

# XUK8AKSNL2

Photoelectric sensors XU, photo electric laser sensor, XUK, BGS, Sn 1 m, 12...24 VDC, cable 2 m



## Main

|                               |                                                                       |
|-------------------------------|-----------------------------------------------------------------------|
| Range of product              | Telemecanique Photoelectric sensors XU                                |
| Series name                   | General purpose single mode                                           |
| Electronic sensor type        | Photo-electric sensor                                                 |
| Sensor name                   | XUK                                                                   |
| Sensor design                 | Compact 50 x 50                                                       |
| Detection system              | Diffuse with background suppression                                   |
| 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                  | 2 m                                                                   |
| Product specific application  | -                                                                     |
| Emission                      | Infrared laser, modulated diffuse with background suppression class 1 |
| [Sn] nominal sensing distance | 1 m diffuse with background suppression                               |

## Complementary

|                                       |                                                                                                        |
|---------------------------------------|--------------------------------------------------------------------------------------------------------|
| Enclosure material                    | PC                                                                                                     |
| Lens material                         | PMMA                                                                                                   |
| Maximum sensing distance              | 1 m diffuse with background suppression                                                                |
| Minimum object diameter for detection | 2 mm                                                                                                   |
| Output type                           | Solid state                                                                                            |
| Add on output                         | Without, <= 50 mA with overload and short-circuit protection                                           |
| Cable composition                     | 5 x 0.34 mm <sup>2</sup>                                                                               |
| Wire insulation material              | PVC                                                                                                    |
| Cable outer diameter                  | 6 mm                                                                                                   |
| Status LED                            | 1 LED (green) for supply on<br>1 LED (yellow) for output state<br>1 LED (red) for alignment assistance |
| [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                | 300 ms                                                                                                 |
| Maximum delay response                | 2 ms                                                                                                   |
| Maximum delay recovery                | 2 ms                                                                                                   |
| Setting-up                            | Sensitivity adjustment by potentiometer                                                                |
| Depth                                 | 50 mm                                                                                                  |
| Height                                | 50 mm                                                                                                  |
| Width                                 | 18 mm                                                                                                  |

|                 |                            |
|-----------------|----------------------------|
| Net weight      | 0.19 kg                    |
| Kit composition | With XUZA51 bracket fixing |

## Environment

|                                       |                                                       |
|---------------------------------------|-------------------------------------------------------|
| Product certifications                | CE                                                    |
| Ambient air temperature for operation | -25...55 °C                                           |
| Ambient air temperature for storage   | -30...70 °C                                           |
| Vibration resistance                  | 7 gn (f = 10...55 Hz) conforming to IEC 60068-2-6     |
| Shock resistance                      | 10 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             | 4.2 cm  |
| Package 1 Width              | 9.7 cm  |
| Package 1 Length             | 13.2 cm |
| Package 1 Weight             | 228 g   |
| Unit Type of Package 2       | S02     |
| Number of Units in Package 2 | 12      |
| Package 2 Height             | 15 cm   |
| Package 2 Width              | 30 cm   |
| Package 2 Length             | 40 cm   |
| Package 2 Weight             | 3.2 kg  |

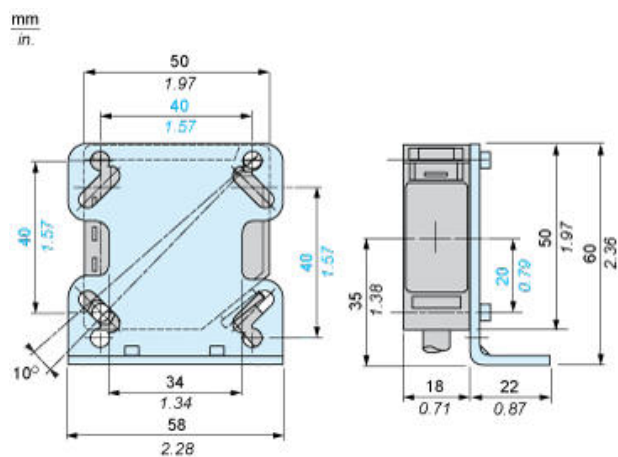
## Offer Sustainability

|                                            |                                                                                                                                                                                                                                                                                                                                                                                  |
|--------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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 Diisodecyl 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>                                                                                                                                                                                                                                                                                                   |

