

XUX8AKSAT16

Photoelectric sensors XU, XUX, BGS, Sn 2 m, 12...24 VDC, terminals



Main

| | |
|-------------------------------|---|
| Range of product | Telemecanique Photoelectric sensors XU |
| Series name | General purpose single mode |
| Electronic sensor type | Photo-electric sensor |
| Sensor name | XUX |
| Sensor design | Compact 92 x 71 |
| 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 | Screw-clamp terminals, 1 x 0.75...1 x 1.5 mm ² |
| Product specific application | Long sensing distance with high accuracy |
| Emission | Infrared |
| [Sn] nominal sensing distance | 2 m |

Complementary

| | |
|---------------------------|--|
| Enclosure material | PC |
| Lens material | PMMA |
| Output type | Solid state |
| Cable entry | ISO 16 cable gland, cable outer diameter: 7...10 mm |
| Status LED | Supply on: 1 LED (green) Instability: 1 LED (red) Output state: 1 LED (yellow) |
| [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 | 150 Hz |
| Maximum voltage drop | <1.5 V (closed state) |
| Current consumption | 35 mA no-load |
| Maximum delay first up | 200 ms |
| Maximum delay response | 3.5 ms |
| Maximum delay recovery | 2.5 ms |
| Net weight | 0.2 kg |

Environment

| | |
|---------------------------------------|--|
| Product certifications | CE[RETURN]CSA[RETURN]UL |
| Ambient air temperature for operation | -25...55 °C |
| Ambient air temperature for storage | -40...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 | IP30 conforming to IEC 60529 (with cover open) IP65 conforming to IEC 60529 (double insulation) IP67 conforming to IEC 60529 (double insulation) |

The information provided in this documentation contains general descriptions and/or technical characteristics of the performance of the products contained herein. This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications. It is the duty of any such user or integrator to perform the appropriate and complete risk analysis, evaluation and testing of the products with respect to the relevant specific application or use thereof. Neither TWSS Holding nor any of its affiliates or subsidiaries shall be responsible or liable for misuse of the information contained herein.

Packing Units

| | |
|------------------------------|-----------|
| Unit Type of Package 1 | PCE |
| Number of Units in Package 1 | 1 |
| Package 1 Height | 4.200 cm |
| Package 1 Width | 9.600 cm |
| Package 1 Length | 13.200 cm |
| Package 1 Weight | 195.000 g |
| Unit Type of Package 2 | S02 |
| Number of Units in Package 2 | 22 |
| Package 2 Height | 15 cm |
| Package 2 Width | 30 cm |
| Package 2 Length | 40 cm |
| Package 2 Weight | 4.607 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 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 www.P65Warnings.ca.gov |
| For all Reach Rohs enquiries contact us at | sustainability@tesensors.com |

Contractual warranty

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

Dimensions



- (1) Elongated hole $\text{Ø } 5.5 \times 7$
- (2) Elongated hole $\text{Ø } 5.5 \times 9$
- (3) $\text{Ø } 5.5$ hole

Wiring Schemes

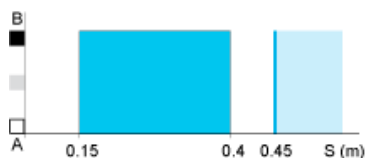
PNP/NPN DC

| M12 | | Terminals | | |
|-----|---|-----------|---|----------------|
| 1 | ● | 1 | ⊘ | + |
| 3 | ● | 2 | ⊘ | - |
| 4 | ● | 3 | ⊘ | Output |
| 2 | ● | 4 | ⊘ | Alarm inactive |

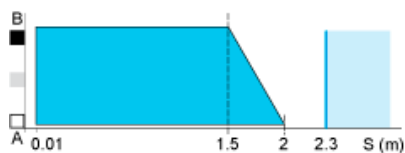
Detection Curves

Variation of Usable Sensing Distance S_u

Teach Mode at Minimum



Teach Mode at Maximum

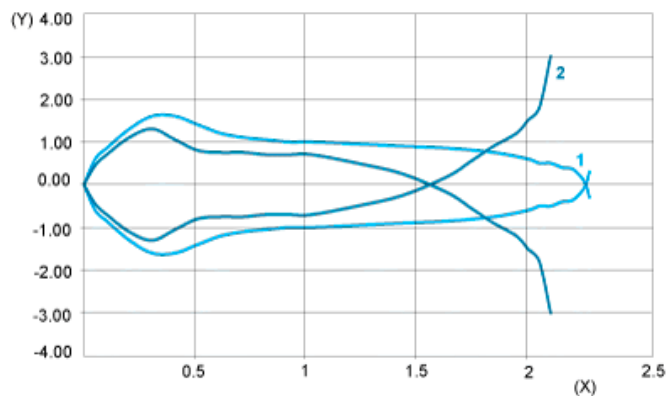


- (1) Black 6%
- (2) Grey 18%
- (3) White 90%
- (4) Sensing range
- (5) Non sensing zone (matt surfaces)

A-B : Object reflection coefficient

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

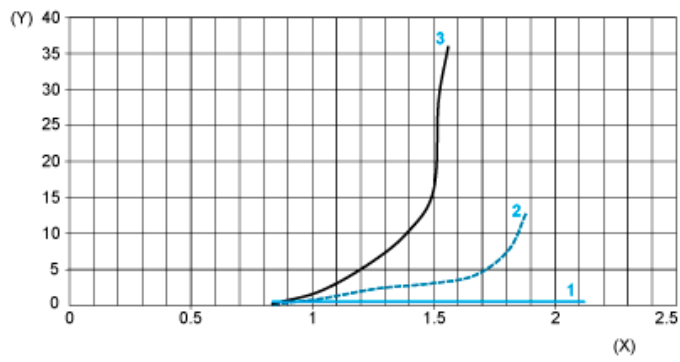
Detection Curves



- 1 : White 90%
- 2 : Grey 18%
- (Y) Detection lobe (cm)
- (X) Object distance (m)

Object 10 x 10 cm

Relative Difference in Sensing Distances According to Object Colour



- 1 : White 90%
 - 2 : Grey 18%
 - 3 : Black 6%
 - (Y) Relative error (%)
 - (X) Object distance (m)
- Object 10 x 10 cm