

# Common inductive proximity sensors series - M12 size DC 2 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

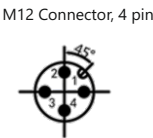
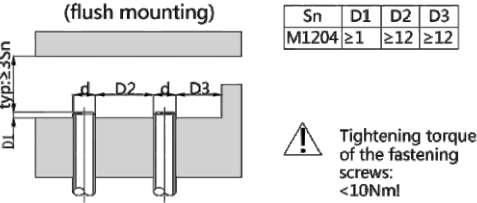
Inductive proximity switch is a low cost method for non-contact detection of metal objects, which is widely used in the following sectors, such as:

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

## ■ P/N table

Sensing distance	Sn: 4mm		
2 Wire , NO	VL1B-F12-04NO-LM12		
2 Wire , NC	VL1B-F12-04NC-LM12		

## ■ Installation



## ■ Product parameters

<b>Features:</b> <ul style="list-style-type: none"><li>• Diameter M12</li><li>• Sensing distance: P/N table</li><li>• Body material: Nickel plated brass</li><li>• Built-in electric protection</li><li>• Output: See P/N table</li><li>• Connection: M12 Connector , 4 pins , Male type</li><li>• Power supply: 24V DC, 2 wires</li></ul>	<p>CE</p>	<p>CE</p>
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### TECHNICAL INFORMATION

#### INDUCTIVE SPECIFICATION

	Sensing Distance	See P/N table	
	Correction Factor	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 Hysteresis	< 10%	

#### ELECTRICAL DATA

	Operating Voltage	10~60V DC
	Switching Frequency	1000Hz
	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	-25.....70 ℃
	Ingress Protection	IP67

#### MECHANICAL DATA

	Housing Material	Nickel plated brass
	Face Material	PBT

#### ELECTRICAL CONNECTION DATA

	Connector	M12 Connector , 4 pins , Male type
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#### ACCESORIES

	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, Straight, Female, Screw connection (P/N: EAM12MC4001A) (available)

## ■ Input/Output circuit

