DADISICK®

TECHNICAL DATA SHEET

Inductive Proximity Switches
Proximity Sensors
Explosion-proof Series

Figure can vary

Contents

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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℃ 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℃ 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℃, 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

L B 0 4 — 0.8 N A — Z A F — S □ — □ **(LB04-0.8NA-ZAF-S)**

Special Instructions

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

Shell material:
H: nickel-plated brass; S: stainless steel; L: aluminum alloy;
P: PBT; T: Teflon; F: PTFE; M: POM;

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:

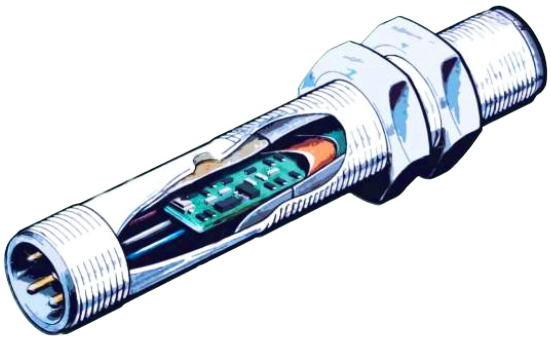
NC: NPN NC;	NO: NPN NO
PC: PNP NC;	PO: PNP NO
NS: NPN NO&NC;	PS: PNP NO&NC
HC: DC NC;	HO: DC NO
AC: AC NC;	AO: AC NO
HS: DC NO&NC;	AS: AC NO&NC
I: analog current;	U: analog voltage
TC: AC&DC NC;	TO: AC&DC NO
TS: AC/DC NO&NC;	V: Current + voltage output
NA: Explosion-proof type	

Detection distance: 1mm-50mm

Specification(mm): ϕ3, ϕ4, M4, M5, ϕ6.5, 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



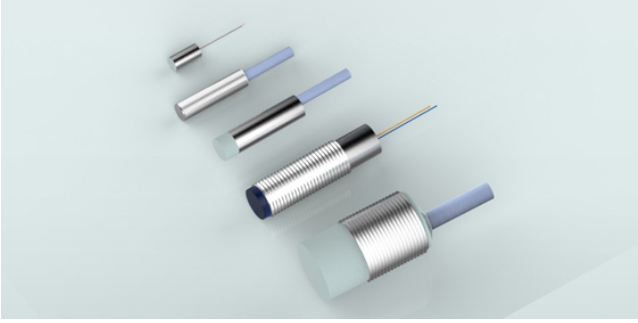
Explosion-proof Series

Proximity sensors

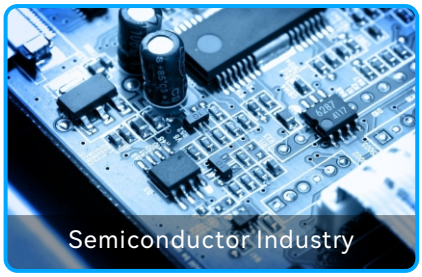
This series features reliable operation, easy installation and use, high performance-price ratio, stable performance and high explosion-proof grade.

Features:

- Features: reliable function, easy install, high cost-performance, stable function
- Size: ϕ4,M5, ϕ6.5, M8, M10, M12, M18, M30
- Sensing Distance: 0.8-30mm
- Operating Voltage: 6-12VDC
- Certificate: CE, ROHS

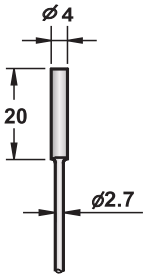


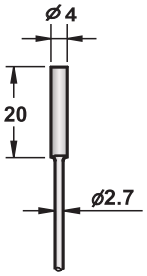
Application Industry



Product Parameters

Explosion-proof

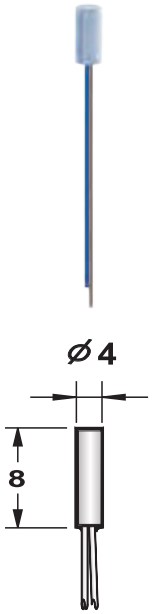


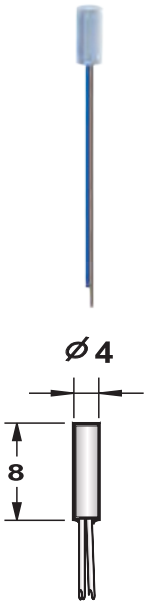


Size category	ϕ4	ϕ4
● Shielded ○ Non-shielded	●	●
Sn: mm	0.8 mm	1mm
Shell material	Stainless steel	Stainless steel
● LED display ○ No LED display	○	○
Working voltage	6-12VDC	6-12VDC
Allowable pulsating voltage	-	-
No-load current	>2.2mA(OFF) <1.1mA(ON)	>2.2mA(OFF) <1.1mA(ON)
Switching frequency	2KHZ	2KHZ
Response time	0.05ms/0.05ms	0.05ms/0.05ms
Switching hysteresis	<15%(Sr)	<15%(Sr)
Repeat accuracy	<1.0% (Sr)	<1.0% (Sr)
Protection level	IP67	IP67
Working temperature	-25℃ - +70℃	-25℃ - +70℃
Temperature drift	<1%(Sr)	<1%(Sr)
Short circuit protection/reverse polarity protection	-	-
Overload protection current	-	-
Delay	<10ms	<10ms
EMC	RFI>3V/m / EFT>1KV / ESD>4KV (contact)	RFI>3V/m / EFT>1KV / ESD>4KV (contact)
Overload protection current	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
Sensing surface material	PBT	PBT
Connection method	2m oil-proof PVC cable 2.7 Φ 2x0.15	2m oil-proof PVC cable 2.7 Φ 2x0.15
Product Model		
DC 2 wire 6-12V NAMUR	LB04-0.8NA-ZAF-S	LB04-01NA-ZAF-S

