

TECHNICAL DATA SHEET

Capacitive Proximity Switches Proximity Sensors **Ring Shape Series**

Contents

- Functional Description
- Application Scenarios
- Technical Parameters
- Size Parameters
- Wiring Diagram



Proximity sensors: solutions for multiple scenarios

Proximity sensors are widely used in many fields due to their non-contact detection, high accuracy and fast response.

Inductive series for oil-resistant and corrosion-resistant machine tool industry

Many times we are faced with harsh operating environments, compact installation spaces, and conditions with both movement and corrosion during use, such as the machine tool manufacturing industry, which has such diverse needs – the number of materials, processes and molds involved is huge and varied. During the production process, cutting fluids and abrasives are required to process workpieces, so various sensor solutions that are not affected by harsh environmental conditions are required. dadisick's product series, which uses different manufacturing processes, can even provide fully suitable sensor solutions for high-speed applications or applications involving corrosive coolants and lubricants.



All-metal integrated housing anti-washing series



Due to the stainless steel integrated housing, this series of sensors not only has good impact resistance, but also can withstand the corrosion of detergents and solvents. It can be used in environments that require frequent high-pressure washing, and can achieve long-term sealing that meets the IP69K protection level. At the same time, it is compatible with the installation method of conventional sensors, which can be replaced and replaced conveniently and practically. It includes a variety of models with a diameter of 8mm...30mm, all with direct cable output and M12 standard connector. Operating distance 2...8mm.

Low-temperature -40°C inductive series for wind power generation

Wind power generation has become one of the world's recognized main clean energy generation methods because it does not require the use of fuel and does not produce radiation or air pollution. Different sensors are used in the operation of the variable pitch yaw generator reducer of the wind turbine to detect the correction of the control movement and rotation process. Most of the installation locations of wind turbines are in places with severe temperature changes such as mountains, oceans and plateaus, which require higher temperature environments for sensors. Our low-temperature -40°C product series launched for this use environment is perfectly adapted to the application here.



Solutions for high-temperature series long-distance products in steelmaking and rolling



Steelmaking and rolling equipment produces complex oil, gas and water erosion and flushing sensors for various raw materials under high temperature of oil and gas in a high-temperature 2000° radiation environment, which puts higher requirements on the stability of sensors. In the position control detection of multiple processes of steel billets, coils and wires, DADISICK has a variety of series of products with high temperature resistance of 250°C, DC two-wire, AC 250V, etc., which are widely used in this complex environment to ensure normal production.

Anti-welding slag adhesion, high temperature resistance and anti-interference series

Whether it is stamping, welding, painting, or assembly processes in automobile manufacturing, long distance, anti-welding slag adhesion, strong current magnetic field interference, or high temperature environment, DADISICK sensors can be used for fixtures, molds and other equipment. Reliable performance and perfect solutions bring a smooth production process to automobile manufacturing. In the welding of various high-current welding machines, the strong magnetic field interference generated by the current and the high-temperature heat conduction generated by the arc will affect the sensors in the fixture molds. Reliable performance products must be selected to ensure normal operation.



All-metal integrated housing anti-washing series

A large number of intelligent warehousing and logistics facilities, such as AGV trolleys and rail-to-rail stackers, are equipped with our sensors to realize the control of rotating positioning and lifting devices, etc., providing very stable and durable high-reliability products. Under the high requirements of small installation space and long detection distance, this series of products is the best choice for customers with strict cost control. Choosing this series of products is the best choice for customers with strict cost control.



High-pressure 1000Bar hydraulic cylinder series

The stable and reliable hydraulic cylinder telescopic more often uses DADISICK's inductive proximity sensors with a high pressure resistance of up to 1000Bar to achieve the control of the origin. Ceramic chips are used as high-voltage products at the induction level and stainless steel integrated housings are used to achieve high-pressure resistant applications. DC10-30V two-wire and three-wire products are also provided.



Analog output series for position correction and control devices



In detecting the offset position of the controlled parts of the fixture, analog output proximity sensors are often used in wire reel correction, and the size of the offset is controlled by the size of the detection distance. This use can be installed and tested in a very small position space. We have successfully provided stable and accurate products for many parts manufacturers and wire rope winding equipment, including 0-10V voltage output and 4-20mA current output and current + voltage output products. The detectable distance can be adjusted between 0-50mm.

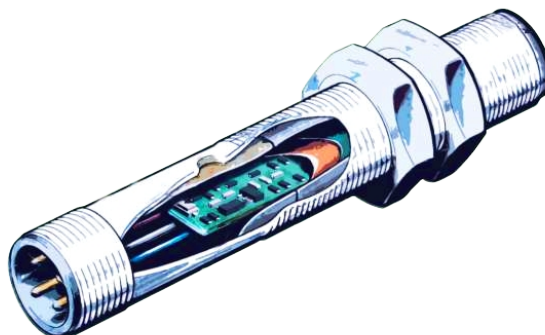
Shoemaking, textile and papermaking machinery series products

Whichever manufacturer of shoemaking machines, textile machines and papermaking machines has long equipped the mechanical equipment they produce with more automated operation technologies, these control technologies are also equipped with high-quality sensors to achieve their control conditions. They require products with higher switching frequency accuracy and better stability, and they need a variety of products with unconventional dimensions. We tailor new outer shell dimensions for them one by one to meet their needs.



