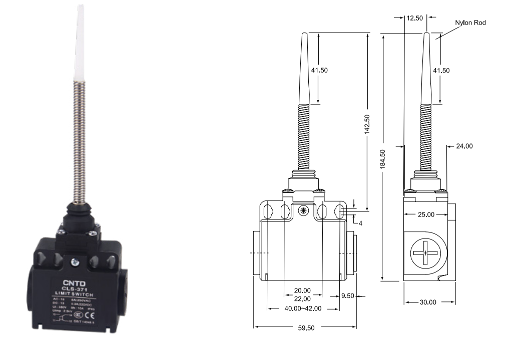
CLS-331M



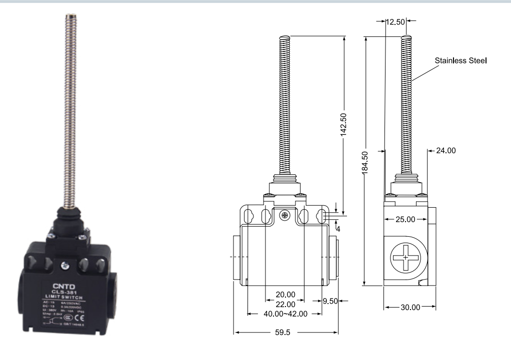
CLS-361



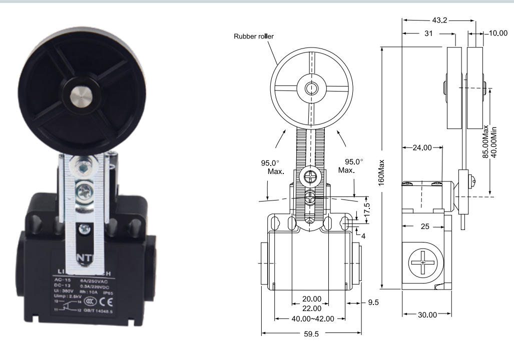
CLS-371



CLS-381



CLS-391



C4N Vertical Safety Limit Switch

CNTD

Features

- Forced open action device(NC contacts only), to disconnect the contact when the contact has fusing and other failures
- Strengthened top seal structure improves the sealing performance
- Built-in contact holder has fast-action type: 1NC/1NO; Slow-action: 1NC /1NO and 2NC

Model Number Structure

C4N — 4 1 22

① ② ③

Item	Code	Description
① Conduit / connector size	1	Pg13.5 (1 conduit type)
	4	M20 (1 conduit type)
	5	Pg13.5 (2 conduits type)
	8	M20 (2 conduits type)
② Built-in switch	1	1NC/1NO (quick-action type)
	2	2NC (quick-action type)
	A	1NC/1NO (slow-action type)
	B	2NC (slow-action type)
③ Head and driving rod	20	Roller lever (resin lever, resin ball)
	22	Roller lever (metal lever, resin ball)
	25	Roller lever (metal lever, metal resin ball)
	2G	Adjustable roller lever, Form Lock (metal lever, resin ball)
	2H	Adjustable roller lever, Form Lock (metal lever, rubber ball)
	2M	Adjustable roller lever, Form Lock (metal lever, metal resin ball)
	31	Top plunger type
	32	Top plunger ball type
	62	Unilateral cantilever ball type (horizontal)
	72	Unilateral cantilever ball type (vertical)
	80	Whisker type
	87	Plastic stick type

NOTE: The default size of conduit connector is M20x1.5.

Specifications

Protection level		IP66
Life	Electrical	More than 500,000 times (AC250V 3A, resistive load) More than 300,000 times (AC250V 10A, resistive load)
Operating speed		1mm-0.5m/s(C4N-4120)
Operating frequency		Electrical: 30 operations/min
Contact resistance		25 mΩ or less
Minimum working load		1mA resistive load below DC5V (N standard reference value)
Rated insulation voltage (Ui)		300V
Electric shock protection grade		Class II (double insulated)
Pollution degree (Using conditions)		Pollution degree 3 (EN60947-5-1)
Withstand voltage (EN60947-5-1)		Between homopolar terminals: 2.5kV
		Between heteropolar terminals: 2.5kV
		Between terminals and uncharged metal parts: 6kV
Insulation resistance		Above 100MΩ
Contact gap		Minimum 2 × 0.5mm quick-action type, Minimum 2 × 2mm slow-action type
Vibration	Malfunction	10 ~ 55Hz 0.75mm single amplitude
Impact	Duration	1,000m/s^2
	Malfunction	300m/s^2
Ambient temperature		Using: -20~+70℃ （With no icing）
Ambient humidity		Less than 95% RH
Weight		About 82g (D4N-1120) About 99g (D4N-5120)

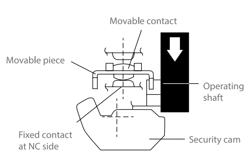
Note 1. The above values are initial values.
Note 2. Once the contact is connected to a standard load, it can not be used to connect a smaller load. If so, the contact may result in rough surface, thus losing contact reliability.
*1. The protection level is gotten based on test method of (EN60947-5-1). Please make sure its sealing under actual environmental conditions before use. The switch box has dust and oil resistance structure, but it should be used in places without dust, oil and chemicals. Otherwise it may lead to premature wear, damage or malfunction.
*2. The durability is for ambient temperature of 5℃ ~ 35℃ and humidity of 40% to 70% RH. For additional details, please contact us.
*3. When the ambient temperature is above 35℃ , more than 2 circuits 3A 250VAC loads are prohibited.
*4. The values will vary with different switching frequency, environmental conditions, reliability level and other factors. Please confirm on the actual load in advance.

C4N Vertical Safety Limit Switch

Forced Disconnecting Mechansim

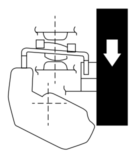
■ 1NC and 1NO contacts (quick-action type)

① Welding occurs

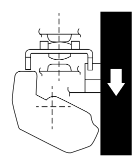


Forced disconnect find of ⊖ EN60947-5-1 (Only NC contact side has direct opening action function).

② Tripping



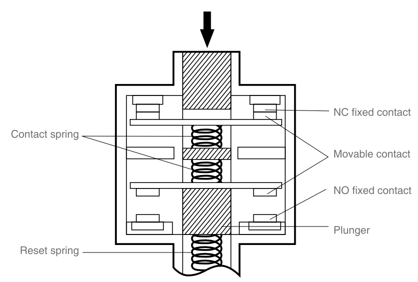
③Separation is completed



Security cams is directly pressed to separate the movable piece

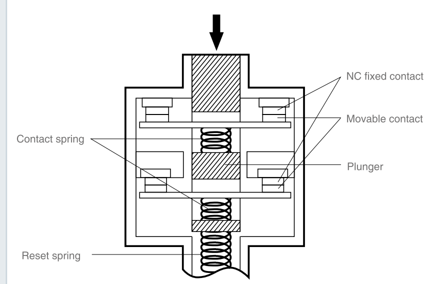
■ 1NC and 1NO contacts (slow-action type)

Forced disconnect find ⊖ of EN60947-5-1 (Only NC contact side has forced disconnect function). When welding occurs, NC contact is separated by pressing the plunger and the loop is cut off.



■ 2NC contacts (slow-action type)

Forced disconnect find ⊖ of EN60947-5-1 (Only NC contact side has forced disconnect function).



Contact Form

Model	Contact	Contact form	Operation mode	Explanation
C4N-□1□	1NC/1NO (Quick-action type)	13 Zb 14 / 31 32	13-14 / 31-32 Travel → ▭ Conductive	Only NC contact (31-32) has forced disconnect function (⊖) Contacts (13-14) and (31-32) can be used as heteropoles.
C4N-□2□	2NC (Quick-action type)	11 Zb 12 / 31 32	11-12 / 31-32 Travel → ▭ Conductive	Only NC contact (31-32) has forced disconnect function (⊖) Contacts (11-12) and (31-32) can be used as heteropoles.
C4N-□A□	1NC/1NO (Slow-action type)	11 Zb 12 / 33 34	11-12 / 33-34 Travel → ▭ Conductive	Only NC contact (11-12) has forced disconnect function (⊖) Contacts (11-12) and (33-34) can be used as heteropoles.
C4N-□B□	2NC (Slow-action type)	11 Zb 12 / 31 32	11-12 / 31-32 Travel → ▭ Conductive	Only NC contact (31-32) has forced disconnect function (⊖) Contacts (11-12) and (31-32) can be used as heteropoles.

Operating Characteristics

■ Quick-action type (1NC/1NO)(2NC), slow-action type (2NC)

Action characteristics \ Model			C4N-□120 C4N-□220 C4N-□B20	C4N-□122 C4N-□222 C4N-□B22	C4N-□125 C4N-□225 C4N-□B25	C4N-□226 C4N-□B26	C4N-□131 C4N-□231 C4N-□B31	C4N-□132 C4N-□232 C4N-□B32	C4N-□162 C4N-□262 C4N-□B62	C4N-□172 C4N-□272 C4N-□B72	C4N-□12H C4N-□22H C4N-□B2H	C4N-□12G C4N-□12M C4N-□22G C4N-□B2G*4	C4N-□□80	C4N-□□87
Action force	OF	Max.	5.0N				6.5N	6.5N	5.0N	5.0N	4.5N		1.5N	1.5N
Restore force	RF	Min.	0.5N				1.5N	1.5N	0.8N	0.8N	0.4N			
Pretravel	PT		18~27°				2mm	2mm	4mm	4mm	18 ~ 27°		15°	15°
Overtravel	OT	Min.	40°				4mm	4mm	5mm	5mm	40°			
Poor response travel	MD	Max.*1	14°				1mm	1mm	1.5mm	1.5mm	14°			
Action position	OP		——				18.2±0.5mm	28.6±0.8mm	37±0.8mm	27±0.8mm	——			
Total travel	TT	*2	(80°)				(6mm)	(6mm)	(9mm)	(9mm)	(80°)			
Forced disconnected pretravel	DOT	Min.*3	50°				3.2mm	3.2mm	5.8mm	4.8mm	50°			
Forced disconnected force	DOF	Min.*3	20N				20N	20N	20N	20N	20N			

Note The simultaneity of ON / OFF operation of 2NC contacts have difference, please make sure before using it.
*1. Only for quick-action type.
*2. Reference values.
*3. Only for slow-action type. For safe use, please make sure that all values are within the range of maximum or minimum.
*4. The property value when length of lever is 32mm.

C4N Vertical Safety Limit Switch

CNTD

Operating Characteristics

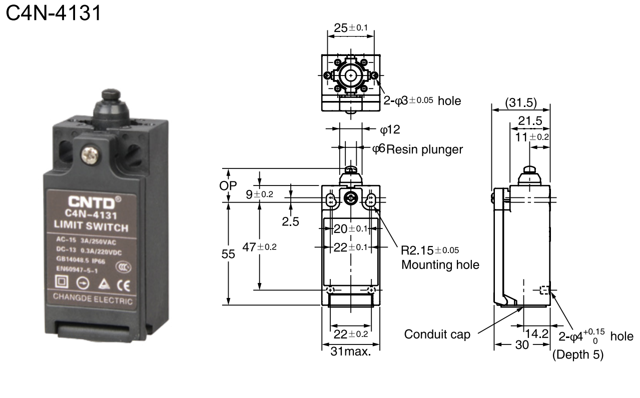
■ Slow-action type (1NC/1NO)

Action characteristics \ Model			C4N-□A20	C4N-□A22	C4N-□A25	C4N-□A26	C4N-□A31	C4N-□A32	C4N-□A62	C4N-□A72	C4N-□A2H	C4N-□A2G *8
Action force	OF	Max.	5.0N				6.5N	6.5N	5.0N	5.0N	4.5N	
Restore force	RF	Min.	0.5N				1.5N	1.5N	0.8N	0.8N	0.4N	
Pretravel	PT	*1	18 ~ 27°				2mm	2mm	4mm	4mm	18 ~ 27°	
	PT	(2nd)*2	(44°)				(2.9mm)	(2.9mm)	(5.2mm)	(4.3mm)	(44°)	
	PT	*3	27.5 ~ 36.5°				2.8mm	2.8mm	4mm	4mm	27.5 ~ 36.5°	
	PT	(2nd)*4	(18°)				(1mm)	(1mm)	(1.5mm)	(1.5mm)	(18°)	
Overtravel	OT	Min.	40°				4mm	4mm	5mm	5mm	40°	
Action position	OP		——				18.2±0.5mm	28.6±0.8mm	37±0.8mm	27±0.8mm	——	
	OP	*5	——				17.4±0.5mm	28±0.8mm	36±0.8mm	26.1±0.8mm	——	
Total travel	TT	*6	(80°)				(6mm)	(6mm)	(9mm)	(9mm)	(80°)	
Forced disconnected pretravel	DOT	Min.*7	50°				3.2mm	3.2mm	5.8mm	4.8mm	50°	
Forced disconnected force	DOF	Min.*7	20N				20N	20N	20N	20N	20N	

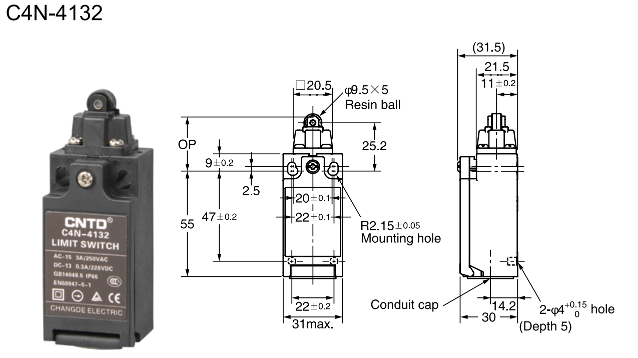
*1. NC contact is open.
*2. NO contact is closed.
*3. Only for MBB type.
*4. It is the reference value of MBB type.
*5. Only for MBB type.
*6. Reference values
*7. For safe use, please make sure that all values are within the range of maximum or minimum.
*8. The property value when length of lever is 32mm.

Appearance and Dimension

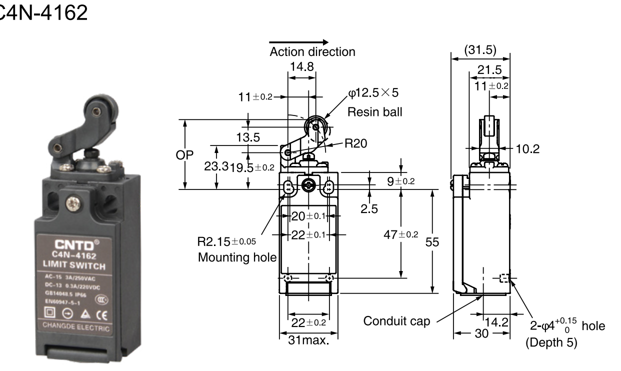
C4N-4131



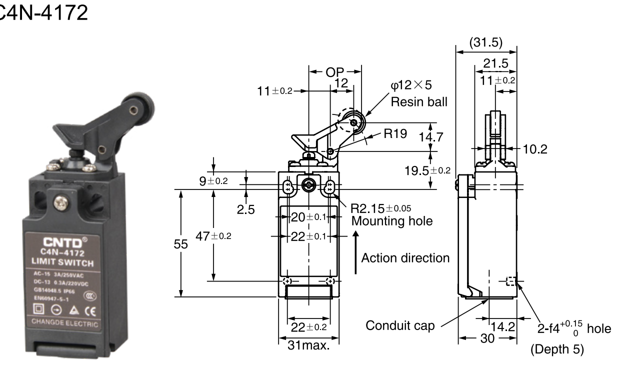
C4N-4132



C4N-4162



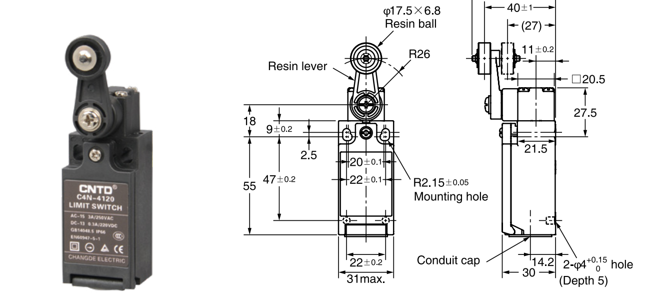
C4N-4172



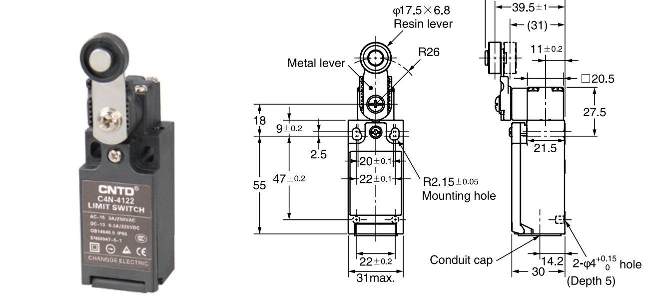
C4N Vertical Safety Limit Switch

Appearance and Dimension

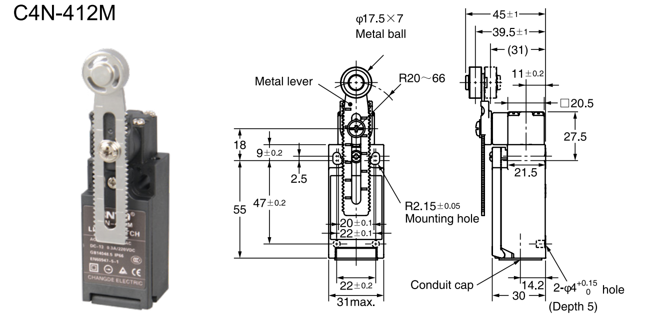
C4N-4120



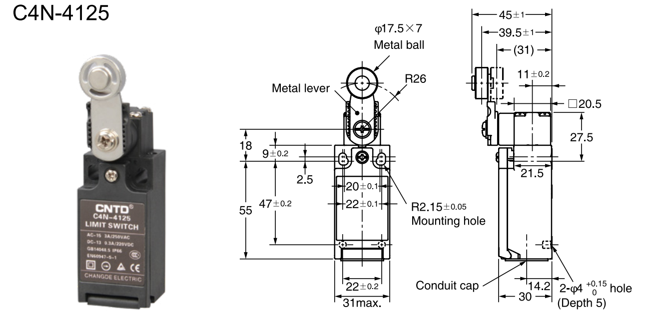
C4N-4122



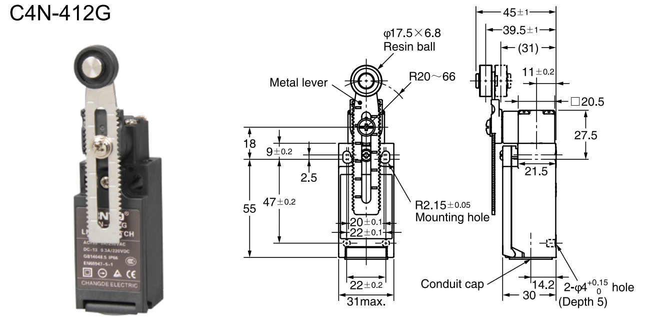
C4N-412M



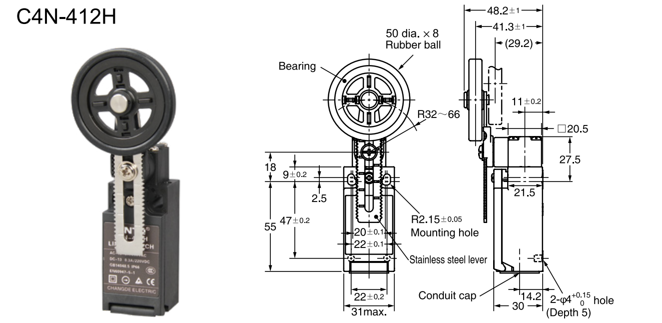
C4N-4125



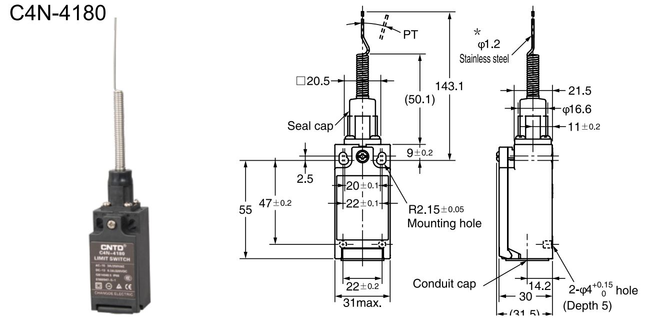
C4N-412G



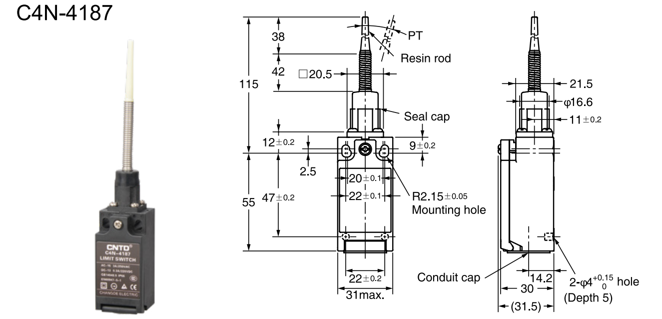
C4N-412H



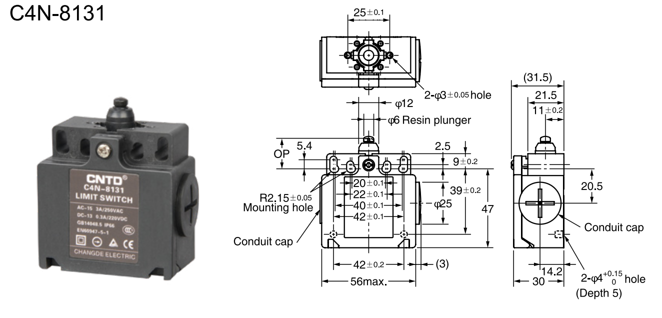
C4N-4180



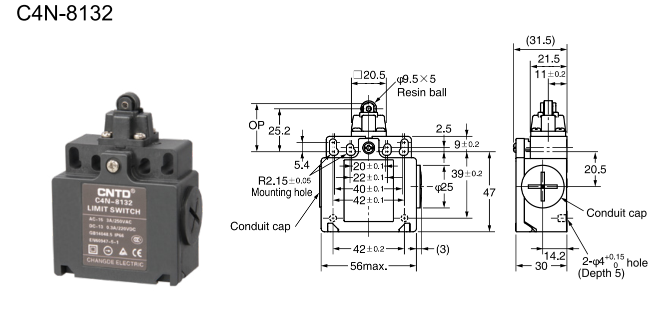
C4N-4187



C4N-8131



C4N-8132



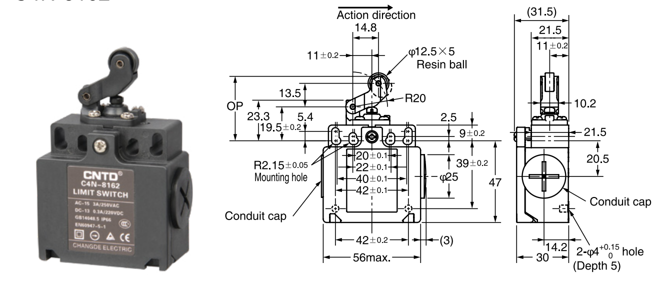
* Application of stainless steel washers and plastic stick are within 35mm from the front end, the entire action is within 70mm.

C4N Vertical Safety Limit Switch

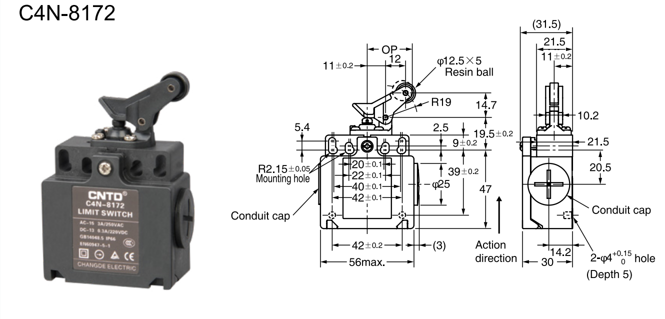
CNTD

Appearance and Dimension

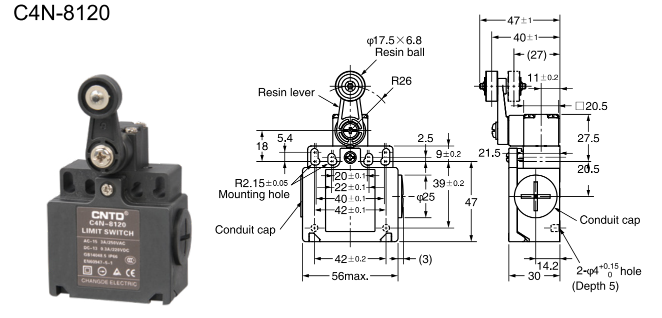
C4N-8162



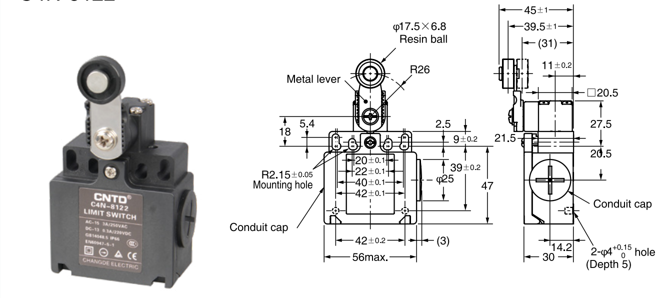
C4N-8172



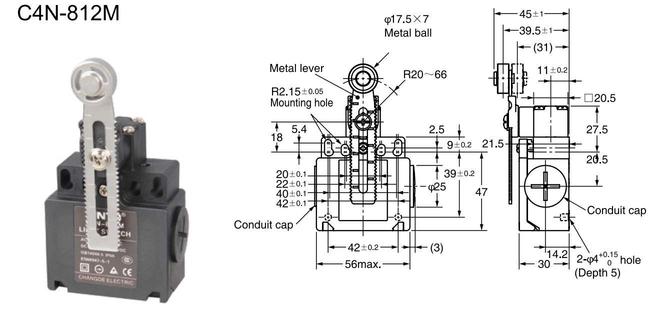
C4N-8120



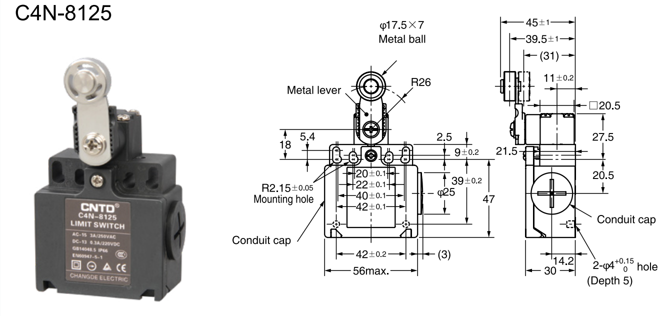
C4N-8122



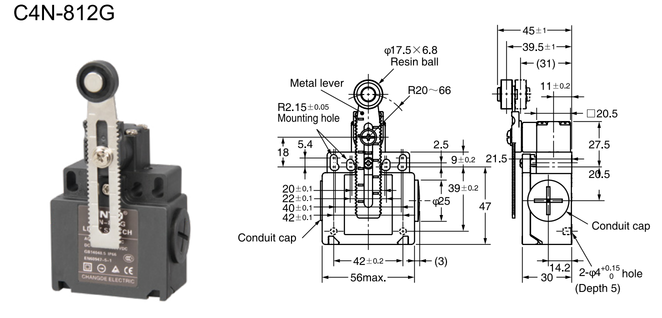
C4N-812M



C4N-8125



C4N-812G



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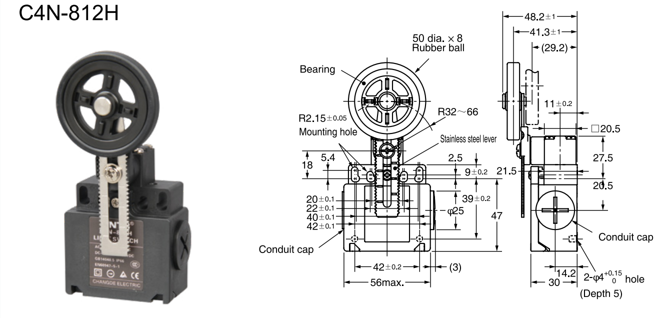
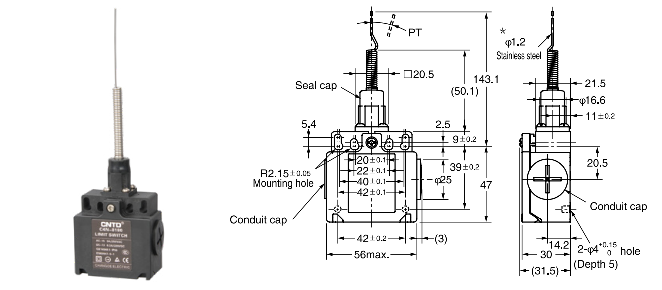
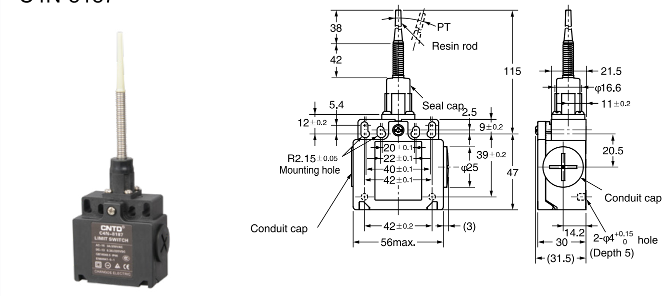


C4N-8180



C4N-8187



* Use of application of stainless steel washers and plastic stick are within 35mm from the front end, the entire action is within 70mm

C4N-□R Vertical Manual Reset Safety Limit Switch

Features

- Forced open action device(NC contacts only), to disconnect the contact when the contact has fusing and other failures
- Strengthened top seal structure improves the sealing performance
- Built-in contact holder has slow-action: 1NC /1NO and 2NC

Model Number Structure

C4N − 4 A 3 1 R

① ② ③

Item	Code	Description
① Conduit / connector size	1	Pg13.5 (1 conduit type)
	4	M20 (1 conduit type)
	5	Pg13.5 (2 conduits type)
	8	M20 (2 conduits type)
② Built-in switch	A	1NC/1NO (slow-action type)
	B	2NC (slow-action type)
③ Head and driving rod	20	Roller lever (resin lever, resin ball)
	22	Roller lever (metal lever, resin ball)
	25	Roller lever (metal lever, metal resin ball)
	2G	Adjustable roller lever, Form Lock (metal lever, resin ball)
	2H	Adjustable roller lever, Form Lock (metal lever, rubber ball)
	2M	Adjustable roller lever, Form Lock (metal lever, metal resin ball)
	31	Top plunger type
	32	Top plunger ball type
	62	Unilateral cantilever ball type (horizontal)
	72	Unilateral cantilever ball type (vertical)

NOTE: The default size of conduit connector is M20x1.5.

Specifications

Protection level		IP66
Life	Electrical	More than 500,000 times (AC250V 3A, resistive load) More than 300,000 times (AC250V 10A, resistive load)
Operating speed		1mm-0.5m/s(C4N-4A20R)
Operating frequency		Max. 30 times/min
Contact resistance		25 mΩ or less
Minimum working load		1mA resistive load below DC5V (N standard reference value)
Rated insulation voltage (Ui)		300V
Electric shock protection grade		Class II (double insulated)
Pollution degree (Using conditions)		Pollution degree 3 (EN60947-5-1)
Withstand voltage (EN60947-5-1)		Between homopolar terminals: 2.5kV
		Between heteropolar terminals: 2.5kV
		Between terminals and uncharged metal parts: 6kV
Insulation resistance		Above 100MΩ
Contact gap		Minimum 2 × 0.5mm quick-action type, Minimum 2 × 2mm slow-action type
Vibration	Malfunction	10 ~ 55Hz 0.75mm single amplitude
Impact	Duration	1,000m/s^2
	Malfunction	300m/s^2
Ambient temperature		Using: -20~+70℃ (With no icing)
Ambient humidity		Less than 95% RH
Weight		About 92g (D4N-1A20R)

Note 1. The above values are initial values.
Note 2. Once the contact is connected to a standard load, it can not be used to connect a smaller load. If so, the contact may result in rough surface, thus losing contact reliability.
*1. The protection level is gotten based on test method of (EN60947-5-1). Please make sure its sealing under actual environmental conditions before use. The switch box has dust and oil resistance structure, but it should be used in places without dust, oil and chemicals. Otherwise it may lead to premature wear, damage or malfunction.
*2. The durability is for ambient temperature of 5℃ ~ 35℃ and humidity of 40% to 70% RH. For additional details, please contact us.
*3. When the ambient temperature is above 35℃, more than 2 circuits 3A 250VAC loads are prohibited.
*4. The values will vary with different switching frequency, environmental conditions, reliability level and other factors. Please confirm on the actual load in advance.

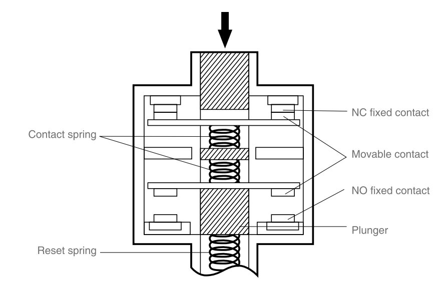
C4N-□R Vertical Manual Reset Safety Limit Switch

CNTD

Forced Disconnecting Mechanism

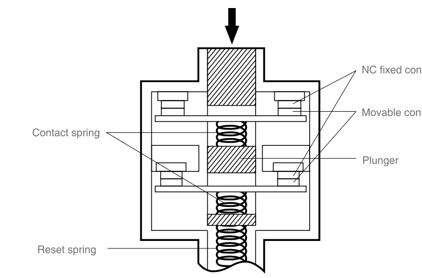
■ 1NC and 1NO contacts (slow-action type)

Only NC contact has forced disconnect structure.
When melting occurs, the contact can be isolated by pressing the plunger to cut off the loop. (In accordance with EN60947-5-1 force disconnect operation).



■ 2NC contacts (slow-action type)

When melting occurs, the contact can be isolated by pressing the plunger to cut off the loop. (In accordance with EN60947-5-1 force disconnect operation).



Contact Form

Model	Contact	Contact form	Operation mode	Explanation
C4N-□A□R	1NC/1NO (Slow-action type)	Zb 11—12 33—34	11-12 33-34 Travel Conductive	Only NC contact (11-12) has forced disconnect function (⊖) Contacts (11-12) and (33-34) can be used as heteropoles.
C4N-□B□R	2NC (Slow-action type)	Zb 11—12 31—32	11-12 31-32 Travel Conductive	Only NC contact (31-32) has forced disconnect function (⊖) Contacts (11-12) and (31-32) can be used as heteropoles.

Operating Characteristics

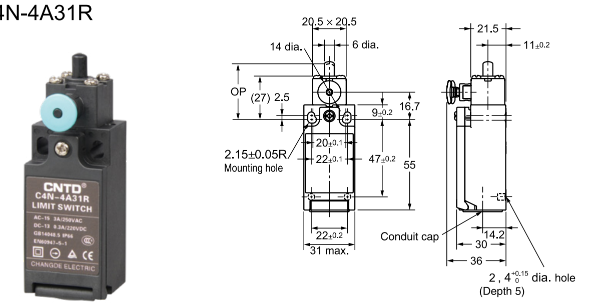
Model		C4N-□□ 20R	C4N-□□ 22R	C4N-□□ 2GR *2	C4N-□□ 2HR	C4N-□□ 31R	C4N-□□ 32R	C4N-□□ 62R	C4N-□□ 72R
LF	Max.	6.45N	6.45N	5.6N	5.4N	10.8N	10.8N	7.5	7.9N
LT	Max.	55°	55°	55°	55°	4.5mm	4.5mm	7mm	7mm
PT1	*3	18~27°	18~27°	18~27°	18~27°	2mm	2mm	4mm	4mm
PT2	*4	(44°)	(44°)	(44°)	(44°)	(2.9mm)	(2.9mm)	(5.2mm)	(4.3mm)
OP		--	--	--	--	34 ± 0.5mm	44.4 ± 0.8mm	53 ± 0.8mm	27 ± 0.8mm
TT	*5	80°	80°	80°	80°	(6mm)	(6mm)	(9mm)	(9mm)
DOT	Min. *6	50°	50°	50°	50°	3.2mm	3.2mm	5.8mm	5.8mm
DOF	Min.* 6	20N		20N	20N	20N	20N	20N	20N

Note
*1. The simultaneity of ON / OFF operation of 2NC contacts have difference, please make sure before using it.
*2. The property value when length of lever is 32mm.
*3. PT value when NC contact is at open (OFF) state.
*4. PT common value when NO contact is at close (ON) state (only for 1NC/1NO types).
*5. Reference values.
*6. Load and travel values of forced disconnect structure. To ensure safety, be sure to remain within the upper and lower range.

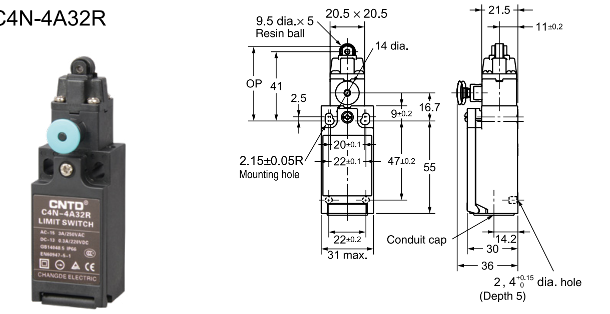
C4N-□R Vertical Manual Reset Safety Limit Switch

Appearance and Dimension

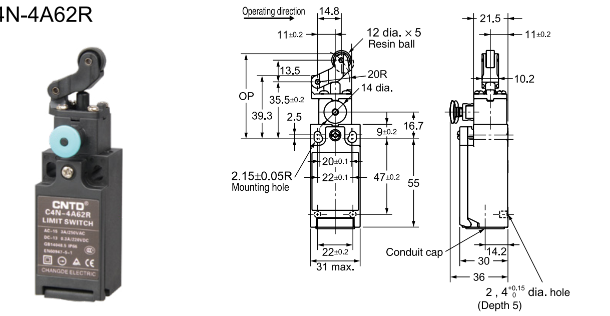
C4N-4A31R



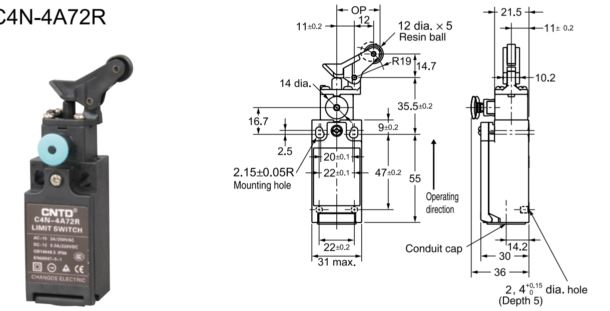
C4N-4A32R



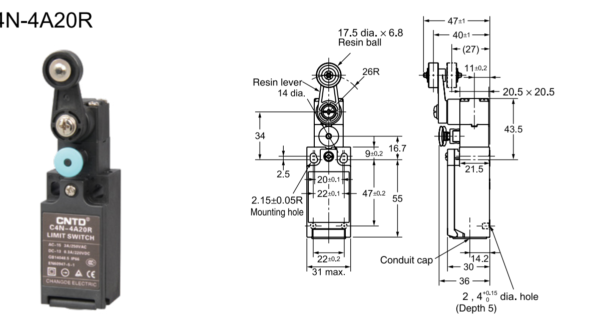
C4N-4A62R



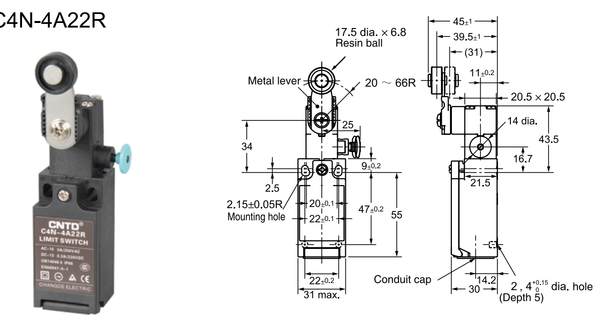
C4N-4A72R



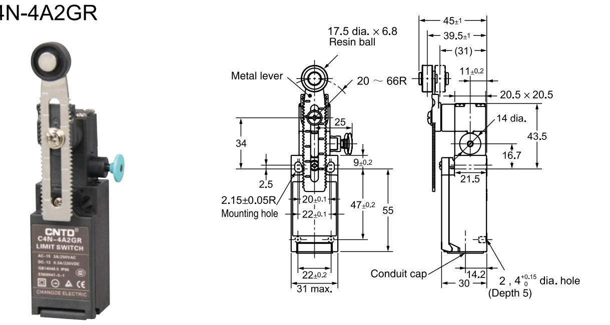
C4N-4A20R



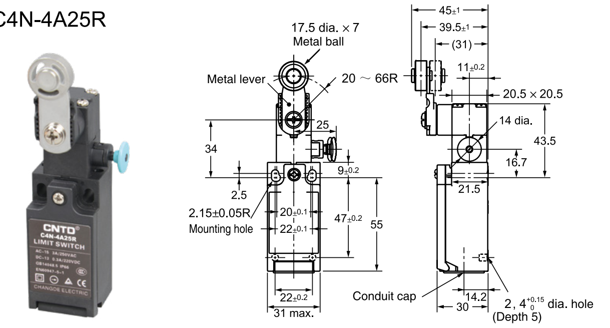
C4N-4A22R



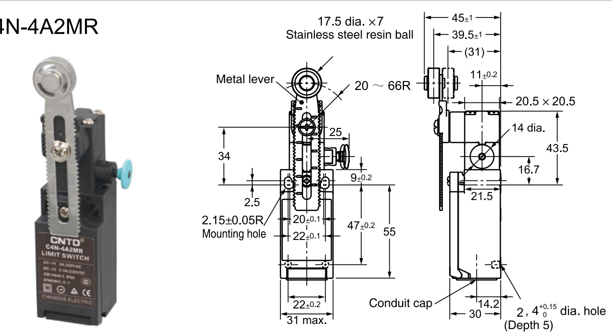
C4N-4A2GR



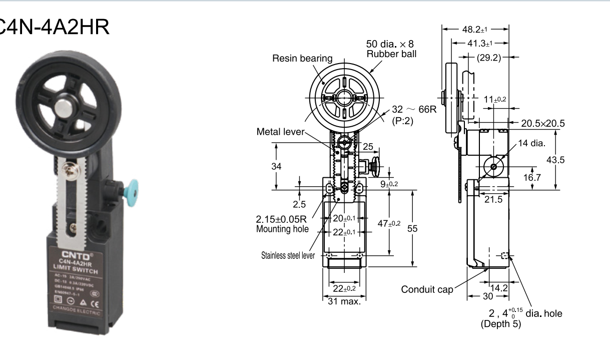
C4N-4A25R



C4N-4A2MR



C4N-4A2HR

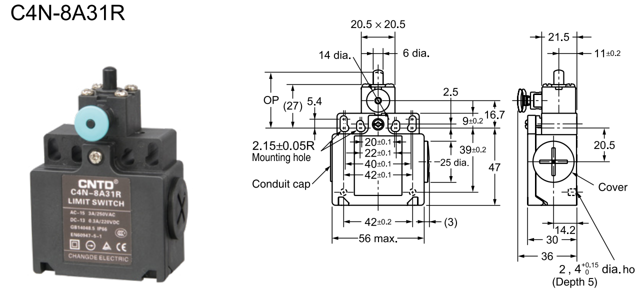


C4N-□R Vertical Manual Reset Safety Limit Switch

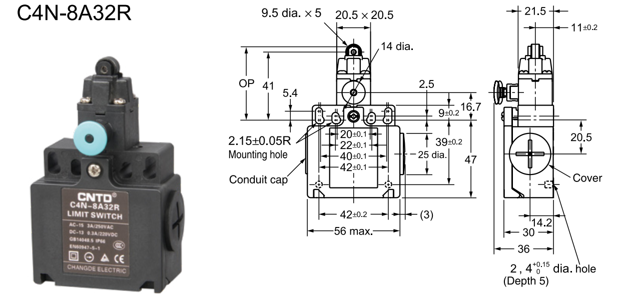
CNTD

Appearance and Dimension

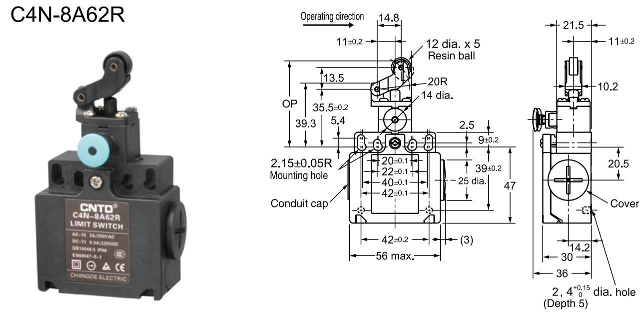
C4N-8A31R



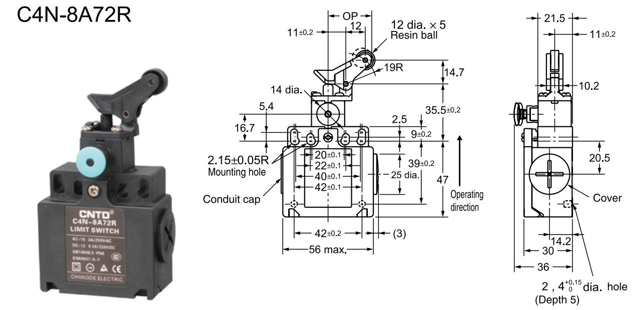
C4N-8A32R



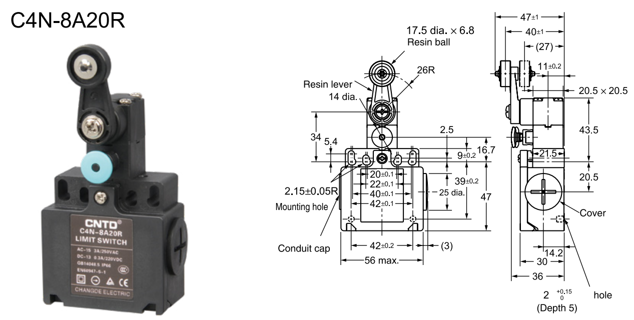
C4N-8A62R



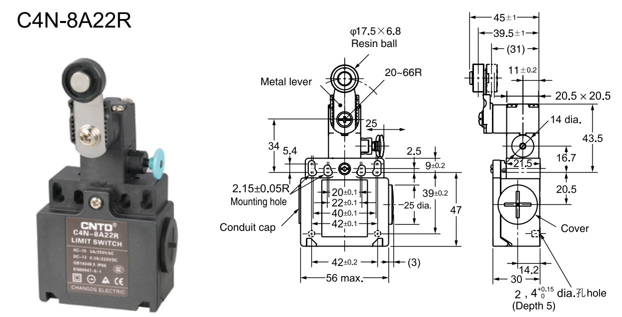
C4N-8A72R



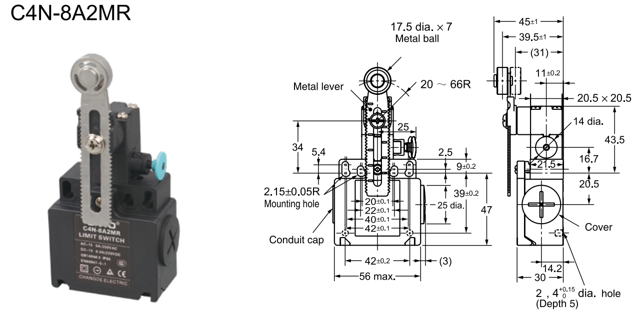
C4N-8A20R



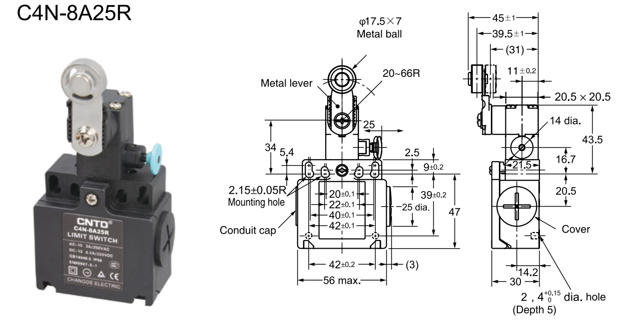
C4N-8A22R



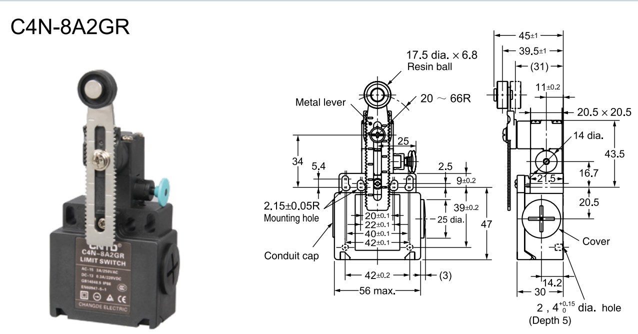
C4N-8A2MR



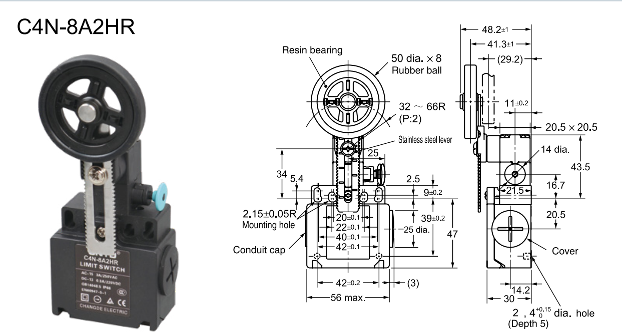
C4N-8A25R



C4N-8A2GR



C4N-8A2HR



C4B-□N Vertical Safety Limit Switch

Features

- Forced open action device (NC contacts only), to disconnect the contact when the contact has fusing and other failures
- Strengthened top seal structure improves the sealing performance
- Built-in contact holder has fast-action type: 1NC / 1NO; Slow-action: 1NC / 1NO and 2NC

Model Number Structure

C4B — 4 1 1 5 N

① ② ③

Item	Code	Description
① Conduit / connector size	1	Pg13.5 (1 conduit type)
	4	M20 (1 conduit type)
② Built-in switch	1	1NC/1NO (quick-action type)
	5	1NC/1NO (slow-action type)
	A	2NC (slow-action type)
③ Head and driving rod	11	Roller lever (resin lever, resin ball)
	12	Form-Lock Adjustable roller lever, Form-Lock (metal lever, metal ball)
	15	Roller lever (metal ball)
	16	Form-Lock Adjustable roller lever, Form-Lock (resin ball)
	17	Form-Lock Adjustable stick lever, Form-Lock (long lever)
	18	Form Lock Adjustable roller lever, Form Lock (metal lever, rubber ball)
	70	Top ball plunger type
	71	Ball plunger type
	72	Ball plunger type
	81	Coil spring type
	87	Plastic stick type
	86	Metal stick type

NOTE: The default size of conduit connector is M20x1.5.

Ratings

Rated voltage (V)		Non-inductive load (A)				Inductive load (A)			
		Resistive load		Lamp load		Inductive load		Motor load	
		NC	NO	NC	NO	NC	NO	NC	NO
AC	125	10		3	1.5	10		5	2.5
	250	10		2	1	10		3	1.5
	400	10		1.5	0.8	3		1.5	0.8
DC	8	10		6	3	10		6	
	14	10		6	3	10		6	
	30	6		4	3	6		4	
	125	0.8		0.2	0.2	0.8		0.2	
	250	0.4		0.1	0.1	0.4		0.1	

Note1.The above values represent constant current.
2.The so-called inductive load refers to the load with power factor of 0.4 or more (AC) and the time constant below 7ms (DC).
3.The so-called lamp load refers to the load with 10 times of surge current.
4.The so-called motor load is the load with 6 times of surge current.

C4B-□N Vertical Safety Limit Switch

CNTD

Specifications

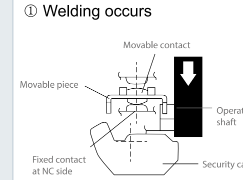
Protection level		IP66
Life	Electrical	More than 500,000 times (AC250V 10A, resistive load)
Operating speed		1mm~0.5m/s
Operating frequency	Mechanical	120 times/min
	Electrical	30 times/min
Rated frequency		50/60Hz
Insulation resistance		100MΩ or more (DC500V Megameter) between homopolars, and between terminals and uncharged metal parts
Contact resistance		25mΩ or less (initial value)
Withstand voltage (EN60947-5-1)		Between homopolar terminals: 2.5kV(quick-action type)/4kV(slow-action type)
		Between heteropolar terminals: 2.5kV(slow-action type)
		Between charged metal parts: 4kV
		Between terminals and uncharged metal parts: 6kV
Rated insulation voltage (Ui)		600V(EN60947-5-1)
Reverse voltage when on/off		1500V max (EN60947-5-1)
Pollution degree (environmental conditions)		Pollution degree 3 (EN60947-5-1)
Electric shock protection grade		Class I (with ground terminal)
Vibration	Malfunction	10 ~ 55Hz 0.75mm single amplitude
Impact	Duration	1,000m/s^2
	Malfunction	300m/s^2
Ambient temperature		Using: -20~+80℃（With no icing）
Ambient humidity		Less than 95% RH
Weight		About 250g

Note 1. The above are initial values.
Note 2. Values of some models may be different from the above, please contact us for details.
*1. The protection structure is tested based on method predetermined by standard (EN69047-5-1), please confirm the sealing in advance according to the operating environment and conditions.
*2. The conditions of life are the values under the ambient temperature of 5~35℃ and humidity of 40 to 70% RH. For other detailed conditions, please contact us.

Forced Disconnecting Mechanism

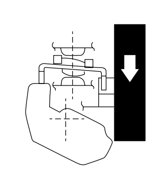
1NC and 1NO contacts (quick-action type)

① Welding occurs

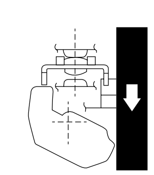


Forced disconnect find of ⊖ EN60947-5-1 (Only NC contact side has direct opening action function).

② Tripping



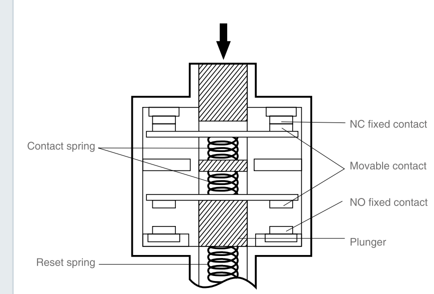
③ Separation is completed



Security cams is directly pressed to separate the movable piece

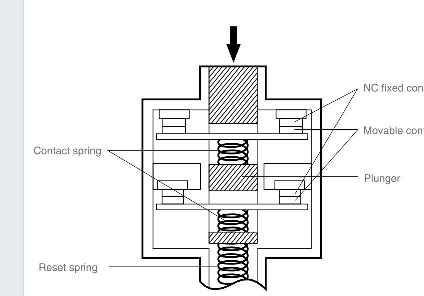
1NC and 1NO contacts (slow-action type)

Forced disconnect find ⊖ of EN60947-5-1 (Only NC contact side has forced disconnect function). When welding occurs, NC contact is separated by pressing the plunger and the loop is cut off.



2NC contacts (slow-action type)

Forced disconnect find ⊖ of EN60947-5-1 (Only NC contact side has forced disconnect function).



C4B-□N Vertical Safety Limit Switch

Contact form

Model	Contact	Contact form	Operation mode	Explanation
C4B-□1□N	1NC/1NO (Quick-action type)	13 Zb 14 / 11 12	11-12 13-14 Travel Conductive	Only NC contact (11-12) has forced disconnect function and got the certification (terminal No.11-12,13-14 can not be used as different heteropoles)
C4B-□5□N	1NC/1NO (Slow-action type)	Zb 11 12 / 23 24	11-12 23-24 Travel Conductive	Only NC contact (11-12) has forced disconnect function and got the certification (terminal No.11-12,13-14 can not be used as different heteropoles)
C4B-□A□N	2NC (Slow-action type)	Zb 11 12 / 21 22	11-12 21-22 Travel Conductive	Two NC contacts (11-12, 21-22) have forced disconnect function and got the certification (terminal No.11-12,21-22 can be used as different heteropoles)

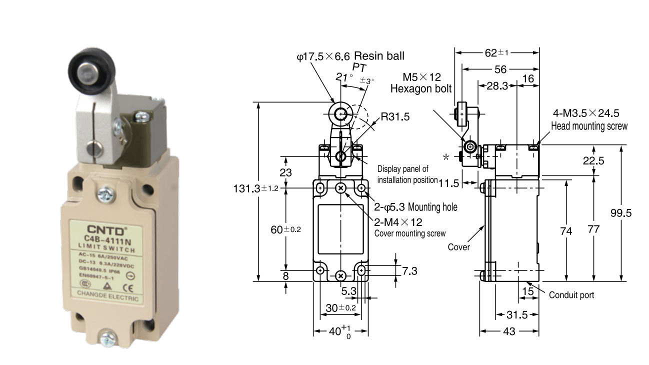
Operating Characteristics

Action characteristics		Model	C4B-□□ 11N	C4B-□□ 15N	C4B-□□16N *1	C4B-□□17N *2	C4B-□□18N *2	C4B-□□ 70N	C4B-□□ 71N	C4B-□□ 81N	C4B-□□ 86N	C4B-□□ 87N
Action force	OF	Max.	9.41N	9.41N	9.41N	2.12N	9.41N	18.63N	18.63N	1.47N	1.47N	1.47N
Restore force	RF	Min.	1.47N	1.47N	1.47N	0.29N	1.47N	1.96N	1.96N			
Pretravel	PT		21° ± 3°	21° ± 3°	21° ± 3°	21° ± 3°	21° ± 3°	2mm	2mm	15	15	15
	PT	(2nd) *3 *5	(45°)	(45°)	(45°)	(45°)	(45°)	(3mm)	(3mm)			
Overtravel	OT	Min.	50°	50°	50°	50°	50°	5mm	5mm			
Poor response travel	MD	Max. *4	12°	12°	12°	12°	12°	1mm	1mm			
Forced disconnected pretravel	DOT	Min. *3*6	35°	35°	35°	35°	35°	3.2mm	3.2mm			
		*4*6	55°	55°	55°	55°	55°					
Forced disconnected force	DOF	Min. *6	19.61N	19.61N	19.61N	19.61N	19.61N	49.03N	49.03N			
Total travel	TT	*5	(75°)	(75°)	(75°)	(75°)	(75°)	(7mm)	(7mm)			
Free position	FP	Max.						38mm	51mm			
Action position	OP							35 ± 1mm	48 ± 1mm			

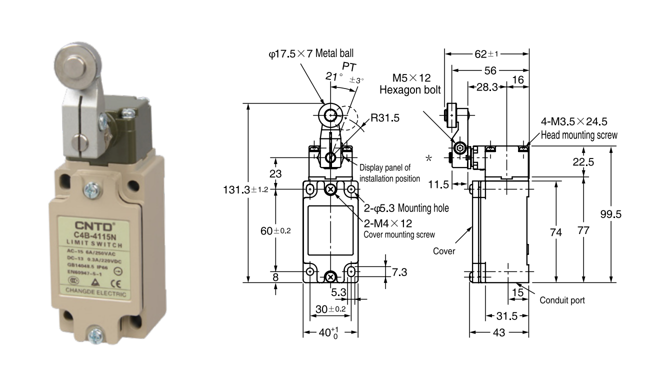
Note The simultaneity of ON / OFF operation of 2NC contacts have difference, please make sure before using it.
*1. The property value when length of lever is 31.5mm.
*2. The property value when length of lever is 140mm.
*3. Only for slow-action type.
*4. Only for quick-action type.
*5. Reference values.
*6. Please make sure in order to ensure the safe use.

Appearance and Dimension

C4B-4111N



C4B-4115N

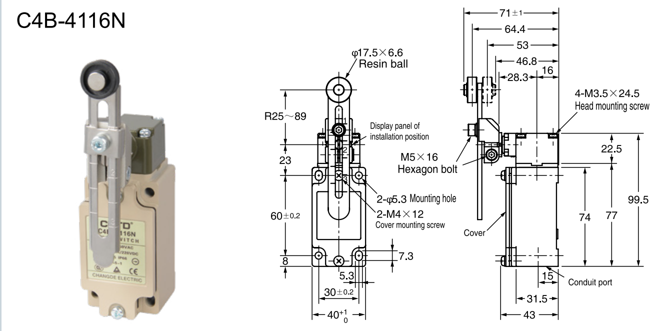


C4B-□N Vertical Safety Limit Switch

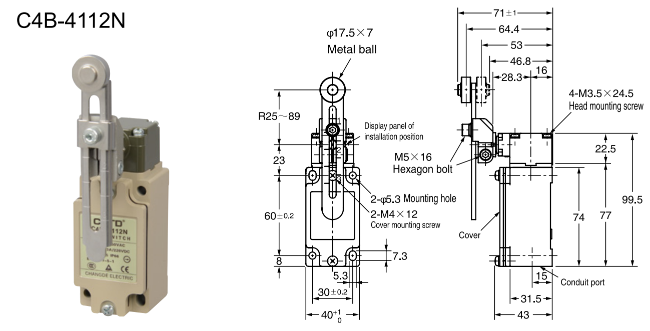
CNTD

Appearance and Dimension

C4B-4116N



C4B-4112N



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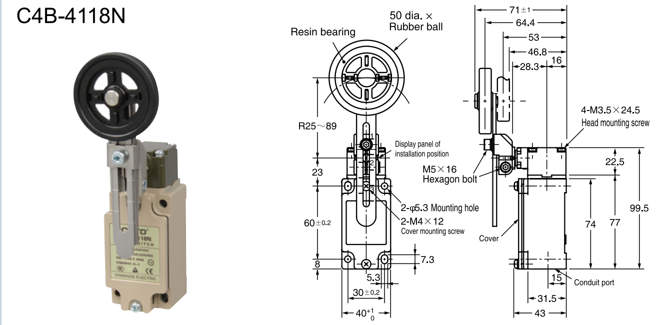

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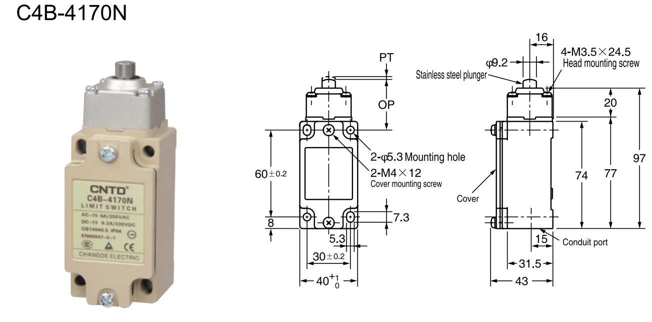
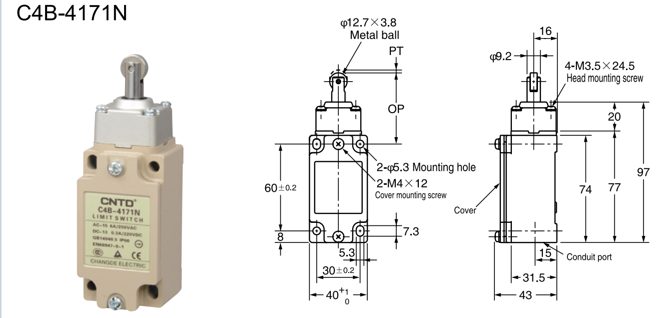


C4B-4171N



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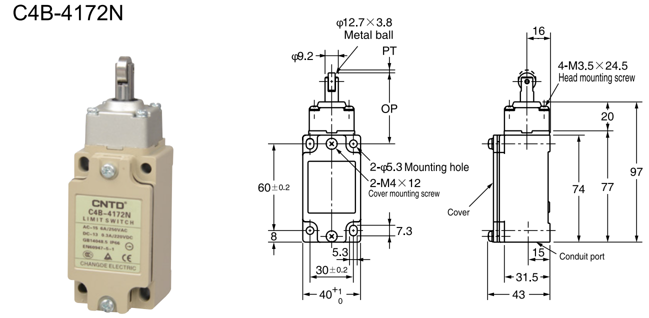
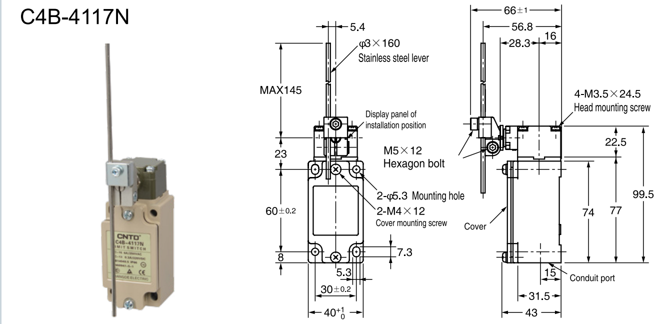
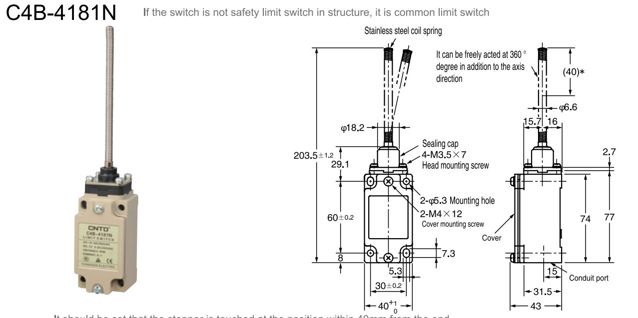


C4B-4117N

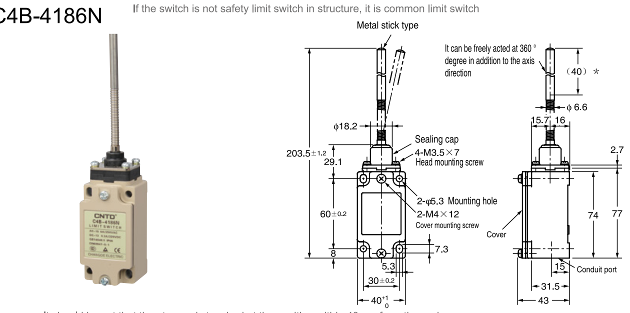


C4B-4181N If the switch is not safety limit switch in structure, it is common limit switch



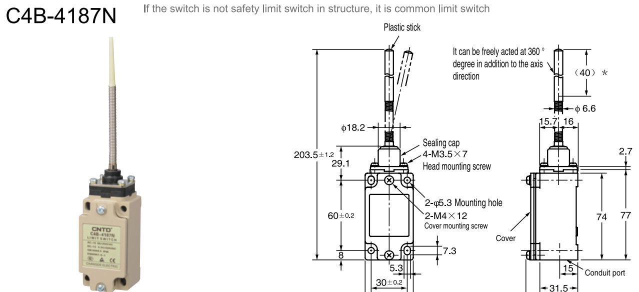
It should be set that the stopper is touched at the position within 40mm from the end

C4B-4186N If the switch is not safety limit switch in structure, it is common limit switch



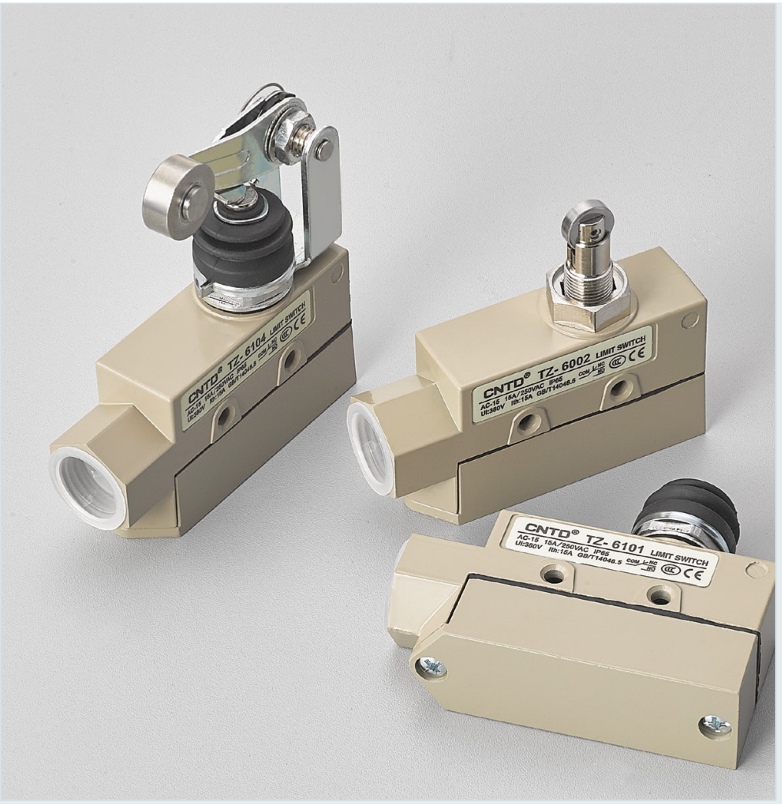
It should be set that the stopper is touched at the position within 40mm from the end

C4B-4187N If the switch is not safety limit switch in structure, it is common limit switch



It should be set that the stopper is touched at the position within 40mm from the end

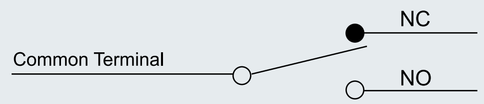
TZ-6 Horizontal Limit Switch



Features

- Built-in CM horizontal limit switch
- High mechanical strength, mainly consists of aluminum cast
- Water-proof and oil-proof construction
- Same rated value and characteristic with CM horizontal limit switch
- Various actuators for different applications

Contact Form



Ratings

Rated Voltage	Noninductive Load (A)				Inductive Load (A)			
	Resistance Load		Lamp Load		Inductive Load		Motor Load	
	NC	NO	NC	NO	NC	NO	NC	NO
125VAC	5	5	1.5	0.7	3	3	2	1
250VAC	5	5	1	0.5	3	3	1.5	0.8
8VDC	5	5	3	3	5	4	3	3
14VDC	5	5	3	3	4	4	3	3
30VDC	5	5	3	3	4	4	3	3
125VDC	0.4	0.4						
250VDC	0.2	0.2						
Inrush Current	N.C: below 24A, N.O: below 12A							

NOTES: 1.Inductive load has a power factor of 0.4 min.(AC) and a time constant of 7 msec. max.(DC).
2.Lamp load has an inrush current of 10 times the steady-state current,while motor load has an inrush current of 6 times the steady-state current.
3.Product with spring, its usable range of operating part is within one third of the whole spring length from the front end of spring.

Specifications

Operation speed	5mm-0.5m/s
Operating frequency	Electical: 20 operations/min
Contact resistance	25mΩ max. (initial value）
Insulation resistance	100mΩ min. （below 500VDC）
Dielectric strength	1500VAC, 50/60 Hz for 1 minute between current-carrying and non-current-carrying metal parts
	1500VAC, 50/60 Hz for 1 minute between current-carrying and non-current-carrying metal parts
	1500VAC, 50/60 Hz for 1 minute between each terminal and ground
Vibration	10-55Hz,1.5mm double amplitude
Shock	Mechanical durable: 1, 000m/Sec^2 (about 100G'S) Malfunction: 300m/Sec^2 (about 30G'S)
Ambient temperature	Using: -20~+80℃（With no icing）
Humidity	<95% RH
Electrical life	500,000 operations above
Protection level	IP66

NOTES: The default size of conduit connector is M20x1.5, outfiting cable connector. Conduit connector size is PG13.5, with product model number plus (-P), example:TZ-6104-P.

Operating Characteristics

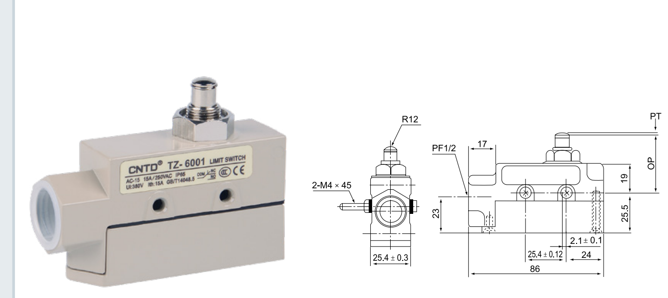
Model	TZ-6	TZ-6001	TZ-6002	TZ-6003	TZ-6004	TZ-6043	TZ-6101	TZ-6102	TZ-6103	TZ-6104	TZ-6143
Operating force	OF(Max.)	250~350g	250~350g		570g	570g	800g	500g		640g	640g
Release force	RF(Min.)	114g	114g		170g	170g	240g	100g		230g	230g
Pre-travel	PT(Max.)	0.4mm	0.5mm		4mm	4mm	2mm	1mm		5mm	5mm
Movement differential	MD(Max.)	0.05mm	0.05mm		0.4mm	0.4mm	0.1mm	0.12mm		0.4mm	0.4mm
Over travel	OT(Min.)	5.5mm	3.6mm		6mm	6mm	5mm	3.5mm		6mm	6mm
Operating Position	OP(mm.)	38.2±0.8mm	49.7±1mm				45.8±0.8mm	49.7±0.8mm			

TZ-6 Horizontal Limit Switch

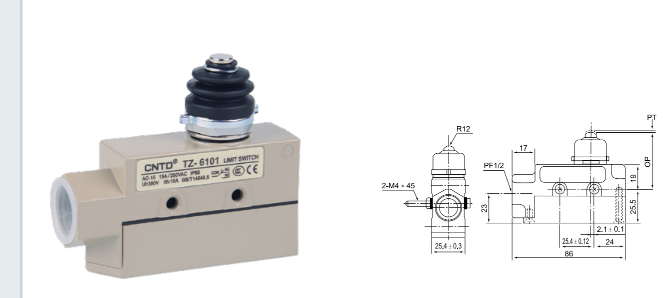
CNTD

Appearance and Dimension

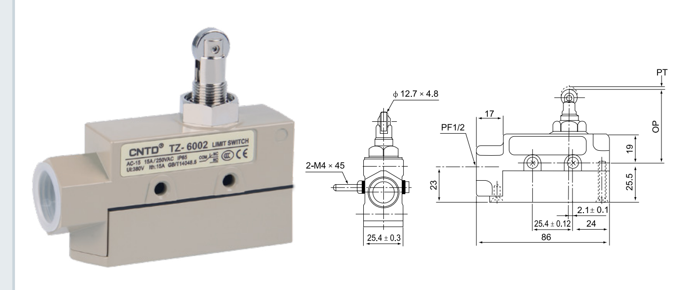
TZ-6001



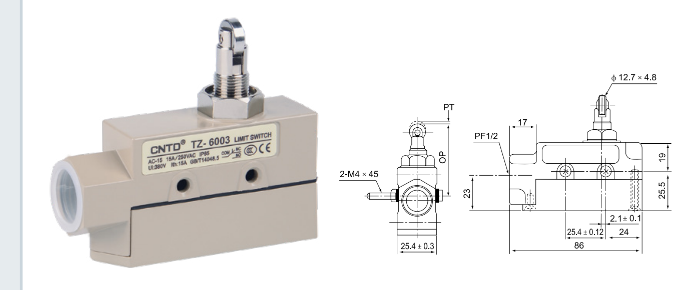
TZ-6101



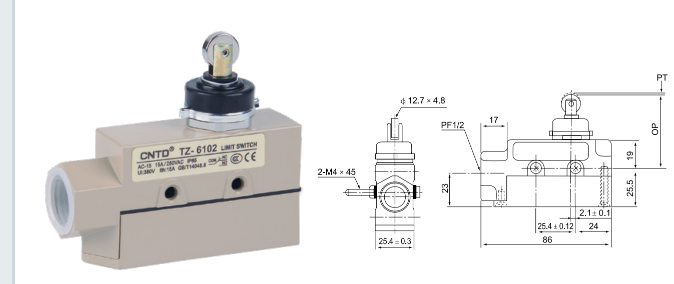
TZ-6002



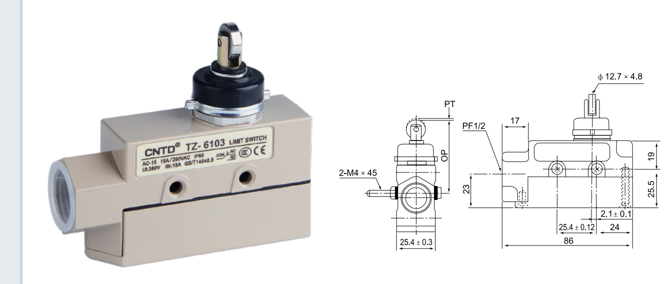
TZ-6003



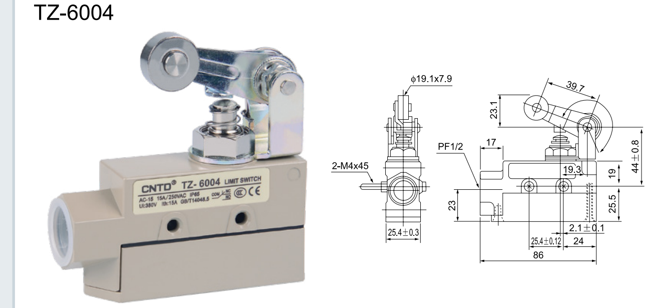
TZ-6102



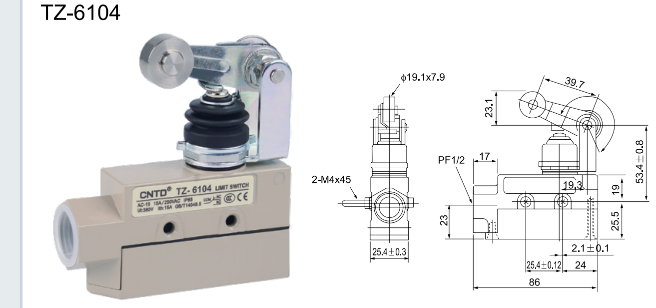
TZ-6103



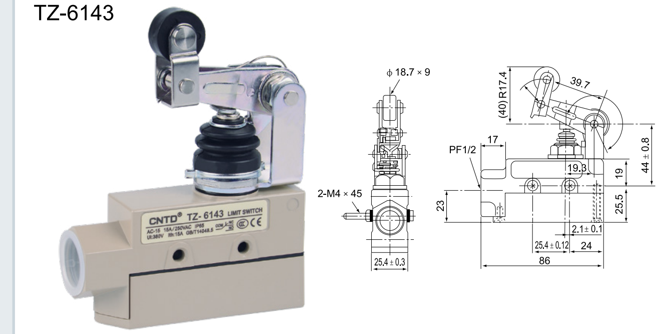
TZ-6004



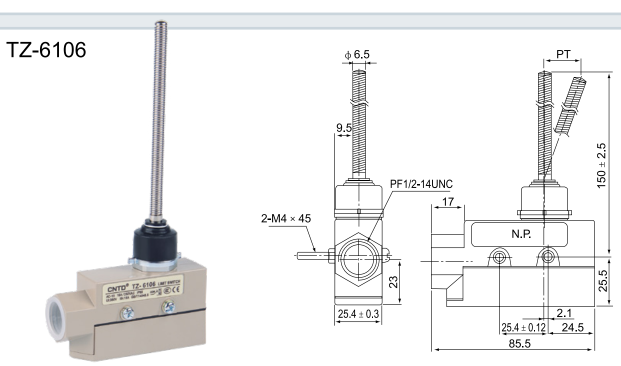
TZ-6104



TZ-6143



TZ-6106



CZ-93 Vertical Interlock Safety Limit Switch

Model Number Structure

CZ-93 | C | PM | 01
① ② ③ ④

Designation	Model NO.	Description
Type	CZ-93	Safety switch
Type of contact blocks fitted	B	2B(2NC)
	C	1A1B(1NC/1NO)
Conduit/connector size	PG	PG 13.5XP1.5
	PM	M20X1.5
Actuating keys	None	None
	01	Horizontal
	02	90° Vertical
	03	Adjustable

NOTE: The default size of conduit connector is M20x1.5.

Ratings

Rated Voltage	Noninductive Load (A)				Inductive Load (A)			
	Resistance Load		Lamp Load		Inductive Load		Motor Load	
	NC	NO	NC	NO	NC	NO	NC	NO
125 VAC	10		3	1.5	10		5	2.5
250 VAC	10		2	1	10		3	1.5
400 VAC	10		1.5	0.8	3		1.5	0.8
8 VDC	10		6	3	10		6	6
14 VDC	10		6	3	10		6	6
30 VDC	6		4	3	6		4	4
125 VDC	0.8		0.2	0.2	0.8		0.2	0.2
250 VDC	0.4		0.1	0.1	0.4		0.1	0.1

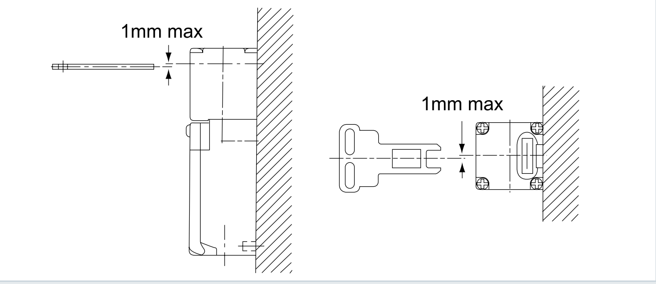
Specifications

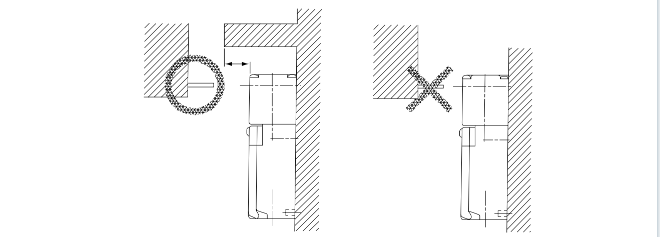
Rating	3A 240VAC (A300)
Operating speed	0.1m~0.5m/s
Operating frequency	30 operations/min
Contact resistance	25mΩ max. (initial).
Insulation resistance	100mΩ min. (at 500VDC)
Rated insulation voltage(UI)	400V
Dielectric strength	AC2500V/Uimp 4KV
Vibration	10 to 55Hz, 1.5mm double amplitude
Shock	Mechanical: Approx. 1000m/s² (Approx. 100G'S) Electrical: Approx. 300m/s² (Approx. 30G'S)
Ambient temperature	Using: -20~+70℃ (With no icing)
Ambient Humidity	< 95% RH
Electrical life	150,000 operations/min.
Protection level	IP65 (IEC Standard)

Cautions

To prevent the wear and the space should be within 1mm between the key and middle of the insert hole.

When in use,there should put a plate on the top to prevent the key overinsert.To prevent nonmovement, the space between the plate and the switch should be under 3 mm.



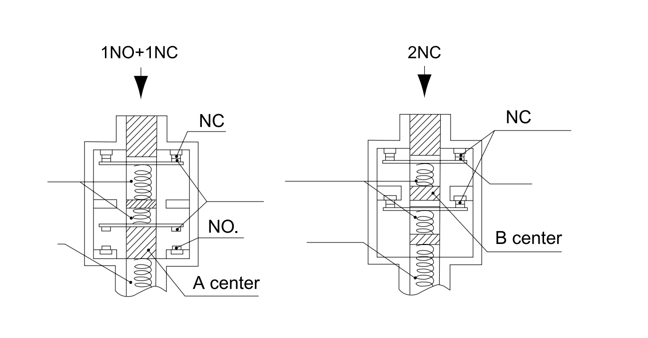


Normal used state   Unsuitable used state

CZ-93 Vertical Interlock Safety Limit Switch

CNTD

Forced Disconnecting Mechanism



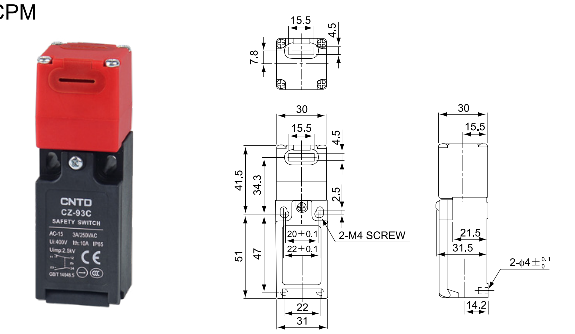
When the contact block get fire, press on the middle of the key structure, the NC strict leaving structure can push the contact block a way cut off the movement.

Operating Characteristics

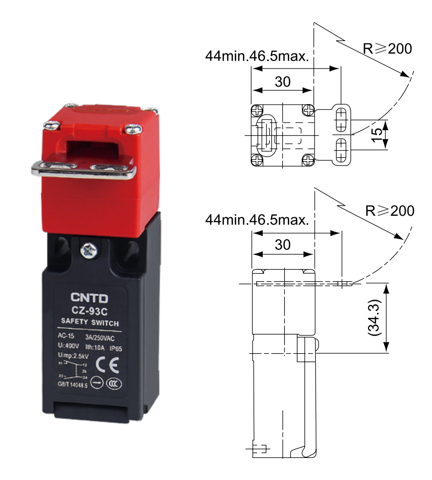
Key plug in force	14.7N(1,500gf)
key pull out force	29.42N(3,000gf)
Pretravel	6 ± 3mm
Total travel	(28mm)
Force required to have positive	58.84N(6,000gf)
Positive opening travel	10mm

Appearance and Dimension

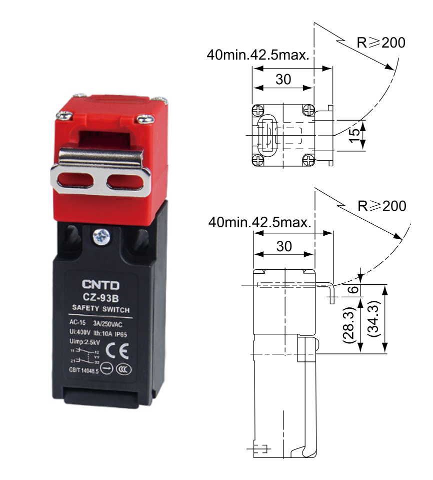
CZ-93CPM



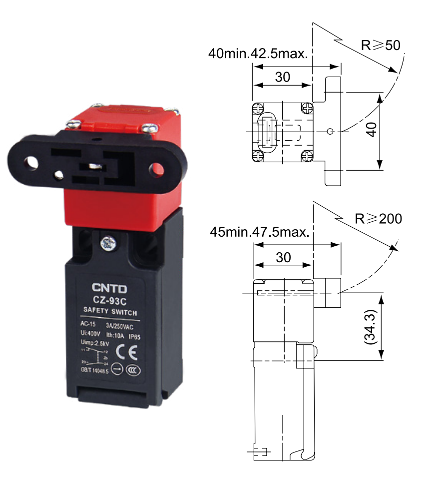
CZ-93CPM01



CZ-93BPM02

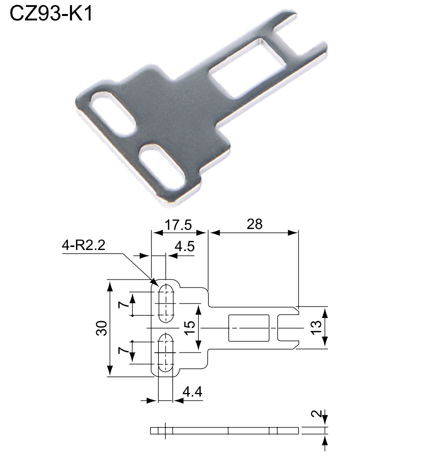


CZ-93CPM03

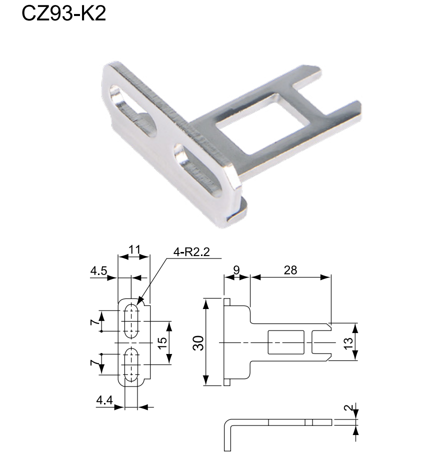


Key Dimension

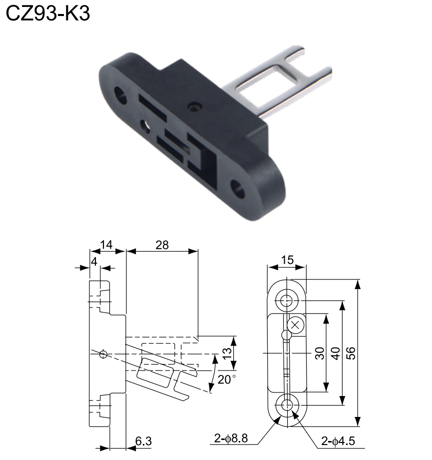
CZ93-K1



CZ93-K2



CZ93-K3

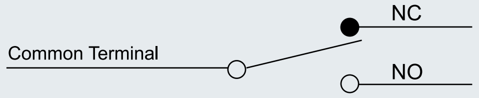


CZ-3 Vertical Limit Switch

Features

- High mechanical strength, mainly consists of aluminum cast
- Water proof, oil proof and dust proof construction
- Various actuators for different applications

Contact Form



Ratings

Rated Voltage	Noninductive Load (A)				Inductive Load (A)			
	Resistance Load		Lamp Load		Inductive Load		Motor Load	
	NC	NO	NC	NO	NC	NO	NC	NO
125 VAC 250 VAC	5 (0.1) 3		1.5 1	0.7 0.5	3 2		2.5 1.5	1.3 0.8
8 VDC 14 VDC 30 VDC 125 VDC 250 VDC	5 (0.1) 5 (0.1) 4 (0.1) 0.4 0.2		2 2 2 0.05 0.03		5 4 3 0.4 0.2	4 4 3 0.4 0.2	3 3 3 0.05 0.03	

Note: Product with spring, its usable range of operating part is within one third of the whole spring length from the front end of spring.

Specifications

Rating	5A 125V,3A 250VAC
Operating speed	1mm~1m/s(Swing rod type) 0.1mm~0.5m/s(Plunger type)
Operating frequency	Electrical:30 operations/min.
Contact resistance	25mΩ max.(initial)
Inslation resistance	100mΩ min.(at 500VDC)
Dielectric strength	1000VAC, 50/60 Hz for 1 minute between terminals of the same polarity 1500VAC, 50/60 Hz for 1 minute between current-carrying and non-current-carrying metal parts 1500VAC, 50/60 Hz for 1 minute between each terminal and ground
Vibration Frequency	10 to 55HZ,1.5mm double amplitude
Shock	Mechanical:Approx.1000m/s^2 (Appprox.100G'S) Electrical:Approx.500m/s^2 (Approx.50G'S)
Ambienttemperature	Using: -20~+70℃ (With no icing)
Humidity	< 95% RH
Electrical life	200,000 operations/min.
Weight	Approx.360g(cable length 3m) Approx.540g(cable length 5m)
Protection level	IP67

Operating Characteristics

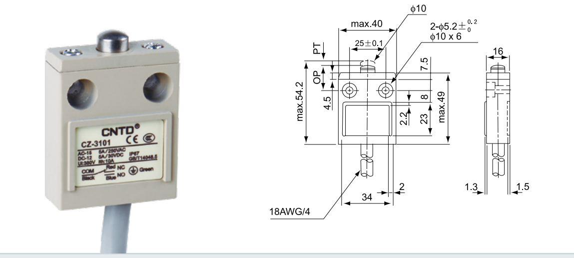
Model	CZ-3	CZ-3101	CZ-3102	CZ-3103	CZ-3104 (3107/3108)	CZ-3110	CZ-3111	CZ-3112	CZ-3113	CZ-3169 (3166/3167/3168)
Operating Force	OF(Max.)	11.77N	11.77N	11.77N	5.69N	11.77N	17.65N	17.65N	17.65N	1.47N
Release Force	RF(Min.)	4.41N	4.41N	4.41N	1.47N	4.41N	4.41N	4.41N	4.41N	-
Pre-Travel	PT(Max.)	1.8mm	1.8mm	1.8mm	25	1.8mm	1.8mm	1.8mm	1.8mm	15°
Over Travel	OT(Min.)	3mm	3mm	3mm	40	3mm	3mm	3mm	3mm	-
Movement Differential	MD(Max.)	0.2mm	0.2mm	0.2mm	3	0.2mm	0.2mm	0.2mm	0.2mm	-
Operating Position	OP(mm.)	15.7 ± 1mm	28.5 ± 1mm	28.5 ± 1mm	-	28.5 ± 1mm	24.9 ± 1mm	34.3 ± 1mm	34.3 ± 1mm	-

CZ-3 Vertical Limit Switch

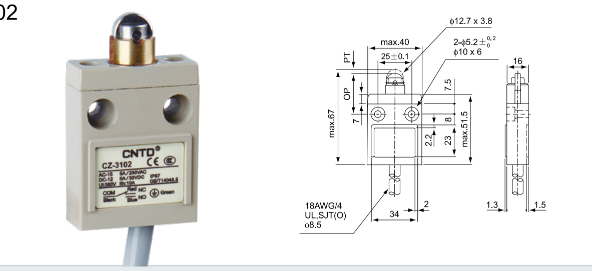
CNTD

Appearance and Dimension

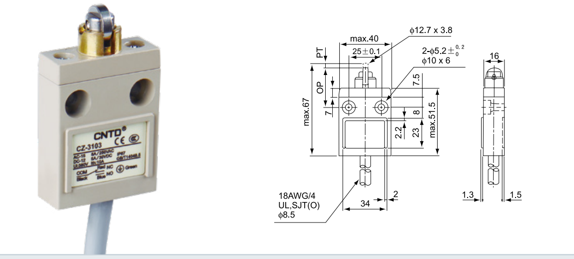
CZ-3101



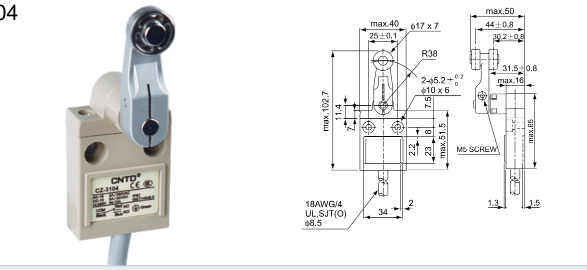
CZ-3102



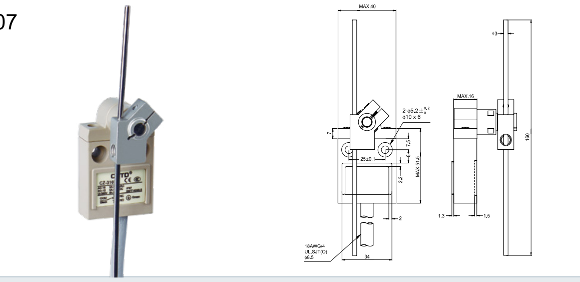
CZ-3103



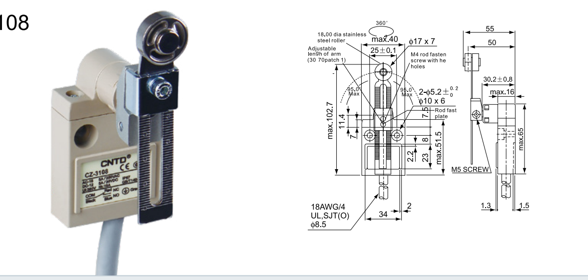
CZ-3104



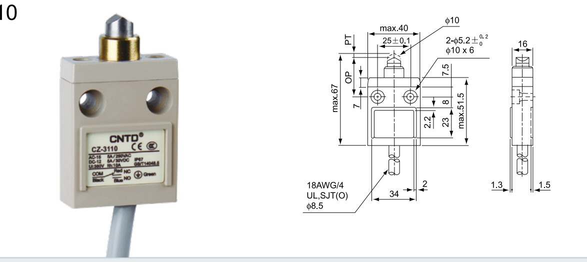
CZ-3107



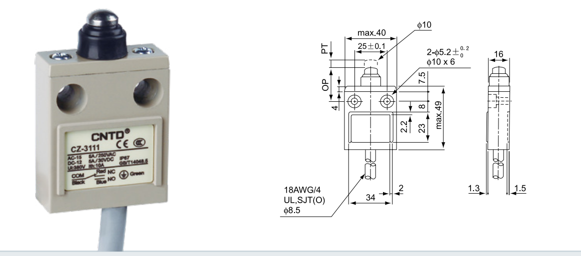
CZ-3108



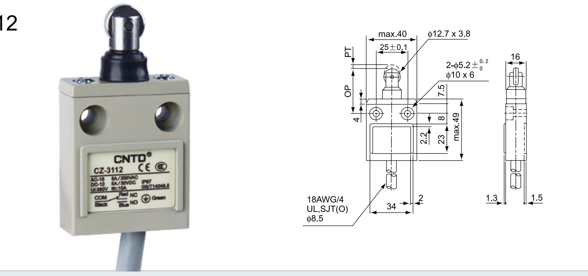
CZ-3110



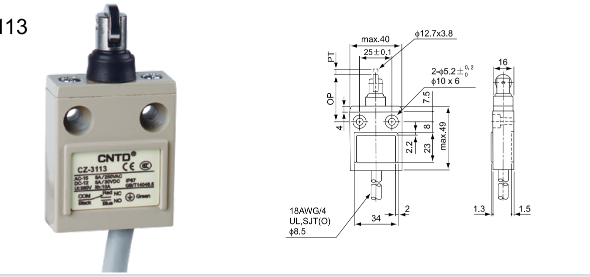
CZ-3111



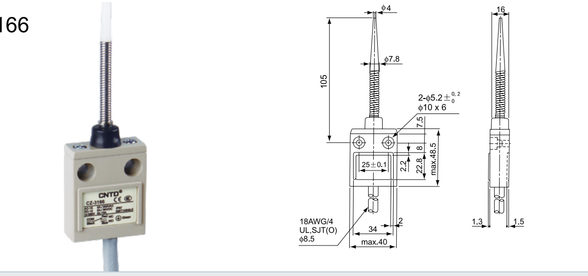
CZ-3112



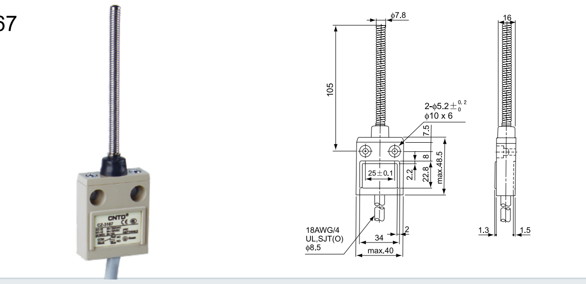
CZ-3113



CZ-3166

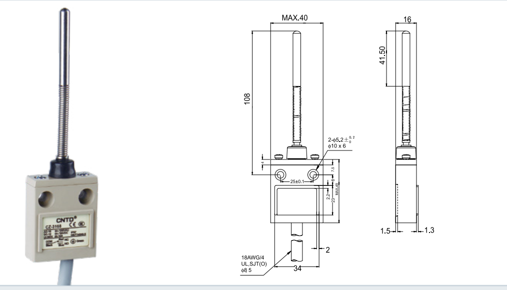


CZ-3167

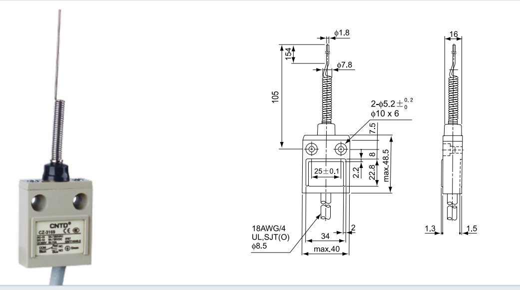


CZ-3 Vertical Limit Switch

CZ-3168

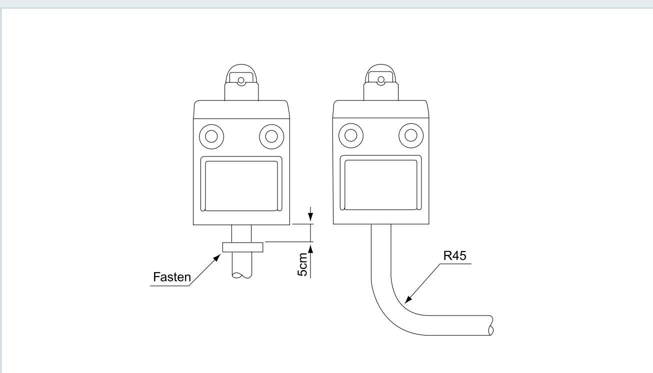


CZ-3169



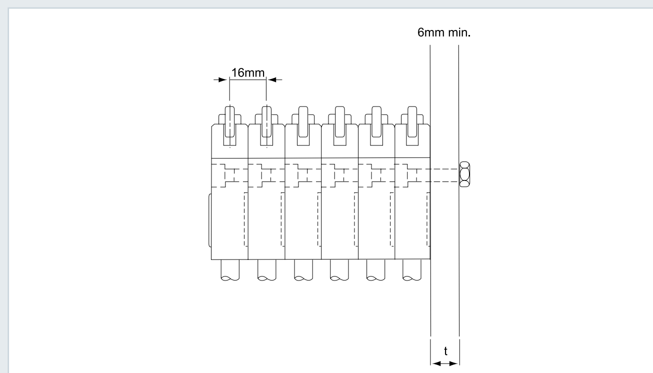
Cabling Attention

The switch bodies are filled with resin for sealing purposes. To avoid stressing the cable and switch body, fasten the switch at 5 cm or farther away from the switch body, should the wire be bent, the bending radius shall be at least 45mm.



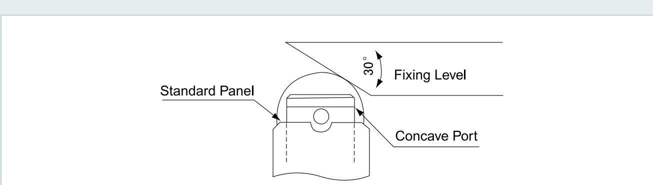
Quantity Mounted Using Attention

A maximum of six switches may be mounted together as a switch bank. During the installation,the convex part of the switch back.The mounting panel shall be 6mm or thicker.



Installation Attention

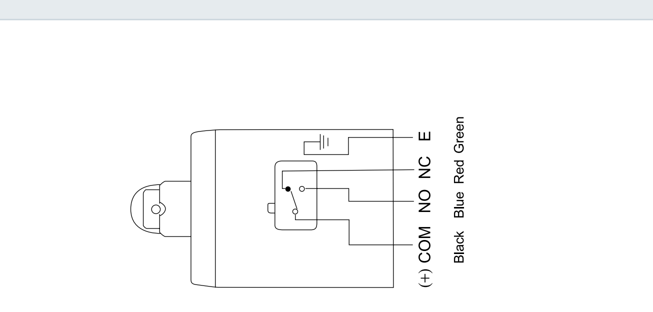
The service life and accuracy of switches will be effected by the shape of actuator operation frequency & over travel. So the angular of the fixing level should be about 30° , the surface finish of the fixing level should be over, the hardness is from HV400~500.When installing, the position of the concave part should be above the standard panel



Recommended tightening torque according to the follwing form.

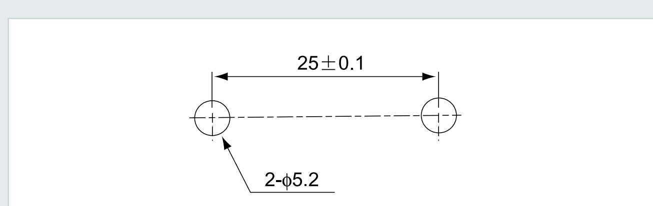
Model	Screw type	Torque
1	M5 fastening screws	43.4~52lb.in (50~60kgf.cm)
2	M3.5 installing screws	6.9~7.9lb.in (8~9kgf.cm)

Contact Form



Mounting Holes

Mount the switch body to a rigid mounting panel using two M5 screws.



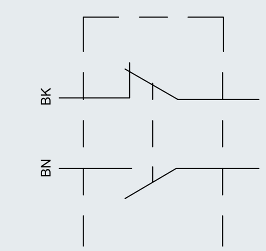
C6N Vertical Safety Limit Switch

CNTD

Features

- Integrated injection molded housing with high mechanical strength IP67 High protection
- Small size, thickness only 16mm, wide applicability
- The installation is simple and convenient

Contact Form



Model Designation

C6N — □ □ □ □ □

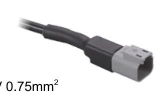
① ② ③ ④ ⑤ ⑥

No	Item	Code	Description	Forced disconnection Yes/No
①	Serial number	C6N	High precision type	
②	Shell material	P	Plastic	
③	Contact structure and contact material	1	1NC/1NO	
④	Head and drive rod	04	Ball swing rod type (metal swing rod, resin ball)	Only NC end has forced disconnection
		05	Ball swing rod type (metal swing rod, metal ball)	Only NC end has forced disconnection
		08	Adjustable ball swing rod (metal swing rod, resin ball)	Only NC end has forced disconnection
		09	Adjustable ball swing rod (metal swing rod, metal ball)	Only NC end has forced disconnection
		11	Top plunger type	Only NC end has forced disconnection
		17	M12 Top plunger type	Only NC end has forced disconnection
		22	Top plunger horizontal ball (metal ball) type	Only NC end has forced disconnection
		23	Top plunger vertical ball (metal ball) type	Only NC end has forced disconnection
		24	M12 Top plunger horizontal ball (metal ball) type	Only NC end has forced disconnection
		25	M12 Top plunger vertical ball (metal ball) type	Only NC end has forced disconnection
		15	Single-side cantilever ball type (horizontal to right)	Only NC end has forced disconnection
		16	Single-side cantilever ball type (horizontal to left)	Only NC end has forced disconnection

C6N Vertical Safety Limit Switch

④	Head and drive rod	67	Spring type	None
		68	Metal rod coil spring type	None
		69	Tentacle type	None
		66	Plastic rod type	None
		07	Adjustable rod swing rod type	None
⑤	Outlet mode	None	Standard type (side outlet)	
⑥	Standard type (side outlet)	None	No line	
		L1~L5	1~5m	

Special Specification Code Description

Code	Description	Picture
△□	△ means: 1=1NO,2=1NC; □ Indicates: None: ungrounded. G: grounded.	 RVV 0.75mm^2
D ○△□	DT type connectors (○ represents 2=DT04-2P, 3=DT04-3P, 4=DT04-4P, 6=DT04-6P; △ represents: 1=1NO,2=1NC,3=1NO1NC; □ Indicates: None: ungrounded. G: grounded	 RVV 0.75mm^2
A ○△□	AMP type connectors (○ represents 2=AMP04-2P, 3=AMP04-3P, 4=AMP04-4P, 6=DAMP04-6P; △ represents: 1=1NO,2=1NC,3=1NO1NC; □ Indicates: None: ungrounded. G: grounded	 RVV 0.75mm^2
M ○△□	M12 type connectors (○ represents 4=M12-4P, 5=M12-5P, 8=M12-8P; △ represents: 1=1NO,2=1NC,3=1NO1NC; □ Indicates: None: ungrounded. G: grounded	 RVV 0.3mm^2

*The above special specifications, customized production according to order, product nameplate production for laser marking process; The universal model nameplate process is pad printing process.