Product Parameters

Explosion-proof

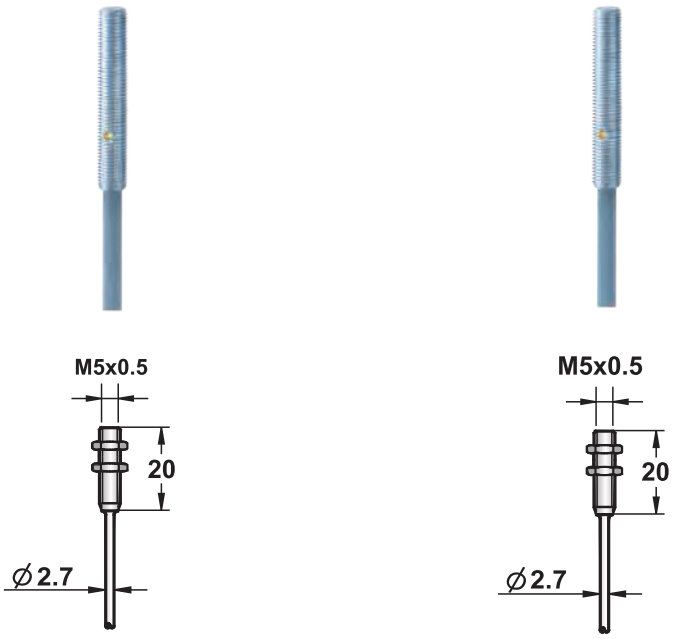




Size category	ϕ4	ϕ4
● Shielded ○ Non-shielded	●	●
Sn: mm	0.8 mm	1mm
Shell material	Stainless steel	Stainless steel
● LED display ○ No LED display	○	○
Working voltage	6-12VDC	6-12VDC
Allowable pulsating voltage	-	-
No-load current	>2.2mA(OFF) <1.1mA(ON)	>2.2mA(OFF) <1.1mA(ON)
Switching frequency	2KHZ	2KHZ
Response time	0.05ms/0.05ms	0.05ms/0.05ms
Switching hysteresis	<15%(Sr)	<15%(Sr)
Repeat accuracy	<1.0% (Sr)	<1.0% (Sr)
Protection level	IP67	IP67
Working temperature	-25℃ - +70℃	-25℃ - +70℃
Temperature drift	<1%(Sr)	<1%(Sr)
Short circuit protection/reverse polarity protection	-	-
Overload protection current	-	-
Delay	<10ms	<10ms
EMC	RFI>3V/m / EFT>1KV / ESD>4KV (contact)	RFI>3V/m / EFT>1KV / ESD>4KV (contact)
Overload protection current	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
Sensing surface material	PBT	PBT
Connection method	2m oil-proof PVC cable 2x0.15	2m oil-proof PVC cable 2x0.15
Product Model		
DC 2 wire 6-12V NAMUR	LB04-0.8NA-ZAF-SM	LB04-01NA-ZAF-SM

Product Parameters

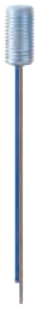
Explosion-proof



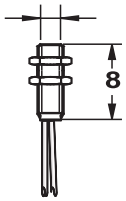
Size category	M5	M5
● Shielded ○ Non-shielded	●	●
Sn: mm	0.8 mm	1mm
Shell material	Stainless steel	Stainless steel
● LED display ○ No LED display	○	○
Working voltage	6-12VDC	6-12VDC
Allowable pulsating voltage	-	-
No-load current	>2.2mA(OFF) <1.1mA(ON)	>2.2mA(OFF) <1.1mA(ON)
Switching frequency	2KHZ	2KHZ
Response time	0.05ms/0.05ms	0.05ms/0.05ms
Switching hysteresis	<15%(Sr)	<15%(Sr)
Repeat accuracy	<1.0% (Sr)	<1.0% (Sr)
Protection level	IP67	IP67
Working temperature	-25℃ - +70℃	-25℃ - +70℃
Temperature drift	<1%(Sr)	<1%(Sr)
Short circuit protection/reverse polarity protection	-	-
Overload protection current	-	-
Delay	<10ms	<10ms
EMC	RFI>3V/m / EFT>1KV / ESD>4KV (contact)	RFI>3V/m / EFT>1KV / ESD>4KV (contact)
Overload protection current	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
Sensing surface material	PBT	PBT
Connection method	2m oil-proof PVC cable 2.7 Φ 2x0.15	2m oil-proof PVC cable 2.7 Φ 2x0.15
Product Model		
DC 2 wire 6-12V NAMUR	LB05-0.8NA-ZAF-S	LB05-01NA-ZAF-S

