# Product data sheet
## Characteristics

# XX512A2PAM8
## ultrasonic sensor cylindrical M12 - Sn 0.1 m - NO - M8 connector



### Main

| | |
|---|---|
| Range of product | OsiSense XX |
| Sensor type | Ultrasonic sensor |
| Series name | General purpose |
| Sensor name | XX5 |
| Sensor design | Cylindrical M12 |
| Detection system | Diffuse |
| [Sn] nominal sensing distance | 0.1 m fixed |
| Material | Plastic |
| Type of output signal | Discrete |
| Discrete output function | 1 NO |
| Wiring technique | 3-wire |
| Discrete output type | PNP |
| [Us] rated supply voltage | 12...24 V DC with reverse polarity protection |
| Electrical connection | Male connector M8 3 pins |
| [Sd] sensing range | 0.0064…0.102 m |
| Beam angle | 10 ° |
| IP degree of protection | IP67 conforming to IEC 60529 |

### Complementary

| | |
|---|---|
| Enclosure material | ULTEM |
| Front material | Epoxy |
| Thread type | M12 x 1 |
| Supply voltage limits | 10…28 V DC |
| [Sa] assured operating distance | 0.0064…0.102 m |
| Maximum differential travel | 0.7 mm |
| Blind zone | 0…6.4 mm |
| Transmission frequency | 500 kHz |
| Repeat accuracy | 0.7 % |
| Deviation angle from 90° of object to be detected | -10…10 ° |
| Minimum size of detected object | Cylinder diameter 2.5 mm<br>Flat bar 1 mm wide |
| Status LED | Supply on: 1 LED (green)<br>Output state: 1 LED (yellow) |
| Current consumption | 25 mA |
| Maximum switching current | 100 mA with overload and short-circuit protection |
| Maximum voltage drop | 1 V |
| Switching frequency | <= 125 Hz |
| Maximum delay first up | 20 ms |
| Maximum delay response | 3 ms |
| Maximum delay recovery | 3 ms |
| Marking | CE |
| Threaded length | 38 mm |
| Height | 12 mm |
| Width | 12 mm |
| Depth | 50 mm |
| Net weight | 0.011 kg |

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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.
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## Environment

| | |
|---|---|
| Standards | IEC 60947-5-2 |
| Product certifications | UL |
| Ambient air temperature for operation | -20…65 °C |
| Ambient air temperature for storage | -40…80 °C |
| Vibration resistance | +/-1 mm conforming to IEC 60068-2-6 (f = 10…55 Hz) |
| Shock resistance | 30 gn in all 3 axes for 11 ms conforming to IEC 60068-2-27 |
| Resistance to electrostatic discharge | 8 kV level 4 conforming to IEC 61000-4-2 |
| Resistance to electromagnetic fields | 10 V/m level 3 conforming to IEC 61000-4-3 |
| Resistance to fast transients | 1 kV level 3 conforming to IEC 61000-4-4 |

## Packing Units

| | |
|---|---|
| Unit Type of Package 1 | PCE |
| Number of Units in Package 1 | 1 |
| Package 1 Weight | 24 g |
| Package 1 Height | 6.6 cm |
| Package 1 width | 4 cm |
| Package 1 Length | 9.5 cm |
| Unit Type of Package 2 | S02 |
| Number of Units in Package 2 | 30 |
| Package 2 Weight | 1.287 kg |
| Package 2 Height | 15 cm |
| Package 2 width | 30 cm |
| Package 2 Length | 40 cm |

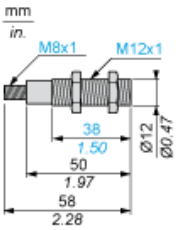
## Offer Sustainability

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

## Contractual warranty

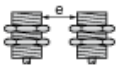
| | |
|---|---|
| Warranty | 18 months |

## Dimensions



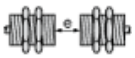
## Minimum Mounting Distances

### Side by side




e : respect the distances indicated on the detection curves

### Face to face

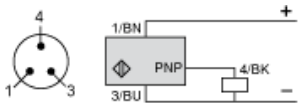



e > 4 x Sn

## Wiring Diagram

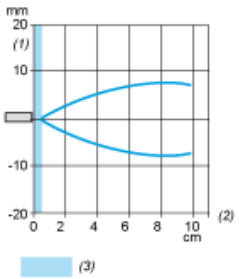
### 3-Wire Type

NO outputs, PNP




(1) (+)
(3) (-)
(4) Output
BN Brown
BU Blue
BK Black

## Curves




(1) Parallel movement
(2) Distance
(3) Blind zone for diffuse sensors.