Inductive proximity sensor

# **V**<sub>5</sub> Group

# Common inductive proximity sensors series - M30 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

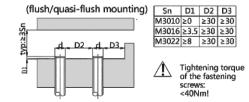
Inductive proximity switch is a low cost method for non-contact detection of metal objects, which is widely used in the following sectors, such as:

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

#### ■ P/N table

Sensing distance	Sn: 10mm	Sn: 16mm	Sn: 22mm
NPN , NO	VL1C-F30N-10NO-LM12	VL1C-F30N-16NO-LM12	VL1C-F30N-22NO-LM12
NPN , NC	VL1C-F30N-10NC-LM12	VL1C-F30N-16NC-LM12	VL1C-F30N-22NC-LM12
PNP , NO	VL1C-F30P-10NO-LM12	VL1C-F30P-16NO-LM12	VL1C-F30P-22NO-LM12
PNP , NC	VL1C-F30P-10NC-LM12	VL1C-F30P-16NC-LM12	VL1C-F30P-22NC-LM12

### ■ Installation



M12 Connector, 4 pin



# Product parameters

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# M30X1.5 Features: Diameter M30 Sensing distance: P/N table Body material: Nickel plated brass Built-in electric protection Output: See P/N table Connection: M12, 4 pins Power supply: 24V DC, 3 wires $\epsilon$

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 Histeresis	< 10%		
ELECTRICAL DATA				
	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		
ENVIRONMENT DATA				
	Ambient Temperature	-2570 ℃		
	Ingress Protection	IP67		
MECHANICAL DATA				
	Housing Material	Nickel plated brass		
	Face Material	PBT		
ELECTRICAL CONNECTION DATA				
	Connector	M12 Connector , 4 pins , Male type		
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, Female type, IP67, Straight, Screw connection (P/N: EAM12FC4001A) (available)		

# ■ Input/Output circuit