Proximity Sensor Model Specifications

C	I	0	5	-	2	0	N	O	-	Z	B	A	-	3	A	-	P		(CI05-20NO-ZBA-3A-P)
																			Special Instructions
																			Shell material: H: nickel-plated brass; S: stainless steel; L: aluminum alloy; P: PBT; T: Teflon; F: PTFE; M: POM;
																			Short circuit protection: A: Standard type with short circuit protection M: Short type with short circuit protection S: Standard type without short circuit protection R: Ultra short type with short circuit protection
																			Wiring method: 2: 2-wire 5: 5-wire type 2E: 2 wire+M8 connector 2T: 2 wire+M12 connector 3: 3-wire E: M8 connector 3E: 3 wire+M8 connector 3T: 3 wire+M12 connector 4: 4-wire T: M12 connector 4E: 4 wire+M8 connector 4T: 4 wire+M12 connector
																			Voltage: A:DC10-30V B:DC5-36V C:DC10-55V D:DC10-60V E:DC18-30V F:DC6-12V G:AC20-250V H:AC/DC20-250V
																			Installation method: A: Shielded B: Non-shielded
																			Connection method: Y: Plug-in type Z: Cable type
																			Output mode: NC: NPN NC; NO: NPN NO PC: PNP NC; PO: PNP NO NS: NPN NO&NC; PS: PNP NO&NC HC: DC NC; HO: DC NO AC: AC NC; AO: AC NO HS: DC NO&NC; AS: AC NO&NC I: analog current; U: analog voltage TC: AC&DC NC; TO: AC&DC NO TS: AC/DC NO&NC; V: Current + voltage output NA: Explosion-proof type
																			Detection distance: 1mm-50mm
																			Specification(mm): $\phi 3$, $\phi 4$, M4, M5, $\phi 6.5$, M8, M12, M18, M30
																			Type: R: Standard type; X: Ultra-small; B: Explosion-proof type; J: All-metal type; P: High-pressure resistant type; G: High-temperature resistant; Z: Low-temperature resistant type; C: Limit switch type; D: Anti-welding slag and high-magnetic type; F: Corrosion-resistant type; A: Analog type; I: Ring type; E: Square type
																			Series: L: Inductive sensor C: Capacitive sensor



Ring Shape Series

Proximity sensors

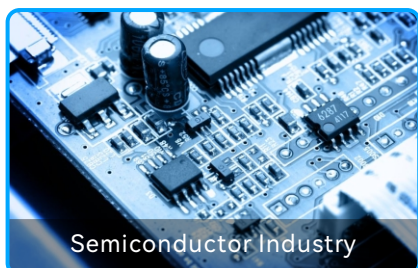
According to the different detection functions, it is divided into: metal through type, used for metal target through detection, adjustable sensitivity, high detection accuracy (0.1mm diameter iron wire), strong anti-interference. Metal through dynamic detection type, used for high-speed detection of metal targets and dynamic points, adjustable sensitivity, pulse delay (0.1-200ms adjustable), high detection accuracy (0.1mm diameter high-speed iron wire), strong anti-interference. High-precision metal through type, with both metal detection and points, adjustable sensitivity, pulse delay (0.1-200ms adjustable), high detection accuracy (0.1mm diameter high-speed iron wire), strong anti-interference.

Features:

- Features: Can detect metals, non-metals, liquids, etc., adjustable sensitivity, NO/NC adjustable;
- Aperture specifications: R05, R06, R10, R15, R21;
- Pulse adjustable: 0.1-200ms;
- Detection distance: 15-20mm;
- Response frequency: 2KHZ;
- Rated voltage: 10-30VDC;
- Rated current: 200mA;
- Product certification: CE, ROHS.

