Common inductive proximity sensors series - M30 size DC 4 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.

Application

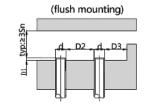
Inductive proximity switch is a low cost method for non-contact detection of metal objects, which is widely used in the following sectors, such as:

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

■ P/N table

Sensing distance	Sn: 10mm	Sn: 16mm	
4 Wire , PNP, NO+NC	VL1D-F30P-10NO/NC-LM12	VL1D-F30P-16NO/NC-LM12	
4 Wire , NPN, NO+NC	VL1D-F30N-10NO/NC-LM12	VL1D-F30N-16NO/NC-LM12	

■ Installation



Sn D1 D2 D3 M3010 ≥0 ≥30 ≥30 M3016 ≥3.5 ≥30 ≥30

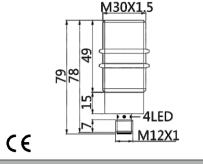
Tightening torque of the fastening

M12 Connector, 4 pin

Product parameters

Features:

- Diameter M30
- Sensing distance: P/N table
- Body material: Nickel plated brass
- Built-in electric protection Output: See P/N table
- Connection:
- M12 Connector , 4 pins , Male type • Power supply: 24V DC, 4 wires





Two meter angled cable (P/N: V5PN-AM12402OF) (available)

Ten meter angled cable (P/N: V5PN-AM12410OF) (available)

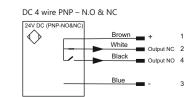
M12, 4 PIN, Male type, IP67, Straight, Female, Screw connection (P/N: EAM12MC4001A) (available)

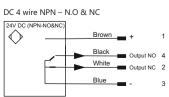
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V₅ Group

	Correction Factor	Nav-ferrous metal Fe360 Aluminum Brass Copper Stainless Steel Cast Iron	Factor 1 0.35 ~ 0.45 0.35 ~ 0.5 0.35 ~ 0.45 0.35 ~ 0.45	
		Nickel	0.93 ~ 0.45 0.93 ~ 1.05 0.65 ~ 0.75	
	Mounting	Flush type installation		
	Switching Histeresis	< 10%		
ELECTRICAL DATA				
	Operating Voltage	10~30V DC	10~30V DC	
	Switching Frequency	300Hz / 200Hz		
	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	-2570 ℃		
	Ingress Protection	IP67		
MECHANICAL DATA				
	Housing Material	Nickel plated brass	Nickel plated brass	
	Face Material	PBT		
ELECTRICAL CONNECTION DATA				
	Connector	M12 Connector , 4 pins , Male type		

■ Input/Output circuit





Cable

Cable

Connector