Product Parameters

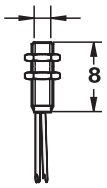
Explosion-proof



M5x0.5



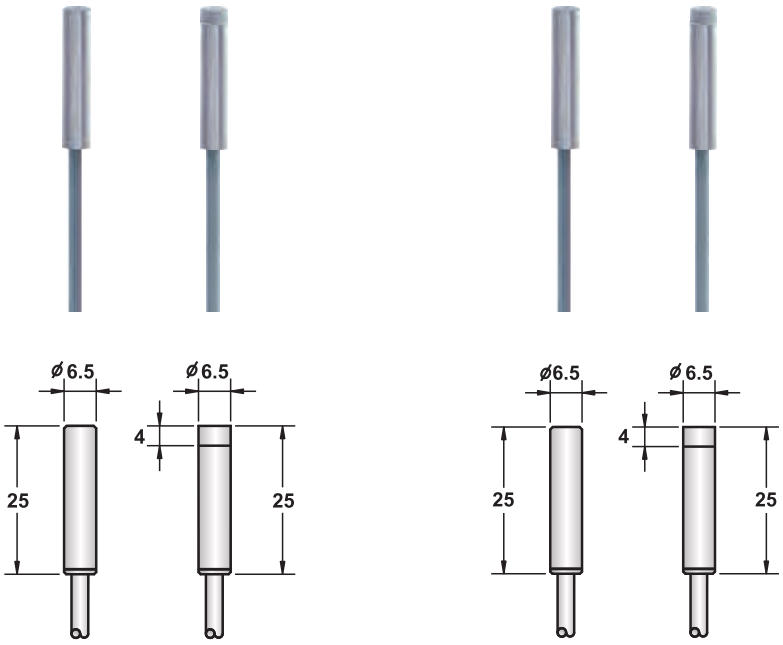
M5x0.5



Size category	M5	M5
● Shielded ○ Non-shielded	●	●
Sn: mm	0.8 mm	1mm
Shell material	Stainless steel	Stainless steel
● LED display ○ No LED display	○	○
Working voltage	6-12VDC	6-12VDC
Allowable pulsating voltage	-	-
No-load current	>2.2mA(OFF) <1.1mA(ON)	>2.2mA(OFF) <1.1mA(ON)
Switching frequency	2KHZ	2KHZ
Response time	0.05ms/0.05ms	0.05ms/0.05ms
Switching hysteresis	<15%(Sr)	<15%(Sr)
Repeat accuracy	<1.0% (Sr)	<1.0% (Sr)
Protection level	IP67	IP67
Working temperature	-25℃ - +70℃	-25℃ - +70℃
Temperature drift	<1%(Sr)	<1%(Sr)
Short circuit protection/reverse polarity protection	-	-
Overload protection current	-	-
Delay	<10ms	<10ms
EMC	RFI>3V/m / EFT>1KV / ESD>4KV (contact)	RFI>3V/m / EFT>1KV / ESD>4KV (contact)
Overload protection current	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
Sensing surface material	PBT	PBT
Connection method	2m oil-proof PVC cable 2.7 Φ 2x0.15	2m oil-proof PVC cable 2.7 Φ 2x0.15
Product Model		
DC 2 wire 6-12V NAMUR	LB05-0.8NA-ZAF-SM	LB05-01NA-ZAF-SM

Product Parameters

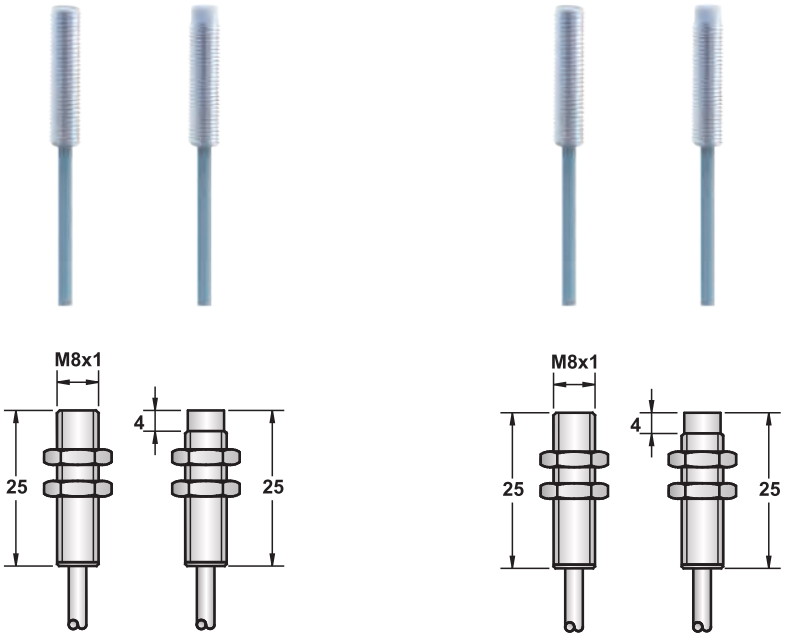
Explosion-proof



Size category	ø6.5		ø6.5	
● Shielded ○ Non-shielded	●	○	●	○
Sn: mm	1mm	2mm	2mm	4 mm
Shell material	Stainless steel / Nickel-plated brass		Stainless steel / Nickel-plated brass	
● LED display ○ No LED display	○		○	
Working voltage	6-12VDC		6-12VDC	
Allowable pulsating voltage	-		-	
No-load current	>2.2mA(OFF)	<1.1mA(ON)	>2.2mA(OFF)	<1.1mA(ON)
Switching frequency	2KHZ	1KHZ	2KHZ	1KHZ
Response time	0.05ms	0.1ms	0.05ms	0.1ms
Switching hysteresis	<15%(Sr)		<15%(Sr)	
Repeat accuracy	<1.0% (Sr)		<1.0% (Sr)	
Protection level	IP67		IP67	
Working temperature	-25℃ - +70℃		-25℃ - +70℃	
Temperature drift	<1%(Sr)		<1%(Sr)	
Short circuit protection/reverse polarity protection	-		-	
Overload protection current	-		-	
Delay	<10ms		<10ms	
EMC	RFI>3V/m / EFT>1KV / ESD>4KV (contact)		RFI>3V/m / EFT>1KV / ESD>4KV (contact)	
Overload protection current	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	
Sensing surface material	PBT		PBT	
Connection method	2m oil-proof PVC cable 3Φ2x0.15		2m oil-proof PVC cable 3Φ2x0.15	
Product Model				
DC 2 wire 6-12V NAMUR	LB6.5-01NA-ZAF-H	LB6.5-02NA-ZBF-H	LB6.5-02NA-ZAF-H	LB6.5-04NA-ZBF-H