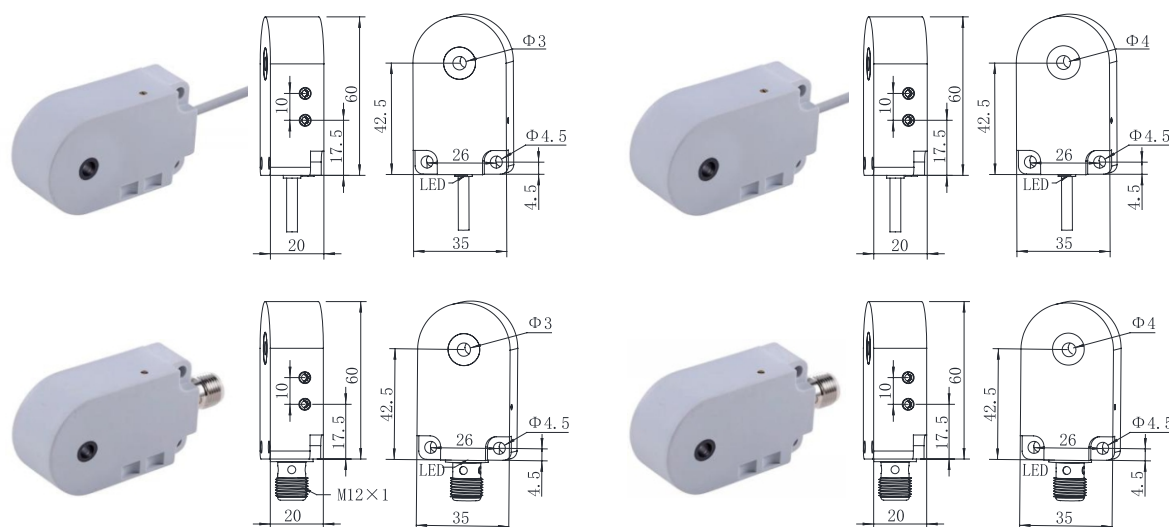


Application Industry



Product Parameters

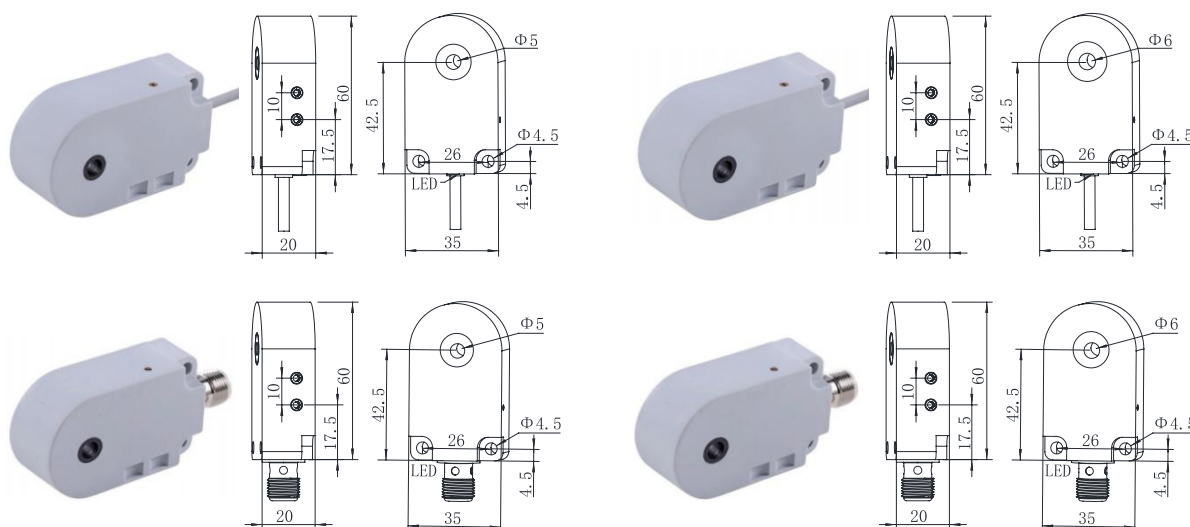
Ring Shape Series Capacitive type



Inner hole diameter	3mm		4mm	
● Shielded ○ Non-shielded	○		○	
Detection distance Sn: mm	20		20	
Shell material	PBT		PBT	
● LED display ○ No LED display	●		●	
Working voltage & allowable pulsating voltage	10-30VDC (Ripple<10%)		10-30VDC (Ripple<10%)	
Minimum interval time of the object to be detected	--		--	
No-load current	10mA		<10mA	
Maximum load current	200mA		200mA	
Leakage current	<0.01mA		<0.01mA	
Shock current	--		--	
Minimum load current	--		--	
Voltage drop	<1.5V at 200mA		<1.5V at 200mA	
Switching frequency	500HZ		500HZ	
Pulse impedance	--		--	
Switching hysteresis	15%		15%	
Repeat accuracy	<2% (Sr)		<2% (Sr)	
Protection level	IP67		IP67	
Working temperature	-25℃ - +70℃		-25℃ - +70℃	
Temperature drift	±10%(sr)		±10%(sr)	
Minimum detection object	D=1mm; L=2mm		D=2mm; L=2mm	
Reverse polarity protection	Yes		Yes	
Short circuit protection	Yes		Yes	
Current overload protection	220mA		220mA	
EMC	RFI>3V/m / EFT>1KV / ESD>4KV (contact)		RFI>3V/m / EFT>1KV / ESD>4KV (contact)	
Shock/vibration	IEC 60947-5-2, Part 7.4.1 / IEC 60947-5-2, Part 7.4.2		IEC 60947-5-2, Part 7.4.1 / IEC 60947-5-2, Part 7.4.2	
Connection method	2m oil-proof PVC cable 4 Φ 3x0.15	M12 connector	2m oil-proof PVC cable 4 Φ 3x0.15	M12 connector
Product Model				
DC 3 wire 10-30V NPN NO	CI03-20NO-ZBA-3A-P	CI03-20NO-ZBA-TA-P	CI04-20NO-ZBA-3A-P	CI04-20NO-ZBA-TA-P
DC 3 wire 10-30V NPN NC	CI03-20NC-ZBA-3A-P	CI03-20NC-ZBA-TA-P	CI04-20NC-ZBA-3A-P	CI04-20NC-ZBA-TA-P
DC 3 wire 10-30V PNP NO	CI03-20PO-ZBA-3A-P	CI03-20PO-ZBA-TA-P	CI04-20PO-ZBA-3A-P	CI04-20PO-ZBA-TA-P
DC 3 wire 10-30V PNP NC	CI03-20PC-ZBA-3A-P	CI03-20PC-ZBA-TA-P	CI04-20PC-ZBA-3A-P	CI04-20PC-ZBA-TA-P
DC 4 wire 10-30V Convertible PNP (NO&NC)	CI03-20PS-ZBA-4A-P	CI03-20PS-ZBA-TA-P	CI04-20PS-ZBA-4A-P	CI04-20PS-ZBA-TA-P
DC 4 wire 10-30V Convertible NPN (NO&NC)	CI03-20NS-ZBA-4A-P	CI03-20NS-ZBA-TA-P	CI04-20NS-ZBA-4A-P	CI04-20NS-ZBA-TA-P

Product Parameters

Ring Shape Series Metal pass type



Inner hole diameter

5mm

6mm

● Shielded ○ Non-shielded

○

○

Detection distance Sn: mm

20

20

Shell material

PBT

PBT

● LED display ○ No LED display

●

●

Working voltage & allowable pulsating voltage

10-30VDC (Ripple<10%)

10-30VDC (Ripple<10%)

Minimum interval time of the object to be detected

--

--

No-load current

10mA

10mA

Maximum load current

200mA

200mA

Leakage current

<0.01mA

<0.01mA

Shock current

--

--

Minimum load current

--

--

Voltage drop

<1.5V at 200mA

<1.5V at 200mA

Switching frequency

500HZ

400HZ

Pulse impedance

--

--

Switching hysteresis

15%

15%

Repeat accuracy

<2% (Sr)

<2% (Sr)

Protection level

IP67

IP67

Working temperature

-25℃ - +70℃

-25℃ - +70℃

Temperature drift

±10%(sr)

±10%(sr)

Minimum detection object

D=2mm; L=2mm

D=2mm; L=2mm

Reverse polarity protection

Yes

Yes

Short circuit protection

Yes

Yes

Current overload protection

220mA

220mA

EMC

RFI>3V/m / EFT>1KV / ESD>4KV (contact)

RFI>3V/m / EFT>1KV / ESD>4KV (contact)

Shock/vibration

IEC 60947-5-2, Part 7.4.1 / IEC 60947-5-2, Part 7.4.2

IEC 60947-5-2, Part 7.4.1 / IEC 60947-5-2, Part 7.4.2

Connection method

2m oil-proof PVC cable
4 φ 3x0.15

M12 connector

2m oil-proof PVC cable
4 φ 3x0.15

M12 connector

Product Model

DC 3 wire 10-30V NPN NO

CI05-20NO-ZBA-3A-P

CI05-20NO-ZBA-TA-P

CI06-20NO-ZBA-3A-P

CI06-20NO-ZBA-TA-P

DC 3 wire 10-30V NPN NC

CI05-20NC-ZBA-3A-P

CI05-20NC-ZBA-TA-P

CI06-20NC-ZBA-3A-P

CI06-20NC-ZBA-TA-P

DC 3 wire 10-30V PNP NO

CI05-20PO-ZBA-3A-P

CI05-20PO-ZBA-TA-P

CI06-20PO-ZBA-3A-P

CI06-20PO-ZBA-TA-P

DC 3 wire 10-30V PNP NC

CI05-20PC-ZBA-3A-P

CI05-20PC-ZBA-TA-P

CI06-20PC-ZBA-3A-P

CI06-20PC-ZBA-TA-P

DC 4 wire 10-30V Convertible PNP (NO&NC)