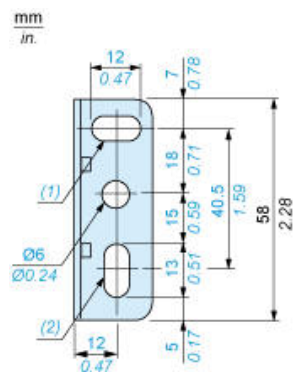
## Contractual warranty

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

## Dimensions



## Bracket fixing

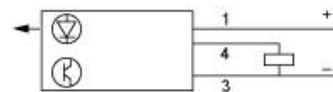


- (1) 1 elongated hole  $\varnothing$  6 x 12
- (2) 1 elongated hole  $\varnothing$  6 x 13

## Wiring Schemes

### NO/NC Programming

PNP Output



NPN Output



BN : Brown

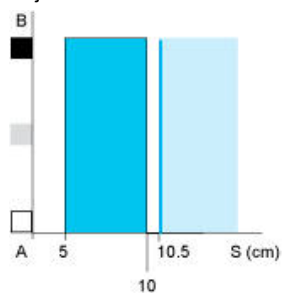
BU : Blue

BK : Black

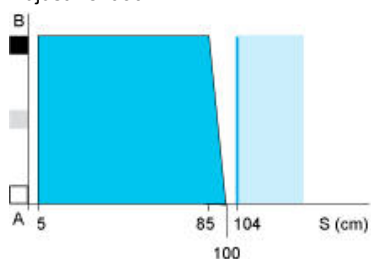
## Detection Curves

### Variation of Usable Sensing Distance $S_u$

Adjustment at 10 cm



Adjustment at 1 m

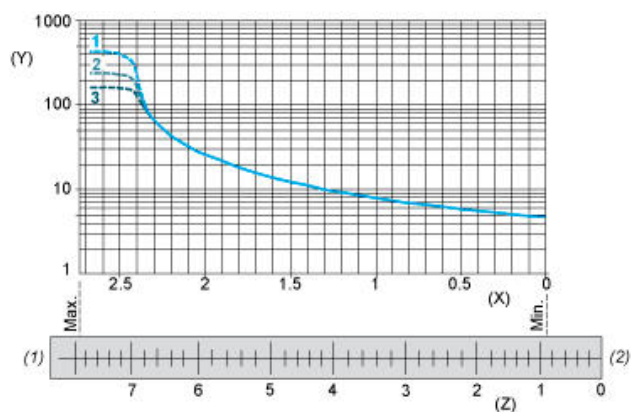


- (1) Black 6%
- (2) Grey 18%
- (3) White 90%
- (4) Sensing range
- (5) Non sensing zone (matt surfaces)

A-B : Object reflection coefficient

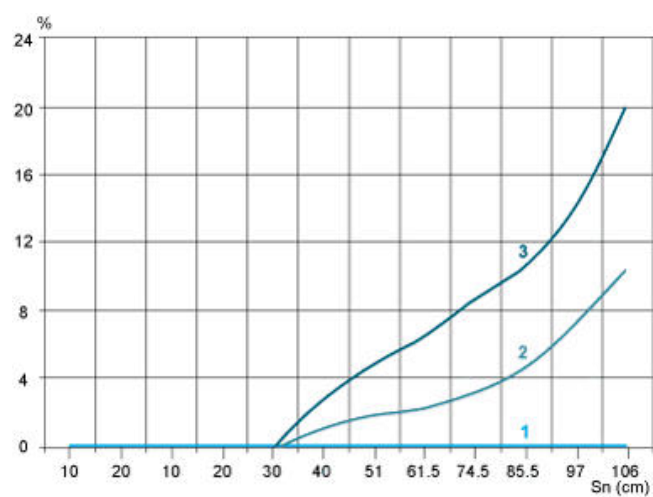
- (1) Black 6%
- (2) Grey 18%
- (3) White 90%
- (4) Sensing range
- (5) Non sensing zone (matt surfaces)

### Sensing Distance Adjustment



- 1 : White 90%
- 2 : Grey 18%
- 3 : Black 6%
- (Y) Sensing distance (cm)
- (X) Number of turns on potentiometer
- (Z) Setting indicator position (mm)

## Relative Difference in Sensing Distances According to Object Colour



- 1 : White 90%
- 2 : Grey 18%
- 3 : Black 6%