

Product data sheet

Specifications



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

XUB0BPSNM12

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 Infrared diffuse with background suppression Infrared thru beam Red polarised reflex |
| [Sn] nominal sensing distance | 3 m polarised reflex need reflector XUZC50 20 m thru beam need a transmitter XUB0BKSNM12T 0.12 m diffuse with background suppression 0.3 m diffuse |

Complementary

| | |
|--------------------------|---|
| Enclosure material | Nickel plated brass |
| Lens material | PMMA |
| Maximum sensing distance | 0.12 m diffuse with background suppression 0.4 m diffuse 30 m thru beam 4.5 m polarised reflex |
| Output type | Solid state |
| Add on output | Without |
| Status LED | 1 LED (green) for supply 1 LED (red) for instability |

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 CE 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 IP67 double insulation conforming to IEC 60529 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

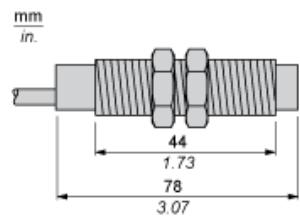
| | |
|---------------------------------|---|
| Sustainable offer status | Green Premium product |
| REACH Regulation | REACH Declaration |
| EU RoHS Directive | Pro-active compliance (Product out of EU RoHS legal scope) EU RoHS Declaration |

| | |
|-----------------------------------|--|
| Mercury free | Yes |
| RoHS exemption information | Yes |
| Environmental Disclosure | Product Environmental Profile |
| Circularity Profile | End of Life Information |
| California proposition 65 | <p>WARNING: This product can expose you to chemicals including: Diisobutyl 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 www.P65Warnings.ca.gov</p> |

Contractual warranty

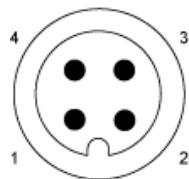
| | |
|-----------------|-----------|
| Warranty | 18 months |
|-----------------|-----------|

Dimensions



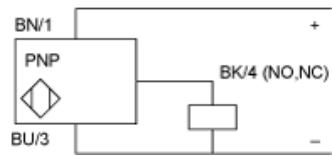
Wiring Schemes

M12 Connector

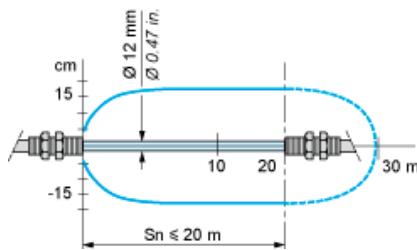
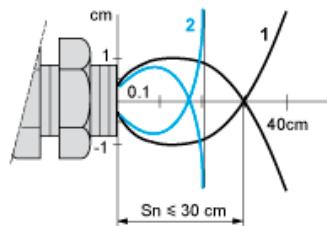


1 : (+)
2 : Beam break input (1)
3 : (-)
4 : OUT/Output
(1) Beam break input on thru-beam transmitter only

Receiver, PNP Output

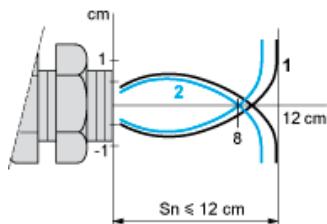


BN : Brown
BU : Blue
BK : Black

Detection Curves**With Thru-beam Accessory (Thru-beam)****Without Accessory (Diffuse)**

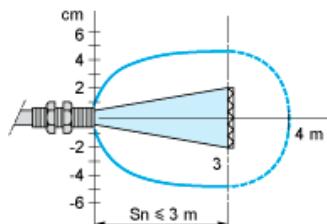
1 : White 90%
 2 : Grey 18%

Object 10 x 10 cm

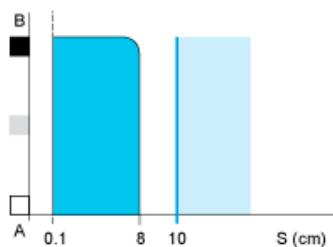
Without Accessory (Diffuse with background suppression)

1 : White 90%
 2 : Grey 18%

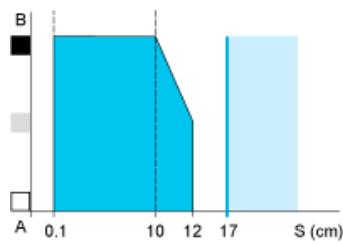
Object 10 x 10 cm

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



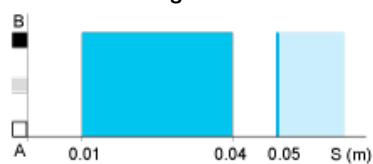
- (1)
- (2)
- (3)
- (4)
- (5)

A-B : Object reflection coefficient

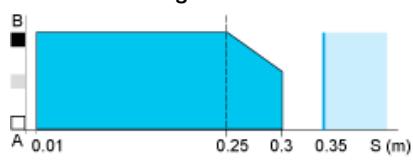
- (1) Black 6%
- (2) Grey 18%
- (3) White 90%
- (4) Sensing range
- (5) Non sensing zone (matt surfaces)

Variation of Usable Sensing Distance

Minimum Setting



Maximum Setting



- (1)
- (2)
- (3)
- (4)
- (5)

A-B : Object reflection coefficient

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

Recommended replacement(s)