International Certification Specifications

Certification specifications	Specifications	Document
CCC	GB/T14048.5	Please consult the CNTD Representative Office
TUV	IEC60947-5-1	

Safety Specification Certification Rating

CCC(GB/T14048.5)、TUV(IEC60947-5-1)

Type and Rating
AC-15 1.5A/240V Resistive load DC-13 0.1A/250V Resistive load

Characteristics

Protection level		IP67
Life	Electrical	More than 500,000 times (DC-13 24V 0.125A), more than 300,000 times (AC-15 240V 1.5A)
Operating speed		1mm-0.5m/s
Operating frequency		Electrical: 30 operations/min
Contact resistance		Less than 150mΩ (initial value of 1m cable), less than 200mΩ (initial value of 2m cable), less than 350mΩ (initial value of 5m cable)
Insulation resistance		100MΩ min.(at 500VDC)
Minimum working load		100mA resistive load below DC24V
Rated insulation voltage (Ui)		400V complies with IEC60947-5-1
Electric shock protection grade		Class II (double insulated)
Pollution degree (Using conditions)		Pollution degree 3 (IEC60947-5-1)
Withstand voltage (IEC60947-5-1)		Between homopolar terminals: 2.5kV
		Between heteropolar terminals: 4kV
		Between terminals and uncharged metal parts: 4kV
Contact gap		Minimum 4*0.5mm quick action type
Vibration	Malfunction	10~55Hz 1.5mm double amplitude
Impact	Duration	1,000m/s^2
	Malfunction	300m/s^2
Ambient temperature		Using: -25~+70℃ (With no icing)
Ambient humidity		Less than 95% RH
Weight		Approx 140g (C6N-P104L1), Approx 110g (C6N-P122L1)

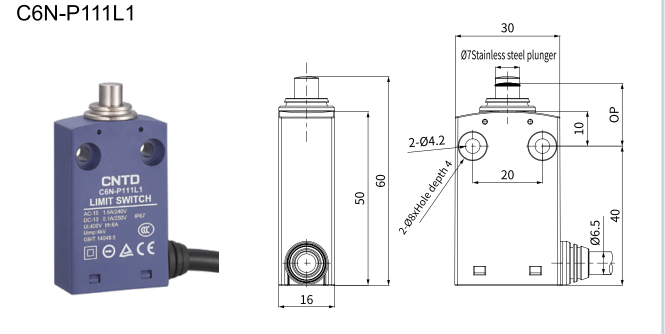
Operating Characteristics

Model	C6N-P	111/117L1	122/123/124/125L1	115/116L1	104/115/107/108/109L1	166/167/168/169L1
Operating Force	OF(Max.)	8.5N	8.5N	7N	5N	1.5N
Release Force	RF(Min.)	0.4N	0.4N	0.4N	0.4N	/
Pre-Travel	PT(Max.)	2mm	2mm	3mm	25°	20°
Over Travel	OT(Min.)	3mm	6mm	/	65°	/
Movement Differential	MD(Max.)	1mm	1mm	1.6mm	12°	10°
Operating Position	OP(mm.)	/	/	/	/	/
Total travel	TT	5mm	8mm	/	90°	/
Forced disconnected pretravel	DOT (Min.)	4.2mm	4.2mm	6.3mm	70°	/
Forced disconnected force	DOF (Min.)	42.5N	42.5N	42.5N	42.5N	/

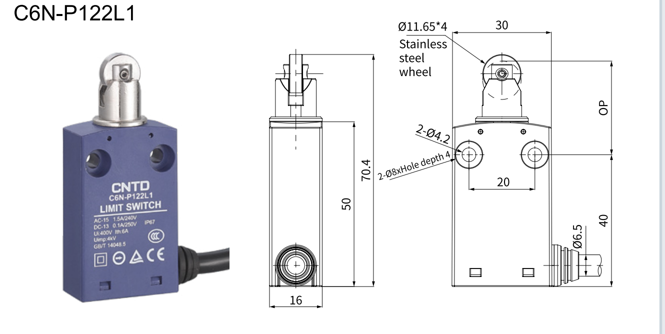
C6N Vertical Safety Limit Switch

Appearance and Dimension

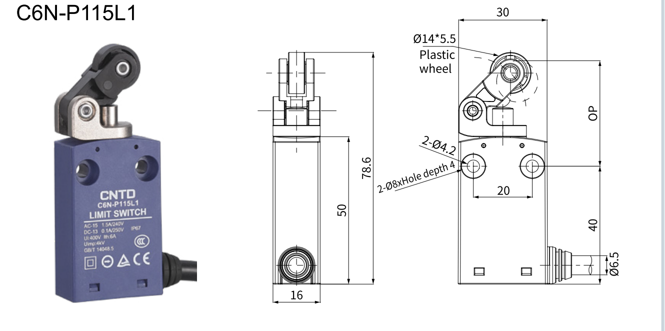
C6N-P111L1



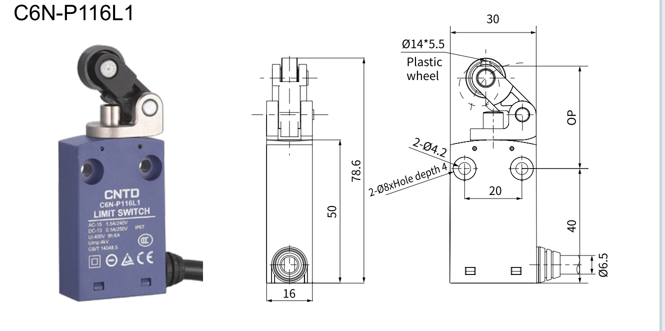
C6N-P122L1



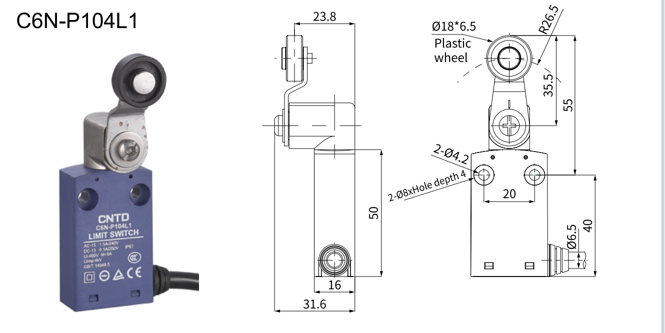
C6N-P115L1



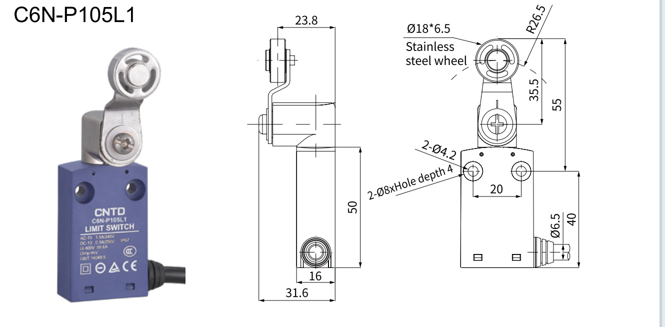
C6N-P116L1



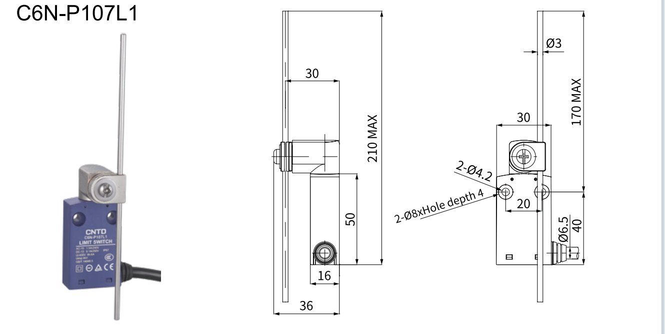
C6N-P104L1



C6N-P105L1



C6N-P107L1



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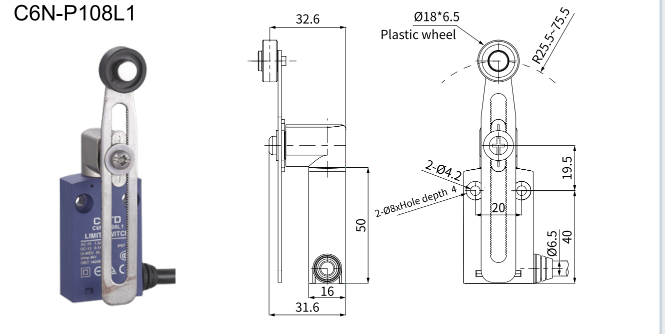

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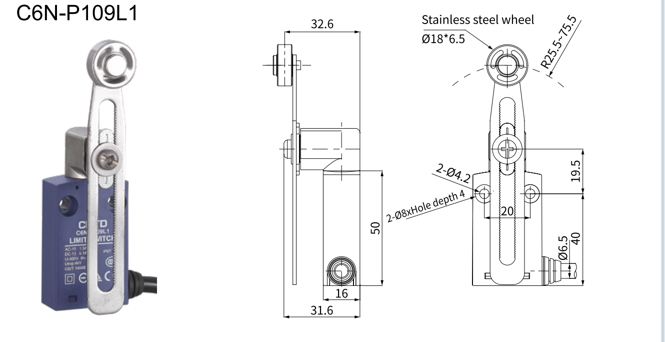
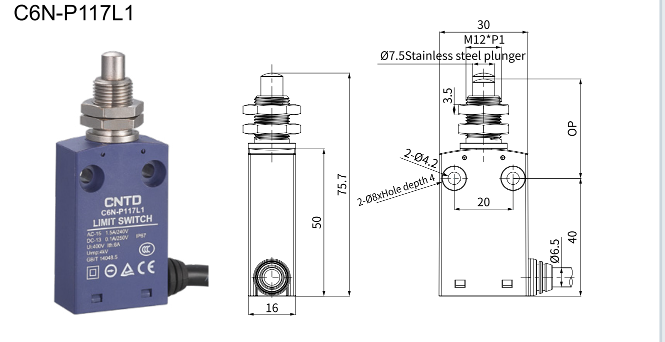


C6N-P117L1

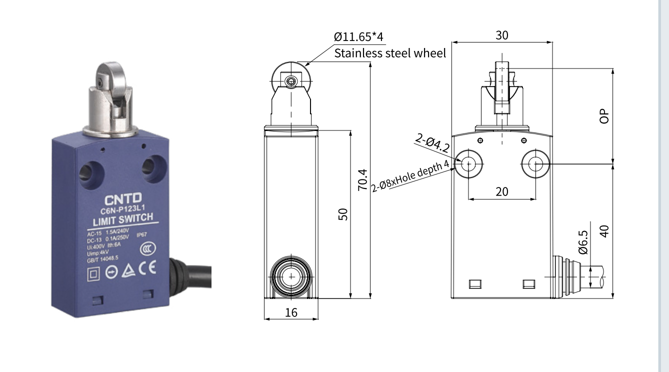


C6N Vertical Safety Limit Switch

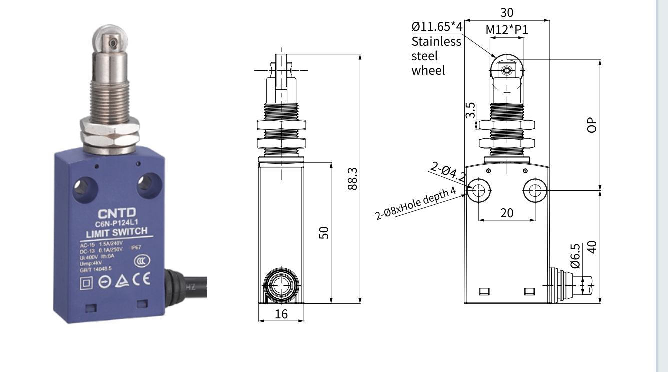
CNTD

Appearance and Dimension

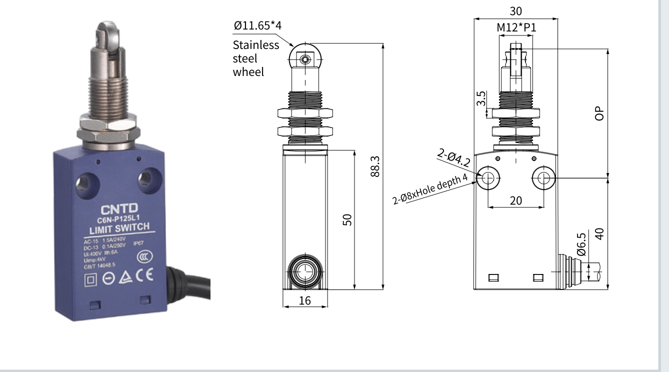
C6N-P123L1



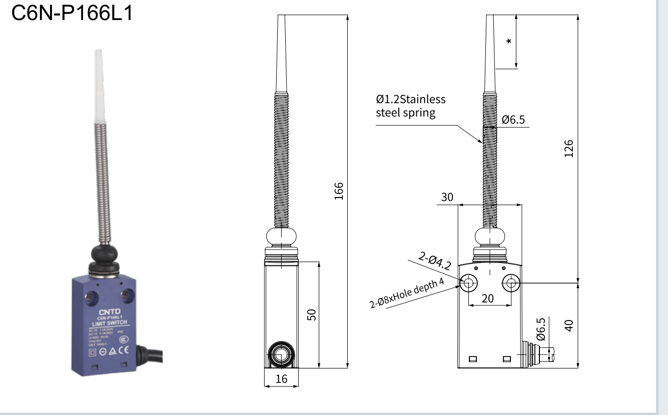
C6N-P124L1



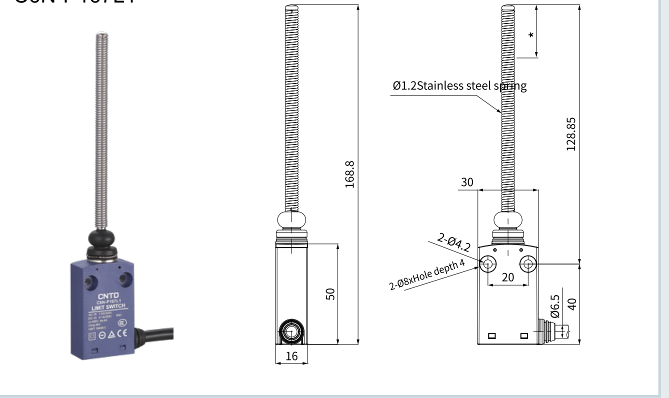
C6N-P125L1



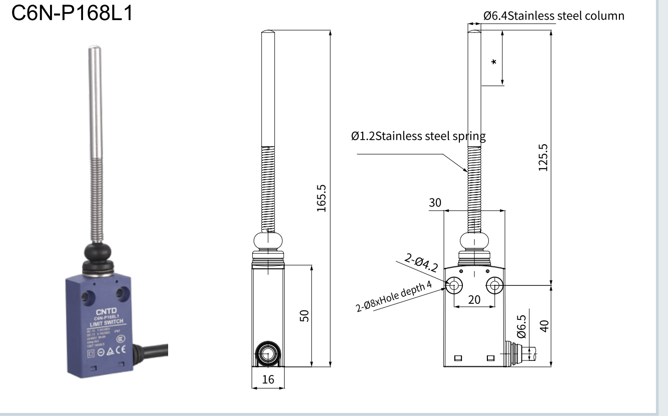
C6N-P166L1



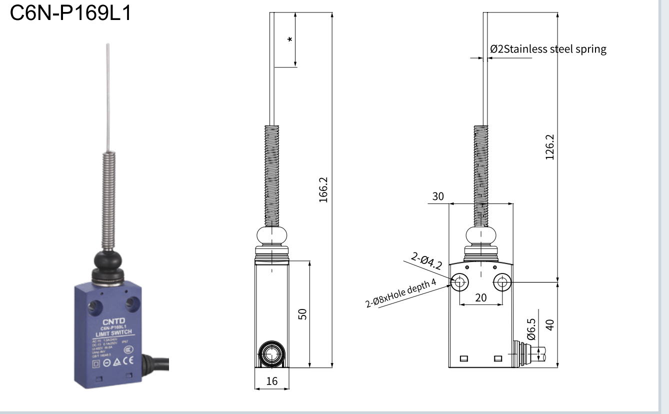
C6N-P167L1



C6N-P168L1



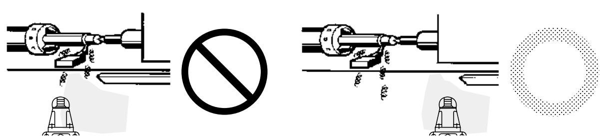
C6N-P169L1



C6N Vertical Safety Limit Switch

About Using the Environment

The sealing material can It can spoil. Please confirm the actual usage conditions before determining the maintenance and replacement time. Please install the switch in a location that will not directly come into contact with chips or dust. It is necessary to ensure that the drive, The moving rod and switch body will not accumulate cutting chips and mud like substances.



When the switch is subjected to continuous vibration and impact, the generated wear powder may cause contact connection Poor contact, abnormal movement, decreased durability, and other issues. In addition, if there is excessive vibration And impact, which may cause contact malfunction and damage, so please install it in the In a position that will not be subjected to vibration and impact, and in a direction that will not resonate.

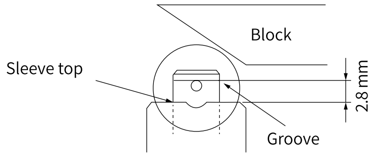
The switch has physical contacts. If silicon gas is present in the environment, the arc energy will cause Silicon dioxide (SiO_2) accumulates on the contacts, resulting in poor contact.

There is silicone oil around the switch When using silicon fillers, silicon wires, and other silicon products, please use contact protection circuits to suppress arcing And eliminate the source of silicon gas generation.

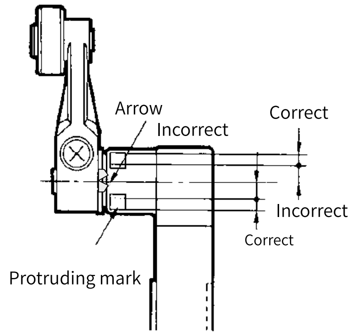
Operate

The operating method, shape of the cam or stop, operating frequency, and overtravel all significantly affect the service life and the accuracy of the limit switch. Due to this reason, the angle of the stop must be below 30 ° , the surface roughness of the stop must be above 6.3 S, and the hardness must be Hv 400 to 500.

To ensure the correct movement of the plunger type drive rod, adjust the stop and cam to the correct setting position. The correct position is the position where the plunger groove matches the top of the sleeve.



To allow the ball swing rod type drive rod to move correctly, adjust the stop and cam so that the arrow is positioned between the two protruding marks, as shown below.



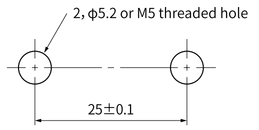
On the Use of Small Load Models

The use of a general load switch in the switching of a small load circuit will cause contact failure. The use of small load type, if the switch will occur surge current load, will also aggravate the contact consumption, shorten the service life, so please insert the necessary contact protection circuit. The minimum applicable load is the N-level reference value. This represents the level of the fault level at a reliability level of 60%(I λ 60). λ 60=0.5x10-6/ time indicates that the presumed failure rate is less than 1/2,000,000 at a reliable level of 60%.

Precautions for use

Switch contacts can be used for general loads or small loads. However, contacts that have already been connected to general loads cannot be used to connect smaller capacity loads. Otherwise, it may lead to roughness of the contact surface and loss of contact reliability.

Mounting hole



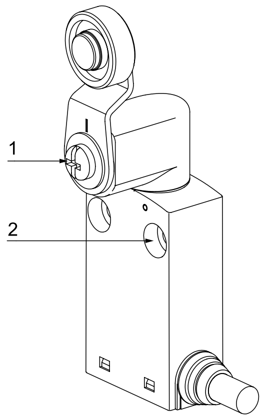
Plunger type may malfunction due to harsh environments, such as dust or cutting debris causing poor reset. In this case, please use a model with a rubber cap.

Do not come into contact with water exceeding 70 ° C or use under steam.

Tighten each screw to the corresponding torque according to the table below.

Number	Types of	Correct tightening torque*
1	M4 swing rod mounting screws	1.2~1.4N·m
2	M4 installation torque	0.6~0.8N·m

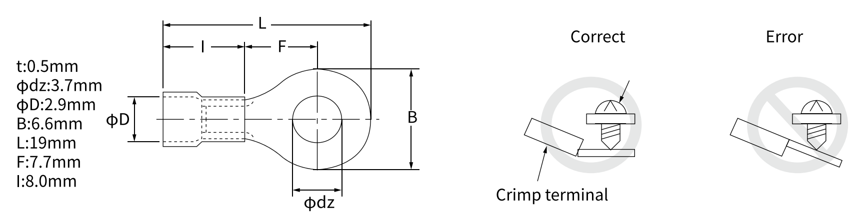
*By removing two screws from the head, the head direction can be rotated 180 ° . When changing the direction of the head Then tighten to the torque specified above. Be careful not to allow any impurities to enter the switch.



C6N Vertical Safety Limit Switch

Wiring precautions

Do not wire the switch while it is powered on. Otherwise, it may cause electric shock.
When wiring, do not allow small wires or other particles to enter the switch body.
When connecting terminals through insulated pipes and M3.5 crimping terminals, please configure the crimping terminals as shown in the figure to ensure that they are not pressed onto the outer shell or cover.
The applicable wire size is: AWG20~AWG18 (0.5~0.75mm2).
Please use wires of appropriate length for wiring. Otherwise, it may cause the outer cover to arch or fail to secure properly.
Do not insert crimped terminals into the gaps in the casing, as this may cause damage or deformation to the casing.
To avoid contact between the terminals and the inside of the switch housing, please use terminals with a thickness of less than 0.5mm.



Applicable conductor

Wire name	Using wires		
	Number of cores	Conductor	Nom OD
Plastic rubber insulated flexible wire	2-core 3-core 4-core	0.75mm²	Circular ϕ6~ϕ9
600V plastic insulation Plastic sheathed cable	2-core	ϕ1/ϕ1.2/ϕ1.6	

Note: If it contains silicon, it may cause poor contact. Please do not use it.

CZE Limit Switch

CNTD

Actuartors available

Direct movement


A
Steel plunger


A/S1
Steel plunger with ruber gasket


B
Steel roller plunger


C
Thermoplastic roller lever, side actuation


C/S1
Thermoplastic roller lever, with rubber gasket, side actuation


D
Thermoplastic roller lever, vertical actuation


D/S1
Thermoplastic roller lever, with rubber gasket, vertical actuation


R
Reversible, adjustable thermoplastic roller lever

Angular movement


E-E/RA
Side rotary lever with plastic or steel roller


I-I/RA
Offset side rotary lever with plastic or steel roller


E/50
Side rotary lever with rubber roller 50 dia.

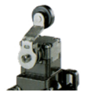

I/50
Side rotary bent lever with rubber roller 50 dia.


F
Side rotary adjustable lever with plastie roller


F/50
Side rotary adjustable lever with rubber roner 50 dia.


G/H
Side rotary adjustable plastic glass fiber, G, aluminum, H, rod 6 dia.


Q
Ceramic roller lever


IS
Offset side rotary lever with plastic or steel roller

Multi-directional movement


L
Flexible rod


LP
Flexible rod with plastic terminal


LP
Flexible rod with metal terminal

CZE Limit Switch

General feature

Opertaing frequency			operat./sec (Hz)	1
Insulation resistance		500 V DC	MΩ	100
Dielectric strength		50/60 Hz per 1*	V AC	2500
Rated insulation voltage	Ui IEC947-5-1		V AC	500
Rated thermal current	Ithe IEC947-5-1		A	10
Rated operating current	IEC 947-5-1/EN60947-5-1			
Category AC15	Ie	24V	A	10
A300		125V	A	6
		230V	A	4
		400V	A	3
Category DC13	Ie	24V	A	10
Q300		48V	A	4
		120V	A	1
		250V	A	0.4
Contact resistance	IEC255-7 cat.3	initial value	MΩ	25
Short circuit protective devices	IEC269(IEC947-5-1)		A	10
	gl or gG type fuse			
Rated conditionals short circuit current	IEC947-5-1		A	100
Pollution degree	IEC947-5-1			3
Protection degree	EN 60529		IP	66
Protection against electric shock		plastic	class	II
		metal	class	I
Vibration resistance	IEC68-2-6		mm	0.35 ± 15%(10 ÷ 55 Hz ± 1 Hz)
Shock resistance	IEC68-2-27	11 ms	g	30
Mechanical life			cycles min	15.000.000
Electrical life	at 250VAC 6A with resistance load cos β =1		cycles min	500.000
	at 250VAC 6A with resistance load cos β =0.4		cycles min	500.000
Distance between contacts	snap action type		mm	2 × 1, 25
	low action type		mm	2 × 2
Terminals	type			Screw with combined notch and retravtable plate
				(notch Ph. size 1)
	screw		M	3, 5
	protection degree		IP	20A
	material			Steel class 8.8/Galvanized
	Max. screw tightening torque		N cm (kg cm)	120(12, 24)
	max connecting capacity	rigid cable	mm^2	2 × 1, 5
		flexible cable	mm^2	2 × 1, 5
	with prod terminal		mm^2	1 × 1, 5
	terminal numbering			In accordance with EN50013

Contact block

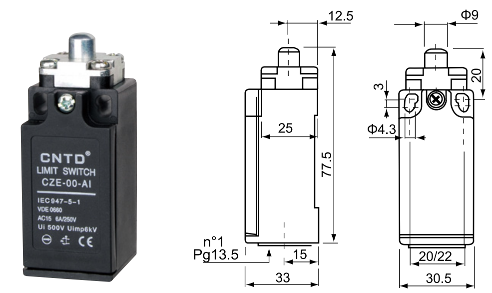
1 NO+1 NC	fast action	00
1 NO+1 NC	slow action	01
1 NO+1 NC	slowe overlapping action	02
2 NO	slow action	03
2 NC	slow action	04
2 NC	fast action	05
2 NO+2 NC	fast action	000(excluded E200) 000(E200 除外)
1 NO+3 NC	slow action	80 (model E400 only) 80(E400)
2 NO+2 NC	slow action	81 (model E400 only) 81 (E400)

CZE Limit Switch

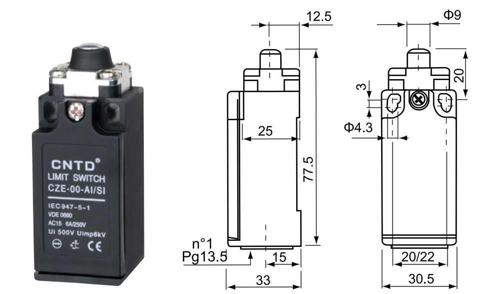
CNTD

Plastic Version

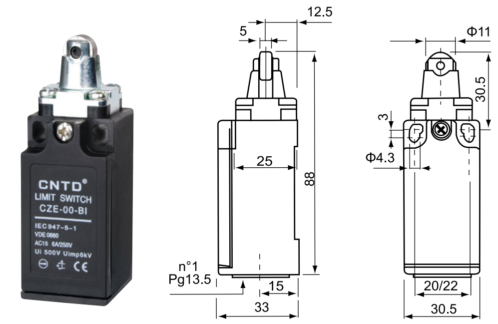
CZE-00-AI



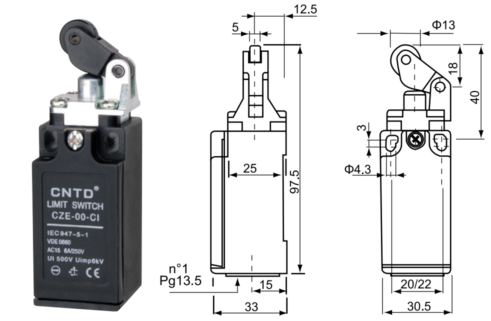
CZE-00-AI/SI



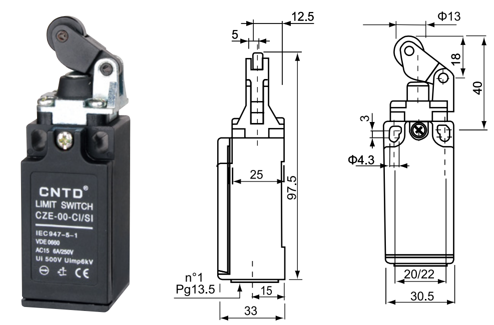
CZE-00-BI



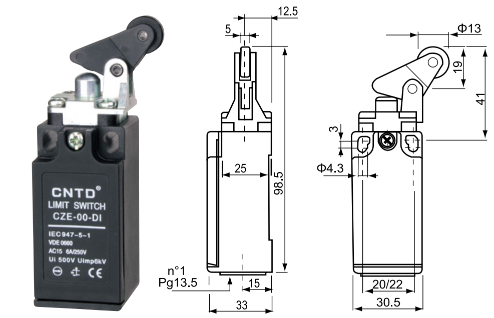
CZE-00-CI



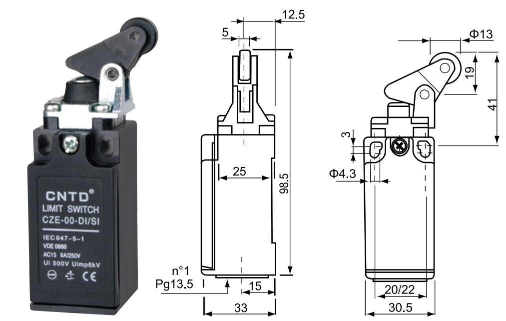
CZE-00-CI/SI



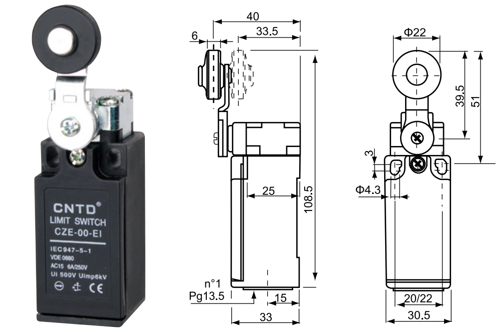
CZE-00-DI



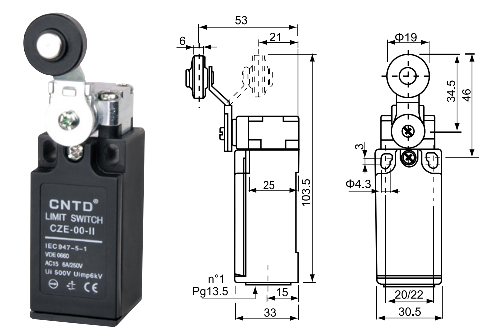
CZE-00-DI/SI



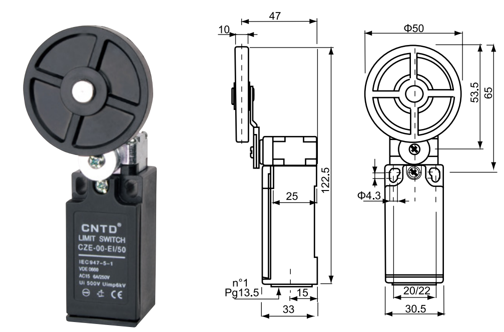
CZE-00-EI



CZE-00-II



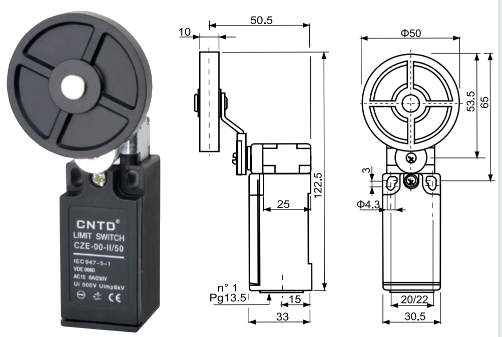
CZE-00-EI/50



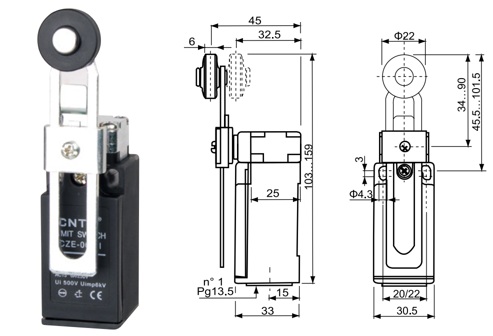
CZE Limit Switch

Plastic Version

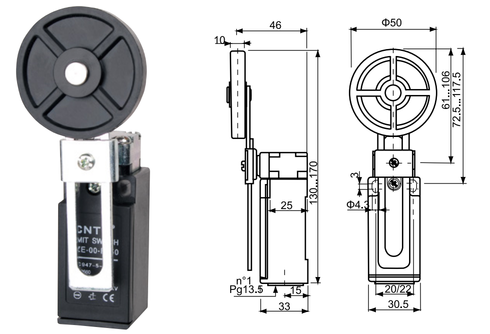
CZE-00-II/50



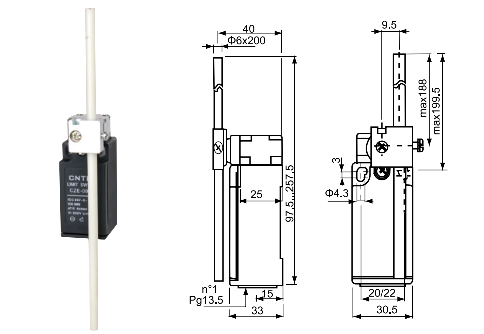
CZE-00-FI



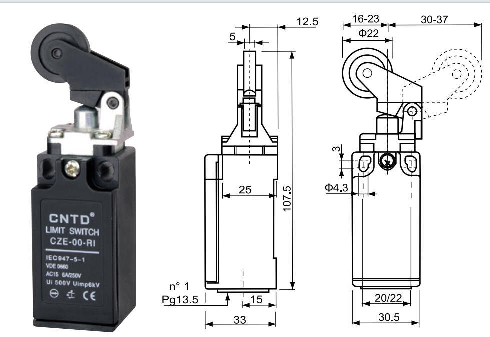
CZE-00-FI/50



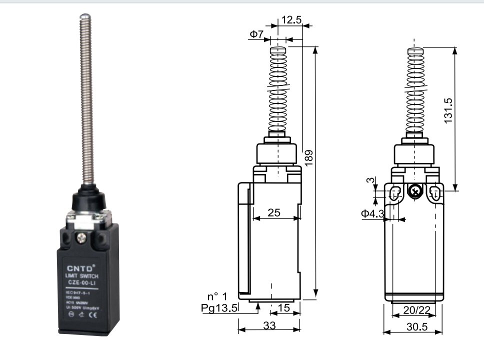
CZE-00-GI



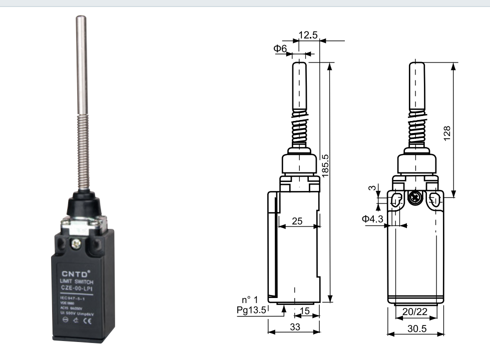
CZE-00-RI



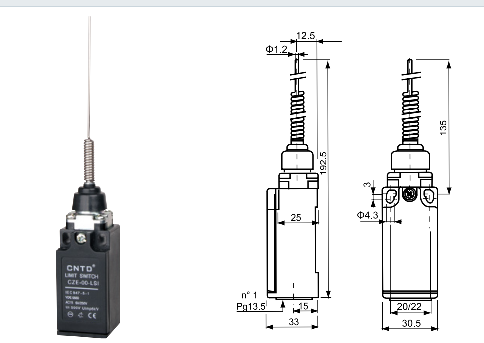
CZE-00-LI



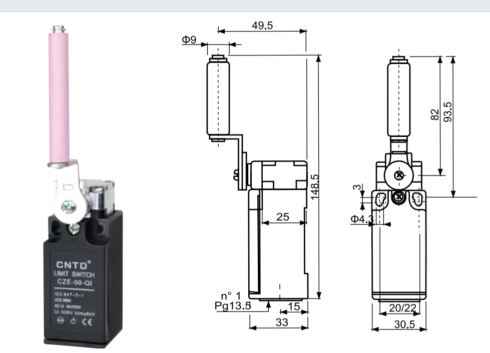
CZE-00-LPI



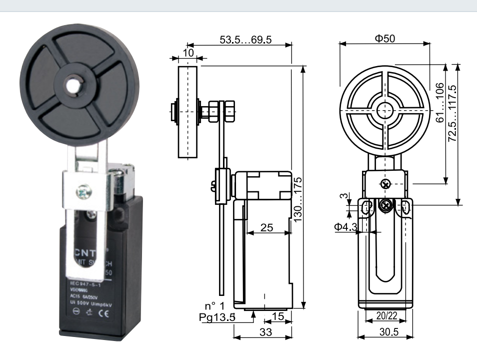
CZE-00-LSI



CZE-00-QI



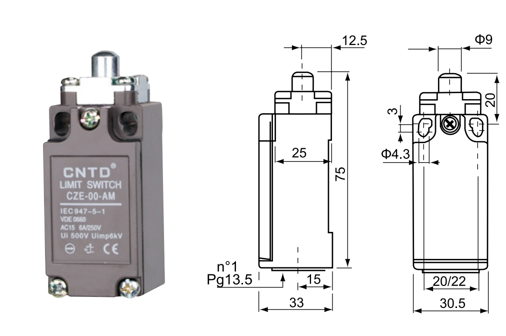
CZE-00-FRI/50



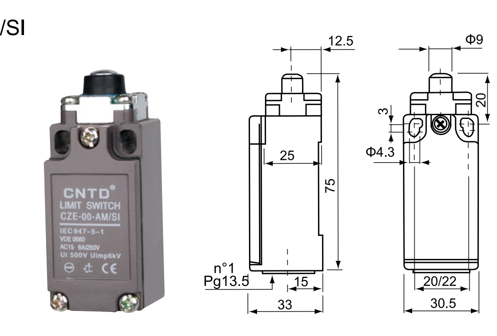
CZE Limit Switch

Metal Version

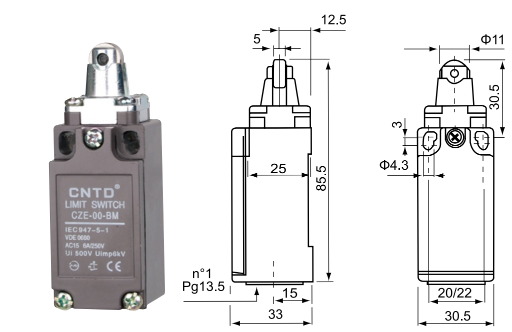
CZE-00-AM



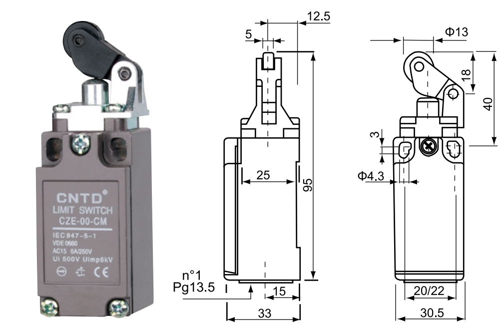
CZE-00-AM/SI



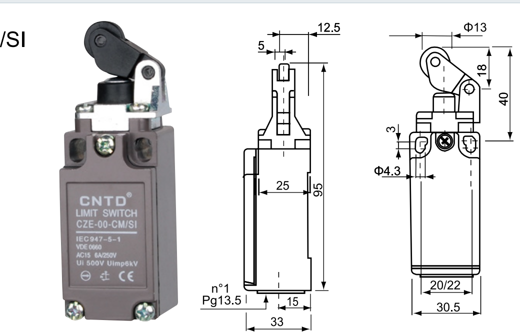
CZE-00-BM



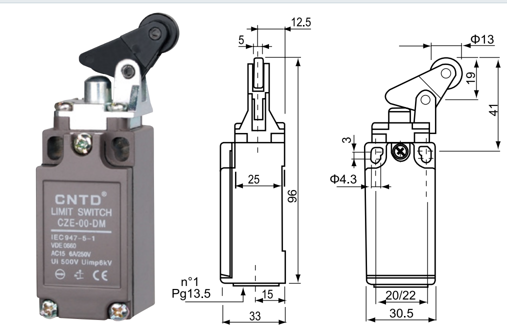
CZE-00-CM



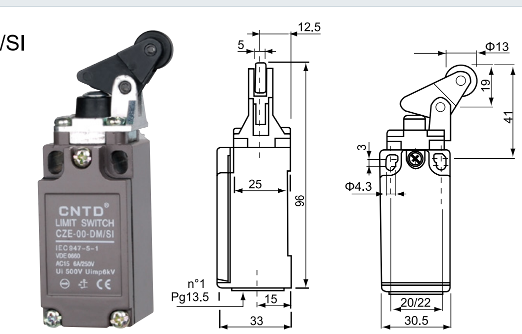
CZE-00-CM/SI



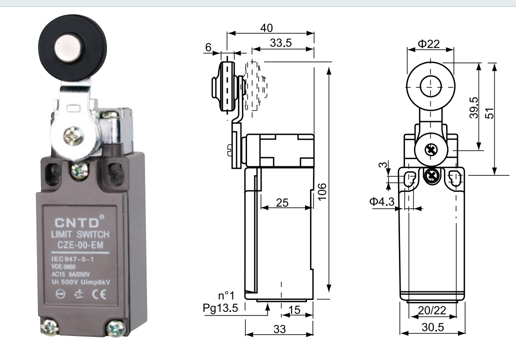
CZE-00-DM



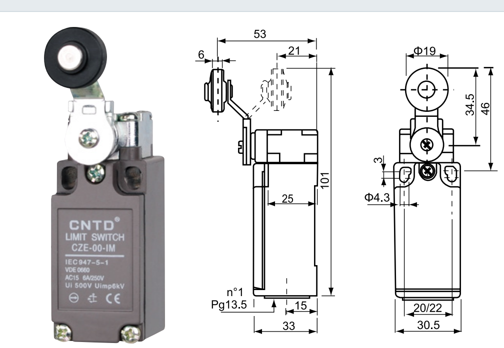
CZE-00-DM/SI



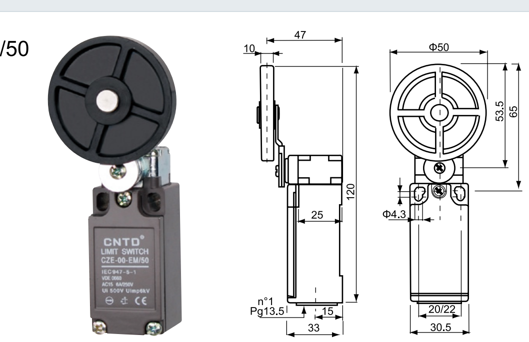
CZE-00-EM



CZE-00-IM



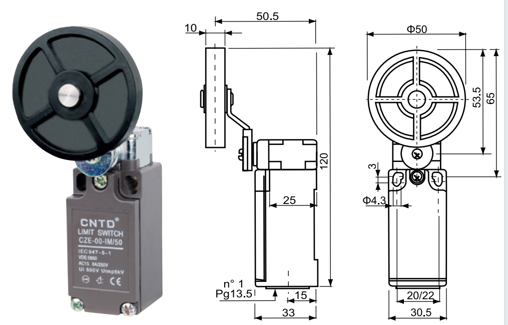
CZE-00-EM/50



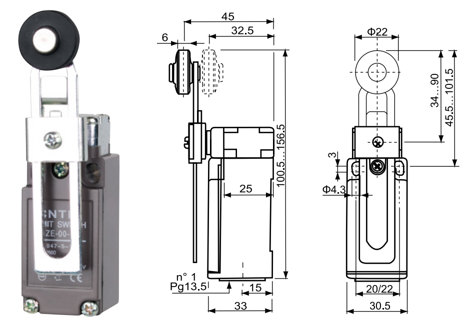
CZE Limit Switch

Metal Version

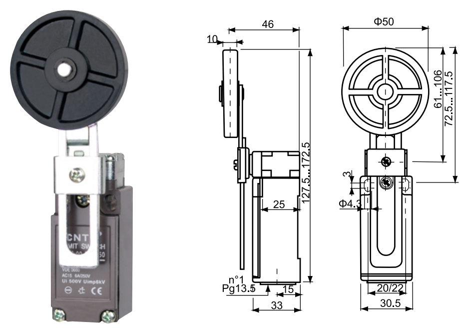
CZE-00-IM/50



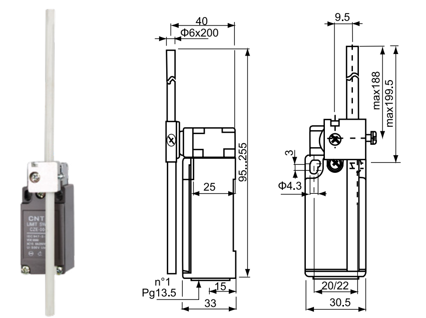
CZE-00-FM



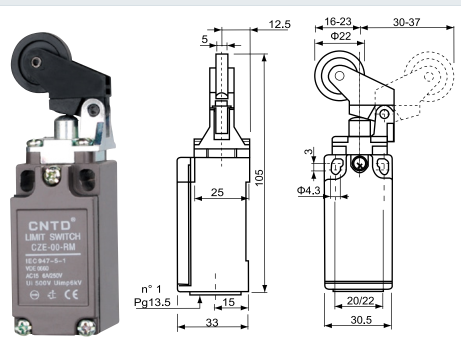
CZE-00-FM/50



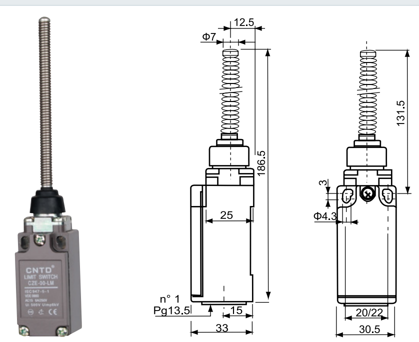
CZE-00-GM



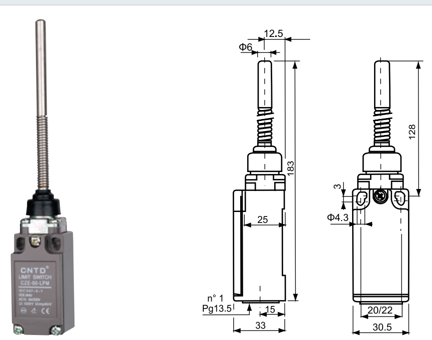
CZE-00-RM



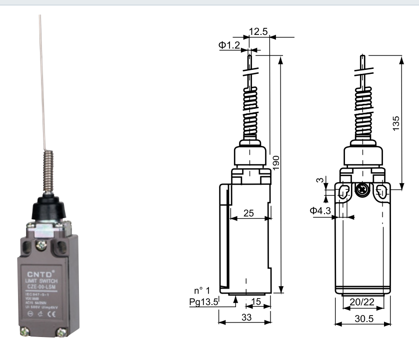
CZE-00-LM



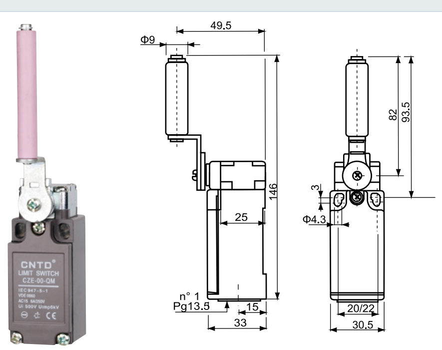
CZE-00-LPM



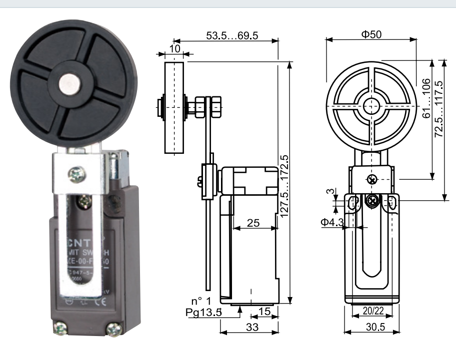
CZE-00-LSM



CZE-00-QM



CZE-00-FRM/50



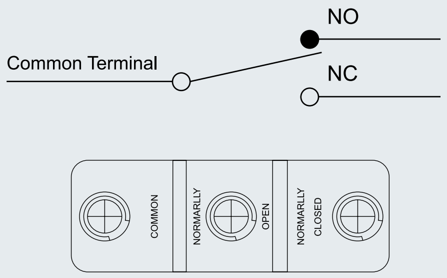
CM Micro Switch

CNTD

Features

- Various actuators and some with adjustable operating position (such as CM1701)
- High accuracy wide range of operation speed

Contact Form



Ratings

Rated Voltage	Noninductive Load (A) Resistance Load NC	Resistance Load NO	Lamp Load NC	Lamp Load NO	Inductive Load (A) Inductive Load NC	Inductive Load NO	Motor Load NC	Motor Load NO	Inrush Current NC	Inrush Current NO
125VAC	15		3	1.5	15		5	2.5	30 max.	15 max.
250VAC	15		2.5	1.25	15		3	1.5		
500VAC	3		1.5	0.75	2.5		1.5	0.75		
8VDC	15		3	1.5	15		5	2.5		
14VDC	15		3	1.5	10		5	2.5		
30VDC	6(2)		3	1.5	5		5	2.5		
125VDC	0.4		0.4	0.4	0.05		0.05	0.05		
250VDC	0.2		0.2	0.2	0.03		0.03	0.03		

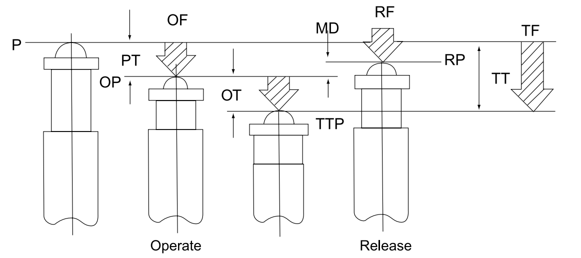
Specifications

Operation speed	0.05mm-1m/s
Operating frequency	Electical: 20 operations/min.
Contact resistance	15mΩ max. (initial value)
Insulation resistance	100mΩ min. (at 500VDC)
Dielectric Strength	1000VAC, 50/60 Hz for 1 minute between terminals of the same polarity
	1500VAC, 50/60 HZ for 1 minute between current-carrying and non-current-carrying metal parts
	1500VAC, 50/60 HZ for 1 minute between each terminal and ground
Vibration	(*10 to 20Hz): 1.5 Vibration amplitude action duration: 10 to 55Hz
Shock	Mechanical durable: 1, 000m/Sec^2 (about 100G'S) Malfunction: 300m/Sec^2 (about 30G'S)
Ambient temperature	Using: -20~+80℃（With no icing）
Humidity	General purpose type: 85% RH max., Sealed type: 95% RH max.
Electrical life	500,000 operations above
Weight	About 22 to 58g

CM Micro Switch

Operating Characteristics

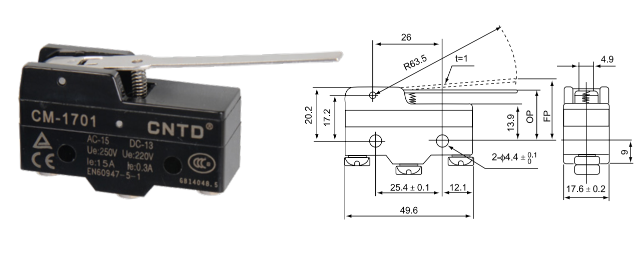
Models	CM1300	CM1301	CM1303 CM1303M	CM1305	CM1306	CM1307	CM1308 CM1308X	CM1309	CM1701 CM1706	CM1702	CM-1703 CM-1703M	CM-1704 CM-1704M	CM1705	CM-1743 CM-1743M
OF(Max.)	350g	300g	300g	350g	350g	350g	350g	350g	70g	160g	100g	160g	10g	160g
RF(Min.)	114g	50g	50g	114g	114g	114g	114g	114g	14g	28g	22g	42g	3g	42g
PT(Max.)	0.4mm	4mm	4mm	0.4mm	0.4mm	0.4mm	0.4mm	0.4mm	10mm	5mm	7.1mm	2.7mm	20mm	2.7mm
OT (Min.)	0.13mm	1.6mm	1.6mm	1.6mm	1.6mm	5.5mm	3.58mm	3.58mm	5.6mm	2mm	4mm	2.4mm	5.6mm	2.4mm
MD (Max.)	0.05mm	1.3mm	1.3mm	0.05mm	0.05mm	0.05mm	0.05mm	0.05mm	1.27mm	1mm	1.02mm	0.5mm	3mm	0.5mm
FP(Max.)		20.6mm	31.8mm						28.2mm	24.8mm	36.5mm	32.5mm		43.6mm
OP(mm)	15.9 ± 0.4	17.4 ± 0.8	28.6 ± 0.8	28.2 ± 0.5	21.5 ± 0.5	21.8 0.8	33.4 ± 1.2	33.4 ± 1.2	19 ± 0.8	19 ± 0.4	30.2 ± 0.8	30.2 ± 0.4	19 ± 0.8	43.1 ± 0.8



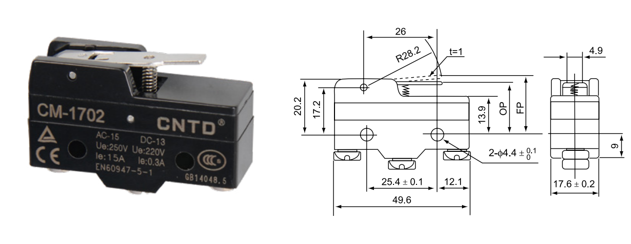
OF: Operating Force
RF: Releasing Force
TF: Total Force
FP: Free Position
OP: Operating Position
RP: Releasing Position
TTP: Total Tavel Position
PT: Pre Travel
OT: Over Travel
MD: Movement Differential
TT: Total Tavel

Appearance and Dimension

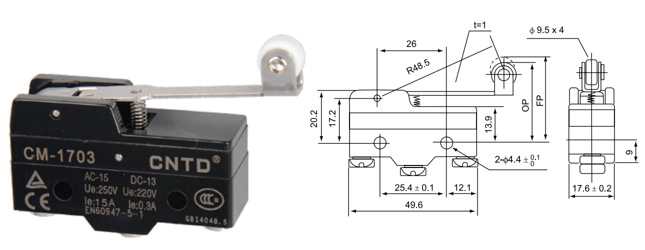
CM-1701



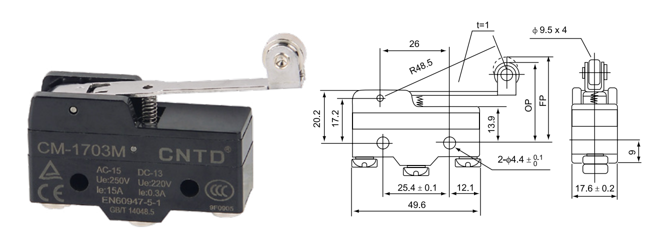
CM-1702



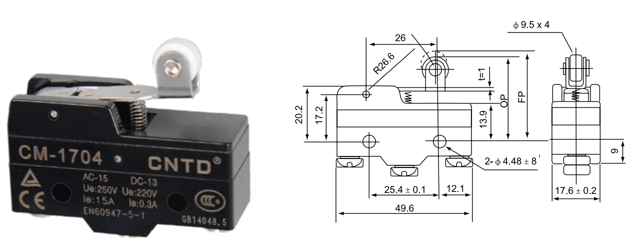
CM-1703



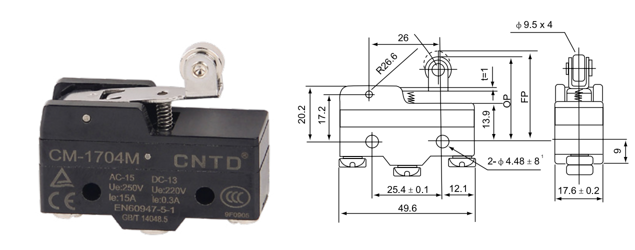
CM-1703M



CM-1704



CM-1704M

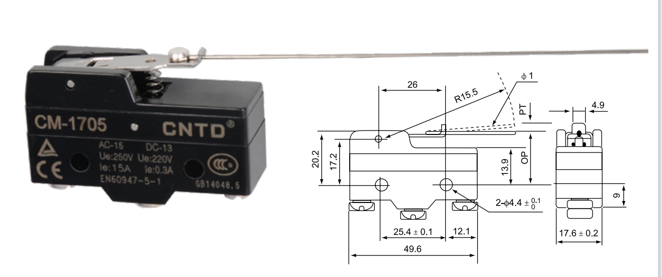


CM Micro Switch

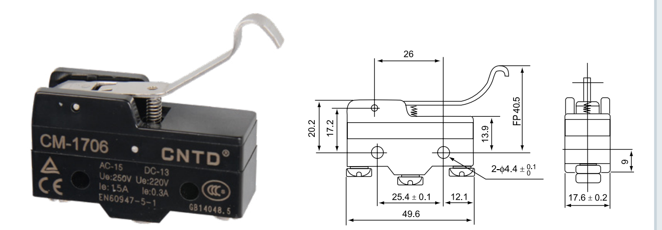
CNTD

Appearance and Dimension

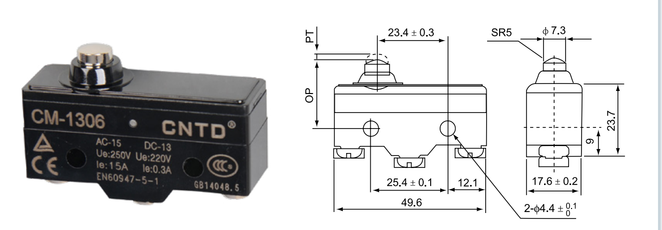
CM-1705



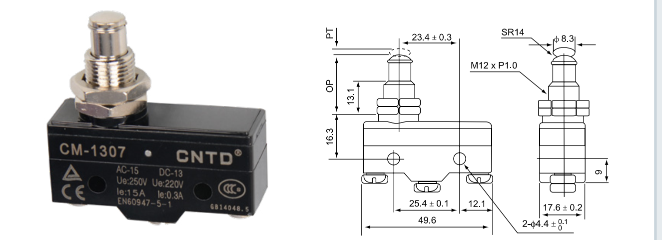
CM-1706



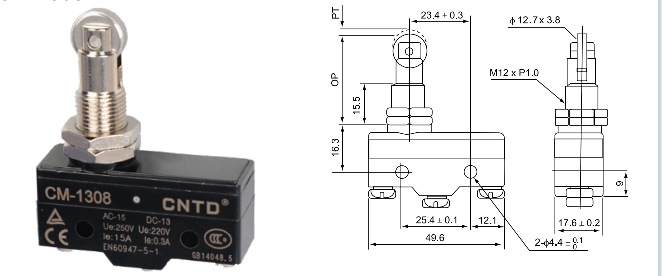
CM-1306



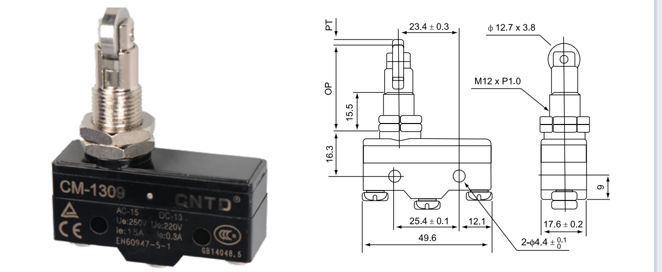
CM-1307



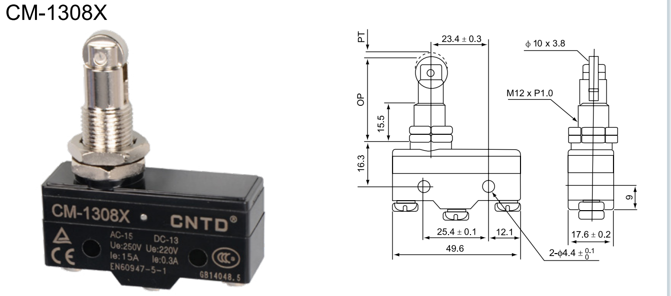
CM-1308



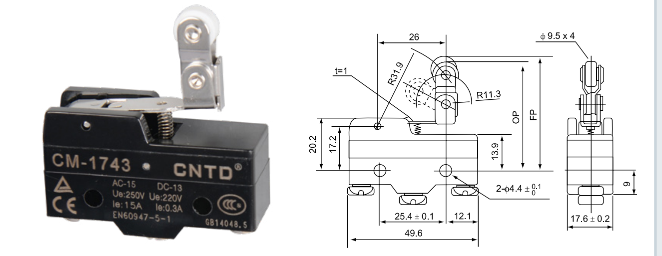
CM-1309



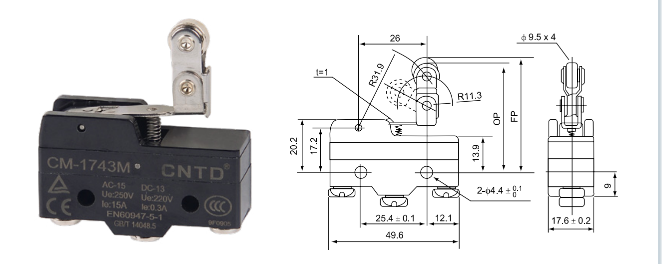
CM-1308X



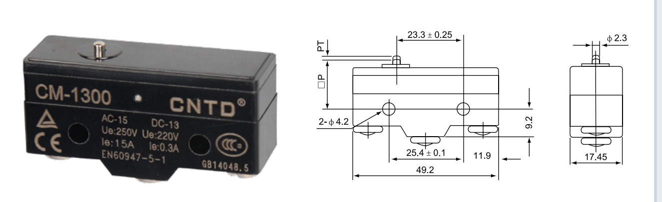
CM-1743



CM-1743M



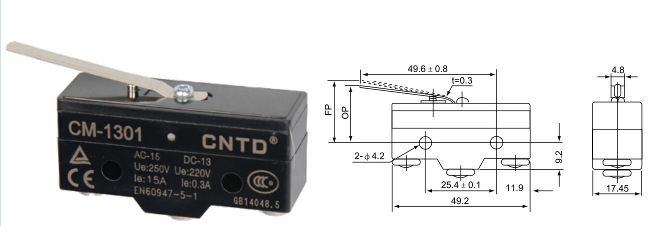
CM-1300



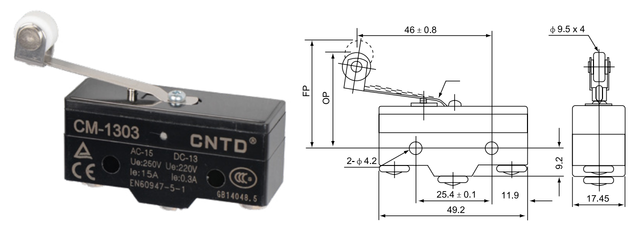
CM Micro Switch

Appearance and Dimension

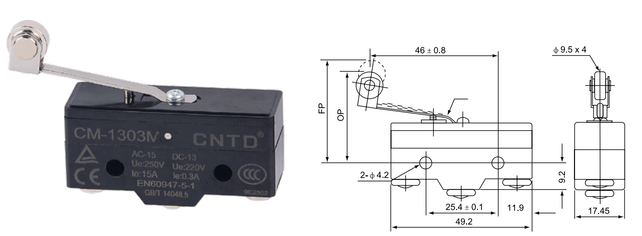
CM-1301



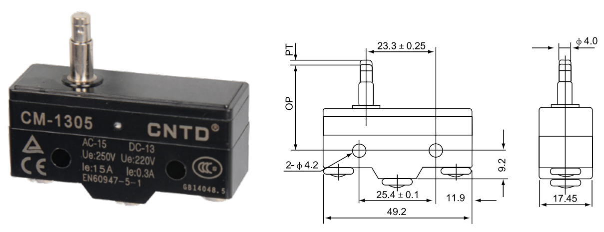
CM-1303



CM-1303M



CM-1305



Terminal Cover

CAP-Y

CAP-C

CAP-B

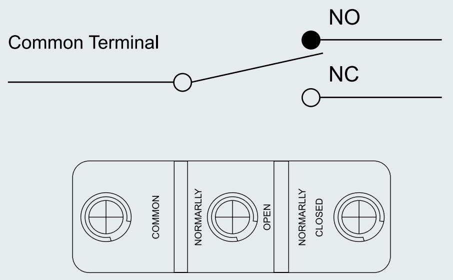
CM-□N Micro Switch

CNTD

Features

- Engineering plastics shell for resistant construction
- Various actuators and some with adjustable operating position (such as CM1701N)
- High accuracy wide range of operation speed

Contact Form



Ratings

Rated Voltage	Noninductive Load (A)			Inductive Load (A)			Inrush Current	
	Resistance Load	Lamp Load		Inductive Load	Motor Load			
	NC / NO	NC	NO	NC / NO	NC	NO	NC	NO
125VAC	15	3	1.5	15	5	2.5	30 max.	15 max.
250VAC	15	2.5	1.25	15	3	1.5		
500VAC	3	1.5	0.75	2.5	1.5	0.75		
8VDC	15	3	1.5	15	5	2.5		
14VDC	15	3	1.5	10	5	2.5		
30VDC	6(2)	3	1.5	5	5	2.5		
125VDC	0.4	0.4	0.4	0.05	0.05	0.05		
250VDC	0.2	0.2	0.2	0.03	0.03	0.03		

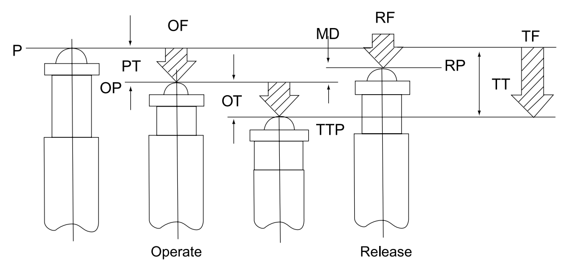
Specifications

Operation speed	0.05mm-1m/s
Operating frequency	Electical: 20 operations/min.
Contact resistance	15mΩ max. (initial value)
Insulation resistance	100mΩ min. (at 500VDC)
Dielectric Strength	1000VAC, 50/60 Hz for 1 minute between terminals of the same polarity
	1500VAC, 50/60 HZ for 1 minute between current-carrying and non-current-carrying metal parts
	1500VAC, 50/60 HZ for 1 minute between each terminal and ground
Vibration	(*10 to 20Hz): 1.5 Vibration amplitude action duration: 10 to 55Hz
Shock	Mechanical durable: 1, 000m/Sec^2 (about 100G'S) Malfunction: 300m/Sec^2 (about 30G'S)
Ambient temperature	Using: -20~+70℃（With no icing）
Humidity	General purpose type: 85% RH max., Sealed type: 95% RH max.
Electrical life	500,000 operations above
Weight	About 22 to 58g

CM-□N Micro Switch

Operating Characteristics

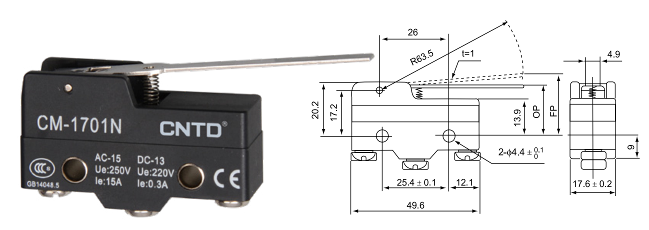
Models	CM1300N	CM1301N	CM1303N CM1303NM	CM1305N	CM1306N	CM1307N	CM1308N CM1308XN	CM1309N	CM1701N CM1706N	CM1702N	CM1703N CM1703NM	CM1704N CM1704NM	CM1705N	CM1743N CM1743NM
OF(Max.)	350g	300g	300g	350g	350g	350g	350g	350g	70g	160g	100g	160g	10g	160g
RF(Min.)	114g	50g	50g	114g	114g	114g	114g	114g	14g	28g	22g	42g	3g	42g
PT (Max.)	0.4mm	4mm	4mm	0.4mm	0.4mm	0.4mm	0.4mm	0.4mm	10mm	5mm	7.1mm	2.7mm	20mm	2.7mm
OT(Min.)	0.13mm	1.6mm	1.6mm	1.6mm	1.6mm	5.5mm	3.58mm	3.58mm	5.6mm	2mm	4mm	2.4mm	5.6mm	2.4mm
MD (Max.)	0.05mm	1.3mm	1.3mm	0.05mm	0.05mm	0.05mm	0.05mm	0.05mm	1.27mm	1mm	1.02mm	0.5mm	3mm	0.5mm
FP (Max.)		20.6mm	31.8mm						28.2mm	24.8mm	36.5mm	32.5mm		43.6mm
OP(mm)	15.9 ± 0.4	17.4 ± 0.8	28.6 ± 0.8	28.2 ± 0.5	21.5 ± 0.5	21.8 0.8	33.4 ± 1.2	33.4 ± 1.2	19 ± 0.8	19 ± 0.4	30.2 ± 0.8	30.2 ± 0.4	19 ± 0.8	43.1 ± 0.8



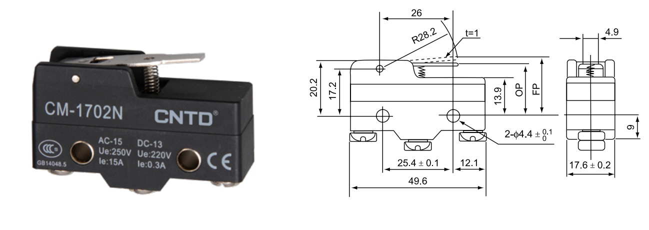
OF: Operating Force
RF: Releasing Force
TF: Total Force
FP: Free Position
OP: Operating Position
RP: Releasing Position
TTP: Total Tavel Position
PT: Pre Travel
OT: Over Travel
MD: Movement Differential
TT: Total Tavel

Appearance and Dimension

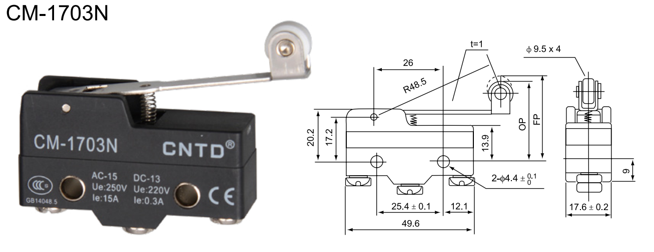
CM-1701N



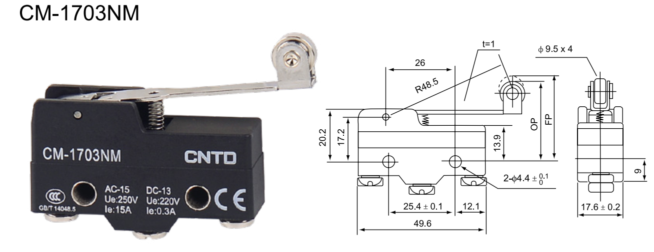
CM-1702N



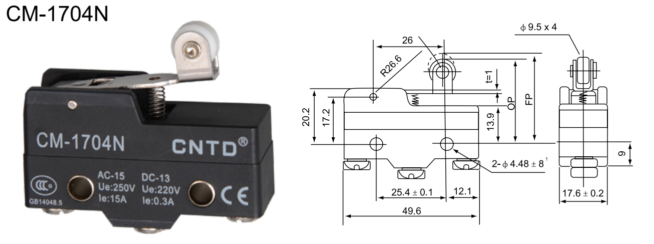
CM-1703N



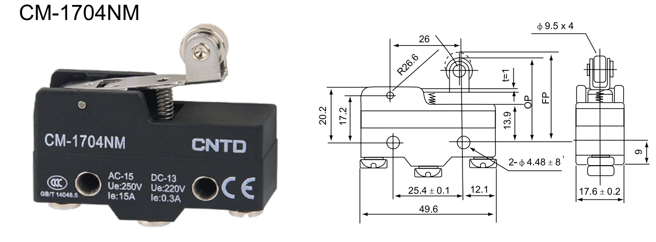
CM-1703NM



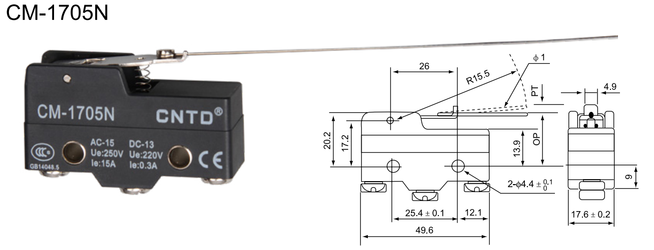
CM-1704N



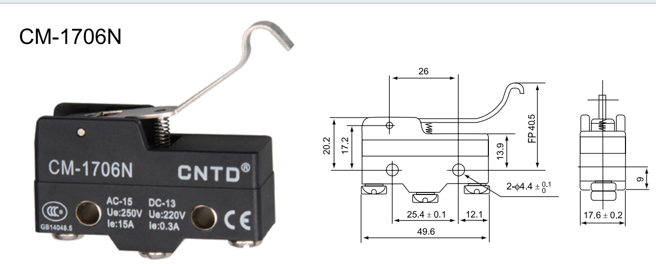
CM-1704NM



CM-1705N



CM-1706N

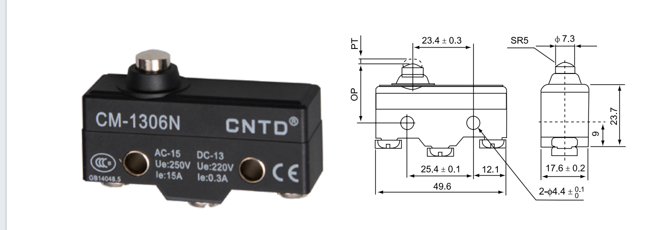


CM-□N Micro Switch

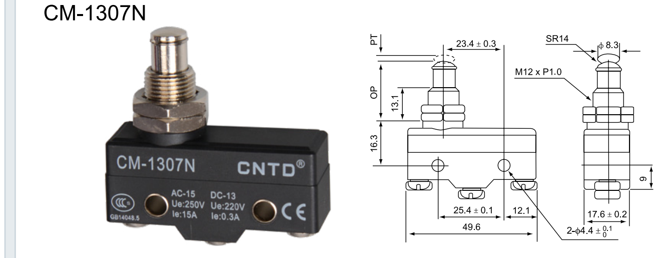
CNTD

Appearance and Dimension

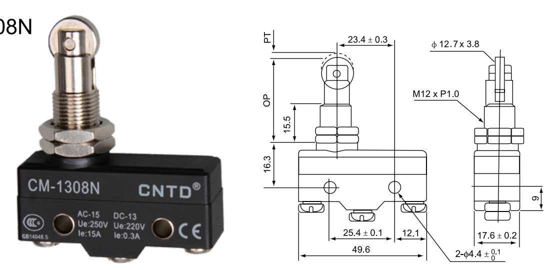
CM-1306N



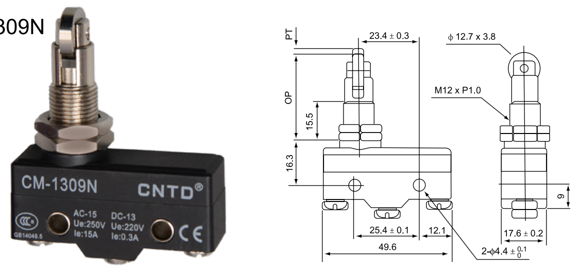
CM-1307N



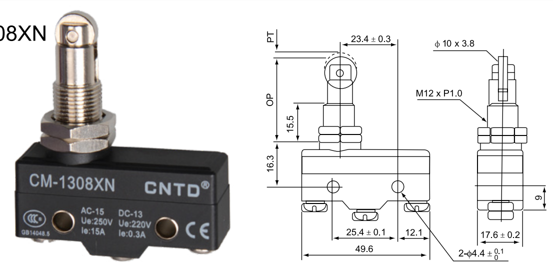
CM-1308N



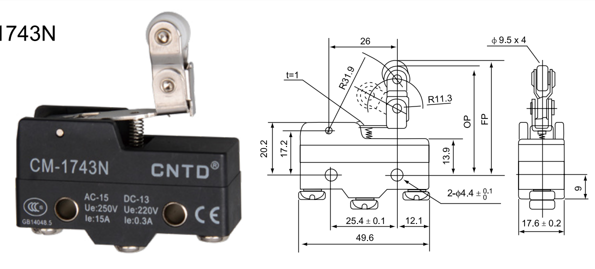
CM-1309N



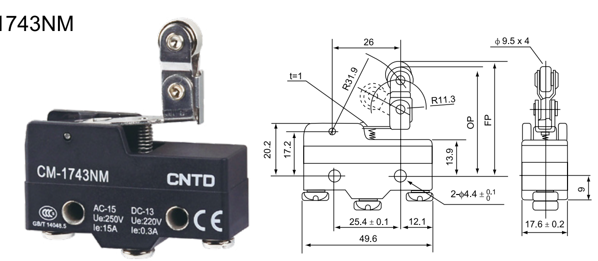
CM-1308XN



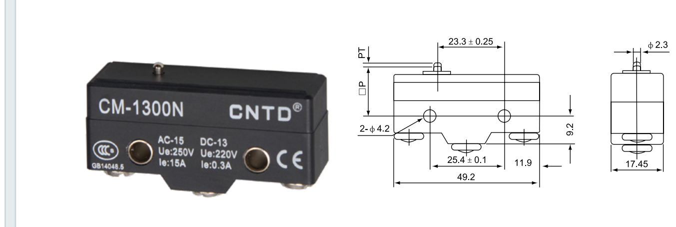
CM-1743N



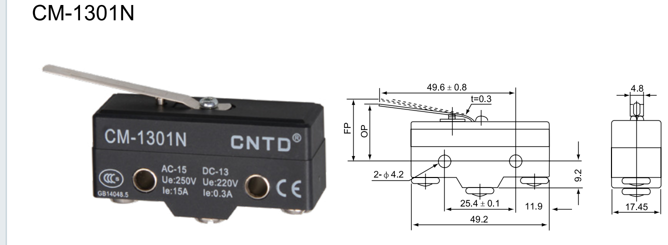
CM-1743NM



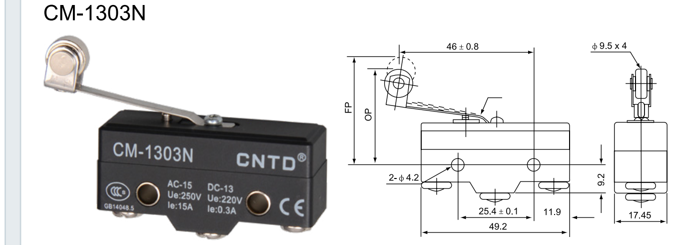
CM-1300N



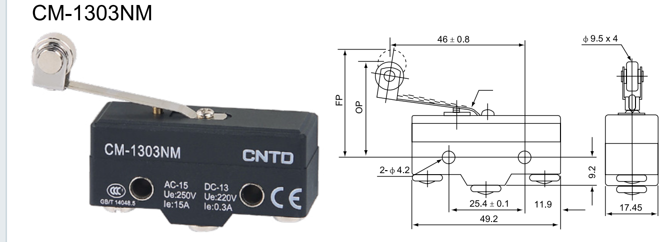
CM-1301N



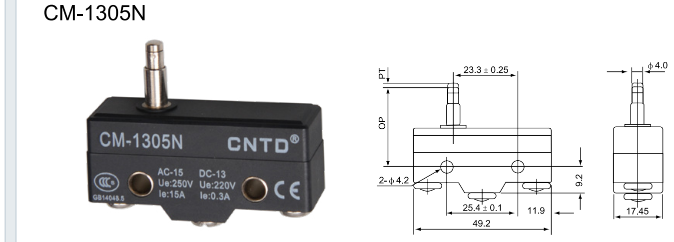
CM-1303N



CM-1303NM



CM-1305N

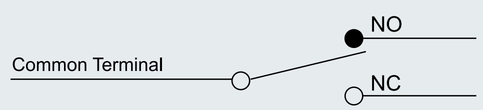


CZ-7 Horizontal Limit Switch

Features

- Various actuators and some with adjustable operating position (such as CZ-7121)
- Shell covered with intensive plastic for water-proof and oil-proof. The mechanical strength is better than CM series of horizontal limit switch

Contact Form



Ratings

Rated Voltage	Noninductive Load (A)				Inductive Load (A)			
	Resistance Load		Lamp Load		Inductive Load		Motor Load	
	NC	NO	NC	NO	NC	NO	NC	NO
125VAC	10		3	1.5	10		5	2.5
250VAC	10		2.5	1.25	10		3	1.5
480VAC	3		1.5	0.75	2.5		1.5	0.75
8VDC	10		3	1.5	6		6	5
14VDC	10		3	1.5	6		6	5
30VDC	8		3	1.5	6		5	2.5
125VDC	0.5		0.4	0.4	0.05		0.05	0.05
250VDC	0.25		0.2	0.2	0.03		0.03	0.03

NOTES: 1.Inductive load has a power factor of 0.4 min.(AC) and a time constant of 7 msec.max.(DC).
2.Lamp load has an inrush current of 10 times the steady-state current,while motor load has an inrush current of 6 times the steady-state current.
3.Product with spring, its usable range of operating part is within one third of the whole spring length from the front end of spring.

Specifications

Operation speed	0.05mm-0.5m/s
Operating frequency	Electical: 20 operations/min.
Contact resistance	25mΩmax. (initial value)
Insulation resistance	100mΩ above(at 500VDC)
Dielectric strength	1000VAC, 50/60 Hz for 1 minute between terminals of the same polarity
	1500VAC, 50/60 Hz for 1 minute between current-carrying and non-current-carrying metal parts
	1500VAC, 50/60 Hz for 1 minute between each terminal and ground
Vibration	Malfunction Duration: 10-55Hz, 1.5mm double amplitude
Shock	Mechanical durable: 1,000m/Sec^2(about 100g's) Malfunction: 300m/Sec^2(about 30g's)
Ambient temperature	Using: -20~+70℃（With no icing）
Humidity	< 95% RH
Electrical life	500,000 operations above
Weight	About 60g

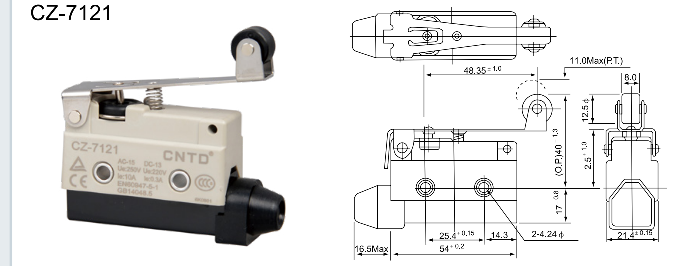
Operating Characteristics

Model	CZ-7	CZ-7100	CZ-7110	CZ-7310	CZ-7311	CZ-7312	CZ-7120	CZ-7140	CZ-7121	CZ-7141	CZ-7124	CZ-7144	CZ-7166
Operating force	OF(Max.)	600g	600g	600g	600g	600g	150g	220g	180g	240g	200g	280g	120g
Release force	RF(Min.)	100g	100g	100g	100g	100g	40g	60g	50g	80g	60g	100g	
Pre-travel	PT(Max.)	2.0mm	2.0mm	2.0mm	2.0mm	2.0mm	13.5mm	8.5mm	11.0mm	6.5mm	11mm	6.5mm	250mm
Over travel	OT(Min.)	0.8mm	5.0mm	6.0mm	6.0mm	6.0mm	4.0mm	2.5mm	3.0mm	2.0mm	3.0mm	2.0mm	11mm
Movement differential	MD(Max.)	0.8mm	0.8mm	0.8mm	0.8mm	0.8mm	3.2mm	2.0mm	2.4mm	1.5mm	2.4mm	1.5mm	
Operating position	OP(mm.)	30.5 ± 0.8mm	44 ± 1.2mm	21.8 ± 1.2mm	33.3 ± 1.2mm	33.3 ± 1.2mm	25 ± 1mm	25 ± 1mm	40 ± 1mm	40 ± 1mm	50 ± 1.2mm	50 ± 1.2mm	
Free Position	FP						35mm	32mm		46mm		56mm	

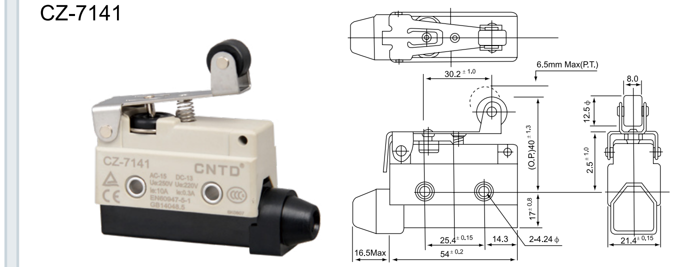
CZ-7 Horizontal Limit Switch

Appearance and Dimension

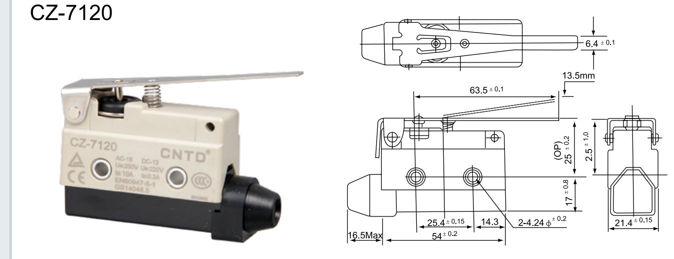
CZ-7121



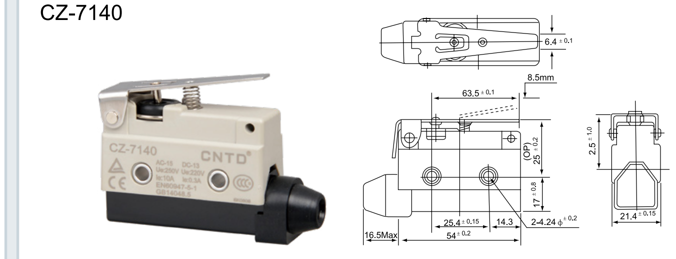
CZ-7141



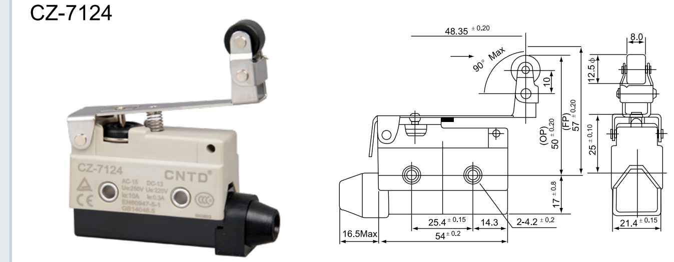
CZ-7120



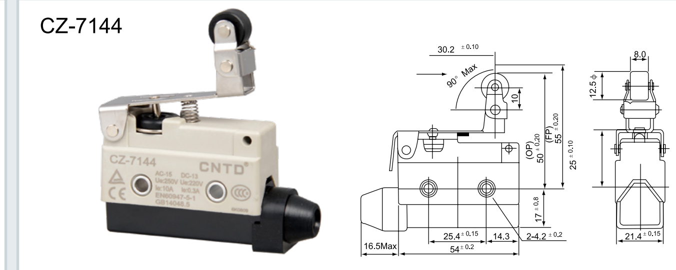
CZ-7140



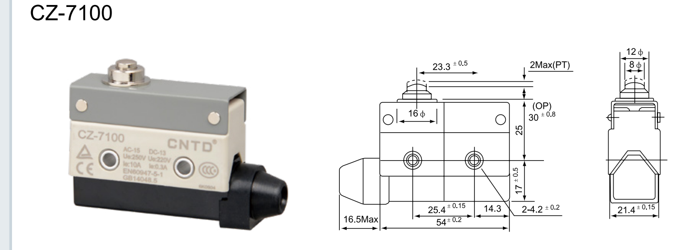
CZ-7124



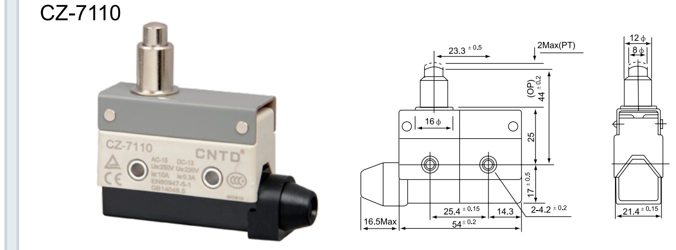
CZ-7144



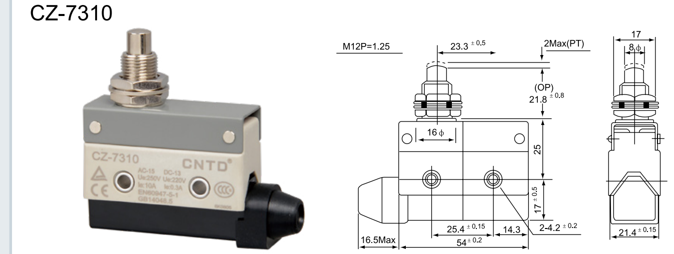
CZ-7100



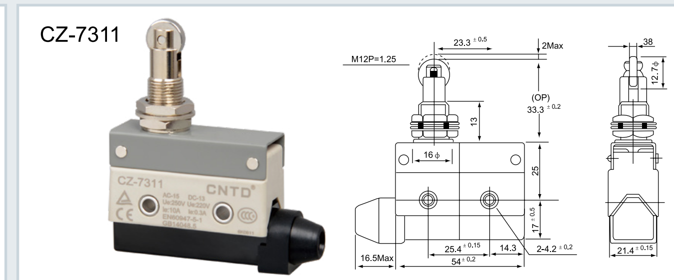
CZ-7110



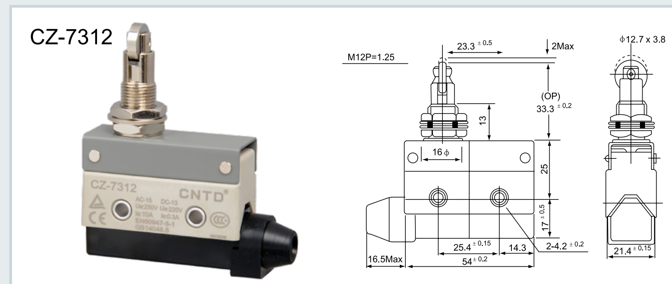
CZ-7310



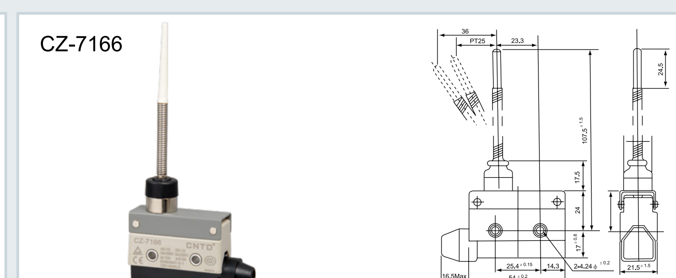
CZ-7311



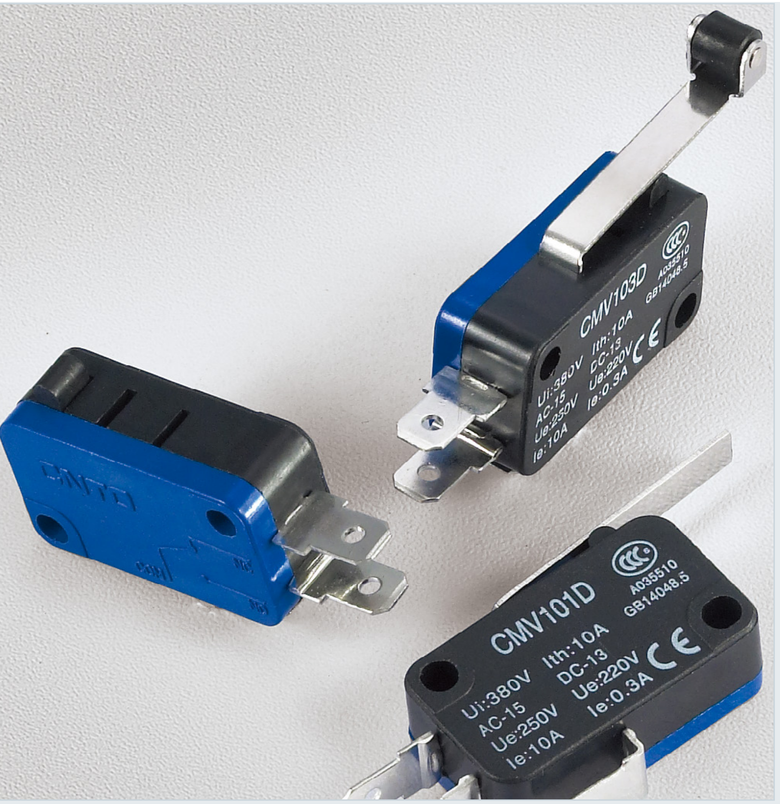
CZ-7312



CZ-7166



CMV10 Miniature Snap Action Switch



Model Number Structure

CMV [10] [0] [D]
① ② ③

Item	Code	Description
① Rated Current	10	10A
② Head and driving rod	0 1 2 3 4 5 6	Button type Long handle type Short shank type Long pulley type Short pulley type Longer handle type Crank type
③ Terminal specifications	C D	#250 terminal #187 terminal

Ratings

Item / Spec.	Rated Voltage	Noninductive Load (A)				Inductive Load (A)				Inarush Current	
		Resistance Load		Lamp Load		Inductive Load		Motor Load			
		NC	NO	NC	NO	NC	NO	NC	NO	NC	NO
10A	250VAC 8VDC 30VDC 125VDC 250VDC	10 10 6 0.3 0.3		1.5 3 3 0.1 0.05		6 6 6 0.6 0.3		2 3 3 0.1 0.05		24 max.	

