

## Product data sheet

### Characteristics

# XUB0BPSWL2

photo-electric sensor - XUB - multi - 90° - Sn  
0..7m - 12..24VDC - cable 2m



### 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            | 90° lateral                                                                                                                                                 |
| 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         | Cable                                                                                                                                                       |
| Cable length                  | 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 | 1.5 M polarised reflex need reflector XUZC50<br>7 M thru beam need a transmitter XUB0BKSWL2T<br>0.11 M diffuse with background suppression<br>0.2 m diffuse |

### Complementary

|                           |                                                                                                       |
|---------------------------|-------------------------------------------------------------------------------------------------------|
| Enclosure material        | Nickel plated brass                                                                                   |
| Lens material             | PMMA                                                                                                  |
| Maximum sensing distance  | 2 M polarised reflex<br>0.11 M diffuse with background suppression<br>0.3 M diffuse<br>10 m thru beam |
| Output type               | Solid state                                                                                           |
| Add on output             | Without                                                                                               |
| Wire insulation material  | PvR                                                                                                   |
| 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 | 0.11 kg       |

## Environment

|                                       |                                                                                                  |
|---------------------------------------|--------------------------------------------------------------------------------------------------|
| Product certifications                | CE[RETURN]CSA[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 |

## Packing Units

|                              |     |
|------------------------------|-----|
| Unit Type of Package 1       | PCE |
| Number of Units in Package 1 | 1   |

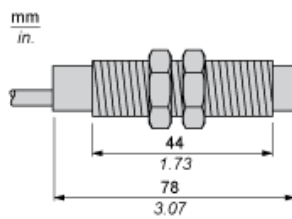
## Contractual warranty

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

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Dimensions

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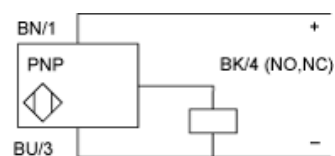


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## Connections and Schemes

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### PNP



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



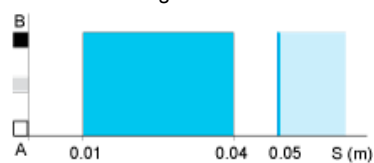
- (1) Black 6%
- (2) Grey 18%
- (3) White 90%
- (4) Sensing range
- (5) Non sensing zone (matt surfaces)

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)