CI05-20PS-ZBA-4A-P

CI05-20PS-ZBA-TA-P

CI06-20PS-ZBA-4A-P

CI06-20PS-ZBA-TA-P

DC 4 wire 10-30V Convertible NPN (NO&NC)

CI05-20NS-ZBA-4A-P

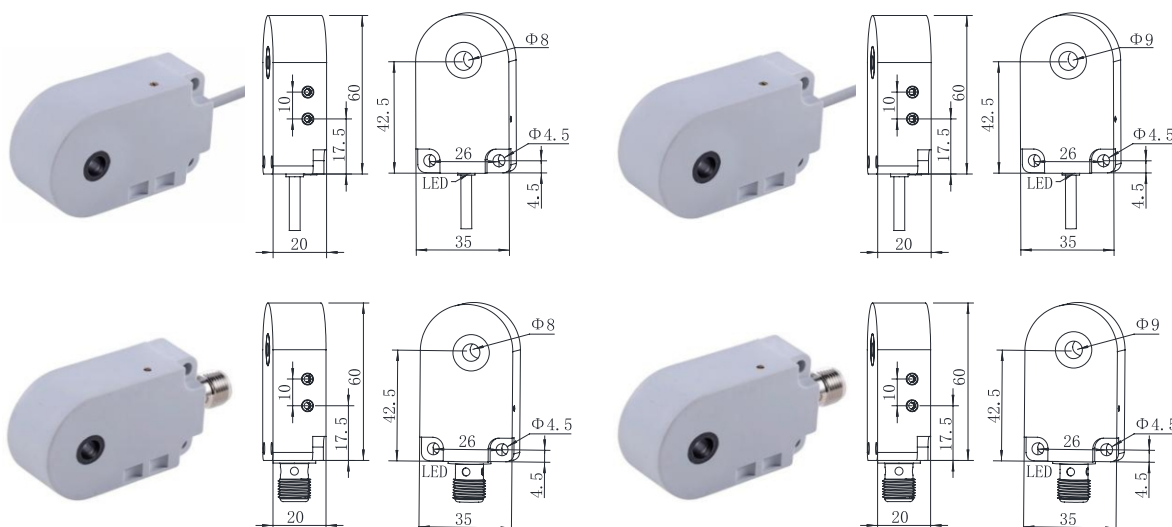
CI05-20NS-ZBA-TA-P

CI06-20NS-ZBA-4A-P

CI06-20NS-ZBA-TA-P

Product Parameters

Ring Shape Series Metal pass type



Inner hole diameter

8mm

9mm

● Shielded ○ Non-shielded

○

○

Detection distance Sn: mm

20

20

Shell material

PBT

PBT

● LED display ○ No LED display

●

●

Working voltage & allowable pulsating voltage

10-30VDC (Ripple<10%)

10-30VDC (Ripple<10%)

Minimum interval time of the object to be detected

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--

No-load current

10mA

10mA

Maximum load current

200mA

200mA

Leakage current

<0.01mA

<0.01mA

Shock current

--

--

Minimum load current

--

--

Voltage drop

<1.5V at 200mA

<1.5V at 200mA

Switching frequency

300HZ

500HZ

Pulse impedance

--

--

Switching hysteresis

15%

15%

Repeat accuracy

<2% (Sr)

<2% (Sr)

Protection level

IP67

IP67

Working temperature

-25°C - +70°C

-25°C - +70°C

Temperature drift

±10%(sr)

±10%(sr)

Minimum detection object

D=2mm;L=3mm

D=2.5mm;L=4mm

Reverse polarity protection

Yes

Yes

Short circuit protection

Yes

Yes

Current overload protection

220mA

220mA

EMC

RFI>3V/m / EFT>1KV / ESD>4KV (contact)

RFI>3V/m / EFT>1KV / ESD>4KV (contact)

Shock/vibration

IEC 60947-5-2,Part 7.4.1 / IEC 60947-5-2,Part 7.4.2

IEC 60947-5-2,Part 7.4.1 / IEC 60947-5-2,Part 7.4.2

Connection method

2m oil-proof PVC cable
4 Φ 3x0.15

M12 connector

2m oil-proof PVC cable
4 Φ 3x0.15

M12 connector

Product Model

DC 3 wire 10-30V NPN NO

CI08-20NO-ZBA-3A-P

CI08-20NO-ZBA-TA-P

CI09-20NO-ZBA-3A-P

CI09-20NO-ZBA-TA-P

DC 3 wire 10-30V NPN NC

CI08-20NC-ZBA-3A-P

CI08-20NC-ZBA-TA-P

CI09-20NC-ZBA-3A-P

CI09-20NC-ZBA-TA-P

DC 3 wire 10-30V PNP NO

CI08-20PO-ZBA-3A-P

CI08-20PO-ZBA-TA-P

CI09-20PO-ZBA-3A-P

CI09-20PO-ZBA-TA-P

DC 3 wire 10-30V PNP NC

CI08-20PC-ZBA-3A-P

CI08-20PC-ZBA-TA-P

CI09-20PC-ZBA-3A-P

CI09-20PC-ZBA-TA-P

DC 4 wire 10-30V Convertible PNP (NO&NC)

CI08-20PS-ZBA-4A-P

CI08-20PS-ZBA-TA-P

CI09-20PS-ZBA-4A-P

CI09-20PS-ZBA-TA-P

DC 4 wire 10-30V Convertible NPN (NO&NC)