Specifications

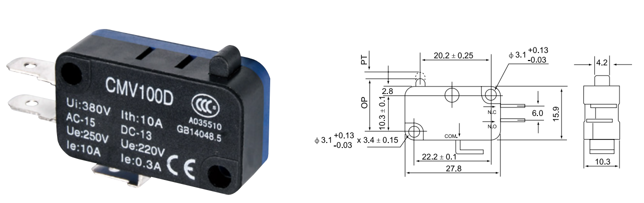
Item / Type		CMV 10 type
Operation speed		0.05mm~1m/s(Button type)
Operating frequency		Electrical: 20 operations/min
Insulation resistance		100mΩ above(at 500VDC)
Contact resistance		15mΩmax. (initial value)
Withstand voltage	Non-continuous terminals	1000VAC, 50/60 Hz for 1 minute
	current-carrying and non-current-carrying metal parts, Between terminal and earthing	1500VAC, 50/60 Hz for 1 minute
Vibration	Misoperation	10 to 55Hz,1.5mm pairs swing
Shock	Durable	Maximum 1000 m/S² (100G)
	Misoperation	Maximum 200 m/S² (100G)
Life	Electrical	More than 300000 times
Temperature		Using: -20~+70℃ (With no icing)
Humidity		(+5~+35℃)Below 85% RH

Operating Characteristics

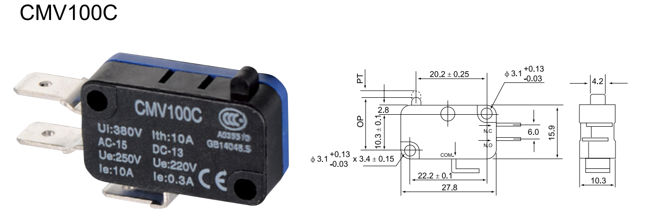
Models	CMV100D	CMV101D	CMV102D	CMV103D	CMV104D	CMV105D	CMV106D
OF(Max.)	2.4N	1.23N	2.4N	1.23N	2.7N	0.69N	1.2N
RF(Min.)	0.49N	0.14N	0.49N	0.14N	0.49N	0.06N	0.14N
PT(Max.)	1.2mm	4.0mm	1.6mm	4.0mm	1.5mm	9.0mm	4.0mm
OT(Min.)	1.0mm	1.6mm	0.8mm	1.6mm	0.8mm	2.0mm	1.5mm
MD(Max.)	0.4mm	1.5mm	0.6mm	1.5mm	0.6mm	2.8mm	1.5mm
OP(mm.)	14.7±0.4mm	15.2±1.2mm	15.2±0.5mm	20.7±1.2mm	20.7±0.6mm	15.2±3mm	18.7±1.2mm

Appearance and Dimension

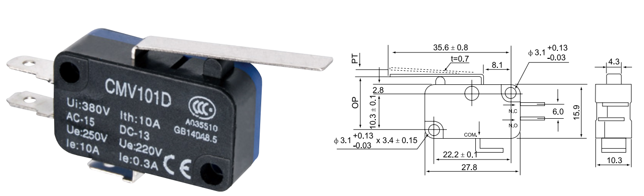
CMV100D



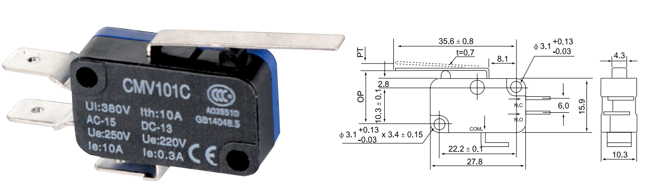
CMV100C



CMV101D



CMV101C

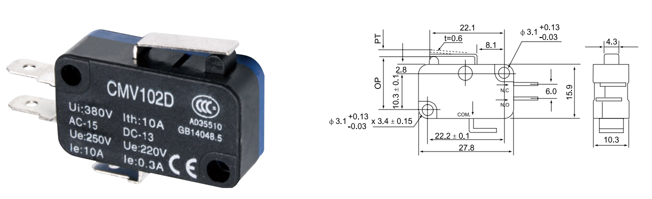


CMV10 Miniature Snap Action Switch

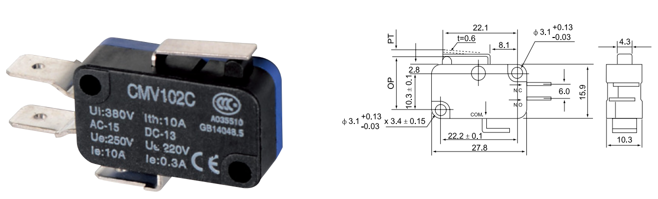
CNTD

Appearance and Dimension

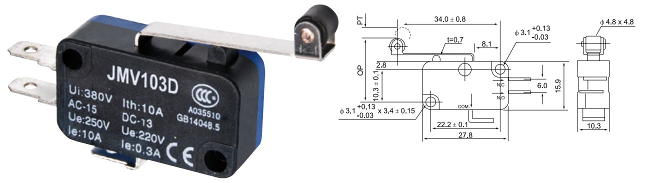
CMV102D



CMV102C

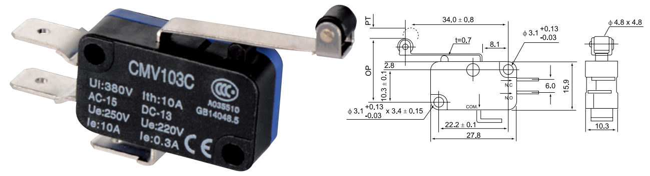


CMV103D



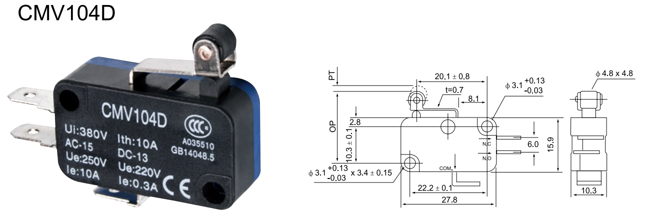
Optional Metal idler wheel

CMV103C



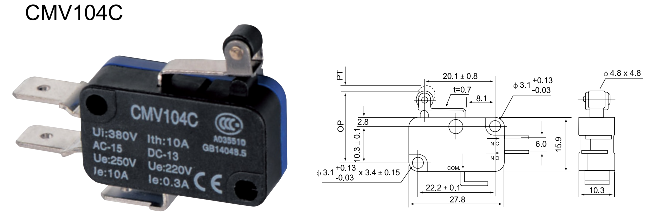
Optional Metal idler wheel

CMV104D



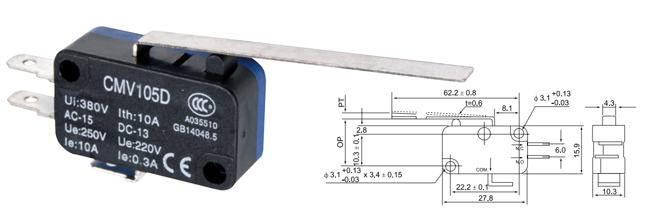
Optional Metal idler wheel

CMV104C

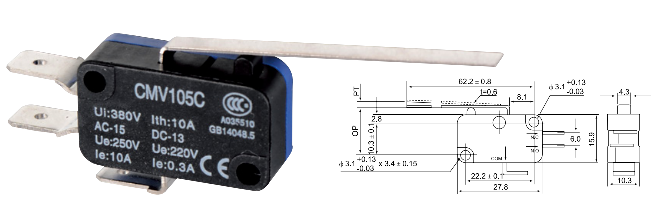


Optional Metal idler wheel

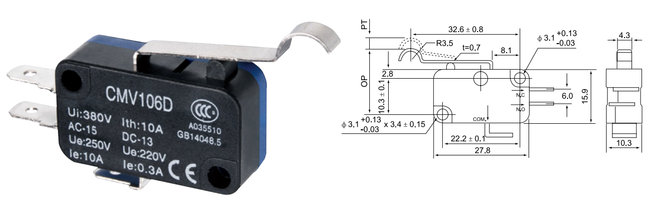
CMV105D



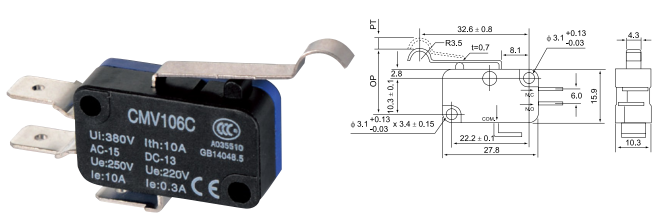
CMV105C



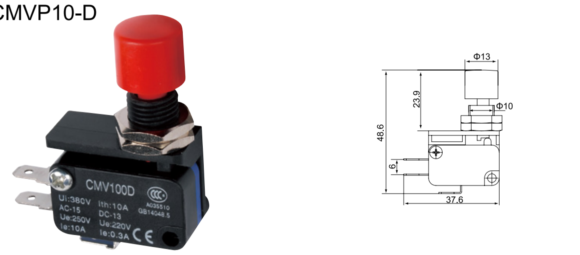
CMV106D



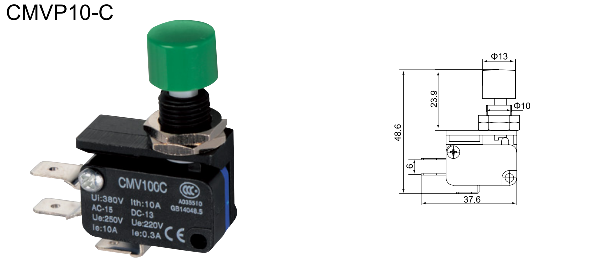
CMV106C



CMVP10-D



CMVP10-C



CMV16 Miniature Snap Action Switch

Ratings

Spec. \ Item	Rated Voltage	Noninductive Load (A) Resistance Load NC / NO	Noninductive Load (A) Lamp Load NC / NO	Inductive Load (A) Inductive Load NC / NO	Inductive Load (A) Motor Load NC / NO	Inrush Current NC / NO
16A	250VAC	16	2	10	3	40 max.
	8VDC	16	4	10	6	
	30VDC	10	4	10	4	
	125VDC	0.6	0.1	0.6	0.1	
	250VDC	0.3	0.05	0.3	0.05	

Specifications

Item \ Type		CMV 16 type
Operation speed		0.05mm~1m/s(Button type)
Operating frequency		Electrical: 20 operations/min
Insulation resistance		100mΩ above(at 500VDC)
Contact resistance		15mΩmax. (initial value)
Withstand voltage	Non-continuous terminals	1000VAC, 50/60 Hz for 1 minute
	current-carrying and non-current-carrying metal parts, Between terminal and earthing	2000VAC, 50/60 Hz for 1 minute
Vibration	Misoperation	10 to 55Hz,1.5mm pairs swing
Shock	Durable	Maximum 1000 m/S² (100G)
	Misoperation	Maximum 200 m/S² (100G)
Life	Electrical	More than 300000 times
Temperature		Using: -20~+70℃ （With no icing）
Humidity		(+5~+35℃)Below 85% RH

Model Number Structure

CMV 16 0 0 1 C 2
① ② ③ ④

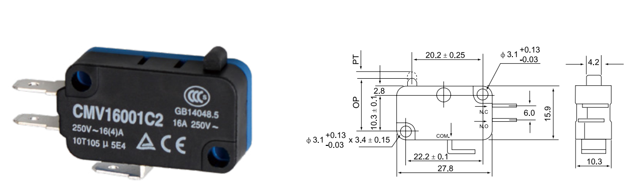
Item	Code	Description
① Rated Current	16	16A
② Head and driving rod	00 01 02 03 04 05 06	Button type Long handle type Short shank type Long pulley type Short pulley type Longer handle type Crank type
③ Contact form	1 2 3	1NO/1NC 1NC 1NO
③ Terminal specifications	C C2	#250 terminal #187 terminal

Operating Characteristics

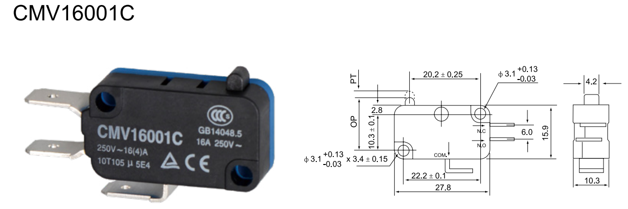
Model	CMV16	CMV16001C2	CMV16011C2	CMV16021C	CMV16031C2	CMV16041C2	CMV16051C2	CMV16061C
Operating force	PT(Max.)	2.4N	1.23N	2.4N	1.23N	2.7N	0.69N	1.2N
Release force	RF(Min.)	0.49N	0.14N	0.49N	0.14N	0.49N	0.06N	0.14N
Pre-travel	PT(Max.)	1.2mm	4.0mm	1.6mm	4.0mm	1.5mm	9.0mm	4.0mm
Over travel	OT(Min.)	1.0mm	1.6mm	0.8mm	1.6mm	0.8mm	2.0mm	1.5mm
Movement differential	MD(Max.)	0.4mm	1.5mm	0.6mm	1.5mm	0.6mm	2.8mm	1.5mm
Operating position	OP(mm.)	14.7±0.4mm	15.2±1.2mm	15.2±0.5mm	20.7±1.2mm	20.7±0.6mm	15.2±3mm	18.7±1.2mm

Appearance and Dimension

CMV16001C2



CMV16001C

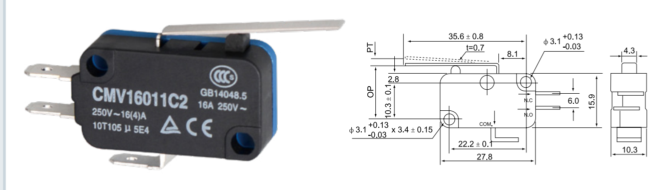


CMV16 Miniature Snap Action Switch

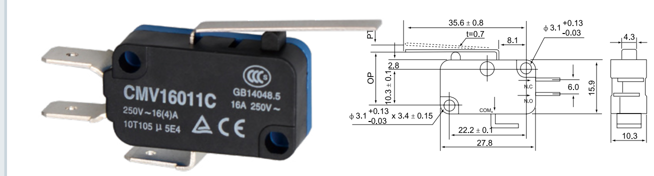
CNTD

Appearance and Dimension

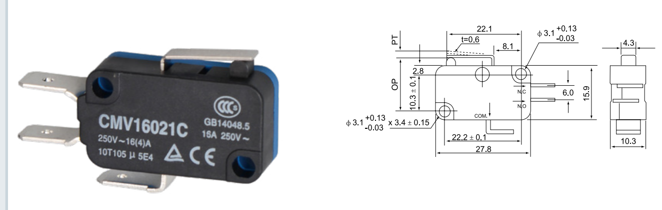
CMV16011C2



CMV16011C

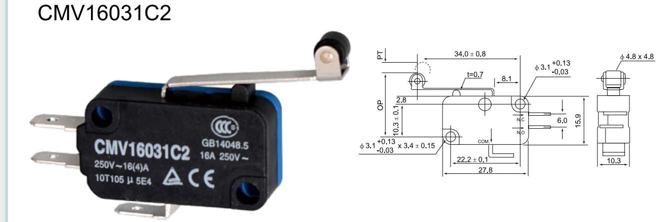


CMV16021C



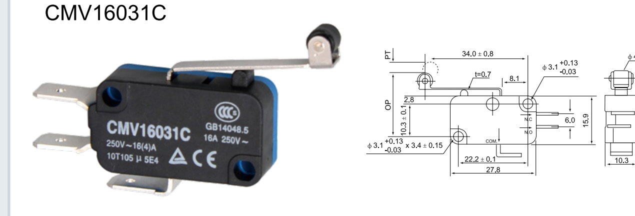
CMV16021C2

CMV16031C2



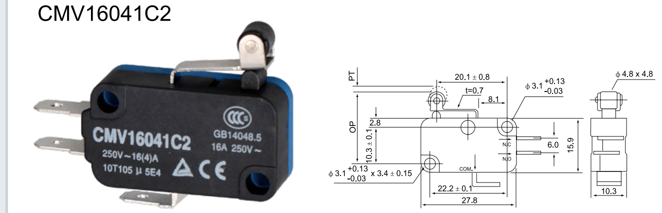
Custom Made Metal idler wheel

CMV16031C



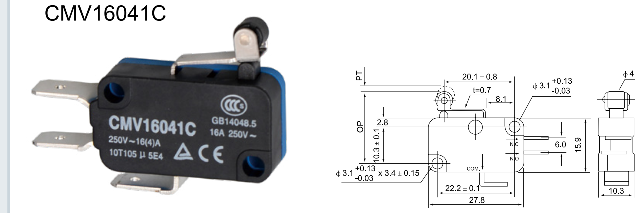
Custom Made Metal idler wheel

CMV16041C2



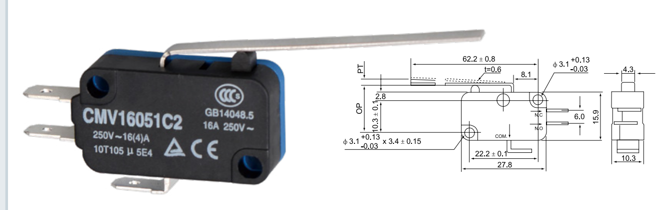
Custom Made Metal idler wheel

CMV16041C

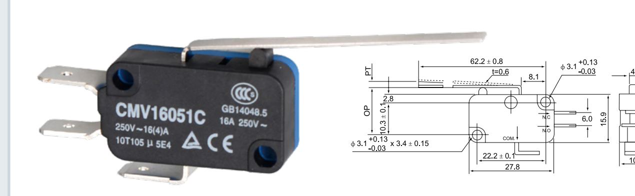


Custom Made Metal idler wheel

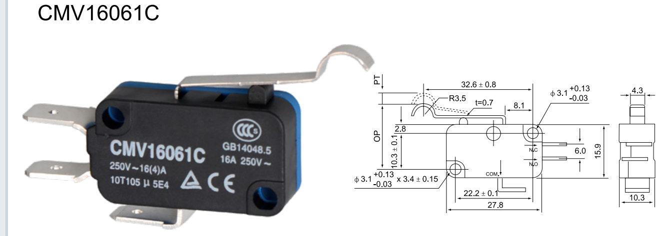
CMV16051C2



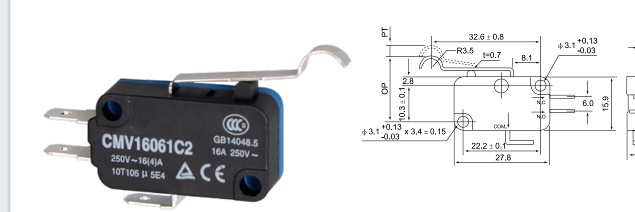
CMV16051C



CMV16061C



CMV16061C2



CNTD®

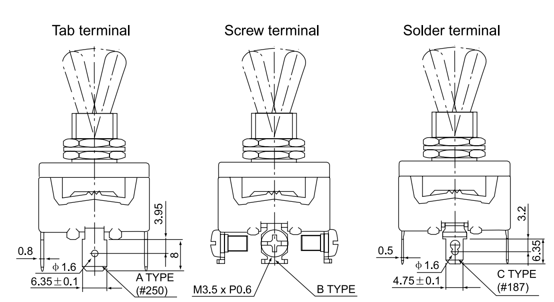
B

Industrial Control Division

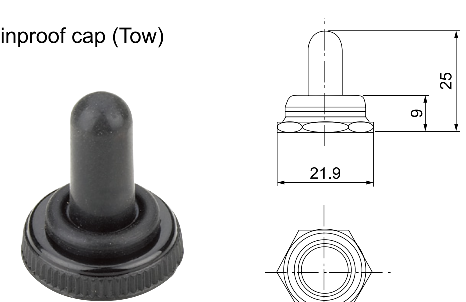
C5 Toggle Switch

Specifications

Contact resistance	15MΩmax. (initial)
Insulation resistance	100MΩ above under 500VDC
Dielectric strength	2000VAC、50/60Hz For 1minute
Vibration	10-55Hz、1.5mm double amplitude
Ambien temperature	Using: -20~+70℃ (With no icing)
Humidity	85% RH max.
Electrical life	500,000 operations above



COW Rainproof cap (Tow)



Features

- 10A type and 15A type for selection
- Fixed type and auto-return type (both single-throw and double-throw) for selection
- Screw terminal, solder terminal and tab terminal for selection
- Water-proof cap for water-proof and oil-proof
- Mounting hole: ϕ12mm

Model Number Structure

C5 | 11 | B

① ② ③

Items	Code	Description
① Type	CO	10A 250VAC Self-locking
	COR	10A 250VAC Spring return
	C5	15A 250VAC Self-locking
	C5R	15A 250VAC Spring return
② Contact	11	Single pole single throw ON-OFF
	12	Single pole double throw ON-ON
	13	Single pole double throw (central OFF)ON-OFF-ON
	131	Single pole double throw (central OFF single return)ON-OFF-ON
	21	Double pole single throw ON-OFF
	22	Double pole double throw ON-ON
	23	Double pole double throw (central OFF)ON-OFF-ON
	231	Double pole double throw (central OFF single return)ON-OFF-ON
③ Terminal	A	Tab terminal(#250)
	B	Screw terminal
	C	Solder terminal(#187)

Ratings

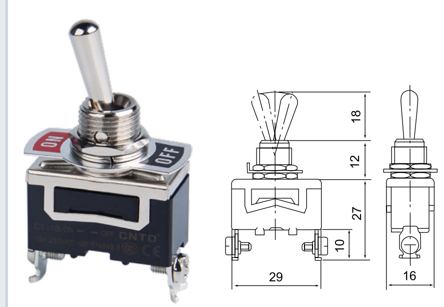
Load	Type	AC Rating	DC Rating
Resistance Load	CO	10A 250V 15A 125V	0.4A 250V 0.8A 125V
	C5	15A 250V 20A 125V	0.5A 250V 0.9A 125V
Inductive Load	CO	10A 250V 15A 250V	0.2A 250V 0.4A 125V
	C5	15A 250V 20A 125V	0.3A 250V 0.5A 125V 15A
Lamp Load	CO	300W 100V 500W 200V	30V
	C5	400W 125V 800W 250V	-
Motor Load	CO	200W 125V 300W 250V	7A 30V
	C5	400W 125V(single phase)	
	CO	550W 250V(three phase)	-
	C5	750W 250V(three phase)	

C5 Toggle Switch

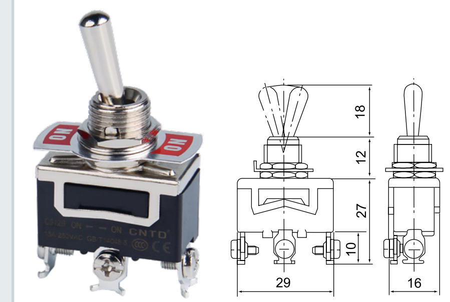
CNTD

Appearance and Dimension

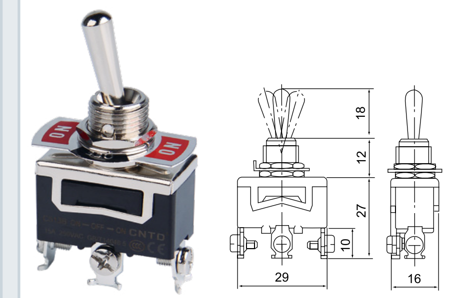
C511B
C5R11B



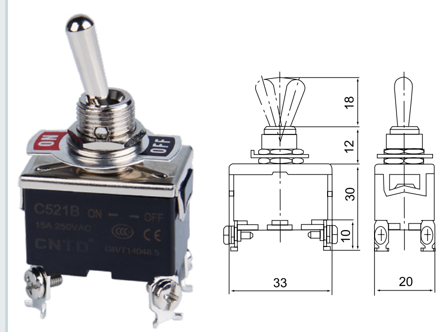
C512B
C5R12B



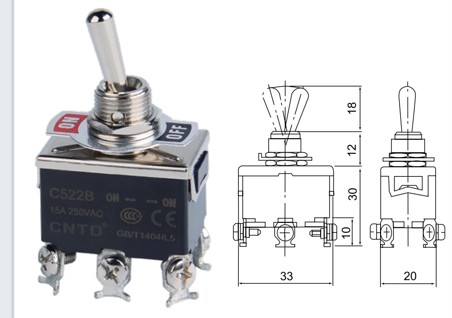
C513B
C5R13B



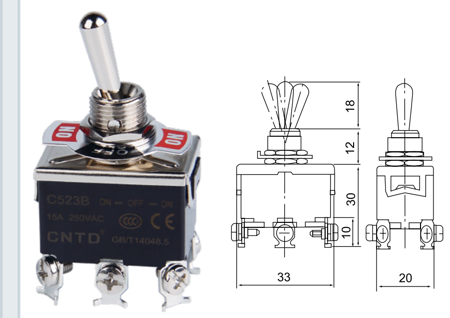
C521B
C5R21B



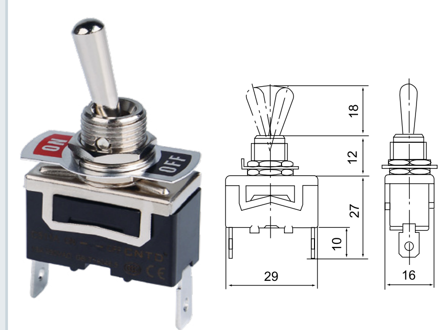
C522B
C5R22B



C523B
C5R23B



C511A
C5R11A



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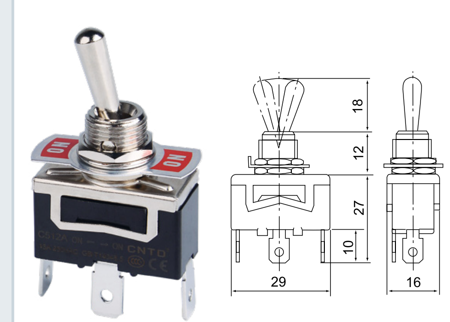

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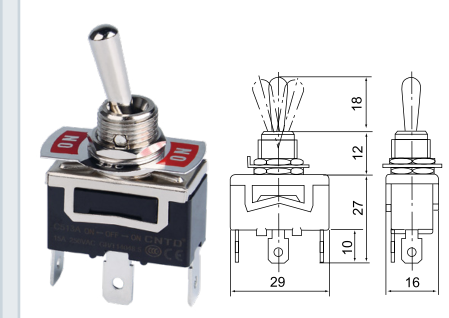
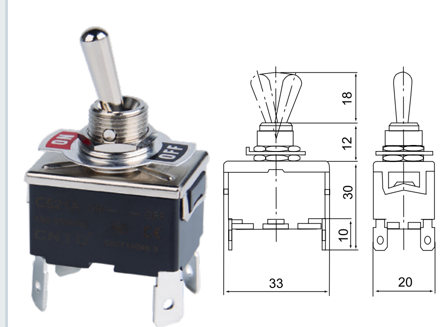
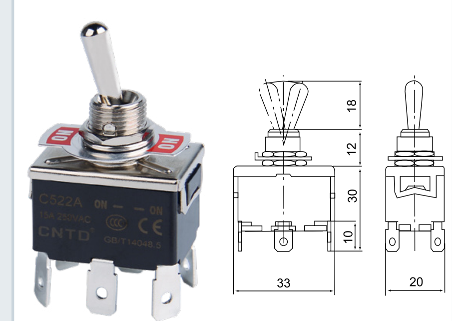


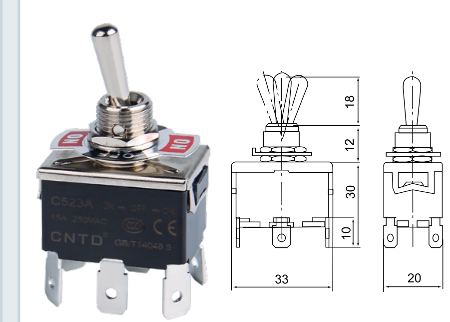
C521A
C5R21A



C522A
C5R22A



C523A
C5R23A



C6 Toggle Switch

Features

- Current rating 15A 250VAC, 20A 125VAC
- Fixed type and auto-return type (both single-throw and double-throw) for selection
- Screw terminal, solder terminal and tab terminal for selection
- Protection structure IP67, water-proof cap for water-proof and oil-proof
- Mounting hole: ϕ 12mm

Model Number Structure

C6 11 B

① ② ③

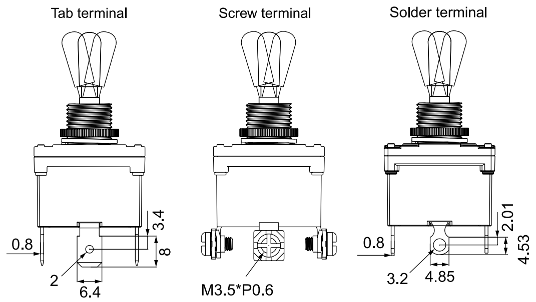
Items	Code	Description
① Type	C6	15A 250VAC 20A 125VAC Self-locking
	C6R	15A 250VAC 20A 125VAC Spring return
② Contact	11	Single pole single throw ON-OFF
	12	Single pole double throw ON-ON
	13	Single pole double throw (central OFF)ON-OFF-ON
	131	Single pole double throw (central OFF single return)ON-OFF-ON
	21	Double pole single throw ON-OFF
	22	Double pole double throw ON-ON
	23	Double pole double throw (central OFF)ON-OFF-ON
	231	Double pole double throw (central OFF single retum)ON-OFF-ON
③ Terminal	A	Tab terminal(#250)
	B	Screw terminal
	C	Solder terminal(#187)

Specifications

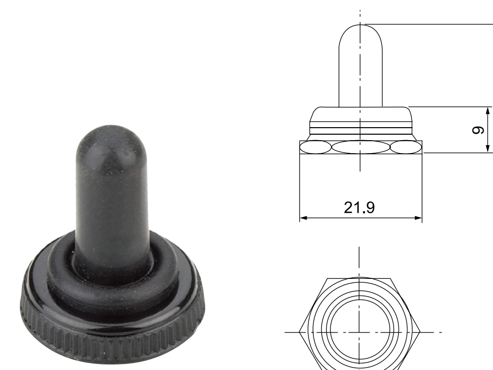
Items	15MΩmax. (initial)
Contact resistance	100MΩ above under 500VDC
Insulation resistance	2000VAC, 50/60Hz For 1minute
Dielectric strength	10-55Hz, 1.5mm double amplitude
Vibration	Using: -20~+70℃ (With no icing)
Ambien temperature	85% RH max.
Electrical life	500,000 operations above

Ratings

Load	Type	AC Rating	DC Rating
Resistance Load	C6	15A 250V 20A 125V	0.5A 250V 0.9A 125V
Inductive Load		15A 250V 20A 125V	0.3A 250V 0.5A 125V 15A
Lamp Load		400W 125V 800W 250V	-
Motor Load		400W 125V(single phase)	-
		750W 250V(three phase)	-



COW Rainproof cap (Tow)

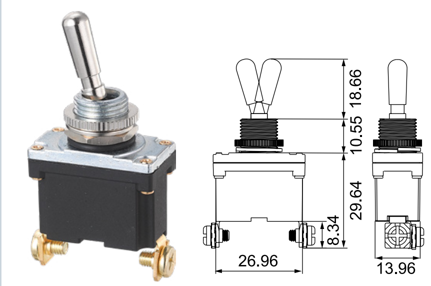


C6 Toggle Switch

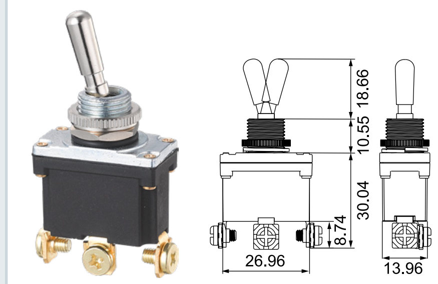
CNTD

Appearance and Dimension

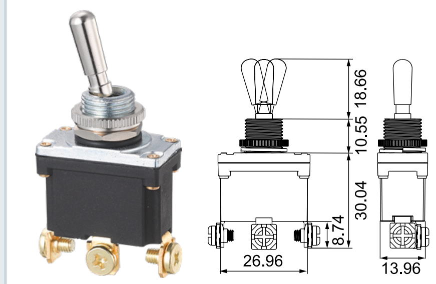
C611B
C6R11B



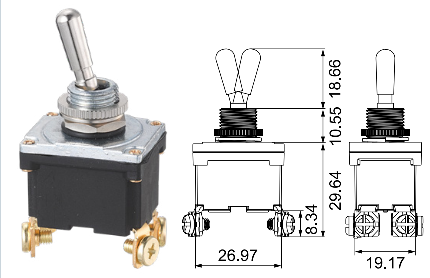
C612B
C6R12B



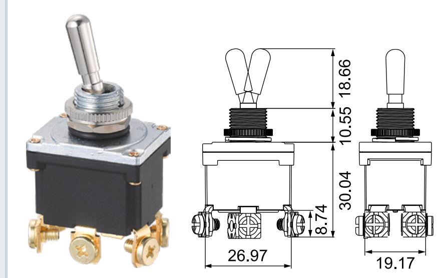
C613B
C6R13B



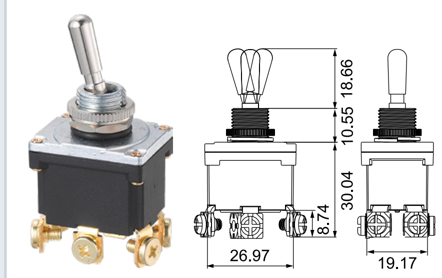
C621B
C6R21B



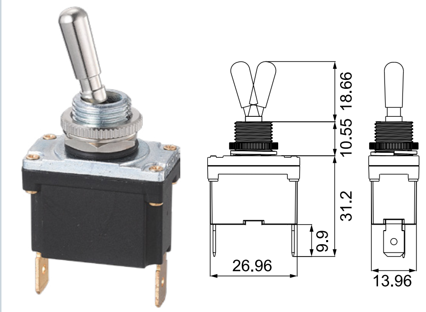
C622B
C6R22B



C623B
C6R23B



C611A
C6R11A



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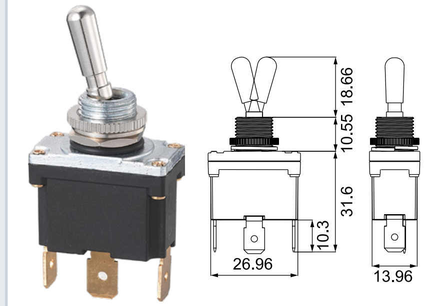

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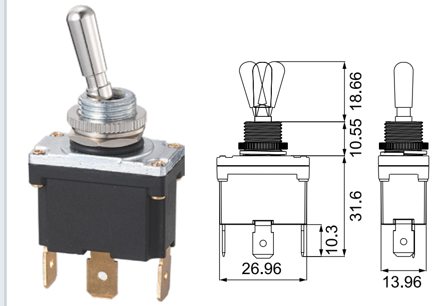
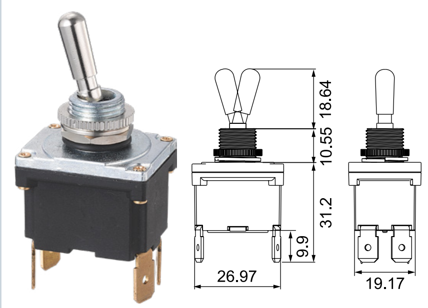
C6R13A



C621A
C6R21A



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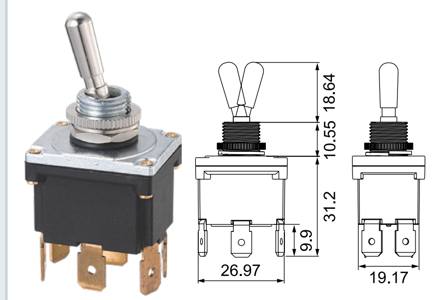
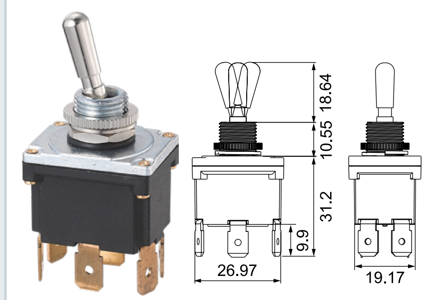
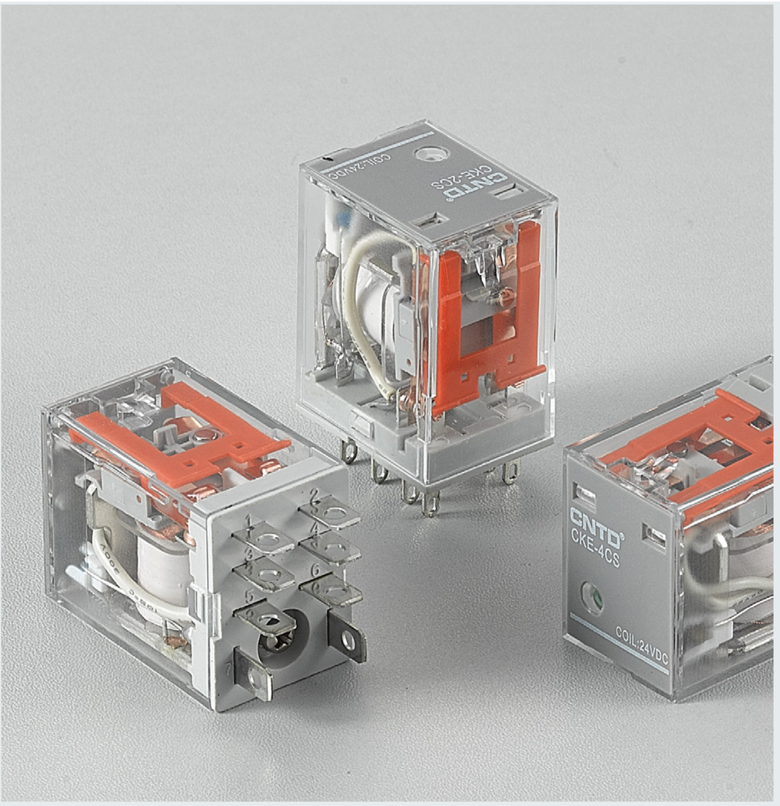
C6R22A



C623A
C6R23A



CK Miniature General Purpose Relay



Features

- Small size and high sensitivity
- Large contact load 2C: 5A/10A, 4C: 3A
- Multiple specifications with two-way indicator
- With mechanical indicator window

Model Number Structure

CK [E] — [2C] [S] [024] [ ]

① ② ③ ④ ⑤

① Current form(Resistance)	E: Current load 3A、5A
	L: Current load 10A
② Contact form	2C: 2 Set
	4C: 4 Set
③ Mount options	S: Plug-in type; P: Welded type
④ Voltage	Reference coil specification code
⑤ Options	No, standard type; LT: LED+Test button LTD: LED+Test button+Diode

Specifications

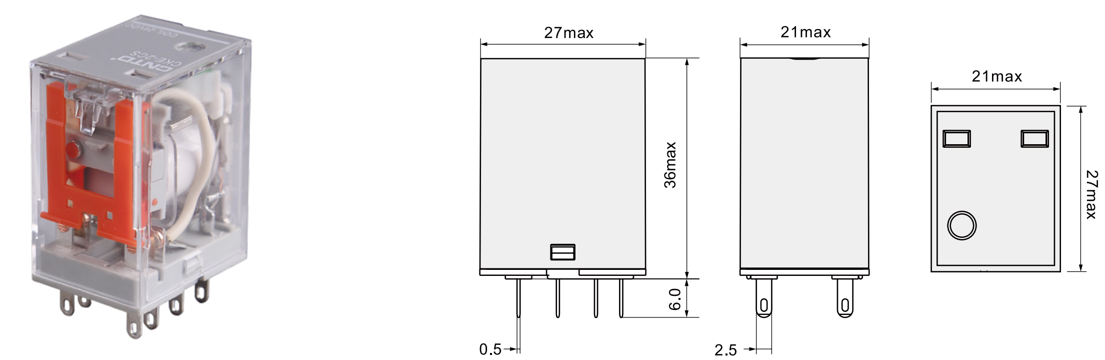
Model			CKE-2CS	CKE-4CS	CKL-2CS
Contact	Form		2C	4C	2C
	Load(Resistance)	Resistance	5A/250VAC 30VDC	3A/250VAC 30VDC	10A/250VAC 30VDC
		Motor	1/6HP 240VAC	1/6HP 240VAC	1/3HP 240VAC
	Switching power (Resistance)		1750VA, 210W	750VA, 90W	2500VA, 300W
	Initial contact (resistance)		50m	≤ 100m	≤ 100m
	Material		Ag alloy	Ag alloy	Ag alloy
	Electrical life(1s ON/ 1s OFF)		≥ 10^5(1800 Ops/h)	≥ 10^5(1800 Ops/h)	≥ 10^5(1800 Ops/h)
	Mechanical life(300 times / 1 min)		≥ 10^7(18000 Ops/h)	≥ 10^7(18000 Ops/h)	≥ 10^7(18000 Ops/h)
Pick-up voltage (23℃)			DC: 75% (Rated voltage), AC: 80% (Rated voltage)	DC: 75% (Rated voltage), AC: 80% (Rated voltage)	DC: 75% (Rated voltage), AC: 80% (Rated voltage)
Drop-out voltage (23℃)			DC: 10% (Rated voltage), AC: 30% (Rated voltage)	DC: 10% (Rated voltage), AC: 30% (Rated voltage)	DC: 10% (Rated voltage), AC: 30% (Rated voltage)
Maximum voltage (23℃)			110% (Rated voltage)	110% (Rated voltage)	110% (Rated voltage)
Insulation resistance			≥ 500M (500VDC)	≥ 500M (500VDC)	≥ 500M (500VDC)
Coil operating power	DC(W)		Approx. 0.9	Approx. 0.9	Approx. 0.9
	AC(VA)		Approx. 1.2	Approx. 1.2	Approx. 1.2
Operate time (at nominal voltage)			≤ 20 ms	≤ 20 ms	≤ 20 ms
Release time (at nominal voltage)			≤ 20 ms	≤ 20 ms	≤ 20 ms
Initial breakdown voltage	Between open contacts		1000VAC/1min (leakage current 1mA)	1000VAC/1min (leakage current 1mA)	1000VAC/1min (leakage current 1mA)
	Between poles		1000VAC/1min (leakage current 1mA)	1000VAC/1min (leakage current 1mA)	1500VAC/1min (leakage current 1mA)
	Between contacts and coil		1500VAC/1min (leakage current 1mA)	1500VAC/1min (leakage current 1mA)	1500VAC/1min (leakage current 1mA)
Ambient temperature			-25~+55℃	-25~+55℃	-25~+55℃
Humidity			35%~85%RH	35%~85%RH	35%~85%RH
Air pressure			86~106KPa	86~106KPa	86~106KPa
Shock resistance			10G(sinusoidal half-wave pulse:11ms)	10G(sinusoidal half-wave pulse:11ms)	10G(sinusoidal half-wave pulse:11ms)
Vibration resistance			10~55Hz double-amplitude:1.0mm	10~55Hz double-amplitude:1.0mm	10~55Hz double-amplitude:1.0mm
Mounting			plug in	plug in	plug in
Unit weight			35g	40g	40g

Coil Specifications (23℃)

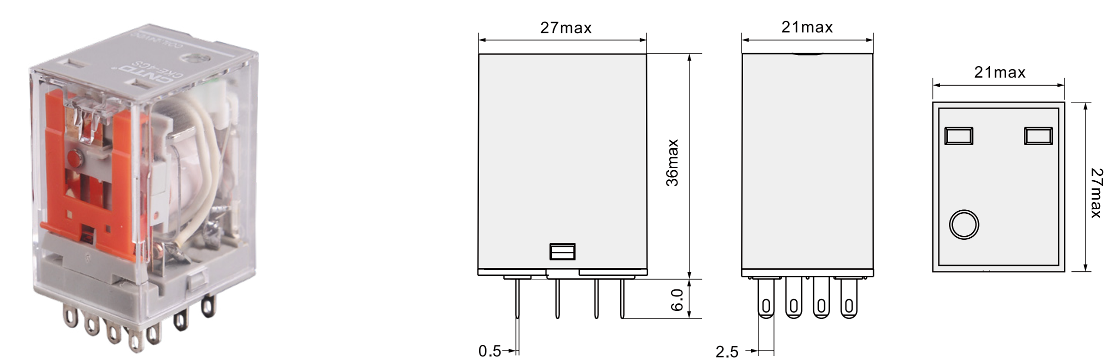
Model	CKE-2CS、CKE-4CS、CKL-2CS							
Voltage code(DC)	006	009	012 *	024 *	036	048 *	110	220
Nominal voltage V.DC	6	9	12	24	36	48	110	220
Coil resistance Ω	40	90	180	640	1500	2600	13000	42000
Voltage code(DC)	706	712	724 *	736	748 *	710	730 *	780
Nominal voltage V.AC	6	12	24	36	48	110	230	380
Coil resistance Ω	11.5	40	180	370	640	4430	16500	42000

Appearance and Dimension

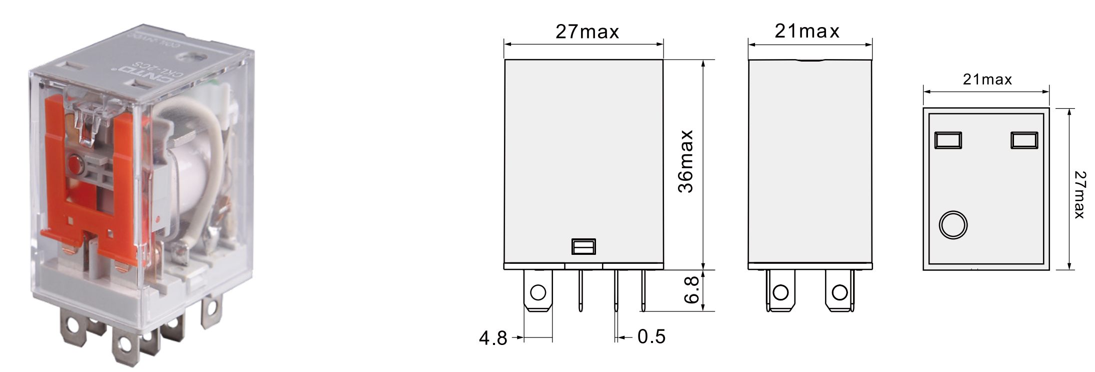
CKE-2CS



CKE-4CS



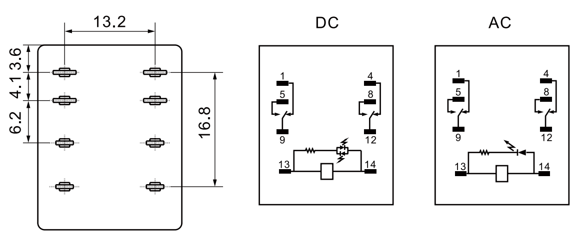
CKL-2CS



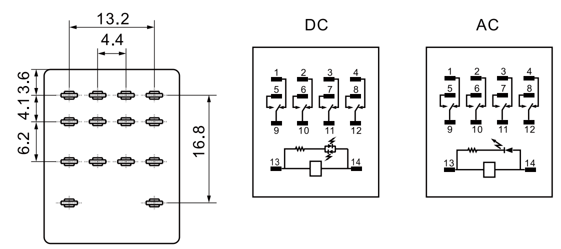
CK Miniature General Purpose Relay

Wiring Diagram

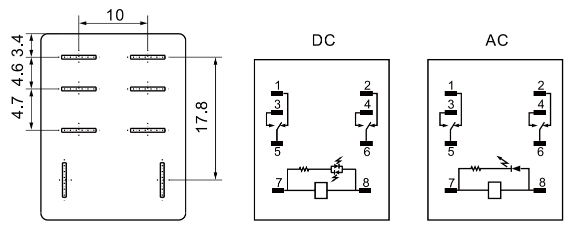
CKE-2CS



CKE-4CS



CKL-2CS



Relay Socket

CYF08A-E

Load current	7A
Load voltage	300V
Dielectric withstanding voltage	2500VAC/S

CRS-E

CYF08A-K

Load current	7A
Load voltage	300V
Dielectric withstanding voltage	2500VAC/S

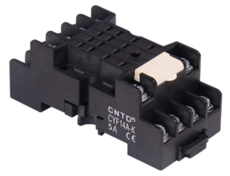
CRS-K

CYF14A-E

Load current	5A
Load voltage	300V
Dielectric withstanding voltage	2500VAC/S

CRS-E

CYF14A-K



Load current	5A
Load voltage	300V
Dielectric withstanding voltage	2500VAC/S

CRS-K

CTF08A-E

Load current	10A
Load voltage	300V
Dielectric withstanding voltage	2500VAC/S

CRS-E

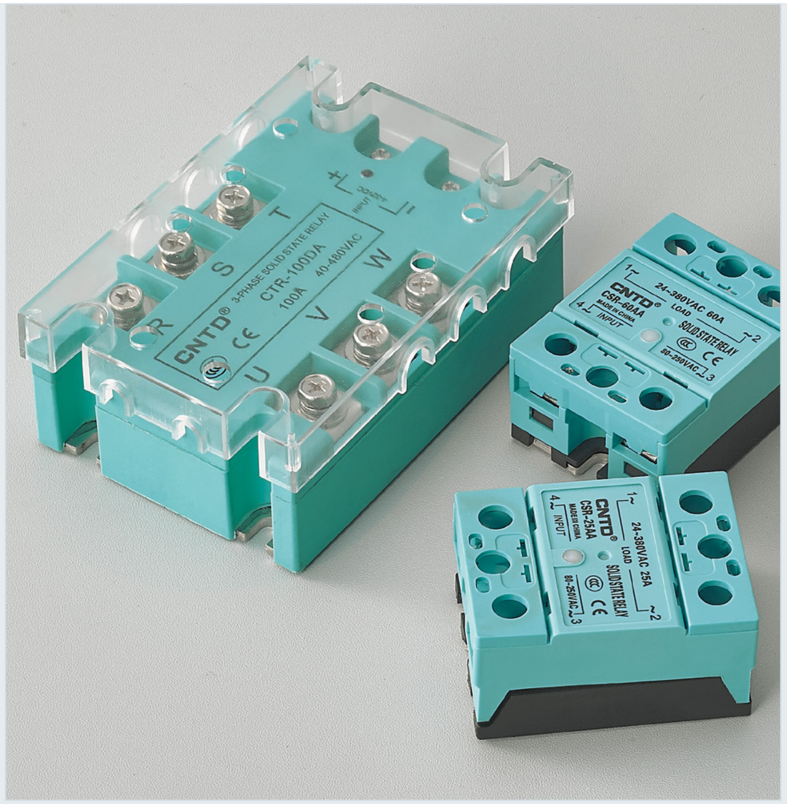
CTF08A-K

Load current	10A
Load voltage	300V
Dielectric withstanding voltage	2500VAC/S

CRS-K

CSR Solid State Relay

CNTD



Overview

Solid State Relay(CSR) is industrial control appliances which use power semiconductor devices for main control part, compare with traditional magnetic contact industrial controllers, it is more high-powered, intelligent, digital, systematic and green development.

according switch mode CSR have zero-cross and random type. When the input control signal, random type conduction immediately, zero cross type need load voltage turn to zero region just can conduction. Revocation of the control signal,all can cut off when less than maintenance current. zero cross type may cause the maximum half-cycle delay, but reduces the impact of the load and radiofrequency interference, is the ideal switching devices.Random type fast response,suitable for dimmer,thermostats resistive loads and some inductive load applications.

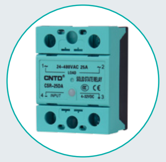
When the CSR turn off, if in the phase current and voltage have different, will have a large rise rate (dv/dt) on the triac, such as dv/dt higher than Triac standatrd (300V/us), will result in delay shutdown even failure. use anti-parallel thyristor's CSR(powerful type) will been greatly improved at dv/dt(dv / dt is 500V/us). Therefore, in the field of capacitive load or inductive load, suggest the use powerful type CSR. CNTD's CSR are all powerful type.

Solid-state voltage regulator consists of thyristor switching circuit, resistance-capacitance phase shifting circuit,lag circuit and over-voltage absorption circuit.The use of only one external potentiometer can be used to achieve AC power regulation.In many occasions can replace the heavy contact voltage lighting power supply,voltage,temperature,brightness, speed and other analog adjustment.

Features

- Current:0.5A~400A
- Voltage:12V~680V
- General Install Size
- Vacuum Weld Techinics
- Led indicator showing "ON" or "OFF"
- Protect Panel
- IEC standard
- Input & output type could chose DC/AC AC/AC DC/DC

■ Gray



■ Light green

Model Number Structure

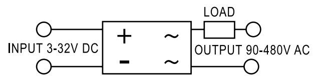
CSR - E 40 DA R
① ② ③ ④ ⑤

1. CSR=CNTD Single Phase Solid State Relay
   CTR=CNTD Three Phase Solid State Relay
2. None= Improve Design Type(Light Green)
   E=Standard Economic Type(Gray)
3. Rated Operation Current
4. Comtrol & Load voltgge type
   DA=DC(4-32V)AC(24-380V) AA=AC(80-250V)AC(24-380V)
   DD=DC(4-32V)DC(12-240V) VA=Voltage regulator调压器(24 380VAC)
5. None=Zero Cross Trigger
   R=Radom Switch

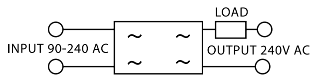
Applications

- AC DC switch & Temp control
- Automate Control
- CNC machinery
- Packaging machinery
- Textile machinery
- Glass machinery
- Plastic machinery

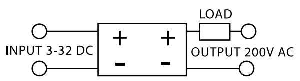
1、CSR-D(DC TO AC) Application Circuit



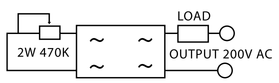
2、CSR-A(AC TO AC) Application Circuit



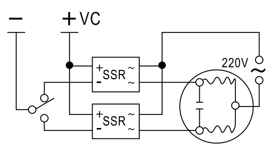
3、CSR-DD(DC to DC) Application Circuit



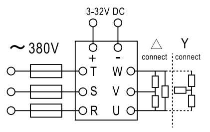
4、CSR-V(voltage regulator) Application Circuit



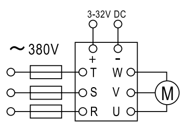
5、Motor positive and reverse Application Circuit



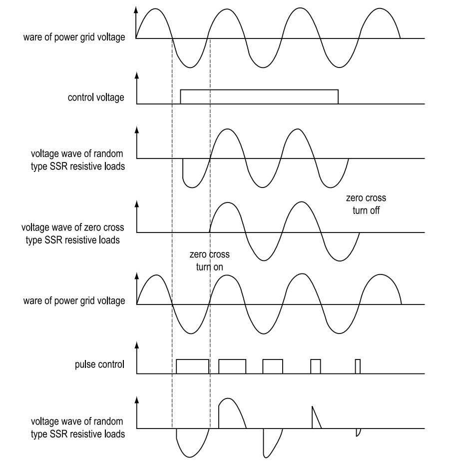
6、3phase CSR Load control Connect



7、3phase Motor positive and reverse



Specification		input parameter				output parameter					Safe Load	
		Control Voltage	Control Current	Start Current	Close Voltage	Operating Current	Operating Voltage	Insulate voltage	Protection: Over Voltage	Protection: Over Current	Resistive Load	Inductive Load
CSR	DC/ AC	4-32 V DC	<20mA	≥ 5mA	≤ 1.5V DC	10-100A	24-480 V AC	≥ 2500 VAC	RC MOV	Fast Fuse	60%	40%
CSR	AC/AC	80-250 V AC	<30mA	≥ 5mA	≤ 10V AC	10-100A	24-480 V AC					
CSR	Industry class	4-32 V DC	<20mA	≥ 5mA	≤ 1.5V DC	100-800A	24-480 V AC					
CSR	DC/DC	3-32 V DC	<25mA	≥ 5mA	≤ 1.5V DC	10-40A	12-250 V DC		Diode			
CTR		4-32 V DC	<30mA	≥ 9ma	≤ 2.5V DC	10-120A	24-480 V AC		RC MOV	Fast Fuse		
Solid StateVoltage Regulator		Potentiometer 500KΩ/1/4W				10-40A	10-250V AC		RC MOV	Fast Fuse		

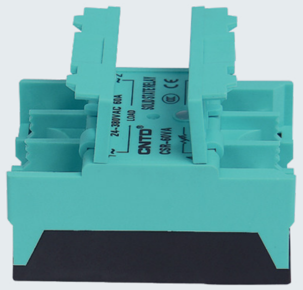


RC: Built-in resistance capacity absorption circuit.
MOV: External shunt metal oxide varistor.

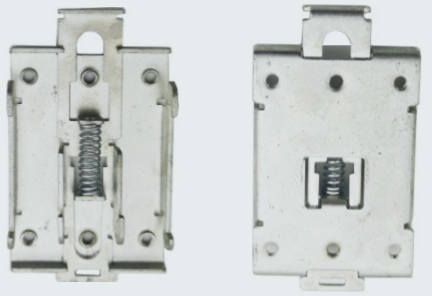
Notes

1.Strictly prohibit for load short circuit.Can use fast fuse.
2.Ling time working current can't over 70% of the nominal value.
3.Heatsink temperature can't over 75℃.
4.Use at inductive load area, adding varistor for protect is better.

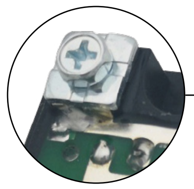
Recommended value of load type (Room temperature)

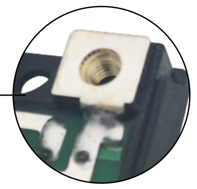


Patent design, using the coverprotection model, easy to operate

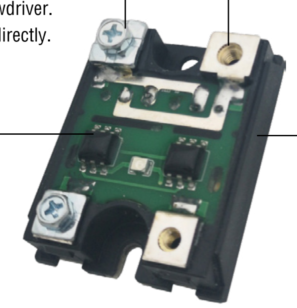


CSR-B01

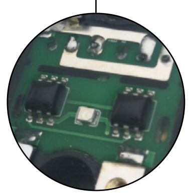


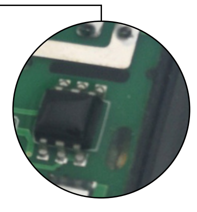


High quality screw, can operate by hexagonal sleeve or screwdriver. Integral fixed gasket, wire without terminal can also be used directly.



Power device directly conducts with copper electrode, which has strong overcurrent ability. Brass fasteners with precise threads help to enhance conductivity.





SMT double panel full patch process, optimize the driving advantages of Crydom and Celcu, strong anti-interference ability, accurate control.

Transparent silicone gel has excellent thermal conductivity and strong insulation characteristics.Multi-layer sealing design, waterproof, dustproof and salt fog resistance, can be used stably in harsh environments.

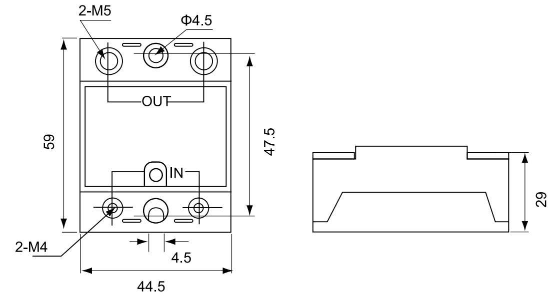
Specifications

Model	CSR-DA / CSRE-DA		CSR-AA / CSRE-AA		CSR-VA / CSRE-VA	CSR-DD / CSRE-DD	CTR-DA / CTRE-DA	
Operation Current	10A,25A,40A	60A,80A,100A	10A,25A,40A	60A,80A,100A	10A,25A,40A	10A,25A,40A	10A,25A,40A	60A,80A, 100A,120A
Operation Voltage	24-480V AC		24-480V AC		10-250V AC	12-250V DC	24-480V AC	
Control Voltage	4-32V DC		80-250V AC		500KΩ/1/4W	3-32V DC	4-32V DC	
Control Current	DC 3-25mA		AC ≤ 12mA		/	DC 3-25mA	DC 3-25mA	
V_{TM}	≤ 1.5V	≤ 1.5V	≤ 1.5V	≤ 1.5V	≤ 1.5V	≤ 2.3V	≤ 1.5V	≤ 1.5V
I_{RRM}	≤ 10mA	≤ 20mA	≤ 10mA	≤ 20mA	≤ 5mA	≤ 5mA	≤ 15mA	≤ 15mA
T_Q	≤ 10mS		≤ 10mS		≤ 10mS	≤ 10mS	≤ 10mS	
V iso	2500V AC		2500V AC		2500V AC	2500V AC	2500V AC	
R iso	1000mΩ 500V DC		1000mΩ 500V DC		1000mΩ 500V DC	1000mΩ 500V DC	1000mΩ 500V DC	
Tj	-30~+80℃		-30~+80℃		-30~+80℃	-30~+80℃	-30~+80℃	
Weight	90g	140g	90g	140g	90g	90g	350g	450g

Appearance and Dimension

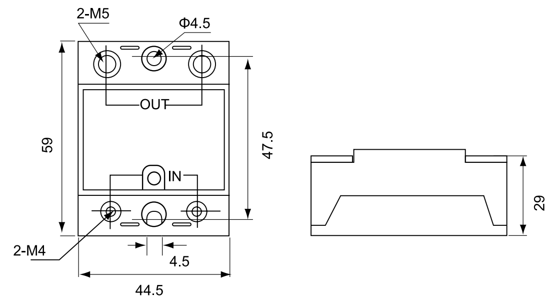
CSR-DA

Model
CSR-10DA
CSR-25DA
CSR-40DA
CSR-60DA
CSR-80DA
CSR-100DA



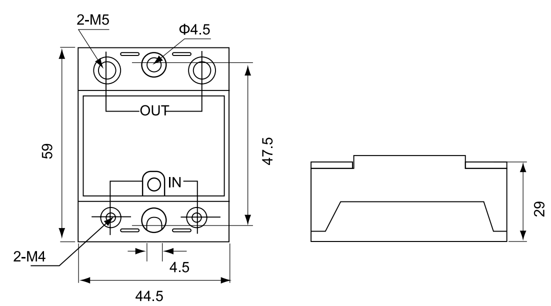
CSR-AA

Model
CSR-10AA
CSR-25AA
CSR-40AA
CSR-60AA
CSR-80AA
CSR-100AA



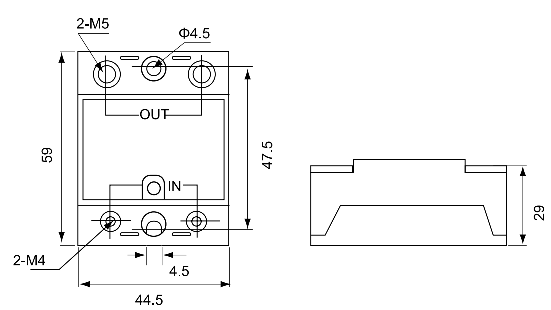
CSR-VA

Model
CSR-10VA
CSR-25VA
CSR-40VA

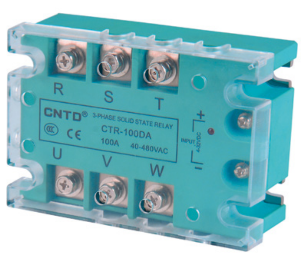


CSR-DD

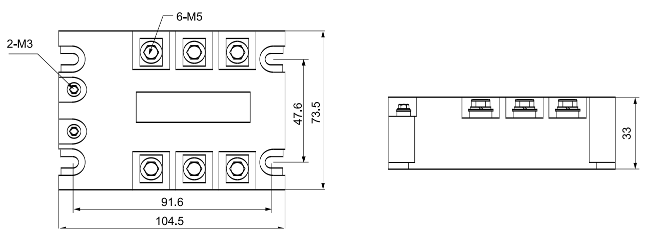
Model
CSR-10DD
CSR-25DD
CSR-40DD



CTR-DA



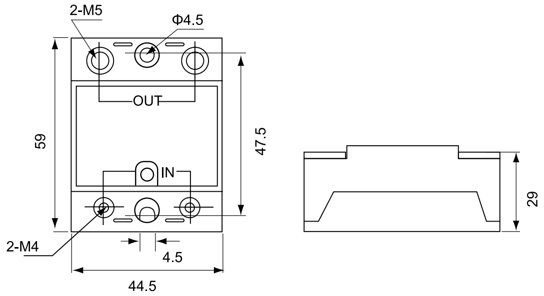
Model
CTR-10DA
CTR-25DA
CTR-40DA
CTR-60DA
CTR-80DA
CTR-100DA
CTR-120DA



Appearance and Dimension

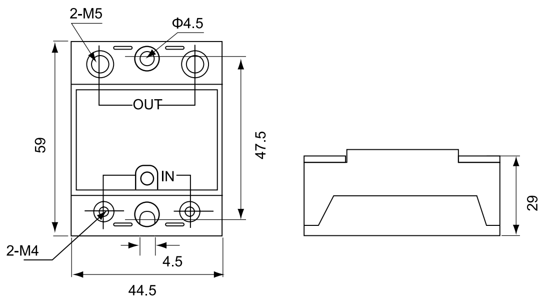
CSRE-DA

Model
CSRE-10DA
CSRE-25DA
CSRE-40DA
CSRE-60DA
CSRE-80DA
CSRE-100DA



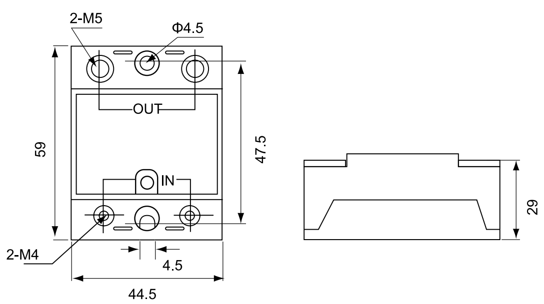
CSRE-AA

Model
CSRE-10AA
CSRE-25AA
CSRE-40AA
CSRE-60AA
CSRE-80AA
CSRE-100AA



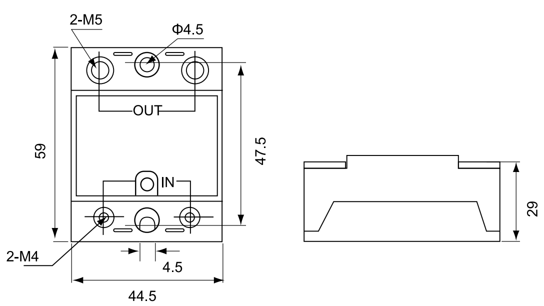
CSRE-VA

Model
CSRE-10VA
CSRE-25VA
CSRE-40VA



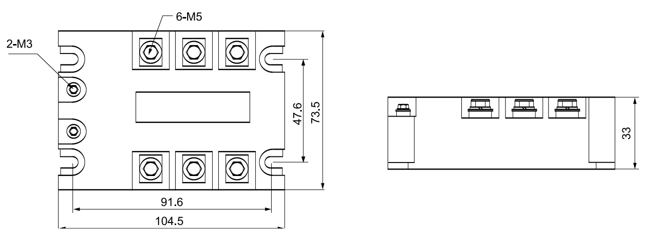
CSRE-DD

Model
CSRE-10DD
CSRE-25DD
CSRE-40DD



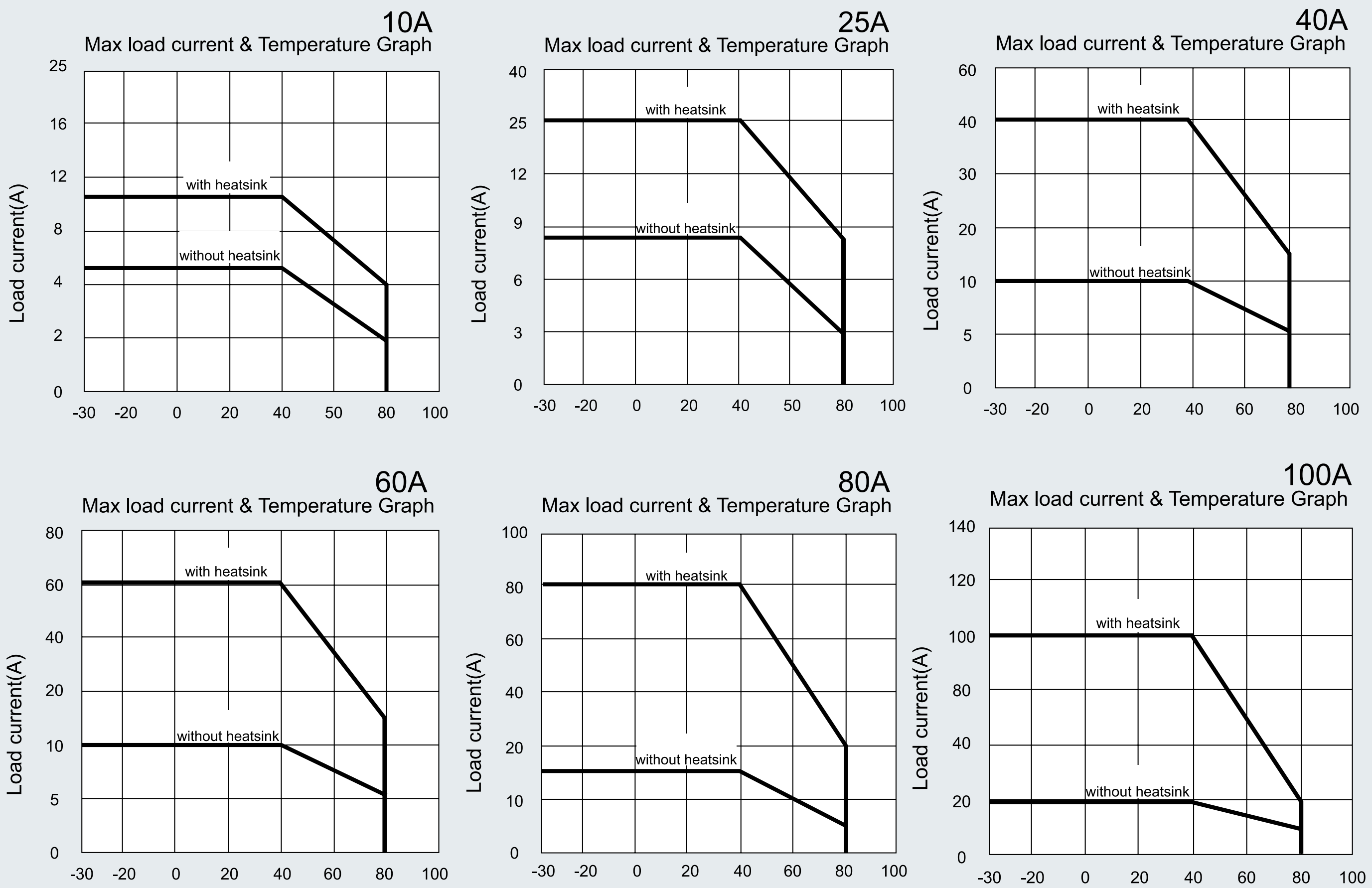
CTRE-DA

Model
CTRE-10DA
CTRE-25DA
CTRE-40DA
CTRE-60DA
CTRE-80DA
CTRE-100DA
CTRE-120DA

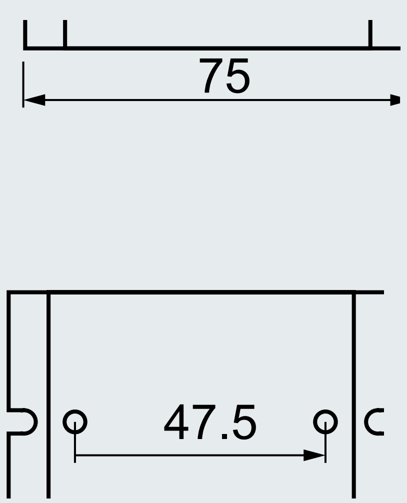


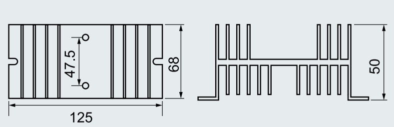
CSR Solid State Relay

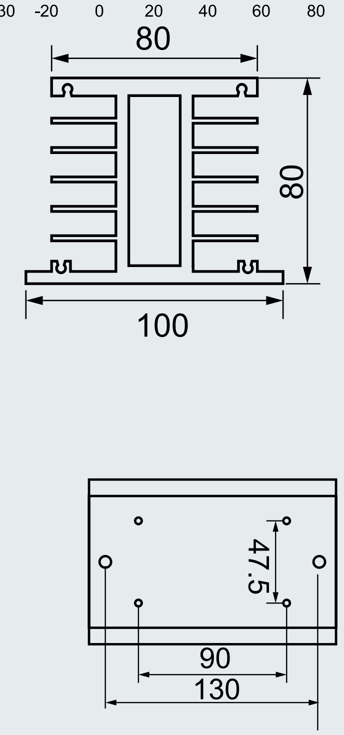
Dissipative Power Curve of CSR



State Relay Heatsink







CSR-A01 (For CSR10A-40A)

CSR-A02 (For CSR60A-100A)

CSR-A03 (For CTR10A-120A)

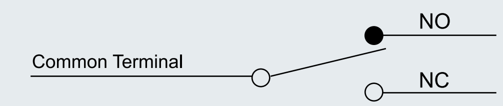
CFS Foot Switch

CNTD

Features

- Plastic shell and metal shell are for selection

Contact Form



Specifications

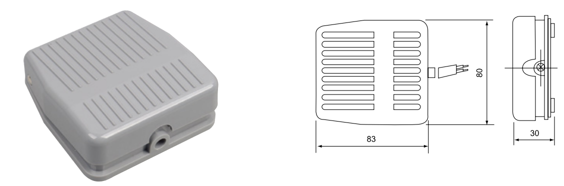
Designation	Model	Rating	Type of switch enclosed & contact arrangement	Cable type / length	Cantact	Action force	Material of Rind
Standard type Momentary Action	CFS-101	10A 250VAC	CMV-100D	0.75mm²,3C/0.5 meter,1 meter~3 meter	1A1B	1.2kg	Plastic
	CFS-102	15A 250VAC	CM-1704	0.75mm²,3C/1 meter,1.5 meter~2 meter	1A1B	1.1kg	
	CFS-2	10A 250VAC	CMV-100D	0.5mm²,3C/1 meter~3 meter	1A1B	1.1kg	Aluminum Cast
	CFS-3	10A 250VAC	CMV-100D	0.75mm²,3C/0.5 meter,1 meter~3 meter	1A1B	1.2kg	
	CFS-3S	15A 250VAC	CM-1704	0.75mm²,3C/1 meter,1 meter~3 meter	1A1B	1.1kg	
Alternate action	CFS-105	6A 250VAC	CMVS-D	0.75mm²,3C/1 meter,1 meter~2 meter	1A1B	2kg	Plastic
	CFS-305	6A 250VAC	CMVS-D	Accessory: Cable gland (No cable)		3.1kg	Aluminum Cast
	CFS-405	6A 250VAC	CMVS-D			3.1kg	
	CFS-505	6A 250VAC	CMVS-D			3.1kg	
Mini foot switch Front end push	CFS-201	10A 250VAC	CMV-100D	0.5mm²,3C/1 meter~3 meter	1A1B	0.7kg	Plastic
	CFS-01	10A 250VAC	CMV-100D	0.5mm²,3C/1 meter~3 meter	1A1B	0.7kg	
	CFS-1	10A 250VAC	CMV-100D	0.5mm²,3C/1 meter~3 meter	1A1B	0.9kg	Iron
Protective guard foot switch	CFS-302	15A 250VAC	CM-1704	Accessory: Cable gland (No cable)	1A1B	3.2kg	Aluminum Cast
	CFS-304	15A 250VAC	CM-1704 * 2		2A2B	3.2kg	
	CFS-502	15A250VAC	CM-1704		1A1B	3.2kg	
	CFS-504	15A250VAC	CM-1704 * 2		2A2B	3.2kg	
	CFS-602	15A250VAC	Button spring type		2*1A1B	2.8kg	
	CFS-702	15A250VAC	CM-1704		2*1A1B	3.2kg	
Large type	CFS-402	15A250VAC	CM-1704		1A1B	3.2kg	
	CFS-404	15A 250VAC	CM-1704 * 2		2A2B	3.2kg	
	CFS-802	15A 250VAC	CM-1704		2*1A1B	3.2kg	

NOTE: The default size of conduit connector is M20x1.5, outfiting cable connector. Conduit connector size is PG13.5, with product model number plus (-P), example:CFS-302-P.

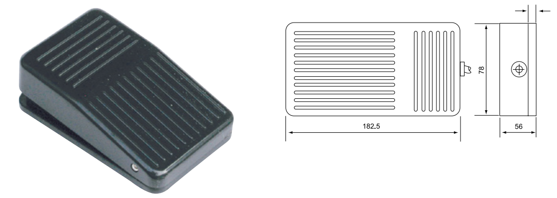
CFS Foot Switch

Appearance and Dimension

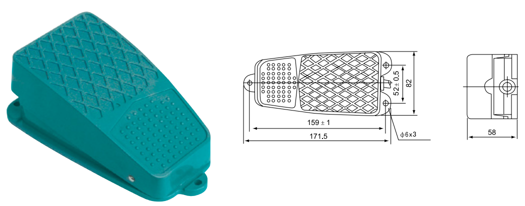
CFS-201



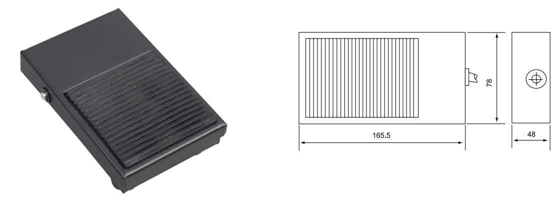
CFS-01



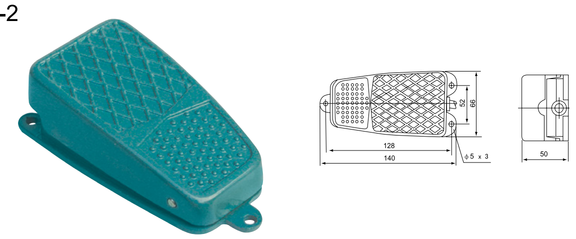
CFS-101
CFS-102
CFS-105



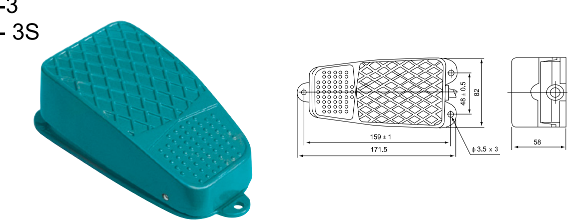
CFS-1



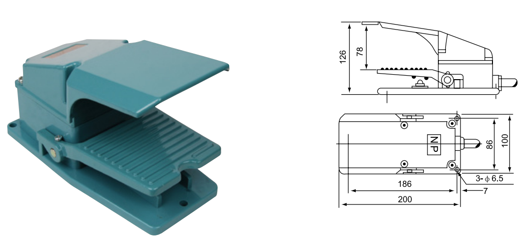
CFS-2



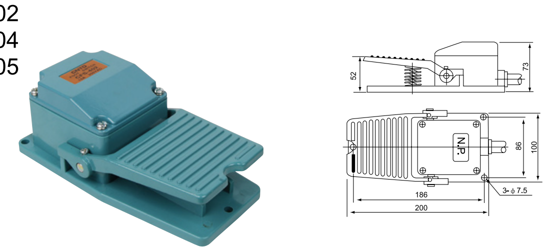
CFS-3
CFS- 3S



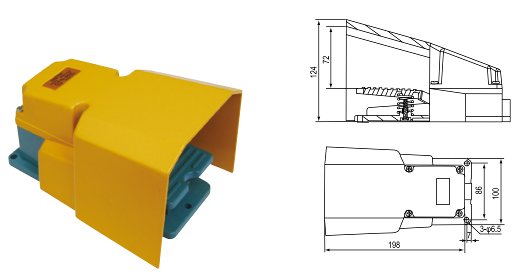
CFS-302
CFS-304
CFS-305



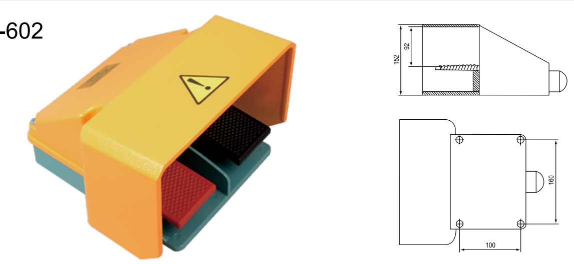
CFS-402
CFS-404
CFS-405



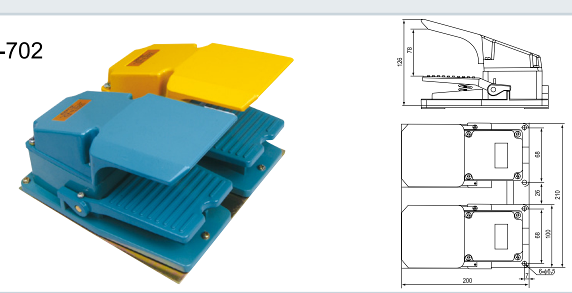
CFS-502
CFS-504
CFS-505



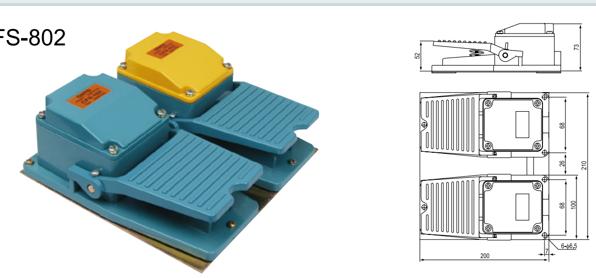
CFS-602



CFS-702



CFS-802



CB Power Pushbutton Switch

Features

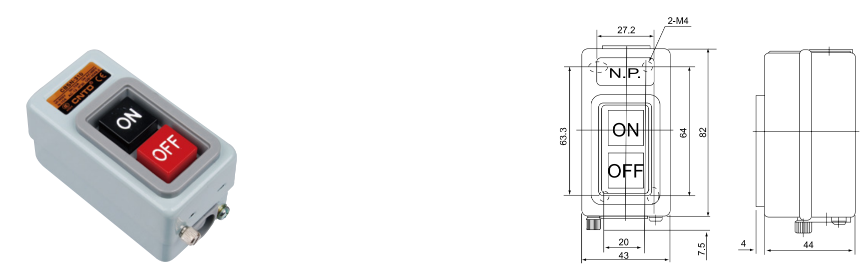
- Plastic shell and metal shell are for selection

Specifications

Model	Spec.	Mounting type	Connection terminal	Material
CBSN-310	3 ϕ 10A 1.5KW	Surface mounting	M3.5	Iron
CBSN-315	3 ϕ 15A 2.2KW		M4	
CBSN-330	3 ϕ 30A 3.7KW		M5	
CBSP-315	3 ϕ 15A 2.2KW	Surface mounting	M4	Plastic
CBSP-330	3 ϕ 30A 3.7KW			
CBSY-315	3 ϕ 15A 2.2KW	Flush mounting	M4	Iron
CBSY-330	3 ϕ 30A 3.7KW			
CBSS-315	3 ϕ 15A 2.2KW	Flush mounting	M3.5	Iron
CBSS-330	3 ϕ 30A 3.7KW		M4	
CPB-2	3A 250VAC	Surface mounting	M4	Plastic
CPB-3	3A 250VAC			

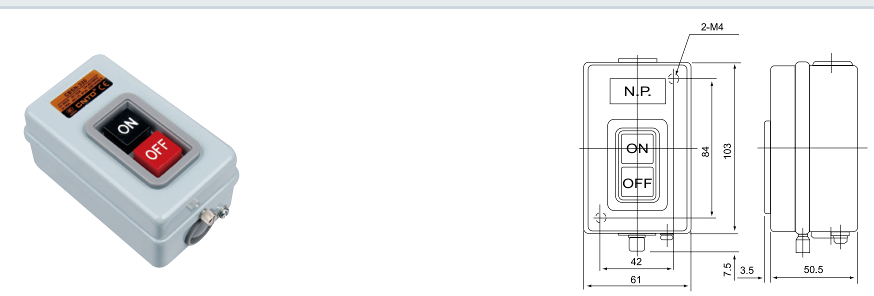
Appearance and Dimension

CBSN-310



CBSN-315

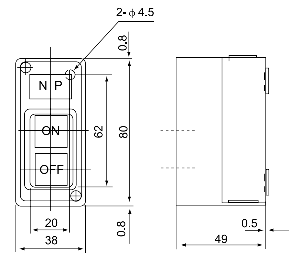
CBSN-330



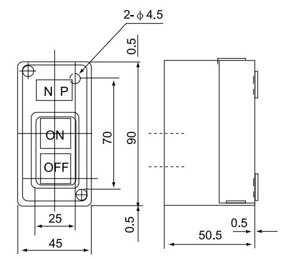
CB Power Pushbutton Switch

Appearance and Dimension

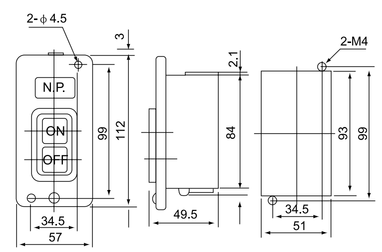
CBSP-315



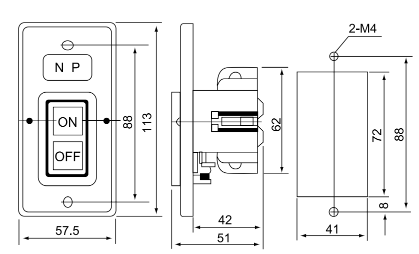
CBSP-330



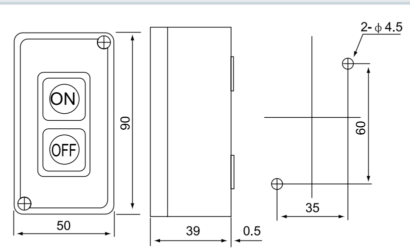
CBSY-315
CBSY-330



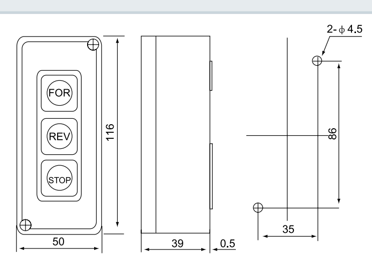
CBSS-315
CBSS-330



CPB-2

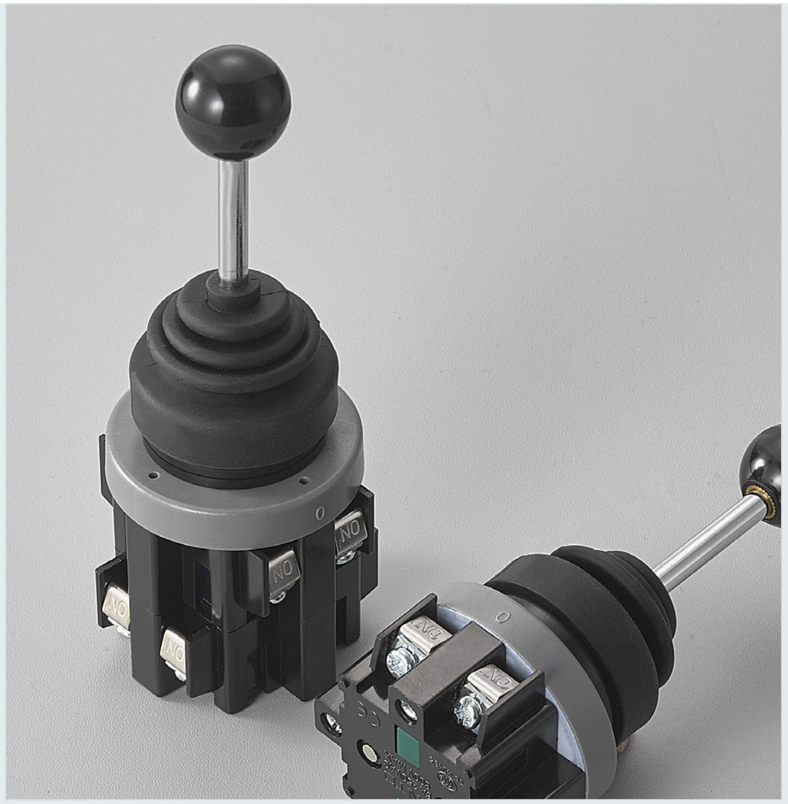


CPB-3



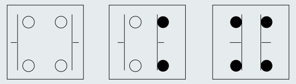
CMR Monolever Switch

CNTD



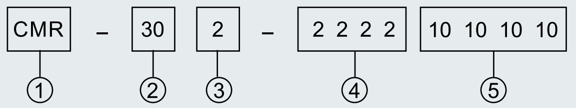
Features

- Smoothly and swiftly handle the lever in four directions upward, rightward, downward, and leftward
- Three alternatives of movement are attainable in each direction: Go-on, auto-return, and blockade-enforcing
- Operate in four, three, or two directions with the switch
- Rubber bushing is water-proof, oil-resistant, and dustpreventive



BR-1　BR-2　BR-3

Model Number Structure



Items	Code	Description
① Type	CMR	Round type
	CMS	Square type
	CMRS	Round type
	CMRN	Seal Round
② Mounting Hole	30	Φ30m/m only
③ No.of contact Blocks fitted	1~4	1~4
④ Actuating keys	1	Go-on
	2	Auto-return
	0	Blockade-enforcing
⑤ Type of contact Blocks fitted	00	None
	10	1a(1NO)
	20	2a(2NO)
	01	1b(1NC)
	02	2b(2NC)
	11	1a1b(1NO-1NC)

Note: When you place order, please kindly designate clockwise the movement way and type of contact fitted.

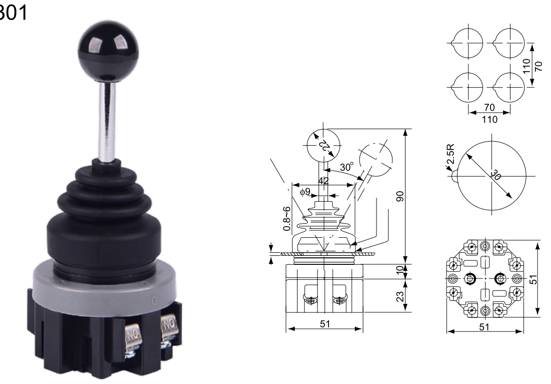
CMR Monolever Switch

Ratings

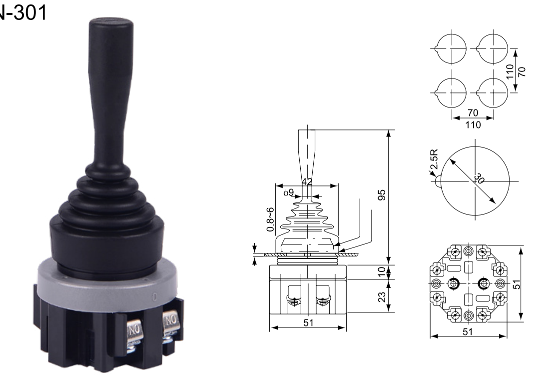
AC	Rated voltage		110V	220V	440V
	Rated current		10A	6A	3A
	Breaking current capacity		50A	30A	10A
DC	Resistance Load	Rated voltage	110V	220V	600V
		Rated Current	2.2A	1.1A	0.4A
		Breaking Current	2.42A	1.21A	0.44A
	Inductive Load	Rated Current	1.2A	0.45A	0.2A
		Breaking Current	1.32A	0.5A	0.22A

Appearance and Dimension

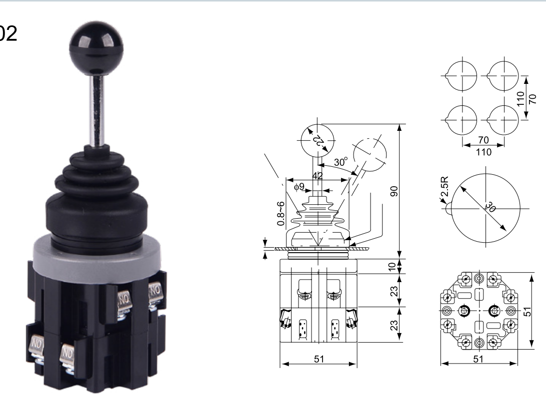
CMR-301



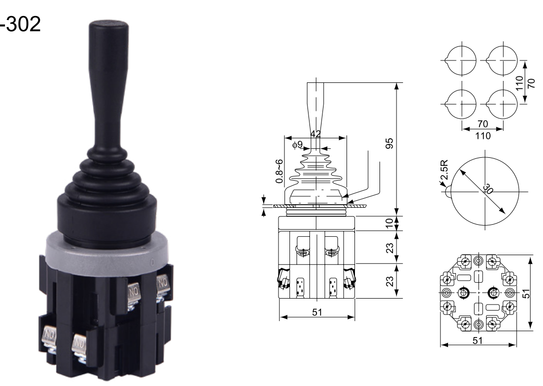
CMRN-301



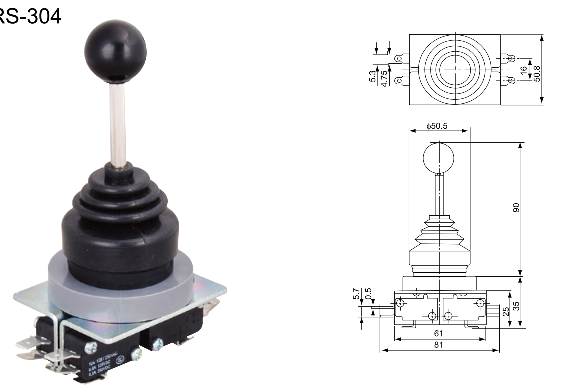
CMR-302



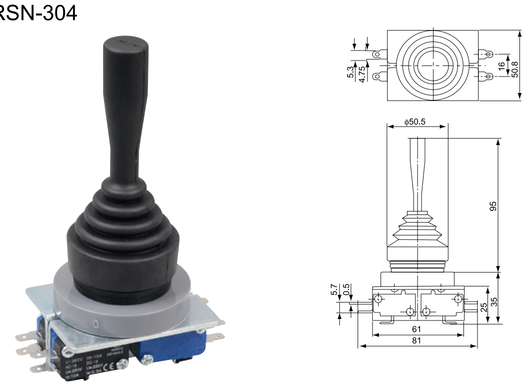
CMRN-302



CMRS-304



CMRSN-304



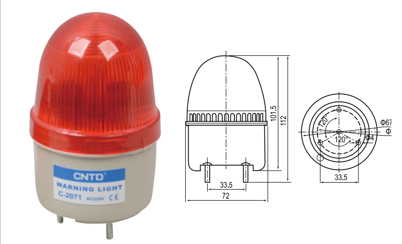
Warning Lamp

CNTD

C-5041

Model	Voltage	Color
C-5041	12V AC/DC 24V AC/DC 110V AC 220V AC	R-Red O-Orange G-Green B-Blue

C-2071

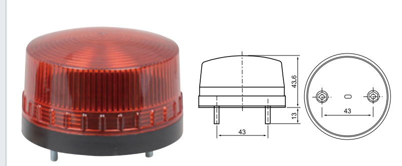


Model	Voltage	Color
C-2071	12V AC/DC 24V AC/DC 110V AC 220V AC	R-Red O-Orange G-Green B-Blue

C-TX

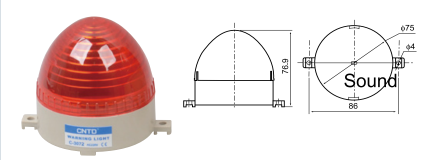
Model	Voltage	Color	Sound
C-TX	12V AC/DC 24V AC/DC 110V AC 220V AC	R-Red O-Orange G-Green B-Blue	

C-3071



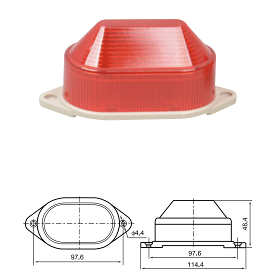
Model	Voltage	Color	Sound
C-3071	12V AC/DC 24V AC/DC 110V AC 220V AC	R-Red O-Orange G-Green B-Blue	

C-3072



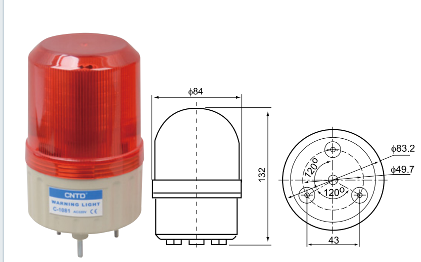
Model	Voltage	Color
C-3072	12V AC/DC 24V AC/DC 110V AC 220V AC	R-Red O-Orange G-Green B-Blue

C-3051



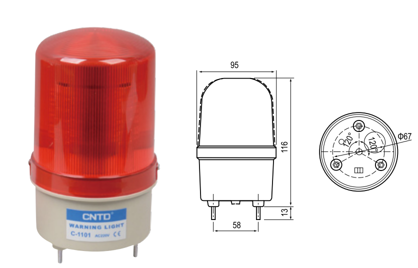
Model	Voltage	Color
C-3051	12V 24V 110V 220V	R-Red O-Orange G-Green B-Blue

C-1081



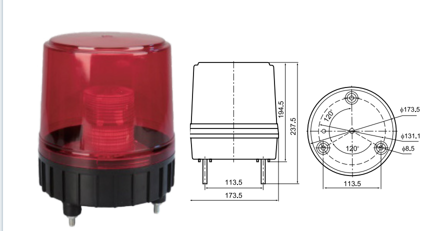
Model	Voltage	Color	Sound
C-1081	12V 24V 110V 220V	R-Red O-Orange G-Green B-Blue	

C-1101



Model	Voltage	Color	Sound
C-1101	12V AC/DC 24V AC/DC 110V AC 220V AC	R-Red O-Orange G-Green B-Blue	

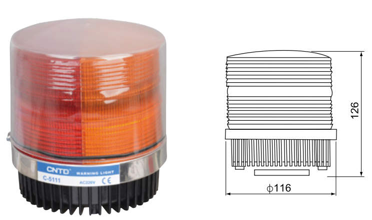
C-1181



Model	Voltage	Color
C-1181	12V 24V 110V 220V	R-Red O-Orange G-Green B-Blue

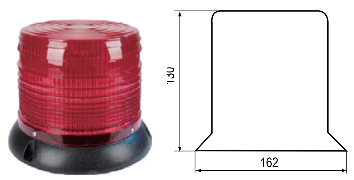
Warning Lamp

C-5111



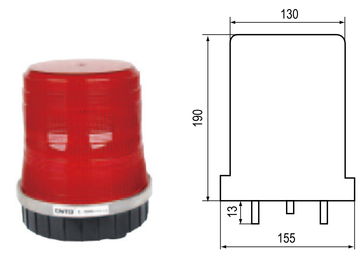
Model	Voltage	Color
C-5111	12V AC/DC 24V AC/DC 110V AC 220V AC	R-Red O-Orange G-Green B-Blue

C-400



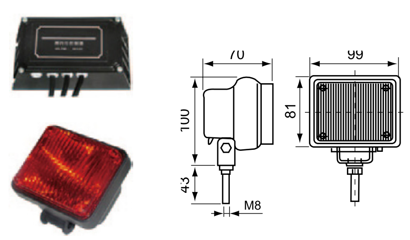
Model	Voltage	Color
C-400	12V AC/DC 24V AC/DC 110V AC 220V AC	R-Red O-Orange G-Green B-Blue

C-1500



Model	Voltage	Color
C-1500	12V 24V 110V 220V	R-Red O-Orange G-Green B-Blue

C-315



Model	Voltage	Color
C-315	12V 24V 110V 220V	R-Red O-Orange G-Green B-Blue

Warning Lamp

CNTD

Model Number Structure

CTL □□ — R□Y□G□B□W□ M□ — 28 P □ Y

① ② ③ ④ ⑤ ⑥ ⑦ ⑧

① Series	CTL		Warning Lamp Series
② Outline dimension appearance and style	50		50 Outside diameter dimension
	70		70 Outside diameter dimension
	702		70 Flat stitching
	701		70 Single lamp style
	801		80 Singlelamp style
	901		90 Singlelamp style
③ Color	R		R: Red G: Green Y: Yellow B: Bule W: White
④ Signal type	M		With buzzer
	MD		With a separate buzzer
	M	1	Continuous Ring
		2	Discontinuous Ring
		3	Discontinuous Ring, delay close
			No digital representative discontinuous Ring
⑤ Voltage	AC.DC	22	12V
		23	24V
		24	36V
		25	48V
	AC	30	110V
		31	220V
		32	3800V
⑥ Installation method	P		Vertical base
	Z		Collapsible universal base
	C		Side mounting base
	No letters		No letters(pagerback base)
⑦ Poling scale(mm)	CTL50	1	87
		2	142
		3	242
	CTL70/90	1	58
		2	88
		3	118
		4	168
		5	218
		6	268
		7	318
⑧ Mounting base			Add the base

Warning Lamp

Model
CTL50-R-31P2
CTL50-RG-31P2
CTL50-RYG-31P2
CTL50-RYGB-31P2
CTL50-RYGBW-31P2
CTL50-RM-23P2
CTL50-RGM-23P2
CTL50-RYGM-23P2
CTL50-RYGBM-23P2
CTL50-RYGBWM-23P2

CTL50

Model
CTL50-R-31Z2
CTL50-RG-31Z2
CTL50-RYG-31Z2
CTL50-RYGB-31Z2
CTL50-RYGBW-31Z2
CTL50-RM-23Z2
CTL50-RGM-23Z2
CTL50-RYGM-23Z2
CTL50-RYGBM-23Z2
CTL50-RYGBWM-23Z2

CTL50

Model
CTL50-R-31C3
CTL50-RG-31C3
CTL50-RYG-31C3
CTL50-RYGB-31C3
CTL50-RYGBW-31C3
CTL50-RM-23C3
CTL50-RGM-23C3
CTL50-RYGM-23C3
CTL50-RYGBM-23C3
CTL50-RYGBWM-23C3

CTL50

Model
CTL70-R-31P4
CTL70-RG-31P4
CTL70-RYG-31P4
CTL70-RYGB-31P4
CTL70-RYGBW-31P4
CTL70-RM-23P4
CTL70-RGM-23P4
CTL70-RYGM-23P4
CTL70-RYGBM-23P4
CTL70-RYGBWM-23P4

CTL70

Model
CTL70-R-31Z4
CTL70-RG-31Z4
CTL70-RYG-31Z4
CTL70-RYGB-31Z4
CTL70-RYGBW-31Z4
CTL70-RM-23Z4
CTL70-RGM-23Z4
CTL70-RYGM-23Z4
CTL70-RYGBM-23Z4
CTL70-RYGBWM-23Z4

CTL70

Model
CTL70-R-31C5
CTL70-RG-31C5
CTL70-RYG-31C5
CTL70-RYGB-31C5
CTL70-RYGBW-31C5
CTL70-RM-23C5
CTL70-RGM-23C5
CTL70-RYGM-23C5
CTL70-RYGBM-23C5
CTL70-RYGBWM-23C5

CTL70

Warning Lamp

CNTD

Model
CTL701-R-31
CTL701-RM-31
CTL701-RGB-23
CTL701-RGBM-23

CTL701

Model
HTL701-R-31P4
HTL701-R-31Z4
HTL701-R-31C5
HTL701-RM-31P4
HTL701-RM-31Z4
HTL701-RM-31C5
HTL701-RGB-23P4
HTL701-RGB-23Z2
HTL701-RGB-23C5
HTL701-RGBM-23P2
HTL701-RGBM-23Z2
HTL701-RGBM-23C5

CTL701

Model
CTL901-R-31
CTL901-RM-31
CTL901-RGB-23
CTL901-RGBM-23

CTL901

Model
CTL70-R-31P4
CTL70-RG-31P4
CTL70-RYG-31P4
CTL70-RYGB-31P4
CTL70-RYGBW-31P4
CTL70-RM-23P4
CTL70-RGM-23P4
CTL70-RYGM-23P4
CTL70-RYGBM-23P4
CTL70-RYGBWM-23P4

CTL901

Model
CTL801-R-31
CTL801-RM-31
CTL801-RGB-23
CTL801-RGBM-23

CTL801

Warning Lamp

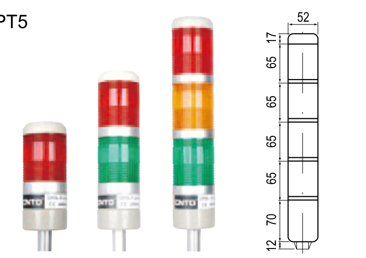
Model Number Structure

CPT 5 - 3 T - D 220V ROG

① ② ③ ④ ⑤ ⑥ ⑦

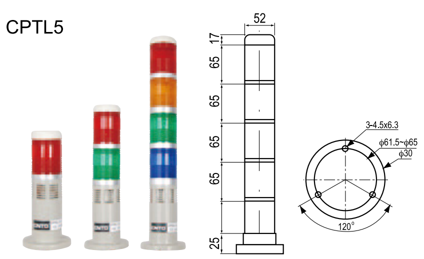
Item	Code	Description
①Type	CPT CPTL CPTLZ CPTLS	Rod(Aluminum pole with L-shaped bracket to be installed) Conjoined disc Conjoined adjustable(Aluminum rod 90 ℃ regulating installation) Rod footplate(Aluminum rod with disk installation)
②Lamp shell outside diameter size	4 5 6	ϕ40 ϕ50 ϕ60
③ The layer number of lights	1-5	1-5 layer
④Function	T W U K	Always Flash Always buzzer Flash buzzer
⑤Lamp Type	E D	Tungsten filament bulbs LED bulbs
⑥Voltage	12V-220V	12V AC/DC 24V AC/DC 110V AC 220V AC
⑦Lamp shell color	R O G B W	Red Orange Green Blue White

CPT5



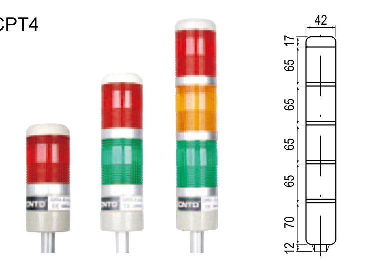
Model	Voltage	Color	Sound
CPT5	12V 24V 110V 220V	R- Red O- Orange G- Green B- Blue	

CPTL5



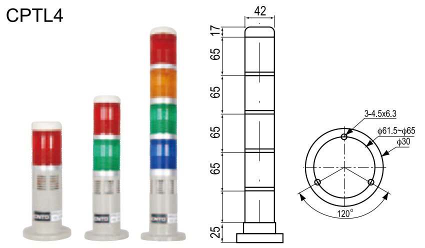
Model	Voltage	Color	Sound
CPTL5	12V 24V 110V 220V	R- Red O- Orange G- Green B- Blue	

CPT4



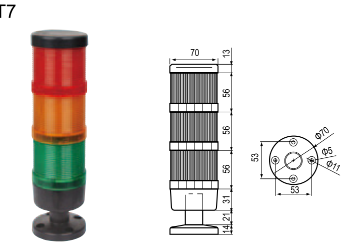
Model	Voltage	Color	Sound
CPT4	12V 24V 110V 220V	R-Red O-Orange G-Green B-Blue	

CPTL4



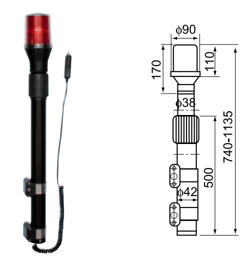
Model	Voltage	Color	Sound
CPTL4	12V 24V 110V 220V	R- Red O- Orange G- Green B- Blue	

CPT7



Model	Voltage	Color
CPT7	12V 24V 110V 220V	R- Red O- Orange G- Green B- Blue

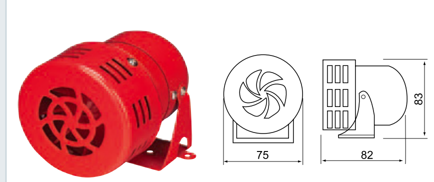
C-3093



Model	Voltage	Color
C-3093	12V 24V 110V 220V	R- Red O- Orange G- Green B- Blue

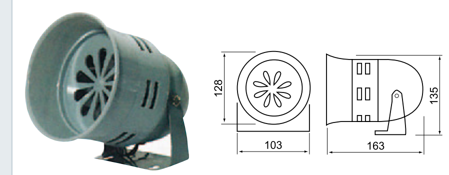
Motor Siren

CMS-190



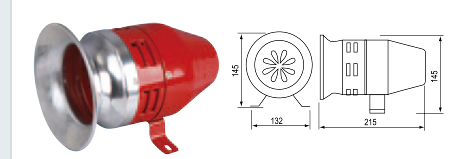
Model	Voltage	Sound
CMS-190	12V 24V 110V 220V	

CMS-290



Model	Voltage	Sound
CMS-290	12V 24V 110V 220V	

CMS-390



Model	Voltage	Sound
CMS-390	12V 24V 110V 220V	

Buzzer

C-F75

C-F80

C-F25

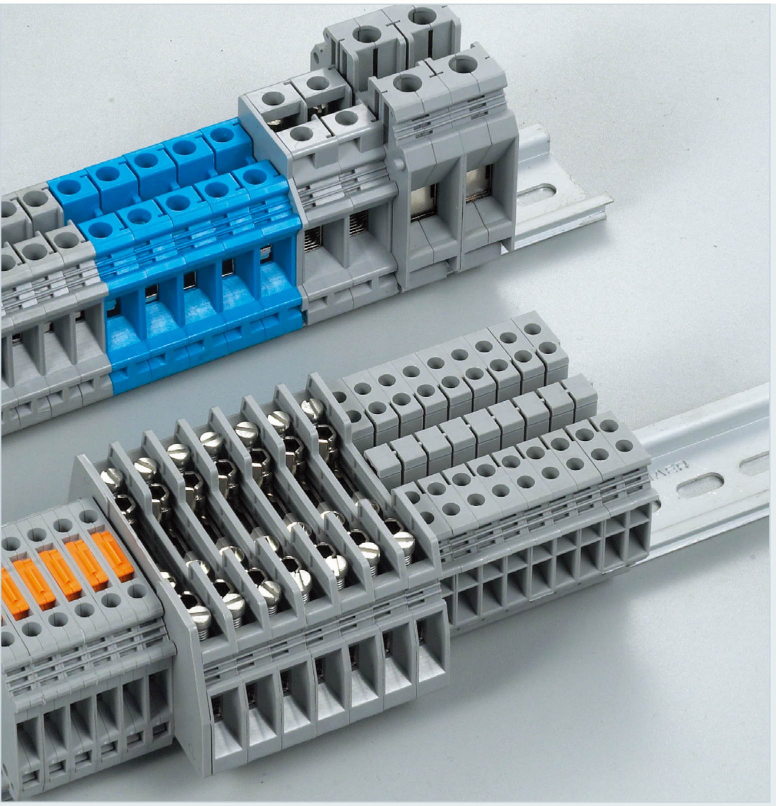
C-F1

Warning Lamp Accessories

CTL50/70/90-ZC-Z

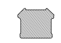
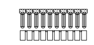
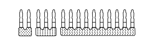
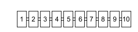
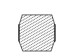
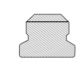
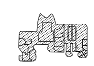
CTL50/70/90-SZ

CUK General Connection Terminal



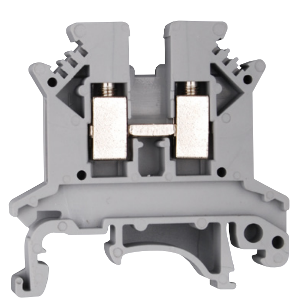
Parameters

Instructions

(1) End clapboard	
(2) Center connecting piece: Use at the center of terminal for transverse bridge connection	
(3) Side connecting piece: 2 digit 3 digit 10 digit	
(4) Mark symbol: 1-100, 10 for a group. Please explain if you have special demand.	
(5) Septa: The spacer used in the electric segreagtion among the adjoint hooknp. Can insert after installation.	
(6) The packet clapboard	
(7) Universal terminal fixture	

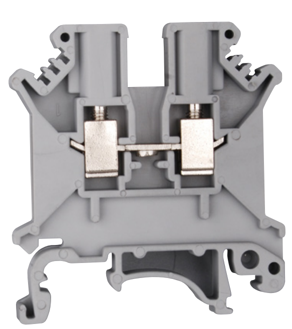
Appearance and Dimension

CUK 2.5B



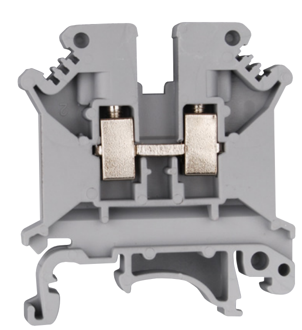
(mm²)	(mm²)	
0.2-4 32A	0.2-2.5 800V	(ZB6)

CUK 3N



(mm²)	(mm²)	
0.2-4 32A	0.2-2.5 800V	(ZB5)

CUK 5N

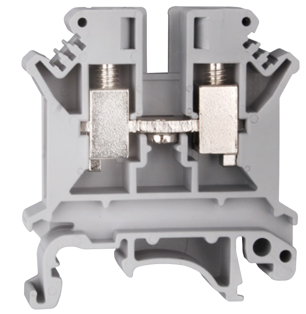


(mm²)	(mm²)	
0.2-6 41A	0.2-4 800V	(ZB6)

CUK General Connection Terminal

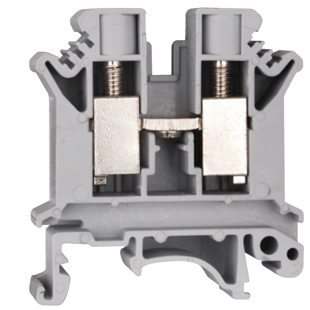
CNTD

CUK 6N



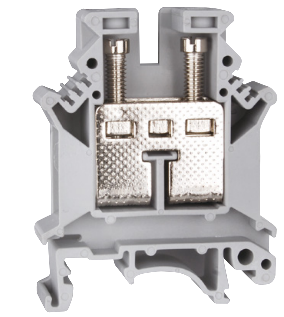
(mm²)	(mm²)	
0.2-10 57A	0.2-6 800V	(ZB8)

CUK 10N



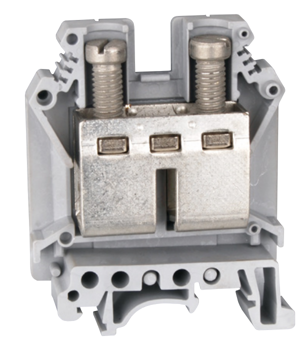
(mm²)	(mm²)	
0.5-16 76A	0.5-10 800V	(ZB10)

CUK 16N



(mm²)	(mm²)	
2-25 101A	4-16 800V	(ZB10)

CUK 35

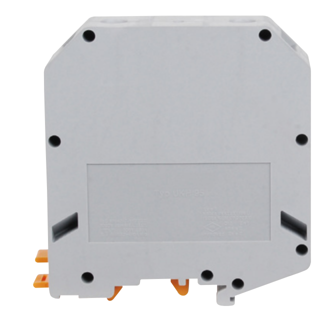


(mm²)	(mm²)	
10-35 125A	10-35 800V	(ZB10)

CUKH 50

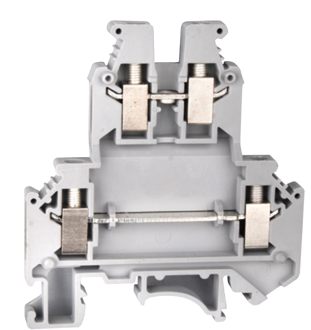
(mm²)	(mm²)	
16-50 150A	25-50 1000V	(ZB10)

CUKH 95



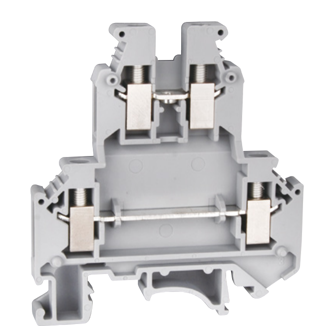
(mm²)	(mm²)	
25-95 232A	35-95 1000V	(ZB10)

CUKK 3



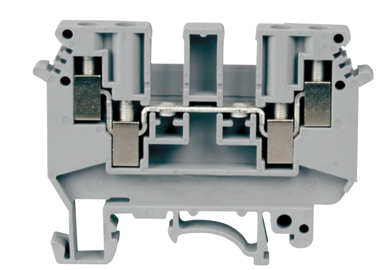
(mm²)	(mm²)	
0.2-4 32A	0.2-2.5 500V	(ZB5)

CUKK 5



(mm²)	(mm²)	
0.2-4 32A	0.2-4 500V	(ZB6)

CUDK4

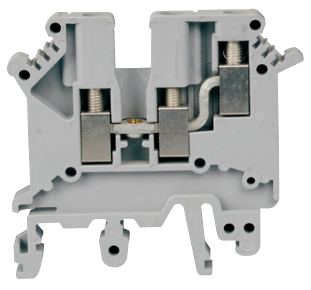


(mm²)	(mm²)	
0.2-6 32A*	0.2-4 690V	(ZB6)

*:

CUK General Connection Terminal

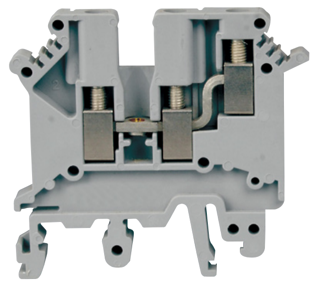
CUK3-TWIN



	(mm²)	(mm²)	
CE	0.2-2.5 24A*	0.2-2.5 400V	(ZB5)

*。

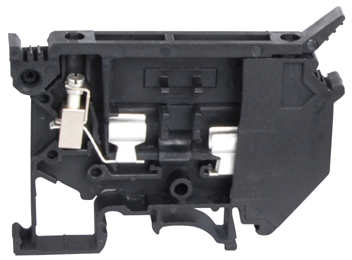
CUK5-TWIN



	(mm²)	(mm²)	
CE	0.2-4 32A*	0.2-4 500V	(ZB6)

*。

CUK5-HESI

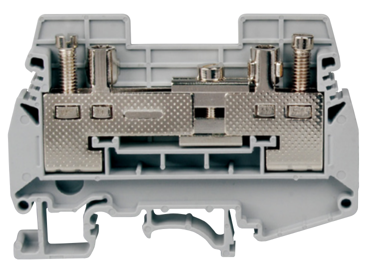


	(mm²)	(mm²)	
CE	0.2-4 6.3A	0.2-4 800V	(ZB8)

CUK10-DREHSI

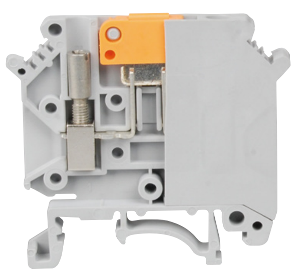
	(mm²)	(mm²)	
CE	10A	800V	(ZB8)

CURTK/S



	(mm²)	(mm²)	
CE	0.5-10 57A	0.5-6 400V	(ZB8)

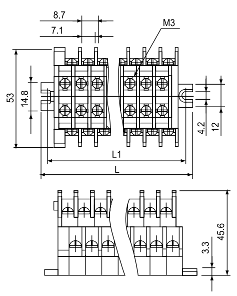
CUK5-MTK-P/P



	(mm²)	(mm²)	
CE	0.2-4 16A	0.2-4 800V	(ZB6)

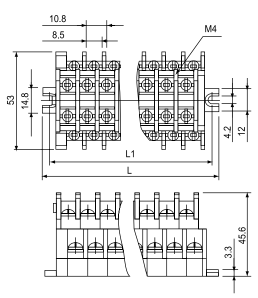
CBD Double-layer Plate Type Screw Crimping Terminal

CBD-10



L=21.6+8.7 × n
L1=15.2+8.7 × n
n=No. of Poles

CBD-20



L=20.6+10.8 × n
L1=15.2+10.8 × n
n=No. of Poles

CUSLKG General Earthing Terminal

CNTD

Appearance and Dimension

CUSLKG 2.5

	(mm²)	(mm²)
CE	0.2-4 32A	0.2-2.5
	(ZB6) 、	

CUSLKG 3

	(mm²)	(mm²)
CE	0.2-4 34A	0.2-2.5
	(ZB5) 、	

CUSLKG 5

	(mm²)	(mm²)
CE	0.2-4 34A	0.2-4
	(ZB6) 、	

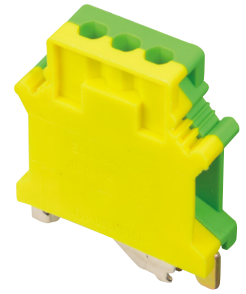
CUSLKG 6

	(mm²)	(mm²)
CE	0.2-10 37A	0.2-6
	(ZB8) 、	

CUSLKG 10

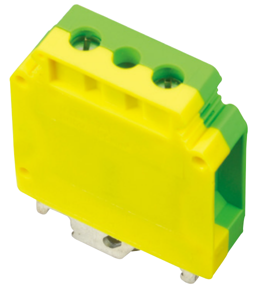
	(mm²)	(mm²)
CE	0.5-16 76A	0.5-10
	(ZB10) 、	

CUSLKG 16



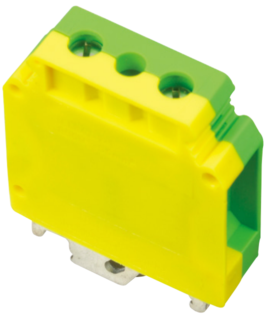
	(mm²)	(mm²)
CE	2.5-25 101A	4-16
	(ZB10) 、	

CUSLKG 35



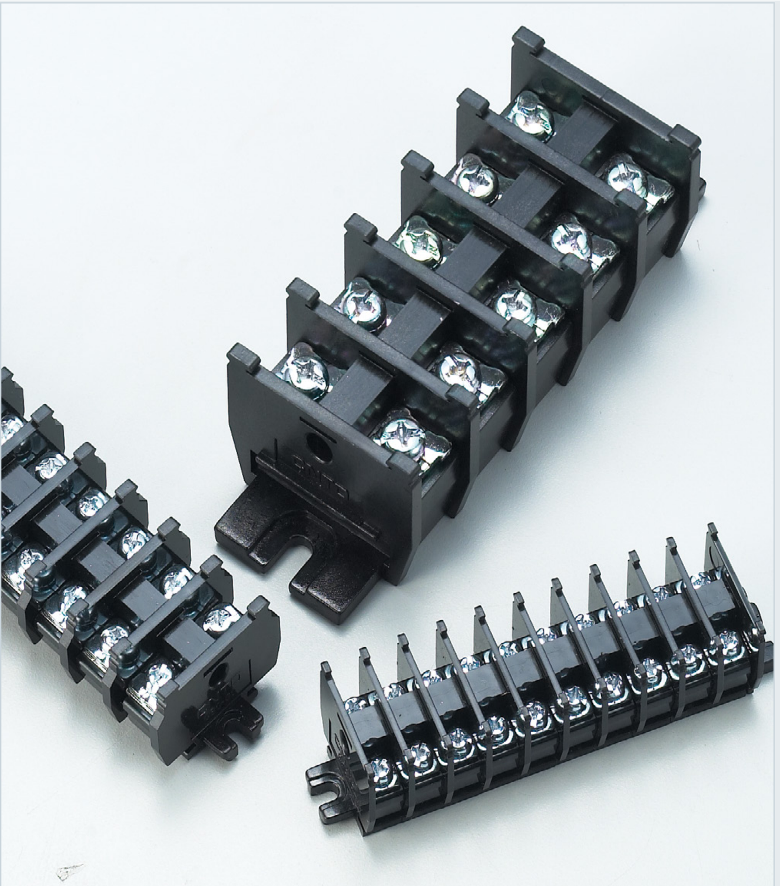
	(mm²)	(mm²)
CE	10-35 125A	10-35
	(ZB10) 、	

CUSLKG 50



	(mm²)	(mm²)
CE	16-50 150A	25-50
	(ZB10) 、	

CBC Cassette Assembly Terminal Block

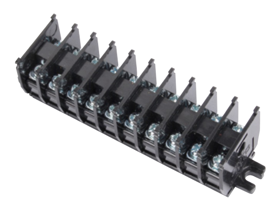


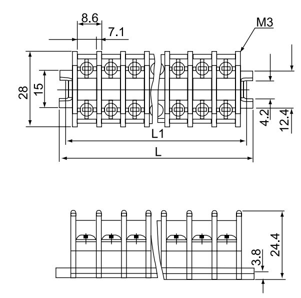
Features

- Under 10P: no need for concatenated guide rail. 2P:can be mutual pressed directly. Installation is convenient and fast
- More than 10P: additional guide rail. More than 20P: can be divided into two or three parts and settle one part, length is not limited
- PC material, heat resistance, strong structure

Appearance and Dimension

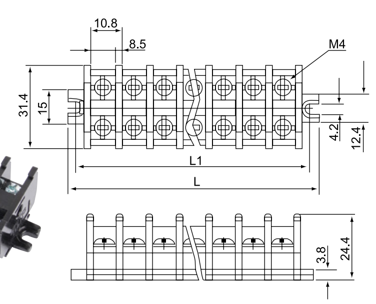
CBC-10





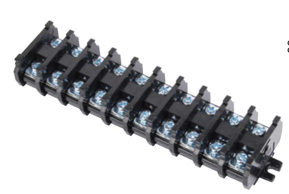
L=16.7+8.6xn
L1=10.3+8.6xn
n=No. of poles

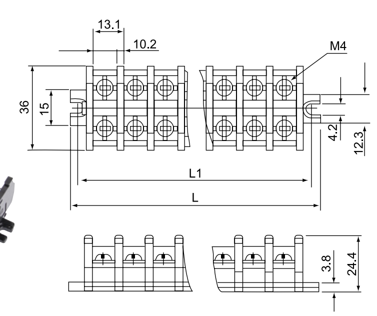
CBC-20



L=17.3+10.8xn
L1=11.2+10.8xn
n=No. of poles

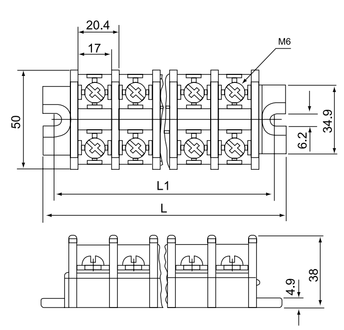
CBC-30





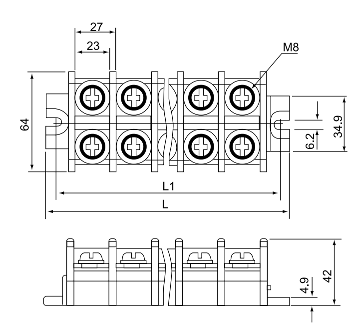
L=18+13.1xn
L1=11.5+13.1xn
n=No. of poles

CBC-60



L=33.5+20.4xn
L1=18.5+20.4xn
n=No. of poles

CBC-100



L=34+27xn
L1=19+27xn
n=No. of poles

CBR Plate Type Screw Crimping Terminal Block

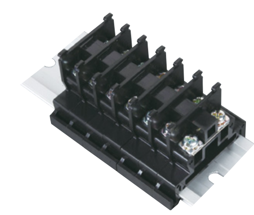
CNTD

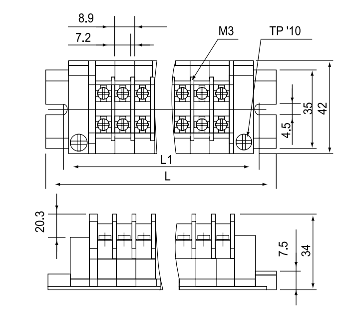
Features

- Combining: one terminal plate end hooks slide under the skeletons end and press hard
- Disassembly: with straight screwdriver stand into a groove, pry up one end
- PC material, heat resistance, strong structure

Appearance and Dimension

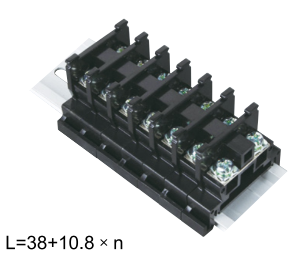
CBR-10

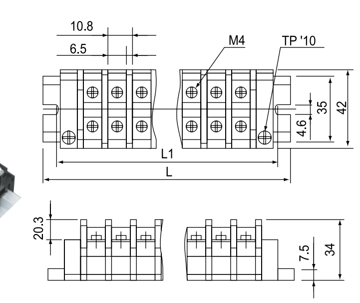




L=38+8.9 × n
L1=22.5+8.9 × n
n=No. of poles

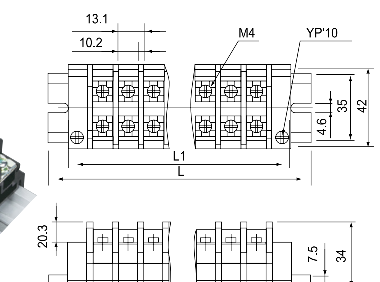
CBR-20





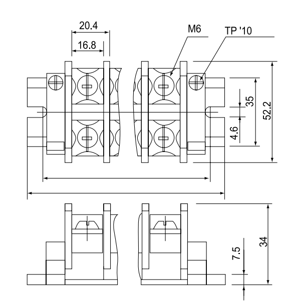
L=38+10.8 × n
L1=22.5+10.8 × n
n=No. of poles

CBR-30



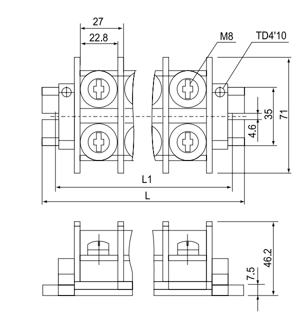
L=38+13.1 × n
L1=22.5+13.1 × n
n=No. of poles

CBR-60



L=38+20.4 × n
L1=22.5+20.4 × n
n=No. of poles

CBR-100



L=38+27 × n
L1=22.5+27 × n
n=No. of poles

C

Pushbutton Switch Division

LA38 Pushbutton Switch Ø22

Features

- In this series, the button head and the middle are connected with in-line fixed installation method . It is resistant to shock、drop and vibration, and is suitable for use in harsh environments.
- In this series, a guide rod installed in the movable leaf spring makes contacting more stable and consistent, which greatly improves electrical performance stability and life; The wiring identification plate is embedded for easy installation and hard to lose; The performance parameters of laser printing ensure long-term use without affecting recognition.
- Composed of button head, middle and contact , adopting advanced non-fastener self-locking connection, safe and reliable, easy to assemble and disassemble, installed on the Ø22mm panel by using wrench without any accessories makes the installation more robust and reliable.
- Using high-quality engineering flame-retardant materials, excellent insulation performance and reliable contact.
- Products comply with standards such as IEC60947-5-1, GB/T14048.5.
- The contact elements are flat pressing and quick-acting, the contact bases (up to 4)can be combined as required and each contact base can be installed with 2 groups of contact elements,which can meet the requirements of making specific control circuits.
  Installation aperture: Ø22mm
- Function: self-reset pushbutton switch, self-locking pushbutton switch, illuminated pushbutton switch, Knob Switch, key switch, E-Stop pushbutton switch, mushroom pushbutton switch, stainless steel pushbutton switch, twin pushbutton switch.
- Switch contact combination: 01/10/02/20/11/22/03/30/04/40/12/21/13/31
- Degree of protection: IP40, IP65 for some customized products.

