

# XUK0AKSAL5

photo-electric sensor - XUK - multi - Sn 0..30m  
- 12..24VDC - cable 5m



## Main

|                               |                                                                                                                                                            |
|-------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Range of product              | OsiSense 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           | DC                                                                                                                                                         |
| Wiring technique              | 3-wire                                                                                                                                                     |
| Discrete output type          | PNP or 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 | 4 M polarised reflex need reflector XUZC50<br>30 M thru beam need a transmitter XUK0AKSAL5T<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              | Solid state                                                                                             |
| Add on output            | With alarm output, <= 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 | 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                                                                              |
| Depth                     | 50 mm                                                                                      |
| Height                    | 50 mm                                                                                      |
| Width                     | 18 mm                                                                                      |
| Net weight                | 0.175 kg                                                                                   |

## Environment

|                                       |                                                                           |
|---------------------------------------|---------------------------------------------------------------------------|
| Product certifications                | CSA<br>CE<br>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                            |

## Packing Units

|                              |          |
|------------------------------|----------|
| Unit Type of Package 1       | PCE      |
| Number of Units in Package 1 | 1        |
| Package 1 Weight             | 287 g    |
| Package 1 Height             | 3 cm     |
| Package 1 width              | 14 cm    |
| Package 1 Length             | 14 cm    |
| Unit Type of Package 2       | S02      |
| Number of Units in Package 2 | 10       |
| Package 2 Weight             | 3.277 kg |
| Package 2 Height             | 15 cm    |
| Package 2 width              | 30 cm    |
| Package 2 Length             | 40 cm    |

## Offer Sustainability

|                            |                                                                                                                                                                                      |
|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Sustainable offer status   | Green Premium product                                                                                                                                                                |
| 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

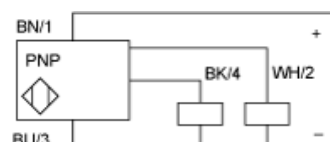
|          |           |
|----------|-----------|
| Warranty | 18 months |
|----------|-----------|

## Dimensions



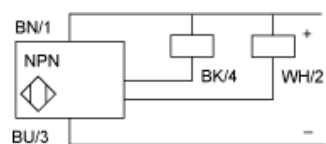
## Wiring Schemes

### PNP Output



(+) Brown  
BN :  
(-) Blue  
BU :  
(OUT) Black  
Output)  
BK :  
(Alarm) White  
WH :

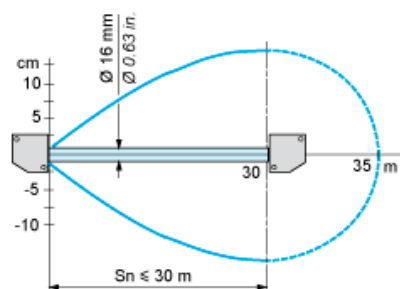
### NPN Output



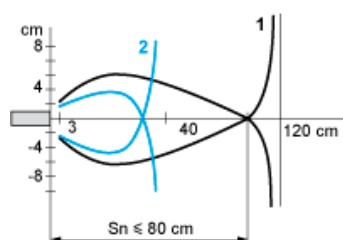
(+) Brown  
BN :  
(-) Blue  
BU :  
(OUT) Black  
Output)  
BK :  
(Alarm) White  
WH :

## Detection Curves

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



### Without Accessory (Diffuse)

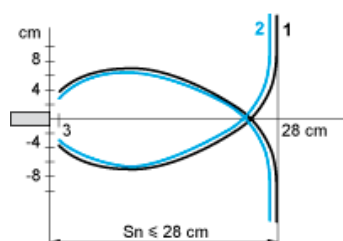


1 : White 90%

2 : Grey 18%

Object 10 x 10 cm

### Without Accessory (Diffuse with background suppression)

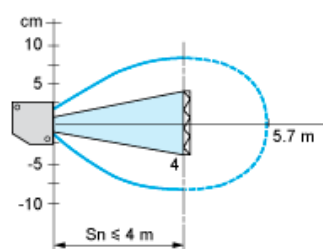


1 : White 90%

2 : Grey 18%

Object 10 x 10 cm

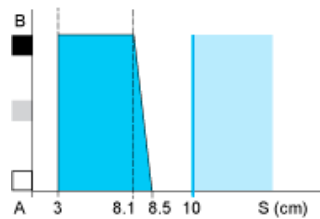
### With reflector (Polarised reflex)



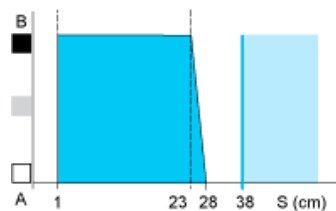
With reflector XUZC50

## 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)