Product Parameters

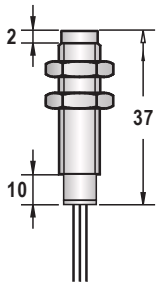
Explosion-proof

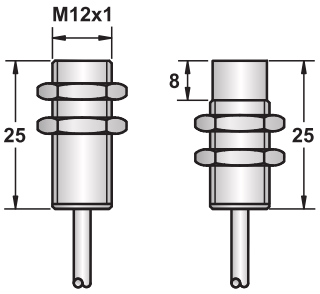


Size category	M 8		M 8	
● Shielded ○ Non-shielded	●	○	●	○
Sn: mm	1mm	2mm	2mm	4 mm
Shell material	Nickel-plated brass		Nickel-plated brass	
● LED display ○ No LED display	○		○	
Working voltage	6-12VDC		6-12VDC	
Allowable pulsating voltage	-		-	
No-load current	>2.2mA(OFF)	<1.1mA(ON)	>2.2mA(OFF)	<1.1mA(ON)
Switching frequency	2KHZ	1KHZ	2KHZ	1KHZ
Response time	0.05ms	0.1ms	0.05ms	0.1ms
Switching hysteresis	<15%(Sr)		<15%(Sr)	
Repeat accuracy	<1.0% (Sr)		<1.0% (Sr)	
Protection level	IP67		IP67	
Working temperature	-25℃ - +70℃		-25℃ - +70℃	
Temperature drift	<1%(Sr)		<1%(Sr)	
Short circuit protection/reverse polarity protection	-		-	
Overload protection current	-		-	
Delay	<10ms		<10ms	
EMC	RFI>3V/m / EFT>1KV / ESD>4KV (contact)		RFI>3V/m / EFT>1KV / ESD>4KV (contact)	
Overload protection current	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	
Sensing surface material	PBT		PBT	
Connection method	2m oil-proof PVC cable 3Φ2x0.15		2m oil-proof PVC cable 3Φ2x0.15	
Product Model				
DC 2 wire 6-12V NAMUR	LB08-01NA-ZAF-H	LB08-02NA-ZBF-H	LB08-02NA-ZAF-H	LB08-04NA-ZBF-H

Product Parameters

Explosion-proof

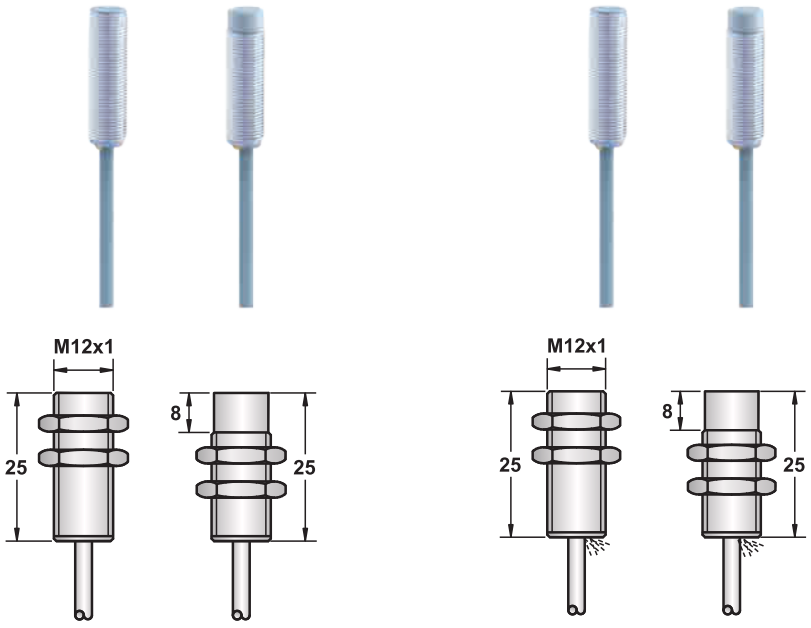




Size category	M 10	M 12
● Shielded ○ Non-shielded	○	● | ○
Sn: mm	3 mm	2mm | 4 mm
Shell material	Nickel-plated brass	Stainless steel / Nickel-plated brass
● LED display ○ No LED display	○	○
Working voltage	6-12VDC	6-12VDC
Allowable pulsating voltage	-	-
No-load current	>2.2mA(OFF) <1.1mA(ON)	>2.2mA(OFF) <1.1mA(ON)
Switching frequency	5KHZ	5KHZ
Response time	0.1ms | 0.2ms	0.1ms | 0.2ms
Switching hysteresis	<15%(Sr)	<15%(Sr)
Repeat accuracy	<1.0% (Sr)	<1.0% (Sr)
Protection level	IP67	IP67
Working temperature	-25℃ - +70 ℃	-25℃ - +70 ℃
Temperature drift	<1%(Sr)	<1%(Sr)
Short circuit protection/reverse polarity protection	-	-
Overload protection current	-	-
Delay	<10ms	<10ms
EMC	RFI>3V/m / EFT>1KV / ESD>4KV (contact)	RFI>3V/m / EFT>1KV / ESD>4KV (contact)
Overload protection current	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
Sensing surface material	PBT	PBT
Connection method	2m oil-proof PVC cable 4 Φ 2x0.34	2m oil-proof PVC cable 4 Φ 2x0.34
Product Model		
DC 2 wire 6-12V NAMUR	LB10-03NA-ZAF-H-LED | LB10-03NA-ZBF-H	LB12-02NA-ZAF-H | LB12-04NA-ZBF-H