Installation Notes

The three-position knobs need to be installed directionally(look for ‘TOP’) ,others don`t .

LA38 Pushbutton Switch Ø22

CNTD

Switch Ratings

Rated insulation voltage Ui			600V				
Rated thermal current Ith			10A				
Rated operational voltage Ue			24V	48V	110V	220V	380V
Rated operational current Ie	AC 50/60Hz	Resistive load	10A	-	10A	6A	-
		Inductive load	10A	-	6A	3A	2A
	DC	Resistive load	8A	4A	2.2A	1.1A	-
		Inductive load	4A	2A	1.2A	0.6A	-
Contact material			Silver alloy				
Minimum applicable load: 3V AC.DC 5mA(Reference value) （The applicable range depends on the use environment and load type)							

Specifications

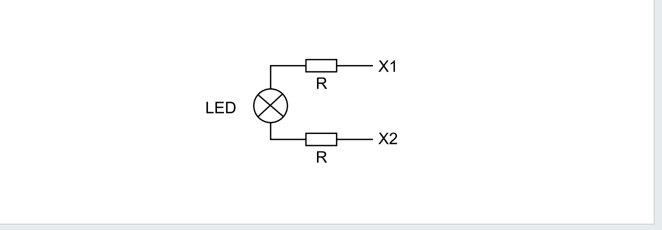
Ambient temperature	-25℃ ~+75℃ (With no icing)
Humidity	45~85%RH
Contact resistance	≤50mΩ
Insulation resistance	≥100MΩ
Power frequency withstand voltage	1890VAC/50Hz/60s
Vibration resistance	Amplitude: about 1.0mm/50Hz
Impact resistance	＞ 10g
Degree of protection	IP40
Electrical life	≥100,000 times
Wiring capacity	Maximum: 2 × 1.5mm² or 1 × 2.5mm², Minimun: 2 × 0.75mm², Maximum insert: 6.3 × 0.8mm

LED Specifications

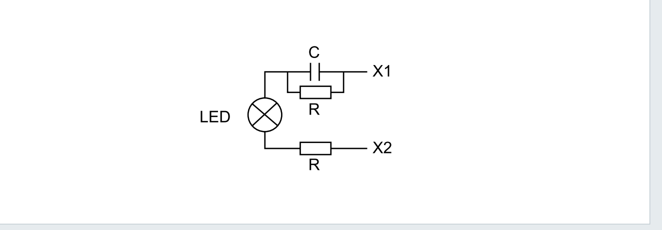
LED type	Bidirectional LED		
Rated voltage	AC/DC 6V	AC/DC 12V	AC/DC 24V
	AC/DC 36V	AC/DC 48V	AC/DC 110V
	AC/DC 220V	AC/DC 380V	
	AC 110V	AC 220V	AC 380V
Emitting color	RD GN YE BL WH BK		
Life	≥40000h		

Lamp Holder Circuit Schematic

■ AC/DC lamp holder



■ AC lamp holder



LA38 Pushbutton Switch Ø22

Contact Form Description

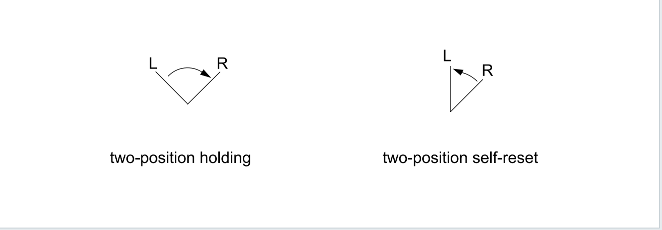
■ The two digits in the model number represent the contact form

○ The first digit "1" indicates the first pair of contacts on the first section of the element, "2" means the second pair.
○ The second digit "1、2" represents the 2 terminals of NC contact, and "3、4" represents the 2 terminals of NO contact.

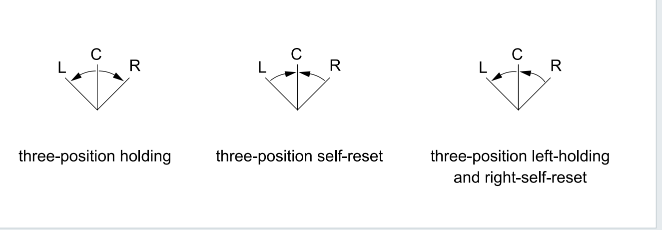
Contact code	11	20	02	10	01
Contact name	1NO1NC	2NO	2NC	1NO	1NC
State diagram					

Working Position And Contact State

■ Two-position and contact ON AND OFF state diagram



■ Three-position and contact ON AND OFF state diagram



Type		
LA38-11■-2		
LA38-20■-2		
LA38-02■-2		
LA38-22■-2		
LA38-31■-2		
LA38-13■-2		
LA38-40■-2		
LA38-04■-2		

Type			
LA38-11■-3			
LA38-20■-3			
LA38-02■-3			
LA38-22■-3			
LA38-31■-3			
LA38-13■-3			
LA38A-40■-3			
LA38A-04■-3			

LA38 Pushbutton Switch Ø22

CNTD

Model Number Structure

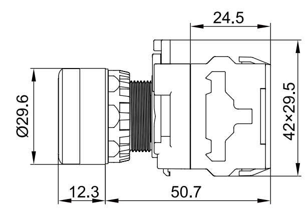
LA38 — ⊙ ■ □ — ▲ — ○ △

LA38-	⊙	■	□	- ▲	- ○	△
Serial number	Contact type	Operation type	Select switch position	Function	Color	Lamp voltage
	01: 1NC 10: 1NO 02: 2NC 20: 2NO 11: 1NO1NC 22: 11+11 03: 02+01 30: 20+10 04: 02+02 40: 20+20 12: 11+01 21: 11+10 13: 11+02 31: 11+20 NO/NC contact combinations based on needs.	PN: Self-reset flat button PNZS: Self-locking flat button PND: Illuminated self-rest flat button PNDZS: Illuminated self-locking flat button GN: Self-reset high button GNZS: Self-locking high button GND: Illuminated self-reset high button GNDZS: Illuminated self-locking high button S: Stainless steel self-reset flat button SZS: Stainless steel self-locking flat button SD: Illuminated stainless steel self-reset flat button SDZS: Illuminated stainless steel self-locking flat button M40/60: Mushroom self-reset button MZS40/60: Mushroom self-locking button MD40/60: Illuminated mushroom self-reset button MDZS40/60: Illuminated mushroom self-locking button ZS40/60: E-Stop button ZSD40/60: Illuminated E-stop butto X: Knob XC: Long knob XD: Illuminated knob Y: Key button PNSW: Twin flat pushbutton PNDSW: Illuminated flat button GNSW: Twin high pushbutton GNDSW: Illuminated twin high pushbutton	21: Two-position holding type 22: Two-position self-reset type 31: Three-position holding type 32: Three-position left-holding and right-self-reset type 33: Three-position self-reset type	Q: Painted plastci head C: Plastic head L: Alumimum head S: Stainless steel head FH1: " ↓ "custom code FH2: " ○ " custom code FH3: " - " custom code FH4: " = " custom code FH5: "START" custom code FH6: "STOP" custom code IP65: Custom IP65 button K: Anti-interference illuminated button	RD GN YE BL WH BK For the optional colors of some types,please refer to product selection (illuminated product without black)	AC/DC 6V AC/DC 12V AC/DC 24V AC/DC 36V AC/DC 48V AC/DC 110V AC/DC 220V AC/DC 380V AC 110V AC 220V AC 380V

The above table is the type explanation.Some combinations have no actual products.For details,please refer to product selection or consulting manufacturers.

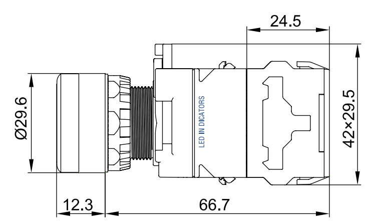
LA38 Pushbutton Switch Ø22

Appearance and Dimension



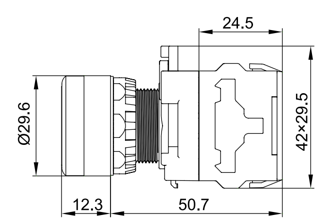
Function type	Location symbol	Product reference
Self-reset flat pushbutton switch	-	LA38-11PN-L-○
Self-locking flat pushbutton switch		LA38-11PNZS-L-○

Color: RD GN YE BL WH BK



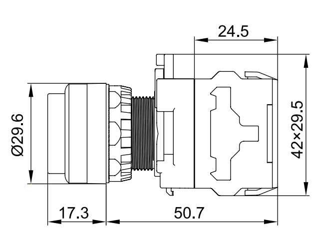
Function type	Location symbol	Product reference
Illuminated self-reset flat pushbutton switch	-	LA38-11PND-L-○ △
Illuminated self-locking flat pushbutton switch		LA38-11PNDZS-L-○ △

Color: RD GN YE BL WH



Function type	Location symbol	Product reference
Self-reset flat-pushbutton switchwith custom code	⬇ O I	LA38-11PN-L/FH*-○
Self-locking flat-pushbutton switch with custom code	II 启动 STOP	LA38-11PNZS-L/FH*-○

Color: RD GN YE BL WH BK



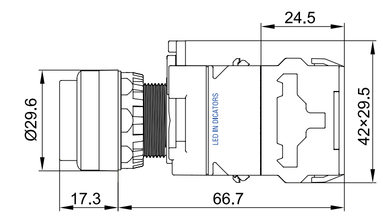
Function type	Location symbol	Product reference
Self-reset high pushbutton switch	-	LA38-11GN-L-○
Self-locking high pushbutton switch		LA38-11GNZS-L-○

Color: RD GN YE BL WH BK

LA38 Pushbutton Switch Ø22

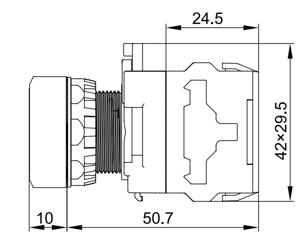
CNTD

Appearance and Dimension



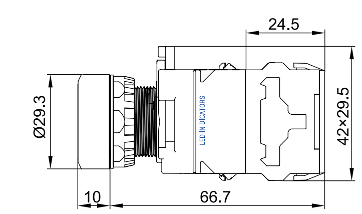
Function type	Location symbol	Product reference
Illuminated self-reset high pushbutton switch	-	LA38-11GND-L-○ △
Illuminated self-locking high pushbutton switch		LA38-11GNDZS-L-○ △

Color: RD GN YE BL WH



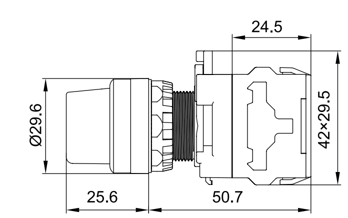
Function type	Location symbol	Product reference
Stainless steel self-reset flat pushbutton switch	-	LA38-11S-S
Stainless steel self-locking flat pushbutton switch		LA38-11SZS-S

Color: WH



Function type	Location symbol	Product reference
Illuminated stainless steel self-reset pushbutton switch	-	LA38-11SD-S-○ △
Illuminated stainless steel self-locking pushbutton switch		LA38-11SDZS-S-○ △

Color: RD GN YE BL WH

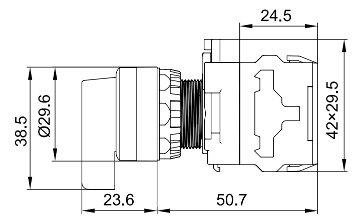


Function type	Location symbol	Product reference
Two-position holding knob switch	L R	LA38-11X21-L-BK
Two-position self-reset knob switch	L R	LA38-11X22-L-BK
Three-position holding knob switch	L C R	LA38-20X31-L-BK
Three-position self-reset knob switch	L C R	LA38-20X33-L-BK
Three-position left-holding & right-self-reset knob switch	L C R	LA38-20X32-L-BK

Color: BK

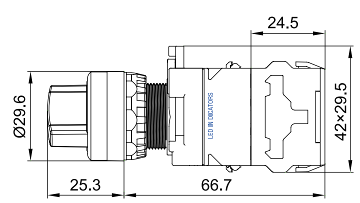
LA38 Pushbutton Switch Ø22

Appearance and Dimension

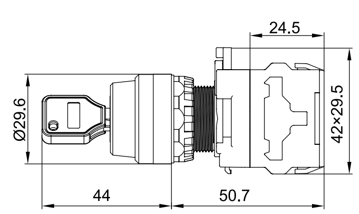
Function type	Location symbol	Product reference
Two-position holding long-knob switch	L R	LA38-11XC21-L-BK
Two-positon self-reset long-knob switch	L R	LA38-11XC22-L-BK
Three-position holding long-knob switch	L C R	LA38-20XC31-L-BK
Three-position self-reset long-knob switch	L C R	LA38-20XC33-L-BK
Three-position left-holding & right-self-reset long-knob switch	L C R	LA38-20XC32-L-BK

Color: BK

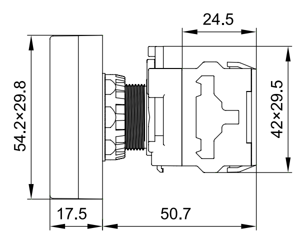



Function type	Location symbol	Product reference
Illuminated two-position holding knob switch	L R	LA38-11XD21-L- ○ △
Illuminated two-position self-reset knob switch	L R	LA38-11XD22-L- ○ △
Illuminated three-position holding knob switch	L C R	LA38-20XD31-L- ○ △
Illuminated three-position self-reset knob switch	L C R	LA38-20XD33-L- ○ △
Illuminated three-position left-holding & right-self-reset knob switch	L C R	LA38-20XD32-L- ○ △

Color: RD GN

Function type	Location symbol	Product reference
Two-position holding key-pushbutton switch	L R	LA38-11Y21-L
Two-position self-reset key-pushbutton switch	L R	LA38-11Y22-L
Three-position holding key-pushbutton switch	L C R	LA38-20Y31-L
Three-position self-reset key-pushbutton switch	L C R	LA38-20Y33-L
Three-posistion left-holding & right self-reset key-pushbutton switch	L C R	LA38-20Y32-L

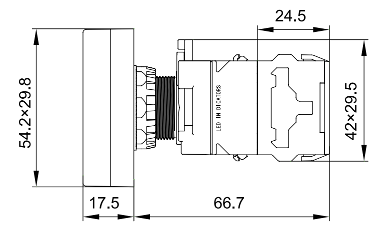



Function type	Location symbol	Product reference
Twin pushbutton switch	O I	LA38-11PNSW-Q

LA38 Pushbutton Switch Ø22

CNTD

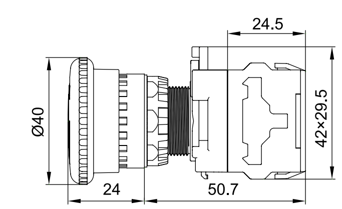
Appearance and Dimension

Function type	Location symbol	Product reference
Illuminated twin pushbutton switch	O I	LA38-11PNDSW-Q-YE △

Default Yellow

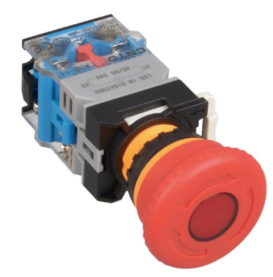
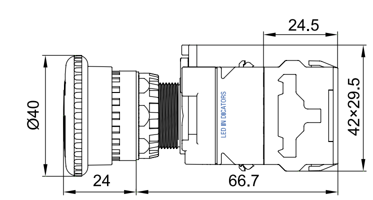
Color: BL WH

Function type	Location symbol	Product reference
40 E-Stop pushbutton switch	-	LA38-11ZS40-C-RD

Default red

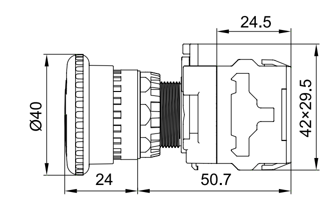
Color: GN

Function type	Location symbol	Product reference
Illuminated 40 E-Stop pushbutton switch	-	LA38-11ZSD40-C-RD △

Default red

Color: GN



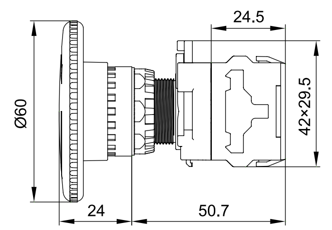
Function type	Location symbol	Product reference
40 E-Stop pushbutton switch with "STOP" custom code	STOP	LA38-11ZS40-C/FH6-RD

Default red

Color: GN

LA38 Pushbutton Switch Ø22

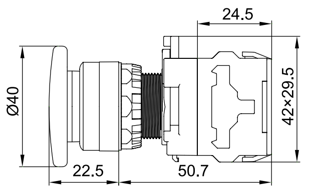
Appearance and Dimension



Function type	Location symbol	Product reference
60 E-Stop pushbutton switch	-	LA38-11ZS60-C-RD

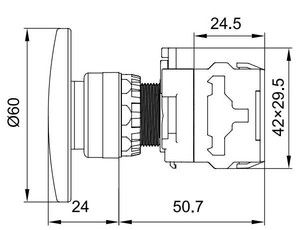
Default red

Color: GN



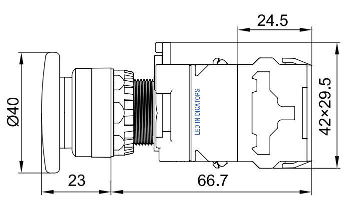
Function type	Location symbol	Product reference
40 Mushroom self-reset pushbutton switch	-	LA38-11M40-Q- ○
40 Mushroom self-locking pushbutton switch		LA38-11MZS40-Q- ○

Color: GN YE



Function type	Location symbol	Product reference
60 Mushroom self-reset pushbutton switch	-	LA38-11M60-Q- ○
60 Mushroom self-locking pushbutton switch		LA38-11MZS60-Q- ○

Color: GN



Function type	Location symbol	Product reference
Illuminated 40 mushroom self-reset pushbutton switch	-	LA38-11MD40-Q- ○ △
Illuminated 40 mushroom self-locking pushbutton switch		LA38-11MDZS40-Q- ○ △

Color: RD GN YE

LA36 Pushbutton Switch Ø22

CNTD

Model Number Structure

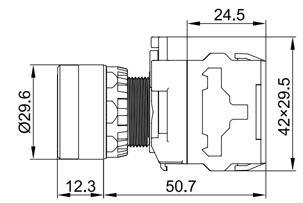
LA36 — ⊙ ■ □ — ▲ — ○ △

LA36-	⊙	■	□	- ▲	- ○	△
Serial number	Contact type	Operation type	Select switch position	Function	Color	Lamp voltage
	01: 1NC 10: 1NO 02: 2NC 20: 2NO 11: 1NO1NC 22: 11+11 03: 02+01 30: 20+10 04: 02+02 40: 20+20 12: 11+01 21: 11+10 13: 11+02 31: 11+20 NO/NC contact combinations based on needs.	PN: Self-reset flat button PNZS: Self-locking flat button PND: Illuminated self-rest flat button PNDZS: Illuminated self-locking flat button GN: Self-reset high button GNZS: Self-locking high button GND: Illuminated self-reset high button GNDZS: Illuminated self-locking high button M40/60: Mushroom self-reset button MZS40/60: Mushroom self-locking button MD40/60: Illuminated mushroom self-reset button MDZS40/60: Illuminated mushroom self-locking button X: Knob XC: Long knob XD: Illuminated knob	21: Two-position holding type 22: Two-position self-reset type 31: Three-position holding type 32: Three-position left-holding and right-self-reset type 33: Three-position self-reset type	C: Plastic head T: Transparent head FH1: " ↓ "custom code FH2: " ○ " custom code FH3: " - " custom code FH4: " = " custom code FH5: "START" custom code FH6: "STOP" custom code IP65: Custom IP65 button K: Anti-interference illuminated button	RD GN YE BL WH BK For the optional colors of some types,please refer to product selection (illuminated product without black)	AC/DC 6V AC/DC 12V AC/DC 24V AC/DC 36V AC/DC 48V AC/DC 110V AC/DC 220V AC/DC 380V AC 110V AC 220V AC 380V

The above table is the type explanation.Some combinations have no actual products.For details,please refer to product selection or consulting manufacturers.

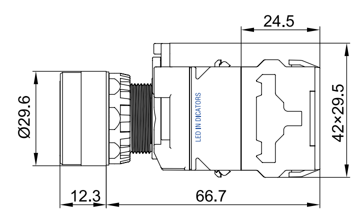
LA36 Pushbutton Switch Ø22

Appendix and Dimension

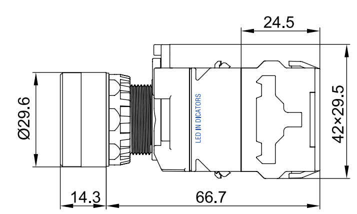
Function type	Location symbol	Product reference
Self-reset flat-pushbutton switch	-	LA36-11PN-C- ○
Self-locking flat-pushbutton switch		LA36-11PNZS-C- ○

Color: RD GN YE BL WH BK

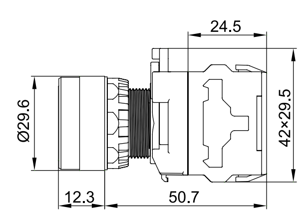
Function type	Location symbol	Product reference
Illuminated self-reset flat-pushbutton switch	-	LA36-11PND-C- ○ △
Illuminated self-locking flat-pushbutton switch		LA36-11PNDZS-C- ○ △

Color: RD GN YE BL WH

Function type	Location symbol	Product reference
Transparent illuminated self-reset flat-button	-	LA36-11PND-T- ○ △

Color: RD GN YE BL WH

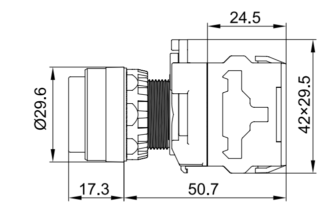



Function type	Location symbol	Product reference
Self-reset flat-pushbutton switch with custom code	⬇ O I II 启动 STOP	LA36-11PN-C/FH*- ○
Self-locking flat-pushbutton switch with custom code		LA36-11PNZS-C/FH*- ○

Color: RD GN YE BL WH BK

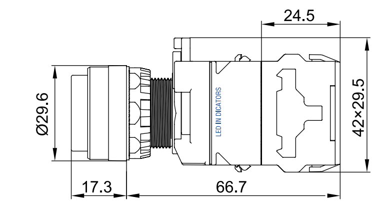
LA36 Pushbutton Switch Ø22

Appearance and Dimension

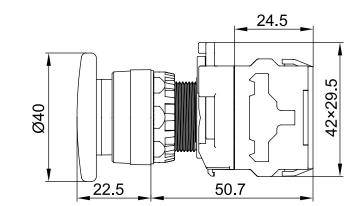
Function type	Location symbol	Product reference
Self-reset high-pushbutton switch	-	LA36-11GN-C- ○
Self-locking high-pushbutton switch		LA36-11GNZS-C- ○

Color: RD GN YE BL WH BK

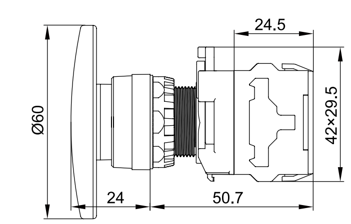
Function type	Location symbol	Product reference
Illuminated self-reset high-pushbutton switch	-	LA36-11GND-C- ○ △
Illuminated self-locking high-pushbutton switch		LA36-11GNDZS-C- ○ △

Color: RD GN YE BL WH

Function type	Location symbol	Product reference
40 Mushroom self-reset pushbutton switch	-	LA36-11M40-C- ○
40 Mushroom self-locking pushbutton switch		LA36-11MZS40-C- ○

Color: GN YE

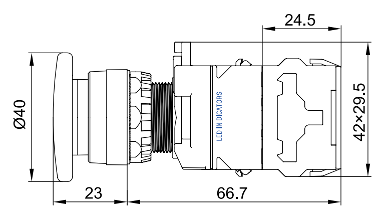



Function type	Location symbol	Product reference
60 Mushroom self-reset pushbutton switch	-	LA36-11M60-C- ○
60 Mushroom self-locking pushbutton switch		LA36-11MZS60-C- ○

Color: GN

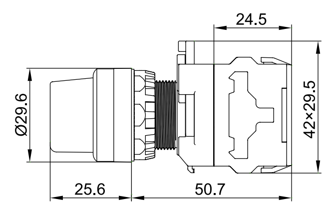
LA36 Pushbutton Switch Ø22

Appearance and Dimension



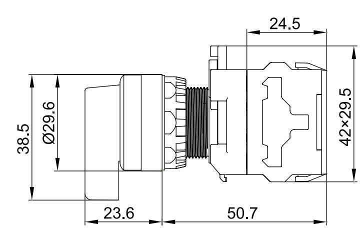
Function type	Location symbol	Product reference
Illuminated 40 mushroom self-reset pushbutton switch	-	LA36-11MD40-C- ○ △
Illuminated 40 mushroom self-reset pushbutton switch		LA36-11MDZS40-C- ○ △

Color: RD GN YE



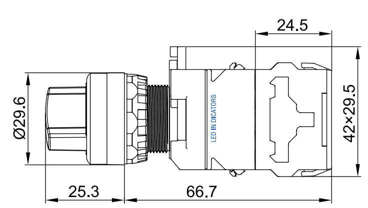
Function type	Location symbol	Product reference
Two-position holding knob switch		LA36-11X21-C-BK
Two-position self-reset knob switch		LA36-11X22-C-BK
Three-position holding knob switch		LA36-20X31-C-BK
Three-position self-reset knob switch		LA36-20X33-C-BK
Three-position left-holding & right self-reset knob switch		LA36-20X32-C-BK

Color: RD GN YE BK



Function type	Location symbol	Product reference
Two-position holding long-knob switch		LA36-11XC21-C-BK
Two-position self-reset long-knob switch		LA36-11XC22-C-BK
Three-position holding long-knob switch		LA36-20XC31-C-BK
Three-position self-reset long-knob switch		LA36-20XC33-C-BK
Three-position left-holding & righ self-reset long-knob switch		LA36-20XC32-C-BK

Color: BK



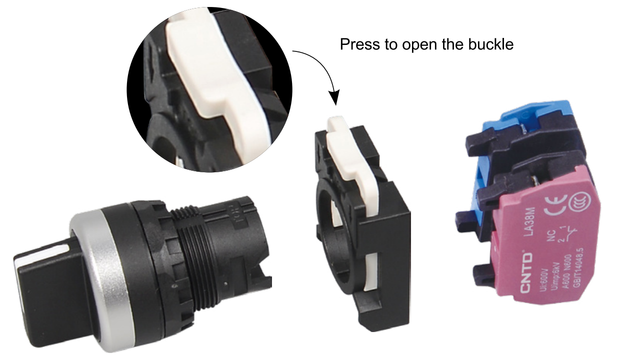
Function type	Location symbol	Product reference
Illuminated two-position holding knob switch		LA36-11XD21-C- ○ △
Illuminated two-position self-reset knob switch		LA36-11XD22-C- ○ △
Illuminated three-position holding knob switch		LA36-20XD31-C- ○ △
Illuminated three-position self-reset knob switch		LA36-20XD33-C- ○ △
Illuminated three-position left-holding & right self-reset knob switch		LA36-20XD32-C- ○ △

Color: RD GN YE

LA38M、LA36M Pushbutton Switch Ø22

CNTD

Installation Notes



The three-position knobs need to be installed directionally(look for ‘TOP’),others don`t .

Features

- This series of products, the button head and the middle seat are connected by multi-point clamping, in-line fixed installation, impact resistance, drop resistance, vibration resistance, suitable for use in various harsh environments.
- It is composed of button head, middle seat and contact seat. It adopts advanced selflocking connection without fasteners, which is safe and reliable. It is efficient and quick to disassemble and assemble. It can be directly installed on the middle 22mm installation panel without adding any accessories. The installation wrench is more sturdy and reliable.
- High-quality engineering flame-retardant materials are used, with good insulation performance and reliable contact
- Products comply with IEC60947-5-1, GB/T14048.5 and other standards.
- The contact element is a flat-pressed slow-action structure; it can meet the requirements of a variety of specific control circuits.
- Mounting Aperture: Ø22mm
- Function: self-reset button, self-locking button, illuminated button, knob, key button, emergency stop button, mushroom head button, stainless steel button, double-position button, etc.
- Switch contact combination: 01/10/02/20/11
- Protection class: IP40

LA38M Pushbutton Switch Ø22

Switch Ratings

Rated insulation voltage Ui			600V				
Rated thermal current Ith			10A				
Rated operational voltage Ue			24V	48V	110V	220V	380V
Rated operational current Ie	AC 50/60Hz	Resistive load	10A	-	10A	6A	-
		Inductive load	10A	-	6A	3A	2A
	DC	Resistive load	8A	4A	2.2A	1.1A	-
		Inductive load	4A	2A	1.2A	0.6A	-
Contact material			Silver alloy				
Minimum applicable load: 3V AC.DC 5mA(Reference value) (The applicable range depends on the use environment and load type)							

Specifications

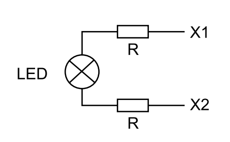
Ambient temperature	-25℃ ~+75℃ (With no icing)
Humidity	45~85%RH
Contact resistance	≤50mΩ
Insulation resistance	≥100MΩ
Power frequency withstand voltage	1890VAC/50Hz/60s
Vibration resistance	Amplitude: about 1.0mm/50Hz
Impact resistance	＞ 10g
Degree of protection	LA38M: IP40, LA36M: IP65
Electrical life	≥100,000 times
Wiring capacity	Maximum: 2 × 1.5mm² or 1 × 2.5mm², Minimun: 2 × 0.75mm², Maximum insert: 6.3 × 0.8mm

LED Specifications

LED type	Bidirectional LED		
Rated voltage	AC/DC 6V	AC/DC 12V	AC/DC 24V
	AC/DC 36V	AC/DC 48V	AC/DC 110V
	AC/DC 220V	AC/DC 380V	
Emitting color	RD GN YE BL WH		
Life	≥40000h		

Lamp Holder Circuit Schematic

■ AC/DC lamp holder



LA38M Pushbutton Switch Ø22

CNTD

Contact Form Description

■ The two digits in the model number represent the contact form

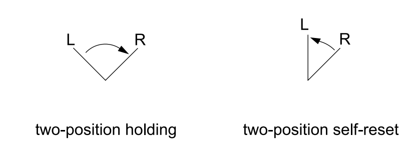
○ The first digit "1" indicates the first pair of contacts on the first section of the element, "2" means the second pair.

○ The second digit "1、2" represents the 2 terminals of NC contact, and "3、4" represents the 2 terminals of NO contact.

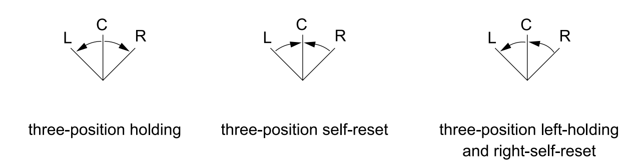
Contact code	11	20	02	10	01
Contact name	1NO1NC	2NO	2NC	1NO	1NC
State diagram					

Working Position And Contact State

○ Two-position and contact ON AND OFF state diagram



○ Three-position and contact ON AND OFF state diagram



Serial Number	Type		
1	LA38M-10 ■ -2 LA36M-10 ■ -2		
2	LA38M-01 ■ -2 LA36M-01 ■ -2		
3	LA38M-20 ■ -2 LA36M-20 ■ -2		
4	LA38M-02 ■ -2 LA36M-02 ■ -2		
5	LA38M-11 ■ -2 LA36M-11 ■ -2		

Serial Number	Type			
1	LA38M-11 ■ -3 LA36M-11 ■ -3			
2	LA38M-20 ■ -3 LA36M-20 ■ -3			
3	LA38M-02 ■ -3 LA36M-02 ■ -3			

LA38M Pushbutton Switch Ø22

Model Number Structure

LA38/36M — ⊙ ■ □ — ▲ — ○ △

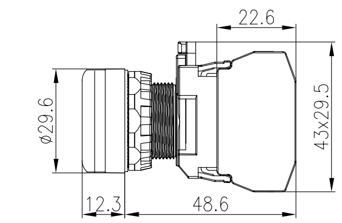
LA38M- LA36M-	⊙	■	□	- ▲	- ○	△
Serial number	Contact type	Operation type	Select switch position	Function	Color	Lamp voltage
	01: 1NC 10: 1NO 02: 2NC 20: 2NO 11: 1NO1NC	PN: Self-reset flat pushbutton switch PNZS: Self-locking flat pushbutton switch PND: Illuminated self-rest flat pushbutton switch PNDZS: Illuminated self-locking flat pushbutton switch GN: Self-reset high pushbutton switch GNZS: Self-locking high pushbutton switch GND: Illuminated self-reset high pushbutton switch GNDZS: Illuminated self-locking high pushbutton switch S: Stainless steel self-reset flat pushbutton switch SZS: Stainless steel self-locking flat pushbutton switch SD: Illuminated stainless steel self-reset flat pushbutton switch SDZS: Illuminated stainless steel self-locking flat pushbutton switch M40/60: Mushroom self-reset pushbutton switch MZS40/60: Mushroom self-locking pushbutton switch MD40: Illuminated mushroom self-reset pushbutton switch MDZS40: Illuminated mushroom self-locking pushbutton switch ZS40/60: E-Stop pushbutton switch ZSD40: Illuminated E-stop pushbutton switch X: knob switch XC: Long knob switch XD: Illuminated knob switch Y: Key pushbutton switch PNSW: Twin flat pushbutton switch PNDSW: Illuminated flat pushbutton switch	21: Two-position holding type 22: Two-position self-reset type 31: Three-position holding type 32: Three-position left-holding and right-self-reset type 33: Three-position self-reset type	Q: Painted plastci head C: Plastic head T: Transparent head S: Stainless steel head L: Aluminum head FH1: " ↓ "custom code FH2: " ○ " custom code FH3: " - " custom code FH4: " = " custom code FH5: "START" custom code FH6: "STOP" custom code IP65: Custom IP65 button D: Special load (consult the manufacturer for details)	RD GN YE BL WH BK optional colors of some types,please refer to product selection (illuminated product without black)	AC/DC 6V AC/DC 12V AC/DC 24V AC/DC 36V AC/DC 48V AC/DC 110V AC/DC 220V AC/DC 380V

The above table is the type explanation.Some combinations have no actual products.For details,please refer to product selection or consulting manufacturers.

LA38M Pushbutton Switch Ø22

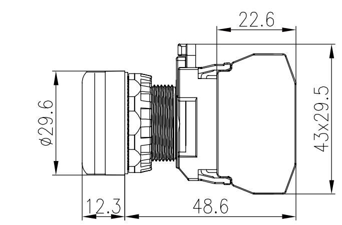
CNTD

Appearance and Dimension

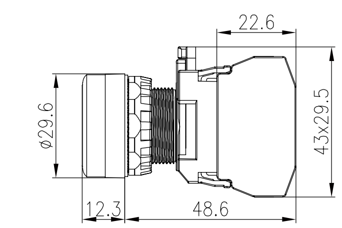
Color: RD GN YE BL WH BK

Function type	Contact structure	Product reference
Self-restoring button	1NO	LA38M-10PN- ▲ - ○
	1NC	LA38M-01PN- ▲ - ○
	1NO1NC	LA38M-11PN- ▲ - ○
Self-locking flat button	1NO	LA38M-10PNZS- ▲ - ○
	1NC	LA38M-01PNZS- ▲ - ○
	1NO1NC	LA38M-11PNZS- ▲ - ○

Color: RD GN YE BL WH

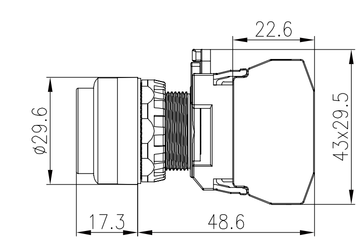
Function type	Contact structure	Product reference
Illuminated self-restoring button	1NO	LA38M-10PND- ▲ - ○ (△)
	1NC	LA38M-01PND- ▲ - ○ (△)
	1NO1NC	LA38M-11PND- ▲ - ○ (△)
Lighted self-locking flat button	1NO	LA38M-10PNDZS- ▲ - ○ (△)
	1NC	LA38M-01PNDZS- ▲ - ○ (△)
	1NO1NC	LA38M-11PNDZS- ▲ - ○ (△)

Color: RD GN YE BL WH BK

Mark: ⬇ O I II 启动 STOP

Function type	Contact structure	Product reference
Custom Symbol Self-Restoring Buttons	1NO	LA38M-10PN- ▲ -/FH*- ○
	1NC	LA38M-01PN- ▲ -/FH*- ○
	1NO1NC	LA38M-11PN- ▲ -/FH*- ○
Custom Symbol Self-Locking Flat Button	1NO	LA38M-10PNZS- ▲ -/FH*- ○
	1NC	LA38M-01PNZS- ▲ -/FH*- ○
	1NO1NC	LA38M-11PNZS- ▲ -/FH*- ○

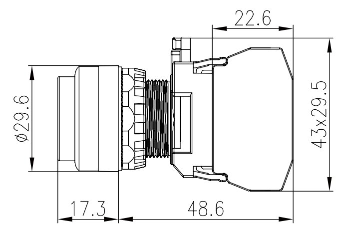



Color: RD GN YE BL WH BK

Function type	Contact structure	Product reference
Self-reset button	1NO	LA38M-10GN- ▲ - ○
	1NC	LA38M-01GN- ▲ - ○
	1NO1NC	LA38M-11GN- ▲ - ○
Self-locking high button	1NO	LA38M-10GNZS- ▲ - ○
	1NC	LA38M-01GNZS- ▲ - ○
	1NO1NC	LA38M-11GNZS- ▲ - ○

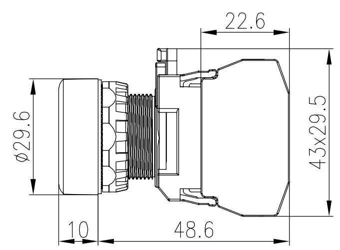
LA38M Pushbutton Switch Ø22

Appearance and Dimension

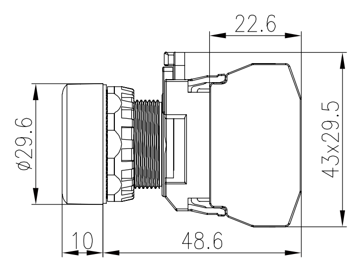



Color: RD GN YE BL WH

Function type	Contact structure	Product reference
Illuminated self-healing button	1NO	LA38M-10GND- ▲ - ○ (△)
	1NC	LA38M-01GND- ▲ - ○ (△)
	1NO1NC	LA38M-11GND- ▲ - ○ (△)
Self-locking high button with light	1NO	LA38M-10GNDZS- ▲ - ○ (△)
	1NC	LA38M-01GNDZS- ▲ - ○ (△)
	1NO1NC	LA38M-11GNDZS- ▲ - ○ (△)

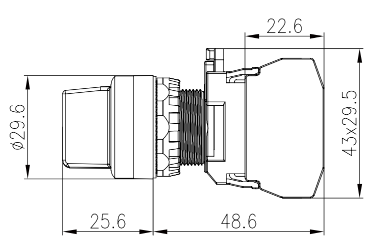



Function type	Contact structure	Product reference
Stainless steel head selfleveling button	1NO	LA38M-10S-S
	1NC	LA38M-01S-S
	1NO1NC	LA38M-11S-S
Stainless steel head self-locking flat button	1NO	LA38M-10SZS-S
	1NC	LA38M-01SZS-S
	1NO1NC	LA38M-11SZS-S

Color: RD GN YE BL WH

Function type	Contact structure	Product reference
Stainless steel head reset button with light	1NO	LA38M-10SD-S- ○ (△)
	1NC	LA38M-01SD-S- ○ (△)
	1NO1NC	LA38M-11SD-S- ○ (△)
Illuminated stainless steel head self-locking button	1NO	LA38M-10SDZS-S- ○ (△)
	1NC	LA38M-01SDZS-S- ○ (△)
	1NO1NC	LA38M-11SDZS-S- ○ (△)

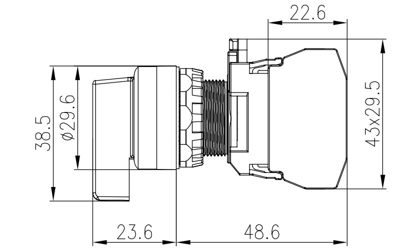
Color: RD GN YE BL WH BK

Function type	Contact structure	Product reference
ITwo-position hold knob	1NO	LA38M-10X21- ▲ -BK
Two-position reset knob	1NO	LA38M-10X22- ▲ -BK
Three-position hold knob	2NO	LA38M-20X31- ▲ -BK
Three-position reset knob	2NO	LA38M-20X33- ▲ -BK
Three left and right self-reset knob	2NO	LA38M-20X32- ▲ -BK

LA38M Pushbutton Switch Ø22

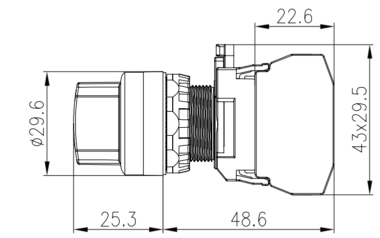
CNTD

Appearance and Dimension

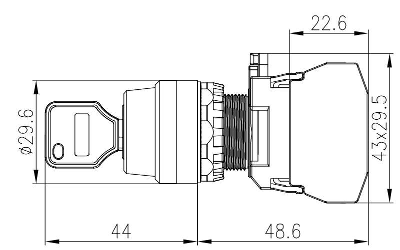
Color: BK

Function type	Contact structure	Product reference
Two-position hold long knob	1NO	LA38M-10XC21- ▲ -BK
Two-position self-recovery knob	1NO	LA38M-10XC22- ▲ -BK
Three-position hold long knob	2NO	LA38M-20XC31- ▲ -BK
Three-position self-recovery knob	2NO	LA38M-20XC33- ▲ -BK
Three left and right self-recovery knob	2NO	LA38M-20XC32- ▲ -BK

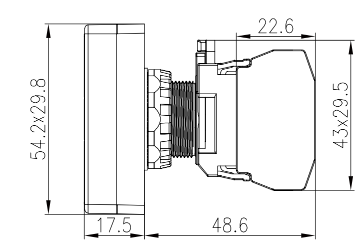



Color: RD GN YE BL WH

Function type	Contact structure	Product reference
Two-position holding knob with light	1NO	LA38M-10XD21- ▲ - ○ (△)
Two-position self-reset knob with light	1NO	LA38M-10XD22- ▲ - ○ (△)
Three-position holding knob with light	2NO	LA38M-20XD31- ▲ - ○ (△)
Three-position reset knob with light	2NO	LA38M-20XD33- ▲ - ○ (△)
Three-position left and right selfreset knob with light	2NO	LA38M-20XD32- ▲ - ○ (△)

Function type	Contact structure	Product reference
Two-position hold key	1NO	LA38M-10Y21-L
Two-position self-resetting key button	1NO	LA38M-10Y22-L
Three-position hold key	2NO	LA38M-20Y31-L
Three-position self-resetting key	2NO	LA38M-20Y33-L
Three left and right self-resetting key	2NO	LA38M-20Y32-L

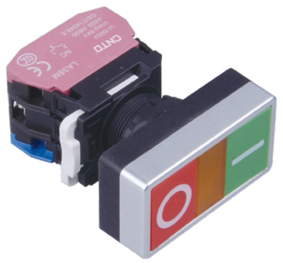
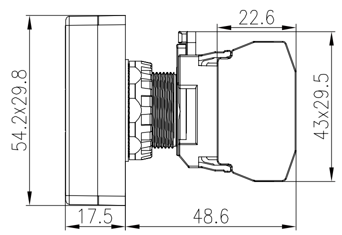



Mark:

Function type	Contact structure	Product reference
Double button	1NO1NC	LA38M-11PNSW-Q

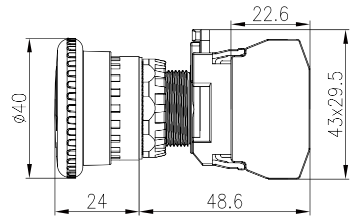
LA38M Pushbutton Switch Ø22

Appearance and Dimension

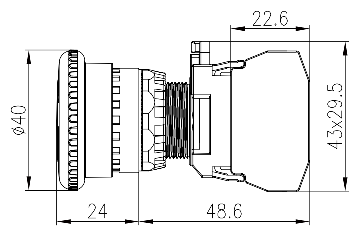
Mark:

Function type	Contact structure	Product reference
Two-position illuminated button	1NO1NC	LA38M-11PNDSW-Q-YE(△)

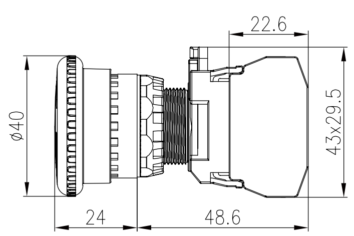
Color: RD GN

Function type	Contact structure	Product reference
40 emergency stop button	1NC	LA38M-01ZS40-C-RD
	1NO1NC	LA38M-11ZS40-C-RD
	2NC	LA38M-02ZS40-C-RD

Color: RD GN

Function type	Contact structure	Product reference
40 emergency stop button with light	1NC	LA38M-01ZSD40-C-RD(△)
	1NO1NC	LA38M-11ZSD40-C-RD(△)
	2NC	LA38M-02ZSD40-C-RD(△)

Color: RD GN

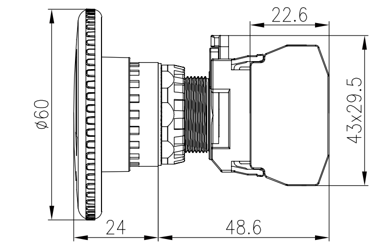
Mark: STOP

Function type	Contact structure	Product reference
Customized STOP symbol 40 emergency stop button	1NC	LA38M-01ZS40-C/FH6-RD
	1NO1NC	LA38M-11ZS40-C/FH6-RD
	2NC	LA38M-02ZS40-C/FH6-RD

LA38M Pushbutton Switch Ø22

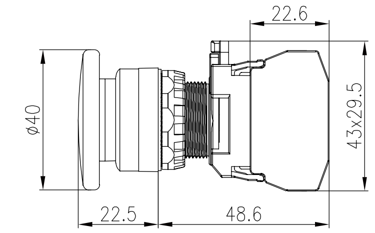
CNTD

Appearance and Dimension

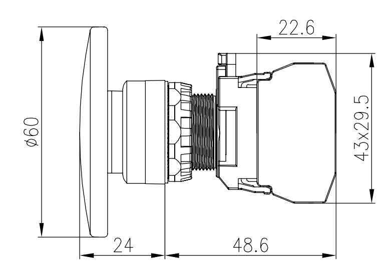
Color: RD GN

Function type	Contact structure	Product reference
60 emergency stop button	1NC	LA38M-01ZS60-C-RD
	1NO1NC	LA38M-11ZS60-C-RD
	2NC	LA38M-02ZS60-C-RD

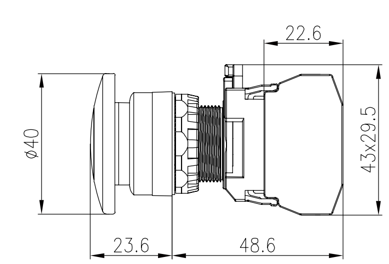
Color: RD GN YE BL WH

Function type	Contact structure	Product reference
40 mushroom head reset button	1NO	LA38M-10M40-Q- ○
	1NC	LA38M-01M40-Q- ○
	1NO1NC	LA38M-11M40-Q- ○
40 mushroom head self-locking button	1NO	LA38M-10MZS40-Q- ○
	1NC	LA38M-01MZS40-Q- ○
	1NO1NC	LA38M-11MZS40-Q- ○

Color: RD GN

Function type	Contact structure	Product reference
60 mushroom head reset button	1NO	LA38M-10M60-Q- ○
	1NC	LA38M-01M60-Q- ○
	1NO1NC	LA38M-11M60-Q- ○
60 mushroom head self-locking button	1NO	LA38M-10MZS60-Q- ○
	1NC	LA38M-01MZS60-Q- ○
	1NO1NC	LA38M-11MZS60-Q- ○

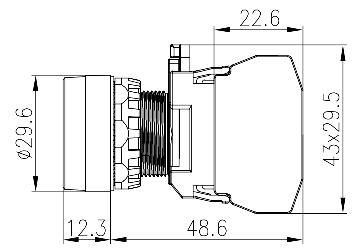



Color: RD GN YE

Function type	Contact structure	Product reference
40 mushroom head reset button with light	1NO	LA38M-10MD40-Q- ○ (△)
	1NC	LA38M-01MD40-Q- ○ (△)
	1NO1NC	LA38M-11MD40-Q- ○ (△)
60 mushroom head self-locking button	1NO	LA38M-10MDZS40-Q- ○ (△)
	1NC	LA38M-01MDZS40-Q- ○ (△)
	1NO1NC	LA38M-11MDZS40-Q- ○ (△)

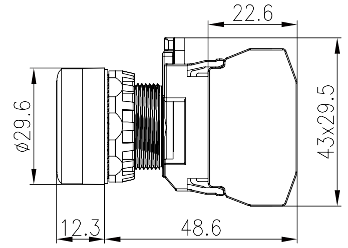
LA36M Pushbutton Switch Ø22

Appearance and Dimension

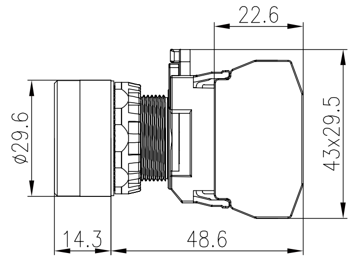
Color: RD GN YE BL WH BK

Function type	Contact structure	Product reference
Self-restoring button	1NO	LA36M-10PN-C- ○
	1NC	LA36M-01PN-C- ○
	1NO1NC	LA36M-11PN-C- ○
Self-locking flat button	1NO	LA36M-10PNZS-C- ○
	1NC	LA36M-01PNZS-C- ○
	1NO1NC	LA36M-11PNZS-C- ○

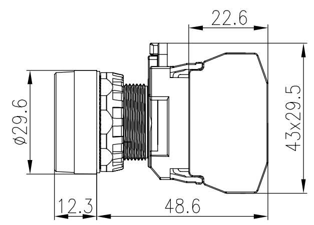
Color: RD GN YE BL WH

Function type	Contact structure	Product reference
Illuminated self-restoring button	1NO	LA36M-10PND-C- ○ (△)
	1NC	LA36M-01PND-C- ○ (△)
	1NO1NC	LA36M-11PND-C- ○ (△)
Lighted self-locking flat button	1NO	LA36M-10PNDZS-C- ○ (△)
	1NC	LA36M-01PNDZS-C- ○ (△)
	1NO1NC	LA36M-11PNDZS-C- ○ (△)

Color: RD GN YE BL WH

Function type	Contact structure	Product reference
Transparent lighted self-leveling button	1NO	LA36M-10PND-T- ○ (△)
	1NC	LA36M-01PND-T- ○ (△)
	1NO1NC	LA36M-11PND-T- ○ (△)

Color: RD GN YE BL WH BK

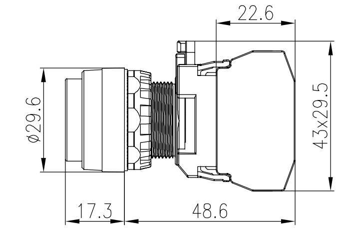
Mark: ⬇ O I II 启动 STOP

Function type	Contact structure	Product reference
Custom Symbol Self-Restoring Buttons	1NO	LA36M-10PN-C/FH*- ○
	1NC	LA36M-01PN-C/FH*- ○
	1NO1NC	LA36M-11PN-C/FH*- ○
Custom Symbol Self-Locking Flat Button	1NO	LA36M-10PNZS-C/FH*- ○
	1NC	LA36M-01PNZS-C/FH*- ○
	1NO1NC	LA36M-11PNZS-C/FH*- ○

LA36M Pushbutton Switch Ø22

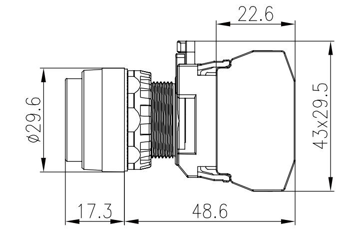
CNTD

Appearance and Dimension

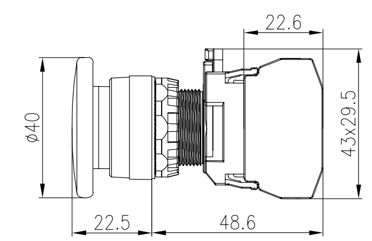
Color: RD GN YE BL WH BK

Function type	Contact structure	Product reference
Self-reset button	1NO	LA36M-10GN-C- ○
	1NC	LA36M-01GN-C- ○
	1NO1NC	LA36M-11GN-C- ○
Self-locking high button	1NO	LA36M-10GNZS-C- ○
	1NC	LA36M-01GNZS-C- ○
	1NO1NC	LA36M-11GNZS-C- ○

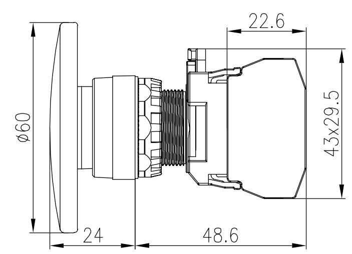
Color: RD GN YE BL WH

Function type	Contact structure	Product reference
Illuminated self-healing button	1NO	LA36M-10GND-C- ○ (△)
	1NC	LA36M-01GND-C- ○ (△)
	1NO1NC	LA36M-11GND-C- ○ (△)
Self-locking high button with light	1NO	LA36M-10GNDZS-C- ○ (△)
	1NC	LA36M-01GNDZS-C- ○ (△)
	1NO1NC	LA36M-11GNDZS-C- ○ (△)

Color: RD GN YE BL WH BK

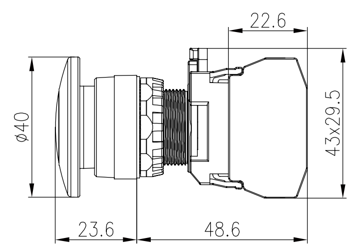
Function type	Contact structure	Product reference
40 mushroom head reset button	1NO	LA36M-10M40-C- ○
	1NC	LA36M-01M40-C- ○
	1NO1NC	LA36M-11M40-C- ○
	1NO	LA36M-10MZS40-C- ○
	1NC	LA36M-01MZS40-C- ○
	1NO1NC	LA36M-11MZS40-C- ○

Color: RD GN

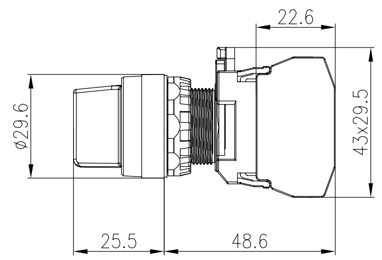
Function type	Contact structure	Product reference
60 mushroom head reset button	1NO	LA36M-10M60-C- ○
	1NC	LA36M-01M60-C- ○
	1NO1NC	LA36M-11M60-C- ○
60 mushroom head self-locking button	1NO	LA36M-10MZS60-C- ○
	1NC	LA36M-01MZS60-C- ○
	1NO1NC	LA36M-11MZS60-C- ○

LA36M Pushbutton Switch Ø22



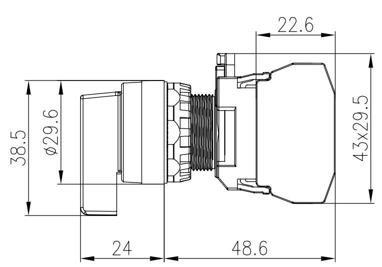
Color: RD GN YE

Function type	Contact structure	Product reference
40 mushroom head reset button with light	1NO	LA36M-10MD40-C-○(△)
	1NC	LA36M-01MD40-C-○(△)
	1NO1NC	LA36M-11MD40-C-○(△)
40 mushroom head self-locking button with light	1NO	LA36M-10MDZS40-C-○(△)
	1NC	LA36M-01MDZS40-C-○(△)
	1NO1NC	LA36M-11MDZS40-C-○(△)



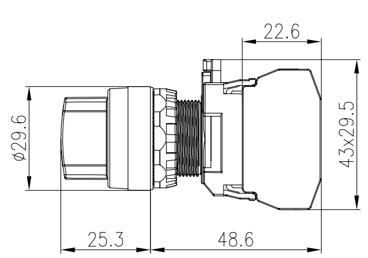
Color: RD GN YE BL WH BK

Function type	Contact structure		Product reference
Two-position hold knob		1NO	LA36M-10X21-C-BK
Two-position reset knob		1NO	LA36M-10X22-C-BK
Three-position hold knob		2NO	LA36M-20X31-C-BK
Three-position reset knob		2NO	LA36M-20X33-C-BK
Three left and right self-reset knob		2NO	LA36M-20X32-C-BK



Color: BK

Function type	Contact structure		Product reference
Two-position hold long knob		1NO	LA36M-10XC21-C-BK
Two-position self-recovery knob		1NO	LA36M-10XC22-C-BK
Three-position hold long knob		2NO	LA36M-20XC31-C-BK
Three-position self-recovery knob		2NO	LA36M-20XC33-C-BK
Three left and right self-recovery knob		2NO	LA36M-20XC32-C-BK



Color: RD GN YE BL WH

Function type	Contact structure		Product reference
Two-position holding knob with light		1NO	LA36M-10XD21-C-○(△)
Two-position self-reset knob with light		1NO	LA36M-10XD22-C-○(△)
Three-position holding knob with light		2NO	LA36M-20XD31-C-○(△)
Three-position reset knob with light		2NO	LA36M-20XD33-C-○(△)
Three-position left and right selfreset knob with light		2NO	LA36M-20XD32-C-○(△)

CB2 Pushbutton Switch Ø22

CNTD

Features

- This series of products, the button head and the middle seat are connected by multi-point clamping, in-line fixed installation, impact resistance, drop resistance, vibration resistance, suitable for use in various harsh environments.
- It is composed of button head, middle seat and contact seat. It
- adopts advanced selflocking connection without fasteners, which is safe and reliable. It is efficient and quick to disassemble and assemble. It can be directly installed on the middle 22mm installation panel without adding any accessories. The installation wrench is more sturdy and reliable.
- High-quality engineering flame-retardant materials are used, with good insulation performance and reliable contact.
- Products comply with IEC60947-5-1, GB/T14048.5 and other standards.
- The contact element is a flat-pressed slow-action structure; it can meet the requirements of a variety of specific control circuits. Mounting Aperture: Ø22mm
- Function: self-reset button, self-locking button, illuminated button, knob, key button, emergency stop button, mushroom head button, double-position button, etc.

Switch Ratings

Rated insulation voltage Ui			600V				
Rated thermal current Ith			10A				
Rated operational voltage Ue			24V	48V	110V	220V	380V
Rated operational current Ie	AC 50/60Hz	Resistive load	10A	-	10A	6A	-
		Inductive load	10A	-	6A	3A	2A
	DC	Resistive load	8A	4A	2.2A	1.1A	-
		Inductive load	4A	2A	1.2A	0.6A	-
Contact material			Silver alloy				
Minimum applicable load: 3V AC.DC 5mA(Reference value) (The applicable range depends on the use environment and load type)							

LED Specifications

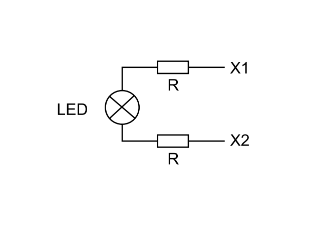
LED type	Bidirectional LED		
Rated voltage	AC/DC 6V	AC/DC 12V	AC/DC 24V
	AC/DC 36V	AC/DC 48V	AC/DC 110V
	AC/DC 220V	AC/DC 380V	
	AC110V	AC220V	AC380V
Emitting color	RD GN YE BL WH		
Life	≥40000h		

Specifications

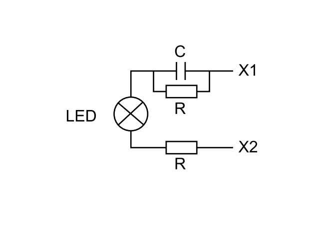
Ambient temperature	-25℃ ~+75℃ (With no icing)
Humidity	45~85%RH
Contact resistance	≤50mΩ
Insulation resistance	≥100MΩ
Power frequency withstand voltage	1890VAC/50Hz/60s
Vibration resistance	Amplitude: about 1.0mm/50Hz
Impact resistance	＞10g
Degree of protection	IP65 Except two bit series: IP40
Electrical life	≥100,000 times
Wiring capacity	Maximum: 2 × 1.5mm² or 1 × 2.5mm² Minimum: 2 × 0.75mm² Maximum insert: 6.3 × 0.8mm

Lamp Holder Circuit Schematic

■ AC/DC lamp holder



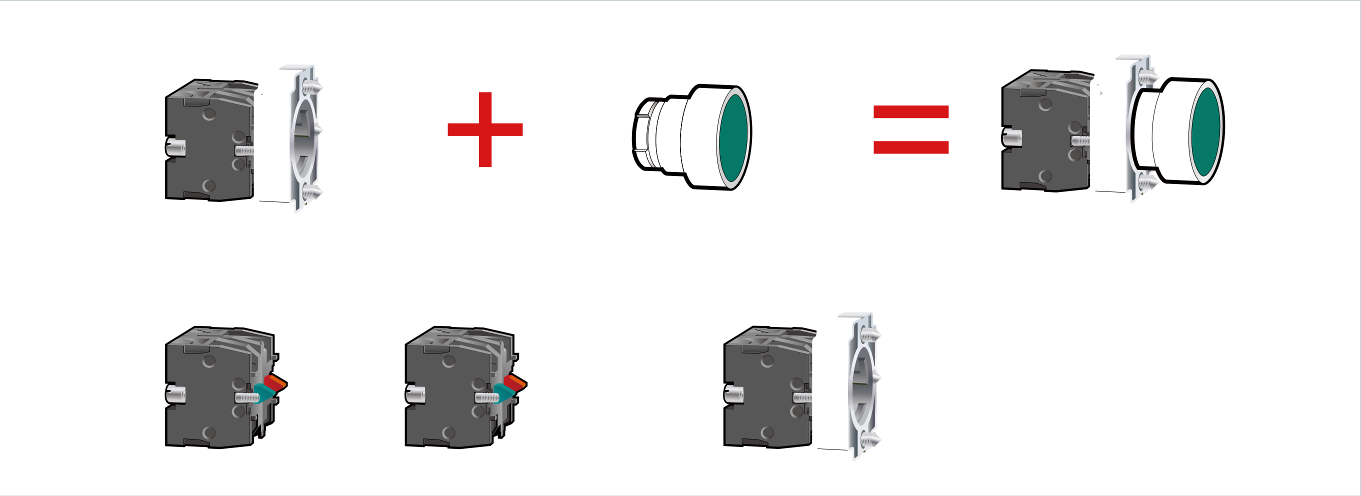
■ AC lamp holder



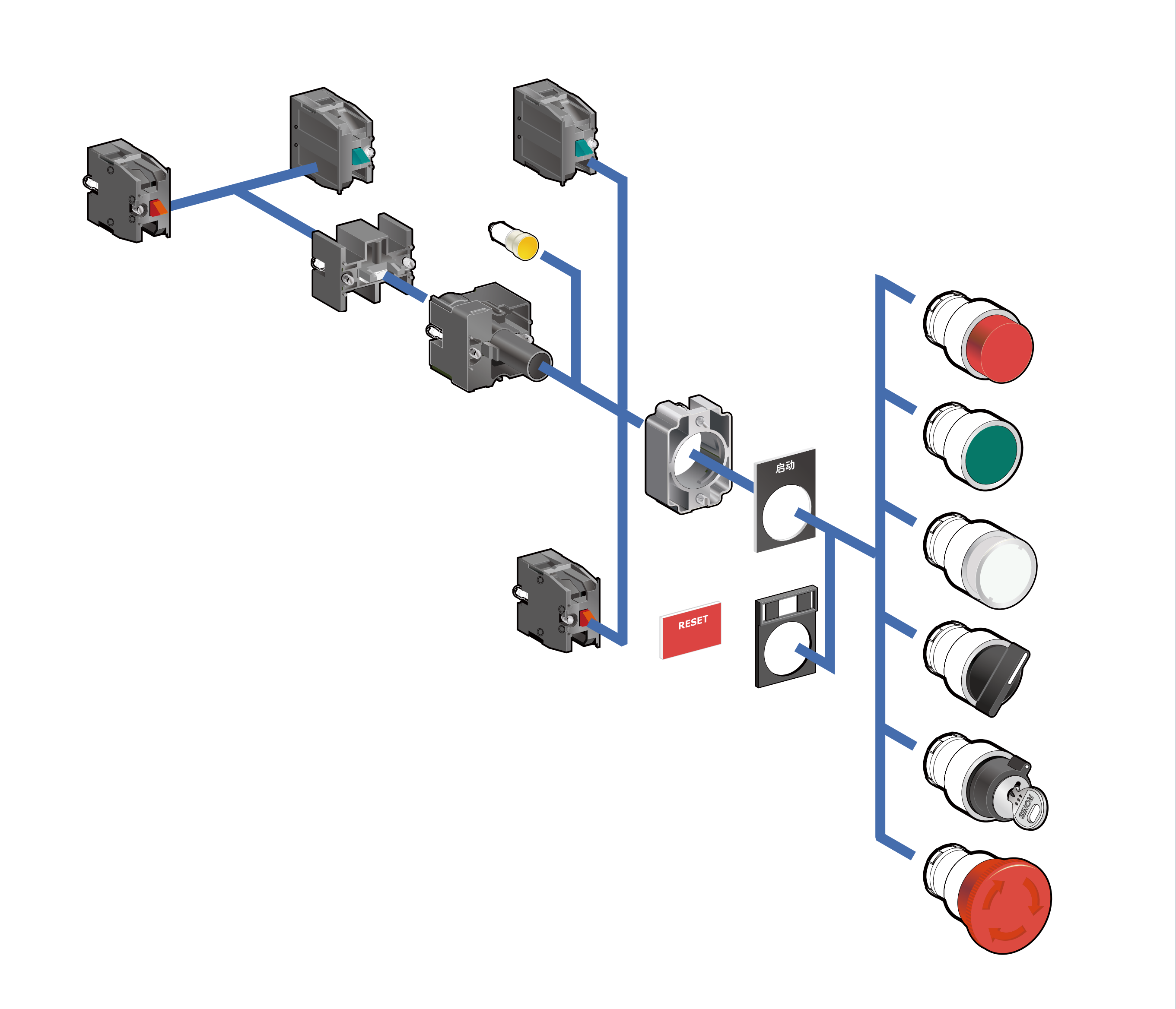
CB2 Pushbutton Switch Ø22

tructure diagram

○ Auxiliary contact connection: up to 6 pairs of contact modules.



Combo Chart



CB2 Pushbutton Switch Ø22

CNTD

Contact Form Description

■ The two digits in the model number represent the contact form

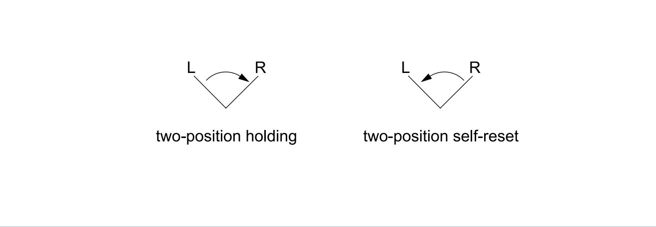
○ The first digit "1" indicates the first pair of contacts on the first section of the element, "2" means the second pair.

○ The second digit "1、2" represents the 2 terminals of NC contact, and "3、4" represents the 2 terminals of NO contact.

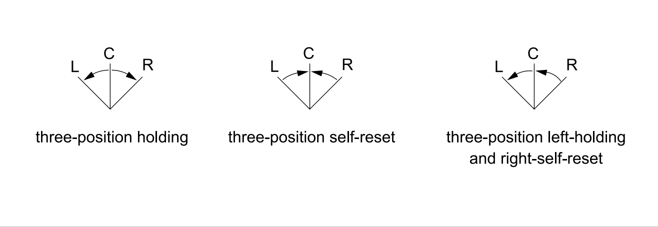
Contact code	1	2	3	4	5
Contact name	1NO	1NC	2NO	2NC	1NO1NC
State diagram	○ ○	● ●	○ ○ ○ ○	● ● ● ●	○ ○ ● ●

Working Position And Contact State

○ Two-position and contact ON AND OFF state diagram



○ Three-position and contact ON AND OFF state diagram



Serial Number	Type	(left position)	(right position)
1	CB2-B■-1	○ ○	● ●
2	CB2-B■-2	● ●	○ ○
3	CB2-B■-3	○ ○ ○ ○	● ● ● ●
4	CB2-B■-4	● ● ● ●	○ ○ ○ ○
5	CB2-B■-5	○ ○ ● ●	● ● ○ ○

Serial Number	Type	(left position)	(center position)	(right position)
1	CB2-B■-3	● ● ○ ○	○ ○ ○ ○	○ ○ ● ●
2	CB2-B■-4	○ ○ ● ●	● ● ● ●	● ● ○ ○
3	CB2-B■-5	● ● ● ●	○ ○ ● ●	○ ○ ○ ○

CB2 Pushbutton Switch Ø22

Model Number Structure

CB2 — B ■ □ — ▲ — ○ △

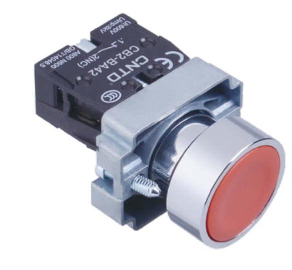
CB2-	B	■	□	- ▲	- ○	△
Serial number	Button material	Operation type	Color	Symbol code	Voltage code	Contact code
	Metal	A: Self-adjusting button AZ: Self-locking flat button L: Self-healing button LZ: Self-locking high button W3: Self-healing button with light WZ3: Self-locking flat button with light C: ϕ40 mushroom head reset button CZ: ϕ40 mushroom head self-locking button R: ϕ60 mushroom head self-resetting button RZ: ϕ60 mushroom head self-locking button T: ϕ40 mushroom head push-pull button S5: ϕ40 emergency stop button S6: ϕ60 emergency stop button D2: Two-position hold knob D3: Three-position hold knob D4: Two-position automatic reset knob D5: three-position self-reset knob J2: Two-position hold long knob J3: Three hold long knob J4: Two-position self-recovery knob J5: Three-position self-recovery knob G2: Two-position hold key button G3: Three Hold Key Button G6: Two-position self-resetting key button G7: Three-position self-resetting key button L832: Two flat two-position buttons L842: high and low double button W83: Two flat buttons with lights	1: WH 2: BK 3: GN 4: RD 5: YE 6: BL	232: black face and white circle 334: White face black arrow 335: black face and white arrow 336: Green-faced double white bars 432: red face and white circle	T: AC/DC6V J: AC/DC12V B: AC/DC24V C: AC/DC36V E:AC/DC48V FD:AC/DC110V MD: AC/DC220V QD: AC/DC380V F: AC110V M: AC220V Q: AC380V	1:1NO 2:1NC 3:2NO 4:2NC 5:1NO1NC

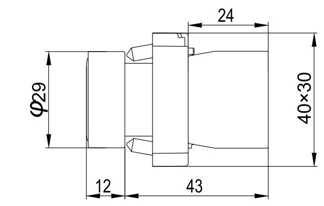
The above table is the type explanation.Some combinations have no actual products.For details,please refer to product selection or consulting manufacturers.

CB2 Pushbutton Switch Ø22

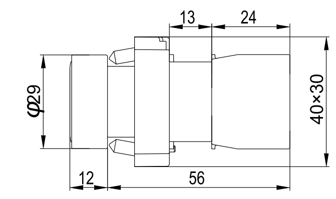
CNTD

Appearance and Dimension

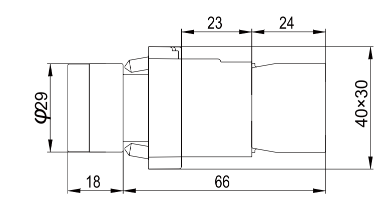




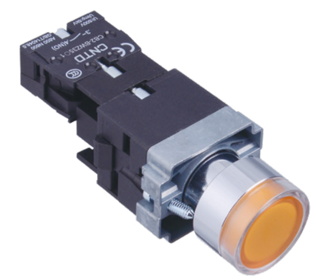
Specification	Contact structure		Product reference
Self-restoring button	○	1NO	CB2-BA11
	●	1NO	CB2-BA21
		1NO	CB2-BA31
		1NC	CB2-BA42
		1NO	CB2-BA51
		1NO	CB2-BA61

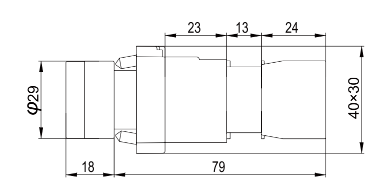


Specification	Contact structure		Product reference
Self-locking flat button	○	1NO	CB2-BAZ11
	●	1NO	CB2-BAZ21
		1NO	CB2-BAZ31
		1NC	CB2-BAZ42
		1NO	CB2-BAZ51
		1NO	CB2-BAZ61



Specification	Contact structure		Product reference
Illuminated self-restoring button	○	1NO	CB2-BW31 ○ 1
		1NO	CB2-BW33 ○ 1
		1NC	CB2-BW34 ○ 2
		1NO	CB2-BW35 ○ 1
		1NO	CB2-BW36 ○ 1

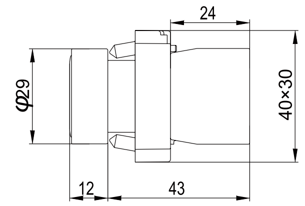




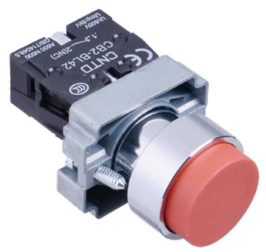
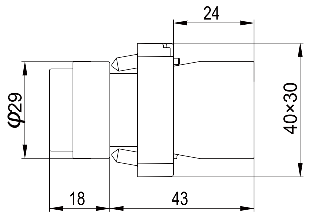
Specification	Contact structure		Product reference
Illuminated self-locking button	○	1NO	CB2-BWZ31 ○ 1
		1NO	CB2-BWZ33 ○ 1
		1NC	CB2-BWZ34 ○ 2
		1NO	CB2-BWZ35 ○ 1
		1NO	CB2-BWZ36 ○ 1

CB2 Pushbutton Switch Ø22

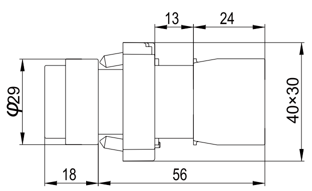
Appearance and Dimension

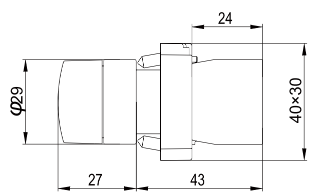
Specification	Contact structure	Product reference
Symbol button	1NO	CB2-BA2321
	1NO	CB2-BA3341
	1NO	CB2-BA3351
	1NO	CB2-BA3361
	1NC	CB2-BA4322

Specification	Contact structure	Product reference
Self-reset button	1NO	CB2-BL11
	1NO	CB2-BL21
	1NO	CB2-BL31
	1NC	CB2-BL42
	1NO	CB2-BL51
	1NO	CB2-BL61

Specification	Contact structure	Product reference
Self-locking high button	1NO	CB2-BLZ11
	1NO	CB2-BLZ21
	1NO	CB2-BLZ31
	1NC	CB2-BLZ42
	1NO	CB2-BLZ51
	1NO	CB2-BLZ61

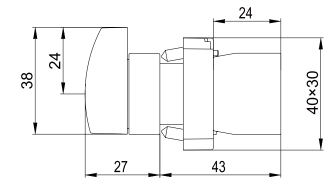



Specification	Contact structure	Product reference
Two-position hold knob	1NO	CB2-BD21
Two-position reset knob	1NO	CB2-BD41
Three-position hold knob	2NO	CB2-BD33
Three-position reset knob	2NO	CB2-BD53

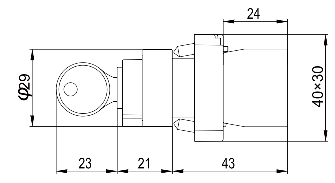
CB2 Pushbutton Switch Ø22

CNTD

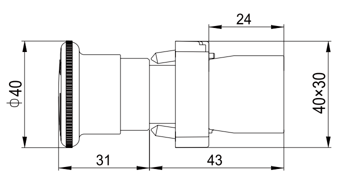
Appearance and Dimension

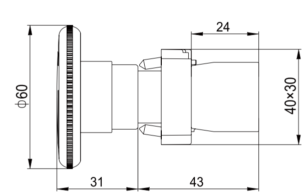
Specification	Contact structure	Product reference
Two-position hold long knob	1NO	CB2-BJ21
Two-position self-recovery knob	1NO	CB2-BJ41
Three-position hold long knob	2NO	CB2-BJ33
Three-position self-recovery knob	2NO	CB2-BJ53

Specification	Contact structure	Product reference
Two-position hold key	1NO	CB2-BG21
Two-position self-resetting key button	1NO	CB2-BG61
Three-position hold key	2NO	CB2-BG33
Three-position self-resetting key	2NO	CB2-BG73

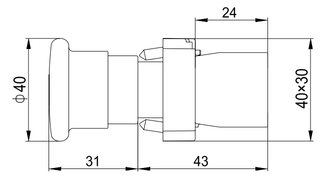
Specification	Contact structure	Product reference
40 emergency stop button	1NO	CB2-BS521
	1NO	CB2-BS531
	1NC	CB2-BS542

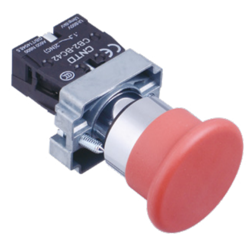
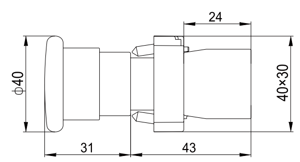
Specification	Contact structure	Product reference
60 emergency stop button	1NO	CB2-BS621
	1NO	CB2-BS631
	1NC	CB2-BS642

CB2 Pushbutton Switch Ø22

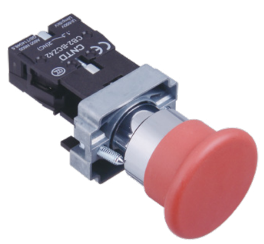
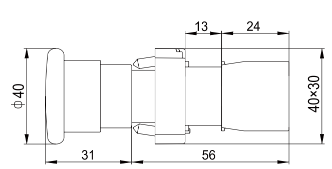
Appearance and Dimension

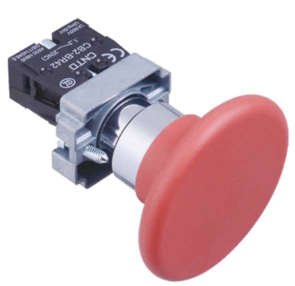
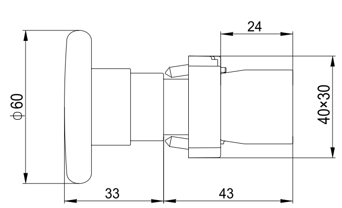
Specification	Contact structure		Product reference
40 mushroom head push button	●	1NC	CB2-BT42
	●	1NO 1NC	CB2-BT45

Specification	Contact structure		Product reference
40 mushroom head reset button	○	1NO	CB2-BC11
	●	1NO	CB2-BC21
	●	1NO	CB2-BC31
	●	1NC	CB2-BC42
	●	1NO	CB2-BC51
	●	1NO	CB2-BC61

Specification	Contact structure		Product reference
40 mushroom head self-locking button	○	1NO	CB2-BCZ11
	●	1NO	CB2-BCZ21
	●	1NO	CB2-BCZ31
	●	1NC	CB2-BCZ42
	●	1NO	CB2-BCZ51
	●	1NO	CB2-BCZ61

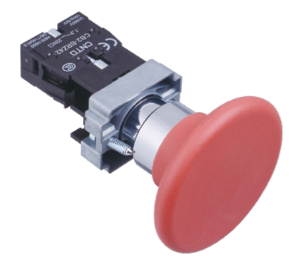
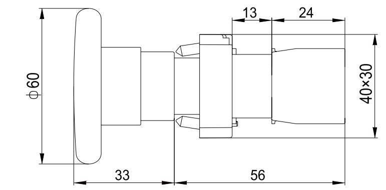



Specification	Contact structure		Product reference
60 mushroom head self-locking button	○	1NO	CB2-BR11
	●	1NO	CB2-BR21
	●	1NO	CB2-BR31
	●	1NC	CB2-BR42
	●	1NO	CB2-BR51
	●	1NO	CB2-BR61

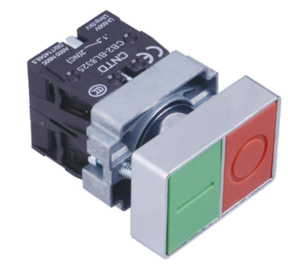
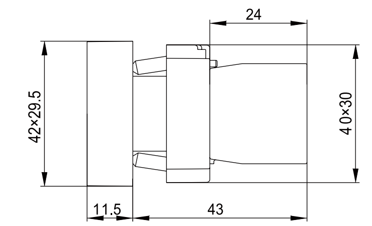
CB2 Pushbutton Switch Ø22

CNTD

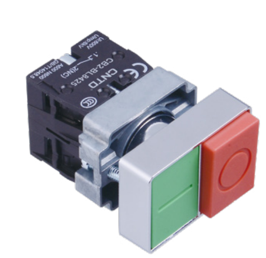
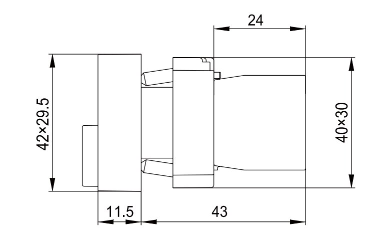
Appearance and Dimension

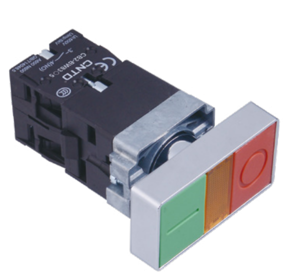
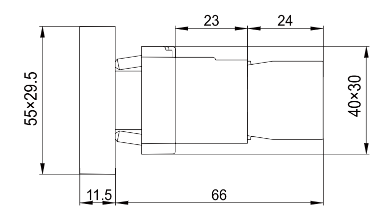
Specification	Contact structure		Product reference
60 mushroom head self-locking button	○	1NO	CB2-BRZ11
	●	1NO	CB2-BRZ21
	●	1NO	CB2-BRZ31
	●	1NC	CB2-BRZ42
	●	1NO	CB2-BRZ51
	●	1NO	CB2-BRZ61

Specification	Contact structure		Product reference
Double flat button	I O	1NO 1NC	CB2-BL8325

Specification	Contact structure		Product reference
Double high and low buttons	I O	1NO 1NC	CB2-BL8425

Specification	Contact structure		Product reference
Two-position illuminated button	I O	1NO 1NC	CB2-BW83 ○ 5

LD16 Indicator Light Ø22

Features

- LD16 series of indicator light use high-brightness pure color LED light-emitting chips as the light source, with long life, low energy consumption, small size and light weight. The lampshade is made of high-strength cabonate, which has good impact resistance. The light has built-in screw-type wiring, makes it safer and more convenient.
- LD16 series of indicator light is suitable for signal indication, advance signal, accident signal and other situations for example in electrical industries, telecommunications, machining tools, ships, textile industries, printing industries and mining machinery.
- The product complies with standards such as IEC60947-5-1,GB/T14048.5.

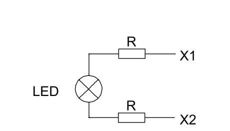
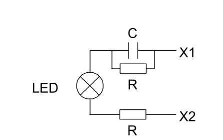
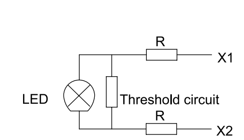
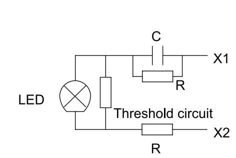
Specifications

Ambient temperature	-25℃ ~+75℃（with no icing）
Humidity	45~85%RH
Continuous operational life	≥40000h
Allow instantaneous voltage fluctuation	± 20%（above 110V）
Power frequency withstand voltage	2.5kV(AC effective value), 1min
Usage frequency(AC)	50-60Hz
Rated operational current	AC/DC6V≤40mA, the rest≤25mA
luminance	≥100cd/m²
Comparative tracking index	≥100, flame retardant
Insulation resistance	5MΩ while Ui≤60V, 50MΩ while 60V ＜ Ui≤660V
Emitting color	RD GN YE BL WH BK
Degree of protection	IP65

Internal Wiring Diagram

Description:

- The AC/DC type indicator light is a resistance step-down type, and the AC type indicator light is a capacitor step-down type.
- When the voltage is 110V and above, the temperature of the shell of the AC/DC signal indicator will be higher than that of the AC signal indicator.
- The use frequency of AC type signal indicator is 50-60Hz. Using in other frequency range will damage the indicator light.

Type	AC/DC type Indicator Light	AC type Indicator Light
Normal type		
Anti-interference type		

LD16 Indicator Light Ø22

CNTD

Model Number Structure

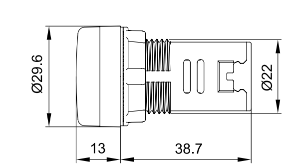
LD16 — ⊙ ■ / □ — ○ △ ▲

① ② ③ ④ ⑤ ⑥ ⑦

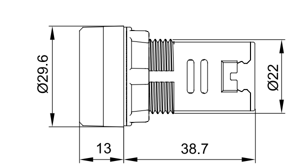
Item	Code	Description
① Serial number	LD16	Serial number
② Installation aperture	22	Ø22mm
③ Function code	DS	Indicator light
	M	Buzzer
	ML	Continuous buzzer
	SM	Flash buzzer
	SML	Constant bright continuous buzzer
④ Auxiliary code	无	Conventional
	F	Discharge lamp
	K	Anti-interference voltage
	FS	Waterproof Indicator Light
⑤ Color	○	RD GN YE BL WH BK Black is only available for no light buzzer
⑥ Lamp voltage	△	AC/DC 6V AC/DC 12V AC/DC 24V AC/DC 36V AC/DC 48V AC/DC 110V AC/DC 220V AC/DC 380V AC 110V AC 220V AC 380V For other special voltages ,please consult the manufacturer
⑦ Interference voltage	▲	24V 40V 60V 90V 110V For other special voltages ,please consult the manufacturer

Appearance and Dimension

LD16-22DS- ○ △
LD16-22DS/F- ○ △
LD16-22DS/K- ○ △ ▲



LD16-22M-BK △
LD16-22ML-BK △
LD16-22SM- ○ △
LD16-22SML- ○ △



C2、C3 Pushbutton Switch

Specifications

Electrical capacitor	Max insulation voltage600VAC, Max thermal current10A
Operation	AC15 Type: 250VAC/16A, DC13 Type: 250VDC/0.6A
Contact resistance	Max 50MΩ
Insulation strength	2500VAC 50Hz, 1 minute
Insulation resistance	500VDC below, 100MΩ above
Vibration resistance	10g @40-500Hz
Life	Lamp 1,000hour、LED 1,000hour
Electrical life	Contact block AC15 250VAC/6A >1、000、000
	DC13 250VAC/0.6A >1、000、000
Storage temperature	Using: -20~+70℃（With no icing）
Operation temperature	Using: -20~+70℃（With no icing）

Model Number Structure

C2 SIS - F2 / 1A - R - 220
① ② ③ ④ ⑤ ⑥

① Fixed hole diameter: 2=22ϕ Round、3=30ϕ Round
② Types:
SNS=Short handle knob、 SNL=Long handle knob
SNK=key knob、PNF=flat head、PNH=convex head
PNM3=30mm big head 、PNM4=40mm big head
PNM6=60mm big head 、PNR3=30mm Emergency stop head
PNR4=40mm Emergency stop head、PNR6=60mm Emergency stop head、
PNKM4=Emergency stop key knob、PID=Doulbe with lamp button
PNP=Tensile switch、PIF=Flat ribbon lamp button
PIH=Convex head with lamp button、PIM4=big head with lamp buttom、
PND= Double button、SIS=Short shank with lamp knob
SIL=Long handle with lamp knob、LIF=Standard type indicating lamp
LUF=circular type indicating lamp、MN=Monolever Switch
③ Operation type: Pushbutton Switch: Blank=Self-resetting、D=Self-locking
Knob Switch、Monolever Switch: F2=2 to the self-locking、F3=3 to the self-locking、
F4=4 to the self-locking、T2=2 to reset、T3=3 to reset、T4=4 to reset
④ Contact: 1A=1NO、1B=1NC、1C=1A1B、1D=1A+1B
2A=2NO、2B=2NC、2C=1A1B+1A1B、
2D=1A1B+1A1B、2E=1A1A+1A1A
⑤ Head color: R=red、G=green、Y=yellow、W=white、B=black、BL=blue
⑥ With lamp voltage:12=12VDC、24=24VDC、36=36VDC、48=48VDC
110=110VAC、220=220VAC、380=380VAC

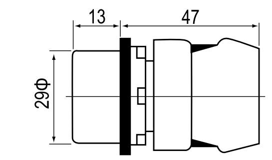
Note: Custom products over the selection can not explain clearly, please also specify when ordering.