CI08-20NS-ZBA-4A-P

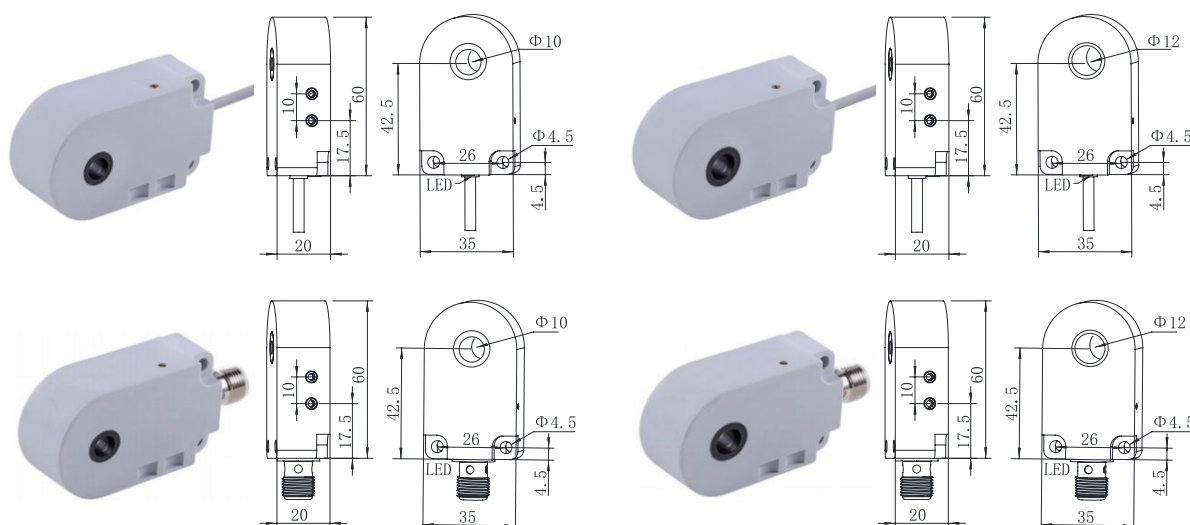
CI08-20NS-ZBA-TA-P

CI09-20NS-ZBA-4A-P

CI09-20NS-ZBA-TA-P

Product Parameters

Ring Shape Series Metal pass type



Inner hole diameter

10mm

12mm

● Shielded ○ Non-shielded

○

○

Detection distance Sn: mm

20

20

Shell material

PBT

PBT

● LED display ○ No LED display

●

●

Working voltage & allowable pulsating voltage

10-30VDC (Ripple<10%)

10-30VDC (Ripple<10%)

Minimum interval time of the object to be detected

--

--

No-load current

10mA

10mA

Maximum load current

200mA

200mA

Leakage current

<0.01mA

<0.01mA

Shock current

--

--

Minimum load current

--

--

Voltage drop

<1.5V at 200mA

<1.5V at 200mA

Switching frequency

500HZ

500HZ

Pulse impedance

--

--

Switching hysteresis

15%

15%

Repeat accuracy

<2% (Sr)

<2% (Sr)

Protection level

IP67

IP67

Working temperature

-25℃ - +70℃

-25℃ - +70℃

Temperature drift

±10%(sr)

±10%(sr)

Minimum detection object

D=2.5mm;L=4mm

D=2.7mm;L=5mm

Reverse polarity protection

Yes

Yes

Short circuit protection

Yes

Yes

Current overload protection

220mA

220mA

EMC

RFI>3V/m / EFT>1KV / ESD>4KV (contact)

RFI>3V/m / EFT>1KV / ESD>4KV (contact)

Shock/vibration

IEC 60947-5-2,Part 7.4.1 / IEC 60947-5-2,Part 7.4.2

IEC 60947-5-2,Part 7.4.1 / IEC 60947-5-2,Part 7.4.2

Connection method

2m oil-proof PVC cable
4 φ 3x0.15

M12 connector

2m oil-proof PVC cable
4 φ 3x0.15

M12 connector

Product Model

DC 3 wire 10-30V NPN NO

CI10-20NO-ZBA-3A-P

CI10-20NO-ZBA-TA-P

CI12-20NO-ZBA-3A-P

CI12-20NO-ZBA-TA-P

DC 3 wire 10-30V NPN NC

CI10-20NC-ZBA-3A-P

CI10-20NC-ZBA-TA-P

CI12-20NC-ZBA-3A-P

CI12-20NC-ZBA-TA-P

DC 3 wire 10-30V PNP NO

CI10-20PO-ZBA-3A-P

CI10-20PO-ZBA-TA-P

CI12-20PO-ZBA-3A-P

CI12-20PO-ZBA-TA-P

DC 3 wire 10-30V PNP NC

CI10-20PC-ZBA-3A-P

CI10-20PC-ZBA-TA-P

CI12-20PC-ZBA-3A-P

CI12-20PC-ZBA-TA-P

DC 4 wire 10-30V Convertible PNP (NO&NC)

CI10-20PS-ZBA-4A-P

CI10-20PS-ZBA-TA-P

CI12-20PS-ZBA-4A-P

CI12-20PS-ZBA-TA-P

DC 4 wire 10-30V Convertible NPN (NO&NC)