Product ParameterH

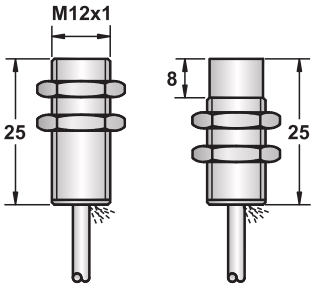
ExploHion-proof

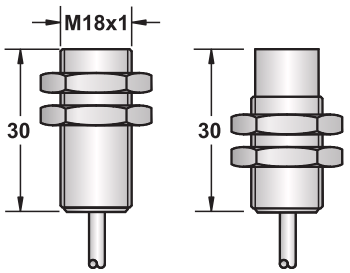


Hize category	M 12		M 12	
● Hhielded ○ Non-Hhielded	●	○	●	○
Sn: mm	4 mm	8 mm	2mm	4 mm
Hhell material	HtainleHH Hteel / Nickel-plated braHH		HtainleHH Hteel / Nickel-plated braHH	
● LED diHplay ○ No LED diHplay	○		○	
Working voltage	6-12VDC		6-12VDC	
Allowable pulHating voltage	-		-	
No-load current	>2.2mA(OFF)	<1.1mA(ON)	<1.1mA(OFF)	>2.2mA(ON)
Hwitching frequency	5KHZ		1KHZ	0.5KHZ
ReHponHe time	0.1ms	0.2ms	0.1ms	0.2ms
Hwitching hyHtereHiH	<15%(Sr)		<15%(Sr)	
Repeat accuracy	<1.0% (Sr)		<1.0% (Sr)	
Protection level	IP67		IP67	
Working temperature	-25℃ - +70℃		-25℃ - +70℃	
Temperature drift	<1%(Sr)		<1%(Sr)	
Hhort circuit protection/reverHe polarity protection	-		-	
Overload protection current	-		-	
Delay	<10ms		<10ms	
EMC	RFI>3V/m / EFT>1KV / ESD>4KV (contact)		RFI>3V/m / EFT>1KV / ESD>4KV (contact)	
Overload protection current	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	
HenHing Hurface material	PBT		PBT	
Connection method	2m oil-proof PVC cable 4 Φ 2x0.34		2m oil-proof PVC cable 4 Φ 2x0.34	
Product Model				
DC 2 wire 6-12V NAMUR	LB12-04NA-ZAF-H	LB12-08NA-ZBF-H	LB12-02NA-ZAF-H-LED	LB12-04NA-ZBF-H-LED

Product Parameters

Explosion-proof

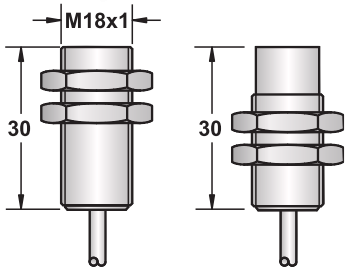


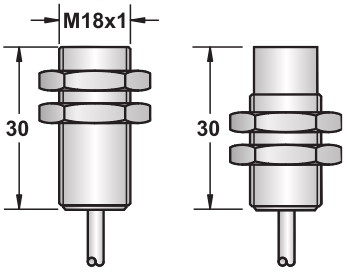


Size category	M 12		M18	
● Shielded ○ Non-shielded	●	○	●	○
Sn: mm	4 mm	8 mm	5 mm	8 mm
Shell material	Stainless steel / Nickel-plated brass		Stainless steel / Nickel-plated brass	
● LED display ○ No LED display	●		○	
Working voltage	6-12VDC		6-12VDC	
Allowable pulsating voltage	-		-	
No-load current	<1.1mA(OFF)	>2.2mA(ON)	>2.2mA(OFF)	<1.1mA(ON)
Switching frequency	1KHZ	0.5KHZ	500HZ	300HZ
Response time	0.1ms	0.2ms	0.2ms	0.5ms
Switching hysteresis	<15%(Sr)		<15%(Sr)	
Repeat accuracy	<1.0% (Sr)		<1.0% (Sr)	
Protection level	IP67		IP67	
Working temperature	-25℃ - +70 ℃		-25℃ - +70 ℃	
Temperature drift	<1%(Sr)		<1%(Sr)	
Short circuit protection/reverse polarity protection	-		-	
Overload protection current	-		-	
Delay	<10ms		<10ms	
EMC	RFI>3V/m / EFT>1KV / ESD>4KV (contact)		RFI>3V/m / EFT>1KV / ESD>4KV (contact)	
Overload protection current	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	
Sensing surface material	PBT		PBT	
Connection method	2m oil-proof PVC cable 4 Φ 2x0.34		2m oil-proof PVC cable 5. 0 Φ 2x0.34	
Product Model				
DC 2 wire 6-12V NAMUR	LB12-04NA-ZAF-H-LED	LB12-08NA-ZBF-H-LED	LB18-05NA-ZAF-H	LB18-08NA-ZBF-H

