

# XX230A12HA00M12

Ultrasonic sensors XX, ultrasonic sensor cylindrical M30, Sn=1 m, dual level NO PNP sync, M12



## Main

|                               |   |
|-------------------------------|---|
| Range of product              | Telemecanique Ultrasonic sensors XX           |
| Sensor type                   | Ultrasonic sensor                             |
| Series name                   | General purpose                               |
| Sensor name                   | XX2   |
| Sensor design                 | Cylindrical M30                               |
| Detection system              | Diffuse                                       |
| [Sn] nominal sensing distance | 1 m adjustable with teach push-button         |
| Material                      | Plastic                                       |
| Type of output signal         | Discrete                                      |
| Discrete output function      | 2 NO  |
| Wiring technique              | 5-wire  |
| Discrete output type          | PNP   |
| [Us] rated supply voltage     | 12...24 V DC with reverse polarity protection |
| Electrical connection         | Male connector M12 5 pins                     |
| Product specific application  | For 2 levels monitoring                       |
| [Sd] sensing range            | 0.051...0.991 m                               |
| Beam angle                    | 10 °  |
| IP degree of protection       | IP67 conforming to IEC 60529                  |

## Complementary

|   |  |
|---|--|
| Enclosure material                                | ULTEM  |
| Front material                                    | Silicone   |
| Thread type                                       | M30 x 1.5  |
| Supply voltage limits                             | 10...28 V DC   |
| Function available                                | With synchronisation mode  |
| [Sa] assured operating distance                   | 0.051...0.991 m (teach mode)   |
| Maximum differential travel                       | 2.5 mm   |
| Blind zone  | 0...51 mm  |
| Transmission frequency                            | 200 kHz  |
| Repeat accuracy                                   | 0.9 %  |
| Deviation angle from 90° of object to be detected | -10...10 °   |
| Minimum size of detected object                   | Cylinder diameter 1.6 mm at 0.635 m  |
| Status LED  | Output state: 1 LED (green/red (flashing))<br>Setting-up assistance: 1 LED (green/red (flashing))<br>Distance indication: 1 LED (yellow) |
| Current consumption                               | 100 mA   |
| Maximum switching current                         | 100 mA with overload and short-circuit protection  |
| Maximum voltage drop                              | 1 V  |
| Maximum delay first up                            | 1000 ms  |
| Maximum delay response                            | 150 ms   |
| Maximum delay recovery                            | 1000 ms  |
| Marking   | CE   |
| Threaded length                                   | 45 mm  |
| Height  | 35 mm  |

|            |          |
|------------|----------|
| Width      | 35 mm    |
| Depth      | 85 mm    |
| Net weight | 0.091 kg |

## Environment

|                                       |  |
|---------------------------------------|--|
| Standards                             | IEC 60947-5-2  |
| Product certifications                | UL[RETURN]cCSAus   |
| Ambient air temperature for operation | 0...50 °C  |
| Ambient air temperature for storage   | -10...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                   |

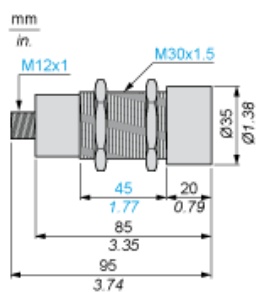
## Packing Units

|                              |        |
|------------------------------|--------|
| Unit Type of Package 1       | PCE    |
| Number of Units in Package 1 | 1      |
| Package 1 Height             | 4.2 cm |
| Package 1 Width              | 13 cm  |
| Package 1 Length             | 9.5 cm |
| Package 1 Weight             | 126 g  |

## Offer Sustainability

|  |   |
|--|---|
| 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> |
| For all Reach Rohs enquiries contact us at | <a href="mailto:sustainability@tesensors.com">sustainability@tesensors.com</a>  |

## Dimensions



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## Minimum Mounting Distances

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### Side by side



e :    respect the distances indicated on the detection curves

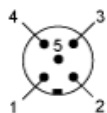
### Face to face



$e > 4 \times S_n$

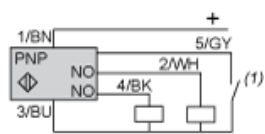
## Wiring Diagram

### Connector



- (1) (+) Brown
- (2) NO output (White)
- (3) (-) Blue
- (4) NO output (Black)
- (5) Synchronisation (Grey)

### NO + NO Outputs, PNP



- BN Brown
- WH White
- BU Blue
- BK Black
- GY Grey

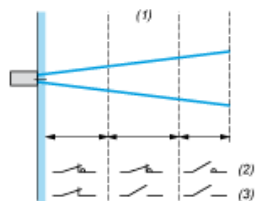
- (1) Open = burst
- Close = no burst

## Curves



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

## Operating Curves



- (1) Adjustable detection zone
- (2) Output pin 4 BK
- (3) Output pin 2 WH