# Product data sheet
## Characteristics

# XUX8AKSAT16

photo-electric sensor - XUX - BGS - Sn 2m - 12..24VDC - terminals

Green Premium™ Product

## Main

| | |
|---|---|
| Range of product | OsiSense 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 mm² |
| 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)<br>Instability: 1 LED (red)<br>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<br>CSA<br>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)<br>IP65 conforming to IEC 60529 (double insulation)<br>IP67 conforming to IEC 60529 (double insulation) |

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## Packing Units

| | |
|---|---|
| Unit Type of Package 1 | PCE |
| Number of Units in Package 1 | 1 |
| Package 1 Weight | 196 g |
| Package 1 Height | 4.2 cm |
| Package 1 width | 13.2 cm |
| Package 1 Length | 9.6 cm |
| Unit Type of Package 2 | S02 |
| Number of Units in Package 2 | 22 |
| Package 2 Weight | 4.68 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 | REACh Declaration |
| EU RoHS Directive | Pro-active compliance (Product out of EU RoHS legal scope) EU RoHS Declaration |
| Mercury free | Yes |
| RoHS exemption information | Yes |
| Environmental Disclosure | Product Environmental Profile |
| Circularity Profile | End of Life Information |

## Contractual warranty

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

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## Dimensions



(1)    Elongated hole Ø 5.5 x 7
(2)    Elongated hole Ø 5.5 x 9
(3)    Ø 5.5 hole

## Wiring Schemes

### PNP/NPN DC

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

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## Detection Curves

### Variation of Usable Sensing Distance Su

Teach Mode at Minimum



Teach Mode at Maximum
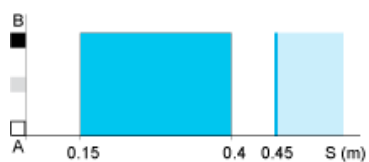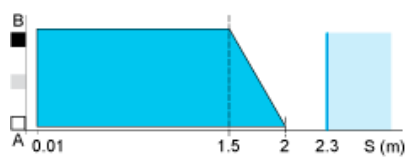


A-B : Object reflection coefficient
(1)    Black 6%
(2)    Grey 18%
(3)    White 90%
(4)    Sensing range
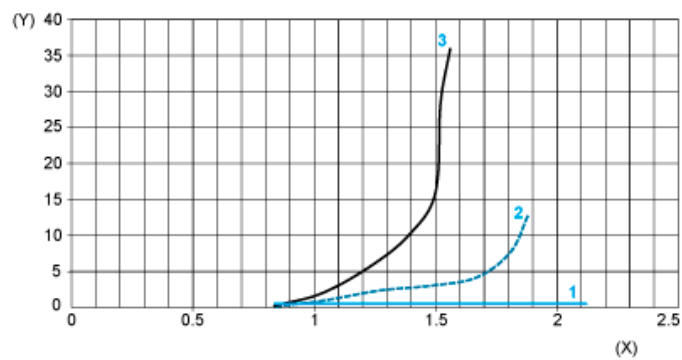(5)    Non sensing zone (matt surfaces)

### Detection Curves
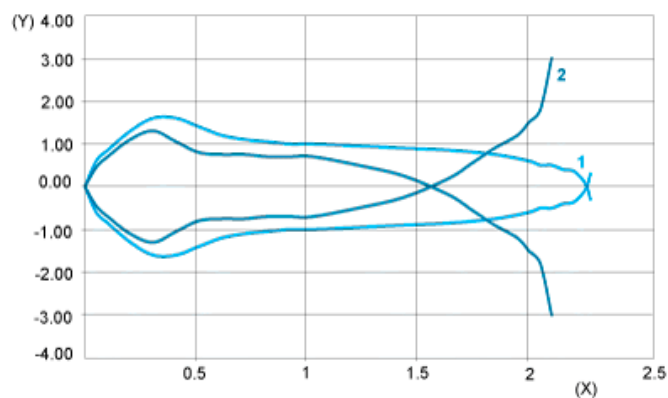


1 :    White 90%
2 :    Grey 18%
(Y)    Detection lobe (cm)
(X)    Object distance (m)

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