C2、C3 Pushbutton Switch

CNTD

Appearance and Dimension

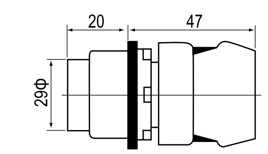
C2PNF



Color: RD GN YE BK

Function type	Product reference
Flat head	C2PNF-1A/1B/1C

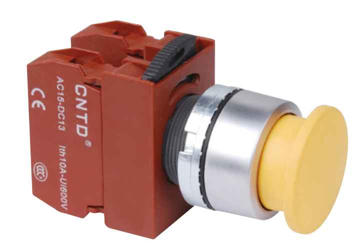
C2PNH

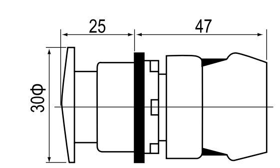


Color: RD GN YE BK

Function type	Product reference
Convex head	C2PNH-1A/1B/1C

C2PNM3

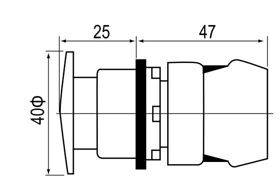




Color: RD GN YE BK

Function type	Product reference
30mm big head	C2PNM3-1A/1B/1C

C2PNM4

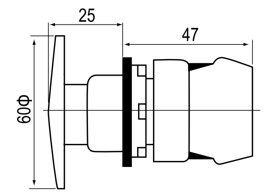


Color: RD GN YE BK

Function type	Product reference
40mm big head	C2PNM4-1A/1B/1C

C2、C3 Pushbutton Switch

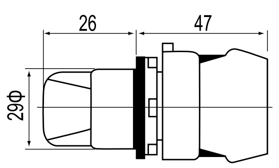
C2PNM6

Function type	Product reference
60mm big head	C2PNM6-1A/1B/1C

Color: RD GN YE BK

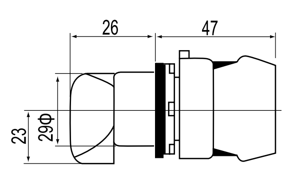
C2SNS

Function type	Product reference
Short handle knob 2 to the self-locking	C2SNS-F2-1A/1B/1C/2A
Short handle knob 3 to the self-locking	C2SNS-F3-2A/2B/1C

Color: RD GN YE BK

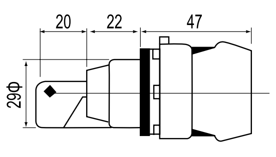
C2SNL

Function type	Product reference
Long handle knob 2 to the self-locking	C2SNL-F2-1A/1B/1C/2A
Long handle knob 3 to the self-locking	C2SNL-F3-2A/2B/1C

Color: RD GN YE BK

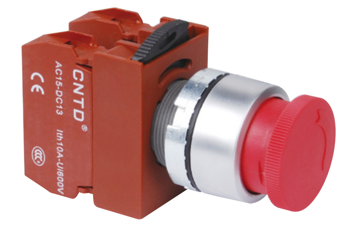
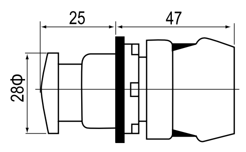
C2SNK

Function type	Product reference
key knob 2 to the self-locking	C2SNK-F2-1A/1B/1C/2A
key knob 3 to the self-locking	C2SNK-F3-2A/2B/1C

Appearance and Dimension

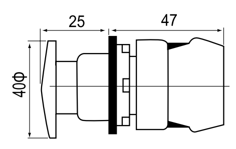
C2PNR3

Function type	Product reference
30mm Emergency stop head	C2PNR3-1A/1B/1C

Color: RD GN YE BK

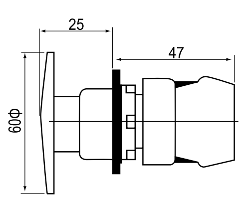
C2PNR4

Function type	Product reference
40mm Emergency stop head	C2PNR4-1A/1B/1C

Color: RD GN YE BK

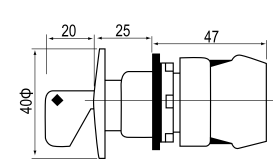
C2PNR6

Function type	Product reference
60mm Emergency stop head	C2PNR6-1A/1B/1C

Color: RD GN YE BK

C2PNKM4

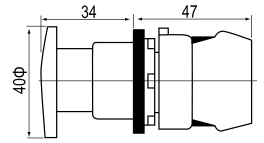
Function type	Product reference
Emergency stop key knob	C2PNKM4-1A/1B/1C

Color: RD GN YE BK

C2、C3 Pushbutton Switch

Appearance and Dimension

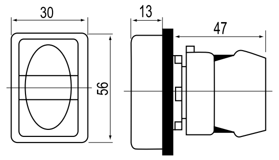
C2PNP

Color: RD GN YE BK

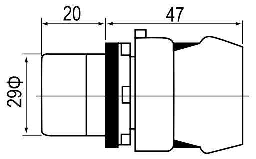
Function type	Product reference
Tensile switch	C2PNP-1A/1B/1C

C2PND

Function type	Product reference
Doulbe button	C2PND-1C/2A/2B

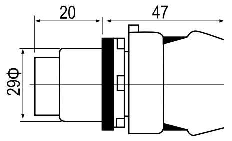
C2PIF

Color: RD GN YE BL

Function type	Product reference	Voltage
Flat ribbon lamp button	C2PIF-1A-R/G/Y/BL	12/24/36/48/110/220/380
Flat ribbon lamp button	C2PIF-1B-R/G/Y/BL	12/24/36/48/110/220/380
Flat ribbon lamp button	C2PIF-1C-R/G/Y/BL	12/24/36/48/110/220/380

C2PIH

Color: RD GN YE BL

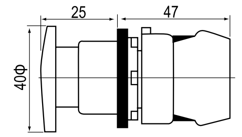
Function type	Product reference	Voltage
Convex head with lamp button	C2PIH-1A-R/G/Y/BL	12/24/36/48/110/220/380
Convex head with lamp button	C2PIH-1B-R/G/Y/BL	12/24/36/48/110/220/380
Convex head with lamp button	C2PIH-1C-R/G/Y/BL	12/24/36/48/110/220/380

C2、C3 Pushbutton Switch

CNTD

Appearance and Dimension

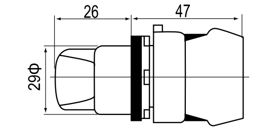
C2PIM4

Color: RD GN YE BL

Function type	Product reference	Voltage
40mm big head with lamp buttom	C2PIM4-1A-R/G/Y/BL	12/24/36/48/110/220/380
40mm big head with lamp buttom	C2PIM4-1B-R/G/Y/BL	12/24/36/48/110/220/380
40mm big head with lamp buttom	C2PIM4-1C-R/G/Y/BL	12/24/36/48/110/220/380

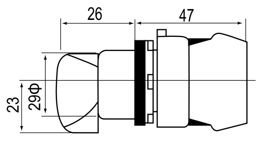
C2SIS

Color: RD GN YE BL

Function type	Product reference	Voltage
Short shank with lamp knob 2 to the self-locking	C2SIS-F2-1A-R/G/Y/BL	12/24/36/48/110/220/380
	C2SIS-F2-1B-R/G/Y/BL	12/24/36/48/110/220/380
	C2SIS-F2-1C-R/G/Y/BL	12/24/36/48/110/220/380
Short shank with lamp knob 3 to the self-locking	C2SIS-F3-2A-R/G/Y/BL	12/24/36/48/110/220/380
	C2SIS-F3-1C-R/G/Y/BL	12/24/36/48/110/220/380

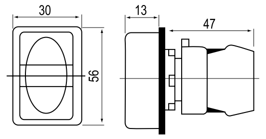
C2SIL

Color: RD GN YE BL

Function type	Product reference	Voltage
Long handle with lamp knob 2 to the self-locking	C2SIL-F2-1A-R/G/Y/BL	12/24/36/48/110/220/380
	C2SIL-F2-1B-R/G/Y/BL	12/24/36/48/110/220/380
	C2SIL-F2-1C-R/G/Y/BL	12/24/36/48/110/220/380
Long handle with lamp knob 3 to the self-locking	C2SIL-F3-2A-R/G/Y/BL	12/24/36/48/110/220/380
	C2SIL-F3-1C-R/G/Y/BL	12/24/36/48/110/220/380

C2PID

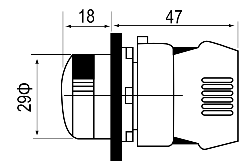



Function type	Product reference	Voltage
Doulbe with lamp button	C2PID-1C/2A/2B	12/24/36/48/110/220/380

C2、C3 Pushbutton Switch

Appearance and Dimension

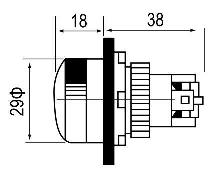
C2LIF

Function type	Product reference	Voltage
Standard type indicating lamp	C2LIF-R/G/Y/W/BL	12/24/36/48/110/220/380

Color: RD GN YE BL

C2LUF

Function type	Product reference	Voltage
Circular type indicating lamp	C2LUF-R/G/Y/W/BL	12/24/36/48/110/220/380

Color: RD GN YE BL

C2MN-T2

Function type	Product reference	Note
Monolever Switch 2 to reset	C2MN-T2-1C/2A/2B/2D	2D=1A1B+1A1B

C2MN-F2

Function type	Product reference	Note
Monolever Switch 2 to the self-locking	C2MN-F2-1C/2A/2B/2D	2D=1A1B+1A1B

Appearance and Dimension

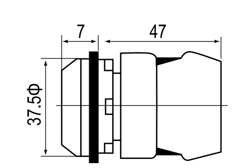
C2MN-T4

Function type	Product reference	Note
Monolever Switch 4 to reset	C2MN-T4-2D/2E	2D=1A1B+1A1B 2E=1A1A+1A1A

C2MN-F4

Function type	Product reference	Note
Monolever Switch 4 to the self-locking	C2MN-F4-2D/2E	2D=1A1B+1A1B 2E=1A1A+1A1A

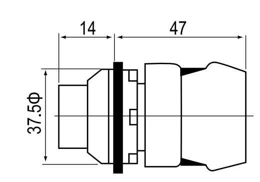
C3PNF

Function type	Product reference
Flat head	C3PNF-1A/1B/1C

Color: RD GN YE BK

C3PNH

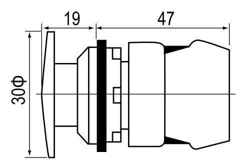
Function type	Product reference
Convex head	C3PNH-1A/1B/1C

Color: RD GN YE BK

C2、C3 Pushbutton Switch

Appearance and Dimension

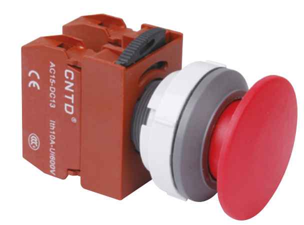
C3PNM3

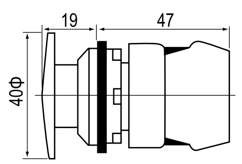


Function type	Product reference
30mm big head	C3PNM3-1A/1B/1C

Color: RD GN YE BK

C3PNM4

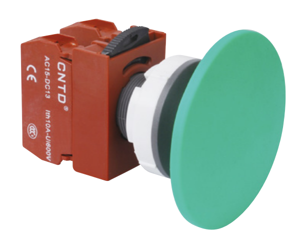


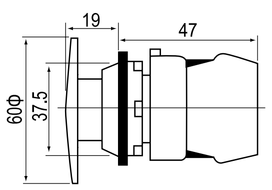


Function type	Product reference
40mm big head	C3PNM4-1A/1B/1C

Color: RD GN YE BK

C3PNM6

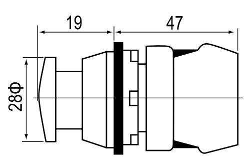




Function type	Product reference
60mm big head	C3PNM6-1A/1B/1C

Color: RD GN YE BK

C3PNR3



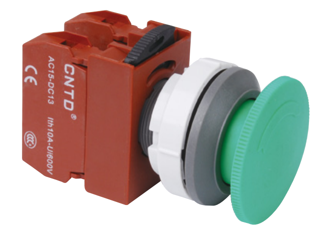
Function type	Product reference
30mm Emergency stop head	C3PNR3-1A/1B/1C

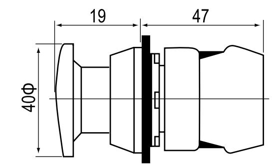
Color: RD GN YE BK

C2、C3 Pushbutton Switch

Appearance and Dimension

C3PNR4

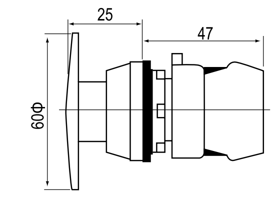




Function type	Product reference
40mm Emergency stop head	C3PNR4-1A/1B/1C

Color: RD GN YE BK

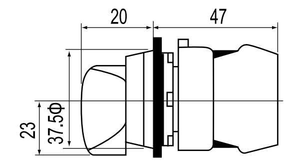
C3PNR6



Function type	Product reference
60mm Emergency stop head	C3PNR6-1A/1B/1C

Color: RD GN YE BK

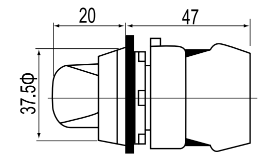
C3SNL



Function type	Product reference
Long handle knob 2 to the self-locking	C3SNL-F2-1A/1B/1C/2A
Long handle knob 3 to the self-locking	C3SNL-F3-2A/1C/2B

Color: RD GN YE BK

C3SNS



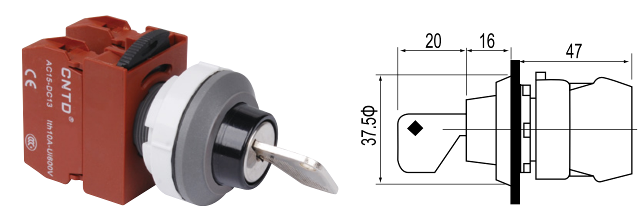
Function type	Product reference
Short handle knob 2 to the self-locking	C3SNS-F2-1A/1B/1C/2A
Short handle knob 3 to the self-locking	C3SNS-F3-2A/1C/2B

Color: RD GN YE BK

C2、C3 Pushbutton Switch

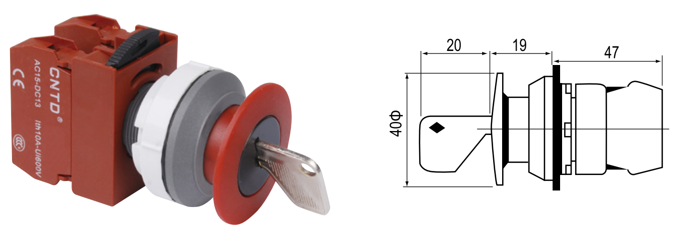
Appearance and Dimension

C3SNK



Function type	Product reference
Key knob 2 to the self-locking	C3SNK-F2-1A/1B/1C/2A
Key knob 3 to the self-locking	C3SNK-F3-2A/1C/2B

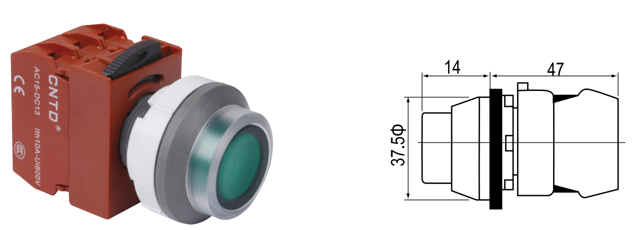
C3PNKM4



Color: RD GN YE BK

Function type	Product reference
Emergency stop key knob	C3PNKM4-1A/1B/1C

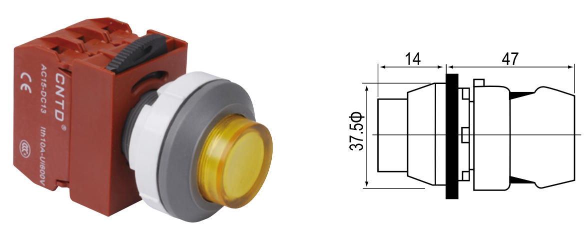
C3PIF



Color: RD GN YE BL

Function type	Product reference	Voltage
Flat ribbon lamp button	C3PIF-1A-R/G/Y/BL	12/24/36/48/110/220/380
Flat ribbon lamp button	C3PIF-1B-R/G/Y/BL	12/24/36/48/110/220/380
Flat ribbon lamp button	C3PIF-1C-R/G/Y/BL	12/24/36/48/110/220/380

C3PIH

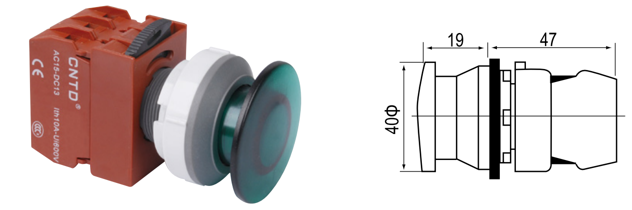


Color: RD GN YE BL

Function type	Product reference	Voltage
Convex head with lamp button	C3PIH-1A-R/G/Y/BL	12/24/36/48/110/220/380
Convex head with lamp button	C3PIH-1B-R/G/Y/BL	12/24/36/48/110/220/380
Convex head with lamp button	C3PIH-1C-R/G/Y/BL	12/24/36/48/110/220/380

Appearance and Dimension

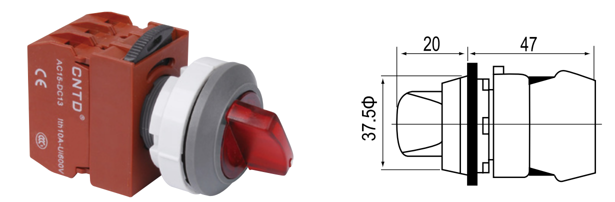
C3PIM4



Color: RD GN YE BL

Function type	Product reference	Voltage
40mm big head with lamp buttom	C3PIM4-1A-R/G/Y/BL	12/24/36/48/110/220/380
40mm big head with lamp buttom	C3PIM4-1B-R/G/Y/BL	12/24/36/48/110/220/380
40mm big head with lamp buttom	C3PIM4-1C-R/G/Y/BL	12/24/36/48/110/220/380

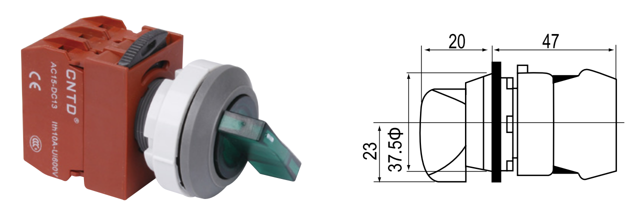
C3SIS



Color: RD GN YE BL

Function type	Product reference	Voltage
Short shank with lamp knob 2 to the self-locking	C3SIS-F2-1A-R/G/Y/BL	12/24/36/48/110/ 220/380
	C3SIS-F2-1B-R/G/Y/BL	
	C3SIS-F2-1C-R/G/Y/BL	
Short shank with lamp knob 3 to the self-locking	C3SIS-F3-2A-R/G/Y/BL	
	C3SIS-F3-1C-R/G/Y/BL	

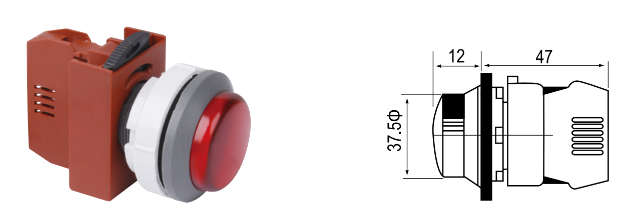
C3SIL



Color: RD GN YE BL

Function type	Product reference	Voltage
Long handle with lamp knob 2 to the self-locking	C3SIL-F2-1A-R/G/Y/BL	12/24/36/48/110/ 220/380
	C3SIL-F2-1B-R/G/Y/BL	
	C3SIL-F2-1C-R/G/Y/BL	
Long handle with lamp knob 3 to the self-locking	C3SIL-F3-2A-R/G/Y/BL	
	C3SIL-F3-1C-R/G/Y/BL	

C3LIF



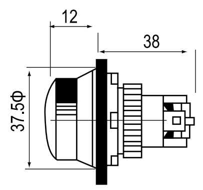
Color: RD GN YE BL WH

Function type	Product reference	Voltage
Standard type indicating lamp	C3LIF-R/G/Y/W/BL	12/24/36/48/110/220/380

C2、C3 Pushbutton Switch

Appearance and Dimension

C3LUF



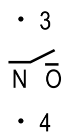
Function type	Product reference	Voltage
Circular type indicating lamp	C3LUF-R/G/Y/W/BL	12/24/36/48/110/220/380

Color: RD GN YE BL WH

Contact Blocks

C10VN

NO

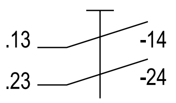


C01VN

NC

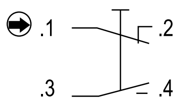
C20VN

NO+NO

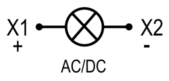


C11VN

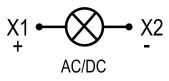
NO+NC



CPDNVS



CPDNVO



Push Button Accessories

C2、C3 Pushbutton Switch

CNTD

Model Number Structure

CBX [2] - [22]
① ②

① 1=1Holes, 2=2Holes, 3=3Holes, 4=4Holes, 5=5Holes,
② 22=22ф Caliber, 30=30ф Caliber

Appearance and Dimension

Model	Mounting Dimensions	External Dimension
	L x W	L x W x H
CBX1	53 x 38 mm	70 x 65 x 63 mm
CBX2	88 x 38 mm	100 x 65 x 63 mm
CBX3	128 x 38 mm	140 x 65 x 63 mm
CBX4	167 x 38 mm	180 x 65 x 63 mm
CBX5	206 x 38 mm	220 x 65 x 63 mm

CNTD®

D

Smart Meter Division

CTN4 Intelligent Temperature Controller

Features

- High-speed sampling
- AI artificial intelligence adjustment algorithm
- Dual PID heating and cooling intelligent adjustment
- AT automatic calculation function
- 16-bit MCU high-speed operation accuracy
- Dual digital display (PV / SV)
- High-speed sampling rate of 100ms and display accuracy of 0.5%
- SSR Drive output / Relay output / Current output optional
- Terminal type wiring method conducive to wiring and maintenance

Model Number Structure

C TN 4 S - 4 1 1 □ □ □

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩

Item	Code	Description
① Name of the company	C	CNTD
② Series	TE	Economical digital dual display PID temperature controller
	TN	Standard digital dual display PID temperature controller
	TZ	High precision digital dual display PID temperature controller
③ Digit	4	9999 (4 Digit)
④ Dimensions	S	48×48
	V	48×96
	M	72×72
	L	96×96
	H	96×48
⑤ Voltage supply	2	24VAC 50/60Hz, 24-48VDC
	4	Switch power supply(100-240V AC, 50HZ)
	A-Z	Custom power supply voltage
⑥ Control output	1	Relay
	2	Output
	3 □	Analog output: A: 0-20mA, 4-20mA, B: 0-5V, 1-5V
	4	Thyristor zero-crossing output
	5	Silicon controlled rectifier (5A)
	6	Relay output
	A-Z	A-Z letter combination represents other or custom control output modes

Item	Code	Description
⑦ Alarm output	1	Way relay
	2	Way relay
	3	1-way SSR
	4	1-way SSR
	A-Z	A-Z letter combination represents other or custom control output modes
⑧ Graduation	None	Thermocouple input K, E, J, L, T, R, S Thermal resistance input PT100, Cu50 (full function)
	A-Z	A-Z letter combination, representing other or customized alarm output
⑨ Transmission output	None	No such function
	T	With transmission output function
⑩ Graduation	None	No such function
	R	With RS485 communication function

Note 1: Analog output and transmission output cannot be selected at the same time;
Note 2: Due to the limited number of 48 * 48 ports, the model selection cannot be fully met. Please contact the manufacturer if necessary;
Note 3: For 48x48 size, if 485 communication is required in the control output option, only 1/2/3 can be selected, not choose 6.

CTN4 Intelligent Temperature Controller

CNTD

Electrical Specification

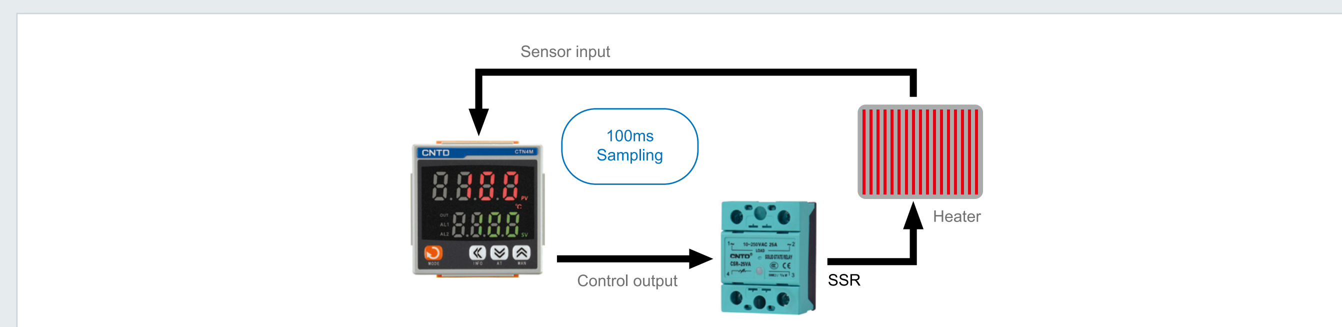
Rated voltage	100-240V AC, 50HZ
Power consumption	≤ 5VA
Rated voltage	Installation type Ⅱ, Pollution degree 2
Storage Temperature	-25°C -65°C (Avoid freezing)
Esolution power	1°C , 0.1°C (Adjustable)
Wiring method	Connecting terminal
Measuring accuracy	±0. 5%FS
Memory Protection	Non-volatile memory
Installation conditions	Installation type Ⅱ, Pollution degree 2
Relay output	Relay contact: AC220V/DC30V,3A
Logic level output	On: DC24V; Off: dc0 Below 5V; Maximum current: 30mA, load resistance ≥ 1K

Overall dimension

Model		Shell size (length, width and height)	Hole size
CTN4S	48x48	48x48x71	45x45
CTN4V	48x96	48x96x71	46x92
CTN4H	96x48	96x48x71	91x45
CTN4M	72x72	72x72x71	68x68
CTN4L	96x96	96x96x71	92x92

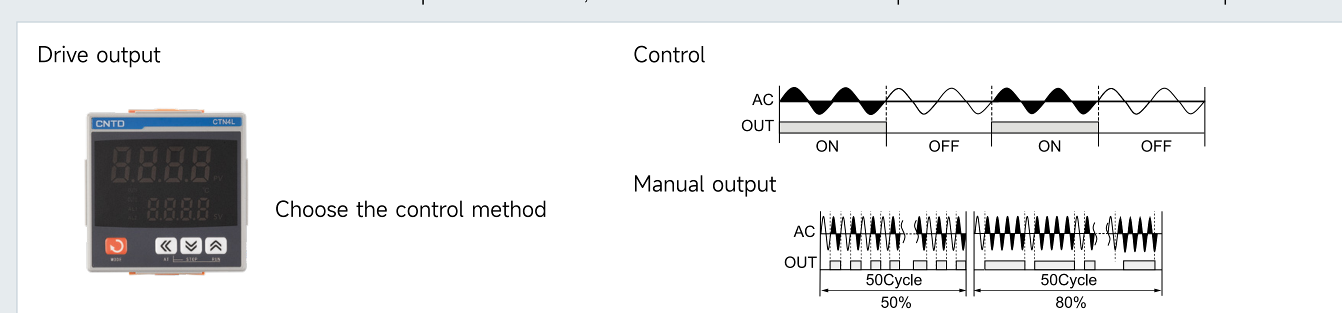
High speed sampling

100ms high-speed sampling rate enables precise temperature control in applications requiring fast response speed.



SSR drive output method

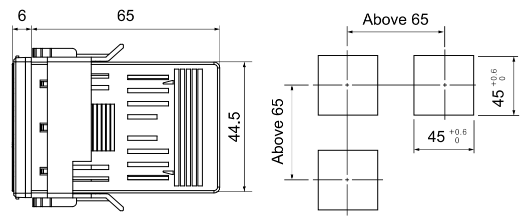
Users can choose SSR and RELAY drive output. On this basis, ON/OFF control and manual output are added to achieve ideal temperature control.



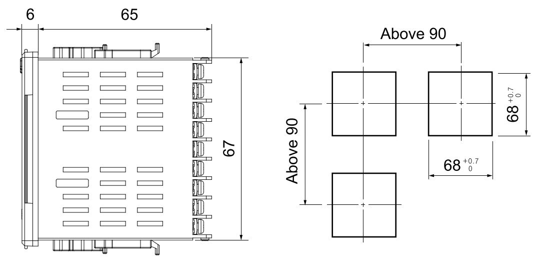
CTN4 Intelligent Temperature Controller

Appearance and Dimension

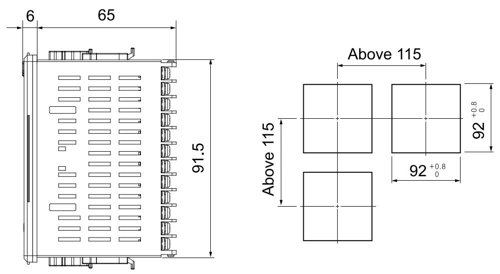
CTN4S
48×48mm



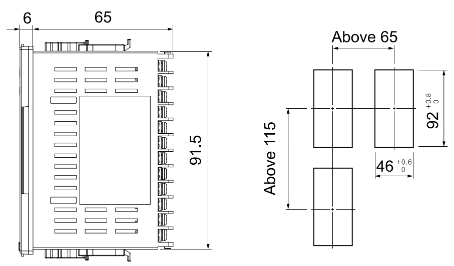
CTN4M
72×72mm



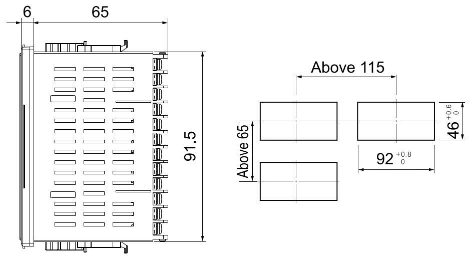
CTN4L
96×96mm



CTN4V
48×96mm



CTN4H
96×48mm



CTN4 Intelligent Temperature Controller

CNTD

First display (PV)
Display measured value
Display various prompts according to the instrument status

Second display(SV)
Display given value
Display various parameter according to the instrument status

Action directive
OUT: Heating indicator, light on when it is operating
ALM1: Deviation high-limit alarm, light on when it is alarming
ALM2: Deviation low-limit alarm, light on when it is alarming

Plus key
Increase the adjustment value
Manual mode access key
Menu parameter switch key

Minus key
Decrease the adjustment value
Auto-tuning state enter key
Menu parameter switch key

INFO key
Status information view enter key

Function key (Mode)
Main menu and submenu access key
Parameter modification and confirmation key

Please scan the QR code for detailed usage parameters

Application scenario

Printing machines

Ceramic machinery

Rubber Machinery

Packaging Machinery

Injection molding machine

Food Machinery

CME4 Modular Temperature Control Instrument

Overview

- The modular temperature control instrument is a special equipment for heating and cooling control launched by our company. It has the function of controlling multiple heating channels separately, and has the characteristics of high integration, accurate temperature control, compact size, and easy installation.It is widely used in packaging machinery, hot runner, production line and other occasions where temperature heating control is required.

Product selection

C ME 4 - 4 K 2 R - 3

① ② ③ ④ ⑤

① Company name	C	CNTD
② Series	ME	Standard modular thermostat
	MH	High-precision modular thermostat
③ Number of channels	1	Single channel
	2	Dual channel
	4	Four channels
	8	Eight channels
	12	Twelve channels
④ Power supply voltage	2	24V AC 50/60Hz，18-32VDC
	4	100-240V AC，50/60Hz
⑤ Temperature input	K	Thermocouple (K, E, J, L, T, R, S)
	P	Thermal resistance input (PT100, Cu50)
	A	4-20mA input
⑥ Control output	1	Relay
	2	SSR output
	A	0-20mA、4-20mA
	B	0-5V、1-5V
⑦ Communication	N	No communication output
	R	RS485 communication
⑧ Combination quick connection interface	None	No quick connection
	1	Quick connect input on the left
	2	Quick connect output on the right
	3	Left and right quick connection input and output

Features

- With multi-channel temperature control function, one module is equivalent to multiple temperature control meters, and the temperature control parameters of each channel are independent and do not affect each other.;
- Multi-channel intelligent temperature control algorithm, can achieve 4-channel accurate PID temperature control, can be widely used in a variety of heating models;
- With RS485 communication interface, standard modbus RTU communication protocol, easy to communicate with PLC or configuration screen, online monitoring of temperature data, real-time control by the host equipment;
- Modular structure design, optional multi-module splicing method, multiple temperature control modules are spliced through the side quick socket to achieve the effect of doubling the number of channels, multiple 4-channel modules can be spliced into 8-channel, 16-channel and more temperature control channels;
- The product has a high degree of integration and compact size. The rail-type installation method is suitable for installation places such as on-site control cabinets and power distribution cabinets.;

CME4 Modular Temperature Control Instrument

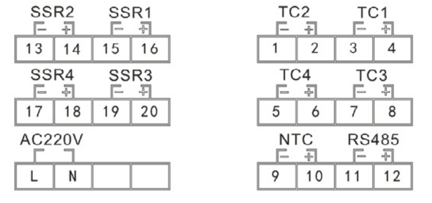
CNTD

Technical parameters

Rated voltage	100-240V AC，50Hz
Power consumption	≤5VA
Working environment	Ambient temperature: 0°C -50°C Relative humidity: 35%-85% (no condensation)
Storage temperature	-25°C -65°C (avoid freezing or condensation)
Resolution	1°C , 0.1°C (adjustable)
Wiring method	Terminal block
Detection accuracy	±0.5%FS
Memory protection	Non-volatile memory
Relay output (If the control output is a relay)	Relay contact AC220V/DC30V, 3A
Relay logic level output (If the control output is SSR)	When ON: DC12V; when OFF: below DC0.5V; Maximum current: 30mA, load resistance ≥ 1K
Thermocouple input type	K、E、J、L、T、R、S
Thermal resistance input type	PT100、Cu50

Wiring

Please refer to the wiring diagram on the side of the modular thermostat for the wiring method. The following is the explanation of the terms on the wiring diagram.:

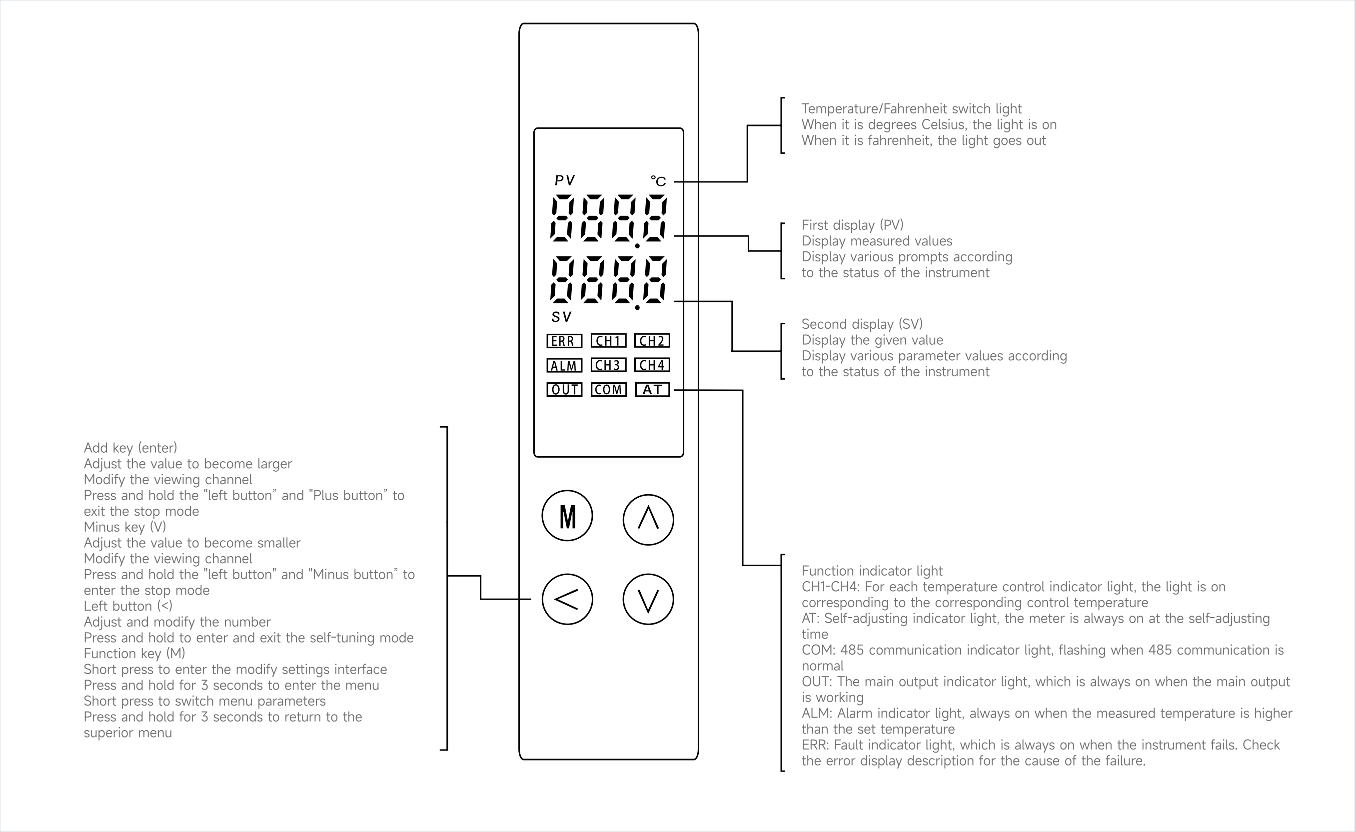


L、N	Thermostat AC220V power supply input interface, can not be divided into zero line, firewire
NTC	External cold terminal detection, can be connected to the included cold terminal resistor, the port does not distinguish between positive and negative.If the external cold terminal resistor is not connected, the internal cold terminal is automatically used
RS485	485 communication interface, you need to distinguish between positive and negative electrodes, A+, B-
TC1	The thermocouple input signal of channel 1, the positive and negative electrodes need to be distinguished
SSR1	The solid-state drive signal output of channel 1, the positive and negative electrodes need to be distinguished
AIN1	The analog input of channel 1, the default is 4-20mA signal, the positive and negative electrodes need to be distinguished
AOUT1	The analog output of channel 1, the default is 4-20mA signal, the positive and negative electrodes need to be distinguished

Note: TC1 is a channel 1 thermocouple, TC2 is a channel 2 thermocouple, and so on. SSR, AIN, and AOUT also follow this rule.

CME4 Modular Temperature Control Instrument

Control panel function description



ALM alarm parameter definition

Alarm code	Alarm form	Description
0	No alarm	No alarm output
1	Absolute upper limit alarm	Alarm when PV>ALUP
2	Alarm at the lower absolute value	Alarm when PV<ALDN
3	Deviation upper limit alarm	Alarm when PV>SV+ALUP
4	Alarm of the lower deviation limit	Alarm when PV<SV-ALDN
5	Alarm within the absolute value range	Alarm when PV<ALUP>PV>ALDN
6	Alarm outside the absolute value range	Alarm when PV>ALUP or PV<ALDN
7	Alarm within the deviation range	Alarm when PV<SV+ALUP and when PV>SV-ALDN
8	Alarm outside the deviation range	Alarm when PV>SV+ALUP or when PV<SV-ALDN
9	Absolute upper limit alarm (hold)	Alarm when PV>ALUP
10	Alarm at the lower absolute value (hold)	Alarm when PV<ALDN
11	Deviation upper limit alarm (hold)	Alarm when PV>SV+ALUP
12	Alarm of the lower limit of deviation (hold)	Alarm when PV<SV-ALDN

Note: "Hold" means power-on and power-on alarm elimination: If the thermostat is in an alarm state as soon as it is turned on, the alarm will not be carried out. The temperature control must be put into a normal state first, and the alarm condition will be reached again before the alarm will be carried out.

CME4 Modular Temperature Control Instrument

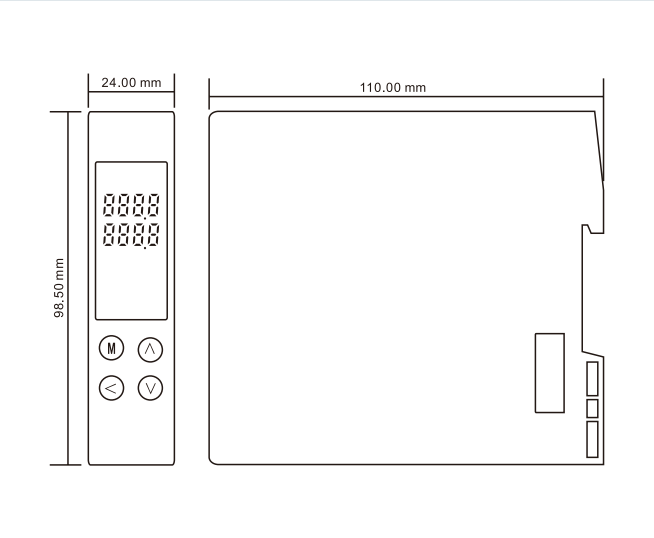
CNTD

Enter the indexing number type selection

	Input type	Symbol	Temperature measurement range
Thermocouple	K	inPK	-60-1200
	E	inPE	-60-950
	J	inPJ	-60-1150
	L	inPL	0-800
	T	inPt	-60-350
	R	inPr	0-1700
	S	inPS	0-1600

	Input type	Symbol	Temperature measurement range
Thermal resistance	PT100	Pt	-60-600
	CU	Cu	-60-150

Dimensional diagram



CTI Current Monitoring Module

Overview

- CTI series current monitoring module is a multi-channel AC current real-time monitoring and acquisition module. By collecting the signal waveform of a high-precision current transformer, the built-in 32-bit high-performance main control unit calculates the effective current value in real time, and can realize a variety of alarm logic according to user settings.Using RS-485 communication bus, data transmission is carried out through the standard MODBUS-RTU protocol.

Features

- Independent high-precision sampling of each channel;
- Has a variety of alarm logic judgment modes;
- Wide operating voltage, compatible with DC12-28V power supply;
- Sufficient threading spacing is reserved between the transformers to facilitate wiring maintenance;
- High-stability design, long-term operation without manual intervention;

Product selection

CTI - 8 RS - 100A

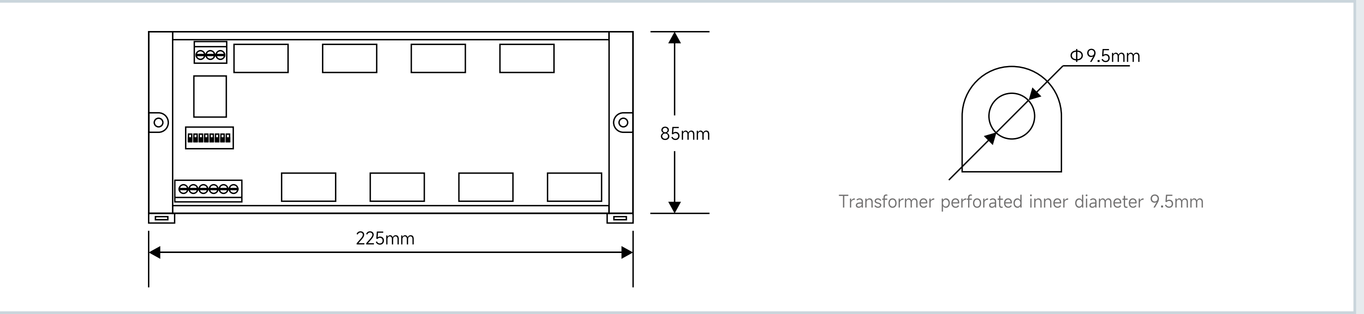
① ② ③

No	Item	Description
①	CTI	Current module
②	8	Number of current detection channels 4: Four-way 6: Six ways 8: Eight ways
③	100A	Upper range limit

Technical parameters

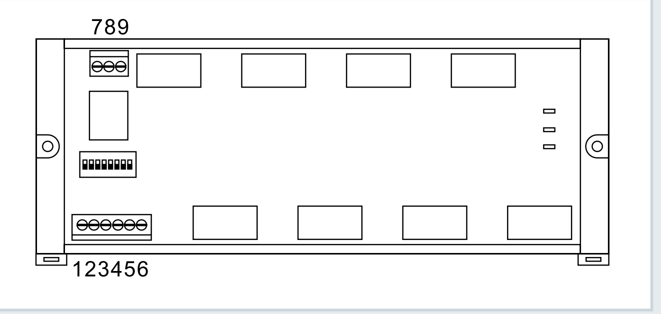
Supply voltage: DC12-28V	Power consumption: ≤1.5W
Working temperature: -20℃ ~ 50℃	Working humidity: 15%~90% (no condensation)
Detection resolution: 0.1A	Basic error: ±1%FS
Sampling period: 100ms	Overcurrent capacity: range 150%
Input signal: 9~30V	Relay contact: AC220V/DC30V, 3A
Range range: 50A, 100A	

Dimensions



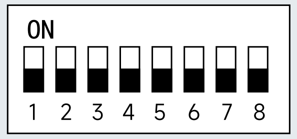
Terminal definition

Terminal 1: the positive electrode of the module's power supply
Terminal 2: Negative electrode of module power supply
Terminal 3: RS485+
Terminal 4: RS485-
Terminal 5: Input signal INA
Terminal 6: Input signal INB
Terminal 7: Normally closed terminal of relay
Terminal 8: Common terminal of relay
Terminal 9: Relay normally open



Note: The input signal is internally bidirectional optocoupler, as long as a 12V or 24V voltage is connected between INA and INB, there is no need to distinguish between positive and negative electrodes.

Dial code setting



The 8th bit of the dial code of the current monitoring module is used to select the communication parameters.
When the 8th dial code is set to ON, the communication baud rate is 9600, and 8N1 has no verification.At this time, the communication address is determined by dialing code 1-dialing code 7. We regard dialing code ON as a value of 1 and dialing code OFF as a value of 0.:
Mailing address = Dial code 1+ (dial code 2×2) + (dial code 3×4) + (dial code 4×8) + (dial code 5×16) + (dial code 6×32) + (dial code 7×64)
If the 8th bit dial code is set to OFF, the communication address, baud rate, parity bit and other parameters are determined by the registers 202, 203, and 204 (see register definition for details)
Note: After adjusting the communication parameters, the module needs to be restarted to take effect!

Indicator light description

There are three indicators on the right side of the module to identify the working status.
RUN: Running state, long light indicates that the alarm is allowed, and the alarm judgment is prohibited when the short flicker is on;
COM: Communication status, flashing during communication;
ALARM: Alarm status, there is an alarm for a long time to light up;

CDT6-A/B Single-Function Time Relay

Application

- Delay the connection or disconnection of the line, such as controlling the power-on time of the heating element, the working time of the water pump, and the delay disconnection of the fan.

Features

- Cost-effective, single-function time relay, the delay can be set directly through the panel knob, which is convenient and intuitive.
- 2 function modes are optional:
  A: Power-on delay
  B: Delay disconnection
- It has 1 set of delay, 2 sets of delay, 1 set of delay + 1 set of transient specifications are optional.
- Ultra-wide delay range, 0.1 seconds-10 days can be set (10 gears).
- It has AC/DC12V-240V ultra-wide operating voltage specifications to choose from.
- The working status of the relay is indicated by an LED indicator.
- Ultra-small size, only 18mm width, 35mm card rail installation.

Product selection

CDT6 - □ □ / □

① ② ③ ④

No	Item	Description
①	CDT6 series time relay	-
②	Delay function	A: Power-on delay; B: Delay disconnection;
③	Number of output contact groups	1: 1 set of conversion; 2: 2 sets of conversion; t: 1 set of delay + 1 set of transient
④	Rated operating power supply voltage	A220:AC230V; W240:AC/DC12V-240V;

CDT6-A/B Single-Function Time Relay

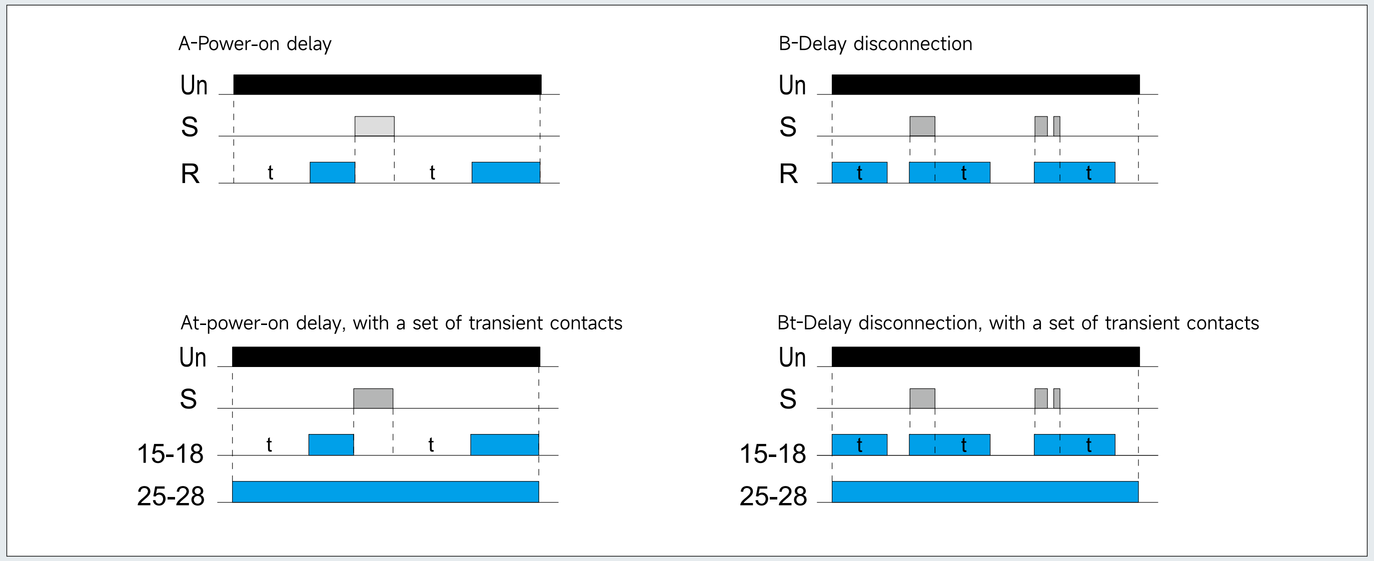
CNTD

Technical parameters

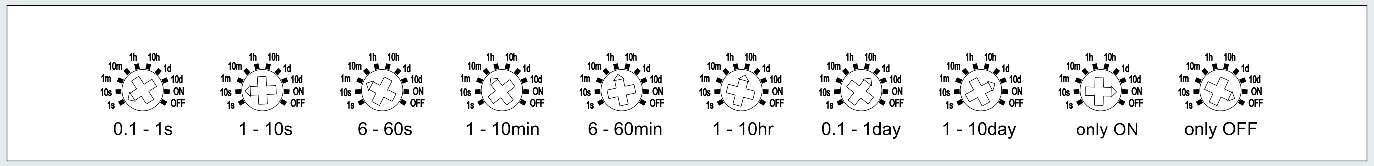
	CDT6-A1/B1	CDT6-A2/B2	CDT6-At/Bt
Function	Type A: power-on delay; type B: delay disconnection		
Power terminal	A1-A2		
Rated control power supply voltage	AC/DC 12-240V(50-60Hz)		
Power consumption	AC 0.09-3VA/DC 0.05-1.7W		
Rated control power supply voltage	AC 220V(50-60Hz)		
Power consumption	AC max.6VA/1.3W	AC max.6VA/1.9W	
Allowable fluctuation range of power supply	-15%;+10%		
Power indicator	Green LED		
Delay range	0.1 seconds-10 days, normally open, normally closed		
Setting method	knob		
Setting accuracy	10%		
Repeatability	0.2%		
Temperature fluctuation error	0.05%°C ,at=20°C		
Output contact parameters	1 set of conversions	2 sets of conversions	1 set of delay + 1 set of transient
	1×16A(AC1)	2×16A(AC1)	
	250VAC/24VDC		
Minimum switching power	500mW		
Output relay indication	Red LED		
Mechanical life	$1×10^7$		
Electrical life (resistive load)	$1×10^5$		
Reset time	Maximum 200ms		
Operating ambient temperature	-20°C ~+55°C		
Storage and transportation ambient temperature	-35°C ~+75°C		
Installation method	35mm Card rail installation		
Protection level	IP20		
Installation location	Arbitrary		
Installation altitude	≤ 2000m		
Pollution level	2		
Wiring ability	$1×2.5mm^2$ or $2×1.5mm^2$ 0.4N·m		
Dimensions	90mm×18mm×65mm		
Weight	67g	80g	
Meet the standard	GB/T 14048.5,IEC60947-5-1,EN 61812-1		

CDT6-A/B Single-Function Time Relay

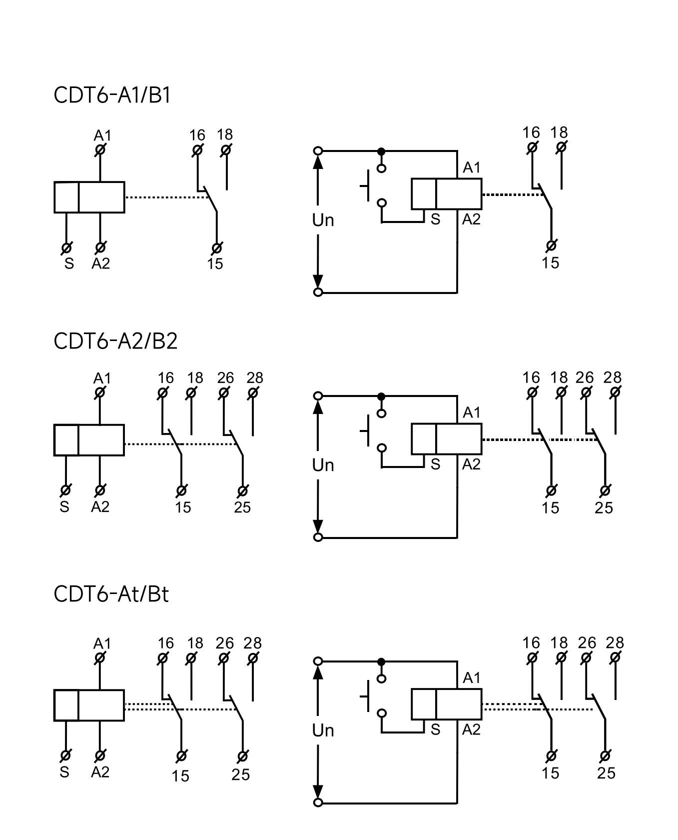
Function diagram



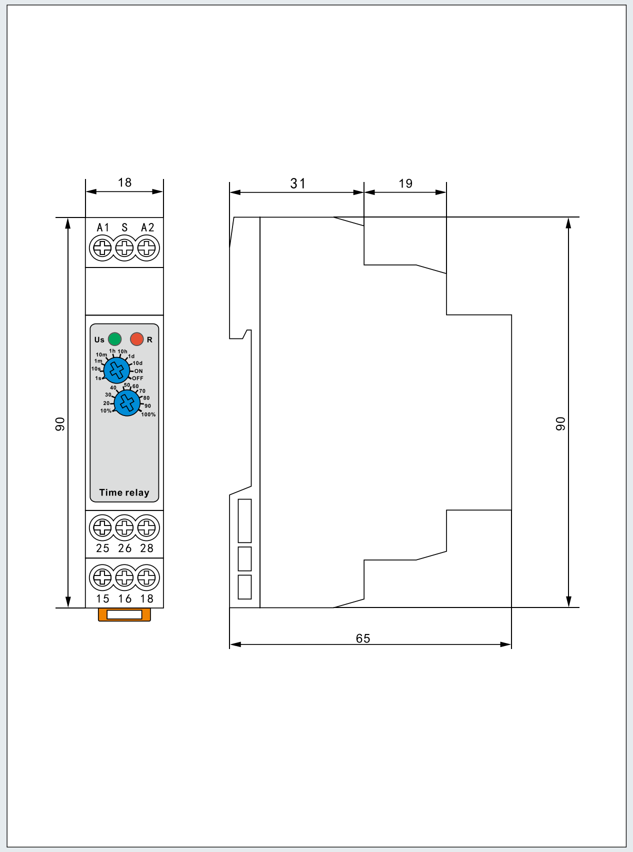
Delay setting



Wiring diagram



Shape and size (mm)



CDT6-M Multifunctional Time Relay

CNTD

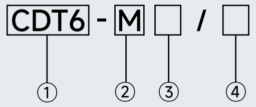
Application

- The multi-function time relay can be used for industrial equipment, lighting control, heating element control, motor, and fan control. It has 10 delay modes and the delay range covers 0.1 seconds to 10 days.

Features

- 10 kinds of delay modes:
  - -5 kinds of delay modes controlled by power supply
  - -4 delay modes controlled by signal
  - -1 pulse conversion modes
- Ultra-wide delay range, 0.1 seconds-10 days can be set (10 gears).
- It has AC/DC12V-240V ultra-wide operating voltage specifications to choose from.
- The working status of the relay is indicated by an LED indicator.
- Ultra-small size, only 18mm width, 35mm card rail installation.

产品选型 Product selection



No	Item	Description
①	CDT6 series time relay	-
②	Multifunctional time relay	-
③	Number of output contact groups	1: 1 group conversion; 2: 2 group conversion;
④	Rated operating power supply voltage	A220:AC230V; W240:AC/DC12V-240V;

CDT6-M Multifunctional Time Relay

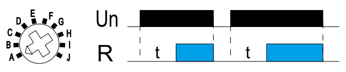
Technical parameters

	CDT6-M1	CDT6-M2
Function	A,B,C,D,E,F,G,H,I,J	
Power terminal	A1-A2	
Rated control power supply voltage	AC/DC 12-240V(50-60Hz)	
Power consumption	AC 0.09-3VA/DC 0.05-1.7W	
Rated control power supply voltage	AC 220V(50-60Hz)	
Rated control power supply voltage	AC max.6VA/1.3W	AC max.6VA/1.9W
Allowable fluctuation range of power supply	-15%;+10%	
Power indicator	Green LED	
Delay range	0.1 seconds-10 days, normally open, normally closed	
Setting method	knob	
Setting accuracy	10%	
Repeatability	0.2%	
Temperature fluctuation error	0.05%°C ,at=20°C	
Output contact parameters	1 set of conversions	2 sets of conversions
	1×16A(AC1)	2×16A(AC1)
	250VAC/24VDC	
Minimum switching power	500mW	
Output relay indication	Red LED	
Mechanical life	1×10^7	
Electrical life (resistive load)	1×10^5	
Reset time	Maximum 200ms	
Operating ambient temperature	-20°C ~+55°C	
Storage and transportation ambient temperature	-35°C ~+75°C	
Installation method	35mm Card rail installation	
Protection level	IP20	
Installation location	Arbitrary	
Installation altitude	≤ 2000m	
Pollution level	2	
Wiring ability	$1\times2.5mm^2$ or $2\times1.5mm^2$ 0.4N·m	
Dimensions	90mm×18mm×65mm	
Weight	67g	80g
Meet the standard	GB/T 14048.5,IEC60947-5-1,EN 61812-1	

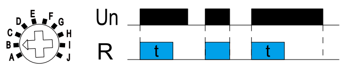
CDT6-M Multifunctional Time Relay

Function diagramw

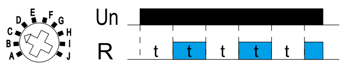
A: Power-on delay
When the relay Un gets power, the relay starts to delay, and the output contact is closed after the delay T.After the relay Un is powered off, the output contact is disconnected, and the S control signal is invalid in this functional mode.



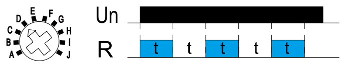
B: Delay disconnection
When the relay Un gets power, the output contacts of the relay are immediately closed and the delay begins. After the delay t, the output contacts are disconnected. If the delay time t does not reach the relay Un loses power, the output contacts are disconnected, and the S control signal is invalid in this functional mode.



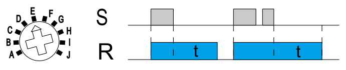
C: Cycle delay (START OFF)
When the relay Un gets power, the relay starts to delay, and the output contact is closed after the delay t, and at the same time, the relay output contact is disconnected after the delay time t, and so on. The cycle is delayed until the relay Un loses power, and the S control signal is invalid in this functional mode.



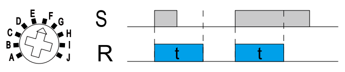
D: Cycle delay (ON start)
When the relay Un gets power, the relay is closed and the delay begins. After the delay t, the output contact is disconnected. At the same time, the relay output contact is closed after the delay time t, and so on. The cycle is delayed until the relay Un loses power, and the S control signal is invalid in this functional mode.



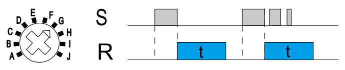
E: Delay disconnection (the falling edge of S triggers the start)
When the relay Un is in the energized state, when the S control terminal is turned on, the relay is closed, and when the S control terminal is disconnected, the relay starts to delay. After the delay t, the output contact is disconnected. During the delay t, the S control terminal is turned on again, and the delay t is cleared to re-delay.



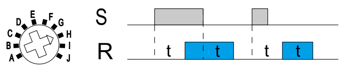
F: Delay disconnection (the rising edge of S triggers the start)
When the relay Un is in the energized state, when the S control terminal is turned on, the relay is closed. At the same time, the relay starts to delay. After the delay t, the output contact is disconnected. During the delay t, the S control terminal is turned on again, and the delay t remains unchanged. Continue to delay.



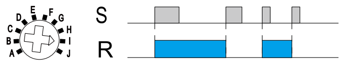
G: S falling edge triggers closure, delay disconnection
When the relay Un is in the energized state, when the S control terminal is disconnected, the relay is closed. At the same time, the relay starts to delay. After the delay t, the output contact is disconnected. During the delay t, the S control terminal is turned on and off again, and the delay t remains unchanged. Continue to delay.



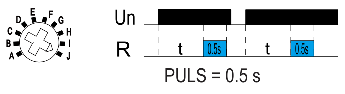
H: On-off delay
When the relay Un is in the energized state, when the S control terminal is turned on, the relay starts to delay, and the output contact is closed after the delay T. When the S control terminal is disconnected, the relay starts to delay, and the output contact is disconnected after the delay T.



I: Pulse conversion
When the relay Un is in the energized state, when the S control terminal is turned on, the state of the relay output contact transitions.

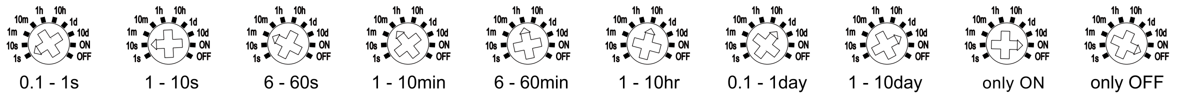


J: Pulse output
When the relay Un is powered up, the relay starts to delay. After the delay time t arrives, the relay output contact is closed for 0.5s and disconnected.

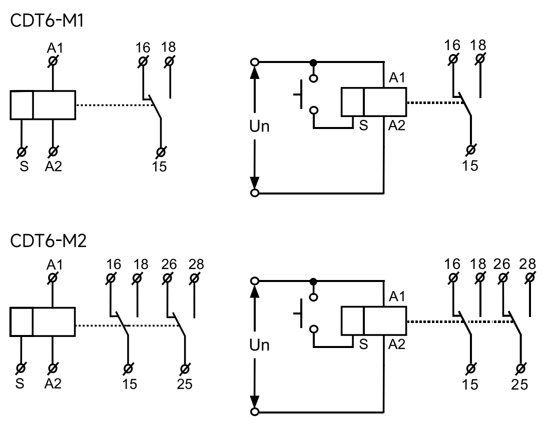


CDT6-M Multifunctional Time Relay

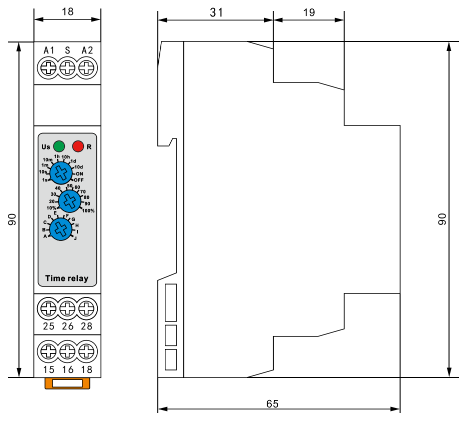
Delay setting



Wiring diagram



Shape and size (mm)



CDT6-EC Double Functional Time Relay

CNTD

Application

- The dual-function time relay can be used for industrial equipment, lighting control, heating element control, motor, and fan control. It has 2 delay modes, and the delay range covers 0.1 seconds to 10 days.

Features

- 2 delay modes can be set.
- At the same time, it supports two operating voltages, AC220V/DC24V.
- Ultra-wide delay range, 0.1 seconds-10 days can be set.
- The working status of the relay is indicated by an LED indicator.
- Ultra-small size, only 18mm width, 35mm card rail installation.

Product selection

CDT6 - EC / □

① ② ③

No	Item	Description
①	CDT6 series time relay	-
②	Dual-function economical time relay	-
③	Rated operating power supply voltage	A220:AC220V;

CDT6-EC Double Functional Time Relay

Technical parameters

	CDT6-EC
Function	Power-on delay, delay disconnection
Power terminal	A1-A2
Rated control power supply voltage	AC220V(50-60Hz),DC24V
Power consumption	AC 3VA/DC 0.5W
Allowable fluctuation range of power supply	-15%;+10%
Power indicator	Green LED
Delay range	0.1 seconds-10 days
Setting method	Dial code + knob setting
Setting accuracy	5%
Repeatability	0.2%
Temperature fluctuation error	0.05%/°C ,at=20°C
Output contact parameters	1 set of conversion contacts
	Ith: 10A;AC-15:Ue/Ie:250V/2.5A
Minimum switching power	500mW
Output relay indication	Red LED
Mechanical life	1×10^7
Electrical life (resistive load)	1×10^5
Reset time	Maximum 200ms
Operating ambient temperature	-20°C ~+55°C
Storage and transportation ambient temperature	-35°C ~+75°C
Installation method	35mm Card rail installation
Protection level	IP20
Installation location	Arbitrary
Installation altitude	≤ 2000m
Pollution level	2
Wiring ability	$1\times2.5mm^2$ or $2\times1.5mm^2$ 0.4N·m
Dimensions	90mm×18mm×65mm
Weight	67g
Meet the standard	GB/T 14048.5,IEC60947-5-1,EN 61812-1

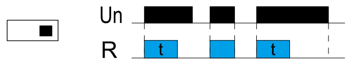
CDT6-EC Double Functional Time Relay

CNTD

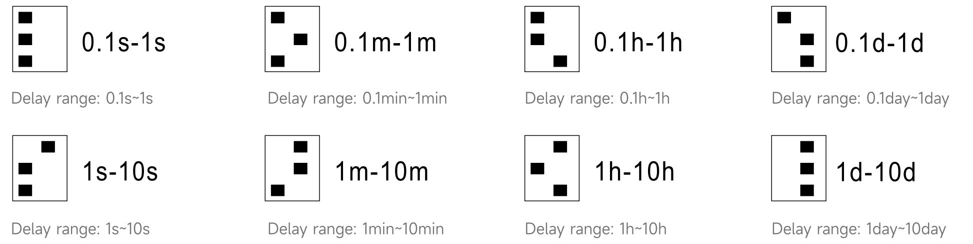
Function diagramw

When the relay Un gets power, the relay starts to delay, and the output contact is closed after the delay T.After the relay Un is powered off, the output contacts are disconnected.

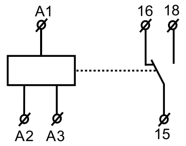
When the relay Un gets power, the output contacts of the relay are immediately closed and the delay begins. After the delay t, the output contacts are disconnected. If the delay time t does not reach the relay Un loses power, the output contacts are disconnected.



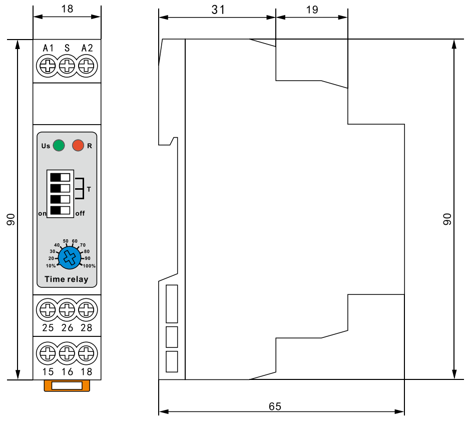
Delay setting



Wiring diagram



Shape and size (mm)



CDT6-K Digital Set Time Relay

Application

- The multi-function time relay with digital setting can be used for industrial equipment, lighting control, heating element control, motor, and fan control. It has 4 delay modes and the delay range covers 0.1 seconds to 99 hours.

Features

- 4 delay modes can be set.
- Through the digital dial code setting, the setting is more accurate.
- Ultra-wide delay range, 0.1 seconds-99 hours can be set.
- With AC/DC12V-240V ultra-wide operating voltage specifications are optional.
- The working status of the relay is indicated by the LED indicator.
- Ultra-small size, only 18mm width, 35mm card rail installation.

Model Designation

CDT6 - K □ / □

① ② ③ ④

No	Item	Description
①	CDT6 series time relay	-
②	Digital set time relay	-
③	Number of output contact groups	1: 1 group conversion; 2: 2 group conversion;
④	Rated operating power supply voltage	A220:AC230V; W240:AC/DC12V-240V;

CDT6-K Digital Set Time Relay

CNTD

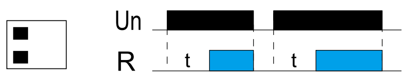
Technical parameters

	CDT6-K1	CDT6-K2
Function	A,B,E,F	
Power terminal	A1-A2	
Rated control power supply voltage	AC/DC 12-240V(50-60Hz)	
Power consumption	AC 0.09-3VA/DC 0.05-1.7W	
Rated control power supply voltage	AC 220V(50-60Hz)	
Power consumption	AC max.6VA/1.3W	AC max.6VA/1.9W
Allowable fluctuation range of power supply	-15%;+10%	
Power indicator	Green LED	
Delay range	0.1 seconds-99 hours, normally open, normally closed	
Setting method	Digital dial code setting	
Setting accuracy	1%	
Repeatability	0.2%	
Temperature fluctuation error	0.05%/°C ,at=20°C	
Output contact parameters	1 set of conversion contacts	2 sets of conversion contacts
	1×16A(AC1)	2×8A(AC1)
	250VAC/24VDC	
Minimum switching power	500mW	
Output relay indication	Red LED	
Mechanical life	1×10^{7}	
Electrical life (resistive load)	1×10^{5}	
Reset time	Maximum 200ms	
Operating ambient temperature	-20°C ~+55°C	
Storage and transportation ambient temperature	-35°C ~+75°C	
Installation method	35 mm card rail installation	
Protection level	IP20	
Installation location	Arbitrary	
Installation altitude	≤ 2000m	
Pollution level	2	
Wiring ability	$1\times2.5mm^2$ or $2\times1.5mm^2$ 0.4N·m	
Dimensions	90mm×18mm×65mm	
Weight	67g	80g
Meet the standard	GB/T 14048.5,IEC60947-5-1,EN 61812-1	

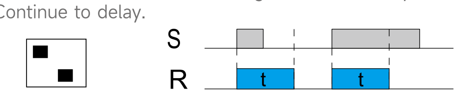
CDT6-K Digital Set Time Relay

Function diagramw

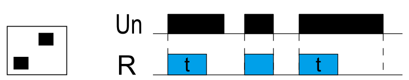
A: Power-on delay
When the relay Un gets power, the relay starts to delay, and the output contact is closed after the delay T.After the relay Un is powered off, the output contact is disconnected, and the S control signal is invalid in this functional mode.



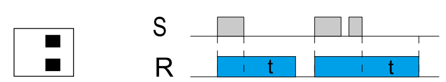
F: Delay disconnection (the rising edge of S triggers the start)
When the relay Un is in the energized state, when the S control terminal is turned on, the relay is closed. At the same time, the relay starts to delay. After the delay t, the output contact is disconnected. During the delay t, the S control terminal is turned on again, and the delay t remains unchanged. Continue to delay.



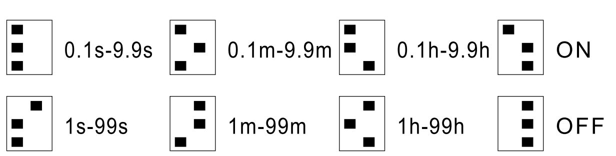
B: Delay disconnection
When the relay Un gets power, the output contacts of the relay are immediately closed and the delay begins. After the delay t, the output contacts are disconnected. If the delay time t does not reach the relay Un loses power, the output contacts are disconnected, and the S control signal is invalid in this functional mode.



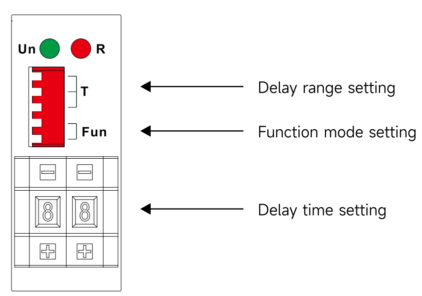
E: Delay disconnection (the falling edge of S triggers the start)
When the relay Un is in the energized state, when the S control terminal is turned on, the relay is closed, and when the S control terminal is disconnected, the relay starts to delay. After the delay t, the output contact is disconnected. During the delay t, the S control terminal is turned on again, and the delay t is cleared to re-delay.



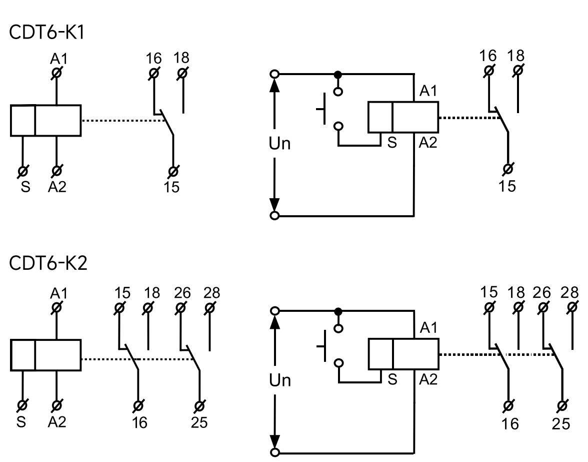
Delay setting



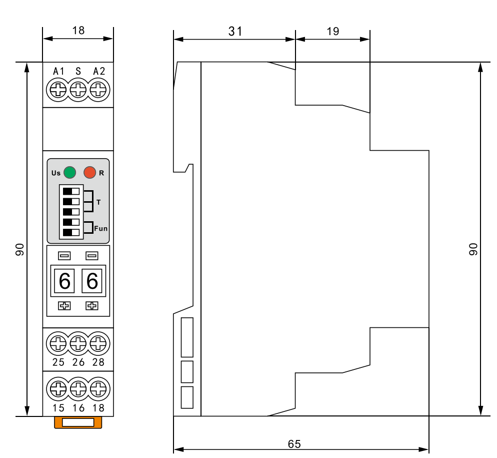
Panel diagram



Wiring diagram



Shape and size (mm)



CDT6-X Digital Display Time Relay

CNTD

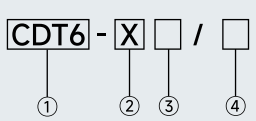
Application

- The multi-function time relay can be used for industrial equipment, lighting control, heating element control, motor, and fan control. It has 20 delay modes, and the delay range covers 0.1 seconds to 99 days.

Features

- 20 kinds of delay modes:
  - -5 kinds of delay modes controlled by power supply
  - -13 delay modes controlled by signal
  - -ON, OFF mode
- Ultra-wide delay range, 0.1 seconds-99 days can be set.
- It has an ultra-wide operating voltage of AC/DC 12V-240V.
- The working status of the relay is indicated by an LED indicator.
- The ultra-small size is only 18mm wide, and the 35mm card rail is installed.

Product selection



No	Item	Description
①	CDT6 series time relay	-
②	Multifunctional digital display time relay	-
③	Number of output contact groups	1: 1 group conversion; 2: 2 group conversion
④	Rated operating power supply voltage	W240:AC/DC24V-240V A220:AC220V

CDT6-X Digital Display Time Relay

Technical parameters

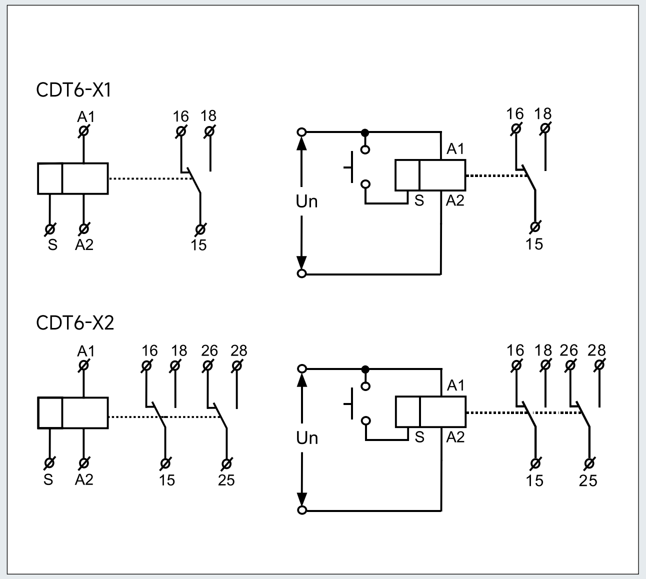
	CDT6-X1	CDT6-X2
Function	20 functional modes	
Power terminal	A1-A2	
Rated control power supply voltage	AC/DC 24-240V 50Hz	
Power consumption	AC 0.09-3VA/DC 0.05-1.7W	
Rated control power supply voltage	AC 220V 50Hz	
Power consumption	AC max.6VA/1.3W	AC max.6VA/1.9W
Allowable fluctuation range of power supply	-15%;+10%	
Rated impact withstand voltage	2.5kV	
Rated insulation voltage	250V	
Power indicator	Green LED	
Delay range	0.1 seconds - 99 days	
Setting method	Button setting	
Setting accuracy	2%	
Repeatability	0.2%	
Temperature fluctuation error	0.05%/°C ,at=20°C	
Output contact parameters	1 set of conversion contacts	2 sets of conversion contacts
	Ith:16A;AC-15:Ue/Ie:250V/5A	
Minimum switching power	500mW	
Output relay indication	Red LED	
Mechanical life	1×10^7	
Electrical life (resistive load)	1×10^5	
Reset time	Maximum 200ms	
Operating ambient temperature	-20°C ~+55°C	
Storage and transportation ambient temperature	-35°C ~+75°C	
Installation method	35mm card rail installation	
Protection level	IP20	
Installation location	Arbitrary	
Installation altitude	≤ 2000m	
Installation altitude	2	
Wiring ability	$1\times2.5mm^2$ or $2\times1.5mm^2$ 0.4N·m	
Dimensions	90mm×18mm×65mm	
Weight	67g	80g
Meet the standard	GB/T 14048.5,IEC60947-5-1,EN 61812-1	

CDT6-X Digital Display Time Relay

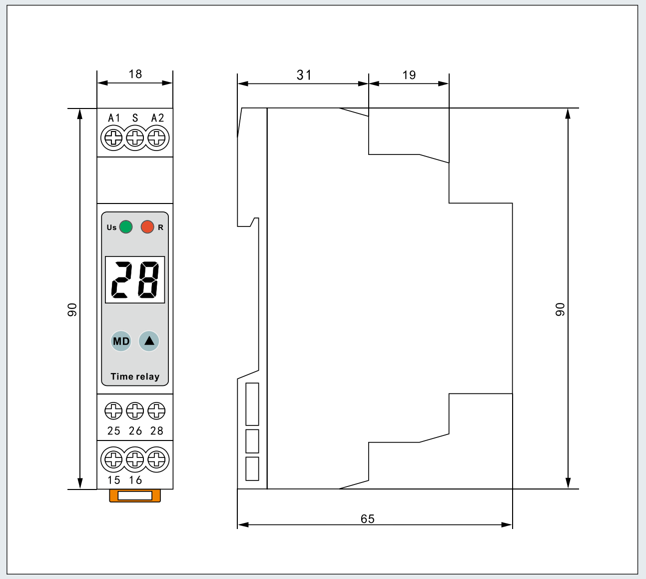
CNTD

Function diagramw

Wiring diagram



Shape and size (mm)



CDT6-2T Dual Delay Type Time Relay

Application

- The dual delay time relay can set 2 sets of power-on delay time, which can be used for time-sharing input of heavy loads to prevent the peak current of the main loop from being too large.
- 2 time relays can be replaced in specific applications to save costs.

Features

- 2 sets of power-on delay settings can be set separately.
- Ultra-wide delay range, 0.1 seconds-10 days can be set (10 gears).
- It has AC/DC12V-240V ultra-wide operating voltage specifications to choose from.
- The working status of the relay is indicated by an LED indicator.
- Ultra-small size, only 18mm width, 35mm card rail installation.

Model Designation

CDT6 - 2T / □

① ② ③

No	Item	Description
①	CDT6 series time relay	-
②	Dual delay type time relay	-
③	Rated operating power supply voltage	A220:AC230V; W240:AC/DC12V-240V;

CDT6-2T Dual Delay Type Time Relay

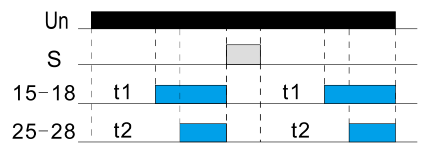
CNTD

Technical parameters

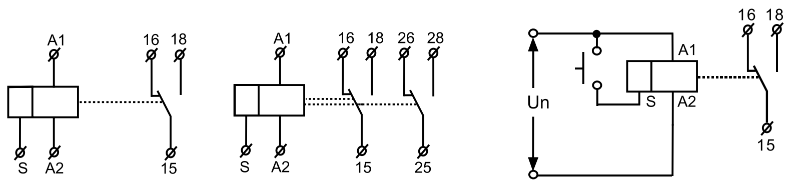
	CDT6-2T
Function	Dual-set power-on delay
Power terminal	A1-A2
Rated control power supply voltage	AC/DC 12-240V(50-60Hz)
Power consumption	AC 0.09-3VA/DC 0.05-1.7W
Rated control power supply voltage	AC 0.09-3VA/DC 0.05-1.7W
Power consumption	AC max.6VA/1.9W
Allowable fluctuation range of power supply	-15%;+10%
Power indicator	Green LED
Delay range	0.1 seconds-10 days, normally open, normally closed
Setting method	knob
Setting accuracy	10%
Repeatability	0.2%
Temperature fluctuation error	0.05%/°C ,at=20°C (0.05%° F, at=68° F)
Output contact parameters	2 sets of conversion contacts
	16A/AC1
	250VAC/24VDC
Minimum switching power	500mW
Output relay indication	Red LED
Mechanical life	$1×10^7$
Electrical life (resistive load)	$1×10^5$
Reset time	Maximum 200ms
Operating ambient temperature	-20°C ~+55°C
Storage and transportation ambient temperature	-35°C ~+75°C
Installation method	35 mm card rail installation
Protection level	IP20
Installation location	Arbitrary
Installation altitude	≤ 2000m
Pollution level	2
Wiring ability	$1×2.5mm^2$ or $2×1.5mm^2$ 0.4N·m
Dimensions	90mm×18mm×65mm
Weight	80g
Meet the standard	GB/T 14048.5,IEC60947-5-1,EN 61812-1

CDT6-2T Dual Delay Type Time Relay

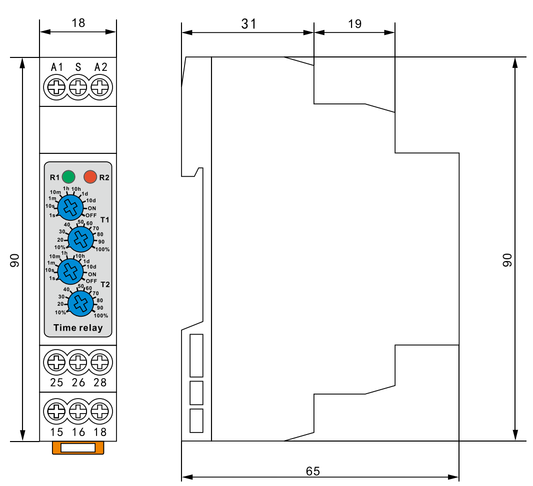
Function diagramw



Wiring diagram



Shape and size (mm)



CDT6-S Cycle Delay Type Time Relay

CNTD

Application

- It is used for cycle delay control, periodic power-on, lighting control, and heating control of an electrical circuit.

Features

- There are separate delay settings for ON and OFF, and different delay times can be set.
- Ultra-wide delay range, 0.1 seconds-100 days can be set (10 gears).
- Different working modes can be switched by shorting S-A1.
- It has AC/DC 12V-240V ultra-wide operating voltage specifications to choose from.
- The working status of the relay is indicated by an LED indicator.
- Ultra-small size, only 18mm width, 35mm card rail installation.

Product selection

CDT6 - S □ / □

① ② ③ ④

No	Item	Description
①	CDT6 series time relay	-
②	Cycle delay type time relay	-
③	Number of output contact groups	1: 1 group conversion 2: 2 groups of conversion
④	Rated operating power supply voltage	A220:AC230V; W240:AC/DC12V-240V;

CDT6-S Cycle Delay Type Time Relay

Technical parameters

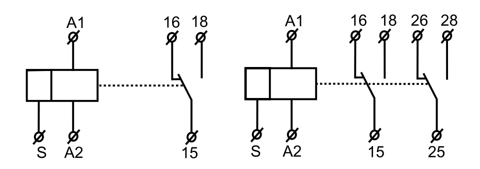
	CDT6-S1	CDT6-S2
Function	Cycle delay	
Power terminal	A1-A2	
Rated control power supply voltage	AC/DC 12-240V(50-60Hz)	
Power consumption	AC 0.09-3VA/DC 0.05-1.7W	
Rated control power supply voltage	AC 220V(50-60Hz)	
Power consumption	AC max.6VA/1.3W	AC max.6VA/1.9W
Allowable fluctuation range of power supply	-15%;+10%	
Power indicator	Green LED	
Delay range	0.1 seconds - 100 days	
Setting method	knob	
Setting accuracy	10%	
Repeatability	0.2%	
Temperature fluctuation error	0.05%/°C ,at=20°C (0.05%° F, at=68° F)	
Output contact parameters	1 set of conversion contacts	2 sets of conversion contacts
	1×16A(AC1)	2×16A(AC1)
	250VAC/24VDC	
Minimum switching power	500mW	
Output relay indication	Red LED	
Mechanical life	1×10^7	
Electrical life (resistive load)	1×10^5	
Reset time	Maximum 200ms	
Operating ambient temperature	-20°C ~+55°C	
Storage and transportation ambient temperature	-35°C ~+75°C	
Installation method	35mm card rail installation	
Protection level	IP20	
Installation location	Arbitrary	
Installation altitude	≤ 2000m	
Pollution level	2	
Wiring ability	$1\times2.5mm^2$ or $2\times1.5mm^2$ 0.4N·m	
Dimensions	90mm×18mm×65mm	
Weight	67g	80g
Meet the standard	GB/T 14048.5,IEC60947-5-1,EN 61812-1	

CDT6-S Cycle Delay Type Time Relay

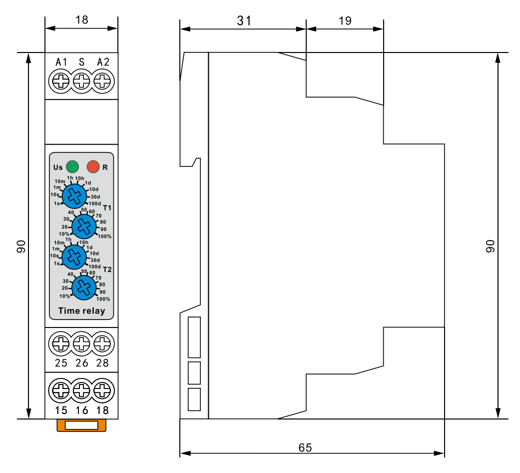
CNTD

Function diagramw

Wiring diagram



Shape and size (mm)



CDT6-P Delay Pulse Type Time Relay

Application

- It is used to delay and generate a pulse, which is used to delay a certain load for a period of time.

Features

- Separate delay time and pulse width settings, different delay times can be set.
- Ultra-wide delay range, 0.1 seconds-100 days can be set (10 gears).
- The delay time can be reset by shorting S-A1.
- It has AC/DC 12V-240V ultra-wide operating voltage specifications to choose from.
- The working status of the relay is indicated by an LED indicator.
- Ultra-small size, only 18mm width, 35mm card rail installation.

Model Designation

CDT6 - P □ / □
① ② ③ ④

No	Item	Description
①	CDT6 series time relay	-
②	Delay pulse type time relay	-
③	Number of output contact groups	1: 1 group conversion; 2: 2 group conversion;
④	Rated operating power supply voltage	A220:AC230V; W240:AC/DC12V-240V;

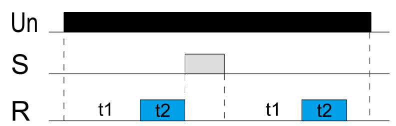
CDT6-P Delay Pulse Type Time Relay CNTD

Technical parameters

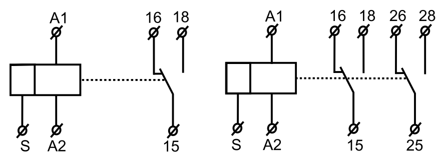
	CDT6-P1	CDT6-P2
Function	Delay pulse output	
Power terminal	A1-A2	
Rated control power supply voltage	AC/DC 12-240V(50-60Hz)	
Power consumption	AC 0.09-3VA/DC 0.05-1.7W	
Rated control power supply voltage	AC 220V(50-60Hz)	
Power consumption	AC max.6VA/1.3W	AC max.6VA/1.9W
Allowable fluctuation range of power supply	-15%;+10%	
Power indicator	Green LED	
Delay range	0.1 seconds - 100 days	
Setting method	knob	
Setting accuracy	10%	
Repeatability	0.2%	
Temperature fluctuation error	0.05%/°C ,at=20°C (0.05%° F, at=68° F)	
Output contact parameters	1 set of conversion contacts	2 sets of conversion contacts
	1×16A(AC1)	2×16A(AC1)
	250VAC/24VDC	
Minimum switching power	500mW	
Output relay indication	Red LED	
Mechanical life	1×10^7	
Electrical life (resistive load)	1×10^5	
Reset time	Maximum 200ms	
Operating ambient temperature	-20°C ~+55°C	
Storage and transportation ambient temperature	-35°C ~+75°C	
Installation method	35 mm card rail installation	
Protection level	IP20	
Installation location	Arbitrary	
Installation altitude	≤ 2000m	
Pollution level	2	
Wiring ability	$1\times2.5mm^2$ or $2\times1.5mm^2$ 0.4N·m	
Dimensions	90mm×18mm×65mm	
Weight	67g	80g
Meet the standard	GB/T 14048.5,IEC60947-5-1,EN 61812-1	

CDT6-P Delay Pulse Type Time Relay

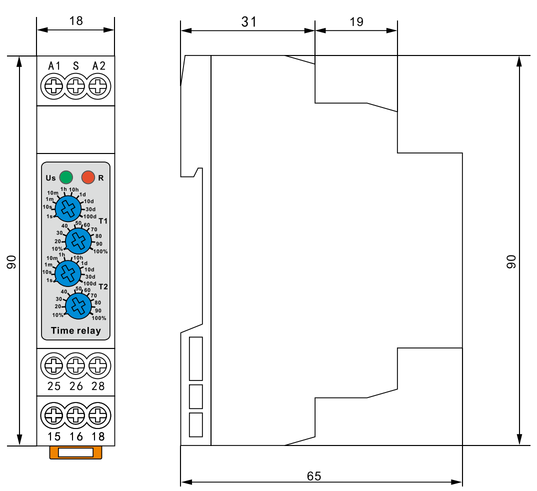
Function diagramw



Wiring diagram



Shape and size (mm)



CDT6-ST Star Triangle Start Time Relay

CNTD

Application

- It is specially used for motor star triangle start-up control, which can greatly simplify the electrical circuit, facilitate wiring and reduce costs.

Features

- t1: The start-up delay range of 0.1s-10min can be set (knob setting).
- t2: The conversion time is 0.1s-1s can be set (knob setting).
- With AC220, AC380, AC/DC12V-240V ultra-wide operating
- voltage specifications are optional.
- The working status of the relay is indicated by an LED indicator.
- Ultra-small size, only 18mm width, 35mm card rail installation.

Product selection

CDT6 - ST / □

① ② ③

No	Item	Description
①	CDT6 series time relay	-
②	Star Triangle start time relay	-
③	Rated operating power supply voltage	A220:AC230V; A380:AC380V; W240:AC/DC12V-240V;

CDT6-ST Star Triangle Start Time Relay

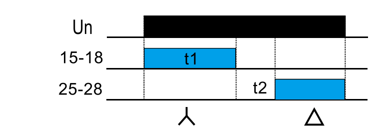
Technical parameters

	CDT6-ST
Function	Star Triangle start delay
Power terminal	A1-A2
Rated control power supply voltage	AC/DC 12-240V(50-60Hz)
Power consumption	AC 0.3-2VA/DC 0.1-1.2W
Rated control power supply voltage	AC 220V,AC 380V(50-60Hz)
Power consumption	AC max.6VA/1.3W
Allowable fluctuation range of power supply	-15%+10%
Power indicator	Green LED
Delay range	Start-up delay: 0.1 seconds-10 minutes, conversion delay: 0.1s-1s
Setting method	knob
Setting accuracy	10%
Repeatability	0.2%
Temperature fluctuation error	0.05%/°C ,at=20°C (0.05%° F, at=68° F)
Output contact parameters	2 sets of conversion contacts
	16A/AC1
	250VAC/24VDC
Minimum switching power	500mW
Output relay indication	Red LED
Mechanical life	$1×10^7$
Electrical life (resistive load)	$1×10^5$
Reset time	Maximum 200ms
Operating ambient temperature	-20°C ~+55°C
Storage and transportation ambient temperature	-35°C ~+75°C
Installation method	35mm card rail installation
Protection level	IP20
Installation location	Arbitrary
Installation altitude	≤ 2000m
Pollution level	2
Wiring ability	1×2.5mm^2 or 2×1.5mm^2 0.4N·m
Dimensions	90mm×18mm×65mm
Weight	80g
Meet the standard	GB/T 14048.5,IEC60947-5-1,EN 61812-1

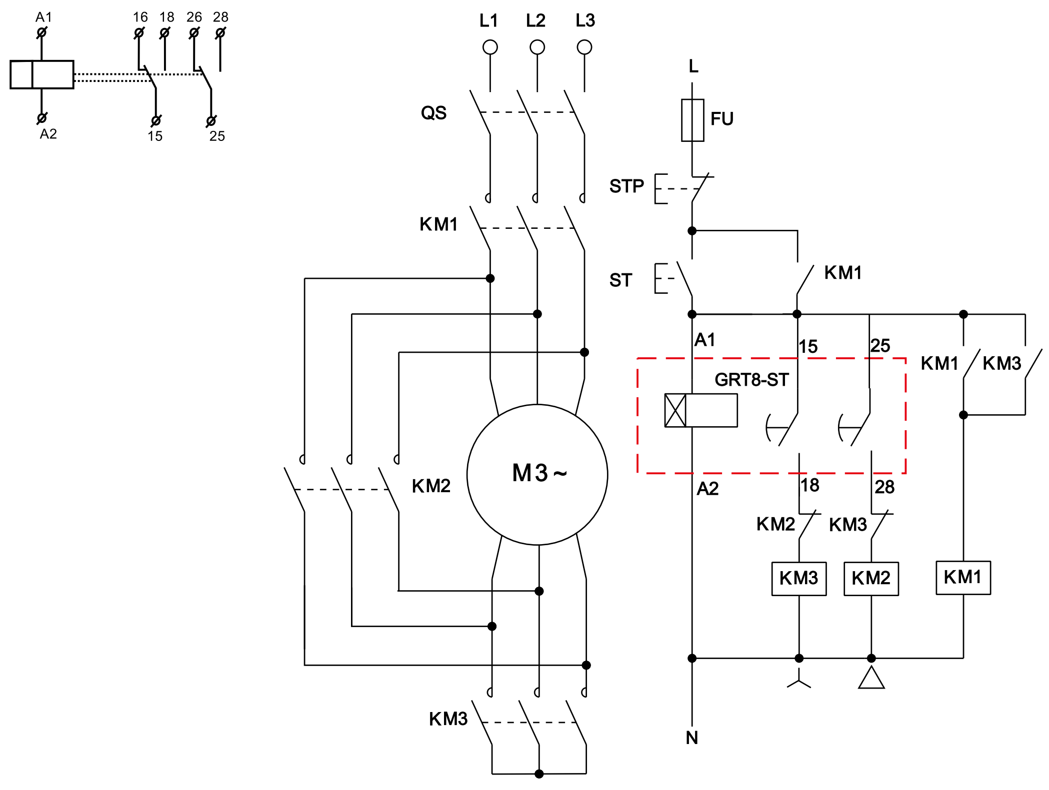
CDT6-ST Star Triangle Start Time Relay

CNTD

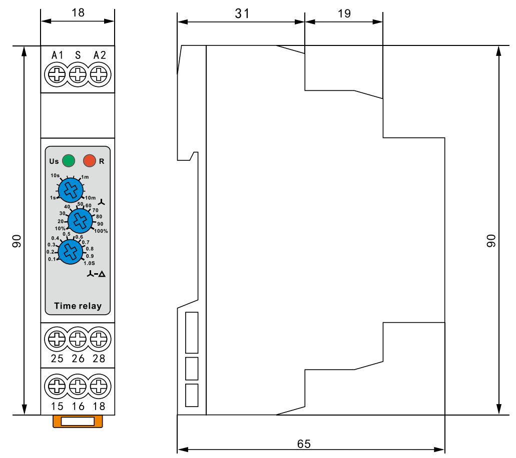
Function diagramw



Wiring diagram



Shape and size (mm)



CDV6 Single-Phase Voltage Monitoring Relay

Application

- It is used for overvoltage protection of electrical equipment or compressors.
- Switching control of emergency/backup power supply.

Features

- Monitor its own operating voltage (true RMS measurement)
- The working mode can be selected through the knob.
- The voltage measurement accuracy is ≤1%.
- The working status of the relay is indicated by an LED indicator.
- Ultra-small size, only 18mm width, 35mm card rail installation.

Model Designation

CDV6 - □ / □

① ② ③

No	Item	Description
①	CDV6 series voltage monitoring relay	-
②	Delay pulse type time relay	01: Overvoltage/undervoltage is selected by knob 02: It has both overvoltage and undervoltage functions
③	Rated supply voltage	see below

Code name	Rated supply voltage	Limit operating voltage	Set voltage range
D12	DC 12V	DC 7...20V	DC 9...15V
AD48	AC/DC 24...48V	AC/DC 15...270V	AC/DC 20...80V
AD240	AC/DC 110...240V	AC/DC 50...270V	AC/DC 65...260V
A220	AC 220V	AC 160...270V	AC 180...260V

CDV6 Single-Phase Voltage Monitoring Relay

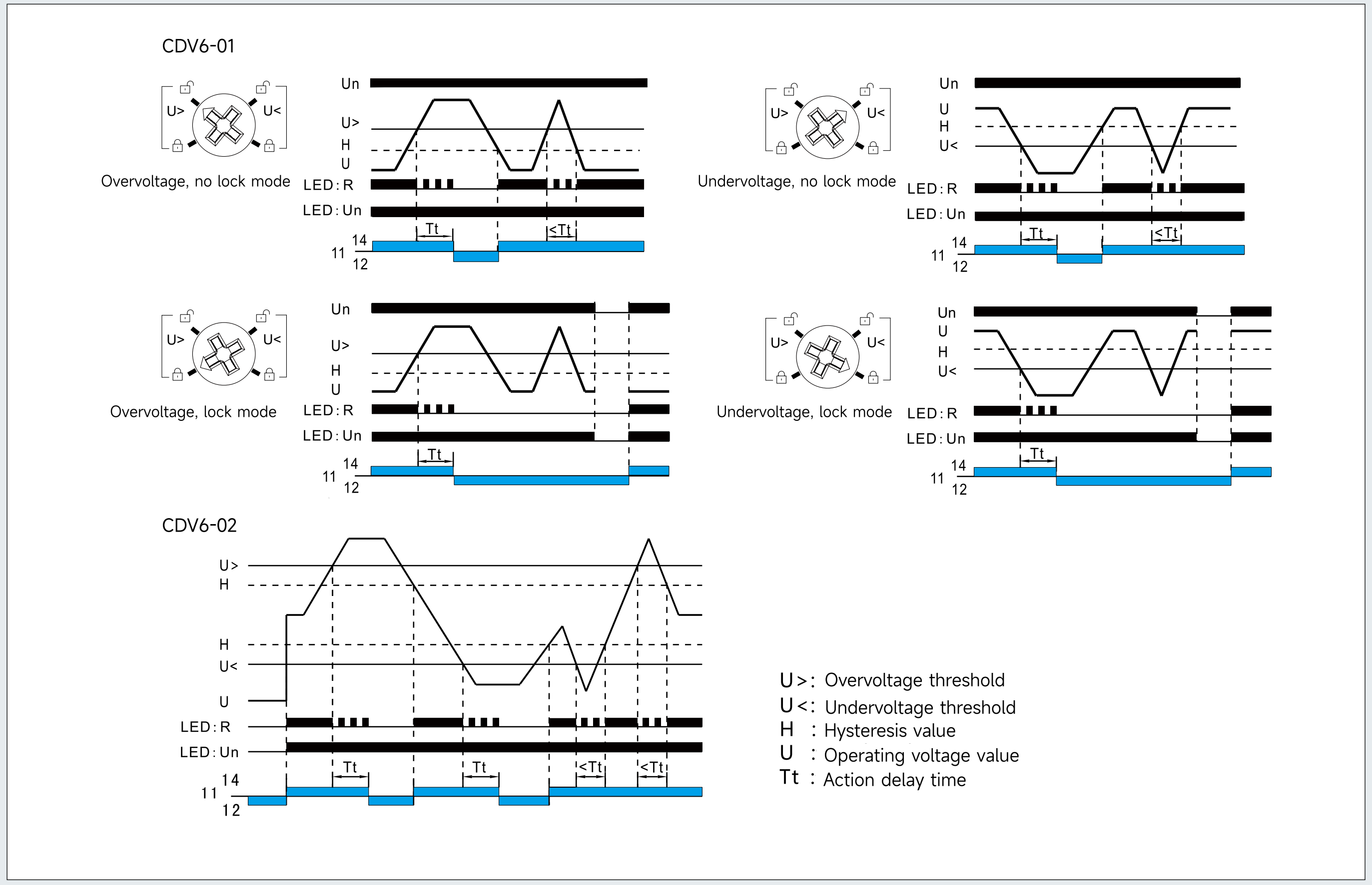
CNTD

Technical parameters

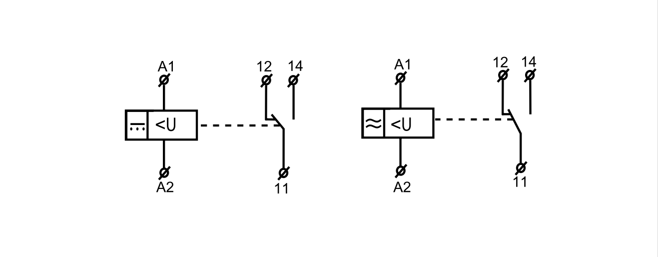
	CDV6-01	CDV6-02
Function	Voltage monitoring	
Power terminal (monitoring terminal)	A1(+)-A2(-)	
Rated supply voltage	DC12V,AC/DC24V-48V,AC/DC110V-240V,AC220V	
Rated power frequency	45Hz-65Hz,0	
Rated insulation voltage	460V	
Hysteresis value	5%-20%	3% fixed
Power indicator	Green LED	
Action delay time	0.1s-10s,10%	
Voltage measurement error	≤ 1%	
Power-on delay time	0.5s	
Knob setting accuracy	10%	
Reset time	1s	
Temperature fluctuation error	0.05%/°C ,at=20°C	
Output	1×SPDT	
	10A/AC1	
	250VAC/24VDC	
Minimum switching power	500mW	
Output relay indication	Red LED	
Mechanical life	1×10^7	
Electrical life (resistive load)	1×10^5	
Operating ambient temperature	-20°C ~+55°C	
Storage and transportation ambient temperature	-35°C ~+75°C	
Installation method	35mm card rail installation	
Protection level	IP20	
Installation location	Arbitrary	
Installation altitude	≤ 2000m	
Pollution level	2	
Wiring ability	$1\times2.5mm^2$ or $2\times1.5mm^2$ 0.8N·m	
Dimensions	90mm×18mm×65mm	
Weight	67g	
Meet the standard	GB/T 14048.5,IEC60947-5-1,EN 60255-1	

CDV6 Single-Phase Voltage Monitoring Relay

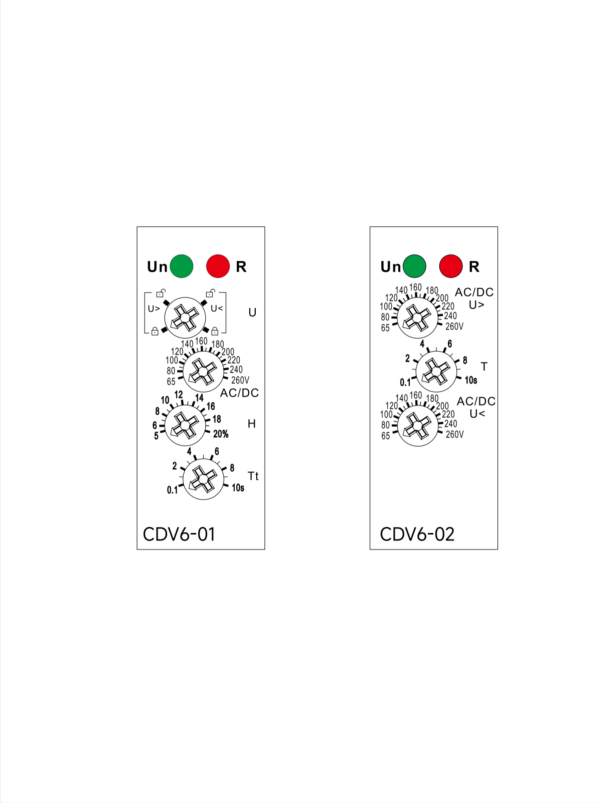
Function diagramw



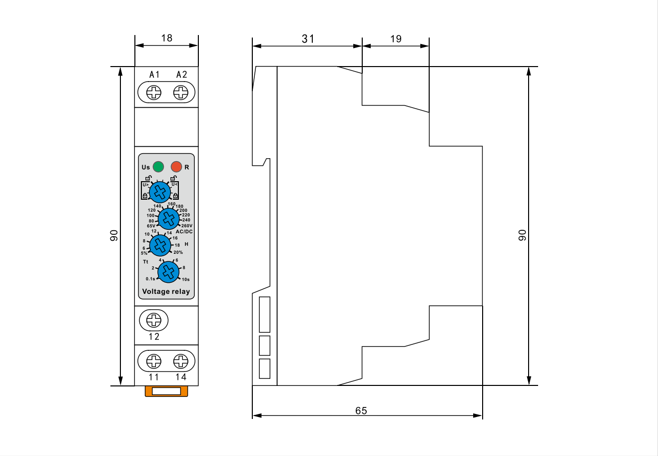
Wiring diagram



Panel diagram



Shape and size (mm)



CDV6 Three-Phase Voltage Monitoring Relay

CNTD

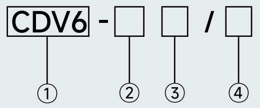
Application

- Used for equipment protection and control (tower cranes, air conditioners, elevators, agricultural equipment, refrigerated trucks).
- Protect the equipment to prevent accidents caused by reverse operation.
- Normal/emergency power switch.
- Prevent phase disconnection of the power load.

Features

- Monitor its own operating voltage (true RMS measurement), 45Hz~65Hz wide frequency measurement.
- 8 kinds of rated voltages are adjustable, suitable for voltages in various regions of the world.
- 3-phase 3-wire and 3-phase 4-wire specifications are optional.
- The voltage measurement accuracy is ≤1%.
- It has an anti-harmonic model, which is optimized for high anti-interference occasions.
- The working status of the relay is indicated by an LED indicator.
- Ultra-small size, only 18mm width, 35mm card rail installation.

