



## Main

|                               |                                                                       |
|-------------------------------|-----------------------------------------------------------------------|
| Range of product              | Telemecanique Ultrasonic sensors XX                                   |
| Sensor type                   | Ultrasonic sensor                                                     |
| Series name                   | General purpose                                                       |
| Sensor name                   | XXS                                                                   |
| Sensor design                 | Cylindrical M30                                                       |
| Detection system              | Diffuse                                                               |
| [Sn] nominal sensing distance | 1 m adjustable with remote teach push-button<br>1 m software with kit |
| Material                      | Metal                                                                 |
| Type of output signal         | Discrete                                                              |
| Discrete output function      | 1 NO or 1 NC programmable                                             |
| 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                                             |
| [Sd] sensing range            | 0.155...1 m                                                           |
| IP degree of protection       | IP65 conforming to IEC 60529<br>IP67                                  |

## Complementary

|                                 |                                                    |
|---------------------------------|----------------------------------------------------|
| Enclosure material              | Stainless steel 316L                               |
| Front material                  | Epoxy<br>Rubber<br>Resin                           |
| Supply voltage limits           | 10...30 V DC                                       |
| Function available              | With synchronisation mode<br>Software configurable |
| [Sa] assured operating distance | 0.155...1 m (teach mode)                           |

|                                                   |                                                           |
|---------------------------------------------------|-----------------------------------------------------------|
| Blind zone                                        | 155 mm                                                    |
| Transmission frequency                            | 120 kHz                                                   |
| Repeat accuracy                                   | 0.1 %                                                     |
| Deviation angle from 90° of object to be detected | -15...15 °                                                |
| Minimum size of detected object                   | Cylinder diameter 1 mm at 1 m                             |
| Status LED                                        | Output state: 1 LED (yellow)<br>Echo state: 1 LED (green) |
| Current consumption                               | 65 mA                                                     |
| Maximum switching current                         | 100 mA with overload and short-circuit protection         |
| Maximum voltage drop                              | 2 V                                                       |
| Switching frequency                               | 11 Hz                                                     |
| Setting-up                                        | Teach mode<br>Configurator software                       |
| Maximum delay first up                            | 120 ms                                                    |
| Maximum delay response                            | 45 ms                                                     |
| Maximum delay recovery                            | 45 ms                                                     |
| Marking                                           | CE                                                        |
| Threaded length                                   | 75.75 mm                                                  |
| Height                                            | 30 mm                                                     |
| Width                                             | 30 mm                                                     |
| Depth                                             | 102.15 mm                                                 |
| Product weight                                    | 0.17 kg                                                   |

## Environment

|                                       |                                                            |
|---------------------------------------|------------------------------------------------------------|
| Standards                             | EN/IEC 60947-5-2<br>CSA C22.2 No 14<br>UL 508              |
| Product certifications                | cULus<br>E2<br>EAC<br>RCM<br>Ecolab                        |
| Ambient air temperature for operation | -25...70 °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 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         | 2 kV conforming to IEC 61000-4-4                           |

## Packing Units

|                              |        |
|------------------------------|--------|
| Unit Type of Package 1       | PCE    |
| Number of Units in Package 1 | 1      |
| Package 1 Weight             | 225 g  |
| Package 1 Height             | 13 cm  |
| Package 1 width              | 4.1 cm |
| Package 1 Length             | 9.5 cm |

## 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                                                                                               |

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|                            |                                                                                                                                                                                                                                                                                                                                                                                   |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| RoHS exemption information | <a href="#">Yes</a>                                                                                                                                                                                                                                                                                                                                                               |
| Environmental Disclosure   | <a href="#">Product Environmental Profile</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> |

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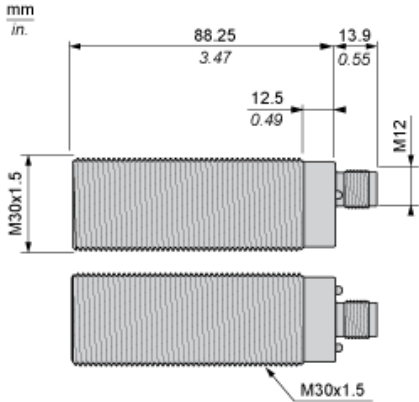
### Contractual warranty

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

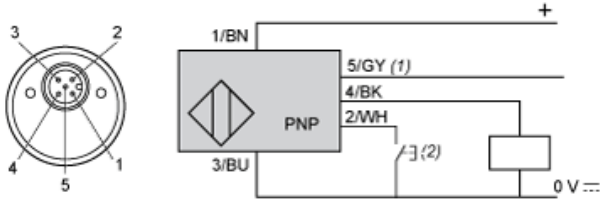
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Dimensions



Connections

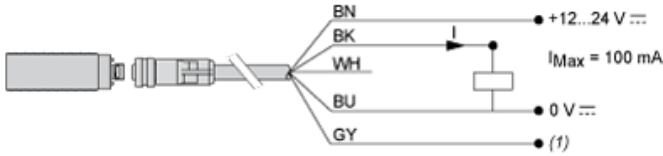
Connector Wiring



- (1) : Synchronization
- (2) : External setting pushbutton or XXZPB100 remote teach pushbutton.

