

# XUB0BPSNM12

Photoelectric sensors XU, XUB, multi, Sn 0...20 m, 12...24 VDC, M12



## Main

|                               |   |
|-------------------------------|---|
| Range of product              | Telemecanique Photoelectric sensors XU  |
| Series name                   | General purpose multimode   |
| Electronic sensor type        | Photo-electric sensor   |
| Sensor name                   | XUB   |
| Sensor design                 | Cylindrical M18   |
| Detection system              | Multimode   |
| Material                      | Metal   |
| Line of sight type            | Axial   |
| Type of output signal         | Discrete  |
| Supply circuit type           | DC  |
| Wiring technique              | 3-wire  |
| Discrete output type          | PNP   |
| Discrete output function      | 1 NO or 1 NC programmable   |
| Electrical connection         | 1 male connector M12, 4 pins  |
| Product specific application  | -   |
| Emission                      | Infrared diffuse<br>Infrared diffuse with background suppression<br>Infrared thru beam<br>Red polarised reflex  |
| [Sn] nominal sensing distance | 3 M polarised reflex need reflector XUZC50<br>20 M thru beam need a transmitter XUB0BKSNM12T<br>0.12 M diffuse with background suppression<br>0.3 m diffuse |

## Complementary

|                           |   |
|---------------------------|---|
| Enclosure material        | Nickel plated brass   |
| Lens material             | PMMA  |
| Maximum sensing distance  | 0.12 M diffuse with background suppression<br>0.4 M diffuse<br>30 M thru beam<br>4.5 m polarised reflex |
| Output type               | Solid state   |
| Add on output             | Without   |
| Status LED                | 1 LED (green) for supply<br>1 LED (red) for instability<br>1 LED (yellow) for output state              |
| [Us] rated supply voltage | 12...24 V DC with reverse polarity protection   |
| Supply voltage limits     | 10...36 V DC  |
| Switching capacity in mA  | <= 100 mA (overload and short-circuit protection)   |
| Switching frequency       | <= 250 Hz   |
| Maximum voltage drop      | <1.5 V (closed state)   |
| Current consumption       | 35 mA no-load   |
| Maximum delay first up    | 200 ms  |
| Maximum delay response    | 2 ms  |
| Maximum delay recovery    | 2 ms  |
| Setting-up                | Self-teaching   |
| Diameter                  | 18 mm   |
| Length                    | 78 mm   |
| Net weight                | 0.055 kg  |

## Environment

|                                       |   |
|---------------------------------------|---|
| Product certifications                | CSA[RETURN]CE[RETURN]UL   |
| Ambient air temperature for operation | -25...55 °C   |
| Ambient air temperature for storage   | -40...70 °C   |
| Vibration resistance                  | 7 gn, amplitude = +/- 1.5 mm (f = 10...55 Hz) conforming to IEC 60068-2-6   |
| Shock resistance                      | 30 gn (duration = 11 ms) conforming to IEC 60068-2-27   |
| IP degree of protection               | IP65 double insulation conforming to IEC 60529<br>IP67 double insulation conforming to IEC 60529<br>IP69K double insulation conforming to DIN 40050 |

## Packing Units

|                              |         |
|------------------------------|---------|
| Unit Type of Package 1       | PCE     |
| Number of Units in Package 1 | 1       |
| Package 1 Height             | 4.2 cm  |
| Package 1 Width              | 6.7 cm  |
| Package 1 Length             | 9.6 cm  |
| Package 1 Weight             | 67 g    |
| Unit Type of Package 2       | S01     |
| Number of Units in Package 2 | 22      |
| Package 2 Height             | 15 cm   |
| Package 2 Width              | 15 cm   |
| Package 2 Length             | 40 cm   |
| Package 2 Weight             | 1.78 kg |

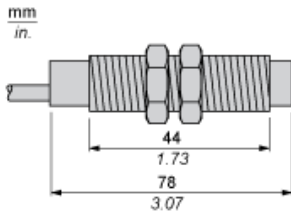
## Offer Sustainability

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

## Contractual warranty

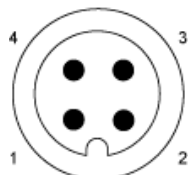
|          |           |
|----------|-----------|
| Warranty | 18 months |
|----------|-----------|

