

# Miniature inductive proximity sensors series - M5 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.

**Special miniature sensors**  
Many engineers are often faced with a particular requirements to fit inductive sensors into tight spaces.  
The inductive sensors of the Miniature Series are fully integrated without external amplifier and our models were equipped with reverse polarity protection and short-circuit protected switching outputs.  
Also an optical switching indicator is always built-in.

### Benefits

- High quality sensors series
- Space-saving installation and significant flexibility in machine design thanks to the compact size
- High positioning accuracy and precise switching behavior for reliable detection of fast handling and assembly processes
- Bright sensors led indicators for easy power and detection recognition
- High switching frequency
- Water proof stainless steel body design for high humidity stability IP67 degree protection

### Application

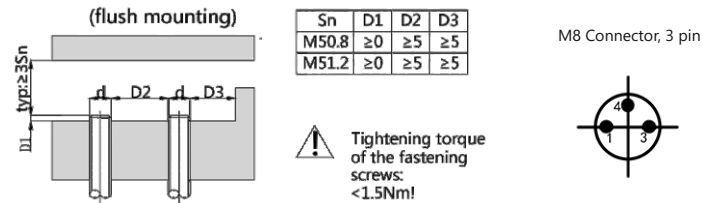
Inductive proximity switch is a low cost method for non-contact detection of metal objects, which is widely used in the following sectors, such as:

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

### P/N table

Sensing distance	Sn: 0.8mm	Sn: 1.2mm
NPN , NO	VL1C-F05N-0.8NO-SCM8	VL1C-F05N-1.2NO-SCM8
NPN , NC	VL1C-F05N-0.8NC-SCM8	VL1C-F05N-1.2NC-SCM8
PNP , NO	VL1C-F05P-0.8NO-SCM8	VL1C-F05P-1.2NO-SCM8
PNP , NC	VL1C-F05P-0.8NC-SCM8	VL1C-F05P-1.2NC-SCM8

### Installation



### Product parameters

<div>Features:</div> <ul style="list-style-type: none"><li>• Diameter M5</li><li>• Sensing distance: P/N table</li><li>• Body material: Stainless steel</li><li>• Built-in electric protection</li><li>• Output: See P/N table</li><li>• Connection: PVC Cable 35mm ; 3*0.15mm: 3 pin, M8 male molded connector</li><li>• Power supply: 24V DC, 3 wires</li></ul>	<div></div> <div>CE</div>	<div></div> <div>CE</div>																
TECHNICAL INFORMATION																		
INDUCTIVE SPECIFICATION																		
	Sensing Distance	See P/N table																
	Correction Factor	<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>	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
	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	Flush type installation																	
Switching Histeresis	< 10%																	
ELECTRICAL DATA																		
	Operating Voltage	10~30V DC																
	Switching Frequency	2000Hz																
	Voltage Drop	≤ 2.0 V																
	Leakage Current	< 0.01mA																
	Load Current	100 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	Stainless steel body																
	Face Material	POM																
ELECTRICAL CONNECTION DATA																		
	Connection	Short PVC cable/30mm ; 3*0.15mm² , M8, 3 pins connector																
ACCESORIES																		
	Cable	Two meter angled cable (P/N: V5PN-AM8302OF) (available)																
	Cable	Ten meter angled cable (P/N: V5PN-AM8310OF) (available)																
	Connector	M8, 3 PIN, Male type, IP67, Straight, Wires with screw connection (P/N: EAM8MC3001A) (available)																

### Input/Output circuit

