

Common inductive proximity sensors series - M8 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

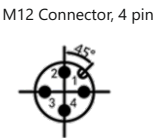
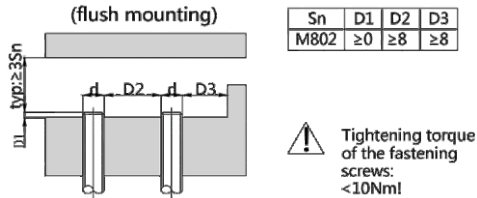
Inductive proximity switch is a low cost method for non-contact detection of metal objects, which is widely used in the following sectors, such as:

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

P/N table

| Sensing distance | Sn: 2mm | | |
|------------------|-------------------|--|--|
| 2 Wire , NO | VL1B-F08-02NO-M12 | | |
| 2 Wire , NC | VL1B-F08-02NC-M12 | | |
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Installation



Product parameters

Features:

- Diameter M8
- Sensing distance: P/N table
- Body material: Nickel plated brass
- Built-in electric protection
- Output: See P/N table
- Connection: M8 Connector , 3 pins , Male type
- Power supply: 24V DC, 2 wires

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 | Stainless still |
| | Face Material | POM |

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, Male type, IP67, Straight, Female, Screw connection (P/N: EAM12MC4001A) (available) |

Input/Output circuit