Dimensions



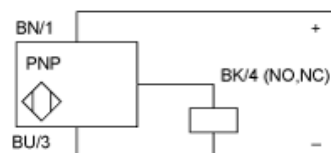
## Wiring Schemes

### M12 Connector



- 1 : (+)
- 2 : Beam break input (1)
- 3 : (-)
- 4 : OUT/Output
- (1) Beam break input on thru-beam transmitter only

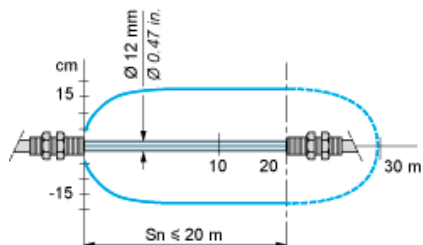
### Receiver, PNP Output



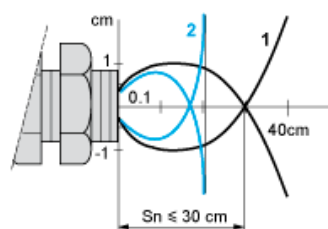
- BN : Brown
- BU : Blue
- BK : Black

Detection Curves

With Thru-beam Accessory (Thru-beam)

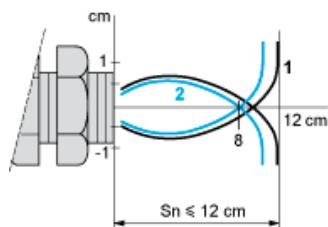


Without Accessory (Diffuse)



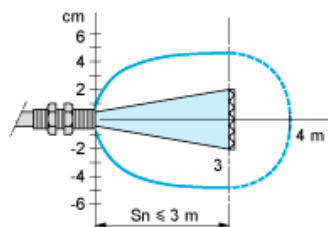
- 1 : White 90%
  - 2 : Grey 18%
- Object 10 x 10 cm

Without Accessory (Diffuse with background suppression)



- 1 : White 90%
  - 2 : Grey 18%
- Object 10 x 10 cm

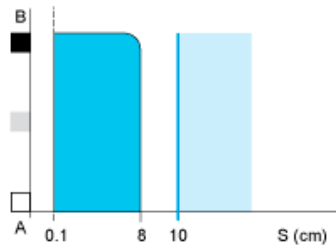
With reflector (Polarised reflex)



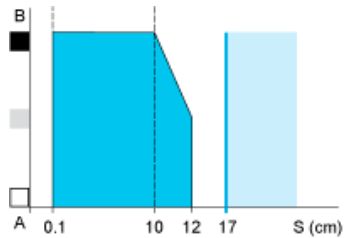
With reflector XUZC50

## Variation of Usable Sensing Distance $S_u$ (Without accessory, with adjustable background suppression)

Teach Mode at Minimum



Teach Mode at Maximum



- (1) Black
- (2) Grey
- (3) White
- (4) Sensing range
- (5) Non sensing zone (matt surfaces)

A-B : Object reflection coefficient

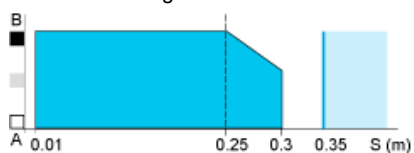
- (1) Black 6%
- (2) Grey 18%
- (3) White 90%
- (4) Sensing range
- (5) Non sensing zone (matt surfaces)

## Variation of Usable Sensing Distance

Minimum Setting



Maximum Setting



- (1) Black
- (2) Grey
- (3) White
- (4) Sensing range
- (5) Non sensing zone (matt surfaces)

A-B : Object reflection coefficient

- (1) Black 6%
- (2) Grey 18%
- (3) White 90%
- (4) Sensing range
- (5) Non sensing zone (matt surfaces)