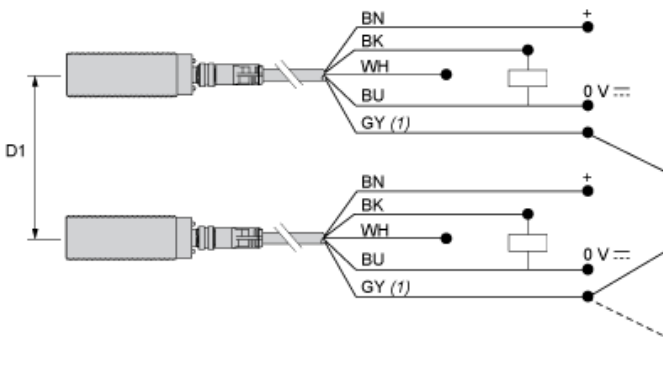
| Pin number | Wire color | Description     |
|------------|------------|-----------------|
| 1          | BN: Brown  | +12...24VDC     |
| 2          | WH: White  | Input teach     |
| 3          | BU: Blue   | 0 VDC           |
| 4          | BK: Black  | Output          |
| 5          | GY: Grey   | Synchronization |

Wiring Scheme. Digital Output (NO or NC)



- (1) : Synchronization

Wiring for the Synchronization Function (Side by Side Application)

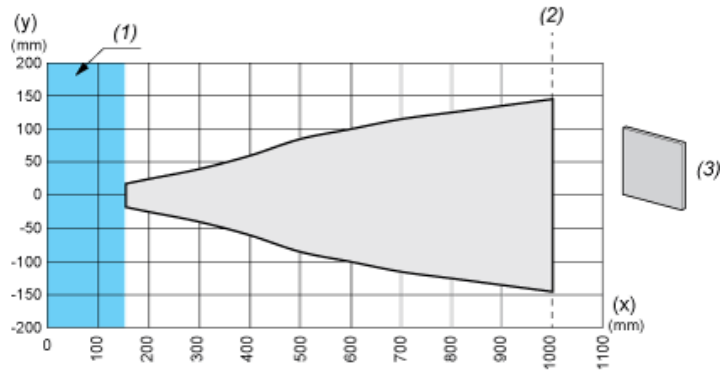


- (1) : Synchronization
- D1 : 1/8 Sn
- BN : Brown
- WH : White
- BU : Blue
- BK : Black
- GY : Grey

NOTE: Up to 8 sensors can be synchronized to operate side by side by electrically connecting all pin no.5 (grey) wires together. To synchronize more than 8 sensors, a PLC output can be used (the pins no.5 must be simultaneously driven by the rising edge of a pulse).

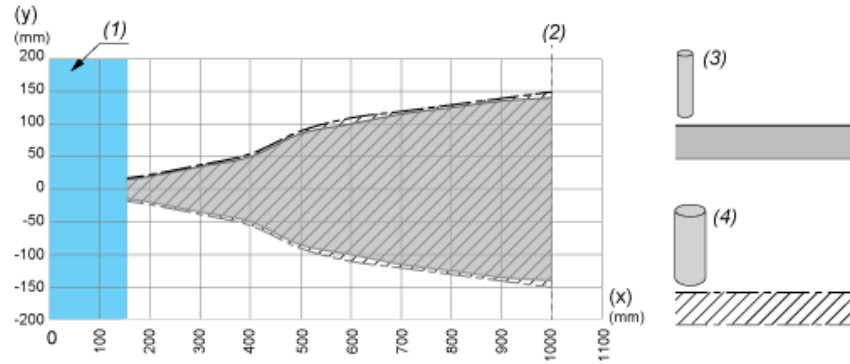
Performance Curves

Detection Curve with 100 x 100 mm / 3.94 x 3.94 inches Square Target



- (X) : Target distance
- (Y) : Detection limit
- (1) : Blind zone: 155 mm / 6.10 inches
- (2) : Sn max.
- (3) : 100 x 100 mm / 3.94 x 3.94 inches stainless steel plate

Detection Curve with Round Bar



- (X) : Target distance
- (Y) : Detection limit
- (1) : Blind zone: 155 mm / 6.10 inches
- (2) : Sn max.
- (3) : Ø 10 mm / 0.394 inches stainless steel cylinder
- (4) : Ø 25 mm / 0.984 inches stainless steel cylinder