

Common inductive proximity sensors series - Q40 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.

■ 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

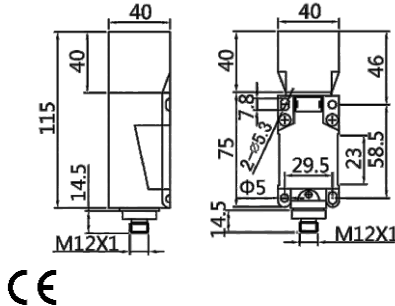

■ P/N table

Sensing distance	Sn: 15mm	Sn: 20mm	Sn: 30mm
NPN , NO	VL1C-FQ40N-15NO-LM12	VL1C-FQ40N-20NO-LM12	VL1C-FQ40N-30NO-LM12
NPN , NC	VL1C-FQ40N-15NC-LM12	VL1C-FQ40N-20NC-LM12	VL1C-FQ40N-30NC-LM12
PNP , NO	VL1C-FQ40P-15NO-LM12	VL1C-FQ40P-20NO-LM12	VL1C-FQ40P-30NO-LM12
PNP , NC	VL1C-FQ40P-15NC-LM12	VL1C-FQ40P-20NC-LM12	VL1C-FQ40P-30NC-LM12

■ Installation



■ 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: 24V DC, 3 wires	<div></div>	<div></div>																
	<div>TECHNICAL INFORMATION</div>																	
<div>INDUCTIVE SPECIFICATION</div>																		
	Sensing Distance	See P/N table																
	Correction Factor	<table><tr><th>Nav-ferrous metal</th><th>Factor</th></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>	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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Mounting	Flush / Quasi Flush type installation																	
Switching Histeresis	< 10%																	
<div>ELECTRICAL DATA</div>																		
	Operating Voltage	10~30V DC																
	Switching Frequency	300Hz / 300Hz / 100Hz																
	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																
<div>ENVIRONMENT DATA</div>																		
	Ambient Temperature	-25.....70 °C																
	Ingress Protection	IP67																
<div>MECHANICAL DATA</div>																		
	Housing Material	PBT																
	Face Material	PBT																
<div>ELECTRICAL CONNECTION DATA</div>																		
	Connector	M12, 4 pins connector																
<div>ACCESORIES</div>																		
	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, Female, Screw connection (P/N: EAM12FC4001A) (available)																

■ Input/Output circuit