CI10-20NS-ZBA-4A-P

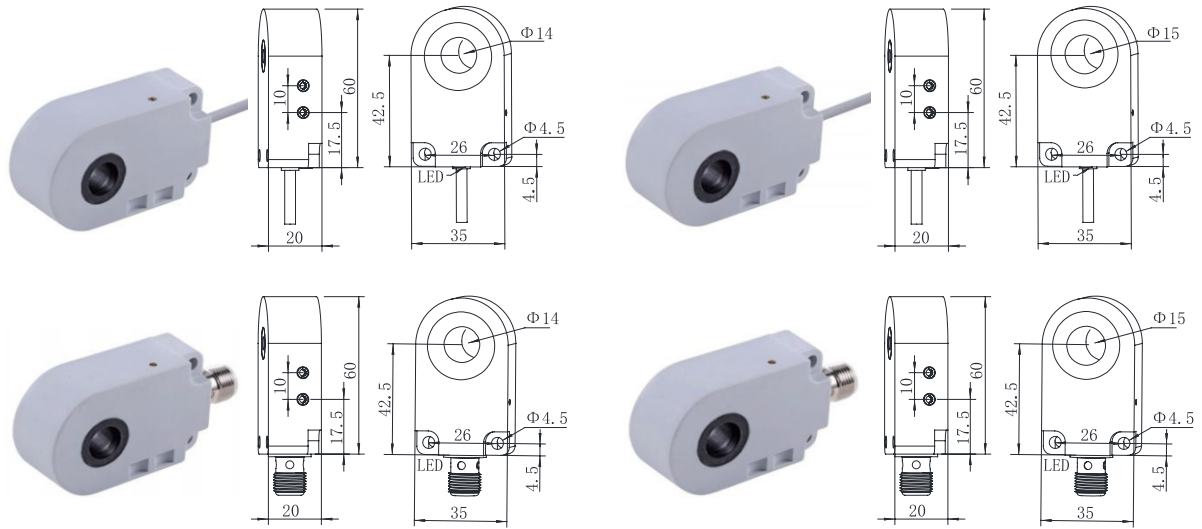
CI10-20NS-ZBA-TA-P

CI12-20NS-ZBA-4A-P

CI12-20NS-ZBA-TA-P

Product Parameters

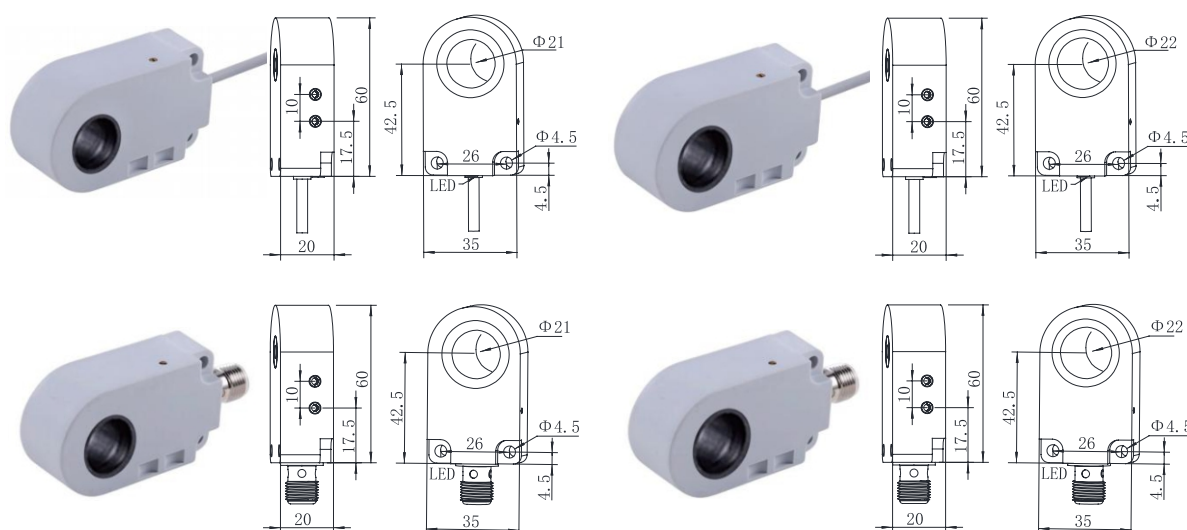
Ring Shape Series Metal pass type



Inner hole diameter		14mm		15mm	
● Shielded ○ Non-shielded		○		○	
Detection distance Sn: mm		20		20	
Shell material		PBT		PBT	
● LED display ○ No LED display		●		●	
Working voltage & allowable pulsating voltage		10-30VDC (Ripple<10%)		10-30VDC (Ripple<10%)	
Minimum interval time of the object to be detected		--		--	
No-load current		10mA		10mA	
Maximum load current		200mA		200mA	
Leakage current		<0.01mA		<0.01mA	
Shock current		--		--	
Minimum load current		--		--	
Voltage drop		<1.5V at 200mA		<1.5V at 200mA	
Switching frequency		400HZ		300HZ	
Pulse impedance		--		--	
Switching hysteresis		15%		15%	
Repeat accuracy		<2% (Sr)		<2% (Sr)	
Protection level		IP67		IP67	
Working temperature		-25℃ - +70℃		-25℃ - +70℃	
Temperature drift		±10%(sr)		±10%(sr)	
Minimum detection object		D=3mm;L=6mm		D=3mm;L=6mm	
Reverse polarity protection		Yes		Yes	
Short circuit protection		Yes		Yes	
Current overload protection		220mA		220mA	
EMC		RFI>3V/m / EFT>1KV / ESD>4KV (contact)		RFI>3V/m / EFT>1KV / ESD>4KV (contact)	
Shock/vibration		IEC 60947-5-2,Part 7.4.1 / IEC 60947-5-2,Part 7.4.2		IEC 60947-5-2,Part 7.4.1 / IEC 60947-5-2,Part 7.4.2	
Connection method		2m oil-proof PVC cable 4 ϕ 3x0.15	M12 connector	2m oil-proof PVC cable 4 ϕ 3x0.15	M12 connector
Product Model					
DC 3 wire 10-30V NPN NO		CI14-20NO-ZBA-3A-P	CI14-20NO-ZBA-TA-P	CI15-20NO-ZBA-3A-P	CI15-20NO-ZBA-TA-P
DC 3 wire 10-30V NPN NC		CI14-20NC-ZBA-3A-P	CI14-20NC-ZBA-TA-P	CI15-20NC-ZBA-3A-P	CI15-20NC-ZBA-TA-P
DC 3 wire 10-30V PNP NO		CI14-20PO-ZBA-3A-P	CI14-20PO-ZBA-TA-P	CI15-20PO-ZBA-3A-P	CI15-20PO-ZBA-TA-P
DC 3 wire 10-30V PNP NC		CI14-20PC-ZBA-3A-P	CI14-20PC-ZBA-TA-P	CI15-20PC-ZBA-3A-P	CI15-20PC-ZBA-TA-P
DC 4 wire 10-30V Convertible PNP (NO&NC)		CI14-20PS-ZBA-4A-P	CI14-20PS-ZBA-TA-P	CI15-20PS-ZBA-4A-P	CI15-20PS-ZBA-TA-P
DC 4 wire 10-30V Convertible NPN (NO&NC)		CI14-20NS-ZBA-4A-P	CI14-20NS-ZBA-TA-P	CI15-20NS-ZBA-4A-P	CI15-20NS-ZBA-TA-P