Product Parameters

Explosion-proof

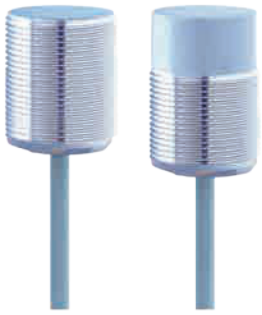


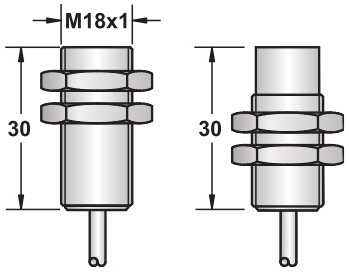


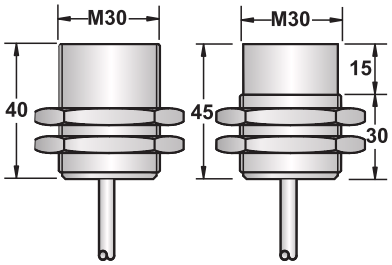
Size category	M18		M18	
● Shielded ○ Non-shielded	●	○	●	○
Sn: mm	8 mm	16 mm	5 mm	8 mm
Shell material	Stainless steel / Nickel-plated brass		Stainless steel / Nickel-plated brass	
● LED display ○ No LED display	○		●	
Working voltage	6-12VDC		6-12VDC	
Allowable pulsating voltage	-		-	
No-load current	>2.2mA(OFF)	<1.1mA(ON)	<1.1mA(OFF)	>2.2mA(ON)
Switching frequency	500HZ	300HZ	500HZ	300HZ
Response time	0.2ms	0.5ms	0.2ms	0.5ms
Switching hysteresis	<15%(Sr)		<15%(Sr)	
Repeat accuracy	<1.0% (Sr)		<1.0% (Sr)	
Protection level	IP67		IP67	
Working temperature	-25℃ - +70℃		-25℃ - +70℃	
Temperature drift	<1%(Sr)		<1%(Sr)	
Short circuit protection/reverse polarity protection	-		-	
Overload protection current	-		-	
Delay	<10ms		<10ms	
EMC	RFI>3V/m / EFT>1KV / ESD>4KV (contact)		RFI>3V/m / EFT>1KV / ESD>4KV (contact)	
Overload protection current	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	
Sensing surface material	PBT		PBT	
Connection method	2m oil-proof PVC cable 5. 0 Φ 2x0.34		2m oil-proof PVC cable 5. 0 Φ 2x0.34	
Product Model				
DC 2 wire 6-12V NAMUR	LB18-08NA-ZAF-H	LB18-16NA-ZBF-H	LB18-05NA-ZAF-H-LED	LB18-08NA-ZBF-H-LED

Product Parameters

Explosion-proof



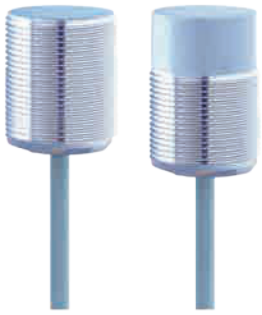


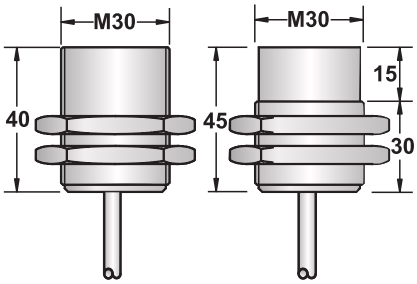


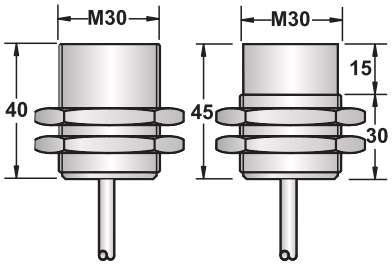
Size category	M18		M 30	
● Shielded ○ Non-shielded	●	○	●	○
Sn: mm	8 mm	16 mm	10 mm	15 mm
Shell material	Stainless steel / Nickel-plated brass		Stainless steel / Nickel-plated brass	
● LED display ○ No LED display	○		○	
Working voltage	6-12VDC		6-12VDC	
Allowable pulsating voltage	-		-	
No-load current	<1.1mA(OFF)	>2.2mA(ON)	>2.2mA(OFF)	<1.1mA(ON)
Switching frequency	500HZ	300HZ	300HZ	100HZ
Response time	0.2ms	0.5ms	0.5ms	1ms
Switching hysteresis	<15%(Sr)		<15%(Sr)	
Repeat accuracy	<1.0% (Sr)		<1.0% (Sr)	
Protection level	IP67		IP67	
Working temperature	-25℃ - +70℃		-25℃ - +70℃	
Temperature drift	<1%(Sr)		<1%(Sr)	
Short circuit protection/reverse polarity protection	-		-	
Overload protection current	-		-	
Delay	<10ms		<10ms	
EMC	RFI>3V/m / EFT>1KV / ESD>4KV (contact)		RFI>3V/m / EFT>1KV / ESD>4KV (contact)	
Overload protection current	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	
Sensing surface material	PBT		PBT	
Connection method	2m oil-proof PVC cable 5. 0 Φ 2x0.34		2m oil-proof PVC cable 5. 0 Φ 2x0.34	
Product Model				
DC 2 wire 6-12V NAMUR	LB18-08NA-ZAF-H-LED	LB18-16NA-ZBF-H-LED	LB30-10NA-ZAF-H	LB30-15NA-ZBF-H

