# Product datasheet

Specifications



## inductive sensor XS5 M12 - L35mm - brass - Sn2mm - 12..24VDC - cable 2m

XS512B1NAL2

## Main

| | |
|---|---|
| **Range of product** | Telemecanique Inductive proximity sensors XS |
| **Series name** | General purpose |
| **Sensor type** | Inductive proximity sensor |
| **Device application** | - |
| **Sensor name** | XS5 |
| **Sensor design** | Cylindrical M12 |
| **Size** | 37 mm |
| **Body type** | Fixed |
| **Detector flush mounting acceptance** | Flush mountable |
| **Material** | Metal |
| **Type of output signal** | Discrete |
| **Wiring technique** | 3-wire |
| **[Sn] nominal sensing distance** | 2 mm |
| **Discrete output function** | 1 NO |
| **Output circuit type** | DC |
| **Discrete output type** | NPN |
| **Electrical connection** | cable |
| **Cable length** | 2 m |
| **[Us] rated supply voltage** | 12...24 V DC with reverse polarity protection |
| **Switching capacity in mA** | <= 200 mA DC with overload and short-circuit protection |
| **IP degree of protection** | IP68 double insulation conforming to IEC 60529<br>IP69K conforming to DIN 40050 |

## Complementary

| | |
|---|---|
| **Thread type** | M12 x 1 |
| **Detection face** | Frontal |
| **Front material** | PPS |
| **Enclosure material** | Nickel plated brass |
| **Operating zone** | 0…1.6 mm |

Disclaimer: This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications

| | |
|---|---|
| **Differential travel** | 1...15% of Sr |
| **Cable composition** | 3 x 0.34 mm² |
| **Wire insulation material** | PvR |
| **Status LED** | Output state: 1 LED (yellow) |
| **Supply voltage limits** | 10…36 V DC |
| **Switching frequency** | <= 5000 Hz |
| **Maximum voltage drop** | <2 V (closed) |
| **Current consumption** | <= 10 mA no-load |
| **Maximum delay first up** | 10 ms |
| **Maximum delay response** | 0.1 ms |
| **Maximum delay recovery** | 0.1 ms |
| **Marking** | CE |
| **Threaded length** | 25 mm |
| **Length** | 35 mm |
| **Net weight** | 0.075 kg |

## Environment

| | |
|---|---|
| **Product certifications** | CSA<br>UL |
| **Ambient air temperature for operation** | -25…70 °C |
| **Ambient air temperature for storage** | -40…85 °C |
| **Vibration resistance** | 25 gn amplitude = +/- 2 mm (f = 10…55 Hz) conforming to IEC 60068-2-6 |
| **Shock resistance** | 50 gn for 11 ms conforming to IEC 60068-2-27 |

## Packing Units

| | |
|---|---|
| **Unit Type of Package 1** | PCE |
| **Number of Units in Package 1** | 1 |
| **Package 1 Weight** | 73.0 g |
| **Package 1 Height** | 4.5 cm |
| **Package 1 width** | 9.5 cm |
| **Package 1 Length** | 13.2 cm |
| **Unit Type of Package 2** | S02 |
| **Number of Units in Package 2** | 22 |
| **Package 2 Weight** | 2.114 kg |
| **Package 2 Height** | 15 cm |
| **Package 2 width** | 30 cm |
| **Package 2 Length** | 40 cm |
| **Unit Type of Package 3** | PAL |
| **Number of Units in Package 3** | 352 |
| **Package 3 Weight** | 33.088 kg |
| **Package 3 Height** | 60 cm |
| **Package 3 width** | 80 cm |
| **Package 3 Length** | 352 cm |

## Offer Sustainability

| | |
|---|---|
| **Sustainable offer status** | Green Premium product |
| **REACh Regulation** | REACh Declaration |
| **EU RoHS Directive** | Pro-active compliance (Product out of EU RoHS legal scope)<br>EU RoHS Declaration |
| **Mercury free** | Yes |
| **RoHS exemption information** | Yes |
| **Environmental Disclosure** | Product Environmental Profile |
| **Circularity Profile** | End of Life Information |

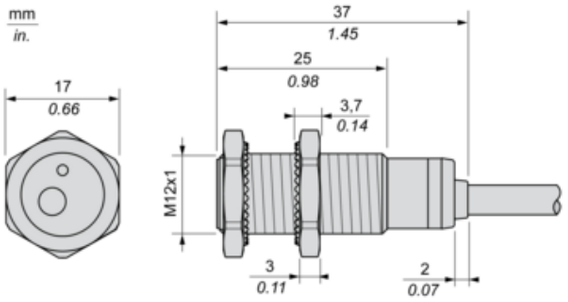
## Contractual warranty

| | |
|---|---|
| **Warranty** | 18 months |

# Product datasheet XS512B1NAL2

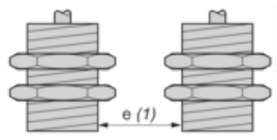
Dimensions Drawings

## Dimensions



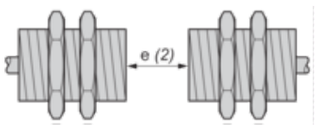
## Minimum Mounting Distances

Side by side



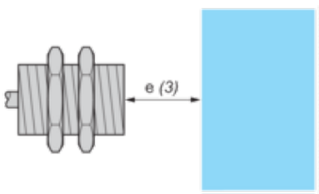

**e (1) ≥** 4 mm/0.16 in.

Face to face




**e (2) ≥** 24 mm/0.94 in.

Facing a metal object

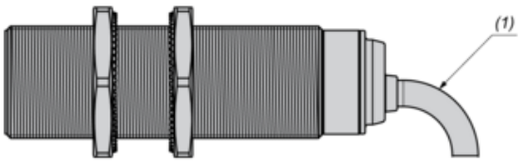



**e (3) ≥** 6 mm/0.24 in.

# Product datasheet XS512B1NAL2

Mounting and Clearance

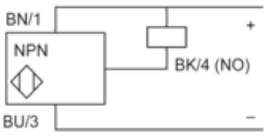
## Mounting




**(1)** Bending cable: 4 x external cable diameter

## Wiring Schemes

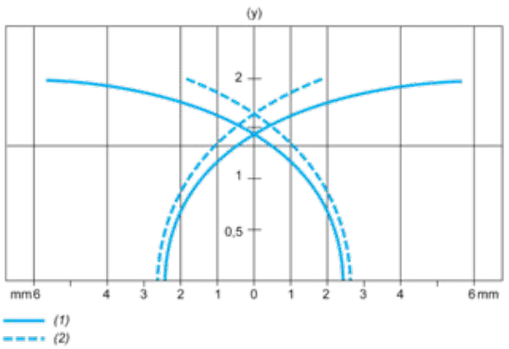
**NPN**




**BU :** Blue
**BN :** Brown
**BK :** Black

## Performance Curves

### Standard Steel Target : 12x12x1 mm




**(1)** Pick-up points

**(2)** Drop-out points (object approaching from the side)

**(y)** Sensing distance in mm