Product Parameters

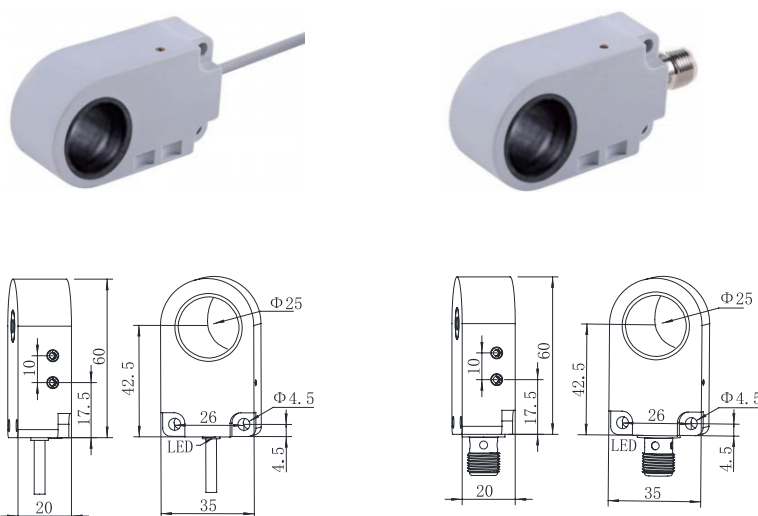
Ring Shape Series Metal pass type



Inner hole diameter	21mm		22mm	
● Shielded ○ Non-shielded	○		○	
Detection distance Sn: mm	20		20	
Shell material	PBT		PBT	
● LED display ○ No LED display	●		●	
Working voltage & allowable pulsating voltage	10-30VDC (Ripple<10%)		10-30VDC (Ripple<10%)	
Minimum interval time of the object to be detected	--		--	
No-load current	10mA		10mA	
Maximum load current	200mA		200mA	
Leakage current	<0.01mA		<0.01mA	
Shock current	--		--	
Minimum load current	--		--	
Voltage drop	<1.5V at 200mA		<1.5V at 200mA	
Switching frequency	500HZ		400HZ	
Pulse impedance	--		--	
Switching hysteresis	15%		15%	
Repeat accuracy	<2% (Sr)		<2% (Sr)	
Protection level	IP67		IP67	
Working temperature	-25℃ - +70℃		-25℃ - +70℃	
Temperature drift	±10%(sr)		±10%(sr)	
Minimum detection object	D=6mm;L=12mm		D=6mm;L=12mm	
Reverse polarity protection	Yes		Yes	
Short circuit protection	Yes		Yes	
Current overload protection	220~280mA		220~280mA	
EMC	RFI>3V/m / EFT>1KV / ESD>4KV (contact)		RFI>3V/m / EFT>1KV / ESD>4KV (contact)	
Shock/vibration	IEC 60947-5-2,Part 7.4.1 / IEC 60947-5-2,Part 7.4.2		IEC 60947-5-2,Part 7.4.1 / IEC 60947-5-2,Part 7.4.2	
Connection method	2m oil-proof PVC cable 4 Φ 3x0.15	M12 connector	2m oil-proof PVC cable 4 Φ 3x0.15	M12 connector
Product Model				
DC 3 wire 10-30V NPN NO	CI21-20NO-ZBA-3A-P	CI21-20NO-ZBA-TA-P	CI22-20NO-ZBA-3A-P	CI22-20NO-ZBA-TA-P
DC 3 wire 10-30V NPN NC	CI21-20NC-ZBA-3A-P	CI21-20NC-ZBA-TA-P	CI22-20NC-ZBA-3A-P	CI22-20NC-ZBA-TA-P
DC 3 wire 10-30V PNP NO	CI21-20PO-ZBA-3A-P	CI21-20PO-ZBA-TA-P	CI22-20PO-ZBA-3A-P	CI22-20PO-ZBA-TA-P
DC 3 wire 10-30V PNP NC	CI21-20PC-ZBA-3A-P	CI21-20PC-ZBA-TA-P	CI22-20PC-ZBA-3A-P	CI22-20PC-ZBA-TA-P
DC 4 wire 10-30V Convertible PNP (NO&NC)	CI21-20PS-ZBA-4A-P	CI21-20PS-ZBA-TA-P	CI22-20PS-ZBA-4A-P	CI22-20PS-ZBA-TA-P
DC 4 wire 10-30V Convertible NPN (NO&NC)	CI21-20NS-ZBA-4A-P	CI21-20NS-ZBA-TA-P	CI22-20NS-ZBA-4A-P	CI22-20NS-ZBA-TA-P

Product Parameters

Ring Shape Series Metal pass type



Inner hole diameter

25mm

● Shielded ○ Non-shielded

○

Detection distance Sn: mm

20

Shell material

PBT

● LED display ○ No LED display

●

Working voltage & allowable pulsating voltage

10-30VDC (Ripple<10%)

Minimum interval time of the object to be detected

--

No-load current

10mA

Maximum load current

200mA

Leakage current

<0.01mA

Shock current

--

Minimum load current

--

Voltage drop

<1.5V at 200mA

Switching frequency

300HZ

Pulse impedance

--

Switching hysteresis

15%

Repeat accuracy

<2% (Sr)

Protection level

IP67

Working temperature

-25°C - +70°C

Temperature drift

±10%(sr)

Minimum detection object

D=7mm;L=13mm

Reverse polarity protection

Yes

Short circuit protection

Yes

Current overload protection

220~280mA

EMC

RFI>3V/m / EFT>1KV / ESD>4KV (contact)

