

# Product data sheet

Specifications



## Ultrasonic sensors XX, ultrasonic sensor parallelepipedic, Sn 0.5 m, NO, M12 connector

XX7V1A1PAM12

### Main

|                               |  |
|-------------------------------|--|
| Range of product              | Telemecanique Ultrasonic sensors XX            |
| Sensor type                   | Ultrasonic sensor                              |
| Series name                   | General purpose                                |
| Sensor name                   | XX7  |
| Sensor design                 | Flat form 18 x 33 x 60 + cylindrical M18       |
| Detection system              | Diffuse  |
| [Sn] nominal sensing distance | 0.5 m adjustable with remote teach push-button |
| 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 M12 4 pins                      |
| [Sd] sensing range            | 0.051...0.508 m                                |
| Beam angle                    | 12 °   |
| IP degree of protection       | IP67 conforming to IEC 60529                   |

### Complementary

|                                 |  |
|---------------------------------|--|
| Enclosure material              | Valox  |
| Front material                  | Epoxy  |
| Supply voltage limits           | 10...28 V DC   |
| [Sa] assured operating distance | 0.051...0.508 m (teach mode)                                       |
| Maximum differential travel     | 2.5 mm   |
| Blind zone                      | 0...51 mm  |
| Transmission frequency          | 300 kHz  |
| Repeat accuracy                 | 1.27 %   |
| Minimum size of detected object | Cylinder diameter 2.5 mm at 0.15 m<br>Flat bar 1 mm wide at 0.15 m |
| Status LED                      | Supply on: 1 LED (green)   |

Output state: 1 LED (yellow)

|                                  |          |
|----------------------------------|----------|
| <b>Current consumption</b>       | 40 mA    |
| <b>Maximum switching current</b> | 100 mA   |
| <b>Maximum voltage drop</b>      | 1 V      |
| <b>Switching frequency</b>       | <= 40 Hz |
| <b>Maximum delay first up</b>    | 100 ms   |
| <b>Maximum delay response</b>    | 10 ms    |
| <b>Maximum delay recovery</b>    | 10 ms    |
| <b>Marking</b>                   | CE       |
| <b>Height</b>                    | 44 mm    |
| <b>Width</b>                     | 18 mm    |
| <b>Depth</b>                     | 60 mm    |

## Environment

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

## Packing Units

|                                     |         |
|-------------------------------------|---------|
| <b>Unit Type of Package 1</b>       | PCE     |
| <b>Number of Units in Package 1</b> | 1       |
| <b>Package 1 Height</b>             | 4.0 cm  |
| <b>Package 1 Width</b>              | 8.5 cm  |
| <b>Package 1 Length</b>             | 8.7 cm  |
| <b>Package 1 Weight</b>             | 60.0 g  |
| <b>Unit Type of Package 2</b>       | S01     |
| <b>Number of Units in Package 2</b> | 15      |
| <b>Package 2 Height</b>             | 15.0 cm |
| <b>Package 2 Width</b>              | 15.0 cm |
| <b>Package 2 Length</b>             | 40.0 cm |
| <b>Package 2 Weight</b>             | 1.17 kg |
| <b>Unit Type of Package 3</b>       | S02     |
| <b>Number of Units in Package 3</b> | 30      |
| <b>Package 3 Height</b>             | 15.0 cm |
| <b>Package 3 Width</b>              | 30.0 cm |

|                  |          |
|------------------|----------|
| Package 3 Length | 40.0 cm  |
| Package 3 Weight | 2.238 kg |

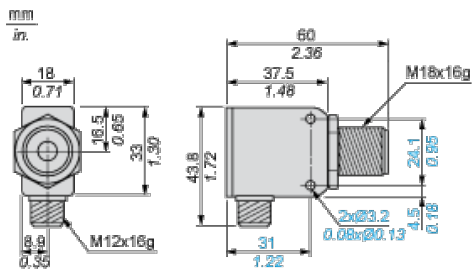
## Offer Sustainability

|                            |   |
|----------------------------|---|
| Sustainable offer status   | Green Premium product   |
| REACH Regulation           | <a href="#">REACH Declaration</a>   |
| EU RoHS Directive          | Pro-active compliance (Product out of EU RoHS legal scope)<br><a href="#">EU RoHS Declaration</a>   |
| Mercury free               | Yes   |
| RoHS exemption information | Yes   |
| Environmental Disclosure   | <a href="#">Product Environmental Profile</a>   |
| Circularity Profile        | <a href="#">End of Life Information</a>   |
| California proposition 65  | WARNING: This product can expose you to chemicals including: Diisononyl phthalate (DINP), which is known to the State of California to cause cancer, and Di-isodecyl phthalate (DIDP), which is known to the State of California to cause birth defects or other reproductive harm. For more information go to <a href="http://www.P65Warnings.ca.gov">www.P65Warnings.ca.gov</a> |

## Contractual warranty

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

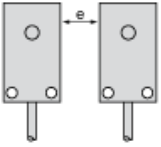
Dimensions



**Minimum Mounting Distances**

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**Side by side**



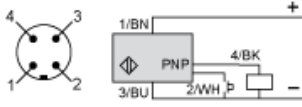
e :      respect the distances indicated on the detection curves

**Wiring Diagram**

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**3-Wire Type**

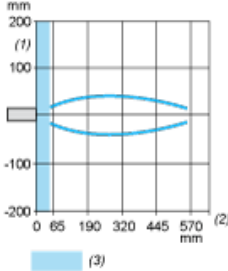
NO outputs, PNP



- |           |                  |
|-----------|------------------|
| (1)       | (+)              |
| (2)       | Teach input (WH) |
| (3)       | (-)              |
| (4)       | Output           |
| <b>BN</b> | Brown            |
| <b>WH</b> | White            |
| <b>BU</b> | Blue             |
| <b>BK</b> | Black            |

Curves

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

Recommended replacement(s)