

Common inductive proximity sensors series - Q40 size

AC 2 wire, AC/DC 2 wire, Switching output



Application

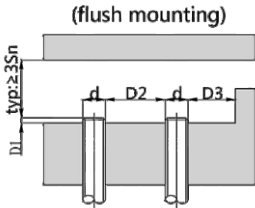
Inductive proximity switch is a low cost method for non-contact detection of metal objects, which is widely used in the following sectors, such as:

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

P/N table

Sensing distance	Sn: 15mm		
2 Wire , AC, NO	VL1A-FQ40-15NO-ACLM12		
2 Wire , AC, NC	VL1A-FQ40-15NC-ACLM12		
2 Wire , AC/DC, NO	VL1A-FQ40-15NO-AC/DCLM12		
2 Wire , AC/DC, NC	VL1A-FQ40-15NC-AC/DCLM12		

Installation



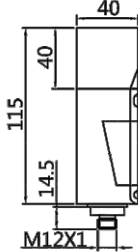
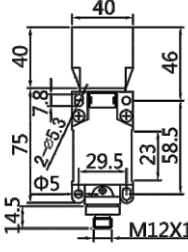

M12 Connector, 4 pin



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

<div>Features:</div> <ul style="list-style-type: none">• 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: 20~250V AC ; 20~250V AC/DC	<div></div> <div></div> <div></div>																	
TECHNICAL INFORMATION																		
INDUCTIVE SPECIFICATION																		
	<div>Sensing Distance</div> <div>Correction Factor</div> <div>Mounting</div> <div>Switching Histeresis</div>	<div>See P/N table</div> <table><tr><td>Nav-ferrous metal</td><td>Factor</td></tr><tr><td>Fe360</td><td>1</td></tr><tr><td>Aluminum</td><td>0.35 ~ 0.45</td></tr><tr><td>Brass</td><td>0.35 ~ 0.5</td></tr><tr><td>Copper</td><td>0.35 ~ 0.45</td></tr><tr><td>Stainless Steel</td><td>0.35 ~ 0.45</td></tr><tr><td>Cast Iron</td><td>0.93 ~ 1.05</td></tr><tr><td>Nickel</td><td>0.65 ~ 0.75</td></tr></table> <div>Flush type installation</div> <div>< 10%</div>	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
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	<div>Operating Voltage</div> <div>Switching Frequency</div> <div>Voltage Drop</div> <div>Leakage Current</div> <div>Load Current</div> <div></div> <div>Hysteresis</div> <div>Repeatability</div> <div>Temperature Drift</div> <div>Short Circuit Protection</div> <div>Overload Protection</div> <div>Polarity Reversal Protection</div>	<div>20~250V AC ; 20~250V AC/DC</div> <div>25Hz / 25Hz AC ; 40Hz DC</div> <div>≤ 8V AC/ 10V AC; 8V DC</div> <div>≤ 1.8mA / ≤ 2.5mA</div> <div>Max.load:400 mA ; Min.load:5mA /</div> <div>Max.load:200 mA ; Min.load:5mA /</div> <div>< 15% (Sr)</div> <div>< 1.0% (Sr)</div> <div>< 10% (Sr)</div> <div>Yes</div> <div>Yes</div> <div>Yes</div>																
ENVIRONMENT DATA																		
	<div>Ambient Temperature</div> <div>Ingress Protection</div>	<div>-25.....70 °C</div> <div>IP67</div>																
MECHANICAL DATA																		
	<div>Housing Material</div> <div>Face Material</div>	<div>Nickel plated brass</div> <div>PBT</div>																
ELECTRICAL CONNECTION DATA																		
	<div>Connector</div>	<div>M12, 4 pins connector</div>																
ACCESORIES																		
	<div>Cable</div> <div>Cable</div> <div>Connector</div>	<div>Two meter angled cable (P/N: V5PN-AM12402OF) (available)</div> <div>Ten meter angled cable (P/N: V5PN-AM12410OF) (available)</div> <div>M12, 4 PIN, Male type, IP67, Straight, Female, Screw connection (P/N: EAM12MC4001A) (available)</div>																

Input/Output circuit

