



Main

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|-------------------------------|-------------------------------------------------------------------------|
| Range of product | OsiSense 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 | 1 male connector M12, 4 pins |
| 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 |
| Wire insulation material | PVC |
| Status LED | 1 LED (yellow) for output state 1 LED (green) for supply |
| [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 |
| Voltage drop | <= 1.5 V (closed state) |
| Current consumption | <= 30 mA (no-load) |
| Delay first up | < 300 ms |
| Delay response | < 2 ms |
| Delay recovery | < 2 ms |
| Setting-up | Sensitivity adjustment by potentiometer |
| Depth | 50 mm |
| Height | 50 mm |
| Width | 18 mm |
| Product weight | 0.035 kg |
| Kit composition | With XUZA51 bracket fixing |

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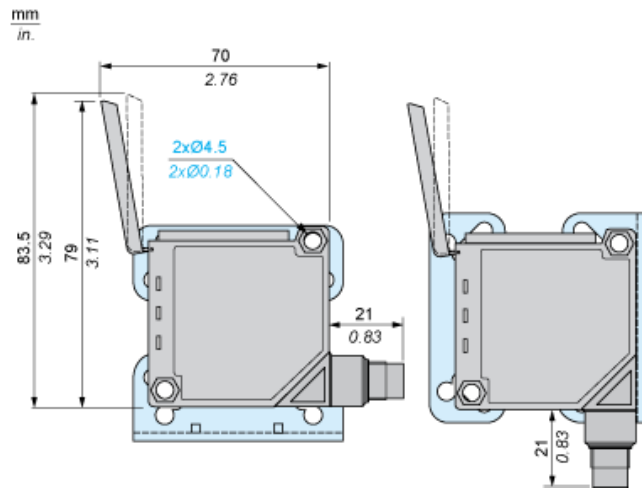
Environment

| | |
|---------------------------------------|---------------------------------------------------------------------------|
| Product certifications | CE Ecolab |
| Ambient air temperature for operation | -20...60 °C |
| Ambient air temperature for storage | -30...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 |

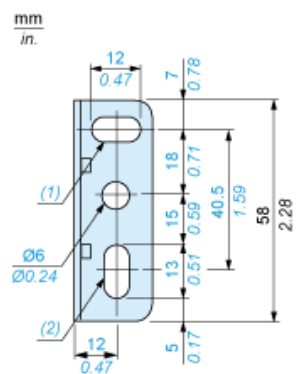
Offer Sustainability

| | |
|--------------------------|---------------------------------------------------------------------------------------|
| Sustainable offer status | Green Premium product |
| RoHS (date code: YYWW) | Compliant - since 0841 - Schneider Electric declaration of conformity |
| REACH | Reference not containing SVHC above the threshold |

Dimensions



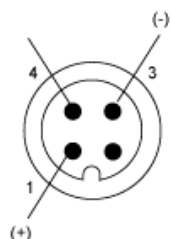
Bracket fixing



- (1) 1 elongated hole $\text{Ø} 6 \times 12$
- (2) 1 elongated hole $\text{Ø} 6 \times 13$

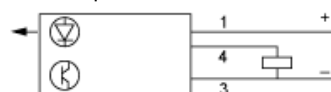
Wiring Schemes

Connector

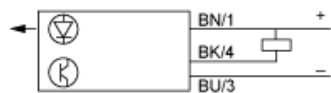


NO/NC programming

PNP Output



NPN Output

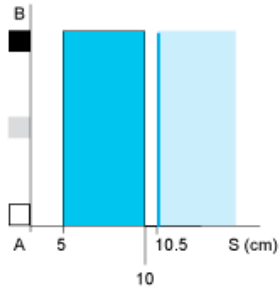


BN : Brown
BU : Blue
BK : Black

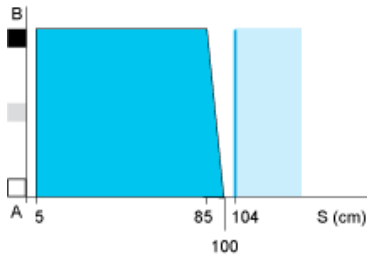
Detection Curves

Variation of Usable Sensing Distance S_u

Adjustment at 10 cm



Adjustment at 1 m

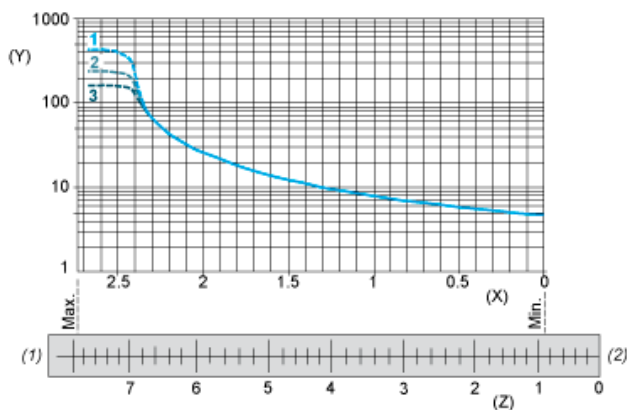


- (1) Black 6%
- (2) Grey 18%
- (3) White 90%
- (4) Sensing range
- (5) Non sensing zone (matt surfaces)

A-B : Object reflection coefficient

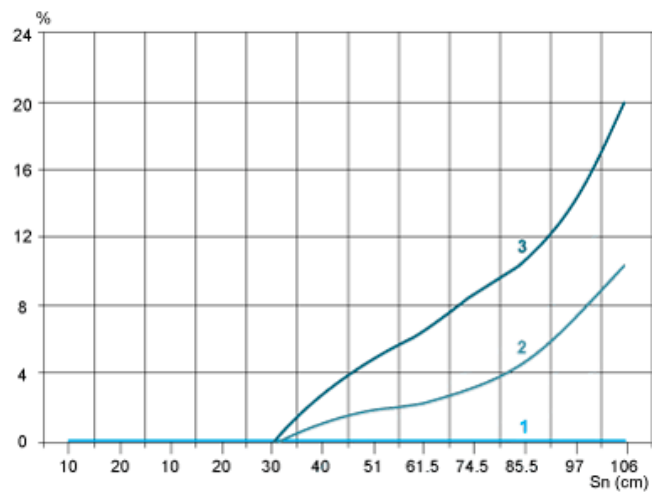
- (1) Black 6%
- (2) Grey 18%
- (3) White 90%
- (4) Sensing range
- (5) Non sensing zone (matt surfaces)

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%