Common inductive proximity sensors series - Q40 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

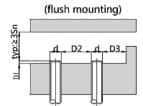
Inductive proximity switch is a low cost method for non-contact detection of metal objects, which is widely used in the following sectors, such as:

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

■ P/N table

Sensing distance	Sn: 15mm	
4 Wire , PNP, NO+NC	VL1D-FQ40P-15NO/NC-SM12	
4 Wire , NPN, NO+NC	VL1D-FQ40N-15NO/NC-SM12	

Installation



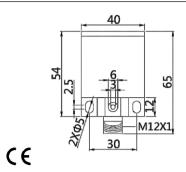
M12 Connector, 4 pin



Product parameters

Features: • Diameter Q40

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





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INDUCTIVE SPECIFICATION			
	Sensing Distance	See P/N table	
	Correction Factor	Nav-ferrous metal Fe360 Aluminum Brass Copper Stainless Steel Cast Iron Nickel	Factor 1 0.35 ~ 0.45 0.35 ~ 0.5 0.35 ~ 0.45 0.35 ~ 0.45 0.35 ~ 0.45 0.93 ~ 1.05 0.65 ~ 0.75
	Mounting	Flush type installation	
	Switching Histeresis	< 10%	
ELECTRICAL DATA			
	Operating Voltage	10~30V DC	
	Switching Frequency	150Hz	
	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	
	Face Material	PBT	
ELECTRICAL CONNECTION	DATA	<u> </u>	
	Connector	M12, 4 pins connector	
ACCESORIES		<u> </u>	
	Cable	Two meter angled cable (P/N:	V5PN-AM12402OF) (available
	Cable	Ten meter angled cable (P/N:	V5PN-AM12410OF) (available
	Connector	M12, 4 PIN, Male type, IP67, connection (P/N: EAM12MC	
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■ Input/Output circuit