Shock/vibration

IEC 60947-5-2,Part 7.4.1 / IEC 60947-5-2,Part 7.4.2

Connection method

**2m oil-proof PVC cable
4 φ 3x0.15**
M12 connector

Product Model

DC 3 wire 10-30V NPN NO

CI25-20NO-ZBA-3A-P
CI25-20NO-ZBA-TA-P

DC 3 wire 10-30V NPN NC

CI25-20NC-ZBA-3A-P
CI25-20NC-ZBA-TA-P

DC 3 wire 10-30V PNP NO

CI25-20PO-ZBA-3A-P
CI25-20PO-ZBA-TA-P

DC 3 wire 10-30V PNP NC

CI25-20PC-ZBA-3A-P
CI25-20PC-ZBA-TA-P

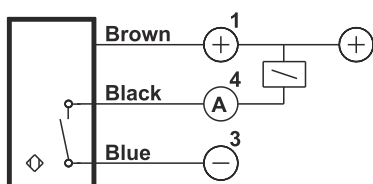
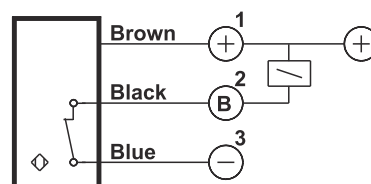
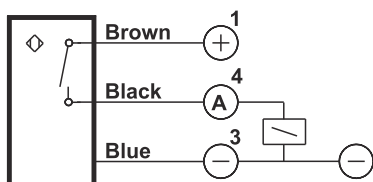
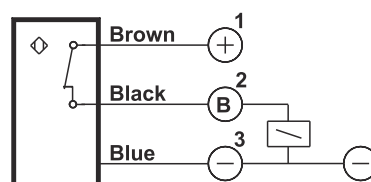
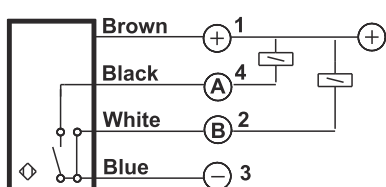
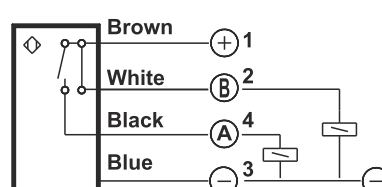
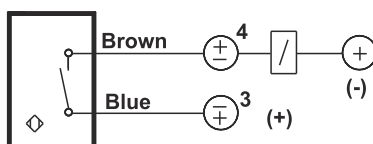
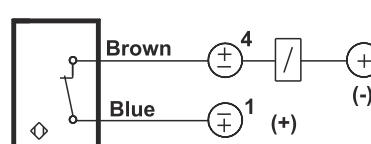
DC 4 wire 10-30V Convertible PNP (NO&NC)

CI25-20PS-ZBA-4A-P
CI25-20PS-ZBA-TA-P

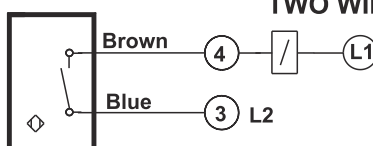
DC 4 wire 10-30V Convertible NPN (NO&NC)

CI25-20NS-ZBA-4A-P
CI25-20NS-ZBA-TA-P

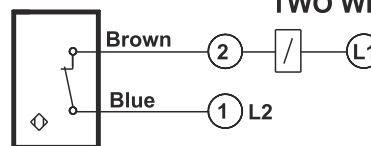
Wiring Diagram

DC NPN NO

DC NPN NC

DC PNP NO

DC PNP NC

DC NPN NO&NC

DC PNP NO&NC

DC 2 wire NO

DC 2 wire NC

Plastic housing

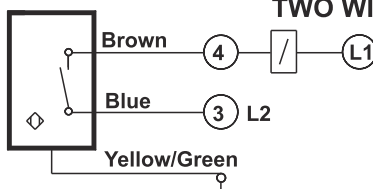
AC/DC 20-250V
or AC 20-250V
TWO WIRE-NO


Plastic housing

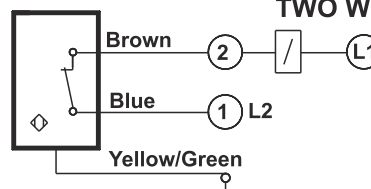
AC/DC 20-250V
or AC 20-250V
TWO WIRE-NC


Metal housing

AC/DC 20-250V
or AC 20-250V
TWO WIRE-NO

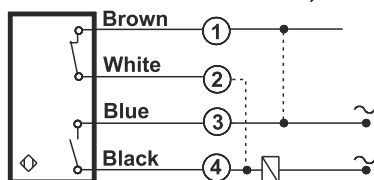

Metal housing

AC/DC 20-250V
or AC 20-250V
TWO WIRE-NC

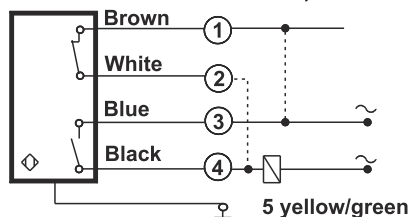


Wiring Diagram

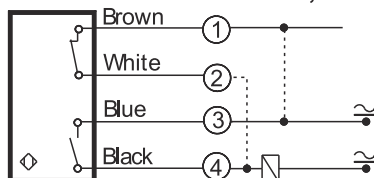
Plastic housing AC 20-250V
NO,NC Changeable



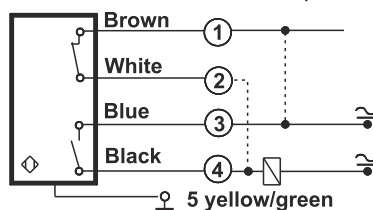
Metal housing AC 20-250V
NO,NC Changeable



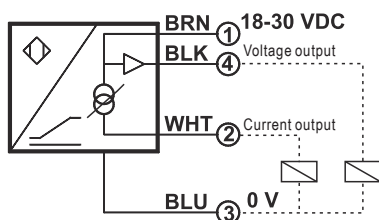
Plastic housing AC 20-250V
NO,NC Changeable



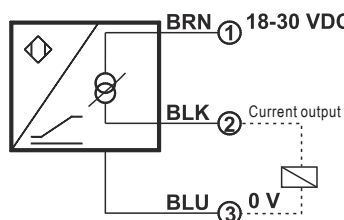
Metal housing AC 20-250V
NO,NC Changeable



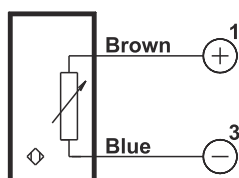
Analog (current + voltage output type)



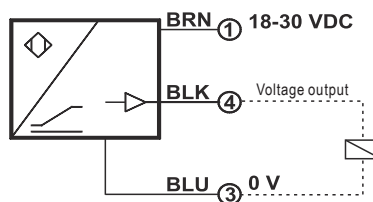
Analog (current output type)



Riot-proof DC 6-12V

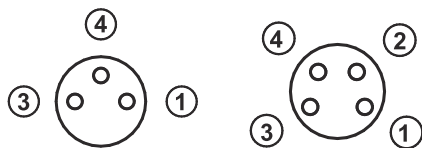


Analog (voltage output type)

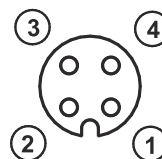


Connector Diagram

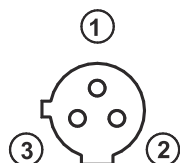
Used for M8 DC
M8



Used for M12 DC
M12



Used for M12 AC
M12



Used for M18 M30 DC or AC

