# Inductive proximity sensors series - M12 NAMUR 2 wire, DC Switching output

## 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.

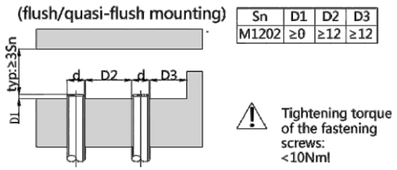
## Application

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 , DC, NAMUR | VL1N-F12-2NO-DC2M | | |
| | | | |
| | | | |
| | | | |

## Installation

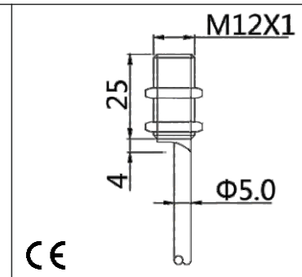



| Sn | D1 | D2 | D3 |
|---|---|---|---|
| M1202 | ≥0 | ≥12 | ≥12 |

Tightening torque of the fastening screws: <10Nml

## Product parameters

**Features:**
- Diameter M12
- Sensing distance: P/N table
- Body material: Stainless steel
- Built-in electric protection
- Output: See P/N table
- Connection: PVC cable/2m ; 2*0.5mm²
- Power supply: 6~12V DC




| | | |
|---|---|---|
| **TECHNICAL INFORMATION** | | |
| **INDUCTIVE SPECIFICATION** | | |
| | Sensing Distance | See P/N table |
| | Correction Factor | **Nav-ferrous metal** / **Factor**<br>Fe360 / 1<br>Aluminum / 0.35 ~ 0.45<br>Brass / 0.35 ~ 0.5<br>Copper / 0.35 ~ 0.45<br>Stainless Steel / 0.35 ~ 0.45<br>Cast Iron / 0.93 ~ 1.05<br>Nickel / 0.65 ~ 0.75 |
| | Mounting | Flush type installation |
| | Switching Histeresis | < 10% |
| **ELECTRICAL DATA** | | |
| | Operating Voltage | 6~12V DC |
| | Switching Frequency | 2000Hz |
| | Voltage Drop | ≤ 6V DC |
| | Leakage Current | > 2.2mA (OFF) / < 1.1mA (ON) |
| | Load Current | Max.load:400 mA ; Min.load:5mA / |
| | | Max.load:200 mA ; Min.load:5mA / |
| | Hysteresis | < 15% (Sr) |
| | Repeatability | < 2.0% (Sr) |
| | Temperature Drift | < 10% (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 | Brass, nickel plated |
| | Face Material | PBT |
| **ELECTRICAL CONNECTION DATA** | | |
| | Connector | PVC cable/2m ; 2*0.5mm² |
| **ACCESORIES** | | |
| | Cable | Two meter straight cable (P/N: V5PN-SM8302OF) (available) |
| | Cable | Ten meter straight cable (P/N: V5PN-SM8310OF) (available) |
| | Connector | M8, 3 PIN, Male type, IP67, Straight, Female, Screw connection (P/N: EAM8MC3001A) (available) |

## Input/Output circuit

DC 6~12V , 2 wire N.O