



Main

|                               |  |
|-------------------------------|--|
| Range of product              | Telemecanique Photoelectric sensors XU   |
| Series name                   | General purpose multimode  |
| Electronic sensor type        | Photo-electric sensor  |
| Sensor name                   | XUK  |
| Sensor design                 | Compact 50 x 50  |
| Detection system              | Multimode  |
| Material                      | Plastic  |
| Type of output signal         | Discrete   |
| Supply circuit type           | AC/DC  |
| Wiring technique              | 5-wire   |
| 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 | 4 M polarised reflex need reflector XUZC50<br>30 M thru beam need a transmitter XUK0ARCTL5T<br>0.28 M diffuse with background suppression<br>0.8 m diffuse |

Complementary

|                                |   |
|--------------------------------|---|
| Enclosure material             | PBT   |
| Lens material                  | PMMA  |
| Maximum sensing distance       | 35 M thru beam<br>0.28 M diffuse with background suppression<br>1.2 M diffuse<br>5.7 m polarised reflex |
| Output type                    | Relay   |
| Add on output                  | Without, <= 50 mA with overload and short-circuit protection  |
| 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      | 24...240 V AC<br>24...240 V DC  |
| Supply voltage limits          | 20...264 V AC<br>20...264 V DC  |
| Switching capacity in mA       | 3 A ( $\cos \phi = 1$ for 0.5 million cycles at 1 operating cycle per second at 250 V)                  |
| Switching frequency            | <= 20 Hz  |
| Maximum voltage drop           | <1.5 V (closed state)   |
| Maximum power consumption in W | 3 W AC/DC   |
| Time delay range               | 0...10 s monostable, on-delay or off-delay (programmable) delay   |
| Maximum delay first up         | 300 ms  |
| Maximum delay response         | 25 ms   |
| Maximum delay recovery         | 25 ms   |
| Setting-up                     | Self-teaching   |
| Electrical durability          | 500000 cycles, $\cos f = 1$ , operating rate <60 cyc/mn at 250 V  |

|            |          |
|------------|----------|
| Depth      | 50 mm    |
| Height     | 50 mm    |
| Width      | 18 mm    |
| Net weight | 0.175 kg |

## Environment

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

## Packing Units

|                              |          |
|------------------------------|----------|
| Unit Type of Package 1       | PCE      |
| Number of Units in Package 1 | 1        |
| Package 1 Height             | 4.0 cm   |
| Package 1 Width              | 13.0 cm  |
| Package 1 Length             | 13.0 cm  |
| Package 1 Weight             | 308.0 g  |
| Unit Type of Package 2       | S02      |
| Number of Units in Package 2 | 20       |
| Package 2 Height             | 15.0 cm  |
| Package 2 Width              | 30.0 cm  |
| Package 2 Length             | 40.0 cm  |
| Package 2 Weight             | 6.821 kg |

## Offer Sustainability

|  |   |
|--|---|
| Sustainable offer status                   | Green Premium product   |
| California proposition 65                  | 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 <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>  |

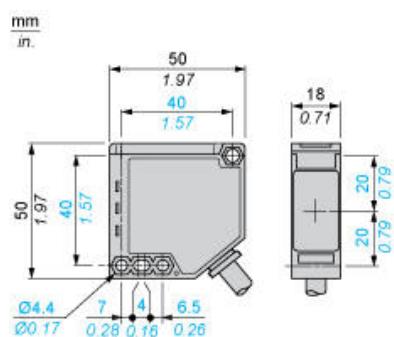
## Contractual warranty

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

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Dimensions

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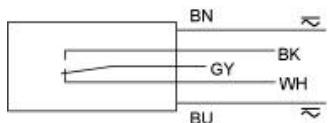


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### Wiring Schemes

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#### Relay Output



BN : Brown

BU : Blue

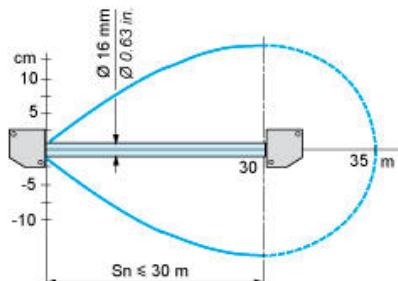
BK : Black (NO)

GY : Grey (Relay common)

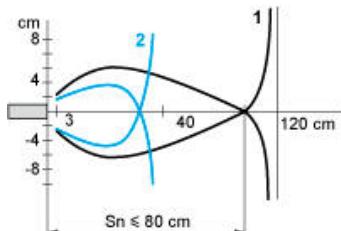
WH : White (NC)

## Detection Curves

### With Thru-beam Accessory (Thru-beam)



### Without Accessory (Diffuse)

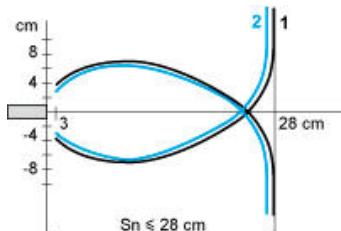


1 : White 90%

2 : Grey 18%

Object 10 x 10 cm

### Without Accessory (Diffuse with background suppression)

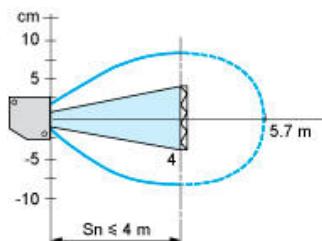


1 : White 90%

2 : Grey 18%

Object 10 x 10 cm

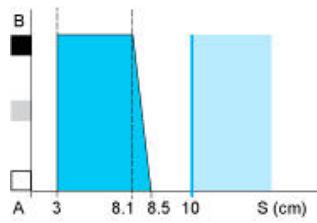
### With reflector (Polarised reflex)



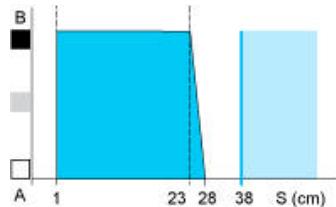
With reflector XUZC50

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

Teach Mode at Minimum



Teach Mode at Maximum



A-B : Object reflection coefficient

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