

Common inductive proximity sensors series - M18 size DC 3 wire



Highlights

Inductive sensor

When the metal conductive objects close to the magnetic field and reach the induction area, high-frequency alternating magnetic field generated by a LC oscillation circuit, which is composed of a coil wound on a ferrite, through the eddy current effect generated by internal of metal objects to achieve non-contact detection.

Standards

All inductive proximity sensors conform to IEC 60947-5-2.

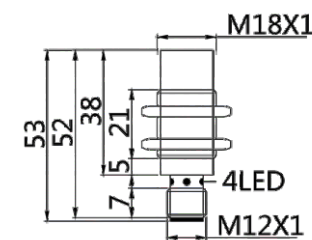
Housing material

The housing material of sensor including nickel plated copper, also stainless steel and plastic with resistance of compression and temperature rapid change. Most of square sensor is plastic housing. These materials can also be used to produce square sensors with adjustable sensing surface or compact (small square) sensors. Such sensors can be used in the occasions of limited installation space or required large detection range.

Product parameters

Features:

- Diameter M18 mm
- Sensing distance: P/N table
- Body material: Nickel plated brass
- Built-in electric protection
- Output: See P/N table
- Connection: M12, 4 pins
- Power supply: 24V DC, 3 wires



TECHNICAL INFORMATION

INDUCTIVE SPECIFICATION

	Sensing Distance	See P/N table	
	Correction Factor	Nav-ferrous metal	Factor
		Fe360	1
		Aluminum	0.35 ~ 0.45
		Brass	0.35 ~ 0.5
Copper		0.35 ~ 0.45	
Stainless Steel		0.35 ~ 0.45	
	Cast Iron	0.93 ~ 1.05	
	Nickel	0.65 ~ 0.75	
	Mounting	Non Flush type installation	
	Switching Histeresis	< 10%	

ELECTRICAL DATA

Operating Voltage	10~30V DC
Switching Frequency	3000Hz/800Hz
Voltage Drop	≤ 2.0 V
Leakage Current	< 0.01mA
Load Current	200 mA
No Load Current	≤ 10 mA (24V DC)
Hysteresis	< 15% (Sr)
Repeatability	< 1.0% (Sr)
Temperature Drift	< 1.0% (Sr)
Short Circuit Protection	Yes
Overload Protection	Yes
Polarity Reversal Protection	Yes

ENVIRONMENT DATA

Ambient Temperature	-25.....70 °C
Ingress Protection	IP67

MECHANICAL DATA

Housing Material	Nickel plated brass
Face Material	PBT

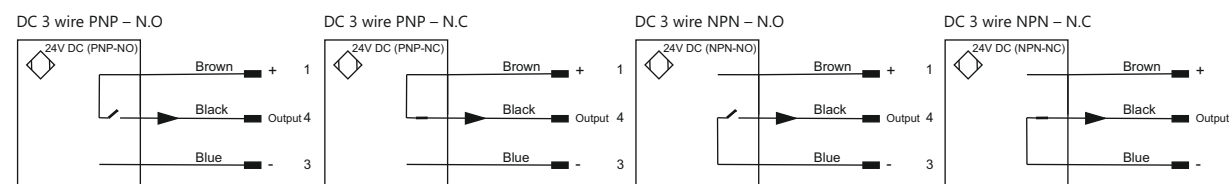
ELECTRICAL CONNECTION DATA

Connector	M12 Connector , 4 pins , Male type
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ACCESORIES

Cable	Two meter angled cable (P/N: V5PN-AM12402OF) (available)
Cable	Ten meter angled cable (P/N: V5PN-AM12410OF) (available)
Connector	M12, 4 PIN, Female type, IP67, Straight, Screw connection (P/N: EAM12FC4001A) (available)

Input/Output circuit



Application

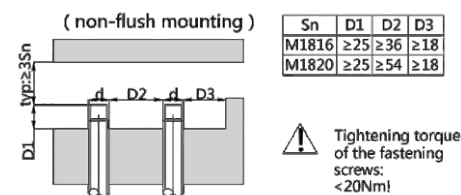
Inductive proximity switch is a low cost method for non-contact detection of metal objects, which is widely used in the following sectors, such as:

- Automotive Industry
- Metallurgical sector
- Machine tool sector
- Robot industry
- Conveyor system
- Paper and printing industry
- Mechanical Engineering

P/N table

Sensing distance	Sn: 8mm	Sn: 12mm
NPN , NO	VL1C-F18N-08NO-SM12	VL1C-F18N-12NO-SM12
NPN , NC	VL1C-F18N-08NC-SM12	VL1C-F18N-12NC-SM12
PNP , NO	VL1C-F18P-08NO-SM12	VL1C-F18P-12NO-SM12
PNP , NC	VL1C-F18P-08NC-SM12	VL1C-F18P-12NC-SM12

Installation



M12 Connector, 4 pin