Product selection



No	Item	Description
①	CDV6 series voltage monitoring relay	-
②	Function code	(see below)
③	None: Ordinary type X: Anti-harmonic type	-
④	Rated supply voltage	(see below)

② Function code:

Function code	Overvoltage	Undervoltage	Voltage imbalance	Action delay	Phase sequence protection	Phase-off protection
03	-	-	-	-	●	●
04	2%...20%	-20%...2%	-	0.1s...10s	●	●
05	2%...20%	-20%...2%	8%	0.1s..10s	●	●
06	2%...20%	-20%...2%	5%...15%	2s	●	●
07	-	-	5%...15%	0.1s...10s	●	●
08	15%	-15%	8%	2s	●	●

④ Rated supply voltage:

Code name	Rated voltage gear
P	220-230-240-380-400-415-440-460VAC(P-P)
N	127-132-138-220-230-240-254-265VAC(P-N)

CDV6 Three-Phase Voltage Monitoring Relay

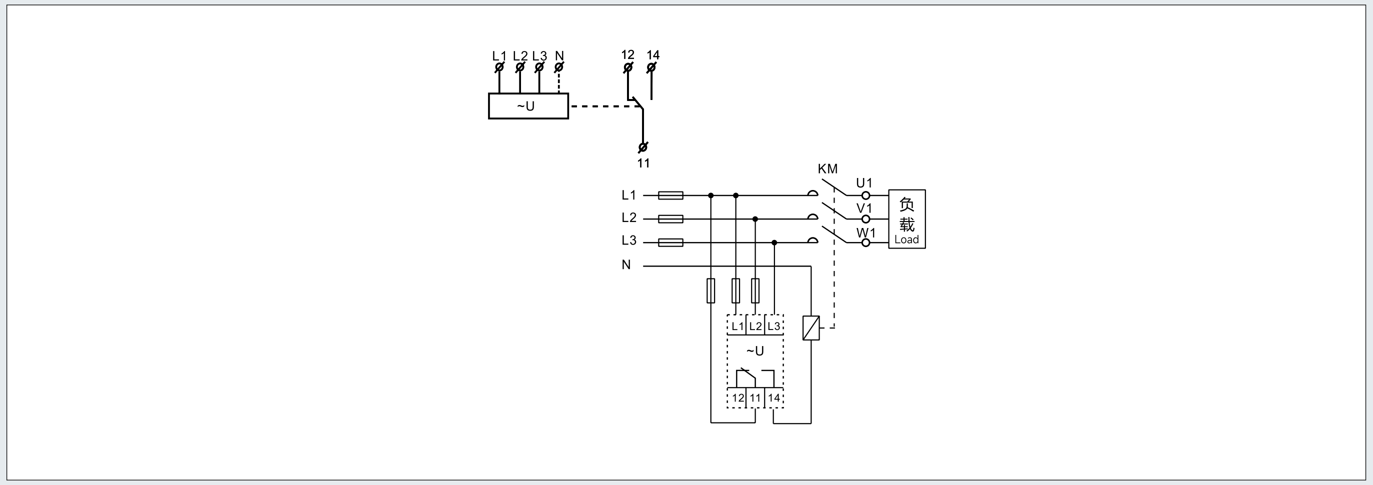
Technical parameters

	P	N
Function	Monitor L-L voltage (3-phase 3-wire system)	Monitor L-N voltage (3-phase 4-wire system)
Monitoring terminal	L1-L2-L3	L1-L2-L3-N
Power supply	L1-L2	L1-N
Rated operating voltage selection	220-230-240-380-400-415-440-460(P-P)	127-132-138-220-230-240-254-265(P-N)
Measuring frequency range	45Hz-65Hz	
Measuring range	176V-552V	101V-318V
Voltage threshold range	2%-20% (rated voltage)	
Unbalanced value threshold range	5%-15%	
Voltage fixed hysteresis rate	2%	
Power indicator	Green LED	
Action delay time	0.1s - 10s(Adjustable)	
Voltage measurement error	≤ 1%	
Power-on delay time	0.5s	
Knob setting accuracy	10%	
Reset time	1s	
Temperature fluctuation error	0.05%/°C ,at=20°C	
Output	1×SPDT	
	10A/AC1	
	250VAC/24VDC	
Minimum switching power	500mW	
Output relay indication	Red LED	
Mechanical life	1×10^7	
Electrical life (resistive load)	1×10^5	
Operating ambient temperature	-20°C ~+55°C	
Storage and transportation ambient temperature	-35°C ~+75°C	
Installation method	35mm card rail installation	
Protection level	IP20	
Installation location	Arbitrary	
Installation altitude	≤ 2000m	
Pollution level	2	
Wiring ability	$1\times2.5mm^2$ or $2\times1.5mm^2$ 0.8N·m	
Dimensions	90mm×18mm×65mm	
Weight	67g	
Meet the standard	GB/T 14048.5,IEC60947-5-1,EN 60255-1	

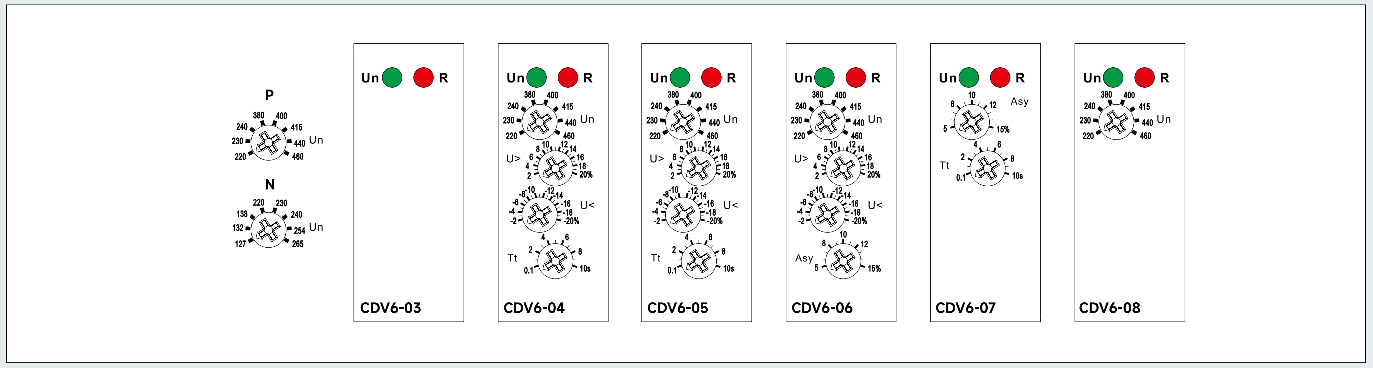
CDV6 Three-Phase Voltage Monitoring Relay

CNTD

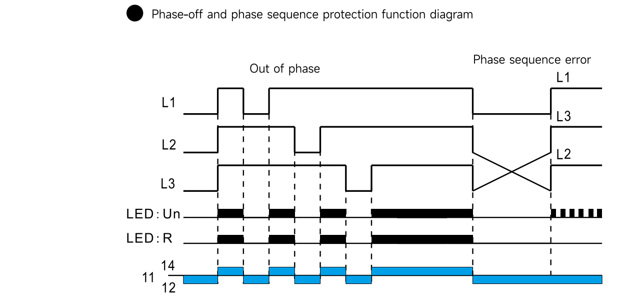
Wiring diagram

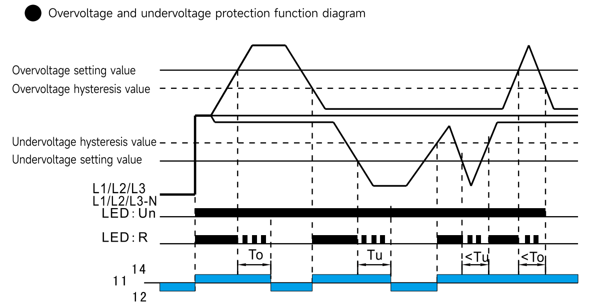


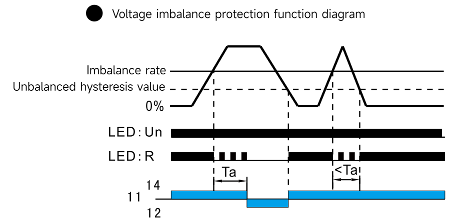
Panel diagram



Function diagramw

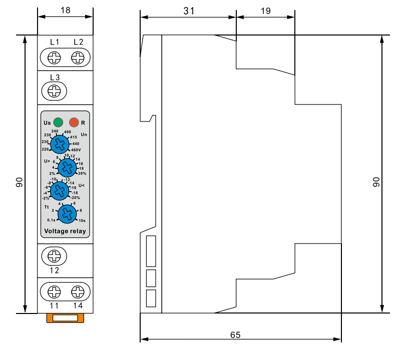






To: The delay time of overvoltage operation.
Tu: The delay time of undervoltage operation.
Ta: Unbalanced action delay time.

Shape and size (mm)



CDV6 Three-Phase Voltage Monitoring Relay (2 Sets Of Outputs)

Application

- Used for equipment protection and control (tower cranes, air conditioners, elevators, agricultural equipment, refrigerated trucks).
- Protect the equipment to prevent accidents caused by reverse operation.
- Normal/emergency power switch.
- Prevent phase disconnection of the power load.

Features

- Monitor its own operating voltage (true RMS measurement), 45Hz ~ 65Hz wide frequency measurement.
- Two sets of output contacts are used for protection and fault alarm.
- 8 kinds of rated voltages are adjustable, suitable for voltages in various regions of the world.
- 3-phase 3-wire and 3-phase 4-wire specifications are optional.
- The voltage measurement accuracy is ≤1%.
- Anti-harmonic design, optimized for high anti-interference occasions.
- The working status of the relay is indicated by an LED indicator.
- Ultra-small size, only 18mm width, 35mm card rail installation.

Model Designation

CDV6 - □ / □

① ② ③

<table>
<tr><th>No</th><th>Item</th><th>Description</th></tr>
<tr><td>①</td><td>CDV6 series voltage monitoring relay</td><td>-</td></tr>
<tr><td>②</td><td>Function code</td><td>
<table>
<tr><th>Function code</th><th>Overvoltage</th><th>Undervoltage</th><th>Voltage imbalance</th><th>Action delay</th><th>Phase sequence protection</th><th>Phase-off protection</th></tr>
<tr><td>03D</td><td>-</td><td>-</td><td>-</td><td>-</td><td>●</td><td>●</td></tr>
<tr><td>04D</td><td>2%...20%</td><td>-20%...2%</td><td>-</td><td>0.1s...10s</td><td>●</td><td>●</td></tr>
<tr><td>05D</td><td>2%...20%</td><td>-20%...2%</td><td>8%</td><td>0.1s..10s</td><td>●</td><td>●</td></tr>
<tr><td>06D</td><td>2%...20%</td><td>-20%...2%</td><td>5%...15%</td><td>2s</td><td>●</td><td>●</td></tr>
<tr><td>07D</td><td>-</td><td>-</td><td>5%...15%</td><td>0.1s...10s</td><td>●</td><td>●</td></tr>
<tr><td>08D</td><td>15%</td><td>-15%</td><td>8%</td><td>2s</td><td>●</td><td>●</td></tr>
</table>
</td></tr>
<tr><td>③</td><td>None: Ordinary type X: Anti-harmonic type</td><td>-</td></tr>
<tr><td>④</td><td>Rated supply voltage</td><td>
<table>
<tr><th>Code name</th><th>Rated voltage gear</th></tr>
<tr><td>P</td><td>220-230-240-380-400-415-440-460VAC(P-P)</td></tr>
<tr><td>N</td><td>127-132-138-220-230-240-254-265VAC(P-N)</td></tr>
</table>
</td></tr>
</table>

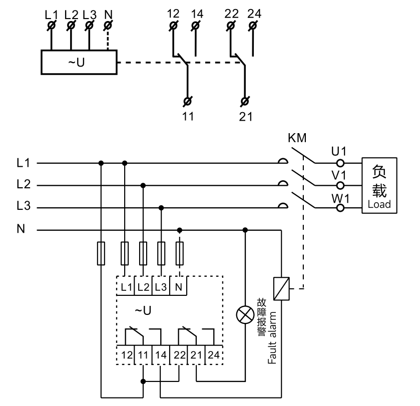
CDV6 Three-Phase Voltage Monitoring Relay (2 Sets Of Outputs) CNTD

Technical parameters

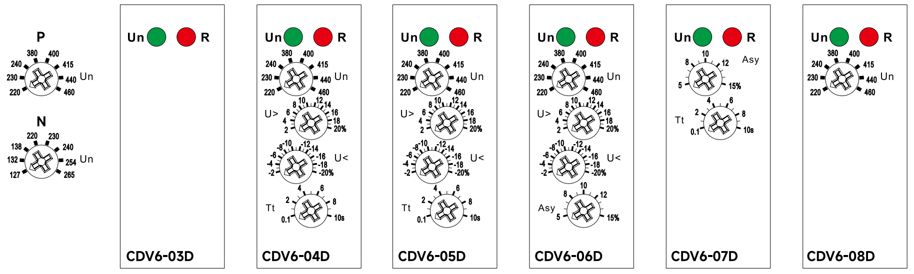
	P	N
Function	Monitor L-L voltage (3-phase 3-wire system)	Monitor L-N voltage (3-phase 4-wire system)
Monitoring terminal	L1-L2-L3	L1-L2-L3-N
Power supply	L1-L2	L1-N
Rated operating voltage selection	220-230-240-380-400 -415-440-460(P-P)	127-132-138-220-230 -240-254-265(P-N)
Measuring frequency range	45Hz-65Hz	
Measuring range	176V-552V	101V-318V
Voltage threshold range	2%-20% (rated voltage)	
Unbalanced value threshold range	5%-15%	
Voltage fixed hysteresis rate	2%	
Power indicator	Green LED	
Action delay time	0.1s - 10s(Adjustable)	
Voltage measurement error	≤ 1%	
Power-on delay time	0.5s	
Knob setting accuracy	10%	
Reset time	1s	
Temperature fluctuation error	0.05%/°C ,at=20°C	
Output	2×SPDT	
	8A/AC1	
	250VAC/24VDC	
Minimum switching power	500mW	
Output relay indication	Red LED	
Mechanical life	1×10^7	
Electrical life (resistive load)	1×10^5	
Operating ambient temperature	-20°C ~+55°C	
Storage and transportation ambient temperature	-35°C ~+75°C	
Installation method	35mm card rail installation	
Protection level	IP20	
Installation location	Arbitrary	
Installation altitude	≤ 2000m	
Pollution level	2	
Wiring ability	$1\times2.5mm^2$ or $2\times1.5mm^2$ 0.8N·m	
Dimensions	90mm×18mm×65mm	
Weight	67g	
Meet the standard	GB/T 14048.5,IEC60947-5-1,EN 60255-1	

CDV6 Three-Phase Voltage Monitoring Relay (2 Sets Of Outputs)

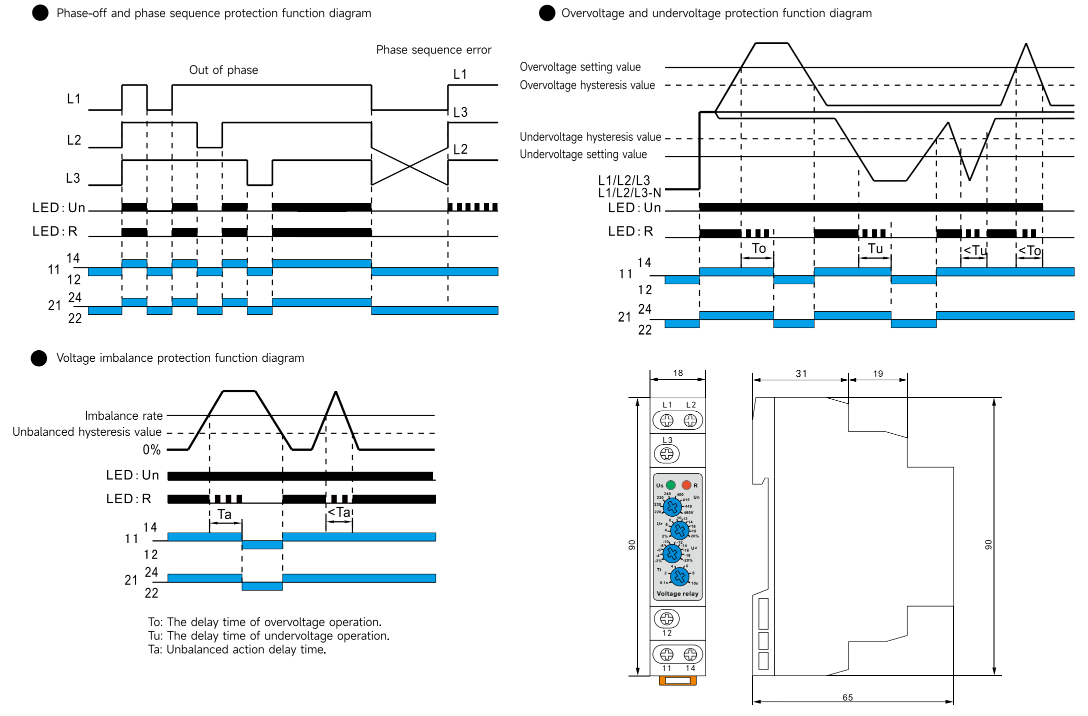
Wiring diagram



Panel diagram



Function diagram



CDI6 AC Current Monitoring Relay

CNTD

Application

- Elevator overload monitoring, light load monitoring.
- Single-phase motor monitoring current monitoring.
- Current overload/under load indication and protection.

Features

- The action delay time is adjustable from 0.1s to 10s to avoid peak current.
- The power-up delay time is adjustable from 0.1s to 10s to avoid the start-up current of the motor load.
- 6-speed current specifications are optional.
- Built-in isolated current transformer, and at the same time, an external current transformer can be connected to expand the monitoring current range.
- The working power supply voltage is AC 85-240V.
- The working status of the relay is indicated by an LED indicator.
- Ultra-small size, only 18mm width, 35mm card rail installation.

Product selection

CDI6 - □ / □
① ② ③

No	Item	Description
①	CDI6 series current monitoring relay	-
②	Function code	Overcurrent protection Under-current protection Overcurrent or overcurrent optional Overcurrent window protection
③	Monitor current range	0.5: 0. 05A-0.5A 1: 0. 1A-1A 2: 0. 2A-2A 5: 0. 5A-5A 8: 0. 8A-8A 16: 1.6A-16A

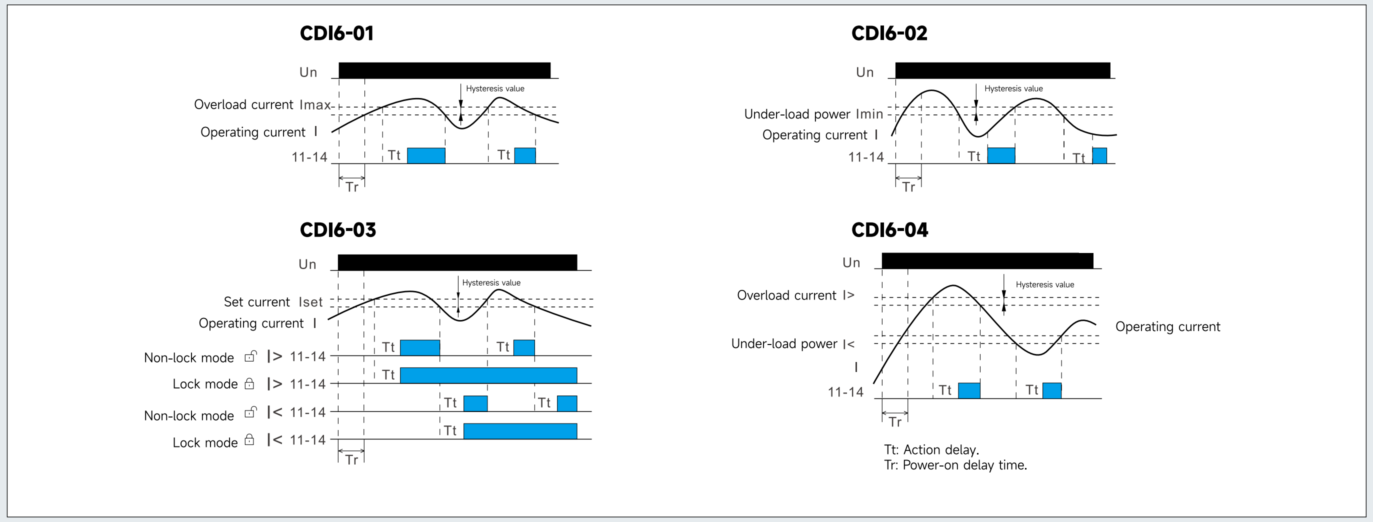
CDI6 AC Current Monitoring Relay

Technical parameters

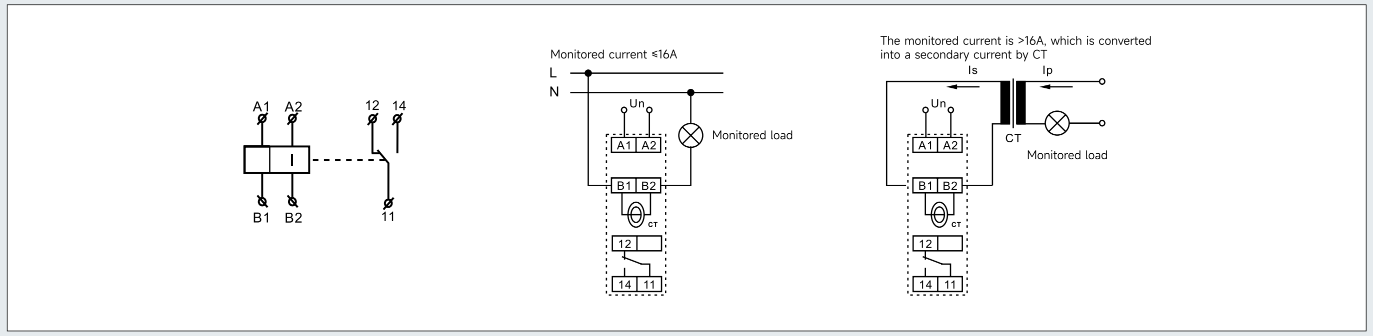
	CDI6-01	CDI6-02		CDI6-03		CDI6-04
Function	Overcurrent protection	Under-current protection		Over/under current protection		Overcurrent protection
Power terminal	A1-A2					
Rated supply voltage	AC85-240V					
Rated power frequency	50/60Hz,0					
Power consumption	max 25VA					
Allowable fluctuation range of power supply	-15%;+10%					
Current setting range	0.05A-0.5A	0.1A-1A	0.2A-2A	0.5A-5A	0.8A-8A	1.6A-16A
Measuring current frequency	AC50HZ					
Maximum passing current	1A	2A	5A	8A	12A	22A
Current setting method	Knob setting					
Action delay time	0.1s~10 s					
Power indicator	Green LED					
Setting accuracy	10%					
Current measurement accuracy	5%（0.05-0.5A 为 10%）					
Temperature fluctuation error	<0.1%/°C					
Hysteresis value	5%					
Output	1×SPDT					
	16A/AC1					
	250VAC/24VDC					
Minimum switching power	500mW					
Output relay indication	Red LED					
Mechanical life	1×10^7					
Electrical life (resistive load)	1×10^5					
Operating ambient temperature	-20°C ~+55°C					
Storage and transportation ambient temperature	-35°C ~+75°C					
Installation method	35mm card rail installation					
Protection level	IP20					
Installation location	Arbitrary					
Installation altitude	≤ 2000m					
Pollution level	2					
Wiring ability	1×2.5mm² or 2×1.5mm² 0.8N·m					
Dimensions	90mm×18mm×65mm					
Weight	67g					
符合标准 Meet the standard	GB/T 14048.5,EN 60255-1					

CDI6 AC Current Monitoring Relay

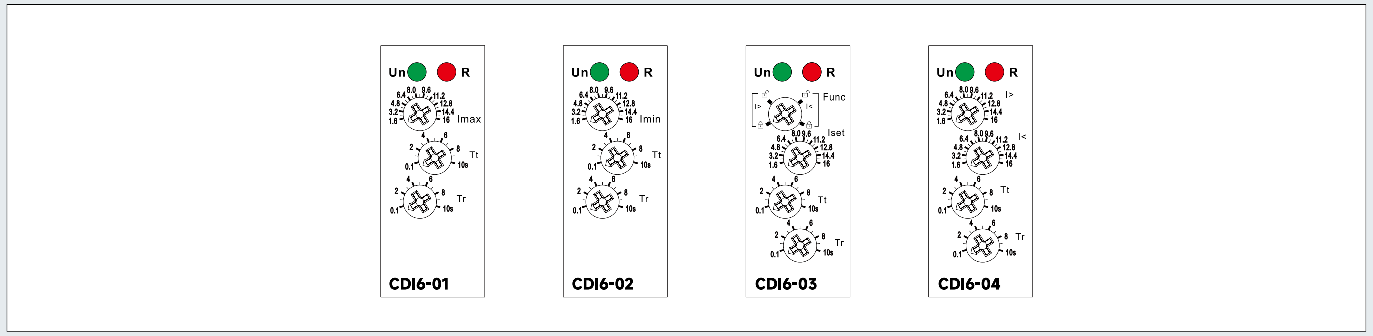
Function diagramw



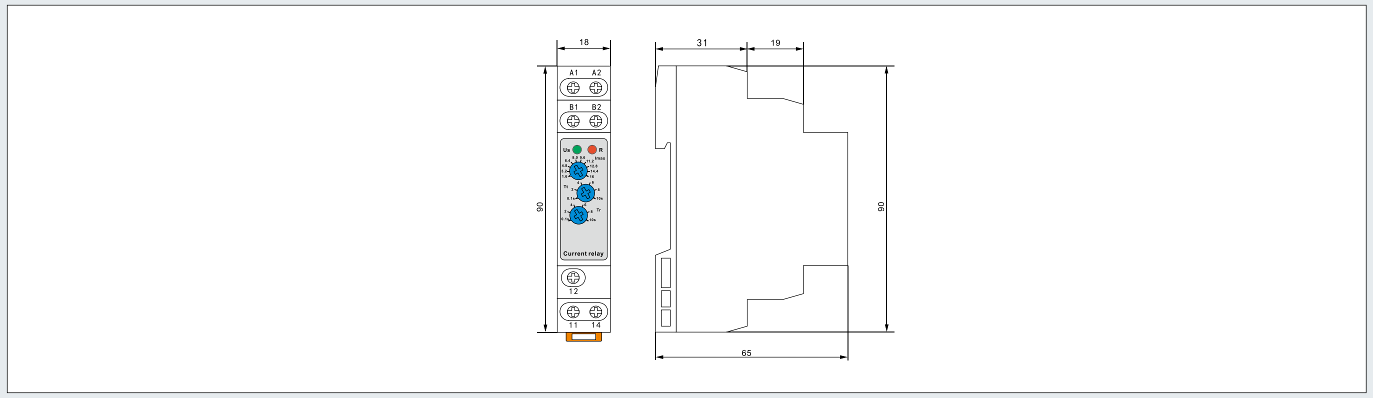
Wiring diagram



Panel diagram



Shape and size (mm)



CDH Timer Relay

Features

- Multiple working modes
- Multiple intervals control
- Switching power supply is adopted, with wide voltage range
- Terminal type and pin type, double wiring mode, more convenient wiring and maintenance

Model description

CDH48S-1Z:
A set of time delay relay output, with reset and pause functions;
CDH48S-2Z:
Two sets of delay relay output;
CDH48S-2ZT:
Two sets of delay relay output, with reset and pause functions;
CDH48S-S:
One set of cycle delay with reset pause function;
CDH48S-2S:
Two sets of cycle delay;
CDH48S-2ST:
Two sets of cycle delay, with reset and pause functions;
CDH48S-2ZH:
One group of time delay relay output and one group of instantaneous relay output;

Product selection

C DH 48 S - □ □

① ② ③ ④ ⑤ ⑥

Item	Code	Description
① Conduit / connector size	C	CNTD
② Series	DH	Timer Relay
③ Installation dimension	48	W48xH48mm
	72	W72xH72mm
④ Installation mode	S	Panel type, 35mm guide rail type
	M	Panel type
⑤ Working mode	See model description for details	
⑥额定电压 Rated voltage	None	100-240VAC
	1	24-48VDC
	2	12VDC
	3	380VAC
	4	12VAC
	5	24VAC
	6	36VAC
	1-9 Digital combination	Custom voltage

Electrical Specification

Display digit	Four digit nixie tube display
Rated voltage	100-240VAC，50Hz
Work environment	Ambient temperature: - 25 ~ + 70 °C , relative humidity 35 ~ 95% RH (the higher the temperature, the lower the humidity, and there is no water condensation)
Wiring mode	Terminal block
Electric shock capacity	5A AC250V
Repetition error	When the delay range is greater than 1s, er ≤ 1%; When the delay range is less than 1s, Dr ≤ 50ms
Altitude	≤ 2000M
Installation mode	Panel type, 35mm guide rail type

Delay range

CDH48S Default

Switch position	Delay range
H	1M-99H99M
M	1S-99M99S
S	0.01S-99.99S

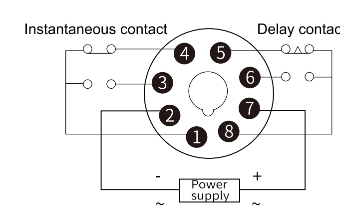
CDH48S-S

Switch position	Delay range
0.1S	0.1S-9.9S
S	1S-99S
0.1M	0.1M-9.9M
M	1M-99M
0.1H	0.1H-9.9H
H	1H-99H
10H	10H-990H

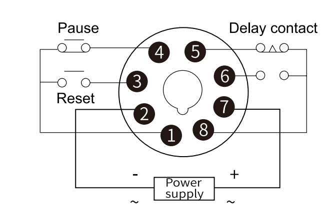
CDH48S Customized

Switch position	Delay range
M/S	1S-99M99S
H/M	1M-99H99M
0.01S	0.01S-99.99S
0.1S	0.1S-999.9S
S	1S-9999S
0.1M	0.1M-999.9M
M	1M-9999M
0.1H	0.1H-999.9H
H	1H-9999H
10H	10H-99990H

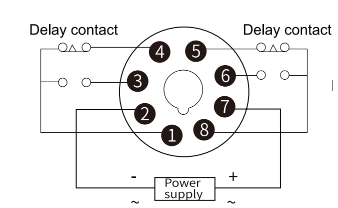
Wiring diagram



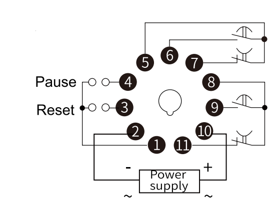
CDH48S-2ZH



CDH48S-S
CDH48S-1Z



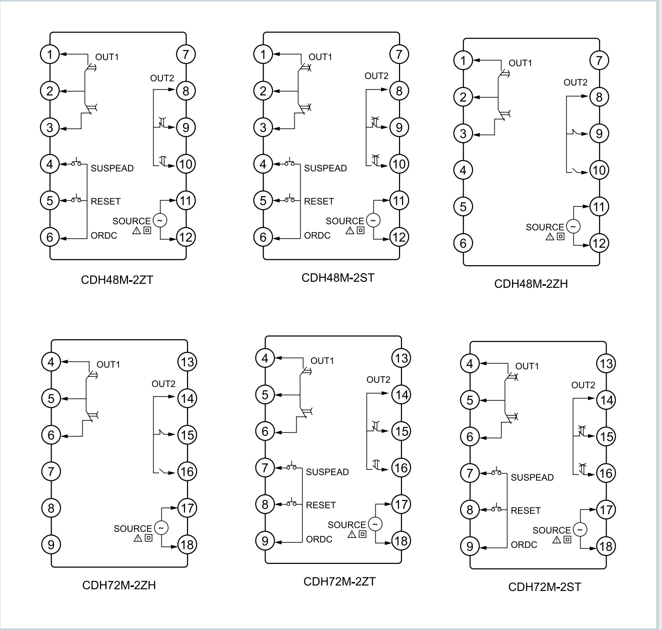
CDH48S-2S
CDH48S-2Z



CDH48S-2S
CDH48S-2Z

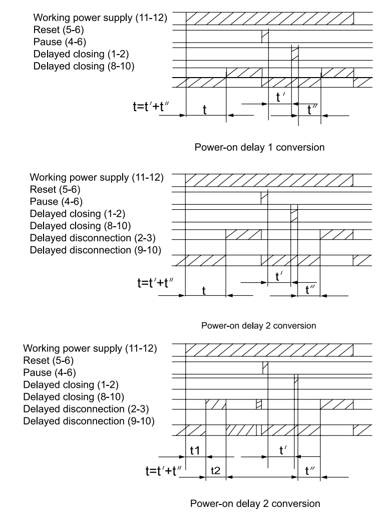
CDH Timer Relay

Wiring diagram



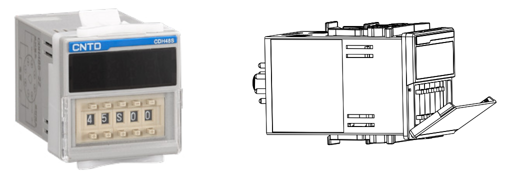
Working sequence diagram

Take CDH48M as an example:

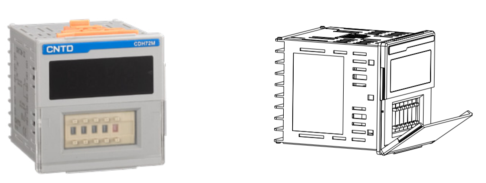


Outline and opening dimension drawing (mm)

CDH48S



CDH72M



Model	Panel size	Shell size (H x W x L)	Opening size
CDH48S	48x48	48x48x103	45x45
CDH72M	72x72	72x72x81	68x68

Instructions

1. Delay setting:
a) Clamp the concave parts on the left and right sides of the cover plate by hand and pull outward (as shown in Figure 1);
b) Set the delay time and time period as required (as shown in Figure 2);
c) After setting, cover the cover (as shown in Figure 3).
2.According to the wiring diagram on the label of the time relay housing and the reference circuit, the wiring is correct, and the power supply voltage and frequency must meet the requirements.
3.Adjust the dial switch, preset the delay time, turn on the power supply, and the time relay starts to operate according to the working sequence.

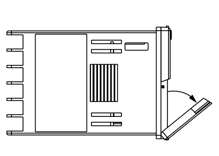


Figure 1

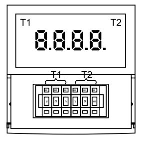


Figure 2

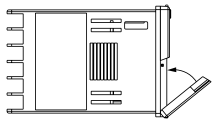
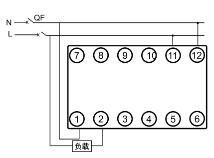
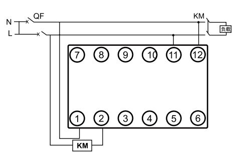


Figure 3

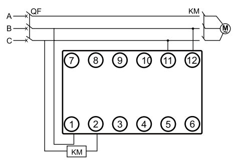
4.Due to the memory function of the time relay, the delay time shall be preset according to the above figure before power on. The preset time after power on is invalid, and the repeated start interval of the time relay shall be ⩾ 0.5s.
5.Cdh48 □ - 1z Function Description: set the dial switch, turn on the power supply, start timing, reach the preset time, the indicator light in the upper left corner of the display window is on, and the delay contact is switched to realize timing control.
6.Cdh48 □ - s Function Description: see for delay setting In Figure 2 above, set T1 The time base and preset number of T2, and then turn on the power supply. The two digit nixie tubes on the right display the delay data of T2, and the T2 indicator light is on. When the delay reaches the T2 set value, the time relay acts. At the same time, the two digit nixie tubes on the left display the delay data of T1, and the T1 indicator light is on. When the delay reaches the T1 set value, the time relay releases and T2 starts to delay, so as to realize the cyclic delay control.
7.Reset function: turn on the reset terminal at any time, and the time relay will return to the initial state.
8.Pause function: in the process of timing, turn on the pause terminal, the timing will stop, and the time at the moment will be displayed. After disconnecting, continue the timing. This function can be used as a timer.
9.In strong current environment and long reset and pause termination wires, please use shielded wires.
10.Do not input voltage to reset and pause terminals to avoid damaging the product.



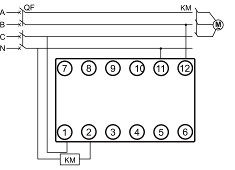
Example 1



Example 2



Example 3



Example 4

1. In case of single-phase load, if the load resistive current ⩽ 3A or inductive current ⩽ 0.5A, the time relay is directly controlled. Refer to example 1 for wiring; If the load resistive current is > 3A or inductive current is > 0.5A, the capacity of the time relay is expanded through the AC contactor. Refer to example 2 for wiring; In case of three-phase load, the power supply of AC contactor and time relay is AC380V. Refer to example 3 for wiring; When the power supply of AC contactor and time relay is AC220V, refer to example 4 for wiring.
2. The function of the example time relay is: when the power is connected, the load or km (AC contactor) is powered on. When the time delay reaches the preset value, the load or km (AC contactor) is powered off.
Note 1: the load can be street lamp or bulb, which can be directly connected to the two lines of the street lamp or bulb port (as shown in example 1).
Note 2: KM is the coil of AC contactor, A1 Both ends of A2 can be wired according to example 2, example 3 and example 4.
Note 3: the working power supply of time relay and KM in example 3 is AC380V. Pay attention to the voltage level of the selected product.

Please scan the QR code for detailed usage parameters

CH6M/S Timing counter

Application

- The timing counter can be used in industrial control occasions. It has two working modes, timing work and counting, and the corresponding functions can be selected according to the use scenario.

Features

- One-shot output time, in units of 10ms, can be set from 0.01 seconds to 99.99 seconds;
- Counter mode
  Display range 0.00001~99999.9;
  9 input modes and 11 output modes to choose from;
  BATCH counting, counting initial value setting function;
  Optional up to 10kCPS input speed;
- Timer mode
  12 time range formats are available;
  13 output modes are available;
  Wide time setting range (0.001 seconds~99999.9 hours)
  Support forward timing and countdown;
- Power-off memory function;

Product selection

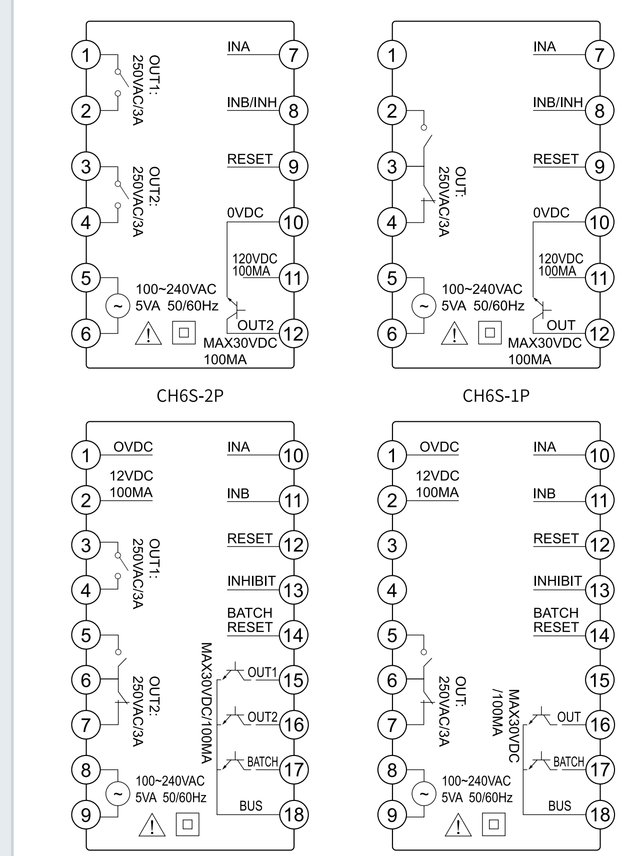
C H 6 M - 2P 4
① ② ③ ④ ⑤ ⑥

Item	Code	Description
① Company name	C	CNTD
② Series	H	Counter/timer
③ Installation dimension	6	999999
④ Dimensions	S	DIN W48×H48mm
	M	DIN W72×H72mm
⑤ Output	1P	1 stage setting type
	2P	2-stage setting type
⑥ Supply voltage	2	24VAC 50/60Hz 24-48VDC
	4	100-240VAC 50/60Hz

Electrical Specification

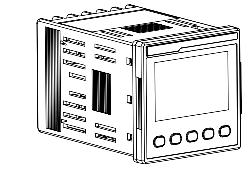
Voltage	AC power supply type	100-240VAC 50/60Hz
	DC power supply type	24VDC
Power consumption		≤ 12VA
INA/INB maximum counting speed		1cps/30cps/1Kcps/5Kcps/10Kcps can be selected
Minimum signal width	Counter	Reset input: 1ms, 20ms optional
	Timer	NA, RESET, INHIBIT, BATCH RESET reset signal: 2ms, 20ms optional
Input method		No voltage input
One-shot output time		Counter, timer, 0.01seconds~99.99 seconds
Memory storage		10 years (non-volatile semiconductor memory)
Wiring method		Terminal block
Use the surrounding humidity		-25~+70°C (not frozen state)
Storage temperature		-30~+80°C (not frozen state)
Humidity		35%~95%RH(Non-condensing state)

Wiring diagram

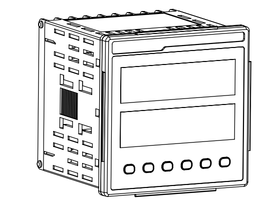


CH6S-2P CH6S-1P CH6M-2P CH6M-1P

Dimensions



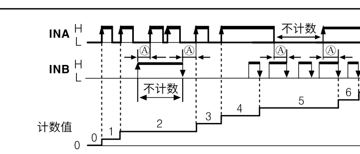
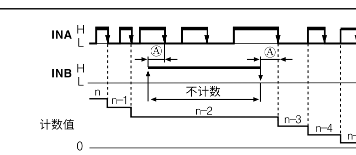
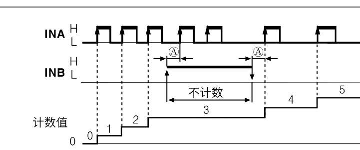
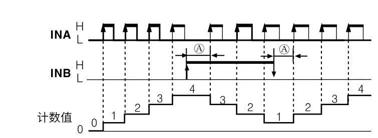
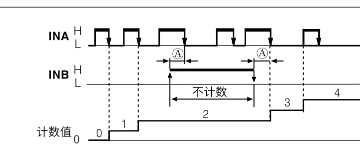
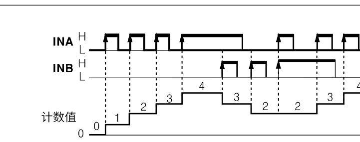
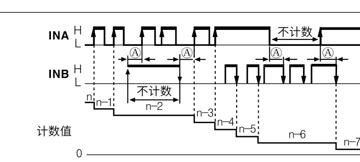
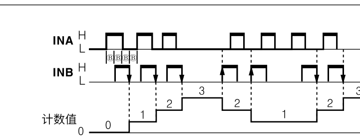
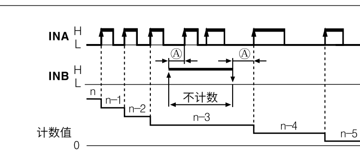
CH6S



CH6M

Model number	Panel size	Shell size (length×width ×height)	Opening size
CH6S	48×48	44.3×44.3×81	45×45
CH6M	72×72	67×67×81	68×68

Input mode (counter)

Input mode	Timing diagram	Input mode	Timing diagram
UP (Up)		dn-2 (Down-2)	
UP-1 (Up-1)		Ud-A (Up/Down-A)	
UP-2 (Up-2)		Ud-b (Up/Down-B)	
dn (Down)		Ud-C (Up/Down-C)	
dn-1 (Down-1)			

CH6M/S Timing counter

CH6M/S Timing counter

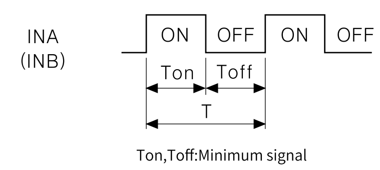
※Ⓐ is above the minimum signal width and Ⓑ is above 1/2 of the minimum signal width. When it is less than this signal width, a counting error of ±1 may occur.

※The meanings of "H" and "L" in the table below are as follows

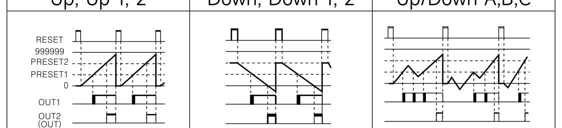
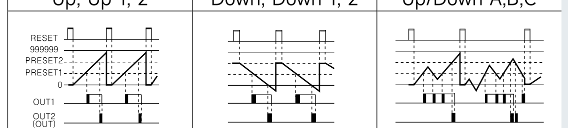
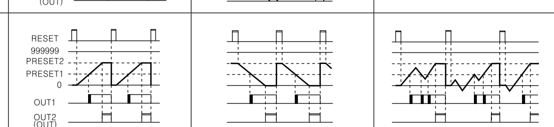
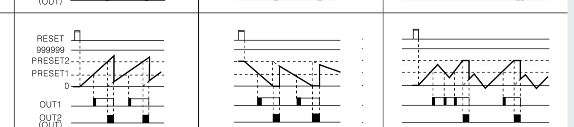
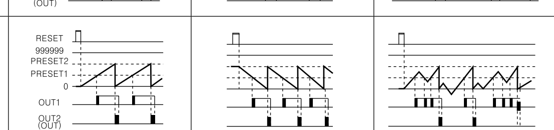
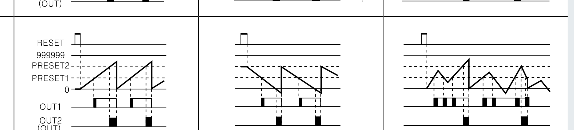
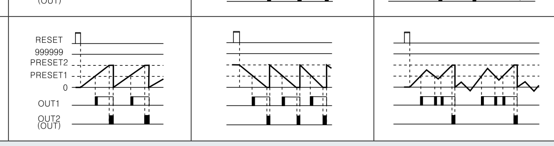
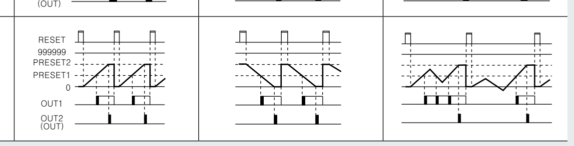
	(PNP)	(NPN)
H	5-30VDC	(Short)
L	0-2VDC	(Open)

※The minimum signal width of each counting speed

Counting speed	Minimum signal width
1cps	500ms
30cps	16.7ms
1kcps	0.5ms
5kcps	0.1ms
10kcps	0.05ms

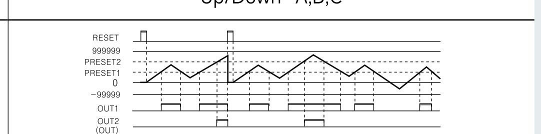
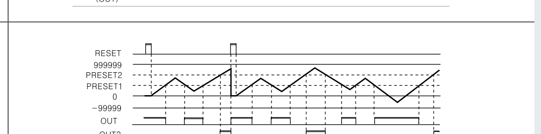
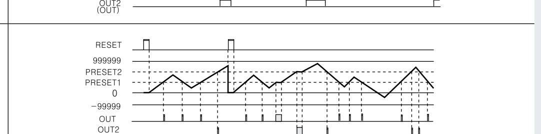


Output mode (counter)

Output mode	Up, Up-1, 2	Down, Down-1, 2	Up/Down A,B,C	Output mode	Up, Up-1, 2	Down, Down-1, 2	Up/Down A,B,C
F (F)				K (K)			
n (N)				K (K)			
C (C)				q (Q)			
r (R)				A (A)			

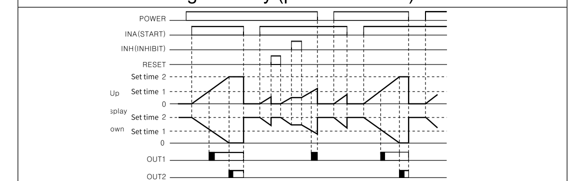
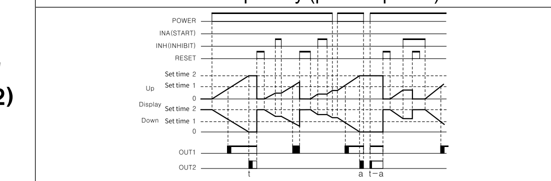
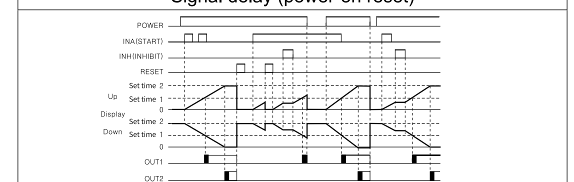
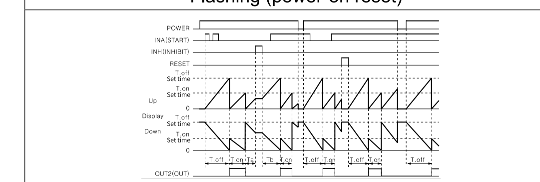
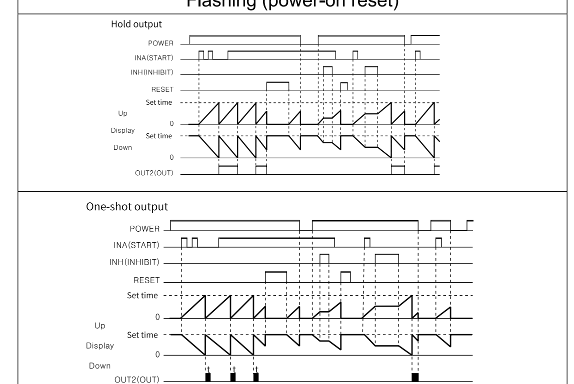
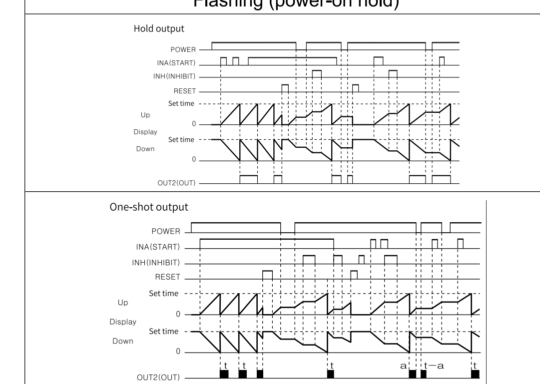
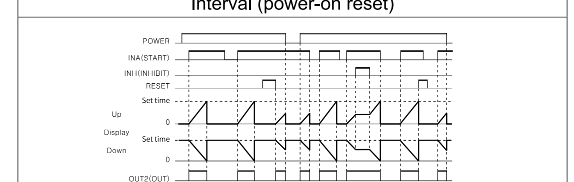
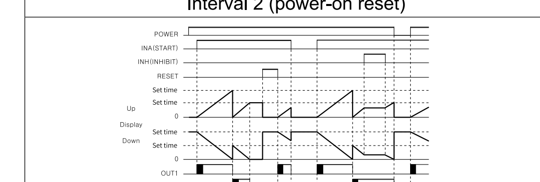
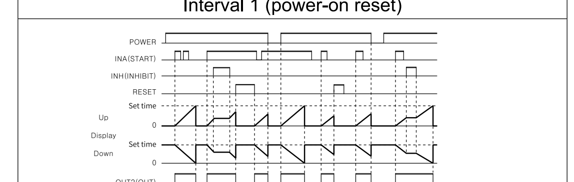
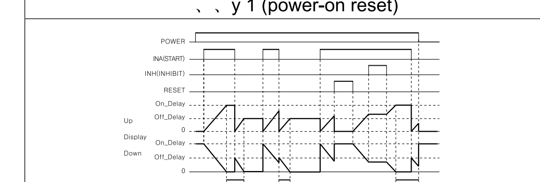
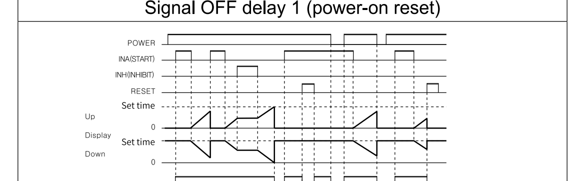
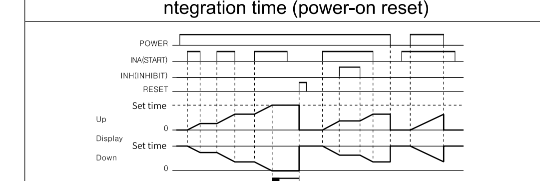
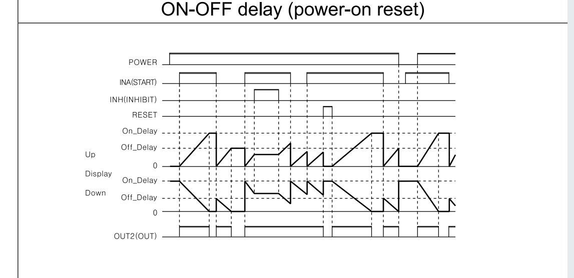
※The OUT output in the 1-stage setting type is the same as the OUT2 output in the 2-stage setting type.
※The OUT1 output can be set to 0 in all output modes, and the corresponding value can be output.
※When the output mode is C (C),R(r),P(P),Q(q), the OUT2 output cannot be set to 0.

Output mode (counter)

Output mode	Up/Down -A,B,C
S (S)	
t (T)	
d (D)	

※The OUT output in the 1-stage setting type is the same as the OUT2 output in the 2-stage setting type.
※In the 2-stage setting type, OUT1 can choose one-shot output or Hold output mode.
※OUT1 In all output modes, the preset value can be set to 0, and the output is consistent with the state corresponding to the preset value of 0.
※When the output mode is C (C),R(r),P(P),Q(q) , the OUT2 output cannot be set to 0.

Output mode (timer)

Output mode	Timing diagram	Output mode	Timing diagram
ond (OND)	Signal delay (power-on reset) 	ond.2 (OND.2)	Power-up delay (power-up hold) 
ond.1 (OND.1)	Signal delay (power-on reset) 	FLK (FLK)	Flashing (power-on reset) 
FLK.1 (FLK.1)	Flashing (power-on reset) 	FLK.2 (FLK.2)	Flashing (power-on hold) 
int (INT)	Interval (power-on reset) 	int.2 (INT.2)	Interval 2 (power-on reset) 
int.1 (INT.1)	Interval 1 (power-on reset) 	nFd.1 (NFD.1)	、 、 y 1 (power-on reset) 
oFd (OFD)	Signal OFF delay 1 (power-on reset) 	intG (INTG)	ntegration time (power-on reset) 
nFd (NFD)	ON-OFF delay (power-on reset) 		

CNTD®

E

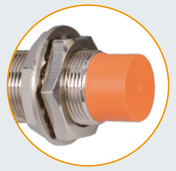
Sensor Division

CJY Proximity Sensor Cylindrical Type

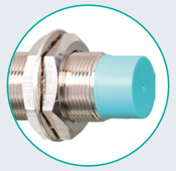
Features

- Orange mark for standard type
- Light green mark for high-end type

- Inside surge protection, reverse polarity protection
- Long use-life cycle and high reliability, easy install, enconomic price
- Red LED status indication, easy to confirm work situation
- Protection structure IP67(IEC standard)
- Replaceable for limit switches
- Exclusively designed IC for improving anti-jamming capability



Orange



Light green

Model Number Structure

C J Y 18 □ — 08 N A □

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

Item	Code	Description
① Company code	C	Company code
② Product name	J	Inductive proximity sensor
③ Shape of shell	Y	Cylinder-shaped
④ Dimension code	18	18=M18
⑤ Product type	Without	Without =High-end type（Light green head）
	E	E =Standard type（Orange head）
⑥ Detection distance	08	08=8mm
⑦ Output mode	K	AC 2wires
	L	DC 2wires
	P	PNP 3wires
	N	NPN 3wires
⑧ Output state	A	NO
	B	NC
	C	NO+NC
⑨ Connection	Without	Without: Lead wire
	T	Plug-in
	R	Wiring leads Plug-in

CJY Proximity Sensor Cylindrical Type

CNTD

Specifications

DC 3-wire type

Model	High-end type	CJY04-01NA CJY04-01NB CJY04-01PA CJY04-01PB	CJY05-01NA CJY05-01NB CJY05-01PA CJY05-01PB	CJY06-01NA CJY06-01NB CJY06-01PA CJY06-01PB	CJY6.5-1.5NA CJY6.5-1.5NB CJY6.5-1.5PA CJY6.5-1.5PB
	Standard type	/	/	/	/
Sensing distance		1mm	1mm	1mm	1.5mm
Hysteresis		Max. 10% of sensing distance			
Standard sensing target		6×6×1mm (Iron)	7×7×1mm (Iron)	8×8×1mm (Iron)	8×8×1.5mm (Iron)
Setting distance		0~0.8mm	0~0.8mm	0~1.0mm	0~6.5mm
Power supply (Operating voltage)		12-24VDC (10-30VDC)			
Leakage current		Max.10mA			
Response frequency (※1)		1500Hz	1500Hz	1000Hz	1000Hz
Residual voltage (※2)		Max. 1.0V			
Affection by Temp.		Max. ±10% for sensing distance at ambient temperature 20℃			
Control output		Max. 200mA			
Insulation resistance		Min. 50MΩ(at 500VDC megger)			
Dielectric strength		1500VAC 50/60Hz for 1minute			
Vibration		1mm amplitude at frequency of 10 to 55Hz(for 1 min.) in each of X, Y, Z directions for 2 hours			
Shock		500m/s^2(approx. 50G) X, Y, Z directions for 3 times			
Indicator		Operation indicator(red LED)			
Ambient temperature		-25~+70℃ (No icing)			
Storage temperature		-30~+80℃ (No icing)			
Ambient humidity		35~95%RH (No condensation)			
Protection circuit		Surge protection circuit, Reverse polarity protection circuit, Overcurrent protection circuit			
Material		Case/Nut: Nickel plated Brass, Washer: Nickel plated Iron, Sensing surface: PBT,Standard cable(Grey): Polyvinyl chloride(PVC), Oil resistant cable(Black): Oil resistant Polyvinyl chloride(PVC)			
Cable		ϕ2.8, 3P, 2m			
		AWG22, Core diameter: 0.1mm, Number of cores: 22, Insulator diameter: ϕ1.25			
Protection		IP67			

(※1): The response frequency is the average value. The standard sensing target is used and the width is set as 2 times of the standard sensing target, 1/2 of the sensing distance for the distance.

CJY Proximity Sensor Cylindrical Type

Specifications

DC 3-wire type

Model	High-end type	CJY08-01NA CJY08-01NB CJY08-01PA CJY08-01PB	CJY08-02NA CJY08-02NB CJY08-02PA CJY08-02PB	CJY12-02NA CJY12-02NB CJY12-02NC CJY12-02PA CJY12-02PB CJY12-02PC	CJY12-04NA CJY12-04NB CJY12-04NC CJY12-04PA CJY12-04PB CJY12-04PC	CJY18-05NA CJY18-05NB CJY18-05NC CJY18-05PA CJY18-05PB CJY18-05PC	CJY18-08NA CJY18-08NB CJY18-08NC CJY18-08PA CJY18-08PB CJY18-08PC	CJY30-10NA CJY30-10NB CJY30-10NC CJY30-10PA CJY30-10PB CJY30-10PC	CJY30-15NA CJY30-15NB CJY30-15NC CJY30-15PA CJY30-15PB CJY30-15PC
	Standard type	CJY08E-01NA CJY08E-01NB CJY08E-01PA CJY08E-01PB	CJY08E-02NA CJY08E-02NB CJY08E-02PA CJY08E-02PB	CJY12E-02NA CJY12E-02NB CJY12E-02NC CJY12E-02PA CJY12E-02PB CJY12E-02PC	CJY12E-04NA CJY12E-04NB CJY12E-04NC CJY12E-04PA CJY12E-04PB CJY12E-04PC	CJY18E-05NA CJY18E-05NB CJY18E-05NC CJY18E-05PA CJY18E-05PB CJY18E-05PC	CJY18E-08NA CJY18E-08NB CJY18E-08NC CJY18E-08PA CJY18E-08PB CJY18E-08PC	CJY30E-10NA CJY30E-10NB CJY30E-10NC CJY30E-10PA CJY30E-10PB CJY30E-10PC	CJY30E-15NA CJY30E-15NB CJY30E-15NC CJY30E-15PA CJY30E-15PB CJY30E-15PC
Sensing distance		1mm	2mm	2mm	4mm	5mm	8mm	10mm	15mm
Hysteresis		Max. 10% of sensing distance							
Standard sensing target		8 × 8 × 1mm (Iron)		12 × 12 × 1mm (Iron)		18 × 18 × 1mm (Iron)	25 × 25 × 1mm (Iron)	30 × 30 × 1mm (Iron)	45 × 45 × 1mm (Iron)
Setting distance		0~0.8mm	0~1.4mm	0~1.4mm	0~2.8mm	0~3.5mm	0~5.6mm	0~7mm	0~10.5mm
Power supply (Operating voltage)		12-24VDC (10-30VDC)							
Leakage current		Max.10mA							
Response frequency (※1)		1000Hz	1000Hz	1000Hz	500Hz		350Hz	400Hz(High-end) 350Hz(standard)	200Hz
Residual voltage		Max. 1.0V							
Affection by Temp.		Max. ±10% for sensing distance at ambient temperature 20℃							
Control output		Max. 200mA							
Insulation resistance		Min. 50MΩ(at 500VDC megger)							
Dielectric strength		1500VAC 50/60Hz for 1minute							
Vibration		1mm amplitude at frequency of 10 to 55Hz(for 1 min.) in each of X, Y, Z directions for 2 hours							
Shock		500m/s^2(approx. 50G) X, Y, Z directions for 3 times							
Indicator		Operation indicator(red LED)							
Ambient temperature		-25~+70℃ (No icing)							
Storage temperature		-30~+80℃ (No icing)							
Ambient humidity		35~95%RH (No condensation)							
Protection circuit		Surge protection circuit, Reverse polarity protection circuit, Overcurrent protection circuit							
Material		Case/Nut: Nickel plated Brass, Washer: Nickel plated Iron, Sensing surface: PBT,Standard cable(Grey): Polyvinyl chloride(PVC), Oil resistant cable(Black): Oil resistant Polyvinyl chloride(PVC)							
Cable	High-end type	ϕ2.8, 3P, 2m		ϕ3.8, 3P,4P 2m		ϕ4.8, 3P,4P 2m			
		(AWG22, Core diameter: 0.1mm, Number of cores: 22, Insulator diameter: ϕ1.25)		(AWG22, Core diameter: 0.1mm, Number of cores: 25, Insulator diameter: ϕ1.25)		(AWG22, Core diameter: 0.1mm, Number of cores: 30, Insulator diameter: ϕ1.25)			
	Standard type	ϕ2.8, 3P, 1.5m		ϕ3.8, 3P, 4P 1.5m		ϕ4.8, 3P, 4P 1.5m			
		(AWG22, Core diameter: 0.1mm, Number of cores: 22, Insulator diameter: ϕ1.25)		(AWG22, Core diameter: 0.1mm, Number of cores: 25, Insulator diameter: ϕ1.25)		(AWG22, Core diameter: 0.1mm, Number of cores: 30, Insulator diameter: ϕ1.25)			
Protection		IP67							

(※1): The response frequency is the average value. The standard sensing target is used and the width is set as 2 times of the standard sensing target, 1/2 of the sensing distance for the distance.

CJY Proximity Sensor Cylindrical Type

CNTD

Specifications

DC 2-wire type

Model	High-end type	CJY08-01LA CJY08-01LB	CJY08-02LA CJY08-02LB	CJY12-02LA CJY12-02LB	CJY12-04LA CJY12-04LB	CJY18-05LA CJY18-05LB	CJY18-08LA CJY18-08LB	CJY30-10LA CJY30-10LB	CJY30-15LA CJY30-15LB
	Standard type	CJY08E-01LA CJY08E-01LB	CJY08E-02LA CJY08E-02LB	CJY12E-02LA CJY12E-02LB	CJY12E-04LA CJY12E-04LB	CJY18E-05LA CJY18E-05LB	CJY18E-08LA CJY18E-08LB	CJY30E-10LA CJY30E-10LB	CJY30E-15LA CJY30E-15LB
Sensing distance		1mm	2mm	2mm	4mm	5mm	8mm	10mm	15mm
Hysteresis		Max. 10% of sensing distance							
Standard sensing target		8 × 8 × 1mm (Iron)		12 × 12 × 1mm (Iron)		18 × 18 × 1mm (Iron)	25 × 25 × 1mm (Iron)	30 × 30 × 1mm (Iron)	45 × 45 × 1mm (Iron)
Setting distance		0~0.8mm	0~1.4mm	0~1.4mm	0~2.8mm	0~3.5mm	0~5.6mm	0~7mm	0~10.5mm
Power supply (Operating voltage)		12-24VDC (10-30VDC)							
Leakage current		Max.0.6mA							
Response frequency (※1)		1000Hz	1000Hz	1000Hz	500Hz		350Hz	350Hz	200Hz
Residual voltage		Max. 3.5V							
Affection by Temp.		Max. ±10% for sensing distance at ambient temperature 20℃							
Control output		Max. 200mA							
Insulation resistance		Min. 50MΩ(at 500VDC megger)							
Dielectric strength		1500VAC 50/60Hz for 1minute							
Vibration		1mm amplitude at frequency of 10 to 55Hz(for 1 min.) in each of X, Y, Z directions for 2 hours							
Shock		500m/s^2(approx. 50G) X, Y, Z directions for 3 times							
Indicator		Operation indicator(red LED)							
Ambient temperature		-25~+70℃ (No icing)							
Storage temperature		-30~+80℃ (No icing)							
Ambient humidity		35~95%RH (No condensation)							
Protection circuit		Surge protection circuit							
Material		Case/Nut: Nickel plated Brass, Washer: Nickel plated Iron, Sensing surface: PBT, Standard cable(Gray): Polyvinyl chloride(PVC), Oil resistant cable(Black): Oil resistant Polyvinyl chloride(PVC)							
Cable	High-end type	ϕ2.8, 2P, 2m		ϕ3.8, 2P, 2m		ϕ4.8, 2P, 2m			
		(AWG22, Core diameter: 0.1mm, Number of cores: 22, Insulator diameter: ϕ1.25)		(AWG22, Core diameter: 0.1mm, Number of cores: 25, Insulator diameter: ϕ1.25)		(AWG22, Core diameter: 0.1mm, Number of cores: 30, Insulator diameter: ϕ1.25)			
	Standard type	ϕ2.8, 2P, 1.5m		ϕ3.8, 2P, 1.5m		ϕ4.8, 2P, 1.5m			
		(AWG22, Core diameter: 0.1mm, Number of cores: 22, Insulator diameter: ϕ1.25)		(AWG22, Core diameter: 0.1mm, Number of cores: 25, Insulator diameter: ϕ1.25)		(AWG22, Core diameter: 0.1mm, Number of cores: 30, Insulator diameter: ϕ1.25)			
Protection		IP67							

(※1): The response frequency is the average value. The standard sensing target is used and the width is set as 2 times of the standard sensing target, 1/2 of the sensing distance for the distance.

CJY Proximity Sensor Cylindrical Type

Specifications

AC 2-wire type

Model	High-end type	/	CJY12-04KA CJY12-04KB	CJY18-05KA CJY18-05KB	CJY18-08KA CJY18-08KB	CJY30-10KA CJY30-10KB	CJY30-15KA CJY30-15KB
	Standard type	CJY12E-02KA CJY12E-02KB	CJY12E-04KA CJY12E-04KB	CJY18E-05KA CJY18E-05KB	CJY18E-08KA CJY18E-08KB	CJY30E-10KA CJY30E-10KB	CJY30E-15KA CJY30E-15KB
Sensing distance		2mm	4mm	5mm	8mm	10mm	15mm
Hysteresis		Max. 10% of sensing distance					
Standard sensing target		12 × 12 × 1mm (Iron)		18 × 18 × 1mm (Iron)	25 × 25 × 1mm (Iron)	30 × 30 × 1mm (Iron)	45 × 45 × 1mm (Iron)
Setting distance		0~1.4mm	0~2.8mm	0~3.5mm	0~5.6mm	0~7mm	0~10.5mm
Power supply (Operating voltage)		24-250VAC()					
		90-250VAC ()					
Leakage current		Max.10mA					
Response frequency (※1)		20Hz					
Residual voltage		Max. 10V					
Affection by Temp.		Max. ±10% for sensing distance at ambient temperature 20℃					
Control output		Max. 200mA					
Insulation resistance		Min. 50MΩ(at 500VDC megger)					
Dielectric strength		1500VAC 50/60Hz for 1minute					
Vibration		1mm amplitude at frequency of 10 to 55Hz(for 1 min.) in each of X, Y, Z directions for 2 hours					
Shock		500m/s^2(approx. 50G) X, Y, Z directions for 3 times					
Indicator		Operation indicator(red LED)					
Ambient temperature		-25~+70℃ (No icing)					
Storage temperature		-30~+80℃ (No icing)					
Ambient humidity		35~95%RH (No condensation)					
Protection circuit		Surge protection current					
Material		Case/Nut: Nickel plated Brass, Washer: Nickel plated Iron, Sensing surface: PBT, Standard cable(Gray): Polyvinyl chloride(PVC), Oil resistant cable(Black): Oil resistant Polyvinyl chloride(PVC)					
Cable	High-end type	ϕ3.8, 2P, 2m		ϕ4.8, 2P, 2m			
		(AWG22, Core diameter: 0.1mm, Number of cores: 25, Insulator diameter: ϕ1.25)		(AWG22, Core diameter: 0.1mm, Number of cores: 30, Insulator diameter: ϕ1.25)			
	Standard type	ϕ3.8, 2P, 1.5m		ϕ4.8, 2P, 1.5m			
		(AWG22, Core diameter: 0.1mm, Number of cores: 25, Insulator diameter: ϕ1.25)		(AWG22, Core diameter: 0.1mm, Number of cores: 30, Insulator diameter: ϕ1.25)			
Protection		IP67					

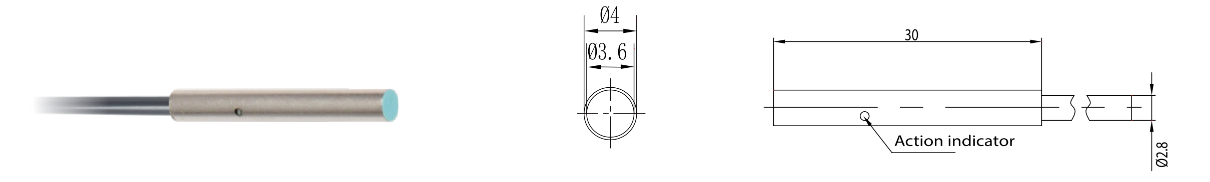
(※1): The response frequency is the average value. The standard sensing target is used and the width is set as 2 times of the standard sensing target, 1/2 of the sensing distance for the distance.

CJY Proximity Sensor Cylindrical Type (High-end type)

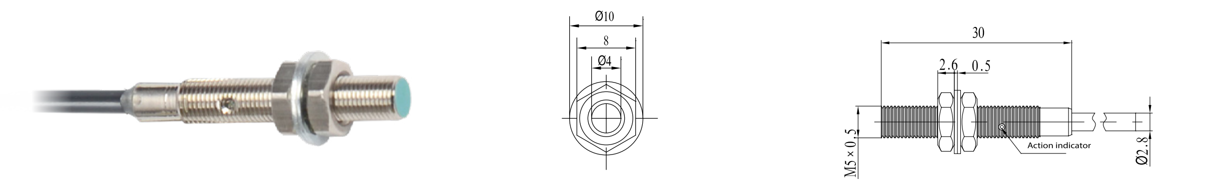
CNTD

Appearance and Dimension

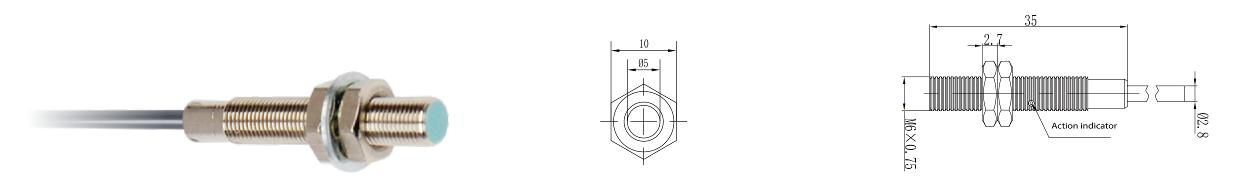
CJY04-01



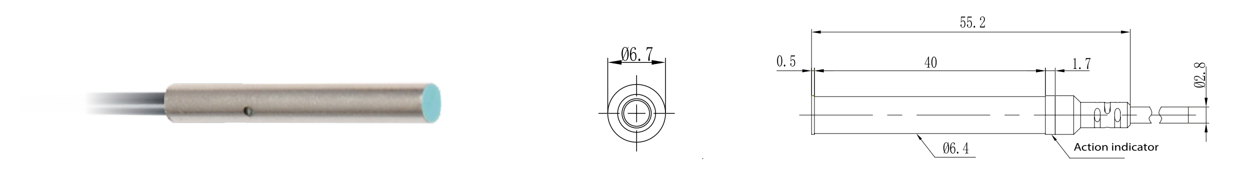
CJY05-01



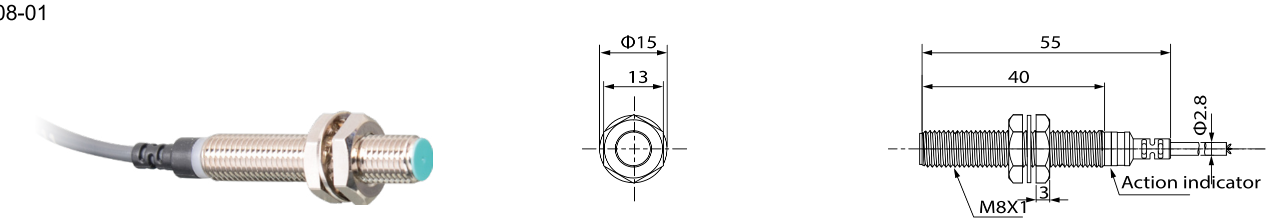
CJY06-01



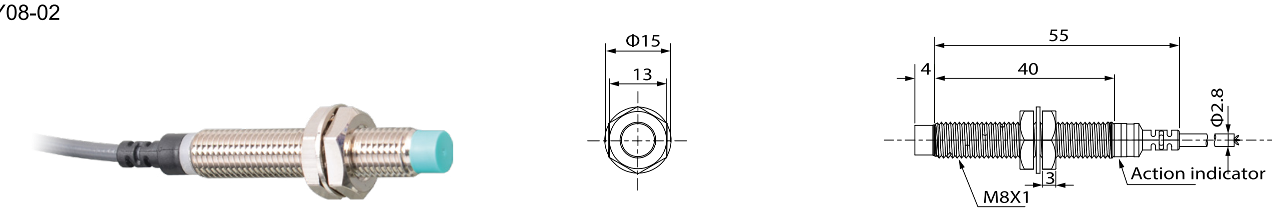
CJY6.5-1.5



CJY08-01



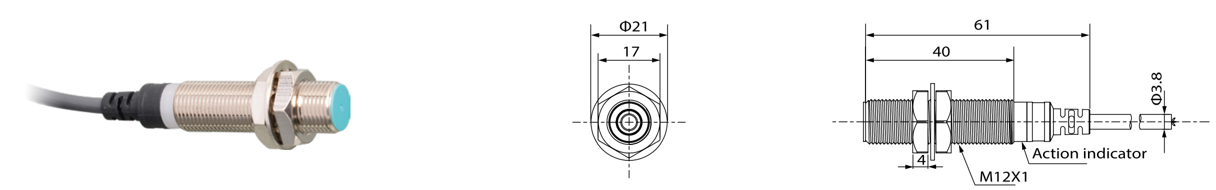
CJY08-02



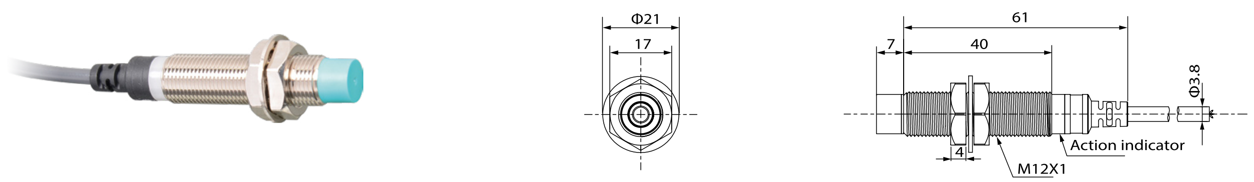
CJY Proximity Sensor Cylindrical Type (High-end type)

Appearance and Dimension

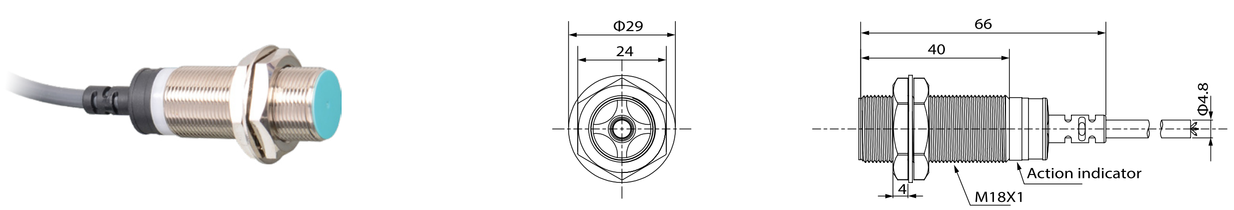
CJY12-02



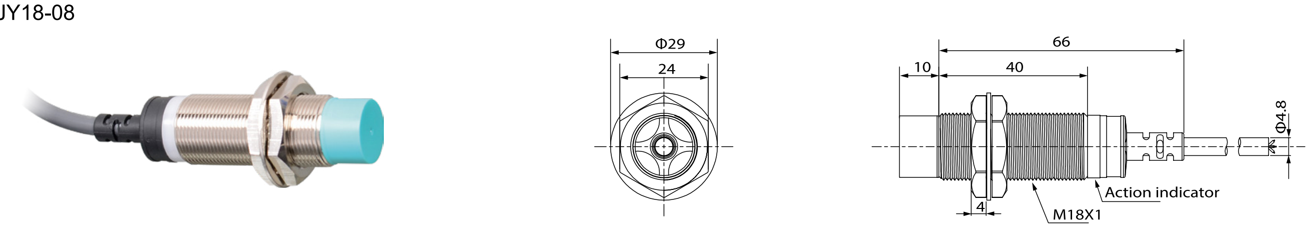
CJY12-04



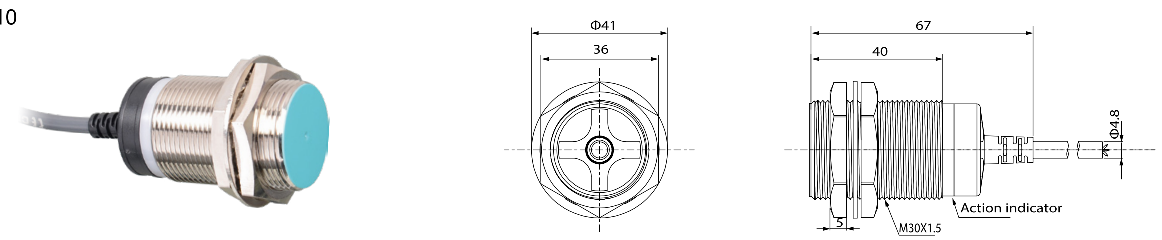
CJY18-05



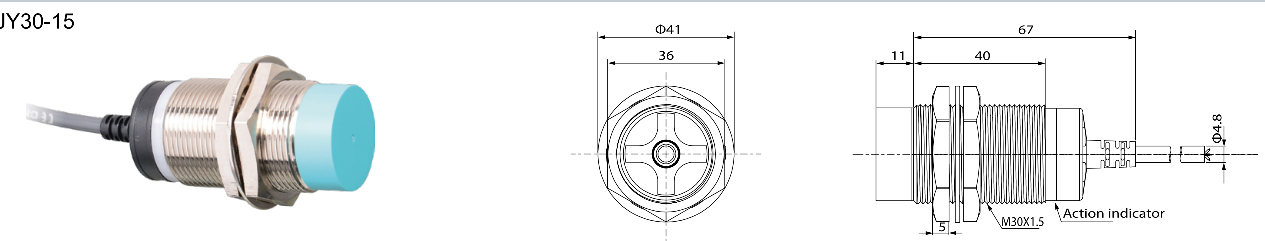
CJY18-08



CJY30-10



CJY30-15

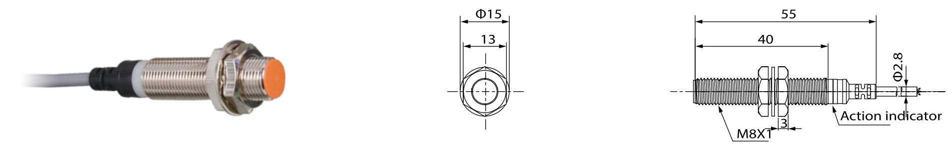


CJY Proximity Sensor Cylindrical Type (Standard type)

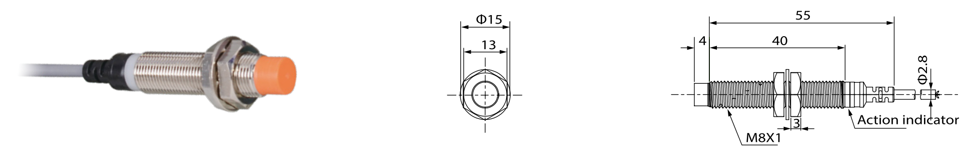
CNTD

Appearance and Dimension

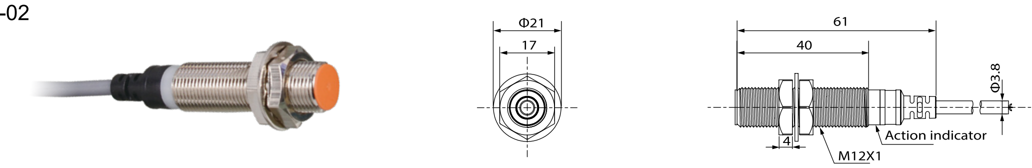
CJY08E-01



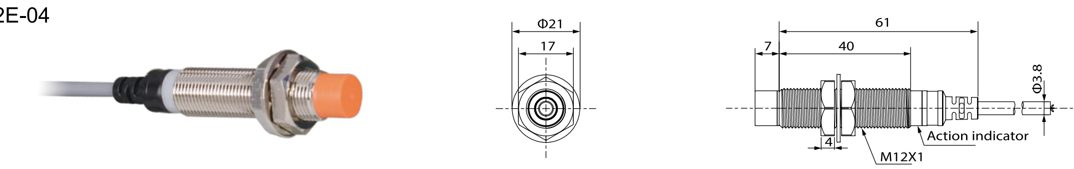
CJY08E-02



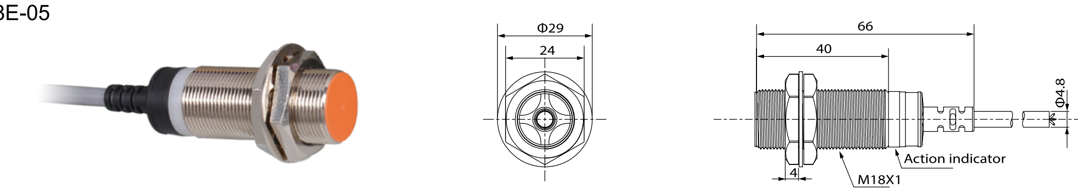
CJY12E-02



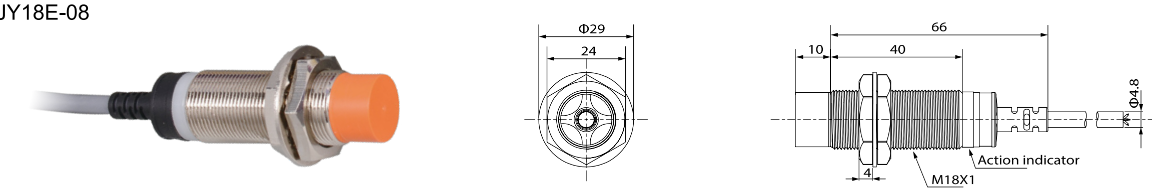
CJY12E-04



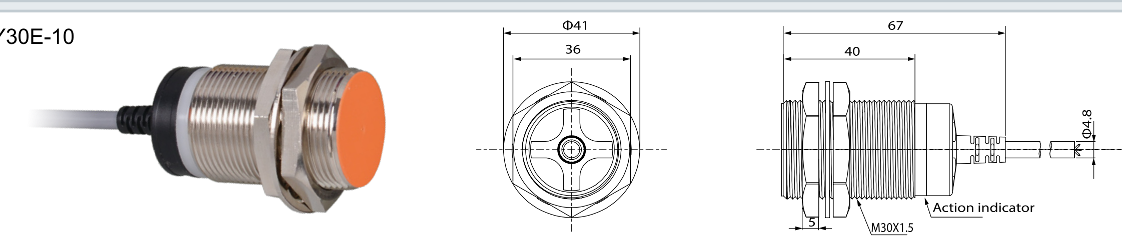
CJY18E-05



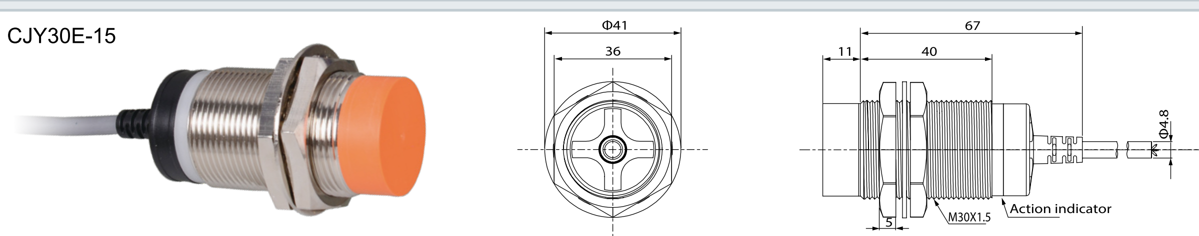
CJY18E-08



CJY30E-10



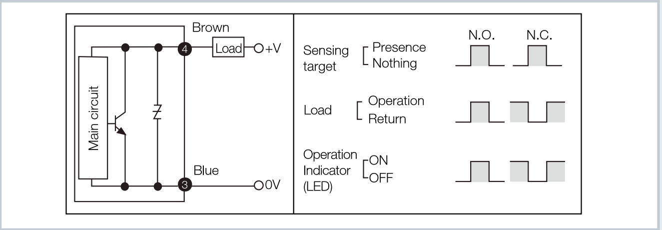
CJY30E-15



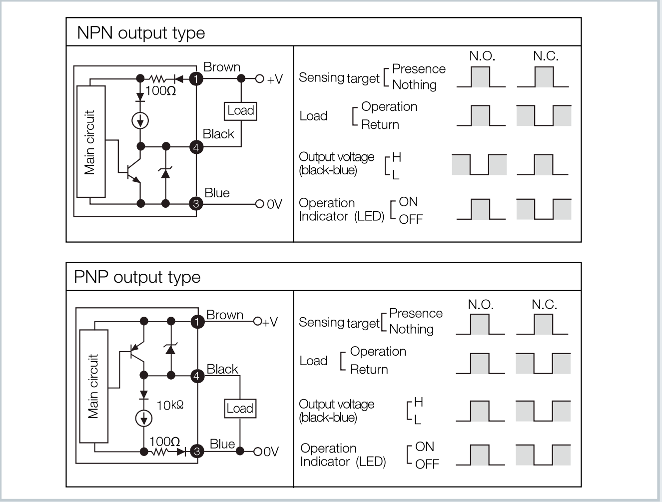
CJY Proximity Sensor Cylindrical Type

Control Output Diagram

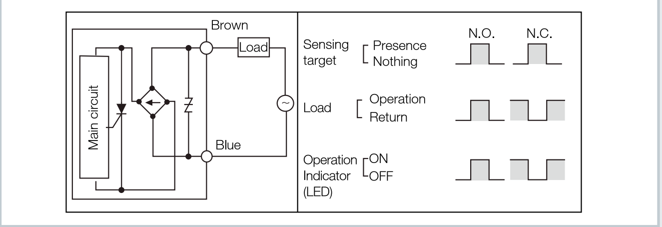
DC 2-wire type



DC 3-wire type

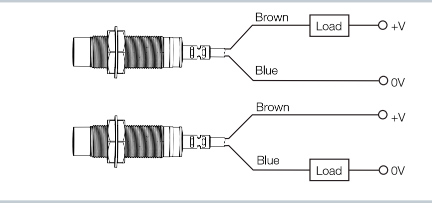


AC 2-wire type



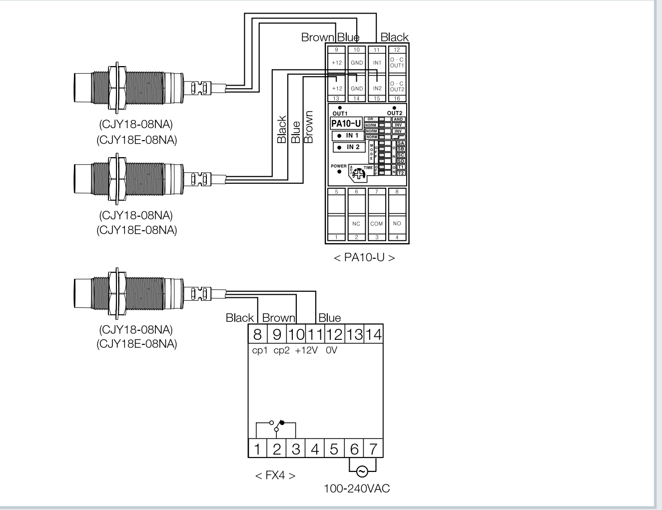
Connections

DC 2-wire type

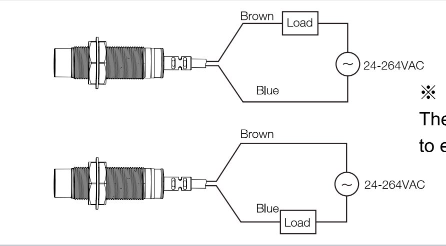


※ The load can be connected to another line

DC 3-wire type



AC 2-wire type



※ The load can be connected to either wire.

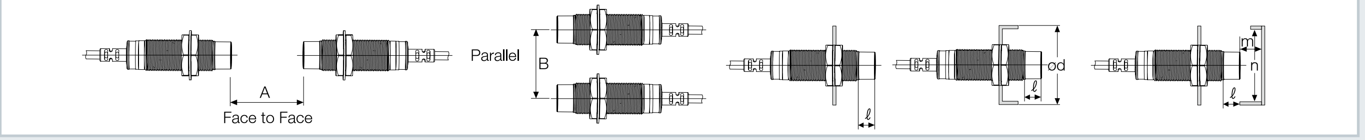
Proper Usage

Mutual-interference

When several proximity sensors are mounted close to one another a malfunction of the sensor may be caused due to mutual interference. Therefore, be sure to provide a minimum distance between the two sensors as below chart indicates.

Influence by surrounding metals

When sensors are mounted on metallic panel, you must prevent the sensors from being affected by any metallic object except target. Therefore, be sure to provide a minimum distance as below chart indicates.



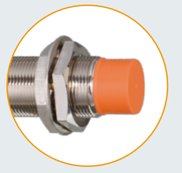
Item \ Model	CJY08-01 CJY08E-01	CJY08-02 CJY08E-02	CJY12-02 CJY12E-02	CJY12-04 CJY12E-04	CJY18-05 CJY18E-05	CJY18-08 CJY18E-08	CJY30-10 CJY30E-10	CJY30-15 CJY30E-15
A	9	12	12	24	30	48	60	90
B	16	24	24	36	36	54	60	90
ℓ	0	8	0	11	0	14	0	15
ϕ d	8	24	12	36	18	54	30	90
m	4.5	6	6	12	15	24	30	45
n	12	24	18	36	27	54	45	90

CJY-T Proximity Sensor Cylindrical Connector Type

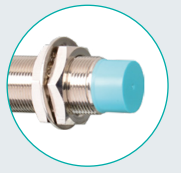
CNTD

Features

- Orange mark for standard type
- Light green mark for high-end type
- Exclusively designed IC for improving anti-jamming capability
- Inside surge protection, reverse polarity protection, overcurrent protection
- Long use-life cycle and high reliability, easy install, enconomic price
- Red LED status indication, easy to confirm work situation
- Protection structure IP65(IEC standard)
- Replaceable for limit switches



Orange



Light green

Model Number Structure

C J Y 18 □ — 08 N A T

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

Item	Code	Description
① Company code	C	Company code
② Product name	J	Inductive proximity sensor
③ Shape of shell	Y	Cylinder-shaped
④ Dimension code	18	18=M18
⑤ Product type	Without	Without = High-end type（Light green head）
	E	E=Standard type（Orange head）
⑥ Detection distance	08	08=8mm
⑦ Output mode	K	AC 2wires
	L	DC 2wires
	P	PNP 3wires
	N	NPN 3wires
⑧ Output state	A	NO
	B	NC
	C	NO+NC
⑨ Connection	Without	Without: Lead wire
	T	Plug-in
	R	Wiring leads Plug-in

CJY-T Proximity Sensor Cylindrical Connector Type

Specifications

DC 3-wire type

Model	High-end type	CJY12-02NAT CJY12-02NBT CJY12-02NCT CJY12-02PAT CJY12-02PBT CJY12-02PCT	CJY12-04NAT CJY12-04NBT CJY12-04NCT CJY12-04PAT CJY12-04PBT CJY12-04PCT	CJY18-05NAT CJY18-05NBT CJY18-05NCT CJY18-05PAT CJY18-05PBT CJY18-05PCT	CJY18-08NAT CJY18-08NBT CJY18-08NCT CJY18-08PAT CJY18-08PBT CJY18-08PCT	CJY30-10NAT CJY30-10NBT CJY30-10NCT CJY30-10PAT CJY30-10PBT CJY30-10PCT	CJY30-15NAT CJY30-15NBT CJY30-15NCT CJY30-15PAT CJY30-15PBT CJY30-15PCT
	Standard type	CJY12E-02NAT CJY12E-02NBT CJY12E-02NCT CJY12E-02PAT CJY12E-02PBT CJY12E-02PCT	CJY12E-04NAT CJY12E-04NBT CJY12E-04NCT CJY12E-04PAT CJY12E-04PBT CJY12E-04PCT	CJY18E-05NAT CJY18E-05NBT CJY18E-05NCT CJY18E-05PAT CJY18E-05PBT CJY18E-05PCT	CJY18E-08NAT CJY18E-08NBT CJY18E-08NCT CJY18E-08PAT CJY18E-08PBT CJY18E-08PCT	CJY30E-10NAT CJY30E-10NBT CJY30E-10NCT CJY30E-10PAT CJY30E-10PBT CJY30E-10PCT	CJY30E-15NAT CJY30E-15NBT CJY30E-15NCT CJY30E-15PAT CJY30E-15PBT CJY30E-15PCT
Sensing distance		2mm	4mm	5mm	8mm	10mm	15mm
Hysteresis		Max. 10% of sensing distance					
Standard sensing target		12 × 12 × 1mm (Iron)		18 × 18 × 1mm (Iron)	25 × 25 × 1mm (Iron)	30 × 30 × 1mm (Iron)	45 × 45 × 1mm (Iron)
Setting distance		0~1.4mm	0~2.8mm	0~3.5mm	0~5.6mm	0~7mm	0~10.5mm
Power supply (Operating voltage)		12-24VDC (10-30VDC)					
Leakage current		Max.10mA					
Response frequency (※1)		1000Hz	500Hz	500Hz	350Hz	350Hz(High-end) 400Hz(standard)	200Hz
Residual voltage		Max. 1.0V					
Affection by Temp.		Max. ±10% for sensing distance at ambient temperature 20℃					
Control output		Max. 200mA					
Insulation resistance		Min. 50MΩ(at 500VDC megger)					
Dielectric strength		1500VAC 50/60Hz for 1minute					
Vibration		1mm amplitude at frequency of 10 to 55Hz(for 1 min.) in each of X, Y, Z directions for 2 hours					
Shock		500m/s^2(approx. 50G) X, Y, Z directions for 3 times					
Indicator		Operation indicator(red LED)					
Ambient temperature		-25~+70℃ (No icing)					
Storage temperature		-30~+80℃ (No icing)					
Ambient humidity		35~95%RH (No condensation)					
Protection circuit		Surge protection circuit, Reverse polarity protection circuit, Overcurrent protection circuit					
Material		Case/Nut: Nickel plated Brass, Washer: Nickel plated Iron, Sensing surface: PBT					
Protection		IP65					

(※1): The response frequency is the average value. The standard sensing target is used and the width is set as 2 times of the standard sensing target, 1/2 of the sensing distance for the distance.

CJY-T Proximity Sensor Cylindrical Connector Type

CNTD

Specifications

DC 2-wire type

Model	High-end type	CJY12-02LAT CJY12-02LBT	CJY12-04LAT CJY12-04LBT	CJY18-05LAT CJY18-05LBT	CJY18-08LAT CJY18-08LBT	CJY30-10LAT CJY30-10LBT	CJY30-15LAT CJY30-15LBT
	Standard type	CJY12E-02LAT	CJY12E-04LAT	CJY18E-05LAT	CJY18E-08LAT	CJY30E-10LAT	CJY30E -15LAT
Sensing distance		2mm	4mm	5mm	8mm	10mm	15mm
Hysteresis		Max. 10% of sensing distance					
Standard sensing target		12 × 12 × 1mm (Iron)		18 × 18 × 1mm (Iron)	25 × 25 × 1mm (Iron)	30 × 30 × 1mm (Iron)	45 × 45 × 1mm (Iron)
Setting distance		0~1.4mm	0~2.8mm	0~3.5mm	0~5.6mm	0~7mm	0~10.5mm
Power supply (Operating voltage)		12-24VDC (10-30VDC)					
Leakage current		Max.0.6mA					
Response frequency (※1)		1000Hz	500Hz	500Hz	350Hz	350Hz	200Hz
Residual voltage		Max. 3.5V					
Affection by Temp.		Max. ±10% for sensing distance at ambient temperature 20℃					
Control output		Max. 200mA					
Insulation resistance		Min. 50MΩ(at 500VDC megger)					
Dielectric strength		1500VAC 50/60Hz for 1minute					
Vibration		1mm amplitude at frequency of 10 to 55Hz(for 1 min.) in each of X, Y, Z directions for 2 hours					
Shock		500m/s^2(approx. 50G) X, Y, Z directions for 3 times					
Indicator		Operation indicator(red LED)					
Ambient temperature		-25~+70℃ (No icing)					
Storage temperature		-30~+80℃ (No icing)					
Ambient humidity		35~95%RH (No condensation)					
Protection circuit		Surge protection circuit					
Material		Case/Nut: Nickel plated Brass, Washer: Nickel plated Iron, Sensing surface: PBT					
Protection		IP65					

(※1): The response frequency is the average value. The standard sensing target is used and the width is set as 2 times of the standard sensing target, 1/2 of the sensing distance for the distance.

CJY-T Proximity Sensor Cylindrical Connector Type

Specifications

AC 2-wire type

Model	High-end type	/	CJY12-04KAT CJY12-04KBT	CJY18-05KAT CJY18-05KBT	CJY18-08KAT CJY18-08KBT	CJY30-10KAT CJY30-10KBT	CJY30-15KAT CJY30-15KBT
	Standard type	CJY12E-02KAT CJY12E-02KBT	CJY12E-04KAT CJY12E-04KBT	CJY18E-05KAT CJY18E-05KBT	CJY18E-08KAT CJY18E-08KBT	CJY30E-10KAT CJY30E-10KBT	CJY30E-15KAT CJY30E-15KBT
Sensing distance		2mm	4mm	5mm	8mm	10mm	15mm
Hysteresis		Max. 10% of sensing distance					
Standard sensing target		12 × 12 × 1mm (Iron)		18 × 18 × 1mm (Iron)	25 × 25 × 1mm (Iron)	30 × 30 × 1mm (Iron)	45 × 45 × 1mm (Iron)
Setting distance		0~1.4mm	0~2.8mm	0~3.5mm	0~5.6mm	0~7mm	0~10.5mm
Power supply (Operating voltage)		90-250VAC					
Leakage current		Max.10mA					
Response frequency (※1)		20Hz					
Residual voltage		Max. 10V					
Affection by Temp.		Max. ± 10% for sensing distance at ambient temperature 20℃					
Control output		Max. 200mA					
Insulation resistance		Min. 50MΩ (at 500VDC megger)					
Dielectric strength		1500VAC 50/60Hz for 1minute					
Vibration		1mm amplitude at frequency of 10 to 55Hz(for 1 min.) in each of X, Y, Z directions for 2 hours					
Shock		500m/s^2(approx. 50G) X, Y, Z directions for 3 times					
Indicator		Operation indicator(red LED)					
Ambient temperature		-25~+70℃ (No icing)					
Storage temperature		-30~+80℃ (No icing)					
Ambient humidity		35~95%RH (No condensation)					
Protection circuit		Surge protection current					
Material		Case/Nut: Nickel plated Brass, Washer: Nickel plated Iron, Sensing surface: PBT					
Protection		IP65					

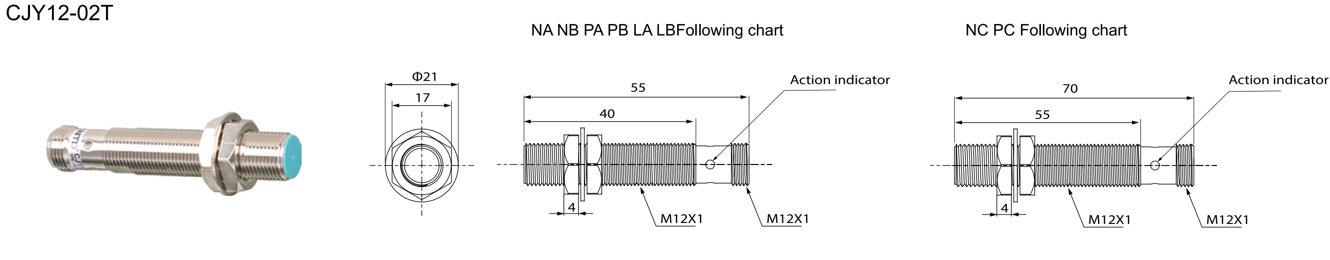
(※1): The response frequency is the average value. The standard sensing target is used and the width is set as 2 times of the standard sensing target, 1/2 of the sensing distance for the distance.

