

# XX230A21HA00M12

Ultrasonic sensors XX, ultrasonic sensor cylindrical M30, Sn=2 m, pump in NO PNP sync, M12



## Main

|                               |   |
|-------------------------------|---|
| Range of product              | Telemecanique Ultrasonic sensors XX           |
| Sensor type                   | Ultrasonic sensor                             |
| Series name                   | Application                                   |
| Sensor name                   | XX2   |
| Sensor design                 | Cylindrical M30                               |
| Detection system              | Diffuse                                       |
| [Sn] nominal sensing distance | 2 m adjustable with teach push-button         |
| Material                      | Plastic                                       |
| Type of output signal         | Discrete                                      |
| Discrete output function      | 1 NC + 1 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 filling levels monitoring               |
| [Sd] sensing range            | 0.12...2 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                   | 0.12...2 m (teach mode)  |
| Maximum differential travel                       | 2.5 mm   |
| Blind zone  | 0...120 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  |

The information provided in this documentation contains general descriptions and/or technical characteristics of the performance of the products contained herein. 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. It is the duty of any such user or integrator to perform the appropriate and complete risk analysis, evaluation and testing of the products with respect to the relevant specific application or use thereof. Neither TWSS Holding nor any of its affiliates or subsidiaries shall be responsible or liable for misuse of the information contained herein.

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

## Environment

|                                       |  |
|---------------------------------------|--|
| Standards                             | IEC 60947-5-2  |
| Product certifications                | cCSAus[RETURN]UL   |
| 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

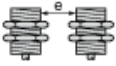


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## Minimum Mounting Distances

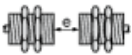
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### Side by side



e : respect the distances indicated on the detection curves

### Face to face



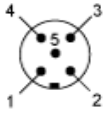
$e > 4 \times S_n$

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## Wiring Diagram

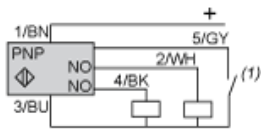
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### Connector



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

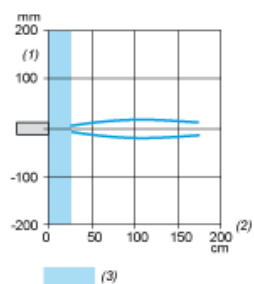
### NO + NO Outputs, PNP



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

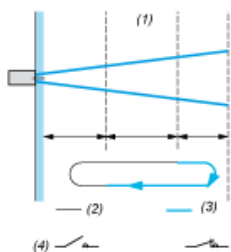
- (1) Open = burst  
Close = no burst

## Curves



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

## Operating Curves



- (1) Adjustable detection zone
- (2) Output deactivated
- (3) Output activated
- (4) NO output