Product Parameters

Explosion-proof



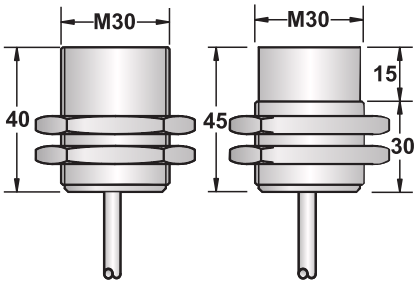




Size category	M 30		M 30	
● Shielded ○ Non-shielded	●	○	●	○
Sn: mm	16 mm	25 mm	10 mm	15 mm
Shell material	Stainless steel / Nickel-plated brass		Stainless steel / Nickel-plated brass	
● LED display ○ No LED display	○		●	
Working voltage	6-12VDC		6-12VDC	
Allowable pulsating voltage	-		-	
No-load current	>2.2mA(OFF)	<1.1mA(ON)	<1.1mA(OFF)	>2.2mA(ON)
Switching frequency	300HZ	100HZ	300HZ	100HZ
Response time	0.5ms	1ms	0.5ms	1ms
Switching hysteresis	<15%(Sr)		<15%(Sr)	
Repeat accuracy	<1.0% (Sr)		<1.0% (Sr)	
Protection level	IP67		IP67	
Working temperature	-25℃ - +70℃		-25℃ - +70℃	
Temperature drift	<1%(Sr)		<1%(Sr)	
Short circuit protection/reverse polarity protection	-		-	
Overload protection current	-		-	
Delay	<10ms		<10ms	
EMC	RFI>3V/m / EFT>1KV / ESD>4KV (contact)		RFI>3V/m / EFT>1KV / ESD>4KV (contact)	
Overload protection current	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	
Sensing surface material	PBT		PBT	
Connection method	2m oil-proof PVC cable 5. 0 Φ 2x0.34		2m oil-proof PVC cable 5. 0 Φ 2x0.34	
Product Model				
DC 2 wire 6-12V NAMUR	LB30-16NA-ZAF-H	LB30-25NA-ZBF-H	LB30-10NA-ZAF-H-LED	LB30-15NA-ZBF-H-LED

Product Parameters

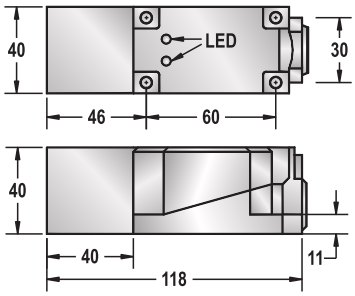
Explosion-proof

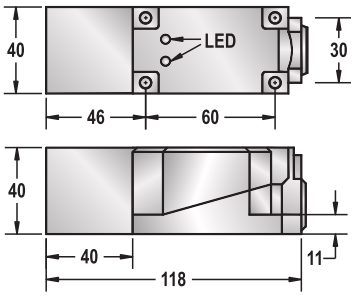


Size category	M 30	
● Shielded ○ Non-shielded	●	○
Sn: mm	16 mm	25 mm
Shell material	Stainless steel / Nickel-plated brass	
● LED display ○ No LED display	●	
Working voltage	6-12VDC	
Allowable pulsating voltage	-	
No-load current	>2.2mA(OFF)	<1.1mA(ON)
Switching frequency	300HZ	100HZ
Response time	0.5ms	1ms
Switching hysteresis	<15%(Sr)	
Repeat accuracy	<1.0% (Sr)	
Protection level	IP67	
Working temperature	-25°C - +70°C	
Temperature drift	<1%(Sr)	
Short circuit protection/reverse polarity protection	-	
Overload protection current	-	
Delay	<10ms	
EMC	RFI>3V/m / EFT>1KV / ESD>4KV (contact)	
Overload protection current	IEC 60947-5-2,Part 7.4.1 / IEC 60947-5-2,Part 7.4.2	
Sensing surface material	PBT	
Connection method	2m oil-proof PVC cable 5. 0 Φ 2x0.34	
Product Model		
DC 2 wire 6-12V NAMUR	LB30-16NA-ZAF-H-LED	LB30-25NA-ZBF-H-LED

Product Parameters

Explosion-proof

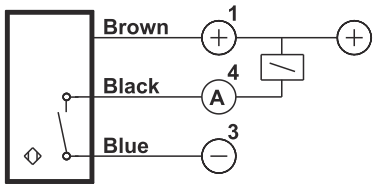




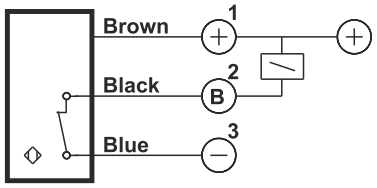
Size category	40x40	40x40
● Shielded ○ Non-shielded	●	○
Sn: mm	15 mm	30 mm
Shell material	PBT	PBT
● LED display ○ No LED display	○ | ●	○ | ●
Working voltage	6-12VDC	6-12VDC
Allowable pulsating voltage	-	-
No-load current	>2.2mA(ON) <1.1mA(OFF) | <1.1mA(OFF)>2.2mA(ON)	>2.2mA(ON) <1.1mA(OFF) | <1.1mA(OFF) >2.2mA(ON)
Switching frequency	100HZ	100HZ
Response time	1ms	1ms
Switching hysteresis	<15%(Sr)	<15%(Sr)
Repeat accuracy	<1.0% (Sr)	<1.0% (Sr)
Protection level	IP67	IP67
Working temperature	-25℃ - +70 ℃	-25℃ - +70 ℃
Temperature drift	<1%(Sr)	<1%(Sr)
Short circuit protection/reverse polarity protection	-	-
Overload protection current	-	-
Delay	<10ms	<10ms
EMC	RFI>3V/m / EFT>1KV / ESD>4KV (contact)	RFI>3V/m / EFT>1KV / ESD>4KV (contact)
Overload protection current	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
Sensing surface material	PBT	PBT
Connection method	Quick Connectors	Quick Connectors
Product Model		
DC 2 wire 6-12V NAMUR	LE40-15NA-ZAF-P | LE40-15NA-ZAF-P-LED	LE40-30NA-ZBF-P | LE40-30NA-ZBF-P-LED