CJY-T Proximity Sensor Cylindrical Connector Type (High-end type)

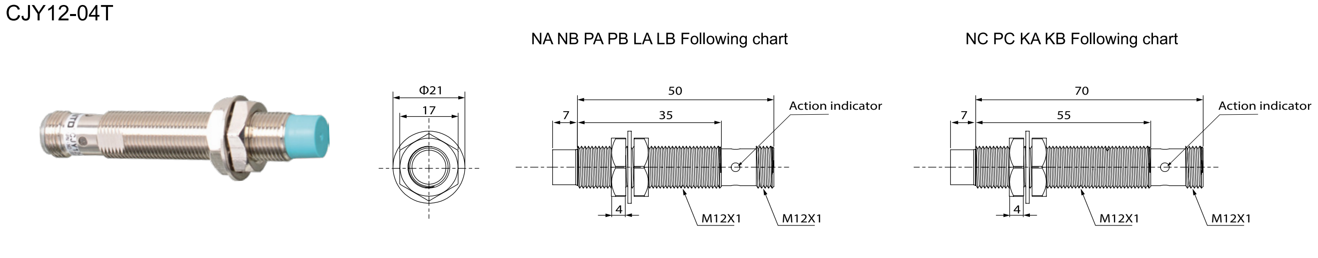
CNTD

Appearance and Dimension

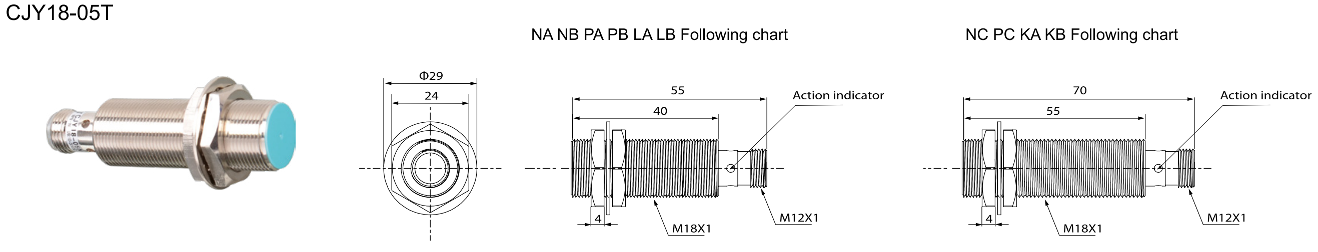
CJY12-02T



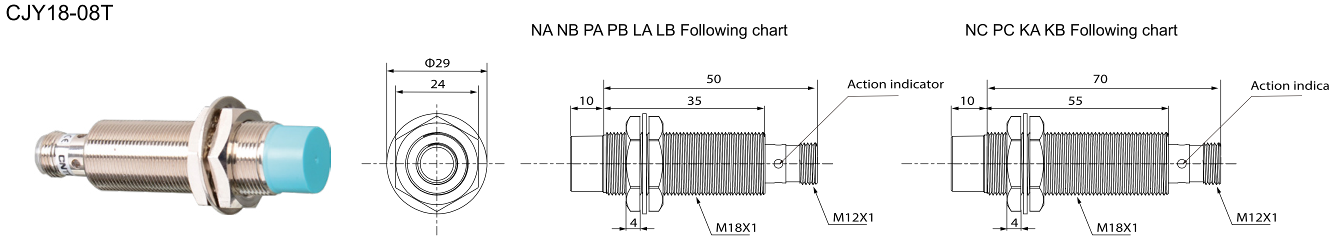
CJY12-04T



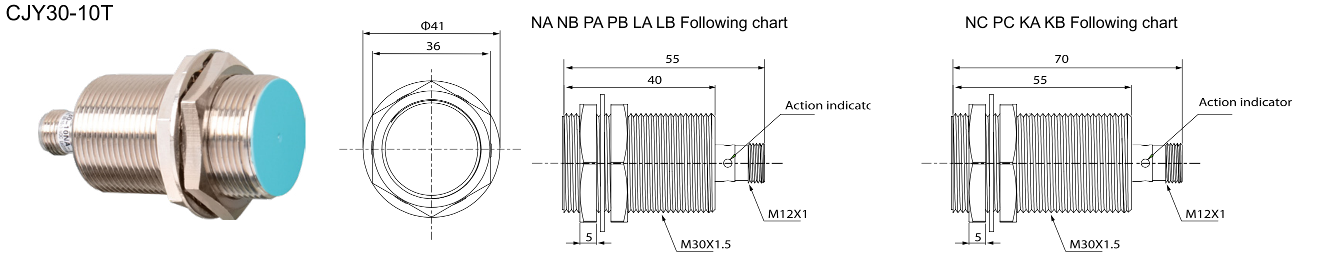
CJY18-05T



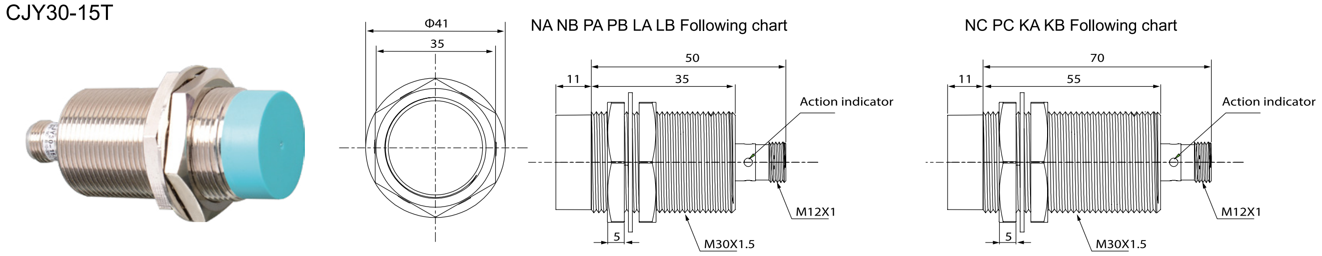
CJY18-08T



CJY30-10T



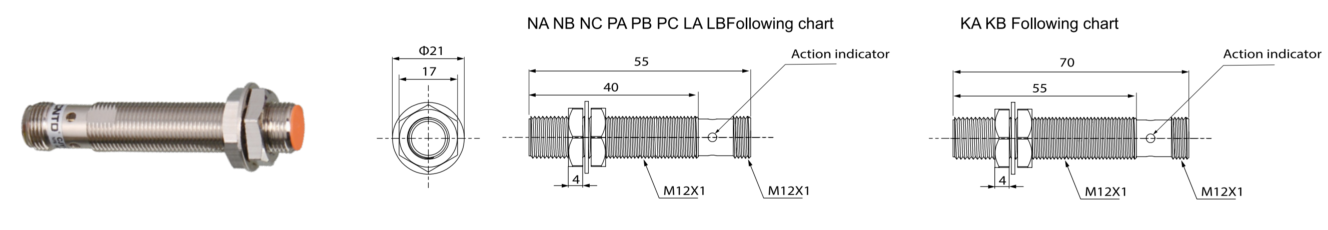
CJY30-15T



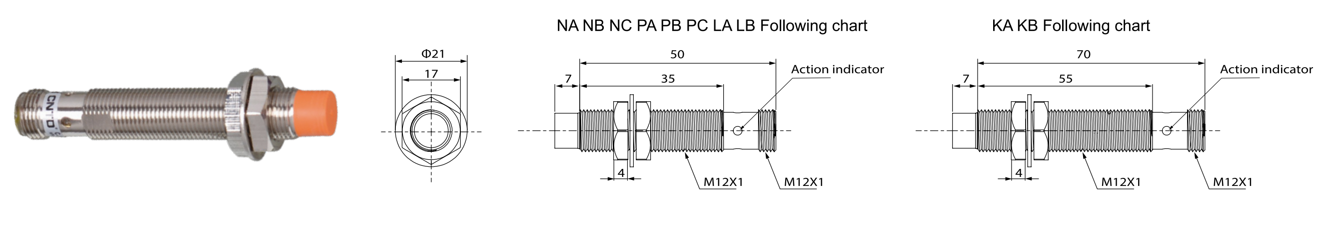
CJY-T Proximity Sensor Cylindrical Connector Type (Standard type)

Appearance and Dimension

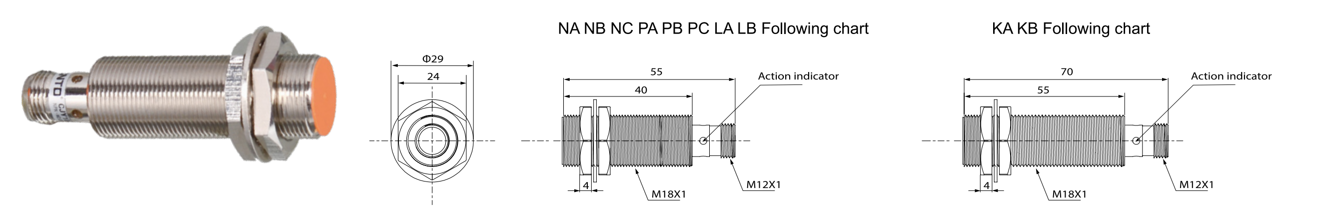
CJY12E-02T



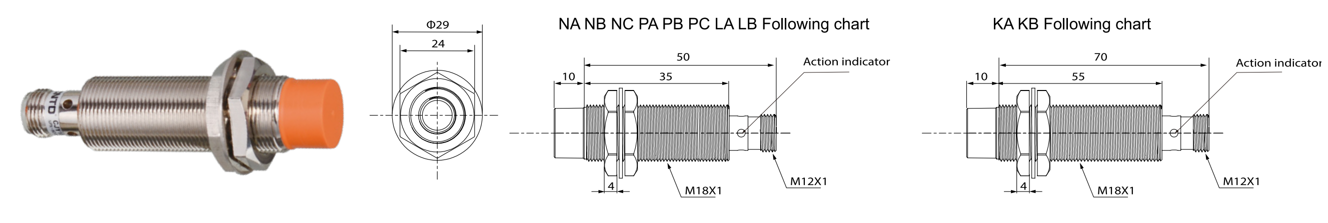
CJY12E-04T



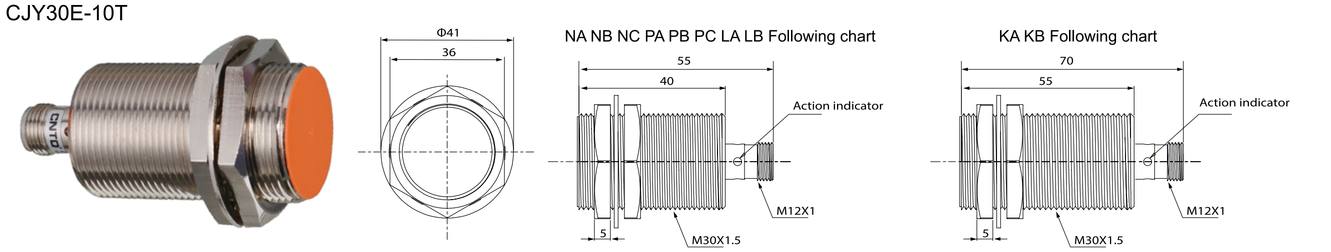
CJY18E-05T



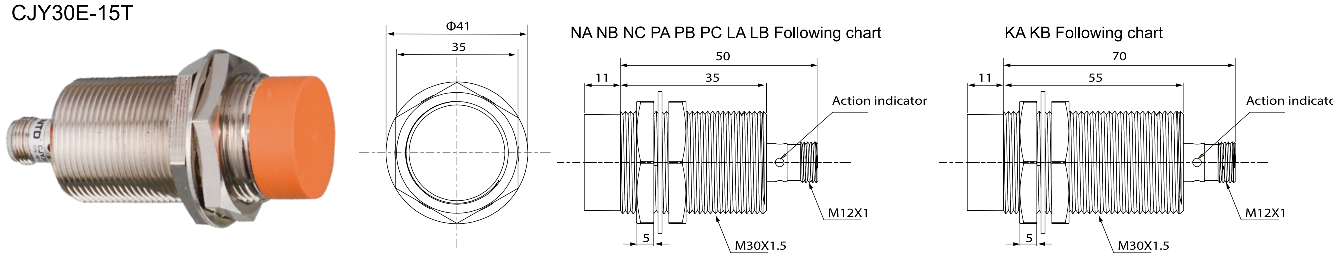
CJY18E-08T



CJY30E-10T



CJY30E-15T

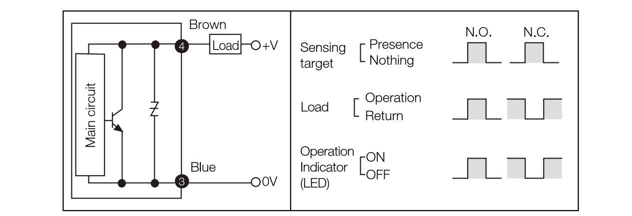


CJY-T Proximity Sensor Cylindrical Connector Type

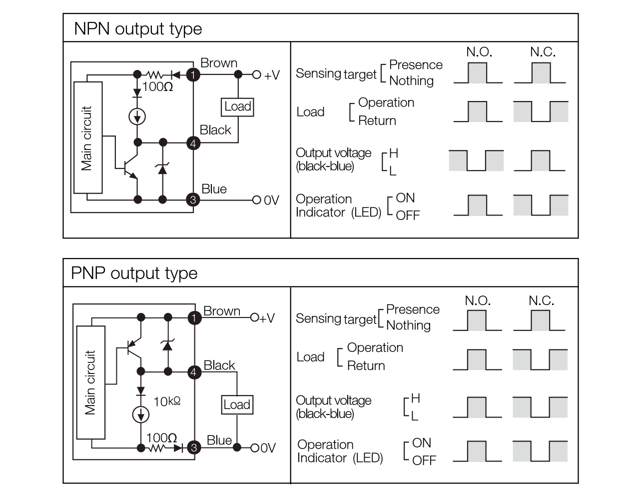
CNTD

Control Output Diagram

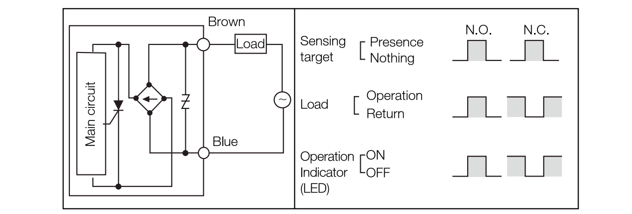
DC 2-wire type



DC 3-wire type

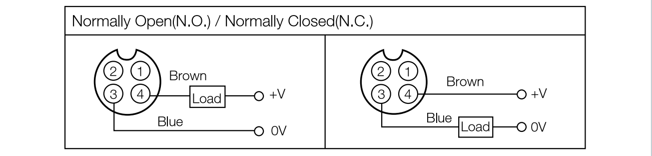


AC 2-wire type



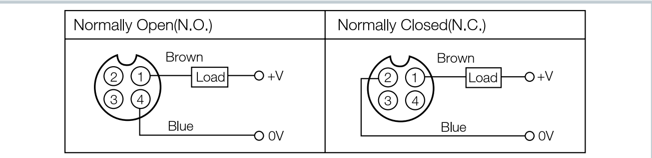
Wiring Diagram

DC 2-wire type (Standard type)



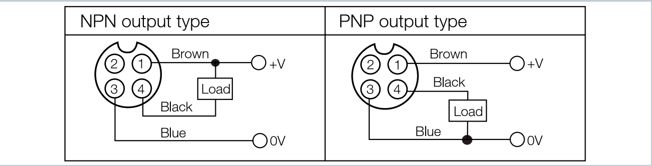
※ Pin ①, ② are not used terminals.
※ When using DC 3-wire type of connector cable, black (12-24VDC) and blue(0V) cables can be used.

DC 2-wire type (IEC standard type)



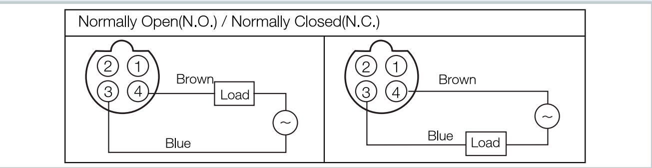
※ ②, ③ of N.O. type and ③, ④ of N.C. type are not used terminals.
※ Please use the IEC specifications of the plug.

DC 3-wire type



※ Please fasten the cleat of connector not to shown the thread. (0.39 to 0.49N.m)
※ Please fasten the vibration part with Teflon tape.

AC 2-wire type



※ In case of AC switching type, ② and ③, ① and ④ are connected to each other inside.

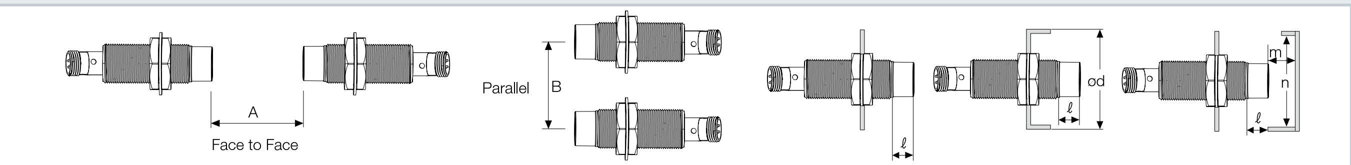
Proper Usage

utual-interference

When several proximity sensors are mounted close to one another a malfunction of the sensor may be caused due to mutual interference. Therefore, be sure to provide a minimum distance between the two sensors as below chart indicates.

Influence by surrounding metals

When sensors are mounted on metallic panel, you must prevent the sensors from being affected by any metallic object except target. Therefore, be sure to provide a minimum distance as below chart indicates.



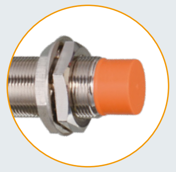
Item \ Model	CJY12-02T	CJY12-04T	CJY18-05T	CJY18-08T	CJY30-10T	CJY30-15T
	CJY12E-02T	CJY12E-04T	CJY18E-05T	CJY18E-08T	CJY30E-10T	CJY30E-15T
A	12	24	30	48	60	90
B	24	36	36	54	60	90
ℓ	0	11	0	14	0	15
ϕ d	12	36	18	54	30	90
m	6	12	15	24	30	45
n	18	36	27	54	45	90

CJY-R Proximity Sensor Cylindrical Cable Connector Type

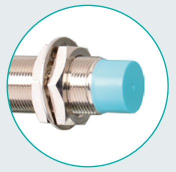
Features

- Orange mark for standard type
- Light green mark for high-end type

- Exclusively designed IC for improving anti-jamming capability
- Inside surge protection, reverse polarity protection, overcurrent protection
- Long use-life cycle and high reliability, easy install, enconomic price
- Red LED status indication, easy to confirm work situation
- Protection structure IP67(IEC standard)
- Replaceable for limit switches



Orange



Light green

Model Number Structure

C J Y 18 □ — 08 N A R

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

Item	Code	Description
① Company code	C	Company code
② Product name	J	Inductive proximity sensor
③ Shape of shell	Y	Cylinder-shaped
④ Dimension code	18	18=M18
⑤ Product type	Without	Without = High-end type（Light green head）
	E	E = Standard type（Orange head）
⑥ Detection distance	08	08=8mm
⑦ Output mode	K	AC 2wires
	L	DC 2wires
	P	PNP 3wires
	N	NPN 3wires
⑧ Output state	A	NO
	B	NC
	C	NO+NC
⑨ Connection	Without	Without: Lead wire
	T	Plug-in
	R	Wiring leads Plug-in

Specifications

DC 3-wire type

Model	High-end type	CJY12-02NAR CJY12-02NBR CJY12-02NCR CJY12-02PAR CJY12-02PBR CJY12-02PCR	CJY12-04NAR CJY12-04NBR CJY12-04NCR CJY12-04PAR CJY12-04PBR CJY12-04PCR	CJY18-05NAR CJY18-05NBR CJY18-05NCR CJY18-05PAR CJY18-05PBR CJY18-05PCR	CJY18-08NAR CJY18-08NBR CJY18-08NCR CJY18-08PAR CJY18-08PBR CJY18-08PCR	CJY30-10NAR CJY30-10NBR CJY30-10NCR CJY30-10PAR CJY30-10PBR CJY30-10PCR	CJY30-15NAR CJY30-15NBR CJY30-15NCR CJY30-15PAR CJY30-15PBR CJY30-15PCR
	Standard type	CJY12E-02NAR CJY12E-02NBR CJY12E-02NCR CJY12E-02PAR CJY12E-02PBR CJY12E-02PCR	CJY12E-04NAR CJY12E-04NBR CJY12E-04NCR CJY12E-04PAR CJY12E-04PBR CJY12E-04PCR	CJY18E-05NAR CJY18E-05NBR CJY18E-05NCR CJY18E-05PAR CJY18E-05PBR CJY18E-05PCR	CJY18E-08NAR CJY18E-08NBR CJY18E-08NCR CJY18E-08PAR CJY18E-08PBR CJY18E-08PCR	CJY30E-10NAR CJY30E-10NBR CJY30E-10NCR CJY30E-10PAR CJY30E-10PBR CJY30E-10PCR	CJY30E-15NAR CJY30E-15NBR CJY30E-15NCR CJY30E-15PAR CJY30E-15PBR CJY30E-15PCR
Sensing distance		2mm	4mm	5mm	8mm	10mm	15mm
Hysteresis		Max. 10% of sensing distance					
Standard sensing target		12 × 12 × 1mm (Iron)		18 × 18 × 1mm (Iron)	25 × 25 × 1mm (Iron)	30 × 30 × 1mm (Iron)	45 × 45 × 1mm (Iron)
Setting distance		0~1.4mm	0~2.8mm	0~3.5mm	0~5.6mm	0~7mm	0~10.5mm
Power supply (Operating voltage)		12-24VDC (10-30VDC)					
Leakage current		Max.10mA					
Response frequency (※1)		1000Hz	500Hz	500Hz	350Hz	350Hz	200Hz
Residual voltage		Max. 1.0V					
Affection by Temp.		Max. ±10% for sensing distance at ambient temperature 20℃					
Control output		Max. 200mA					
Insulation resistance		Min. 50MΩ(at 500VDC megger)					
Dielectric strength		1500VAC 50/60Hz for 1minute					
Vibration		1mm amplitude at frequency of 10 to 55Hz(for 1 min.) in each of X, Y, Z directions for 2 hours					
Shock		500m/s^2(approx. 50G) X, Y, Z directions for 3 times					
Indicator		Operation indicator(red LED)					
Ambient temperature		-25~+70℃ (No icing)					
Storage temperature		-30~+80℃ (No icing)					
Ambient humidity		35~95%RH (No condensation)					
Protection circuit		Surge protection circuit, Reverse polarity protection circuit, Overcurrent protection circuit					
Material		Case/Nut: Nickel plated Brass, Washer: Nickel plated Iron, Sensing surface: PBT, Standard cable(Gray): Polyvinyl chloride(PVC), Oil resistant cable(Black): Oil resistant Polyvinyl chloride(PVC)					
Cable		ϕ3.8, 3P,4P 300mm, M12 connector		ϕ4.8, 3P,4P 300mm, M12 connector			
Protection		IP67					

(※1): The response frequency is the average value. The standard sensing target is used and the width is set as 2 times of the standard sensing target, 1/2 of the sensing distance for the distance.

CJY-R Proximity Sensor Cylindrical Cable Connector Type

Specifications

DC 2-wire type

Model	CJY12-02LAR CJY12-02LBR	CJY12-04LAR CJY12-04LBR	CJY18-05LAR CJY18-05LBR	CJY18-08LAR CJY18-08LBR	CJY30-10LAR CJY30-10LBR	CJY30-15LAR CJY30-15LBR
Sensing distance	2mm	4mm	5mm	8mm	10mm	15mm
Hysteresis	Max. 10% of sensing distance					
Standard sensing target	12 × 12 × 1mm (Iron)		18 × 18 × 1mm (Iron)	25 × 25 × 1mm (Iron)	30 × 30 × 1mm (Iron)	45 × 45 × 1mm (Iron)
Setting distance	0~1.4mm	0~2.8mm	0~3.5mm	0~5.6mm	0~7mm	0~10.5mm
Power supply (Operating voltage)	12-24VDC (10-30VDC)					
Leakage current	Max.0.6mA					
Response frequency (※1)	1000Hz	500Hz	500Hz	350Hz	350Hz	200Hz
Residual voltage	Max. 3.5V					
Affection by Temp.	Max. ±10% for sensing distance at ambient temperature 20℃					
Control output	Max. 200mA					
Insulation resistance	Min. 50MΩ (at 500VDC megger)					
Dielectric strength	1500VAC 50/60Hz for 1minute					
Vibration	1mm amplitude at frequency of 10 to 55Hz(for 1 min.) in each of X, Y, Z directions for 2 hours					
Shock	500m/s^2(approx. 50G) X, Y, Z directions for 3 times					
Indicator	Operation indicator(red LED)					
Ambient temperature	-25~+70℃ (No icing)					
Storage temperature	-30~+80℃ (No icing)					
Ambient humidity	35~95%RH (No condensation)					
Protection circuit	Surge protection circuit, Overcurrent protection circuit					
Material	Case/Nut: Nickel plated Brass, Washer: Nickel plated Iron, Sensing surface: PBT, Standard cable(Gray): Polyvinyl chloride(PVC), Oil resistant cable(Black): Oil resistant Polyvinyl chloride(PVC))					
Cable	ϕ3.8, 2P, 300mm, M12 connector		ϕ4.8, 2P, 300mm, M12 connector			
Protection	IP67					

(※1): The response frequency is the average value. The standard sensing target is used and the width is set as 2 times of the standard sensing target, 1/2 of the sensing distance for the distance.

CJY-R Proximity Sensor Cylindrical Cable Connector Type

CNTD

Specifications

AC 2-wire type

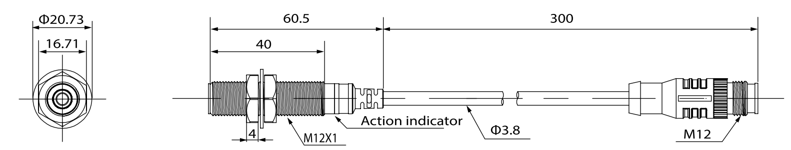
Model	CJY12-02KAR CJY12-02KBR	CJY12-04KAR CJY12-04KBR	CJY18-05KAR CJY18-05KBR	CJY18-08KAR CJY18-08KBR	CJY30-10KAR CJY30-10KBR	CJY30-15KAR CJY30-15KBR
Sensing distance	2mm	4mm	5mm	8mm	10mm	15mm
Hysteresis	Max. 10% of sensing distance					
Standard sensing target	12 × 12 × 1mm (Iron)		18 × 18 × 1mm (Iron)	25 × 25 × 1mm (Iron)	30 × 30 × 1mm (Iron)	45 × 45 × 1mm (Iron)
Setting distance	0~1.4mm	0~2.8mm	0~3.5mm	0~5.6mm	0~7mm	0~10.5mm
Power supply (Operating voltage)	24-250VAC					
Leakage current	Max.10mA					
Response frequency (※1)	20Hz					
Residual voltage	Max. 10V					
Affection by Temp.	Max. ±10% for sensing distance at ambient temperature 20℃					
Control output	Max. 200mA					
Insulation resistance	Min. 50MΩ (at 500VDC megger)					
Dielectric strength	1500VAC 50/60Hz for 1minute					
Vibration	1mm amplitude at frequency of 10 to 55Hz(for 1 min.) in each of X, Y, Z directions for 2 hours					
Shock	500m/s^2(approx. 50G) X, Y, Z directions for 3 times					
Indicator	Operation indicator(red LED)					
Ambient temperature	-25~+70℃ (No icing)					
Storage temperature	-30~+80℃ (No icing)					
Ambient humidity	35~95%RH (No condensation)					
Protection circuit	Surge protection current					
Material	Case/Nut: Nickel plated Brass, Washer: Nickel plated Iron, Sensing surface: PBT, Standard cable(Gray): Polyvinyl chloride(PVC), Oil resistant cable(Black): Oil resistant Polyvinyl chloride(PVC)					
Cable	ϕ3.8, 2P, 300mm, M12 connector		ϕ4.8, 2P, 300mm, M12 connector			
Protection	IP67					

(※1): The response frequency is the average value. The standard sensing target is used and the width is set as 2 times of the standard sensing target, 1/2 of the sensing distance for the distance.

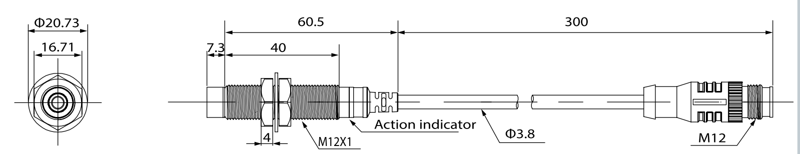
CJY-R Proximity Sensor Cylindrical Cable Connector Type (High-end type)

Appearance and Dimension

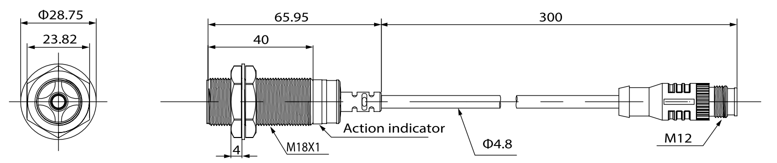
CJY12-02R



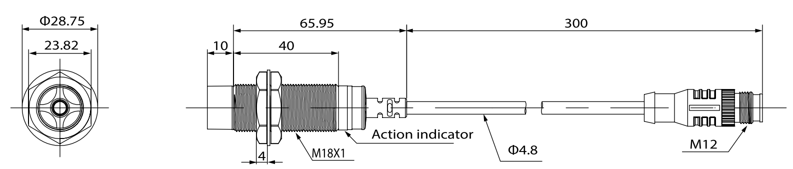
CJY12-04R



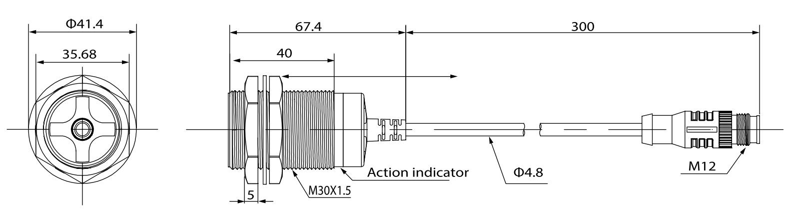
CJY18-05R



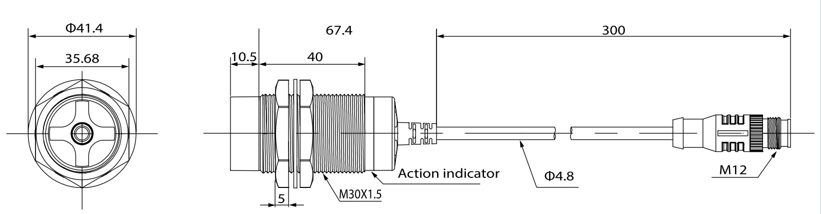
CJY18-08R



CJY30-10R



CJY30-15R

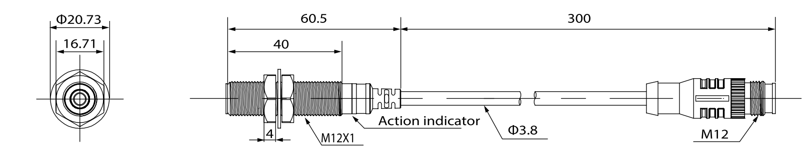


CJY-R Proximity Sensor Cylindrical Cable Connector Type (Standard type)

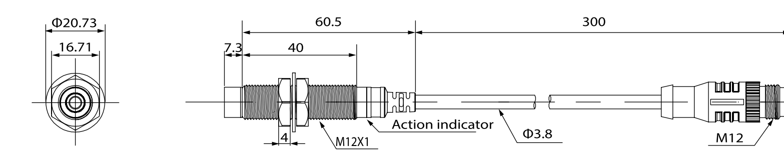
CNTD

Appearance and Dimension

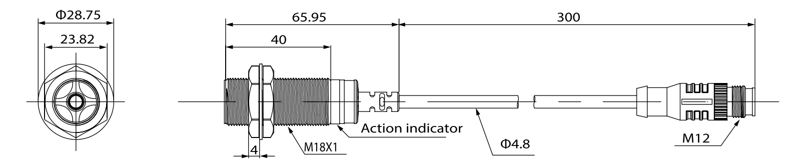
CJY12E-02R



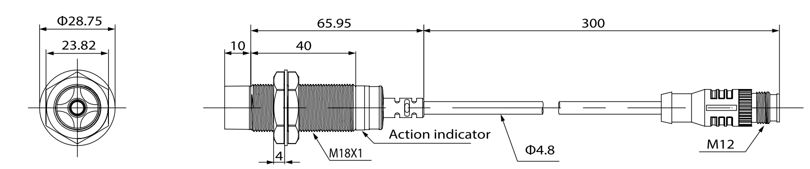
CJY12E-04R



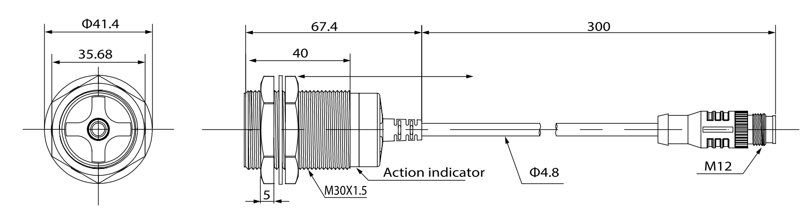
CJY18E-05R



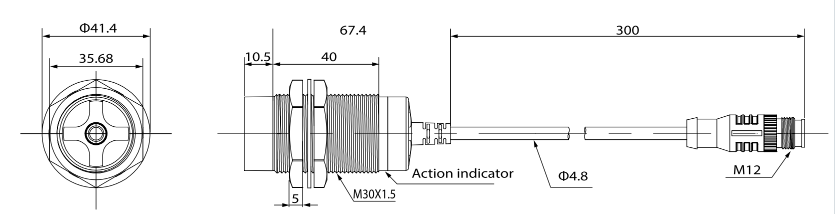
CJY18E-08R



CJY30E-10R



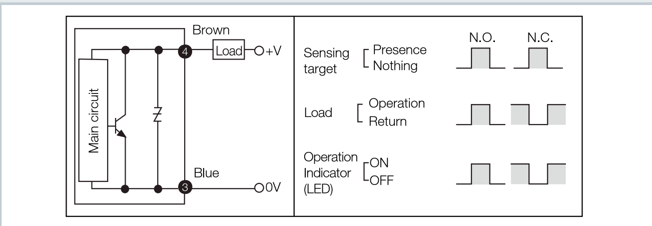
CJY30E-15R



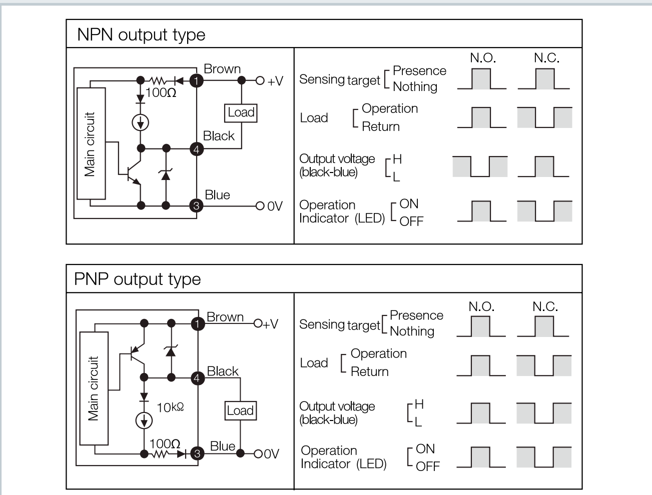
CJY-R Proximity Sensor Cylindrical Cable Connector Type

Control Output Diagram

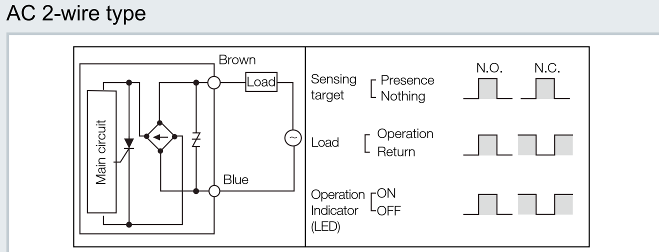
DC 2-wire type



DC 3-wire type

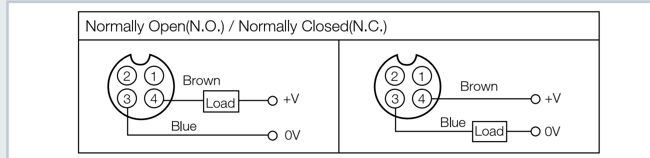


AC 2-wire type



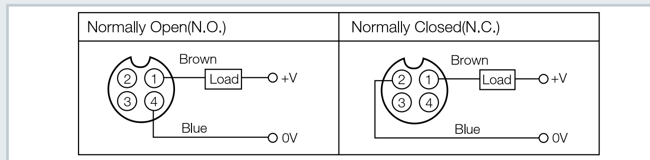
Wiring Diagram

DC 2-wire type (Standard type)



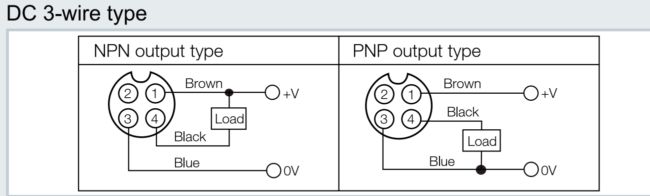
※ Pin ①, ② are not used terminals.
※ When using DC 3-wire type of connector cable, black (12-24VDC) and blue(0V) cables can be used.

DC 2-wire type (IEC standard type)



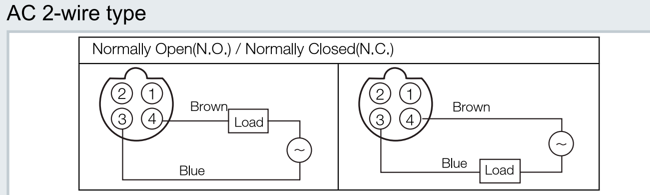
※ ②, ③ of N.O. type and ③, ④ of N.C. type are not used terminals.
※ Please use the IEC specifications of the plug.

DC 3-wire type



※ Please fasten the cleat of connector not to shown the thread. (0.39 to 0.49N.m)
※ Please fasten the vibration part with Teflon tape.

AC 2-wire type



※ In case of AC switching type, ② and ③, ① and ④ are connected to each other inside.

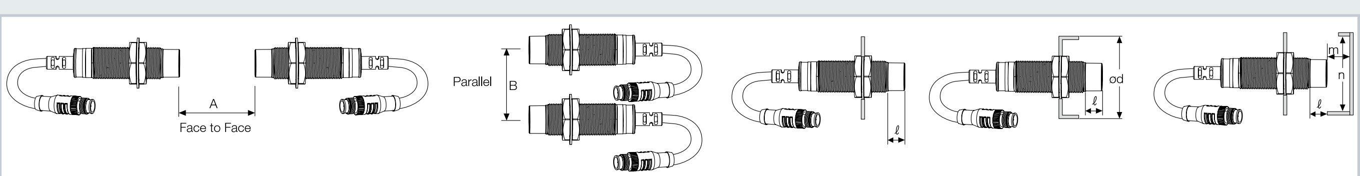
Proper Usage

Mutual-interference

When several proximity sensors are mounted close to one another a malfunction of the sensor may be caused due to mutual interference. Therefore, be sure to provide a minimum distance between the two sensors as below chart indicates.

Influence by surrounding metals

When sensors are mounted on metallic panel, you must prevent the sensors from being affected by any metallic object except target. Therefore, be sure to provide a minimum distance as below chart indicates.



Item \ Model	CJY12-02R CJY12E-02R	CJY12-04R CJY12E-04R	CJY18-05R CJY18E-05R	CJY18-08R CJY18E-08R	CJY30-10R CJY30E-10R	CJY30-15R CJY30E-15R
A	12	24	30	48	60	90
B	24	36	36	54	60	90
ℓ	0	11	0	14	0	15
φd	12	36	18	54	30	90
m	6	12	15	24	30	45
n	18	36	27	54	45	90

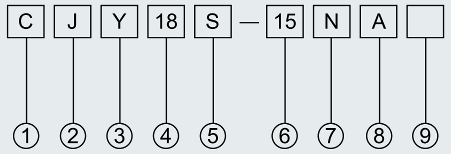
CJY□S Long Distance Proximity Sensor Cylindrical Type

CNTD

Features

- Long sensing distance (1.5 to 2 times longer sensing distance guaranteed compared to existing models)
- Exclusively designed IC for improving anti-jamming capability
- Inside surge protection, reverse polarity protection, overcurrent protection
- Long use-life cycle and high reliability, easy install, enconomic price
- Red LED status indication, easy to confirm work situation
- Protection structure IP67(IEC standard)
- Replaceable for limit switches

Model Number Structure



Item	Code	Description
① Company code	C	Company code
② Product name	J	Inductive proximity sensor
③ Shape of shell	Y	Cylinder-shaped
④ Dimension code	18	18=M18
⑤ Product type	S	Long-range type
⑥ Detection distance	15	15=15mm
⑦ Output mode	K	AC 2wires
	L	DC 2wires
	P	PNP 3wires
	N	NPN 3wires
⑧ Output state	A	NO
	B	NC
	C	NO+NC
⑨ Connection	Without	Without: Lead wire
	T	Plug-in
	R	Wiring leads Plug-in

CJY□S Long Distance Proximity Sensor Cylindrical Type

Specifications

DC 3-wire type

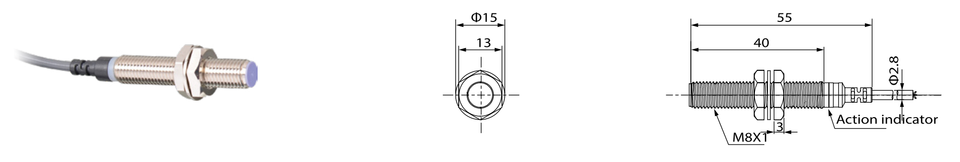
Model	CJY08S-1.5NA CJY08S-1.5NB CJY08S-1.5PA CJY08S-1.5PB	CJY08S-03NA CJY08S-03NB CJY08S-03PA CJY08S-03PB	CJY12S-04NA CJY12S-04NB CJY12S-04NC CJY12S-04PA CJY12S-04PB CJY12S-04PC	CJY12S-07NA CJY12S-07NB CJY12S-07NC CJY12S-07PA CJY12S-07PB CJY12S-07PC	CJY18S-10NA CJY18S-10NB CJY18S-10NC CJY18S-10PA CJY18S-10PB CJY18S-10PC	CJY18S-15NA CJY18S-15NB CJY18S-15NC CJY18S-15PA CJY18S-15PB CJY18S-15PC	CJY30S-17NA CJY30S-17NB CJY30S-17NC CJY30S-17PA CJY30S-17PB CJY30S-17PC	CJY30S-25NA CJY30S-25NB CJY30S-25NC CJY30S-25PA CJY30S-25PB CJY30S-25PC
Sensing distance	1.5mm	3mm	4mm	7mm	10mm	15mm	17mm	25mm
Hysteresis	Max. 10% of sensing distance							
Standard sensing target	8×8×1mm (Iron)	8×8×1mm (Iron)	12×12×1mm (Iron)	25×25×1mm (Iron)	20×20×1mm (Iron)	40×40×1mm (Iron)	45×45×1mm (Iron)	75×75×1mm (Iron)
Setting distance	0~1.8mm	0~3.5mm	0~3.5mm	0~6.5mm	0~8.5mm	0~13.5mm	0~18.5mm	0~28.5mm
Power supply (Operating voltage)	12-24VDC (10-30VDC)							
Leakage current	Max.10mA							
Response frequency (※1)	450Hz	400Hz	400Hz	300Hz	300Hz	200Hz	100Hz	100Hz
Residual voltage (※2)	Max. 1V							
Affection by Temp.	Max. ±10% for sensing distance at ambient temperature 20℃							
Control output	Max. 200mA							
Insulation resistance	Min. 50MΩ (at 500VDC megger)							
Dielectric strength	1500VAC 50/60Hz for 1minute							
Vibration	1mm amplitude at frequency of 10 to 55Hz(for 1 min.) in each of X, Y, Z directions for 2 hours							
Shock	500m/s^2(approx. 50G) X, Y, Z directions for 3 times							
Indicator	Operation indicator(red LED)							
Ambient temperature	-25~+70℃ (No icing)							
Storage temperature	-30~+80℃ (No icing)							
Ambient humidity	35~95%RH (No condensation)							
Protection circuit	Surge protection circuit, Reverse polarity protection circuit, Overcurrent protection circuit							
Material	Case/Nut: Nickel plated Brass, Washer: Nickel plated Iron, Sensing surface: PBT, Standard cable(Gray): Polyvinyl chloride(PVC), Oil resistant cable(Black): Oil resistant Polyvinyl chloride(PVC)							
Cable	ϕ2.8, 3P, 2m (AWG22, Core diameter: 0.1mm, Number of cores: 22, Insulator diameter: ϕ1.25)		ϕ3.8, 3P,4P 2m (AWG22, Core diameter: 0.1mm, Number of cores: 25, Insulator diameter: ϕ1.25)		ϕ4.8, 3P,4P 2m (AWG22, Core diameter: 0.1mm, Number of cores: 30, Insulator diameter: ϕ1.25)			
Protection	IP67							

(※1): The response frequency is the average value. The standard sensing target is used and the width is set as 2 times of the standard sensing target, 1/2 of the sensing distance for the distance.

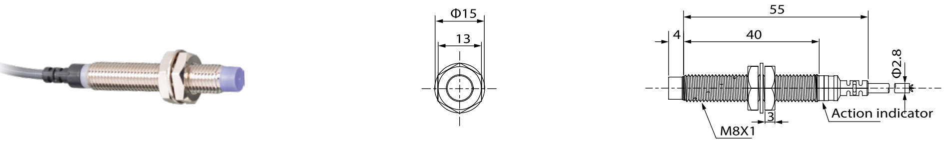
CJY□S Long Distance Sensing Proximity Sensors (Cylindrical type) CNTD

Appearance and Dimension

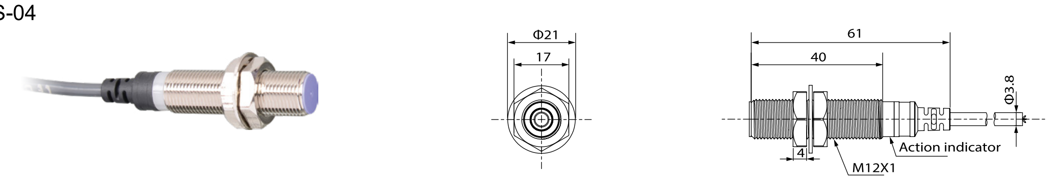
CJY08S-1.5



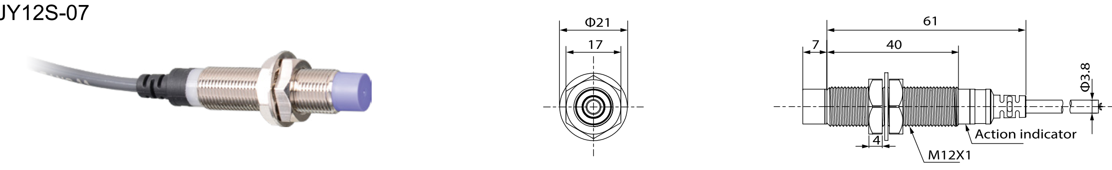
CJY08S-03



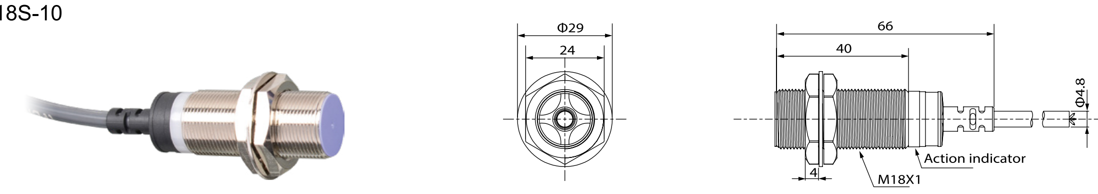
CJY12S-04



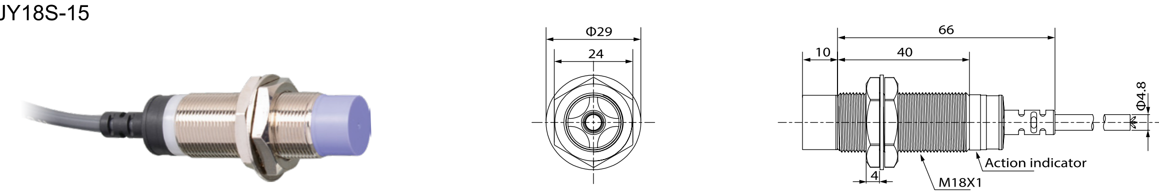
CJY12S-07



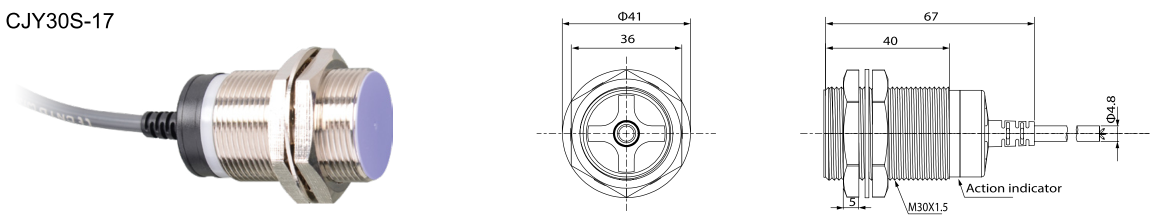
CJY18S-10



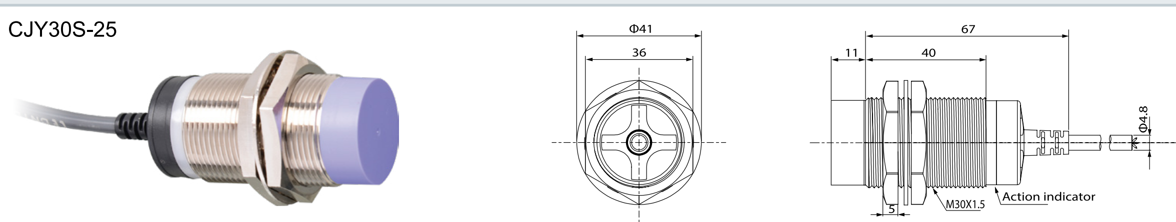
CJY18S-15



CJY30S-17



CJY30S-25



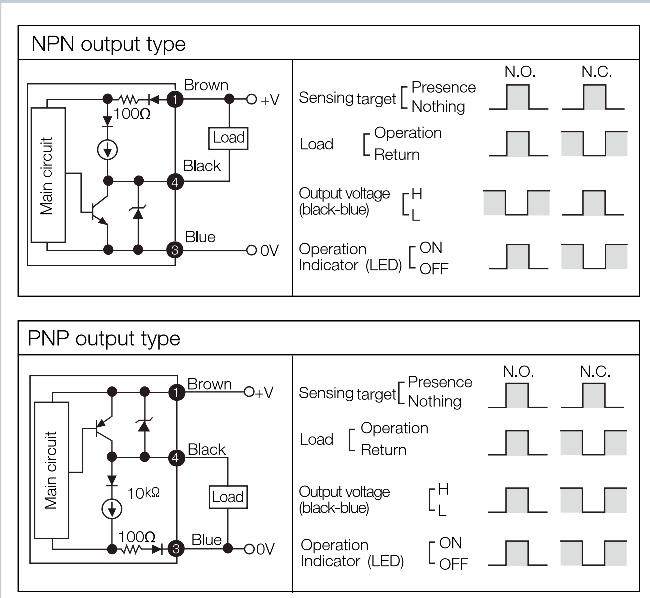
CJY□S Long Distance Sensing Proximity Sensors (Cylindrical type)

CJY□S-T Long Distance Proximity Sensor Cylindrical Connector Type

CNTD

Control Output Diagram

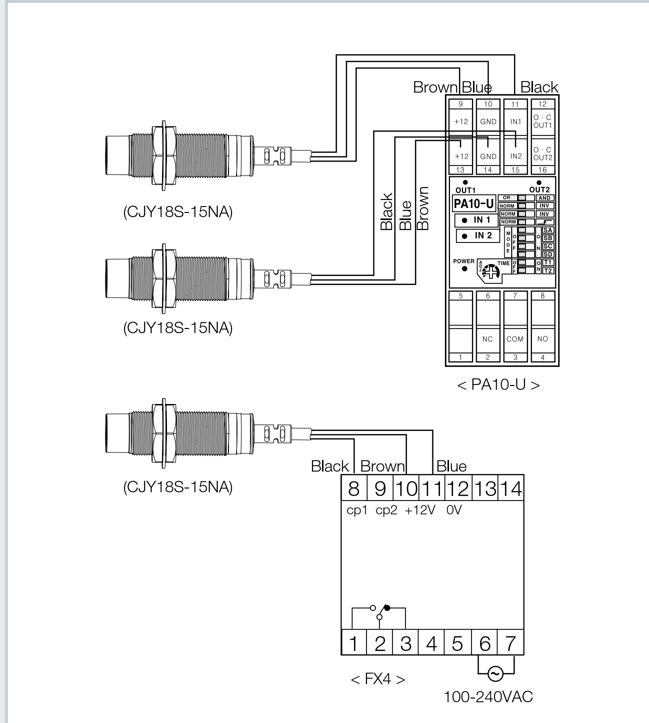
DC 3-wire type



※ The number in a circle is pin no. of connector.

Connections

DC 3-wire type

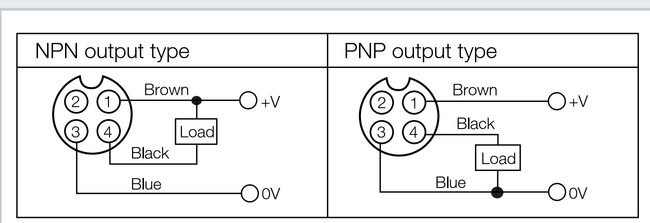


※ Please fasten the cleat of connector not to shown the thread. (0.39 to 0.49N.m)

※ Please fasten the vibration part with Teflon tape.

Wiring Diagram

DC 3-wire type (Standard type)



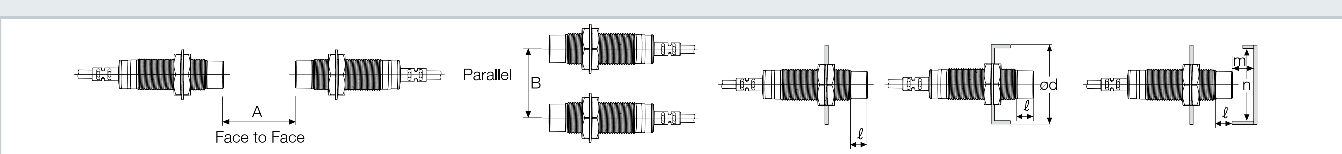
Proper Usage

Mutual-interference

When several proximity sensors are mounted close to one another a malfunction of the sensor may be caused due to mutual interference. Therefore, be sure to provide a minimum distance between the two sensors as below chart indicates.

Influence by surrounding metals

When sensors are mounted on metallic panel, you must prevent the sensors from being affected by any metallic object except target. Therefore, be sure to provide a minimum distance as below chart indicates.



Model / Item	CJY08S-1.5	CJY08S-03	CJY12S-04	CJY12S-07	CJY18S-10	CJY18S-15	CJY30S-17	CJY30S-25
A	9	12	24	48	42	84	90	150
B	16	24	24	36	36	54	60	90
ℓ	0	8	0	11	0	14	0	15
ϕ d	8	24	12	36	18	54	30	90
m	4.5	6	12	24	21	42	45	75
n	12	24	18	36	27	54	45	90

Features

- Long sensing distance (1.5 to 2 times longer sensing distance guaranteed compared to existing models)
- Exclusively designed IC for improved the noise resistance
- Inside surge protection, reverse polarity protection, overcurrent protection
- Long use-life cycle and high reliability, easy install, enconomic price
- Red LED status indication, easy to confirm work situation
- Protection structure IP65(IEC standard)
- Replaceable for limit switches

Model Number Structure

C J Y 12 S — 07 N A T

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

Item	Code	Description
① Company code	C	Company code
② Product name	J	Inductive proximity sensor
③ Shape of shell	Y	Cylinder-shaped
④ Dimension code	12	12=M12
⑤ Product type	S	Long-range type
⑥ Detection distance	07	07=7mm
⑦ Output mode	K	AC 2wires
	L	DC 2wires
	P	PNP 3wires
	N	NPN 3wires
⑧ Output state	A	NO
	B	NC
	C	NO+NC
⑨ Connection	Without	Without: Lead wire
	T	Plug-in
	R	Wiring leads Plug-in

CJY□S-T Long Distance Proximity Sensor Cylindrical Connector Type

Specifications

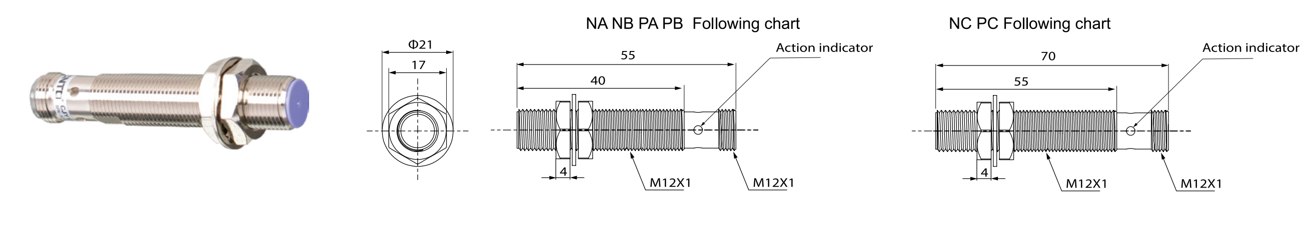
DC 3-wire type

Model	CJY12S-04NAT CJY12S-04NBT CJY12S-04NCT CJY12S-04PAT CJY12S-04PBT CJY12S-04PCT	CJY12S-07NAT CJY12S-07NBT CJY12S-07NCT CJY12S-07PAT CJY12S-07PBT CJY12S-07PCT	CJY18S-10NAT CJY18S-10NBT CJY18S-10NCT CJY18S-10PAT CJY18S-10PBT CJY18S-10PCT	CJY18S-15NAT CJY18S-15NBT CJY18S-15NCT CJY18S-15PAT CJY18S-15PBT CJY18S-15PCT	CJY30S-17NAT CJY30S-17NBT CJY30S-17NCT CJY30S-17PAT CJY30S-17PBT CJY30S-17PCT	CJY30S-25NAT CJY30S-25NBT CJY30S-25NCT CJY30S-25PAT CJY30S-25PBT CJY30S-25PCT
Sensing distance	4mm	7mm	10mm	15mm	17mm	25mm
Hysteresis	Max. 10% of sensing distance					
Standard sensing target	12 × 12 × 1mm (Iron)	25 × 25 × 1mm (Iron)	20 × 20 × 1mm (Iron)	40 × 40 × 1mm (Iron)	45 × 45 × 1mm (Iron)	75 × 75 × 1mm (Iron)
Setting distance	0~2.8mm	0~5.6mm	0~4.9mm	0~9.8mm	0~10.5mm	0~17.5mm
Power supply (Operating voltage)	12-24VDC (10-30VDC)					
Leakage current	Max.10mA					
Response frequency (※1)	400Hz	300Hz	300Hz	200Hz	100Hz	100Hz
Residual voltage	Max. 1V					
Affection by Temp.	Max. ±10% for sensing distance at ambient temperature 20℃					
Control output	Max. 200mA					
Insulation resistance	Min. 50MΩ (at 500VDC megger)					
Dielectric strength	1500VAC 50/60Hz for 1minute					
Vibration	1mm amplitude at frequency of 10 to 55Hz(for 1 min.) in each of X, Y, Z directions for 2 hours					
Shock	500m/s^2(approx. 50G) X, Y, Z directions for 3 times					
Indicator	Operation indicator(red LED)					
Ambient temperature	-25~+70℃ (No icing)					
Storage temperature	-30~+80℃ (No icing)					
Ambient humidity	35~95%RH (No condensation)					
Protection circuit	Surge protection circuit, Reverse polarity protection circuit, Overcurrent protection circuit					
Material	Case/Nut: Nickel plated Brass, Washer: Nickel plated Iron, Sensing surface: PBT					
Protection	IP65					

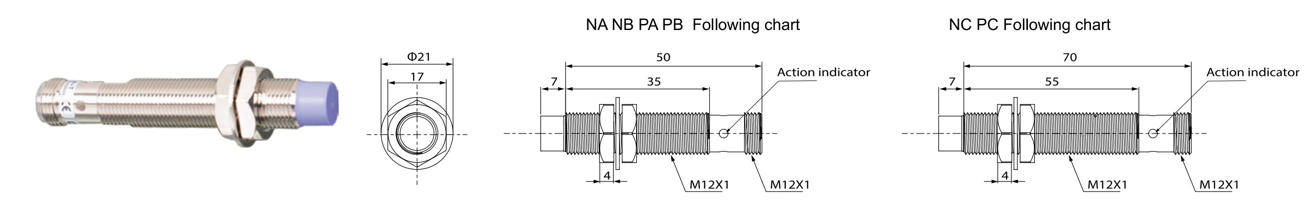
(※1) The response frequency is the average value. The standard sensing target is used and the width is set as 2 times of the standard sensing target, 1/2 of the sensing distance for the distance.

Appearance and Dimension

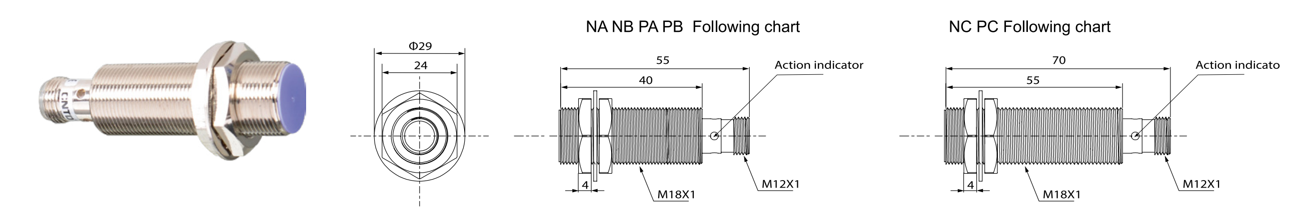
CJY12S-04T



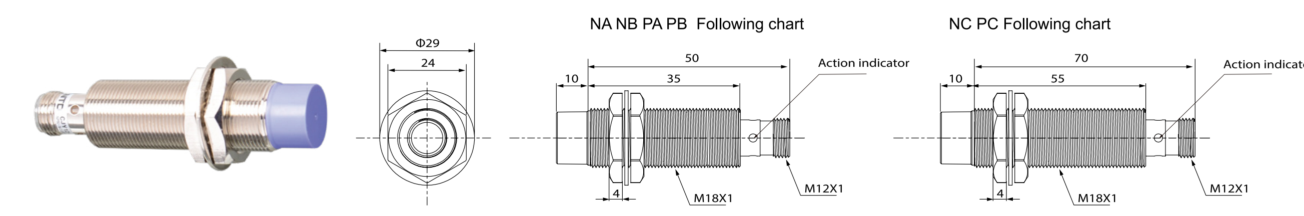
CJY12S-07T



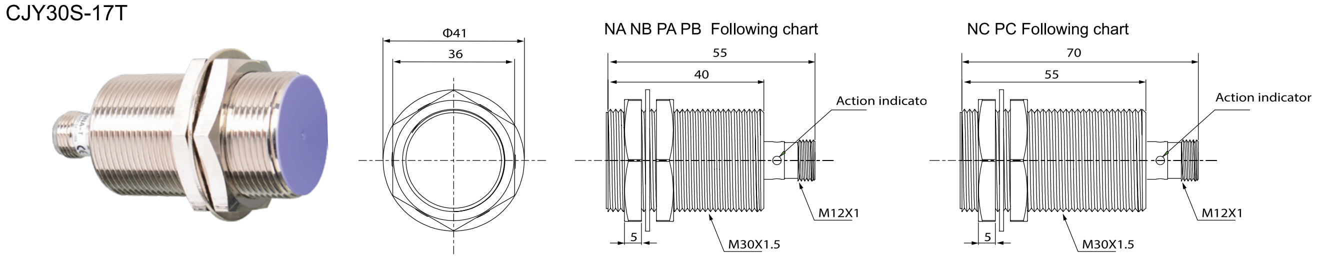
CJY18S-10T



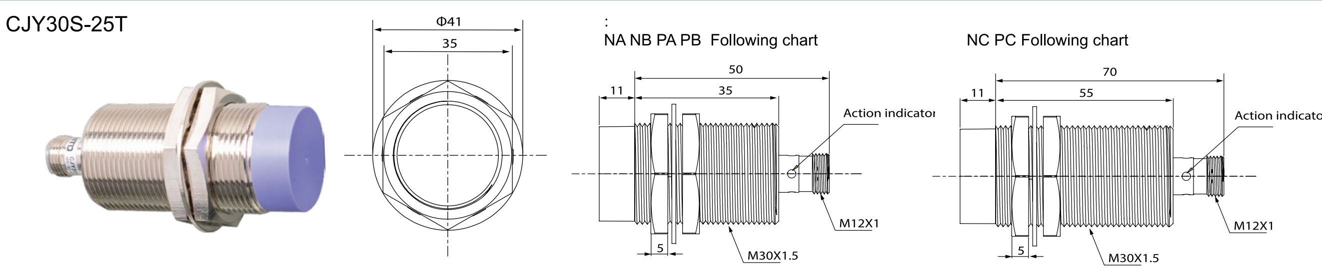
CJY18S-15T



CJY30S-17T



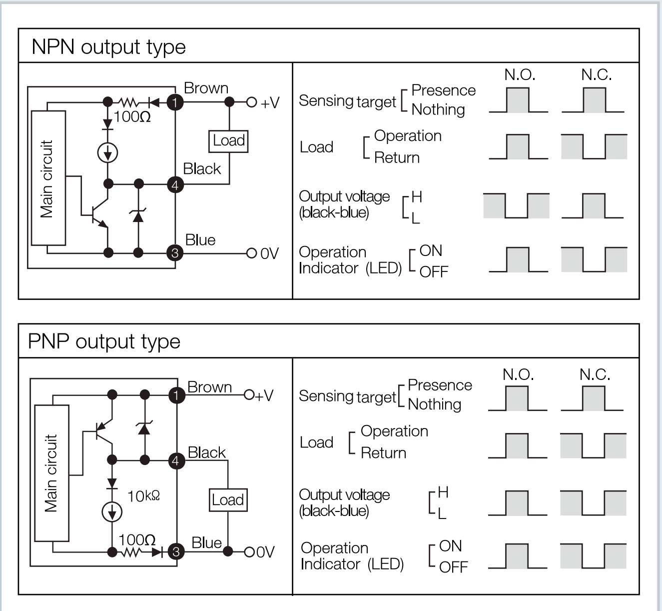
CJY30S-25T



CJY□S-T Long Distance Proximity Sensor Cylindrical Connector Type

Control Output Diagram

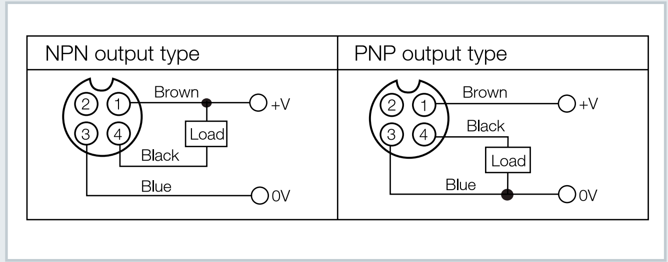
DC 3-wire type



※ The number in a circle is pin no. of connector.

Wiring Diagram

DC 3-wire type (Standard type)



※ Please fasten the cleat of connector not to shown the thread. (0.39 to 0.49N.m)

※ Please fasten the vibration part with Teflon tape.

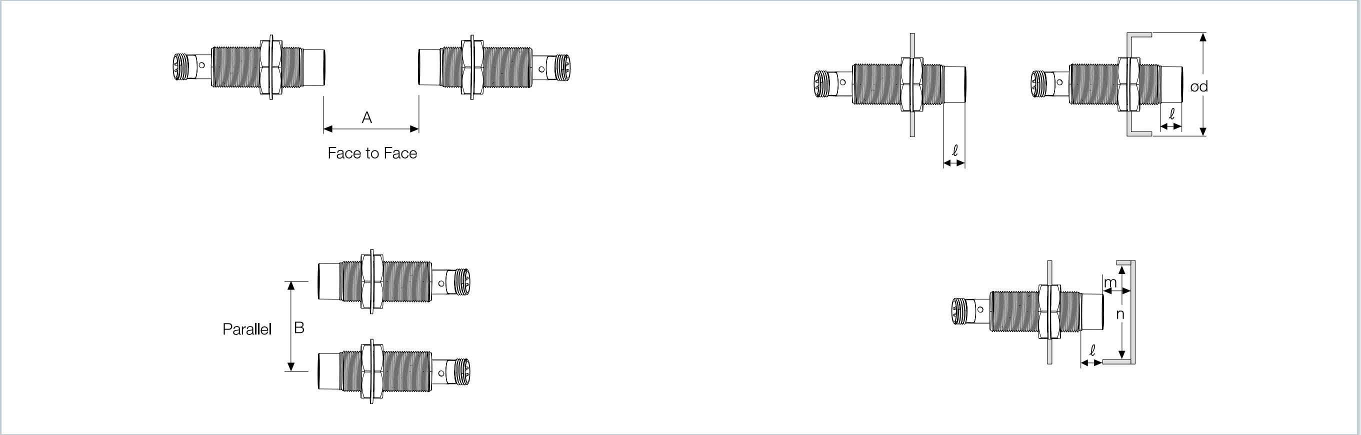
Proper Usage

Mutual-interference

When several proximity sensors are mounted close to one another a malfunction of the sensor may be caused due to mutual interference. Therefore, be sure to provide a minimum distance between the two sensors as below chart indicates.

Influence by surrounding metals

When sensors are mounted on metallic panel, you must prevent the sensors from being affected by any metallic object except target. Therefore, be sure to provide a minimum distance as below chart indicates.



Model / Item	CJY12S-04T	CJY12S-07T	CJY18S-10T	CJY18S-15T	CJY30S-17T	CJY30S-25T
A	24	48	42	84	90	150
B	24	36	36	54	60	90
ℓ	0	11	0	14	0	15
ϕd	12	36	18	54	30	90
m	12	24	21	42	45	75
n	18	36	27	54	45	90

CJY□S-R Long Distance Proximity Sensor Cylindrical Cable Connector Type

CNTD

Features

- Long sensing distance (1.5 to 2 times longer sensing distance guaranteed compared to existing models)
- Exclusively designed IC for improving anti-jamming capability
- Inside surge protection, reverse polarity protection, overcurrent protection
- Long use-life cycle and high reliability, easy install, enconomic price
- Red LED status indication, easy to confirm work situation
- Protection structure IP67(IEC standard)
- Replaceable for limit switches

Model Number Structure

C J Y 18 S — 15 N A R

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

Item	Code	Description
① Company code	C	Company code
② Product name	J	Inductive proximity sensor
③ Shape of shell	Y	Cylinder-shaped
④ Dimension code	18	18=M18
⑤ Product type	S	Long-range type
⑥ Detection distance	15	15=15mm
⑦ Output mode	K	AC 2wires
	L	DC 2wires
	P	PNP 3wires
	N	NPN 3wires
⑧ Output state	A	NO
	B	NC
	C	NO+NC
⑨ Connection	Without	Without: Lead wire
	T	Plug-in
	R	Wiring leads Plug-in

CJY□S-R Long Distance Proximity Sensor Cylindrical Cable Connector Type

Specifications

DC 3-wire type

Model	CJY12S-04NAR CJY12S-04NBR CJY12S-04NCR CJY12S-04PAR CJY12S-04PBR CJY12S-04PCR	CJY12S-07NAR CJY12S-07NBR CJY12S-07NCR CJY12S-07PAR CJY12S-07PBR CJY12S-07PCR	CJY18S-10NAR CJY18S-10NBR CJY18S-10NCR CJY18S-10PAR CJY18S-10PBR CJY18S-10PCR	CJY18S-15NAR CJY18S-15NBR CJY18S-15NCR CJY18S-15PAR CJY18S-15PBR CJY18S-15PCR	CJY30S-17NAR CJY30S-17NBR CJY30S-17NCR CJY30S-17PAR CJY30S-17PBR CJY30S-17PCR	CJY30S-25NAR CJY30S-25NBR CJY30S-25NCR CJY30S-25PAR CJY30S-25PBR CJY30S-25PCR
Sensing distance	4mm	7mm	10mm	15mm	17mm	25mm
Hysteresis	Max. 10% of sensing distance					
Standard sensing target	12 × 12 × 1mm (Iron)	25 × 25 × 1mm (Iron)	20 × 20 × 1mm (Iron)	40 × 40 × 1mm (Iron)	45 × 45 × 1mm (Iron)	75 × 75 × 1mm (Iron)
Setting distance	0~2.8mm	0~5.6mm	0~4.9mm	0~9.8mm	0~10.5mm	0~17.5mm
Power supply (Operating voltage)	12-24VDC (10-30VDC)					
Leakage current	Max.10mA					
Response frequency (※1)	400Hz	300Hz	300Hz	200Hz	100Hz	100Hz
Residual voltage	Max. 1V					
Affection by Temp.	Max. ±10% for sensing distance at ambient temperature 20℃					
Control output	Max. 200mA					
Insulation resistance	Min. 50MΩ (at 500VDC megger)					
Dielectric strength	1500VAC 50/60Hz for 1minute					
Vibration	1mm amplitude at frequency of 10 to 55Hz(for 1 min.) in each of X, Y, Z directions for 2 hours					
Shock	500m/s²(approx. 50G) X, Y, Z directions for 3 times					
Indicator	Operation indicator(red LED)					
Ambient temperature	-25~+70℃ (No icing)					
Storage temperature	-30~+80℃ (No icing)					
Ambient humidity	35~95%RH (No condensation)					
Protection circuit	Surge protection circuit, Reverse polarity protection circuit, Overcurrent protection circuit					
Material	Case/Nut: Nickel plated Brass, Washer: Nickel plated Iron, Sensing surface: PBT					
Cable	ϕ3.8, 3P,4P 300mm, M12 connector		ϕ4.8, 3P,4P 300mm, M12 connector			
Protection	IP67					

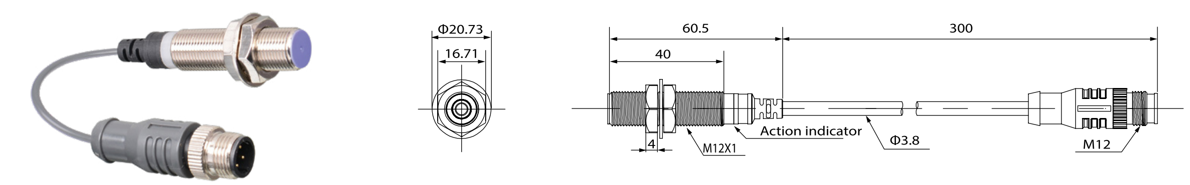
(※1) The response frequency is the average value. The standard sensing target is used and the width is set as 2 times of the standard sensing target, 1/2 of the sensing distance for the distance.

CJY□S-R Long Distance Proximity Sensor Cylindrical Cable Connector Type

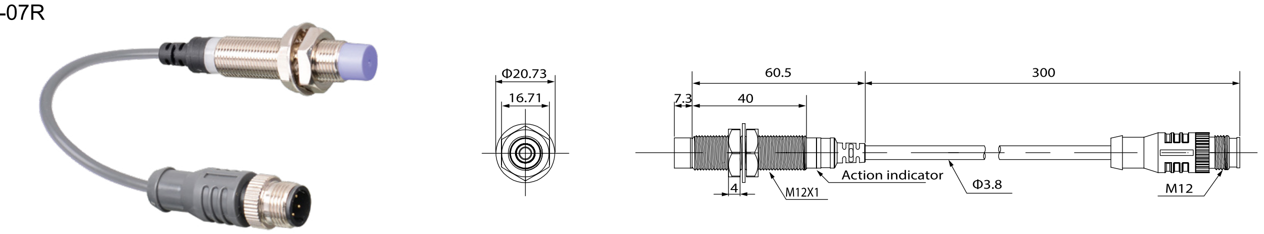
CNTD

Appearance and Dimension

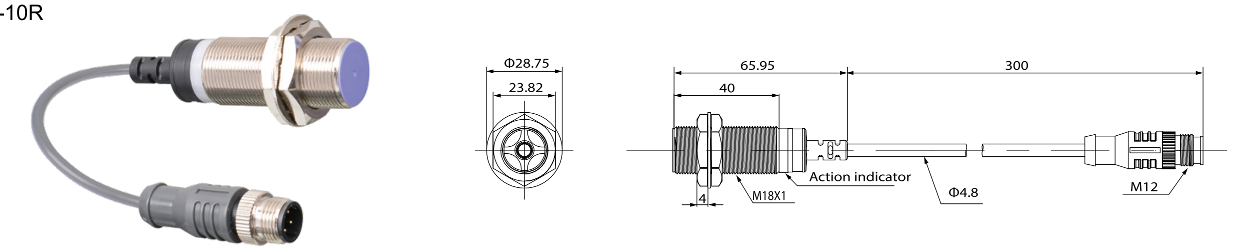
CJY12S-04R



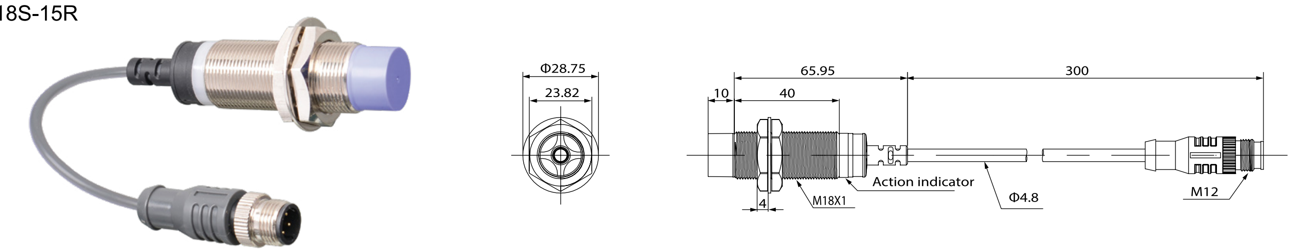
CJY12S-07R



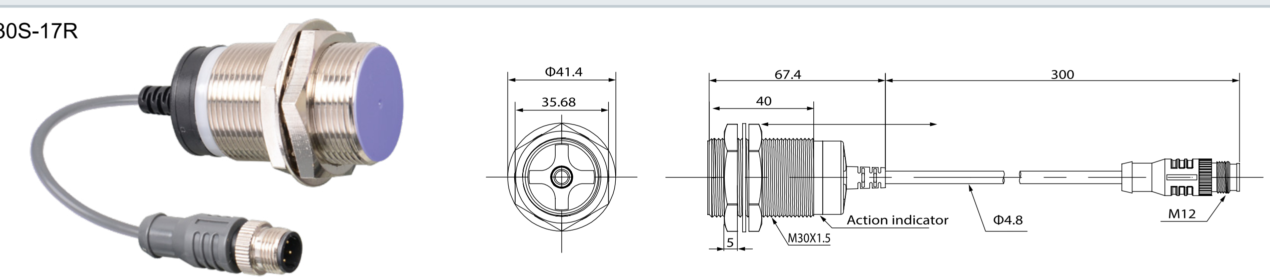
CJY18S-10R



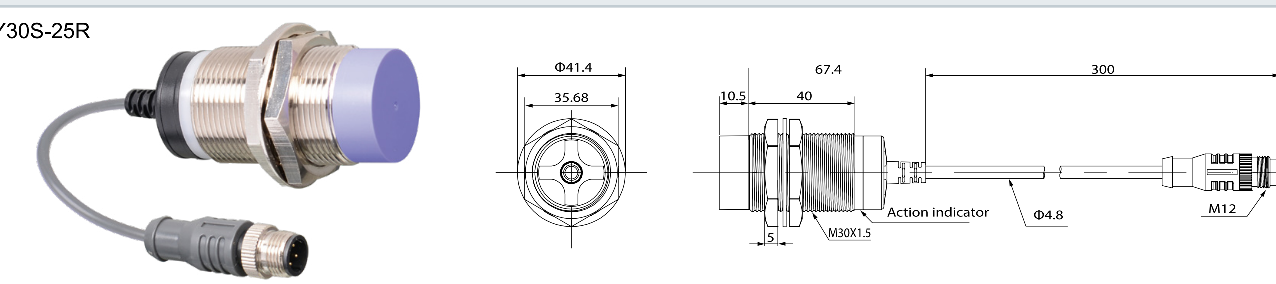
CJY18S-15R



CJY30S-17R



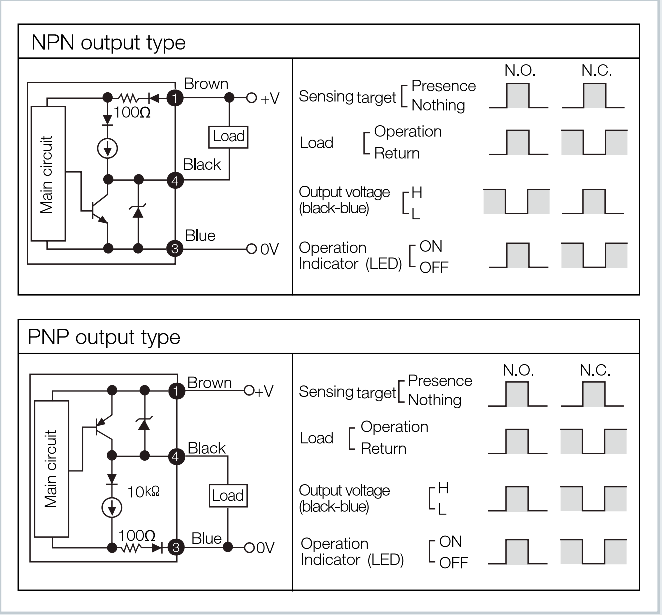
CJY30S-25R



CJY□S-R Long Distance Proximity Sensor Cylindrical Cable Connector Type

Control Output Diagram

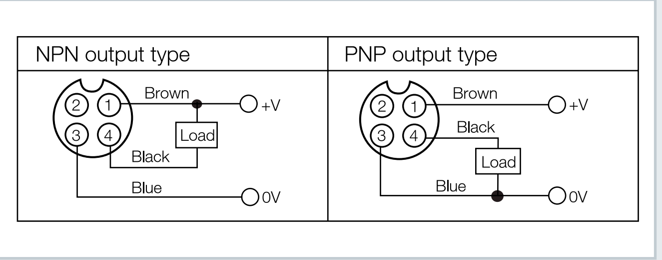
DC 3-wire type



※ The number in a circle is pin no. of connector.

Wiring Diagram

DC 3-wire type (Standard type)



※ Please fasten the cleat of connector not to shown the thread.
(0.39 to 0.49N.m)
※ Please fasten the vibration part with Teflon tape.

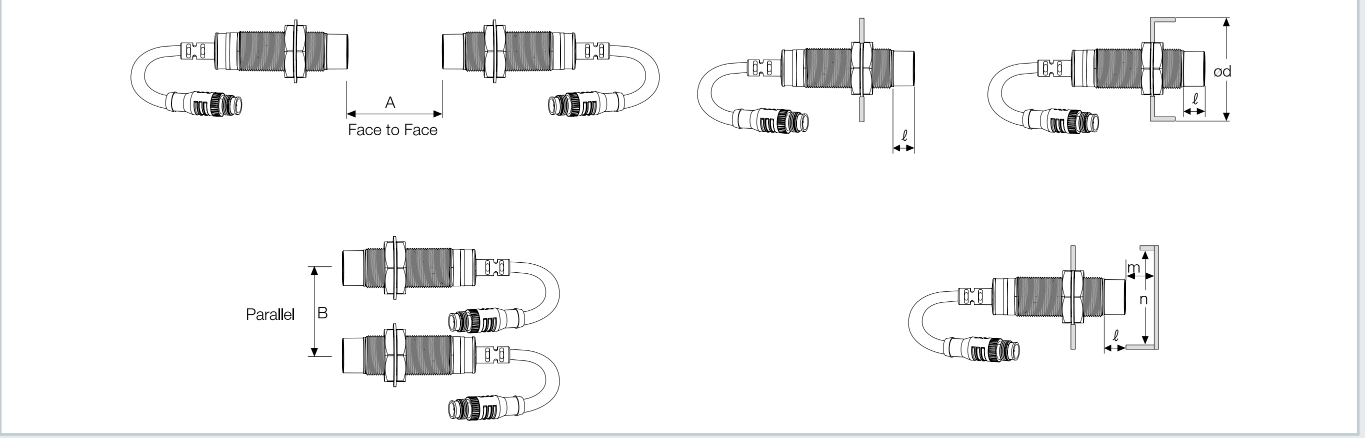
Proper Usage

Mutual-interference

When several proximity sensors are mounted close to one another a malfunction of the sensor may be caused due to mutual interference. Therefore, be sure to provide a minimum distance between the two sensors as below chart indicates.

Influence by surrounding metals

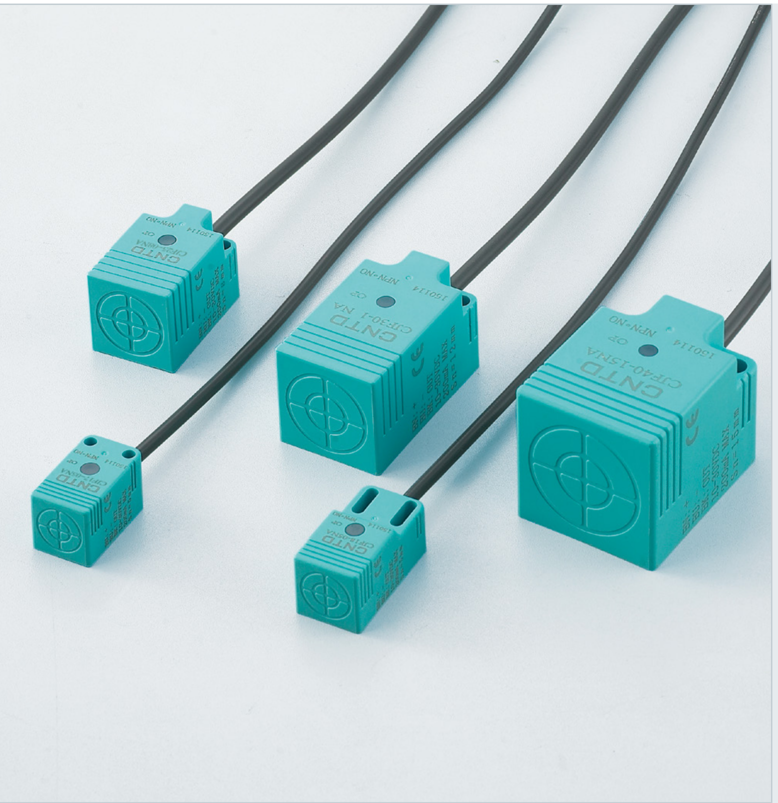
When sensors are mounted on metallic panel, you must prevent the sensors from being affected by any metallic object except target. Therefore, be sure to provide a minimum distance as below chart indicates.



Item \ Model	CJY12S-04R	CJY12S-07R	CJY18S-10R	CJY18S-15R	CJY30S-17R	CJY30S-25R
A	24	48	42	84	90	150
B	24	36	36	54	60	90
ℓ	0	11	0	14	0	15
φ d	12	36	18	54	30	90
m	12	24	21	42	45	75
n	18	36	27	54	45	90

CJF Proximity Sensor Square Type

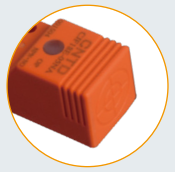
CNTD



Features

- Orange mark for standard type
- Light green mark for high-end type

- Inside surge protection, reverse polarity protection, overcurrent protection
- Long use-life cycle and high reliability, easy install, enconomic price
- Red LED status indication, easy to confirm work situation
- Protection structure IP67(IEC standard)
- Replaceable for limit switches



Orange

Light green

Model Number Structure

C J F 18 □ — 05 N A □

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

Item	Code	Description
① Company code	C	Company code
② Product name	J	Inductive proximity sensor
③ Shape of shell	F	Square
④ Dimension code	18	18=8 Square18
⑤ Product type	Without	Without =High-end type（Light green shell）
	E	E =Standard type（Orange shell）
⑥ Detection distance	05	05=5mm
⑦ Output mode	K	AC 2wires
	L	DC 2wires
	P	PNP 3wires
	N	NPN 3wires
⑧ Output state	A	NO
	B	NC
	C	NO+NC
⑨ Connection	Without	Without: Lead wire
	T	Plug-in
	R	Wiring leads Plug-in

CJF Proximity Sensor Square Type

Specifications

DC 3wire type

Model	High-end type	CJF17-05NA CJF17-05NB CJF17-05PA CJF17-05PB	CJF18-05NA CJF18-05NB CJF18-05PA CJF18-05PB	CJF25-08NA CJF25-08NB CJF25-08PA CJF25-08PB	CJF30-12NA CJF30-12NB CJF30-12PA CJF30-12PB	CJF40-15NA CJF40-15NB CJF40-15PA CJF40-15PB
	Standard type	CJF17E-05NA CJF17E-05NB CJF17E-05PA CJF17E-05PB	CJF18E-05NA CJF18E-05NB CJF18E-05PA CJF18E-05PB	CJF25E-08NA CJF25E-08NB CJF25E-08PA CJF25E-08PB	CJF30E-12NA CJF30E-12NB CJF30E-12PA CJF30E-12PB	CJF40E-15NA CJF40E-15NB CJF40E-15PA CJF40E-15PB
Sensing distance		5mm	5mm	8mm	12mm	15mm
Hysteresis		Max. 10% of sensing distance				
Standard sensing target		18 × 18 × 1mm (Iron)	25 × 25 × 1mm (Iron)	30 × 30 × 1mm (Iron)	40 × 40 × 1mm (Iron)	60 × 60 × 1mm (Iron)
Setting distance		0~3.5mm	0~3.5mm	0~5.5mm	0~7.5mm	0~12.5mm
Power supply (Operating voltage)		12-24VDC (10-30VDC)				
Leakage current		Max.10mA				
Response frequency (※1)		500Hz	500Hz	350Hz	250Hz	100Hz
Residual voltage		Max. 1.0V				
Affection by Temp.		Max. ±10% for sensing distance at ambient temperature 20℃				
Control output		Max. 200mA				
Insulation resistance		Min. 50MΩ (at 500VDC megger)				
Dielectric strength		1500VAC 50/60Hz for 1minute				
Vibration		1mm amplitude at frequency of 10 to 55Hz(for 1 min.) in each of X, Y, Z directions for 2 hours				
Shock		500m/s^2(approx. 50G) X, Y, Z directions for 3 times				
Indicator		Operation indicator(red LED)				
Ambient temperature		-25~+70℃ (No icing)				
Storage temperature		-30~+80℃ (No icing)				
Ambient humidity		35~95%RH (No condensation)				
Protection circuit		Surge protection circuit, Overcurrent protection circuit, Reverse polarity protection circuit				
Cable	High-end type	ϕ3.8, 3P, 2m AWG22, Core diameter: 0.1mm, Number of cores: 25, Insulator diameter: ϕ1.25		ϕ4.8, 3P, 2m AWG22, Core diameter: 0.1mm, Number of cores: 30, Insulator diameter: ϕ1.25		
	Standard type	ϕ3.8, 3P, 1.5m AWG22, Core diameter: 0.1mm, Number of cores: 25, Insulator diameter: ϕ1.25		ϕ4.8, 3P, 1.5m AWG22, Core diameter: 0.1mm, Number of cores: 30, Insulator diameter: ϕ1.25		
Material		Case: ABS, Standard cable(Dark Grey): Polyvinyl chloride(PVC)				
Protection		IP67				

(※1): The response frequency is the average value. The standard sensing target is used and the width is set as 2 times of the standard sensing target, 1/2 of the sensing distance for the distance.

CJF Proximity Sensor Square Type

CNTD

Specifications

DC 2-wire type

Model	High-end type	CJF17-05LA CJF17-05LB	CJF18-05LA CJF18-05LB	CJF25-08LA CJF25-08LB	CJF30-12LA CJF30-12LB	CJF40-15LA CJF40-15LB
	Standard type	CJF17E-05LA	CJF18E-05LA	CJF25E-08LA	CJF30E-12LA	CJF40E-15LA
Sensing distance		5mm	5mm	8mm	12mm	15mm
Hysteresis		Max. 10% of sensing distance				
Standard sensing target		18 × 18 × 1mm (Iron)	25 × 25 × 1mm (Iron)	30 × 30 × 1mm (Iron)	40 × 40 × 1mm (Iron)	60 × 60 × 1mm (Iron)
Setting distance		0~3.5mm	0~3.5mm	0~5.5mm	0~7.5mm	0~12.5mm
Power supply (Operating voltage)		12-24VDC (10-30VDC)				
Leakage current		Max.0.6mA				
Response frequency (※1)		500Hz	500Hz	350Hz	250Hz	100Hz
Residual voltage		Max. 3.5V				
Affection by Temp.		Max. ±10% for sensing distance at ambient temperature 20℃				
Control output		Max. 200mA				
Insulation resistance		Min. 50MΩ (at 500VDC megger)				
Dielectric strength		1500VAC 50/60Hz for 1minute				
Vibration		1mm amplitude at frequency of 10 to 55Hz(for 1 min.) in each of X, Y, Z directions for 2 hours				
Shock		500m/s^2(approx. 50G) X, Y, Z directions for 3 times				
Indicator		Operation indicator(red LED)				
Ambient temperature		-25~+70℃ (No icing)				
Storage temperature		-30~+80℃ (No icing)				
Ambient humidity		35~95%RH (No condensation)				
Protection circuit		Surge protection circuit, Reverse polarity protection circuit, Overcurrent protection circuit				
Cable	High-end type	ϕ3.8, 2P, 2m AWG22, Core diameter: 0.1mm, Number of cores: 25, Insulator diameter: ϕ1.25		ϕ4.8, 2P, 2m AWG22, Core diameter: 0.1mm, Number of cores: 30, Insulator diameter: ϕ1.25		
	Standard type	ϕ3.8, 2P, 1.5m AWG22, Core diameter: 0.1mm, Number of cores: 25, Insulator diameter: ϕ1.25		ϕ4.8, 2P, 1.5m AWG22, Core diameter: 0.1mm, Number of cores: 30, Insulator diameter: ϕ1.25		
Material		Case: ABS, Standard cable(Dark Grey): Polyvinyl chloride(PVC)				
Protection		IP67				

(※1): The response frequency is the average value. The standard sensing target is used and the width is set as 2 times of the standard sensing target, 1/2 of the sensing distance for the distance.

CJF Proximity Sensor Square Type

Specifications

AC 2-wire type

Model	High-end type	CJF25-08KA CJF25-08KB	CJF30-12KA CJF30-12KB	CJF40-15KA CJF40-15KB
	Standard type	CJF25E-08KA CJF25E-08KB	CJF30E-12KA CJF30E-12KB	CJF40E-15KA CJF40E-15KB
Sensing distance		8mm	12mm	15mm
Hysteresis		Max. 10% of sensing distance		
Standard sensing target		30 × 30 × 1mm (Iron)	40 × 40 × 1mm (Iron)	60 × 60 × 1mm (Iron)
Setting distance		0~5.5mm	0~7.5mm	0~12.5mm
Power supply (Operating voltage)		24-250VAC		
Leakage current		Max.10mA		
Response frequency (※1)		20Hz		
Residual voltage		Max. 10V		
Affection by Temp.		Max. ± 10% for sensing distance at ambient temperature 20℃		
Control output		Max. 200mA		
Insulation resistance		Min. 50MΩ(at 500VDC megger)		
Dielectric strength		1500VAC 50/60Hz for 1minute		
Vibration		1mm amplitude at frequency of 10 to 55Hz(for 1 min.) in each of X, Y, Z directions for 2 hours		
Shock		500m/s^2(approx. 50G) X, Y, Z directions for 3 times		
Indicator		Operation indicator(red LED)		
Ambient temperature		-25~+70℃ (No icing)		
Storage temperature		-30~+80℃ (No icing)		
Ambient humidity		35~95%RH (No condensation)		
Protection circuit		Surge protection circuit		
Cable	High-end type	(AWG22, Core diameter: 0.1mm, Number of cores: 30, Insulator diameter: ϕ1.25)		
	Standard type	(AWG22, Core diameter: 0.1mm, Number of cores: 30, Insulator diameter: ϕ1.25)		
Material		Case: ABS, Standard cable(Dark Grey): Polyvinyl chloride(PVC)		
Protection		IP67		

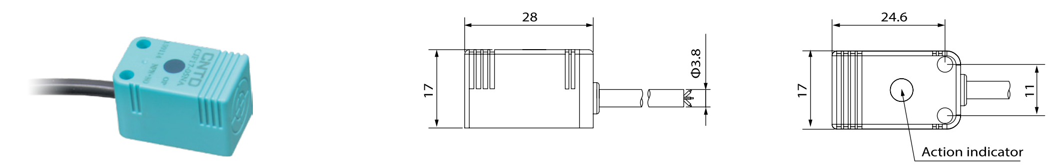
(※1): The response frequency is the average value. The standard sensing target is used and the width is set as 2 times of the standard sensing target, 1/2 of the sensing distance for the distance.

CJF Proximity Sensor Square Type (High-end type)

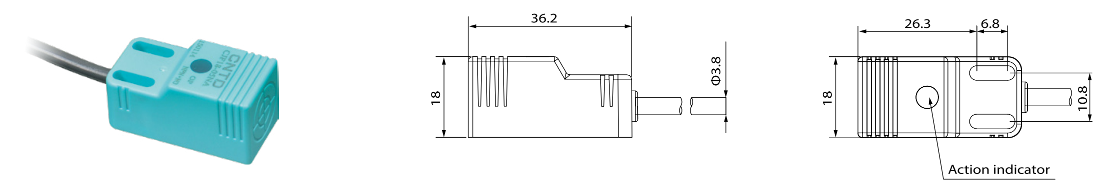
CNTD

Appearance and Dimension

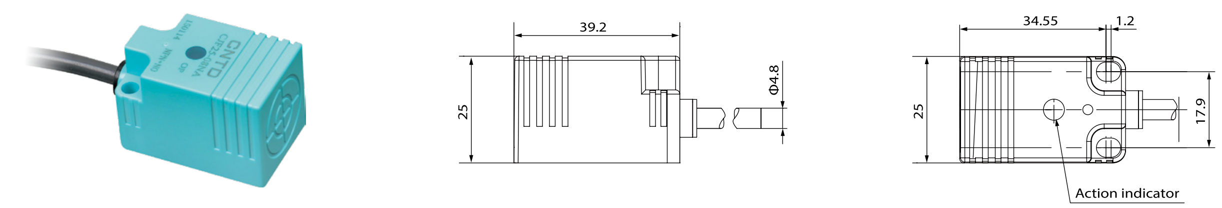
CJF17-05



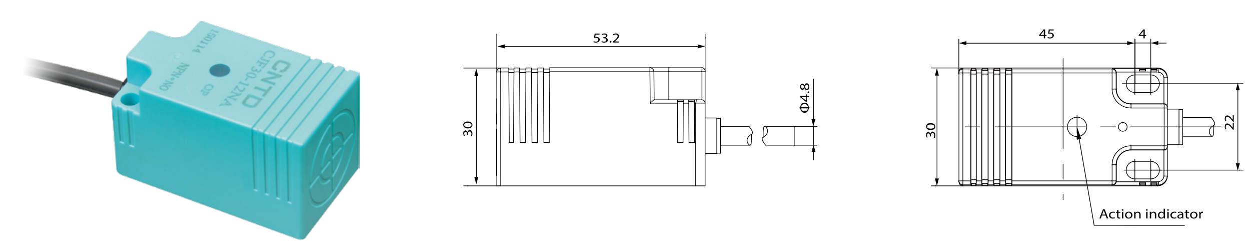
CJF18-05



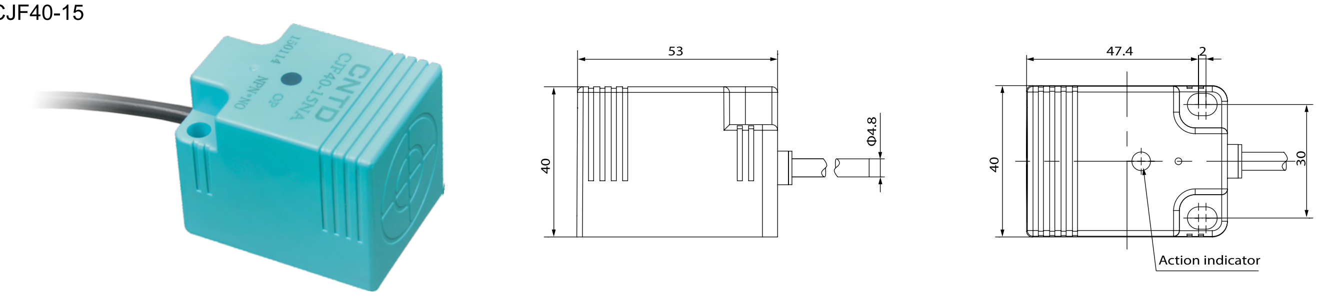
CJF25-08



CJF30-12



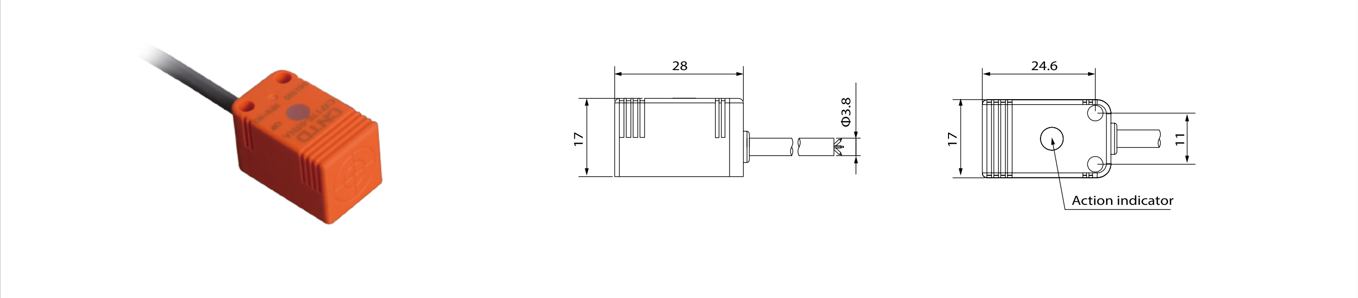
CJF40-15



CJF Proximity Sensor Square Type (Standard type)

Appearance and Dimension

CJF17E-05



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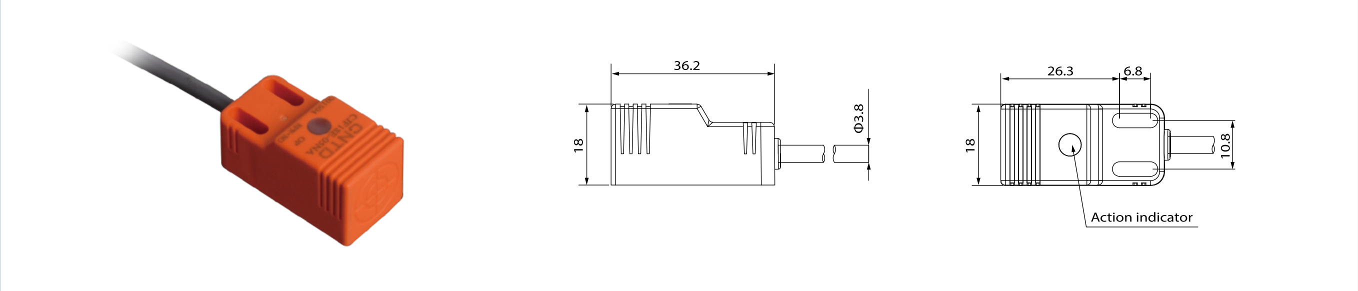

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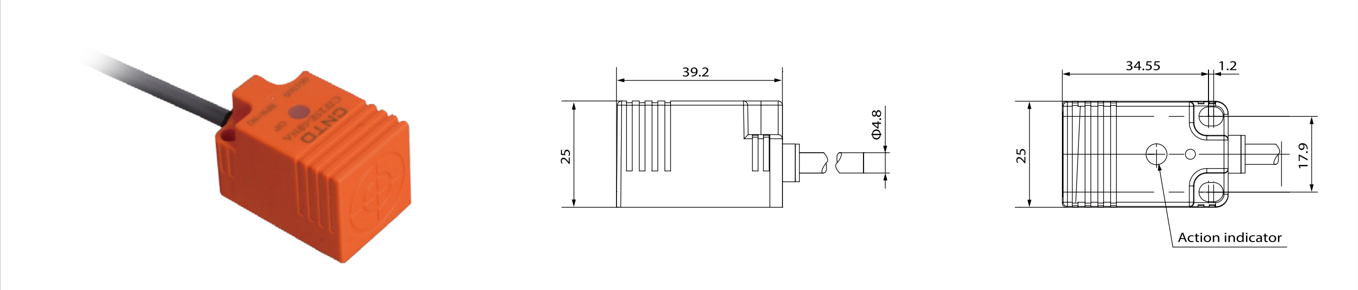
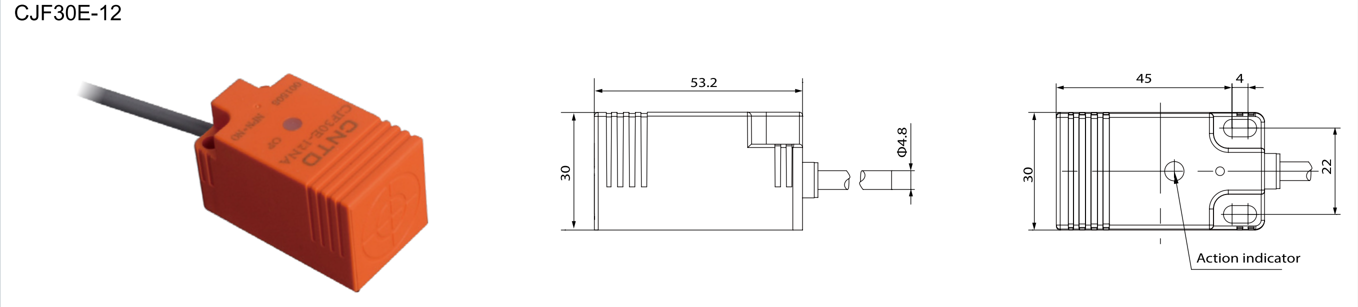
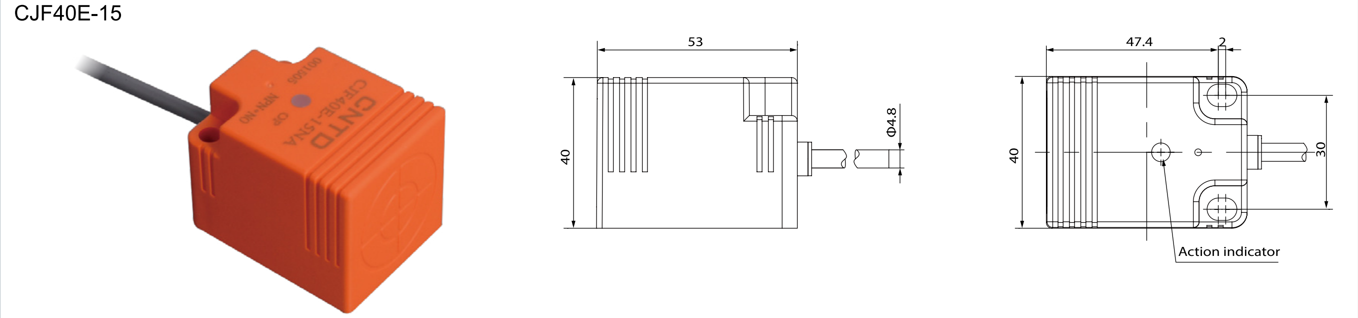


CJF30E-12



CJF40E-15

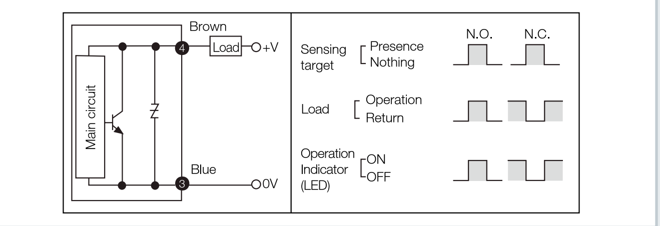


CJF Proximity Sensor Square Type

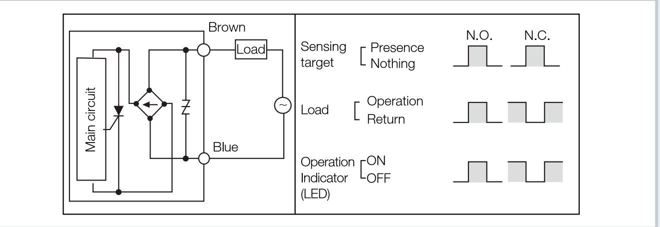
CNTD

Control Output Diagram

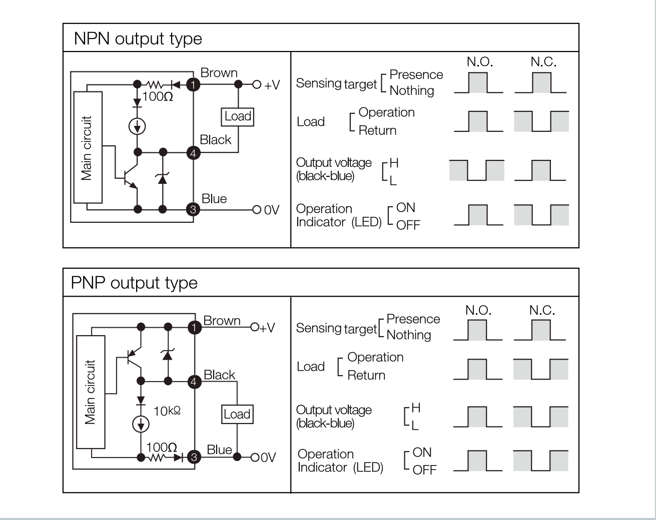
DC 2-wire type



AC 2-wire type

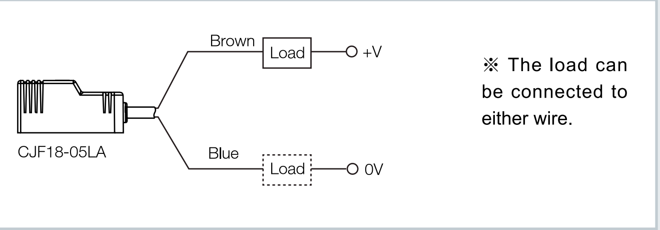


DC 3-wire type

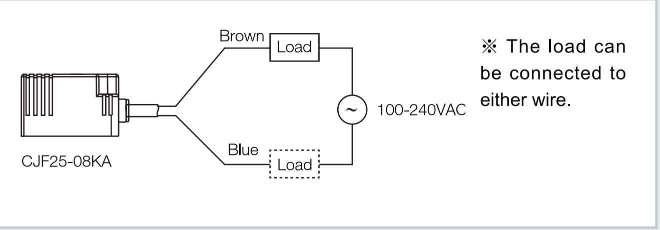


Connections

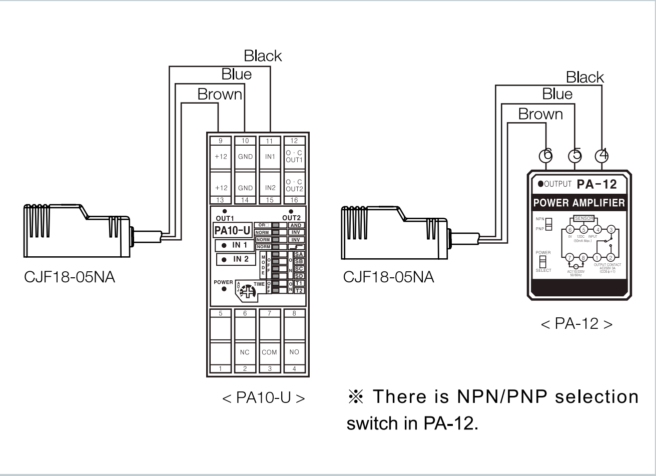
DC 2-wire type



AC 2-wire type



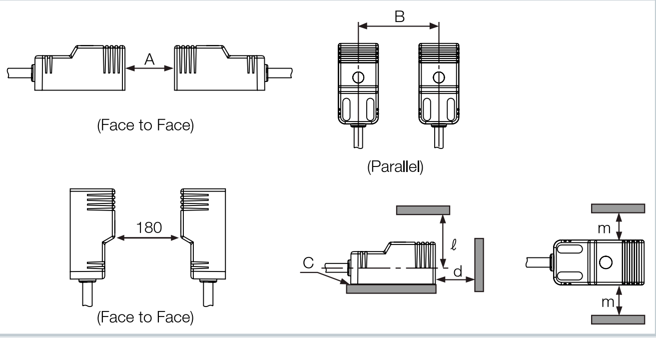
DC 3-wire type



Proper Usage

Mutual-interference

When several proximity sensors are mounted close to one another a malfunction of the may be caused due to mutual interference. Therefore, be sure to provide a minimum distance between the two sensors as below chart indicates.



