

# XUB0BNSNL2

Photoelectric sensors XU, XUB, multi, Sn 0...20 m, 12...24 VDC, cable 2 m



## 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          | NPN                                                                                                                                                                                                 |
| Discrete output function      | 1 NO or 1 NC programmable                                                                                                                                                                           |
| Electrical connection         | Cable                                                                                                                                                                                               |
| Cable length                  | 6.56 ft (2 m)                                                                                                                                                                                       |
| 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 XUB0BKSNL2T<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                                                                                                                                           |
| Wire insulation material  | PvR                                                                                                                                               |
| 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     | 2.52 in (64 mm)        |
| Net Weight | 0.23 lb(US) (0.105 kg) |

## Environment

|                                       |                                                                      |
|---------------------------------------|----------------------------------------------------------------------|
| Product Certifications                | UL<br>CE<br>CSA                                                      |
| 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 |

## Ordering and shipping details

|                   |                              |
|-------------------|------------------------------|
| Category          | 22481-SENSORS, PHOTOELECTRIC |
| Discount Schedule | DS2                          |
| GTIN              | 3389110148411                |
| Returnability     | No                           |
| Country of origin | FR                           |

## Packing Units

|                              |                        |
|------------------------------|------------------------|
| Unit Type of Package 1       | PCE                    |
| Number of Units in Package 1 | 1                      |
| Package 1 Height             | 5.20 in (13.2 cm)      |
| Package 1 Width              | 3.70 in (9.4 cm)       |
| Package 1 Length             | 1.57 in (4.0 cm)       |
| Package 1 Weight             | 4.51 oz (128.0 g)      |
| Unit Type of Package 2       | S02                    |
| Number of Units in Package 2 | 22                     |
| Package 2 Height             | 5.91 in (15.0 cm)      |
| Package 2 Width              | 11.81 in (30.0 cm)     |
| Package 2 Length             | 15.75 in (40.0 cm)     |
| Package 2 Weight             | 7.26 lb(US) (3.293 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> |
| REACH Regulation           | <a href="#">REACH Declaration</a>                                                                                                                                                                                                                                                                                                                                                 |
| EU RoHS Directive          | Pro-active compliance (Product out of EU RoHS legal scope) <a href="#">EU RoHS Declaration</a>                                                                                                                                                                                                                                                                                    |
| Mercury free               | Yes                                                                                                                                                                                                                                                                                                                                                                               |
| RoHS exemption information | <a href="#">Yes</a>                                                                                                                                                                                                                                                                                                                                                               |
| Environmental Disclosure   | <a href="#">Product Environmental Profile</a>                                                                                                                                                                                                                                                                                                                                     |
| Circularity Profile        | <a href="#">End Of Life Information</a>                                                                                                                                                                                                                                                                                                                                           |

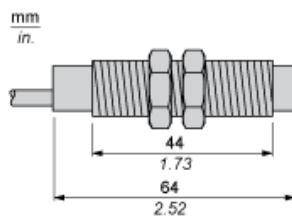
## Contractual warranty

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

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Dimensions

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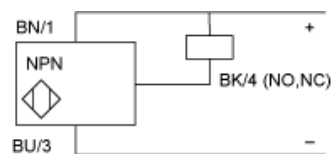


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## Connections and Schemes

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### NPN



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 XUZY50

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

Teach Mode at Minimum



Teach Mode at Maximum



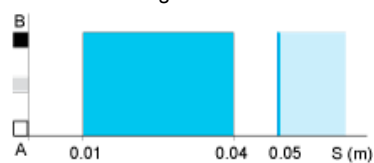
- (1) Black 6%
- (2) Grey 18%
- (3) White 90%
- (4) Sensing range
- (5) Non sensing zone (matt surfaces)

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)