Wiring Diagram

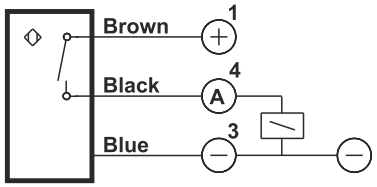
DC NPN NO



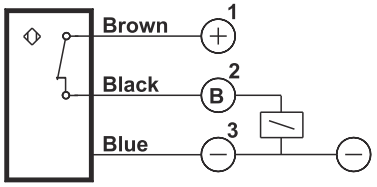
DC NPN NC



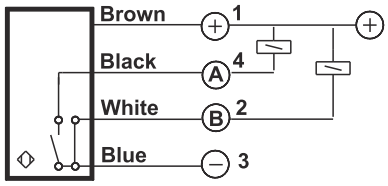
DC PNP NO



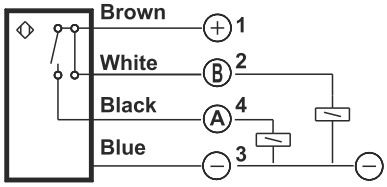
DC PNP NC



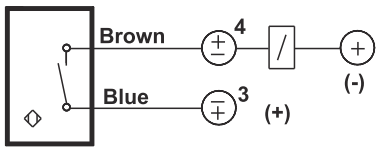
DC NPN NO&NC



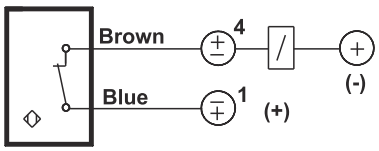
DC PNP NO&NC



DC 2 wire NO

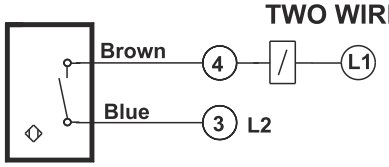


DC 2 wire NC



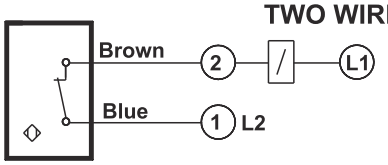
Plastic housing

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



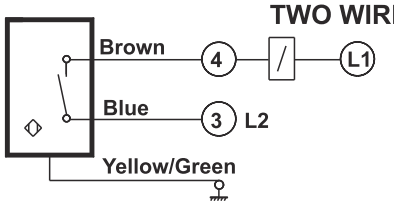
Plastic housing

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



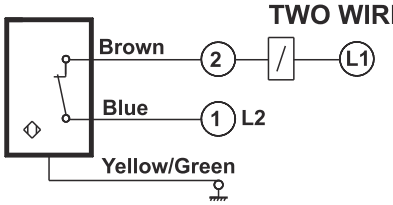
Metal housing

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



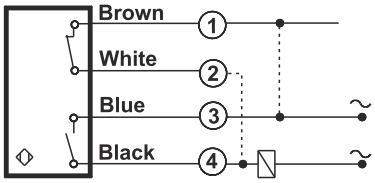
Metal housing

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

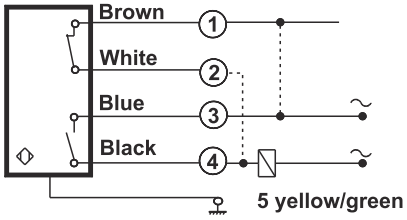


Wiring Diagram

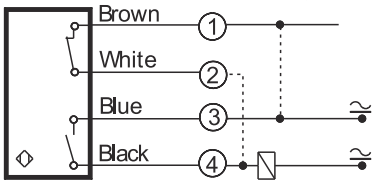
Plastic housing
AC 20-250V
NO,NC Changeable



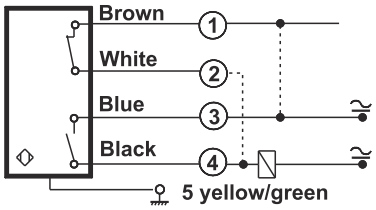
Metal housing
AC 20-250V
NO,NC Changeable



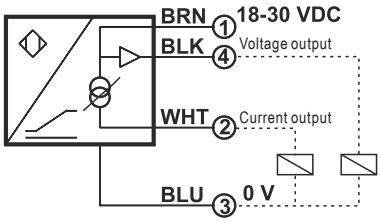
Plastic housing
AC 20-250V
NO,NC Changeable



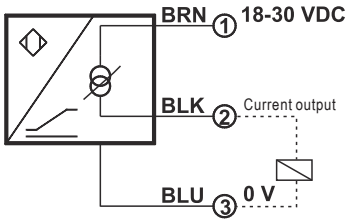
Metal housing
AC 20-250V
NO,NC Changeable



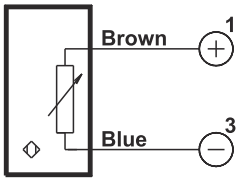
Analog (current + voltage output type)



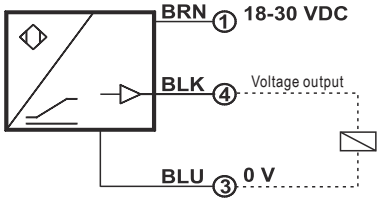
Analog (current output type)



Riot-proof DC 6-12V

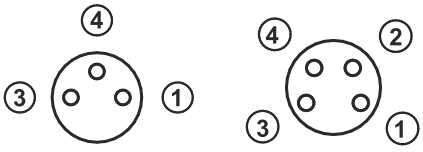


Analog (voltage output type)

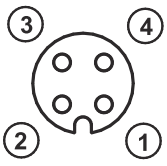


Connector Diagram

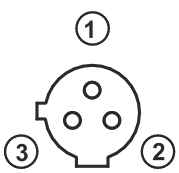
Used for M8 DC
M8



Used for M12 DC
M12



Used for M12 AC
M12



Used for M18 M30 DC or AC