Item \ Model	CJF17-05 CJF17E-05	CJF18-05 CJF18E-05	CJF25-08 CJF25E-08	CJF30-12 CJF30E-12	CJF40-15 CJF40E-15
A	30	48	30	60	120
B	36	40	40	50	70
C	5	5	5	5	5
ϕ d	15	24	15	30	60
ℓ	24	33	25	30	45
m	18	20	20	25	35

CJF Proximity Sensor Flat Type (High-end type)

Features

- Inside surge protection, reverse polarity protection, overcurrent protection
- Long use-life cycle and high reliability, easy install, enconomic price
- Red LED status indication, easy to confirm work situation
- Protection structure IP67(IEC standard)
- Replaceable for limit switches

Model Number Structure

C J F 10 □ — 05 N A □

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

Item	Code	Description
① Company code	C	Company code
② Product name	J	Inductive proximity sensor
③ Shape of shell	F	Square
④ Dimension code	10	10=10 Square10
⑤ Product type	Without	High-end type
⑥ Detection distance	05	05=5mm
⑦ Output mode	K	AC 2wires
	L	DC 2wires
	P	PNP 3wires
	N	NPN 3wires
⑧ Output state	A	NO
	B	NC
	C	NO+NC
⑨ Connection	Without	Without: Lead wire
	T	Plug-in
	R	Wiring leads Plug-in

CJF Proximity Sensor Flat Type (High-end type)

CNTD

Specifications

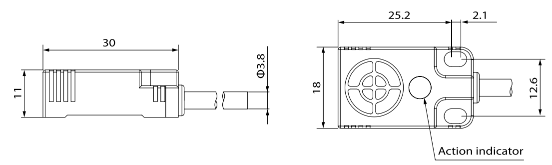
Model	CJF10-05LA CJF10-05NA CJF10-05NB CJF10-05PA CJF10-05PB	CJF11-06LA CJF11-06NA CJF11-06NB CJF11-06PA CJF11-06PB	CJF12-07LA CJF12-07NA CJF12-07NB CJF12-07PA CJF12-07PB
Sensing distance	5mm	6mm	7mm
Hysteresis	Max. 10% of sensing distance		
Standard sensing target	25 × 25 × 1mm (Iron)		
Setting distance	0~3.5mm	0~3.5mm	0~5.5mm
Power supply (Operating voltage)	12-24VDC (10-30VDC)		
Leakage current	Max.10mA		
Response frequency (※1)	500Hz	500Hz	400Hz
Residual voltage	DC Second line: Max. 3.5V DC Three-line: Max. 1.0V		
Affection by Temp.	Max. ±10% for sensing distance at ambient temperature 20℃		
Control output	Max. 200mA		
Insulation resistance	Min. 50MΩ(at 500VDC megger)		
Dielectric strength	1500VAC 50/60Hz for 1minute		
Vibration	1mm amplitude at frequency of 10 to 55Hz(for 1 min.) in each of X, Y, Z directions for 2 hours		
Shock	500m/s^2(approx. 50G) X, Y, Z directions for 3 times		
Indicator	Operation indicator(red LED)		
Ambient temperature	-25~+70℃ (No icing)		
Storage temperature	-30~+80℃ (No icing)		
Ambient humidity	35~95%RH (No condensation)		
Protection circuit	Surge protection circuit, Reverse polarity protection circuit, Overcurrent protection circuit		
Cable	ϕ3.8, 2P, 2m ϕ3.8, 3P, 2m		
	(AWG22, Core diameter: 0.1mm, Number of cores: 25, Insulator diameter: ϕ1.25)		
Material	Case: PBT, Standard cable(Grey): Polyvinyl chloride(PVC)		
Protection	IP67		

(※1): The response frequency is the average value. The standard sensing target is used and the width is set as 2 times of the standard sensing target, 1/2 of the sensing distance for the distance.

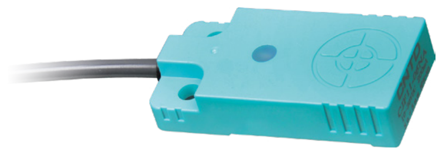
CJF Proximity Sensor Flat Type (High-end type)

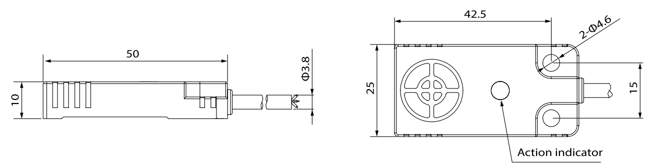
Appearance and Dimension

CJF10-05

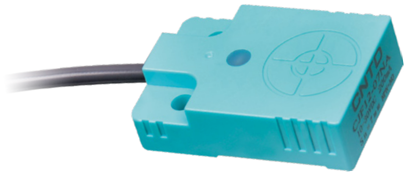


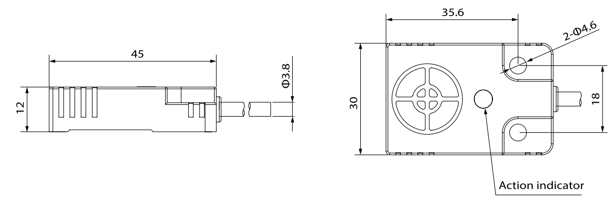
CJF11-06





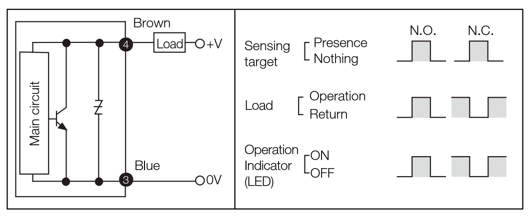
CJF12-07



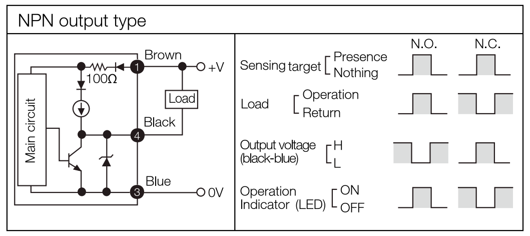


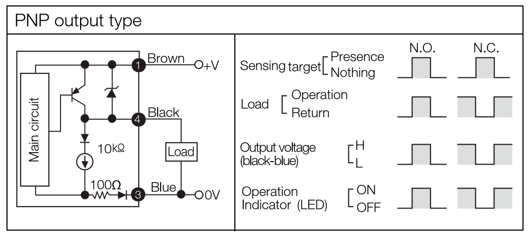
Control Output Diagram

DC 2-wire type



DC 3-wire type





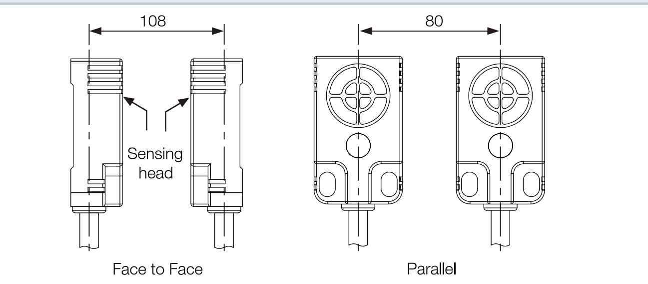
Proper Usage

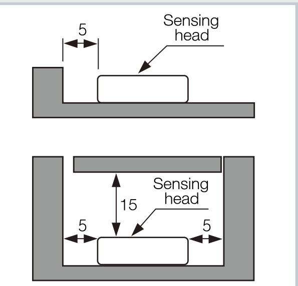
Mutual-interference

When several proximity sensors are mounted close to one another a malfunction of the sensor may be caused due to mutual interference. Therefore, be sure to provide a minimum distance between the two sensors as below chart indicates.

Influence by surrounding metals

When sensors are mounted on metallic panel, you must prevent the sensors from being affected by any metallic object except target. Therefore, be sure to provide a minimum distance as below chart indicates.





※ When the height between the proximity sensor and surrounding metals is same.

※ When the height between the proximity sensor and surrounding metals is different.

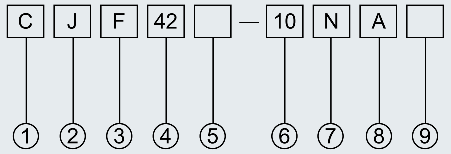
CJF Proximity Sensor Cylindrical Type (High-end type)

CNTD

Features

- Inside surge protection, reverse polarity protection, overcurrent protection
- Long use-life cycle and high reliability, easy install, enconomic price
- Red LED status indication, easy to confirm work situation
- Protection structure IP67(IEC standard)
- Replaceable for limit switches

Model Number Structure



Item	Code	Description
① Company code	C	Company code
② Product name	J	Inductive proximity sensor
③ Shape of shell	F	Square
④ Dimension code	42	42=Φ42
⑤ Product type	Without	High-end type
⑥ Detection distance	10	10=10mm
⑦ Output mode	K	AC 2wires
	L	DC 2wires
	P	PNP 3wires
	N	NPN 3wires
⑧ Output state	A	NO
	B	NC
	C	NO+NC
⑨ Connection	Without	Without: Lead wire
	T	Plug-in
	R	Wiring leads Plug-in

CJF Proximity Sensor Cylindrical Type (High-end type)

Specifications

DC 3wire type

Model	CJF36-07NA CJF36-07NB CJF36-07PA CJF36-07PB	CJF42-10NA CJF42-10NB CJF42-10PA CJF42-10PB	CJF48-15NA CJF48-15NB CJF48-15PA CJF48-15PB	CJF55-20NA CJF55-20NB CJF55-20PA CJF55-20PB
Sensing distance	7mm	10mm	15mm	20mm
Hysteresis	Max. 10% of sensing distance			
Standard sensing target	50 × 50 × 1mm (Iron)	55 × 55 × 1mm (Iron)	60 × 60 × 1mm (Iron)	80 × 80 × 1mm (Iron)
Setting distance	0~5.5mm	0~7.5mm	0~12.5mm	0~15.5mm
Power supply (Operating voltage)	12-24VDC (10-30VDC)			
Leakage current	Max.10mA			
Response frequency (※1)	300Hz	200Hz	100Hz	100Hz
Residual voltage	Max. 1.0V			
Affection by Temp.	Max. ±10% for sensing distance at ambient temperature 20℃			
Control output	Max. 200mA			
Insulation resistance	Min. 50MΩ(at 500VDC megger)			
Dielectric strength	1500VAC 50/60Hz for 1minute			
Vibration	1mm amplitude at frequency of 10 to 55Hz(for 1 min.) in each of X, Y, Z directions for 2 hours			
Shock	500m/s^2(approx. 50G) X, Y, Z directions for 3 times			
Indicator	Operation indicator(red LED)			
Ambient temperature	-25~+70℃ (No icing)			
Storage temperature	-30~+80℃ (No icing)			
Ambient humidity	35~95%RH (No condensation)			
Protection circuit	Surge protection circuit, Reverse polarity protection circuit, Overcurrent protection circuit			
Cable	ϕ3.8, 3P, 2m		ϕ4.8, 3P, 2m	
	AWG22, Core diameter: 0.1mm, Number of cores: 25, Insulator diameter: ϕ1.25		AWG22, Core diameter: 0.1mm, Number of cores: 30, Insulator diameter: ϕ1.25	
Material	Case: PBT, Standard cable(Grey): Polyvinyl chloride(PVC)			
Protection	IP67			

(※1): The response frequency is the average value. The standard sensing target is used and the width is set as 2 times of the standard sensing target, 1/2 of the sensing distance for the distance.

CJF Proximity Sensor Cylindrical Type (High-end type)

CNTD

Specifications

DC 2-wire type

Model	CJF36-07LA CJF36-07LB	CJF42-10LA CJF42-10LB	CJF48-15LA CJF48-15LB	CJF55-20LA CJF55-20LB
Sensing distance	7mm	10mm	15mm	20mm
Hysteresis	Max. 10% of sensing distance			
Standard sensing target	50 × 50 × 1mm (Iron)	55 × 55 × 1mm (Iron)	60 × 60 × 1mm (Iron)	80 × 80 × 1mm (Iron)
Setting distance	0~5.5mm	0~7.5mm	0~12.5mm	0~15.5mm
Power supply (Operating voltage)	12-24VDC (10-30VDC)			
Leakage current	Max.0.6mA			
Response frequency (※1)	300Hz	200Hz	100Hz	100Hz
Residual voltage	Max. 3.5V			
Affection by Temp.	Max. ±10% for sensing distance at ambient temperature 20℃			
Control output	Max. 200mA			
Insulation resistance	Min. 50MΩ(at 500VDC megger)			
Dielectric strength	1500VAC 50/60Hz for 1minute			
Vibration	1mm amplitude at frequency of 10 to 55Hz(for 1 min.) in each of X, Y, Z directions for 2 hours			
Shock	500m/s^2(approx. 50G) X, Y, Z directions for 3 times			
Indicator	Operation indicator(red LED)			
Ambient temperature	-25~+70℃ (No icing)			
Storage temperature	-30~+80℃ (No icing)			
Ambient humidity	35~95%RH (No condensation)			
Protection circuit	Surge protection circuit, Reverse polarity protection circuit, Overcurrent protection circuit			
Cable	ϕ3.8, 2P, 2m		ϕ4.8, 2P, 2m	
	AWG22, Core diameter: 0.1mm, Number of cores: 25, Insulator diameter: ϕ1.25		AWG22, Core diameter: 0.1mm, Number of cores: 30, Insulator diameter: ϕ1.25	
Material	Case: PBT, Standard cable(Grey): Polyvinyl chloride(PVC)			
Protection	IP67			

(※1): The response frequency is the average value. The standard sensing target is used and the width is set as 2 times of the standard sensing target, 1/2 of the sensing distance for the distance.

CJF Proximity Sensor Cylindrical Type (High-end type)

Specifications

AC 2-wire type

Model	CJF42-10KA CJF42-10KB	CJF48-15KA CJF48-15KB	CJF55-20KA CJF55-20KB
Sensing distance	10mm	15mm	20mm
Hysteresis	Max. 10% of sensing distance		
Standard sensing target	55 × 55 × 1mm (Iron)	60 × 60 × 1mm (Iron)	80 × 80 × 1mm (Iron)
Setting distance	0~7.5mm	0~12.5mm	0~15.5mm
Power supply (Operating voltage)	24-250VAC		
Leakage current	Max.10mA		
Response frequency (※1)	20Hz		
Residual voltage	Max. 10V		
Affection by Temp.	Max. ±10% for sensing distance at ambient temperature 20℃		
Control output	Max. 200mA		
Insulation resistance	Min. 50MΩ (at 500VDC megger)		
Dielectric strength	1500VAC 50/60Hz for 1minute		
Vibration	1mm amplitude at frequency of 10 to 55Hz(for 1 min.) in each of X, Y, Z directions for 2 hours		
Shock	$500m/s^2$(approx. 50G) X, Y, Z directions for 3 times		
Indicator	Operation indicator(red LED)		
Ambient temperature	-25~+70℃ (No icing)		
Storage temperature	-30~+80℃ (No icing)		
Ambient humidity	35~95%RH (No condensation)		
Protection circuit	Surge protection circuit		
Cable	ϕ3.8, 2P, 2m (AWG22, Core diameter: 0.1mm, Number of cores: 25, Insulator diameter: ϕ1.25)	ϕ4.8, 2P, 2m (AWG22, Core diameter: 0.1mm, Number of cores: 30, Insulator diameter: ϕ1.25)	
Material	Case: PBT, Standard cable(Grey): Polyvinyl chloride(PVC)		
Protection	IP67		

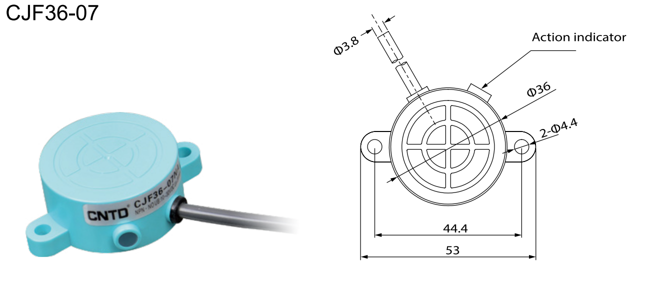
(※1): The response frequency is the average value. The standard sensing target is used and the width is set as 2 times of the standard sensing target, 1/2 of the sensing distance for the distance.

CJF Proximity Sensor Cylindrical Type (High-end type)

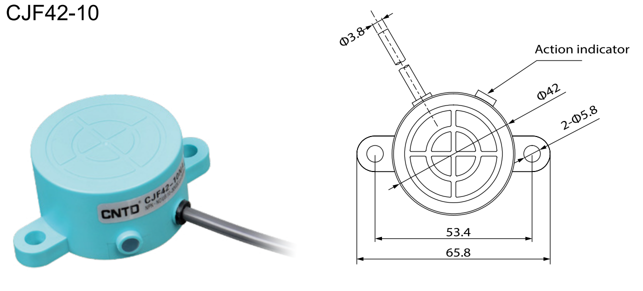
CNTD

Appearance and Dimension

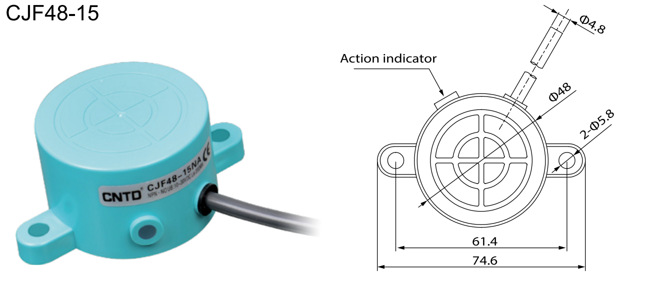
CJF36-07



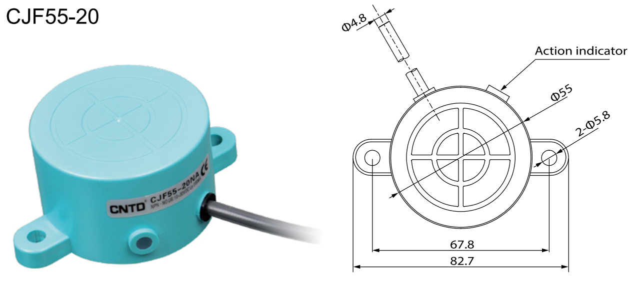
CJF42-10



CJF48-15

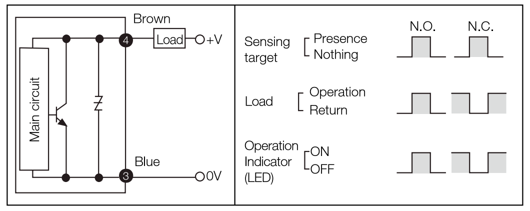


CJF55-20

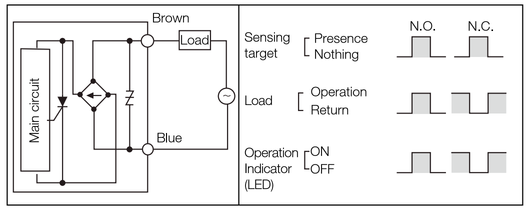


Control Output Diagram

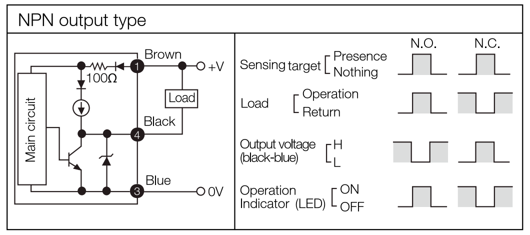
DC 2-wire type

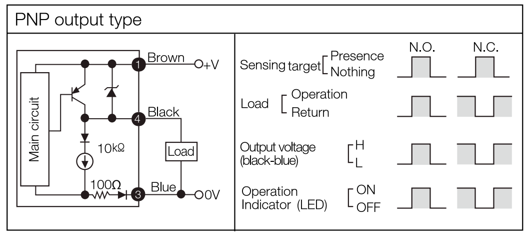


AC 2-wire type



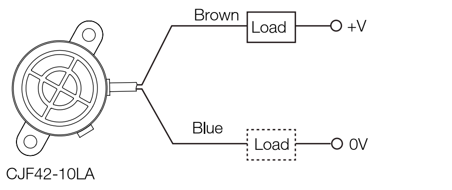
DC 3-wire type





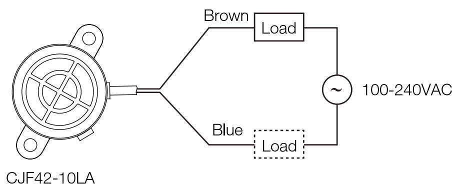
Connections

DC 2-wire type



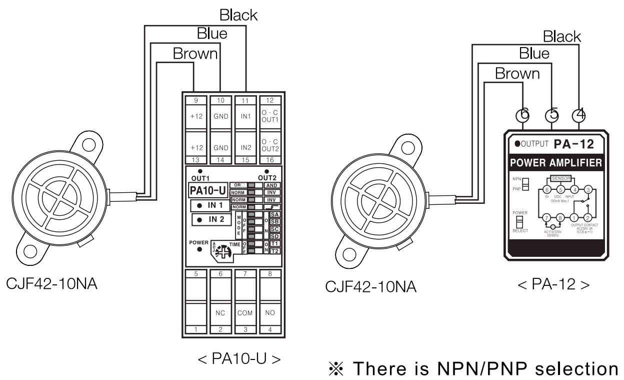
※ The load can be connected to either wire.

AC 2-wire type



※ The load can be connected to either wire.

DC 3-wire type



※ There is NPN/PNP selection switch in PA-12.

CJF Long Distance Proximity Sensor Flat Type

Features

- Long sensing distance 50mm
- Exclusively designed IC for improving anti-jamming capability
- Inside surge protection, reverse polarity protection, overcurrent protection
- Red LED status indication, easy to confirm work situation
- Protection structure IP65(IEC standard)

Model Number Structure

C J F 40X [ ] — 20 N A [ ]

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

Item	Code	Description
① Company code	C	Company code
② Product name	J	Inductive proximity sensor
③ Shape of shell	F	Square
④ Dimension code	40X	40X=Rectangle 40
⑤ Product type	Without	High-end type
⑥ Detection distance	20	20=20mm
⑦ Output mode	K	AC 2wires
	L	DC 2wires
	P	PNP 3wires
	N	NPN 3wires
⑧ Output state	A	NO
	B	NC
	C	NO+NC
⑨ Connection	Without	Without: Lead wire
	T	Plug-in
	R	Wiring leads Plug-in

Specifications

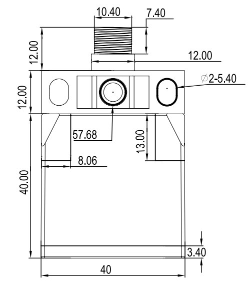
Model	CJF40X-20LA CJF40X-20LB CJF40X-20NA CJF40X-20NB CJF40X-20PA CJF40X-20PB CJF40X-20KA CJF40X-20KB	CJF40Y-20LA CJF40Y-20LB CJF40Y-20NA CJF40Y-20NB CJF40Y-20PA CJF40Y-20PB CJF40Y-20KA CJF40Y-20KB	CJF80-50LA CJF80-50LB CJF80-50NA CJF80-50NB CJF80-50PA CJF80-50PB CJF80-50KA CJF80-50KB
Sensing distance	20mm	20mm	50mm
Hysteresis	Max. 10% of sensing distance		
Standard sensing target	75 × 75 × 1mm (Iron)	75 × 75 × 1mm (Iron)	120 × 120 × 1mm (Iron)
Setting distance	0~15.5mm	0~15.5mm	0~40mm
Power supply (Operating voltage)	10-30VDC / 24-250VAC		
Leakage current	Max.10mA		
Response frequency (※1)	DC 200Hz / AC 20Hz		
Residual voltage	DC second line: Max. 3.5V DC three-wire: Max. 1.0V AC two-wire: below 10V Max. 10V		
Affection by Temp.	Max. ± 10% for sensing distance at ambient temperature 20℃		
Control output	Max. 200mA		
Insulation resistance	Min. 50MΩ (at 500VDC megger)		
Dielectric strength	1500VAC 50/60Hz for 1minute		
Vibration	1mm amplitude at frequency of 10 to 55Hz(for 1 min.) in each of X, Y, Z directions for 2 hours		
Shock	500m/s^2(approx. 50G) X, Y, Z directions for 3 times		
Indicator	Operation indicator(red LED)		
Ambient temperature	-25~+70℃ (No icing)		
Storage temperature	-30~+80℃ (No icing)		
Ambient humidity	35~95%RH (No condensation)		
Protection circuit	Surge protection circuit, Reverse polarity protection circuit, Overcurrent protection circuit		
Material	Case: PBT, Standard cable(Grey): Polyvinyl chloride(PVC)		
Protection	IP65		

(※1): The response frequency is the average value. The standard sensing target is used and the width is set as 2 times of the standard sensing target, 1/2 of the sensing distance for the distance.

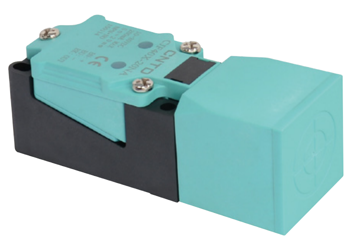
CJF Long Distance Proximity Sensor Flat Type

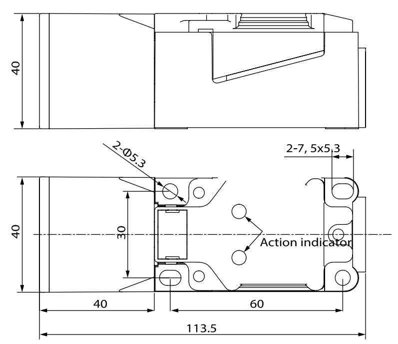
Appearance and Dimension

CJF40Y-20

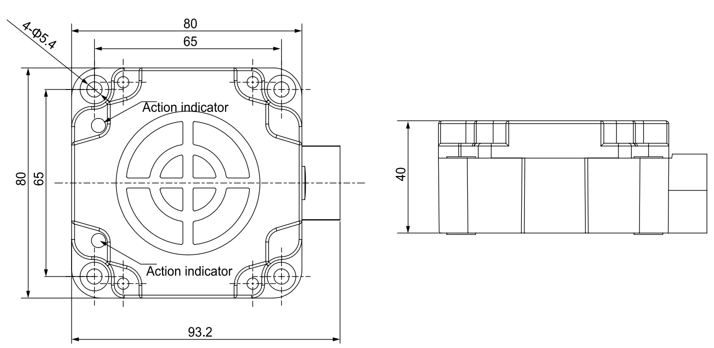


CJF40X-20



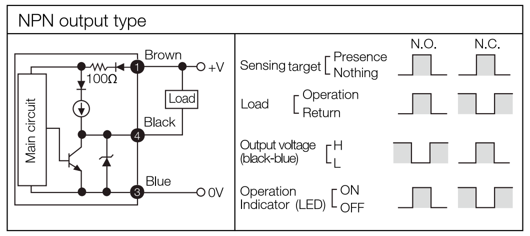


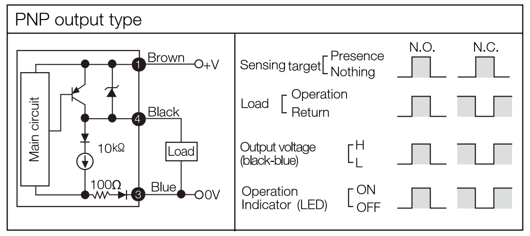
CJF80-50



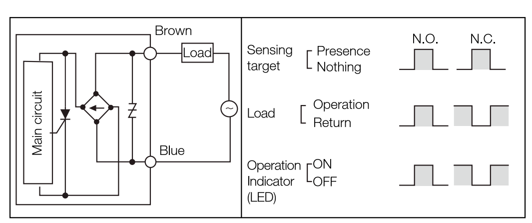
Control Output Diagram

DC 3-wire type





AC 2-wire type



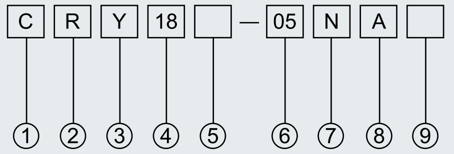
CRY Capacitive Proximity Sensor

CNTD

Features

- Inside surge protection, reverse polarity protection
- Long use-life cycle and high reliability, easy install, enconomic price
- Red LED status indication, easy to confirm work situation
- Protection structure IP65(IEC standard)

Model Number Structure



Item	Code	Description
① Company code	C	Company code
② Product name	R	Capacitve proximity sensor
③ Shape of shell	Y	Cylinder-shaped
④ Dimension code	18	18=M18
⑤ Product type	Without	High-end type
⑥ Detection distance	05	05=5mm
⑦ Output mode	K	AC 2wires
	L	DC 2wires
	P	PNP 3wires
	N	NPN 3wires
⑧ Output state	A	NO
	B	NC
	C	NO+NC
⑨ Connection	Without	Without: Lead wire
	T	Plug-in
	R	Wiring leads Plug-in

CRY Capacitive Proximity Sensor

Specifications

DC 3wire type

Model	CRY12-02NA CRY12-02NB CRY12-02PA CRY12-02PB	CRY12-04NA CRY12-04NB CRY12-04PA CRY12-04PB	CRY18-05NA CRY18-05NB CRY18-05NC CRY18-05PA CRY18-05PB CRY18-05PC	CRY18-08NA CRY18-08NB CRY18-08NC CRY18-08PA CRY18-08PB CRY18-08PC	CRY30-10NA CRY30-10NB CRY30-10NC CRY30-10PA CRY30-10PB CRY30-10PC	CRY30-15NA CRY30-15NB CRY30-15NC CRY30-15PA CRY30-15PB CRY30-15PC
Sensing distance	2mm	4mm	5mm	8mm	10mm	15mm
Hysteresis	Max. 10% of sensing distance					
Setting distance	0~1.4mm	0~2.8mm	0~3.5mm	0~5.6mm	0~7mm	0~10.5mm
Power supply (Operating voltage)	12-24VDC (10-30VDC)					
Leakage current	Max.10mA					
Response frequency (※1)	50Hz					
Residual voltage	Max. 1.0V					
Affection by Temp.	Max. ± 10% for sensing distance at ambient temperature 20℃					
Control output	Max. 200mA					
Insulation resistance	Min. 50MΩ(at 500VDC megger)					
Dielectric strength	1500VAC 50/60Hz for 1minute					
Vibration	1mm amplitude at frequency of 10 to 55Hz(for 1 min.) in each of X, Y, Z directions for 2 hours					
Shock	500m/s^2(approx. 50G) X, Y, Z directions for 3 times					
Indicator	Operation indicator(red LED)					
Ambient temperature	-25~+60℃ (No icing)					
Storage temperature	-30~+80℃ (No icing)					
Ambient humidity	35~95%RH (No condensation)					
Protection circuit	Surge protection circuit, Overcurrent protection circuit					
Material	Case/Nut: ABS, Washer: Plastic, Sensing surface: PBT, Standard cable(Gray): Polyvinyl chloride(PVC), Oil resistant cable(Black): Oil resistant Polyvinyl chloride(PVC)					
Cable	ϕ3.8, 3P, 2m		ϕ4.8, 3P,4P 2m			
	(AWG22, Core diameter: 0.1mm, Number of cores: 25, Insulator diameter: ϕ1.25		(AWG22, Core diameter: 0.1mm, Number of cores: 30, Insulator diameter: ϕ1.25			
Protection	IP65					

Specifications

AC 2wire type

Model	CRY18-05KA CRY18-05KB	CRY18-08KA CRY18-08KB	CRY30-10KA CRY30-10KB	CRY30-15KA CRY30-15KB
Sensing distance	5mm	8mm	10mm	15mm
Hysteresis	Max. 10% of sensing distance			
Setting distance	0~3.5mm	0~5.6mm	0~7mm	0~10.5mm
Power supply (Operating voltage)	90-250VAC			
Leakage current	Max.10mA			

CRY Capacitive Proximity Sensor

CNTD

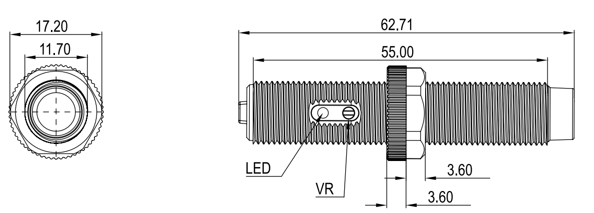
Specifications

AC 2wire type

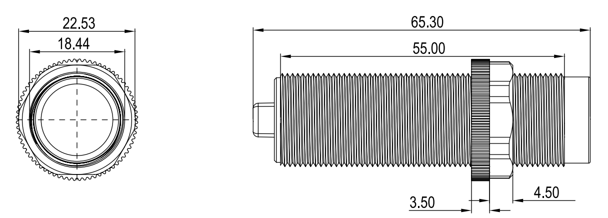
Model	CRY18-05KA CRY18-05KB	CRY18-08KA CRY18-08KB	CRY30-10KA CRY30-10KB	CRY30-15KA CRY30-15KB
Response frequency (※1)	50Hz			
Residual voltage	Max. 10V			
Affection by Temp.	Max. ± 10% for sensing distance at ambient temperature 20℃			
Control output	Max. 200mA			
Insulation resistance	Min. 50MΩ(at 500VDC megger)			
Dielectric strength	1500VAC 50/60Hz for 1minute			
Vibration	1mm amplitude at frequency of 10 to 55Hz(for 1 min.) in each of X, Y, Z directions for 2 hours			
Shock	500m/s^2(approx. 50G) X, Y, Z directions for 3 times			
Indicator	Operation indicator(red LED)			
Ambient temperature	-25~+60℃ (No icing)			
Storage temperature	-30~+80℃ (No icing)			
Ambient humidity	35~95%RH (No condensation)			
Protection circuit	Surge protection circuit,			
Material	Case/Nut: ABS, Sensing surface: PBT, Standard cable(Gray): Polyvinyl chloride(PVC), Oil resistant cable(Black): Oil resistant Polyvinyl chloride(PVC)			
Cable	ϕ4.8, 2P, 2m			
	(AWG22, Core diameter: 0.1mm, Number of cores: 30, Insulator diameter: ϕ1.25			
Protection	IP65			

Appearance and Dimension

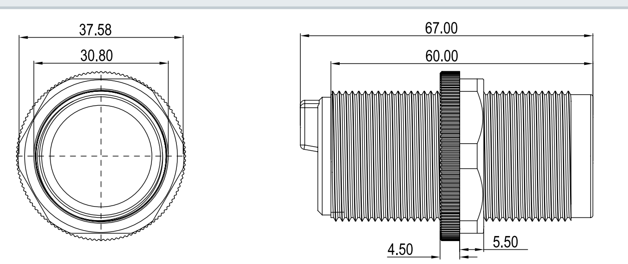
CRY12



CRY18



CRY30



CMY Analog Proximity Sensor

Features

- Inside surge protection, reverse polarity protection
- Long use-life cycle and high reliability, easy install, enconomic price
- Red LED status indication, easy to confirm work situation
- Protection structure IP65(IEC standard)

Model Number Structure

C M Y 30 □ — 15 U A □

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

Item	Code	Description
① Company code	C	Company code
② Product name	M	Analog proximity sensor
③ Shape of shell	Y	Cylinder-shaped
④ Dimension code	30	30=M30
⑤ Product type	Without	High-end type
	E	Standard type
⑥ Detection distance	15	15=15mm
⑦ Output mode	U	Voltage mode
	I	Current mode
⑧ Output state	A	NO
	B	NC
	C	NO+NC
⑨ Connection	Without	Without: Lead wire
	T	Plug-in
	R	Wiring leads Plug-in

CMY Analog Proximity Sensor

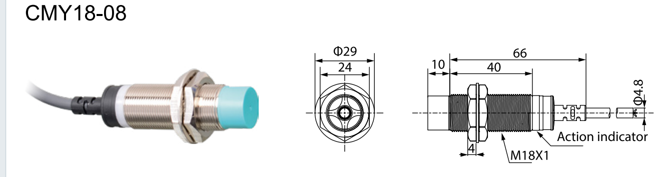
CNTD

Specifications

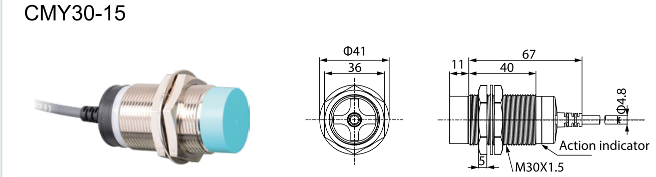
Model	CMY18-08U CMY18-08 I	CMY30-15U CMY30-15 I	CMF40-20U CMF40-20 I	CMF48-20U CMF48-20 I
Sensing distance	1-8mm	1-15mm	1-20mm	1-20mm
Hysteresis	3-20%			
Power supply (Operating voltage)	15-30VDC			
Affection by Temp.	Max. ±10% for sensing distance at ambient temperature 20℃			
Control output	Output voltage / Current output			
Insulation resistance	Min. 50MΩ(at 500VDC megger)			
Dielectric strength	1500VAC 50/60Hz for 1minute			
Vibration	1mm amplitude at frequency of 10 to 55Hz(for 1 min.) in each of X, Y, Z directions for 2 hours			
Shock	500m/s^2(approx. 50G) X, Y, Z directions for 3 times			
Indicator	Operation indicator(red LED)			
Ambient temperature	-15~+55℃ (No icing)			
Storage temperature	-15~+55℃ (No icing)			
Ambient humidity	35~95%RH (No condensation)			
Protection circuit	Surge protection circuit, Overcurrent protection circuit			
Material	Case/Nut: Plastic, Washer: Plastic, Sensing surface: PBT, Standard cable(Gray): Polyvinyl chloride(PVC), Oil resistant cable(Black): Oil resistant Polyvinyl chloride(PVC)			
Cable	ϕ3.8, 2P, 2m (AWG22, Core diameter: 0.1mm, Number of cores: 25, Insulator diameter: ϕ1.25		ϕ4.8, 2P, 2m (AWG22, Core diameter: 0.1mm, Number of cores: 30, Insulator diameter: ϕ1.25	
Protection	IP65			

Appearance and Dimension

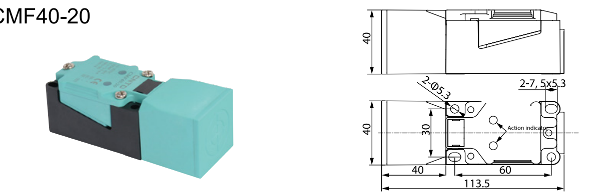
CMY18-08



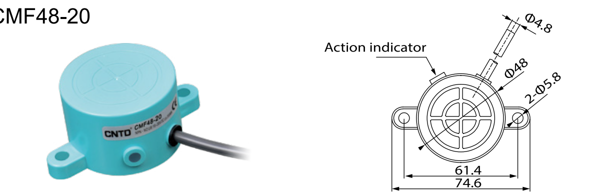
CMY30-15



CMF40-20



CMF48-20



CHY Hall Sensor

Features

- Inside surge protection, reverse polarity protection
- Long use-life cycle and high reliability, easy install, enconomic price
- Red LED status indication, easy to confirm work situation
- Protection structure IP67(IEC standard)

Model Number Structure

C H Y 08 ☐ — 10 N A ☐

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

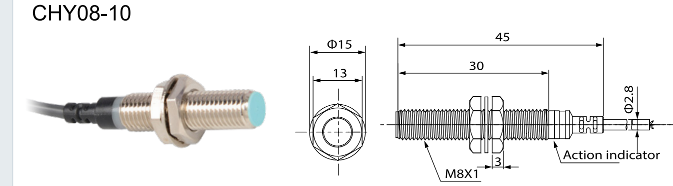
Item	Code	Description
① Company code	C	Company code
② Product name	H	Hall sensor
③ Shape of shell	Y	Cylinder-shaped
④ Dimension code	08	08=M08
⑤ Product type	Without	High-end type
⑥ Detection distance	10	10=10mm
⑦ Output mode	P	PNP 3wires
	N	NPN 3wires
⑧ Output state	A	NO
	B	NC
	C	NO+NC
⑨ Connection	Without	Without: Lead wire
	T	Plug-in
	R	Wiring leads Plug-in

Specifications

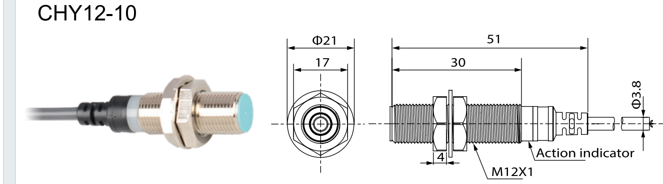
Model	CHY08-10NA CHY08-10PA CHY08-10NB CHY08-10PB	CHY12-10NA CHY12-10PA CHY12-10NB CHY12-10PB CHY12-10NC CHY12-10PC	CHY18-10NA CHY18-10PA CHY18-10NB CHY18-10PB CHY18-10NC CHY18-10PC
Sensing distance	10mm	10mm	10mm
Hysteresis	3-20%		
Consumption current	Max. 10mA		
Power supply (Operating voltage)	6-36VDC		
Response frequency	1000Hz		
Residual voltage	Max. 1V		
Affection by Temp.	Max. ±10% for sensing distance at ambient temperature 20℃		
Control output	Max. 200mA		
Insulation resistance	Min. 50MΩ(at 500VDC megger)		
Dielectric strength	1500VAC 50/60Hz for 1minute		
Vibration	1mm amplitude at frequency of 10 to 55Hz(for 1 min.) in each of X, Y, Z directions for 2 hours		
Shock	500m/s^2(approx. 50G) X, Y, Z directions for 3 times		
Indicator	Operation indicator(red LED)		
Ambient temperature	-15~+55℃ (No icing)		
Storage temperature	-15~+55℃ (No icing)		
Ambient humidity	35~95%RH (No condensation)		
Protection circuit	Surge protection circuit, Overcurrent protection circuit		
Material	Case/Nut: Nickel plated Brass, Washer: Nickel plated Iron, Sensing surface: PBT, Standard cable(Gray): Polyvinyl chloride(PVC), Oil resistant cable(Black): Oil resistant Polyvinyl chloride(PVC)		
Cable	ϕ2.8,3P, 2m	ϕ3.8, 3P,4P 2m	ϕ4.8, 3P,4P 2m
	(AWG22, Core diameter: 0.1mm, Number of cores: 22, Insulator diameter: ϕ1.25	(AWG22, Core diameter: 0.1mm, Number of cores: 25, Insulator diameter: ϕ1.25	(AWG22, Core diameter: 0.1mm, Number of cores: 30, Insulator diameter: ϕ1.25
Protection	IP67		

Appearance and Dimension

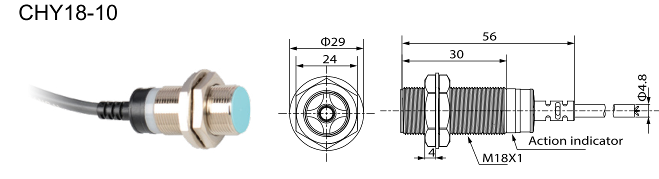
CHY08-10



CHY12-10



CHY18-10



CXY Magnetic Sensor

Features

- Inside surge protection, reverse polarity protection
- Long use-life cycle and high reliability, easy install, enconomic price
- Red LED status indication, easy to confirm work situation
- Protection structure IP67(IEC standard)

Model Number Structure

C X Y 12 □ — 10 N A □

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

Item	Code	Description
① Company code	C	Company code
② Product name	X	Magnetic sensor
③ Shape of shell	Y	Cylinder-shaped
④ Dimension code	12	12=M12
⑤ Product type	Without	High-end type
⑥ Detection distance	10	10=10mm
⑦ Output mode	K	AC 2 wires
	L	DC 2 wires
⑧ Output state	A	NO
	B	NC
	C	NO+NC
⑨ Connection	Without	Without: Lead wire
	T	Plug-in
	R	Wiring leads Plug-in

CXY Magnetic Sensor

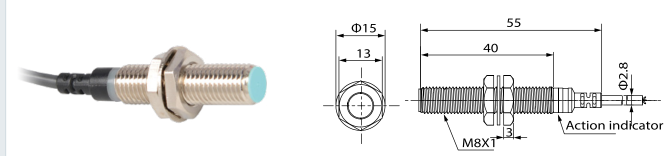
CNTD

Specifications

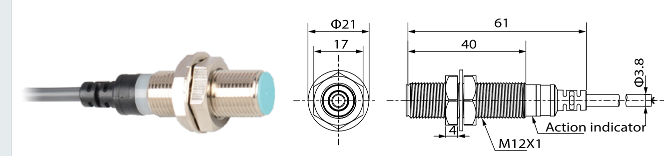
Model	CXY08-10LA CXY08-10KA	CXY12-10LA CXY12-10KA	CXY18-10LA CXY18-10KA	CXF18-10LA CXF18-10KA
Sensing distance	10mm	10mm	10mm	10mm
Hysteresis	3-20%			
Consumption current	Max. 10mA			
Power supply (Operating voltage)	12-240VDC/AC			
Response frequency	100Hz			
Residual voltage	Max. 3V			
Affection by Temp.	Max. ±10% for sensing distance at ambient temperature 20℃			
Control output	Max. 200mA			
Insulation resistance	Min. 50MΩ(at 500VDC megger)			
Dielectric strength	1500VAC 50/60Hz for 1minute			
Vibration	1mm amplitude at frequency of 10 to 55Hz(for 1 min.) in each of X, Y, Z directions for 2 hours			
Shock	500m/s^2(approx. 50G) X, Y, Z directions for 3 times			
Indicator	Operation indicator(red LED)			
Ambient temperature	-15~+55℃ (No icing)			
Storage temperature	-15~+55℃ (No icing)			
Ambient humidity	35~95%RH (No condensation)			
Protection circuit	Surge protection circuit			
Material	Case/Nut: Nickel plated Brass, Washer: Nickel plated Iron, Sensing surface: PBT, Standard cable(Gray): Polyvinyl chloride(PVC), Oil resistant cable(Black): Oil resistant Polyvinyl chloride(PVC)			
Cable	ϕ2.8, 2P, 2m	ϕ3.8, 2P, 2m	ϕ4.8, 2P, 2m	
	(AWG22, Core diameter: 0.1mm, Number of cores: 22, Insulator diameter: ϕ1.25	(AWG22, Core diameter: 0.1mm, Number of cores: 25, Insulator diameter: ϕ1.25	(AWG22, Core diameter: 0.1mm, Number of cores: 30, Insulator diameter: ϕ1.25	
Protection	IP67			

Appearance and Dimension

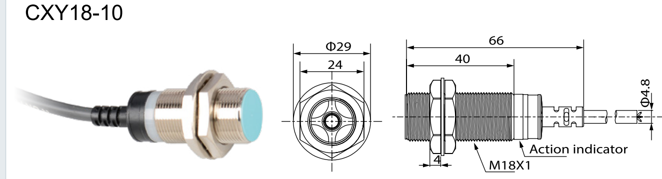
CXY08-10



CXY12-10



CXY18-10



CGY Photoelectric Sensor Cylindrical Type

Features

- Dark grey mark for standard type
- Blue green mark for high-end type

- Exclusively designed IC for improving anti-jamming capability
- Inside surge protection, reverse polarity protection
- Long use-life cycle and high reliability, easy install, enconomic price
- Red LED status indication, easy to confirm work situation
- Protection structure IP65(IEC standard)

Rice white

Dark grey

Model Number Structure

C G Y 18 [ ] — R 2 J C [ ]

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩

Item	Code	Description
① Company code	C	Company code
② Product name	G	Photoelectric sensor
③ Shape of shell	Y	Cylinder-shaped
④ Dimension code	18	18=M18
⑤ Product type	Without	Without =High-end type（Dark grey）
	E	E=Standard type（Rice white）
⑥ Installation form	D	Diffuse-reflective type
	R	Retro-reflective type
	T	Through-bethod type
⑦ Detection distance	2	2=2m
⑧ Output mode	K	AC 2wires
	P	PNP 3wires
	N	NPN 3wires
	J	Relay
⑨ Output state	A	NO
	B	NC
	C	NO+NC
⑩ Connection	Without	Without: Lead wire
	T	Plug-in
	R	Wiring leads Plug-in

Note: Shell nuts can be customized nickel plated brass material, product model plus (-B), example: CGY18-R2JC-B.

CGY Photoelectric Sensor Cylindrical Type

CNTD

Specifications

Diffuse-reflective type

Model	High-end type	CGY12-D05NA CGY12-D05NB CGY12-D05PA CGY12-D05PB	CGY12-D10NA CGY12-D10NB CGY12-D10PA CGY12-D10PB	CGY18-D10NA CGY18-D10NB CGY18-D10NC CGY18-D10PA CGY18-D10PB CGY18-D10PC CGY18-D10KA CGY18-D10KB	CGY18-D30NA CGY18-D30NB CGY18-D30NC CGY18-D30PA CGY18-D30PB CGY18-D30PC CGY18-D30KA CGY18-D30KB	CGY30-D50NA CGY30-D50NB CGY30-D50NC CGY30-D50PA CGY30-D50PB CGY30-D50PC CGY30-D50KA CGY30-D50KB	CGY30-D70NA CGY30-D70NB CGY30-D70NC CGY30-D70PA CGY30-D70PB CGY30-D70PC CGY30-D70KA CGY30-D70KB
	Standard type	CGY12E-D05NA CGY12E-D05NB CGY12E-D05PA CGY12E-D05PB	CGY12E-D10NA CGY12E-D10NB CGY12E-D10PA CGY12E-D10PB	CGY18E-D10NA CGY18E-D10NB CGY18E-D10NC CGY18E-D10PA CGY18E-D10PB CGY18E-D10PC CGY18E-D10KA CGY18E-D10KB	CGY18E-D30NA CGY18E-D30NB CGY18E-D30NC CGY18E-D30PA CGY18E-D30PB CGY18E-D30PC CGY18E-D30KA CGY18E-D30KB	CGY30E-D50NA CGY30E-D50NB CGY30E-D50NC CGY30E-D50PA CGY30E-D50PB CGY30E-D50PC CGY30E-D50KA CGY30E-D50KB	CGY30E-D70NA CGY30E-D70NB CGY30E-D70NC CGY30E-D70PA CGY30E-D70PB CGY30E-D70PC CGY30E-D70KA CGY30E-D70KB
Sensing distance		5cm	10cm (Adjustable)	10cm	30cm (Adjustable)	50cm	70cm (Adjustable)
Hysteresis		3-20%					
Light source		Infrared LED (880nm)					
Consumption current		Max. 25mA					
Power supply (Operating voltage)		10-30VDC / 90-250VAC					
Response time		< 8.2ms					
Residual voltage		DC Max. 1V / AC Max. 10V					
Affection by Temp.		Max. ±10% for sensing distance at ambient temperature 20℃					
Control output		Max. 200mA					
Insulation resistance		Min. 50MΩ(at 500VDC megger)					
Dielectric strength		1500VAC 50/60Hz for 1minute					
Vibration		1mm amplitude at frequency of 10 to 55Hz(for 1 min.) in each of X, Y, Z directions for 2 hours					
Shock		500m/s^2(approx. 50G) X, Y, Z directions for 3 times					
Indicator		Operation indicator(red LED)					
Ambient temperature		-15~+55℃ (No icing)					
Storage temperature		-15~+55℃ (No icing)					
Ambient humidity		35~95%RH (No condensation)					
Protection circuit		Surge protection circuit, Overcurrent protection circuit					
Material		Case/Nut: ABS, Sensing surface: PMMA, Standard cable(Gray): Polyvinyl chloride(PVC), Oil resistant cable(Black): Oil resistant Polyvinyl chloride(PVC)					
Cable	High-end type	ϕ3.8, 3P, 2m (AWG22, Core diameter: 0.1mm, Number of cores: 25, Insulator diameter: ϕ1.25		ϕ4.8, 2P,3P,4P 2m (AWG22, Core diameter: 0.1mm, Number of cores: 30, Insulator diameter: ϕ1.25			
	Standard type	ϕ3.8, 3P, 1.5m (AWG22, Core diameter: 0.1mm, Number of cores: 25, Insulator diameter: ϕ1.25		ϕ4.8, 2P,3P,4P 1.5m (AWG22, Core diameter: 0.1mm, Number of cores: 30, Insulator diameter: ϕ1.25			
Protection		IP65					

CGY Photoelectric Sensor Cylindrical Type

Specifications

Retro-reflective type

Model	High-end type	CGY12-R1NA CGY12-R1NB CGY12-R1PA CGY12-R1PB	CGY18-R2NA CGY18-R2NB CGY18-R2NC CGY18-R2PA CGY18-R2PB CGY18-R2PC CGY18-R2KA CGY18-R2KB	CGY30-R4NA CGY30-R4NB CGY30-R4NC CGY30-R4PA CGY30-R4PB CGY30-R4PC CGY30-R4KA CGY30-R4KB
	Standard type	CGY12E-R1NA CGY12E-R1NB CGY12E-R1PA CGY12E-R1PB	CGY18E-R2NA CGY18E-R2NB CGY18E-R2NC CGY18E-R2PA CGY18E-R2PB CGY18E-R2PC CGY18E-R2KA CGY18E-R2KB	CGY30E-R4NA CGY30E-R4NB CGY30E-R4NC CGY30E-R4PA CGY30E-R4PB CGY30E-R4PC CGY30E-R4KA CGY30E-R4KB
Sensing distance		1m	2m	4m
Hysteresis		3-20%		
Light source		Infrared LED (880nm)		
Consumption current		Max. 25mA		
Power supply (Operating voltage)		10-30VDC / 90-250VAC		
Response time		< 8.2ms		
Reflector		TD02		TD08
Residual voltage		DC Max. 1V / AC Max. 10V		
Affection by Temp.		Max. ±10% for sensing distance at ambient temperature 20℃		
Control output		Max. 200mA		
Insulation resistance		Min. 50MΩ(at 500VDC megger)		
Dielectric strength		1500VAC 50/60Hz for 1minute		
Vibration		1mm amplitude at frequency of 10 to 55Hz(for 1 min.) in each of X, Y, Z directions for 2 hours		
Shock		500m/s^2(approx. 50G) X, Y, Z directions for 3 times		
Indicator		Operation indicator(red LED)		
Ambient temperature		-15~+55℃ (No icing)		
Storage temperature		-15~+55℃ (No icing)		
Ambient humidity		35~95%RH (No condensation)		
Protection circuit		Surge protection circuit, Overcurrent protection circuit		
Material		Case/Nut: ABS, Washer: Plastic, Sensing surface: PMMA, Standard cable(Gray): Polyvinyl chloride(PVC), Oil resistant cable(Black): Oil resistant Polyvinyl chloride(PVC)		
Cable	High-end type	ϕ3.8, 3P, 2m (AWG22, Core diameter: 0.1mm, Number of cores: 25, Insulator diameter: ϕ1.25	ϕ4.8, 2P,3P,4P 2m (AWG22, Core diameter: 0.1mm, Number of cores: 30, Insulator diameter: ϕ1.25	
	Standard type	ϕ3.8, 3P, 1.5m (AWG22, Core diameter: 0.1mm, Number of cores: 25, Insulator diameter: ϕ1.25	ϕ4.8, 2P,3P,4P 1.5m (AWG22, Core diameter: 0.1mm, Number of cores: 30, Insulator diameter: ϕ1.25	
Protection		IP65		

CGY Photoelectric Sensor Cylindrical Type

Specifications

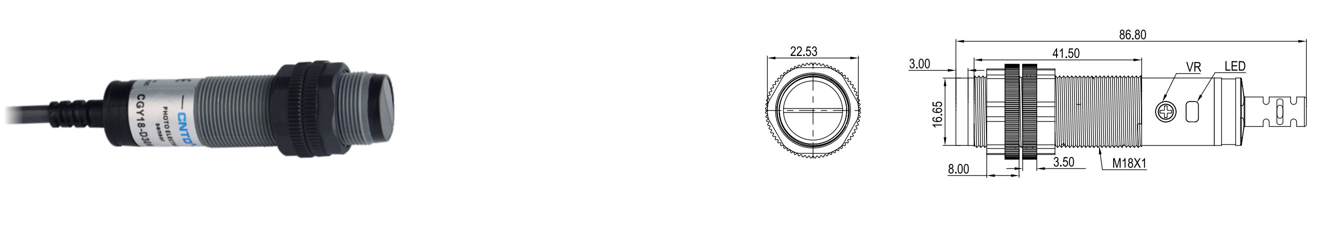
Through-bethod type

Model	High-end type	CGY12-T3NA CGY12-T3NB CGY12-T3PA CGY12-T3PB	CGY18-T5NA CGY18-T5NB CGY18-T5NC CGY18-T5PA CGY18-T5PB CGY18-T5PC CGY18-T5KA CGY18-T5KB	CGY18-T10NA CGY18-T10NB CGY18-T10NC CGY18-T10PA CGY18-T10PB CGY18-T10PC CGY18-T10KA CGY18-T10KB	CGY30-T10NA CGY30-T10NB CGY30-T10NC CGY30-T10PA CGY30-T10PB CGY30-T10PC CGY30-T10KA CGY30-T10KB	CGY30-T15NA CGY30-T15NB CGY30-T15NC CGY30-T15PA CGY30-T15PB CGY30-T15PC CGY30-T15KA CGY30-T15KB
	Standard type	CGY12E-T3NA CGY12E-T3NB CGY12E-T3PA CGY12E-T3PB	CGY18E-T5NA CGY18E-T5NB CGY18E-T5NC CGY18E-T5PA CGY18E-T5PB CGY18E-T5PC CGY18E-T5KA CGY18E-T5KB	CGY18E-T10NA CGY18E-T10NB CGY18E-T10NC CGY18E-T10PA CGY18E-T10PB CGY18E-T10PC CGY18E-T10KA CGY18E-T10KB	CGY30E-T10NA CGY30E-T10NB CGY30E-T10NC CGY30E-T10PA CGY30E-T10PB CGY30E-T10PC CGY30E-T10KA CGY30E-T10KB	CGY30E-T15NA CGY30E-T15NB CGY30E-T15NC CGY30E-T15PA CGY30E-T15PB CGY30E-T15PC CGY30E-T15KA CGY30E-T15KB
Sensing distance		3m	5m	10m	10m	15m
Hysteresis		3-20%				
Light source		Infrared LED (880nm)				
Consumption current		Max. 40mA				
Power supply (Operating voltage)		10-30VDC / 90-250VAC				
Response time		< 8.2ms				
Residual voltage		DC Max. 1V / AC Max. 10V				
Affection by Temp.		Max. ±10% for sensing distance at ambient temperature 20℃				
Control output		Max. 200mA				
Insulation resistance		Min. 50MΩ(at 500VDC megger)				
Dielectric strength		1500VAC 50/60Hz for 1minute				
Vibration		1mm amplitude at frequency of 10 to 55Hz(for 1 min.) in each of X, Y, Z directions for 2 hours				
Shock		500m/s^2(approx. 50G) X, Y, Z directions for 3 times				
Indicator		Operation indicator(red LED)				
Ambient temperature		-15~+55℃ (No icing)				
Storage temperature		-15~+55℃ (No icing)				
Ambient humidity		35~95%RH (No condensation)				
Protection circuit		Surge protection circuit, Overcurrent protection circuit				
Material		Case/Nut: ABS, Sensing surface: PMMA, Standard cable(Gray): Polyvinyl chloride(PVC), Oil resistant cable(Black): Oil resistant Polyvinyl chloride(PVC)				
Cable	High-end type	ϕ3.8, 3P, 2m (AWG22, Core diameter: 0.1mm, Number of cores: 25, Insulator diameter: ϕ1.25	ϕ4.8, 2P,3P,4P 2m (AWG22, Core diameter: 0.1mm, Number of cores: 30, Insulator diameter: ϕ1.25			
	Standard type	ϕ3.8, 3P, 1.5m (AWG22, Core diameter: 0.1mm, Number of cores: 25, Insulator diameter: ϕ1.25	ϕ4.8, 2P,3P,4P 1.5m (AWG22, Core diameter: 0.1mm, Number of cores: 30, Insulator diameter: ϕ1.25			
Protection		IP65				

CGY Photoelectric Sensor Cylindrical Type (High-end type)

Appearance and Dimension

CGY18-D



CGY18-R

CGY18-T

CGY30-D

CGY30-R

CGY30-T

CGY Photoelectric Sensor Cylindrical Type (Standard type)

CNTD

Appearance and Dimension

CGY18E-D

CGY18E-R

CGY18E-T

CGY30E-D

CGY30E-R

CGY30E-T

CGF Photoelectric Sensor Square Type

Features

■ Black mark for standard type
■ Dark grey mark for high-end type

■ Exclusively designed IC for improving anti-jamming capability
■ ■ Inside surge protection, reverse polarity protection
■ ■ Long use-life cycle and high reliability, easy install, enconomic price
■ ■ Red LED status indication, easy to confirm work situation
■ ■ Protection structure IP65(IEC standard)


■ Black


■ Dark grey

Model Number Structure

C G F 50 □ — R 4 J C □

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩

Item	Code	Description
① Company code	C	Company code
② Product name	G	Photoelectric sensor
③ Shape of shell	F	Square
④ Dimension code	50	50=Square 50
⑤ Product type	Without	Without =High-end type（Dark grey shell）
	E	E=Standard type（Black shell）
⑥ Installation form	D	Diffuse-reflective type
	R	Retro-reflective type
	T	Through-bethod type
⑦ Detection distance	4	4=4m
⑧ Output mode	K	AC 2wires
	P	PNP 3wires
	N	NPN 3wires
	J	Relay
⑨ Output state	A	NO
	B	NC
	C	NO+NC
⑩ Connection	Without	Without: Lead wire
	T	Plug-in
	R	Wiring leads Plug-in

CGF Photoelectric Sensor Square Type

CNTD

Specifications

Diffuse-reflective type

Model	High-end type		CGF50-D30JC	CGF70-D50JC
	Standard type		CGF50E-D30JC	CGF70E-D50JC
Sensing distance			30cm(adjustable)	50cm(adjustable)
Hysteresis	3-20%			
Light source	Infrared LED (880nm)			
Consumption current	Max. 25mA			
Power supply (Operating voltage)	24-250VDC/AC(High-end type) 10-30VDC / 90-250VAC(Standard type)			
Response time	< 8.2ms			
Residual voltage	Max. 1V			
Affection by Temp.	Max. ±10% for sensing distance at ambient temperature 20℃			
Control output	3A			
Insulation resistance	Min. 50MΩ(at 500VDC megger)			
Dielectric strength	1500VAC 50/60Hz for 1minute			
Vibration	1mm amplitude at frequency of 10 to 55Hz(for 1 min.) in each of X, Y, Z directions for 2 hours			
Shock	500m/s^2(approx. 50G) X, Y, Z directions for 3 times			
Indicator	Operation indicator(red LED)			
Ambient temperature	-15~+55℃ (No icing)			
Storage temperature	-15~+55℃ (No icing)			
Ambient humidity	35~95%RH (No condensation)			
Protection circuit	Surge protection circuit			
Material	Case: ABS, Sensing surface: PMMA, Standard cable(Gray): Polyvinyl chloride(PVC), Oil resistant cable(Black): Oil resistant Polyvinyl chloride(PVC)			
Cable	High-end type	ϕ3.8, 3P,4P 2m	ϕ6, 5P, 2m	/
		(AWG22, Core diameter: 0.1mm, Number of cores:25, Insulator diameter: ϕ1.25)	(AWG22, Core diameter: 0.1mm, Number of cores: 22, Insulator diameter: ϕ1.25)	/
	Standard type	ϕ3.8, 3P,4P 1.5m	ϕ6, 5P, 1.5m	/
		(AWG22, Core diameter: 0.1mm, Number of cores:25, Insulator diameter: ϕ1.25)	(AWG22, Core diameter: 0.1mm, Number of cores: 22, Insulator diameter: ϕ1.25)	/
Protection	IP65			

CGF Photoelectric Sensor Square Type

Specifications

Diffuse-reflective type

Model	High-end type	CGF30-D30NA CGF30-D30NB CGF30-D30NC CGF30-D30PA CGF30-D30PB CGF30-D30PC	CGF50-D30NA CGF50-D30NB CGF50-D30NC CGF50-D30PA CGF50-D30PB CGF50-D30PC	CGF70-D50NA CGF70-D50NB CGF70-D50NC CGF70-D50PA CGF70-D50PB CGF70-D50PC
	Standard type	CGF30E-D30NA CGF30E-D30NB CGF30E-D30NC CGF30E-D30PA CGF30E-D30PB CGF30E-D30PC	CGF50E-D30NA CGF50E-D30NB CGF50E-D30NC CGF50E-D30PA CGF50E-D30PB CGF50E-D30PC	CGF70E-D50NA CGF70E-D50NB CGF70E-D50NC CGF70E-D50PA CGF70E-D50PB CGF70E-D50PC
Sensing distance		30cm(Adjustable)		50cm(Adjustable)
Hysteresis		3-20%		
Light source		Infrared LED (880nm)		
Consumption current		Max. 25mA		
Power supply (Operating voltage)		10-30VDC		
Response time		< 8.2ms		
Residual voltage		Max.1V		
Affection by Temp.		Max. ±10% for sensing distance at ambient temperature 20℃		
Control output		Max. 200mA		
Insulation resistance		Min. 50MΩ(at 500VDC megger)		
Dielectric strength		1500VAC 50/60Hz for 1minute		
Vibration		1mm amplitude at frequency of 10 to 55Hz(for 1 min.) in each of X, Y, Z directions for 2 hours		
Shock		500m/s²(approx. 50G) X, Y, Z directions for 3 times		
Indicator		Operation indicator(red LED)		
Ambient temperature		-15~+55℃ (No icing)		
Storage temperature		-15~+55℃ (No icing)		
Ambient humidity		35~95%RH (No condensation)		
Protection circuit		Surge protection circuit, Overcurrent protection circuit		
Material		Case: ABS, Sensing surface: PMMA, Standard cable(Gray): Polyvinyl chloride(PVC), Oil resistant cable(Black): Oil resistant Polyvinyl chloride(PVC)		
Cable	High-end type	ϕ3.8, 3P,4P 2m	ϕ6, 3P,4P, 2m	/
		(AWG22, Core diameter: 0.1mm, Number of cores:25, Insulator diameter: ϕ1.25)	(AWG22, Core diameter: 0.1mm, Number of cores: 22, Insulator diameter: ϕ1.25	/
	Standard type	ϕ3.8, 3P,4P 1.5m	ϕ6, 3P,4P, 1.5m	/
		(AWG22, Core diameter: 0.1mm, Number of cores:25, Insulator diameter: ϕ1.25)	(AWG22, Core diameter: 0.1mm, Number of cores: 22, Insulator diameter: ϕ1.25	/
Protection		IP65		

CGF Photoelectric Sensor Square Type

Specifications

Retro-reflective type

Model	High-end type		CGF50-R4JC	CGF70-R5JC
	Standard type		CGF50E-R4JC	CGF70E-R5JC
Sensing distance			4m	5m
Hysteresis		3-20%		
Light source		Infrared LED (880nm)		
Consumption current		Max. 25mA		
Power supply (Operating voltage)		24-250VDC/AC(High-end type) 10-30VDC / 90-250VAC(Standard type)		
Response time		< 8.2ms		
Reflector		TD08		
Residual voltage		Max. 1V		
Affection by Temp.		Max. ±10% for sensing distance at ambient temperature 20℃		
Control output		3A		
Insulation resistance		Min. 50MΩ(at 500VDC megger)		
Dielectric strength		1500VAC 50/60Hz for 1minute		
Vibration		1mm amplitude at frequency of 10 to 55Hz(for 1 min.) in each of X, Y, Z directions for 2 hours		
Shock		500m/s²(approx. 50G) X, Y, Z directions for 3 times		
Indicator		Operation indicator(red LED)		
Ambient temperature		-15~+55℃ (No icing)		
Storage temperature		-15~+55℃ (No icing)		
Ambient humidity		35~95%RH (No condensation)		
Protection circuit		Surge protection circuit,		
Material		Case: ABS, Sensing surface: PMMA, Standard cable(Gray): Polyvinyl chloride(PVC), Oil resistant cable(Black): Oil resistant Polyvinyl chloride(PVC)		
Cable	High-end type	ϕ3.8, 3P,4P 2m	ϕ6, 5P, 2m	/
		(AWG22, Core diameter: 0.1mm, Number of cores:25, Insulator diameter: ϕ1.25)	(AWG22, Core diameter: 0.1mm, Number of cores: 22, Insulator diameter: ϕ1.25	/
	Standard type	ϕ3.8, 3P,4P 1.5m	ϕ6, 5P, 1.5m	/
		(AWG22, Core diameter: 0.1mm, Number of cores:25, Insulator diameter: ϕ1.25)	(AWG22, Core diameter: 0.1mm, Number of cores: 22, Insulator diameter: ϕ1.25	/
Protection		IP65		

CGF Photoelectric Sensor Square Type

Specifications

Retro-reflective type

Model	High-end type	CGF30-R1NA CGF30-R1NB CGF30-R1NC CGF30-R1PA CGF30-R1PB CGF30-R1PC	CGF50-R4NA CGF50-R4NB CGF50-R4NC CGF50-R4PA CGF50-R4PB CGF50-R4PC	CGF70-R5NA CGF70-R5NB CGF70-R5NC CGF70-R5PA CGF70-R5PB CGF70-R5PC
	Standard type	CGF30E-R1NA CGF30E-R1NB CGF30E-R1NC CGF30E-R1PA CGF30E-R1PB CGF30E-R1PC	CGF50E-R4NA CGF50E-R4NB CGF50E-R4NC CGF50E-R4PA CGF50E-R4PB CGF50E-R4PC	CGF70E-R5NA CGF70E-R5NB CGF70E-R5NC CGF70E-R5PA CGF70E-R5PB CGF70E-R5PC
Sensing distance		1m	4m	5m
Hysteresis		3-20%		
Light source		Infrared LED (880nm)		
Consumption current		Max. 25mA		
Power supply (Operating voltage)		10-30VDC		
Response time		< 8.2ms		
Reflector	High-end type	TD08		
	Standard type	TD09		TD05
Residual voltage		Max. 1V		
Affection by Temp.		Max. ±10% for sensing distance at ambient temperature 20℃		
Control output		Max. 200mA		
Insulation resistance		Min. 50MΩ(at 500VDC megger)		
Dielectric strength		1500VAC 50/60Hz for 1minute		
Vibration		1mm amplitude at frequency of 10 to 55Hz(for 1 min.) in each of X, Y, Z directions for 2 hours		
Shock		$500m/s^2$(approx. 50G) X, Y, Z directions for 3 times		
Indicator		Operation indicator(red LED)		
Ambient temperature		-15~+55℃ (No icing)		
Storage temperature		-15~+55℃ (No icing)		
Ambient humidity		35~95%RH (No condensation)		
Protection circuit		Surge protection circuit, Overcurrent protection circuit		
Material		Case: ABS, Sensing surface: PMMA, Standard cable(Gray): Polyvinyl chloride(PVC), Oil resistant cable(Black): Oil resistant Polyvinyl chloride(PVC)		
Cable	High-end type	ϕ3.8, 3P,4P 2m	ϕ6, 3P,4P, 2m	/
		(AWG22, Core diameter: 0.1mm, Number of cores:25, Insulator diameter: ϕ1.25)	(AWG22, Core diameter: 0.1mm, Number of cores: 22, Insulator diameter: ϕ1.25	/
	Standard type	ϕ3.8, 3P,4P 1.5m	ϕ6, 3P,4P, 1.5m	/
		(AWG22, Core diameter: 0.1mm, Number of cores:25, Insulator diameter: ϕ1.25)	(AWG22, Core diameter: 0.1mm, Number of cores: 22, Insulator diameter: ϕ1.25	/
Protection		IP65		

CGF Photoelectric Sensor Square Type

CNTD

Specifications

Through-bethod type

Model	High-end type		CGF50-T10JC	CGF70-T15JC
	Standard type		CGF50E-T10JC	CGF70E-T15JC
Sensing distance			10m	15m
Hysteresis		3-20%		
Light source		Infrared LED (880nm)		
Consumption current		Max. 50mA		
Power supply (Operating voltage)		24-250VDC/AC(High-end type) 10-30VDC / 90-250VAC(Standard type)		
Response time		< 8.2ms		
Residual voltage		Max. 1V		
Affection by Temp.		Max. ±10% for sensing distance at ambient temperature 20℃		
Control output		3A		
Insulation resistance		Min. 50MΩ(at 500VDC megger)		
Dielectric strength		1500VAC 50/60Hz for 1minute		
Vibration		1mm amplitude at frequency of 10 to 55Hz(for 1 min.) in each of X, Y, Z directions for 2 hours		
Shock		$500m/s^2$(approx. 50G) X, Y, Z directions for 3 times		
Indicator		Operation indicator(red LED)		
Ambient temperature		-15~+55℃ (No icing)		
Storage temperature		-15~+55℃ (No icing)		
Ambient humidity		35~95%RH (No condensation)		
Protection circuit		Surge protection circuit		
Material		Case: ABS, Sensing surface: PMMA, Standard cable(Gray): Polyvinyl chloride(PVC), Oil resistant cable(Black): Oil resistant Polyvinyl chloride(PVC)		
Cable	High-end type	ϕ3.8, 3P,4P 2m	ϕ6, 5P, 2m	/
		(AWG22, Core diameter: 0.1mm, Number of cores:25, Insulator diameter: ϕ1.25)	(AWG22, Core diameter: 0.1mm, Number of cores: 22, Insulator diameter: ϕ1.25	/
	Standard type	ϕ3.8, 3P,4P 1.5m	ϕ6, 5P, 1.5m	/
		(AWG22, Core diameter: 0.1mm, Number of cores:25, Insulator diameter: ϕ1.25)	(AWG22, Core diameter: 0.1mm, Number of cores: 22, Insulator diameter: ϕ1.25	/
Protection		IP65		

CGF Photoelectric Sensor Square Type

Specifications

Through-bethod type

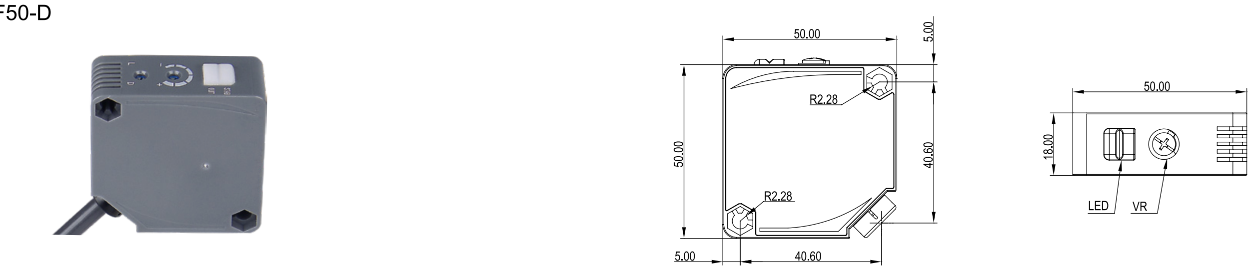
Model	High-end type	CGF30-T5NA CGF30-T5NB CGF30-T5NC CGF30-T5PA CGF30-T5PB CGF30-T5PC	CGF50-T10NA CGF50-T10NB CGF50-T10NC CGF50-T10PA CGF50-T10PB CGF50-T10PC	CGF70-T15NA CGF70-T15NB CGF70-T15NC CGF70-T15PA CGF70-T15PB CGF70-T15PC
	Standard type	CGF30E-T5NA CGF30E-T5NB CGF30E-T5NC CGF30E-T5PA CGF30E-T5PB CGF30E-T5PC	CGF50E-T10NA CGF50E-T10NB CGF50E-T10NC CGF50E-T10PA CGF50E-T10PB CGF50E-T10PC	CGF70E-T15NA CGF70E-T15NB CGF70E-T15NC CGF70E-T15PA CGF70E-T15PB CGF70E-T15PC
Sensing distance		5m	10m	15m
Hysteresis		3-20%		
Light source		Infrared LED (880nm)		
Consumption current		Max. 40mA		
Power supply (Operating voltage)		10-30VDC		
Response time		< 8.2ms		
Residual voltage		Max. 1V		
Affection by Temp.		Max. ±10% for sensing distance at ambient temperature 20℃		
Control output		Max. 200mA		
Insulation resistance		Min. 50MΩ(at 500VDC megger)		
Dielectric strength		1500VAC 50/60Hz for 1minute		
Vibration		1mm amplitude at frequency of 10 to 55Hz(for 1 min.) in each of X, Y, Z directions for 2 hours		
Shock		500m/s^2(approx. 50G) X, Y, Z directions for 3 times		
Indicator		Operation indicator(red LED)		
Ambient temperature		-15~+55℃ (No icing)		
Storage temperature		-15~+55℃ (No icing)		
Ambient humidity		35~95%RH (No condensation)		
Protection circuit		Surge protection circuit, Overcurrent protection circuit		
Material		Case: ABS, Sensing surface: PMMA, Standard cable(Gray): Polyvinyl chloride(PVC), Oil resistant cable(Black): Oil resistant Polyvinyl chloride(PVC)		
Cable	High-end type	ϕ3.8, 3P,4P 2m	ϕ6, 2P,3P,4P, 2m	/
		(AWG22, Core diameter: 0.1mm, Number of cores:25, Insulator diameter: ϕ1.25)	(AWG22, Core diameter: 0.1mm, Number of cores:22, Insulator diameter: ϕ1.25	/
	Standard type	ϕ3.8, 3P,4P 1.5m	ϕ6, 2P,3P,4P, 1.5m	/
		(AWG22, Core diameter: 0.1mm, Number of cores:25, Insulator diameter: ϕ1.25)	(AWG22, Core diameter: 0.1mm, Number of cores:22, Insulator diameter: ϕ1.25	/
Protection		IP65		

CGF Photoelectric Sensor Square Type (High-end type)

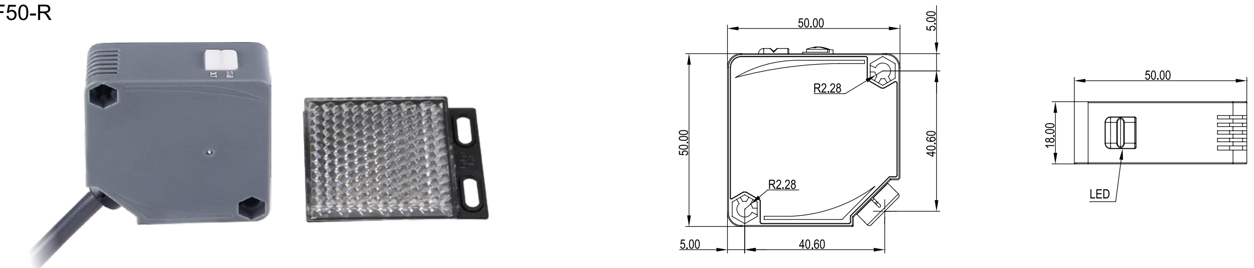
CNTD

Appearance and Dimension

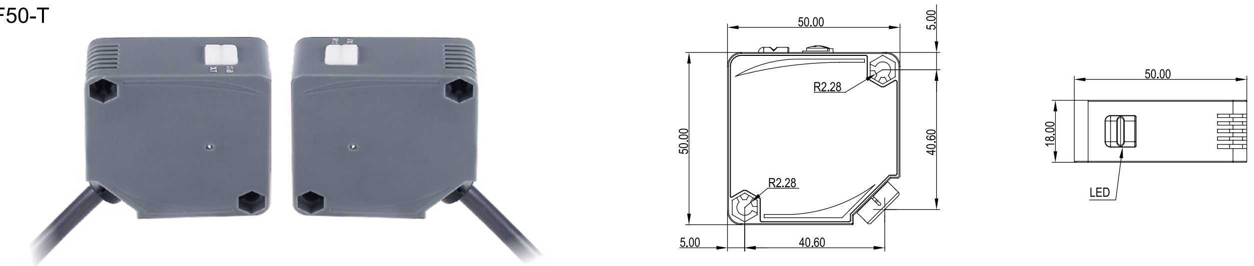
CGF50-D



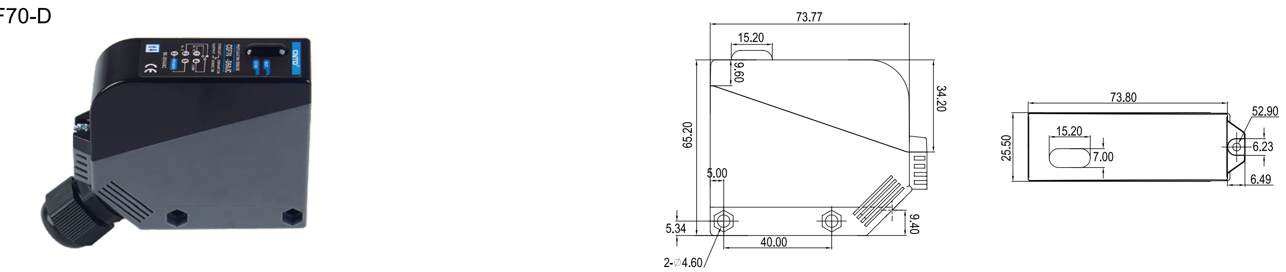
CGF50-R



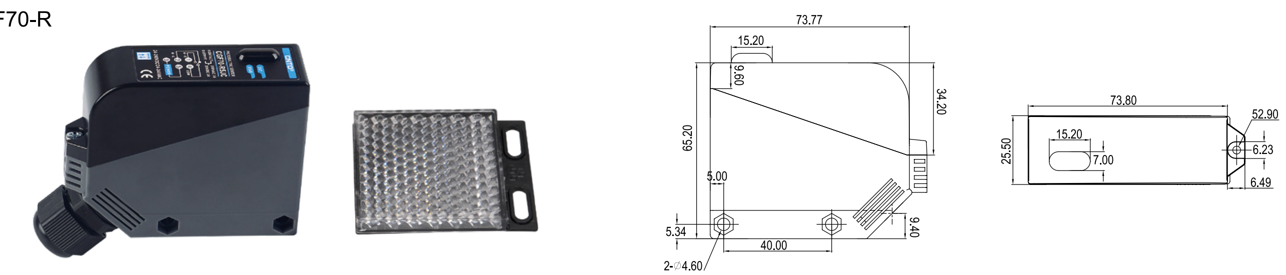
CGF50-T



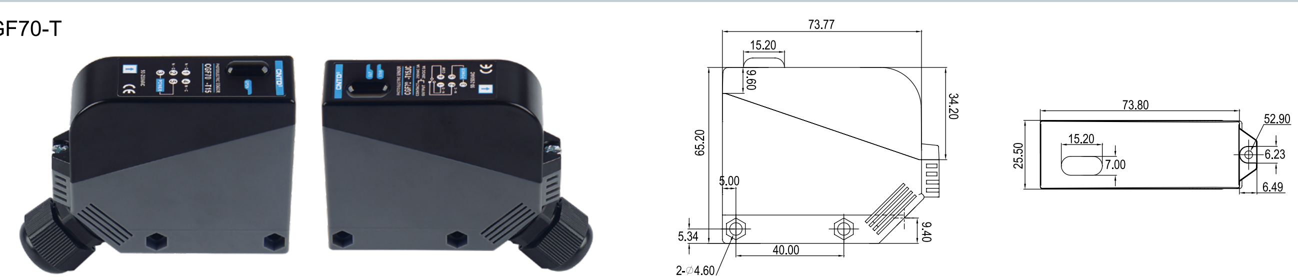
CGF70-D



CGF70-R



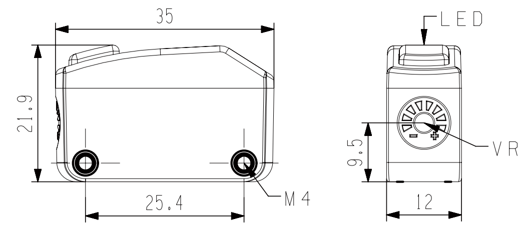
CGF70-T



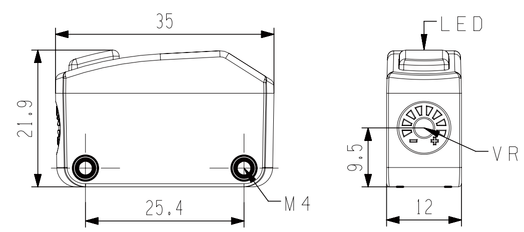
CGF Photoelectric Sensor Square Type (Standard type)

Appearance and Dimension

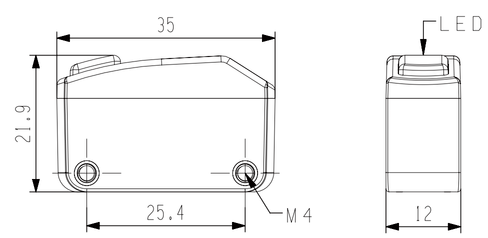
CGF30E-D



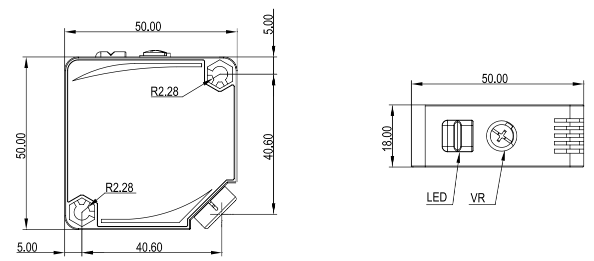
CGF30E-R



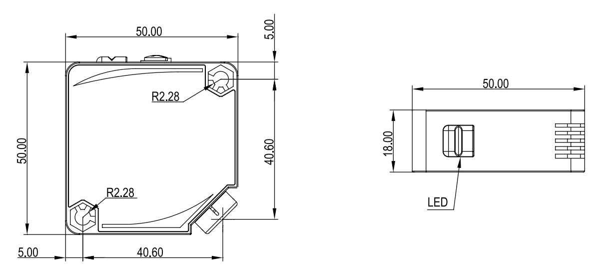
CGF30E-T



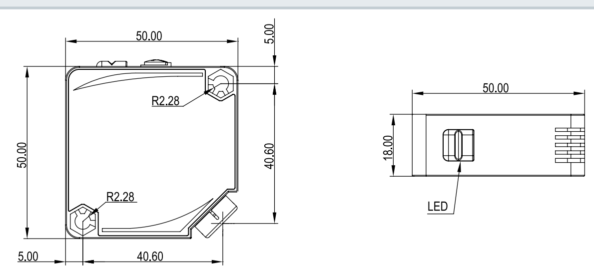
CGF50E-D



CGF50E-R



CGF50E-T

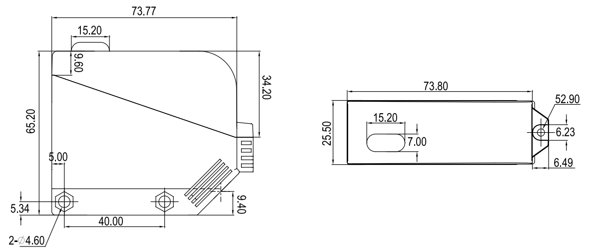


CGF Photoelectric Sensor Square Type (Standard type)

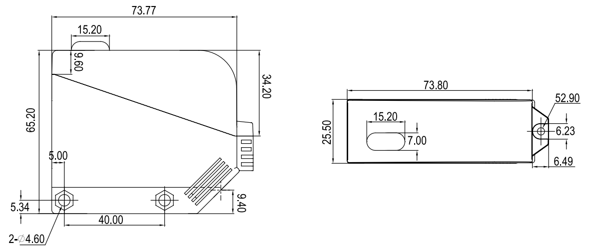
CNTD

Appearance and Dimension

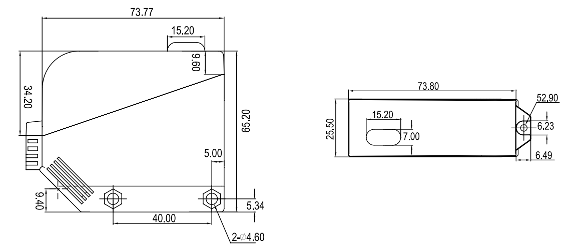
CGF70E-D



CGF70E-R



CGF70E-T



CGU Photoelectric Sensor U Type

Features

- Black mark for standard type
- Dark grey mark for high-end type

- Exclusively designed IC for improving anti-jamming capability
- Inside surge protection, reverse polarity protection
- Long use-life cycle and high reliability, easy install, enconomic price
- Red LED status indication, easy to confirm work situation
- Protection structure IP65(IEC standard)

■ Black

■ Dark grey

Model Number Structure

C | G | U | 07 | □ — 07 | N | A | □

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

Item	Code	Description
① Company code	C	Company code
② Product name	G	Photoelectric sensor
③ Shape of shell	U	U type
④ Dimension code	07	7mm Groove width 7mm
⑤ Product type	Without	Without =High-end type（Dark grey shell）
	E	E = Standard type（Black shell）
⑥ Detection distance	07	7=7mm
⑦ Output mode	K	AC 2wires
	P	PNP 3wires
	N	NPN 3wires
	J	Relay
⑧ Output state	A	NO
	B	NC
	C	NO+NC
⑨ Connection	Without	Without: Lead wire
	T	Plug-in
	R	Wiring leads Plug-in

CGU Photoelectric Sensor U Type

CNTD

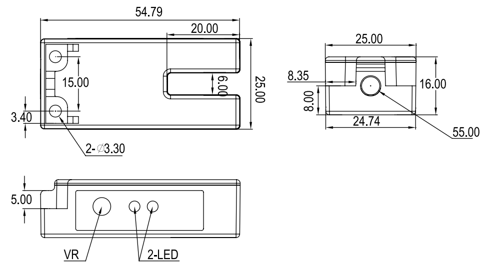
Specifications

Model	High-end type	CGU07-07NA CGU07-07NB CGU07-07NC CGU07-07PA CGU07-07PB CGU07-07PC	CGU10-10NA CGU10-10NB CGU10-10PA CGU10-10PB	CGU30-30NA CGU30-30NB CGU30-30NC CGU30-30PA CGU30-30PB CGU30-30PC	CGU50-50NA CGU50-50NB CGU50-50NC CGU50-50PA CGU50-50PB CGU50-50PC
	Standard type	CGU07E-07NA CGU07E-07NB CGU07E-07NC CGU07E-07PA CGU07E-07PB CGU07E-07PC	CGU10E-10NA CGU10E-10NB CGU10E-10PA CGU10E-10PB	CGU30E-30NA CGU30E-30NB CGU30E-30NC CGU30E-30PA CGU30E-30PB CGU30E-30PC	CGU50E-50NA CGU50E-50NB CGU50E-50NC CGU50E-50PA CGU50E-50PB CGU50E-50PC
Sensing distance		7mm	10mm	30mm	50mm
Light source		Infrared LED (Modulation)			
Consumption current		Max. 15mA			
Power supply (Operating voltage)		10-30VDC			
Response time		< 1ms			
Residual voltage		Max. 1V			
Affection by Temp.		Max. ±10% for sensing distance at ambient temperature 20℃			
Control output		Max. 200mA			
Insulation resistance		Min. 50MΩ(at 500VDC megger)			
Dielectric strength		1500VAC 50/60Hz for 1minute			
Vibration		1mm amplitude at frequency of 10 to 55Hz(for 1 min.) in each of X, Y, Z directions for 2 hours			
Shock		500m/s^2(approx. 50G) X, Y, Z directions for 3 times			
Indicator		Operation indicator(red LED)			
Ambient temperature		-15~+55℃ (No icing)			
Storage temperature		-15~+55℃ (No icing)			
Ambient humidity		35~95%RH (No condensation)			
Protection circuit		Surge protection circuit, Overcurrent protection circuit			
Material		Case: ABS, Sensing surface: PMMA, Standard cable(Gray): Polyvinyl chloride(PVC), Oil resistant cable(Black): Oil resistant Polyvinyl chloride(PVC)			
Cable	High-end type	ϕ4.8, 3P,4P 2m (AWG22, Core diameter: 0.1mm, Number of cores:30, Insulator diameter: ϕ1.25	ϕ3.8, 3P, 2m (AWG22, Core diameter: 0.1mm, Number of cores:25, Insulator diameter: ϕ1.25	ϕ4.8, 3P,4P 2m (AWG22, Core diameter: 0.1mm, Number of cores:30, Insulator diameter: ϕ1.25	
	Standard type	ϕ4.8, 3P,4P 1.5m (AWG22, Core diameter: 0.1mm, Number of cores:30, Insulator diameter: ϕ1.25	ϕ3.8, 3P, 1.5m (AWG22, Core diameter: 0.1mm, Number of cores:25, Insulator diameter: ϕ1.25	ϕ4.8, 3P,4P 1.5m (AWG22, Core diameter: 0.1mm, Number of cores:30, Insulator diameter: ϕ1.25	
Protection		IP65			

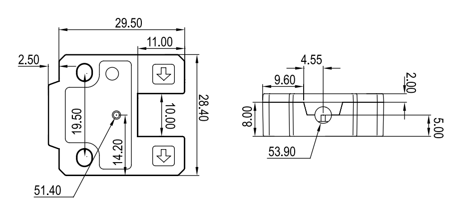
CGU Photoelectric Sensor U Type (High-end type)

Appearance and Dimension

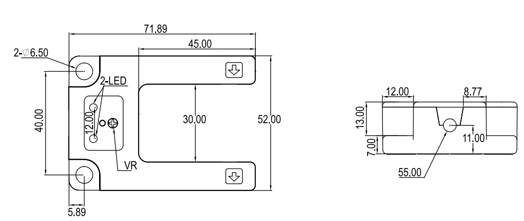
CGU07-07



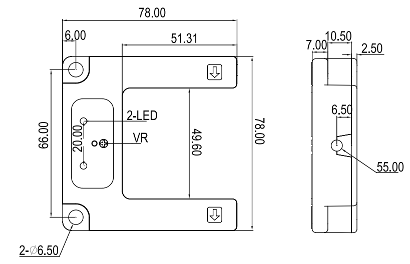
CGU10-10



CGU30-30



CGU50-50

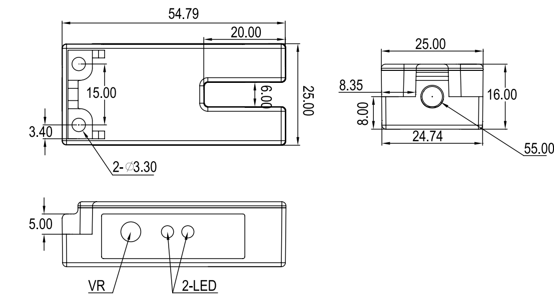


CGU Photoelectric Sensor U Type (Standard type)

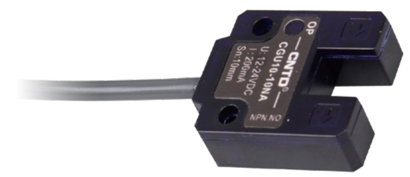
CNTD

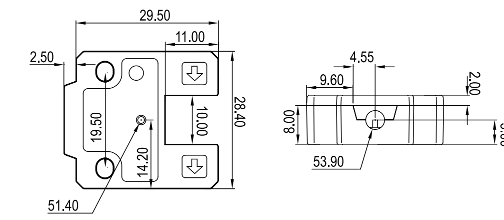
Appearance and Dimension

CGU07E-07

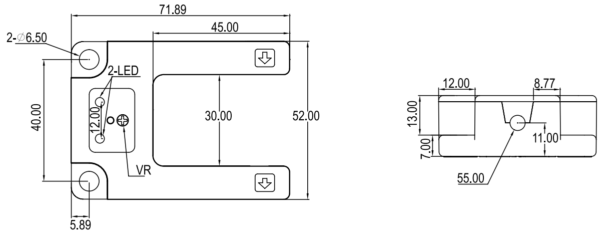


CGU10E-10

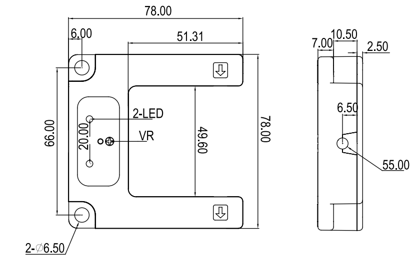




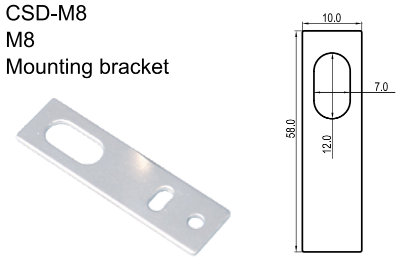
CGU30E-30



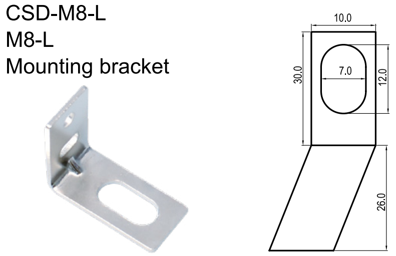
CGU50E-50



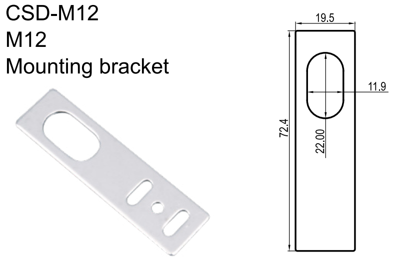
CSD-M8
M8
Mounting bracket



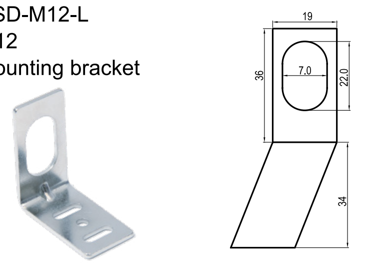
CSD-M8-L
M8-L
Mounting bracket



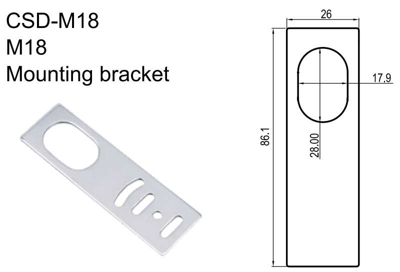
CSD-M12
M12
Mounting bracket



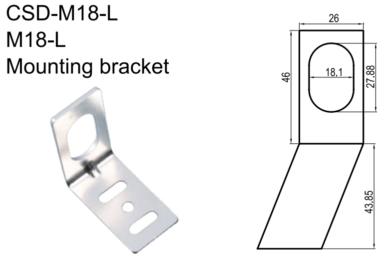
CSD-M12-L
M12
Mounting bracket



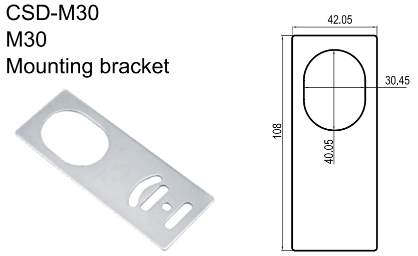
CSD-M18
M18
Mounting bracket



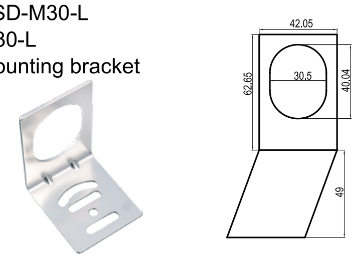
CSD-M18-L
M18-L
Mounting bracket



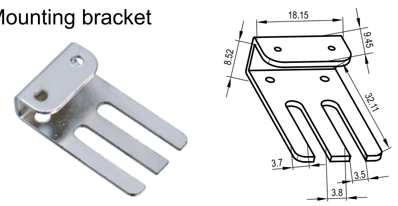
CSD-M30
M30
Mounting bracket



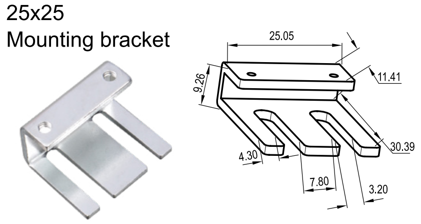
CSD-M30-L
M30-L
Mounting bracket



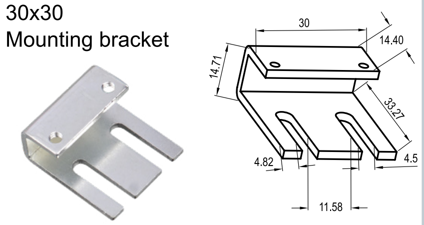
CSD-F18
18x18
Mounting bracket



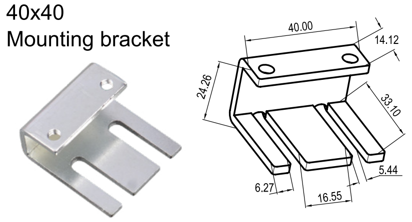
CSD-F25
25x25
Mounting bracket



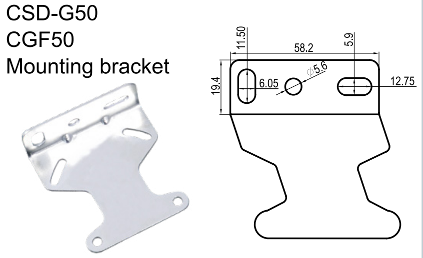
CSD-F30
30x30
Mounting bracket



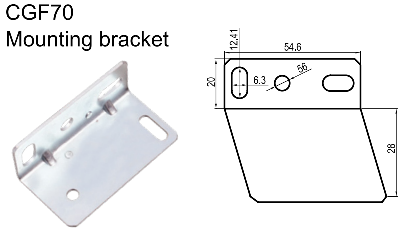
CSD-F40
40x40
Mounting bracket



CSD-G50
CGF50
Mounting bracket



CSD-G70
CGF70
Mounting bracket



TDE08
TD08
Mirror

TDE02
TD02
Mirror

CSD-PS1202/1203/1204
M12
Plug

CSD-PC1202/1203/1204
M12-L
Plug

Memo