

# 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 | 9.84 Ft (3 m) polarised reflex need reflector XUZC50<br>65.62 Ft (20 m) thru beam need a transmitter XUB0BKSNM12T<br>0.39 Ft (0.12 m) diffuse with background suppression<br>0.98 ft (0.3 m) diffuse |

## Complementary

|                           |   |
|---------------------------|---|
| Enclosure Material        | Nickel Plated Brass   |
| Lens material             | PMMA  |
| Maximum sensing distance  | 0.39 Ft (0.12 m) diffuse with background suppression<br>1.31 Ft (0.4 m) diffuse<br>98.43 Ft (30 m) thru beam<br>14.76 ft (4.5 m) polarised reflex |
| Output Type               | Solid state   |
| Add on output             | Without   |
| Status LED                | 1 LED green)supply<br>1 LED red)instability<br>1 LED yellow)output state  |
| [Us] rated supply voltage | 12...24 V DC 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                  | 0.71 in (18 mm)   |
| Length                    | 3.07 in (78 mm)   |
| Net Weight                | 0.12 lb(US) (0.055 kg)  |

## Environment

|                                       |   |
|---------------------------------------|---|
| Product Certifications                | CSA[RETURN]CE[RETURN]UL   |
| Ambient Air Temperature for Operation | -13...131 °F (-25...55 °C)  |
| Ambient Air Temperature for Storage   | -40...158 °F (-40...70 °C)  |
| Vibration resistance                  | 7 gn +/- 1.5 mm 10...55 Hz) IEC 60068-2-6   |
| Shock resistance                      | 30 gn 11 ms) IEC 60068-2-27   |
| IP degree of protection               | IP65 double insulation IEC 60529<br>IP67 double insulation IEC 60529<br>IP69K double insulation DIN 40050 |

## Ordering and shipping details

|                   |               |
|-------------------|---------------|
| Category          | US10DS222481  |
| Discount Schedule | ODS2          |
| GTIN              | 3389110148466 |
| Returnability     | Yes           |
| Country of origin | US            |

## Packing Units

|                              |                       |
|------------------------------|-----------------------|
| Unit Type of Package 1       | PCE                   |
| Number of Units in Package 1 | 1                     |
| Package 1 Height             | 1.65 in (4.2 cm)      |
| Package 1 Width              | 2.64 in (6.7 cm)      |
| Package 1 Length             | 3.78 in (9.6 cm)      |
| Package 1 Weight             | 2.36 oz (67 g)        |
| Unit Type of Package 2       | S01                   |
| Number of Units in Package 2 | 22                    |
| Package 2 Height             | 5.91 in (15 cm)       |
| Package 2 Width              | 5.91 in (15 cm)       |
| Package 2 Length             | 15.75 in (40 cm)      |
| Package 2 Weight             | 3.92 lb(US) (1.78 kg) |

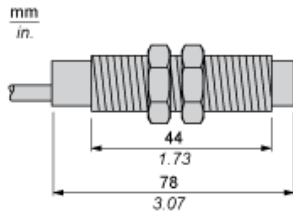
## Offer Sustainability

|  |   |
|--|---|
| Sustainable offer status                   | Green Premium product   |
| 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

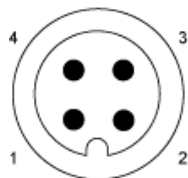
|          |           |
|----------|-----------|
| Warranty | 18 months |
|----------|-----------|

Dimensions



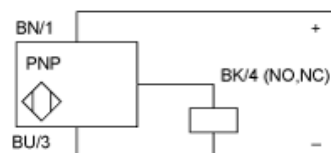
## Wiring Schemes

### M12 Connector



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

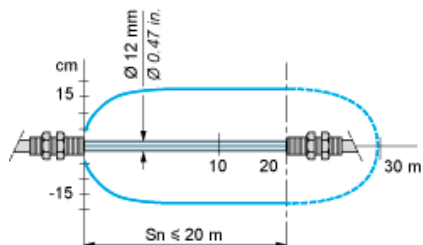
### Receiver, PNP Output



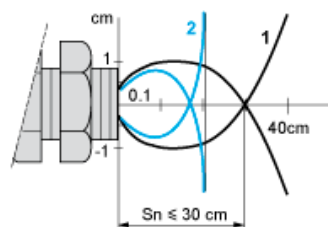
- BN : Brown
- BU : Blue
- BK : Black

Detection Curves

With Thru-beam Accessory (Thru-beam)

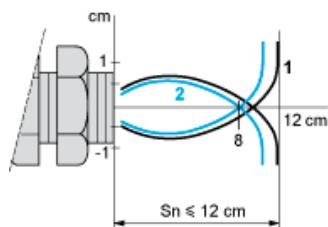


Without Accessory (Diffuse)



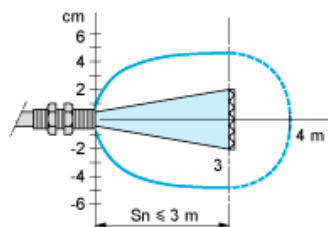
- 1 : White 90%
  - 2 : Grey 18%
- Object 10 x 10 cm

Without Accessory (Diffuse with background suppression)



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

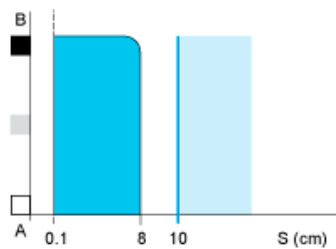
With reflector (Polarised reflex)



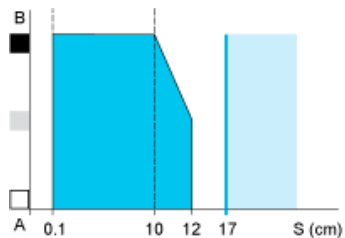
With reflector XUZC50

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

Teach Mode at Minimum



Teach Mode at Maximum



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

A-B : Object reflection coefficient

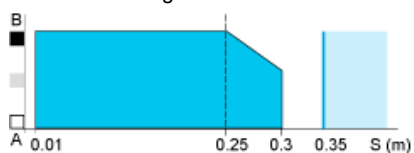
- (1) Black 6%
- (2) Grey 18%
- (3) White 90%
- (4) Sensing range
- (5) Non sensing zone (matt surfaces)

## Variation of Usable Sensing Distance

Minimum Setting



Maximum Setting



- (1) Black 6%
- (2) Grey 18%
- (3) White 90%
- (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)