



## 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                  | 5 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 | 3 M polarised reflex need reflector XUZC50<br>20 M thru beam need a transmitter XUB0BKSNL5T<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                                                                                                 |
| 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   | 64 mm |

## Environment

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

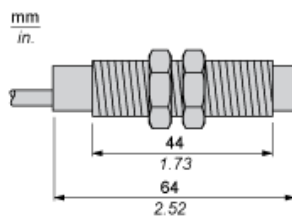
## Offer Sustainability

|                            |                                                                                                                                                                    |
|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Sustainable offer status   | Green Premium product                                                                                                                                              |
| EU RoHS Directive          | Pro-active compliance (Product out of EU RoHS legal scope)  EU RoHS Declaration |
| Mercury free               | Yes                                                                                                                                                                |
| RoHS exemption information |  Yes                                                                              |

## Contractual warranty

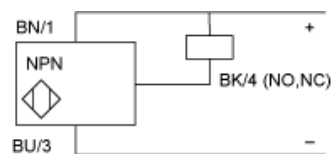
|          |           |
|----------|-----------|
| Warranty | 18 months |
|----------|-----------|

## Dimensions



## Connections and Schemes

### 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 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)