



## 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	1 male connector M12, 4 pins
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
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 CSA 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)

## Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Weight	192 g
Package 1 Height	13.2 cm
Package 1 width	9.4 cm
Package 1 Length	4.2 cm
Unit Type of Package 2	S02
Number of Units in Package 2	22
Package 2 Weight	4.48 kg
Package 2 Height	15 cm
Package 2 width	30 cm
Package 2 Length	40 cm

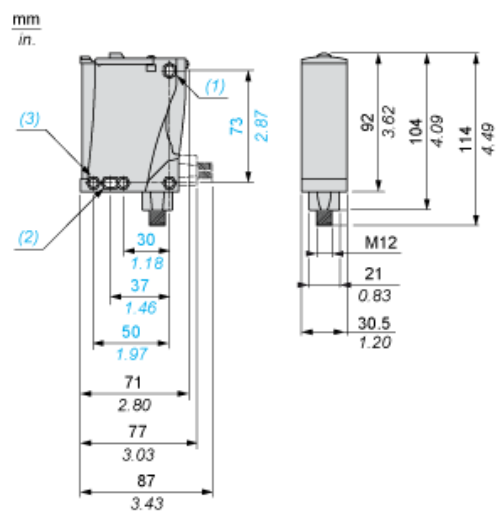
## Offer Sustainability

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
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## Dimensions



- (1) Elongated hole  $\varnothing 5.5 \times 7$
- (2) Elongated hole  $\varnothing 5.5 \times 9$
- (3)  $\varnothing 5.5$  hole

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## Mounting and Clearance

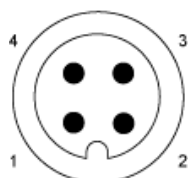
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### Possible Orientation of Elbowed Connector (Rear View)



## Wiring Schemes

### M12 Connector



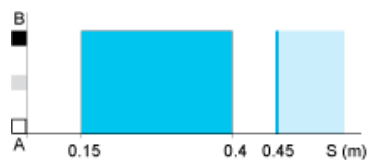
### PNP/NPN DC

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

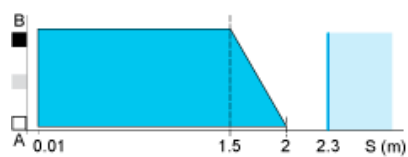
## Detection Curves

### Variation of Usable Sensing Distance $S_u$

Teach Mode at Minimum



Teach Mode at Maximum

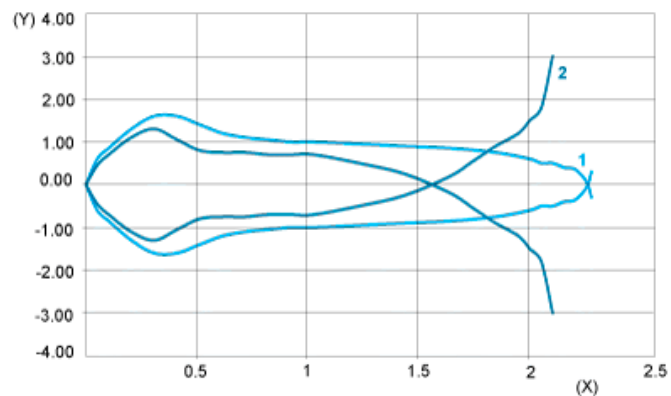


- (1) Black 6%
- (2) Grey 18%
- (3) White 90%
- (4) Sensing range
- (5) Non sensing zone (matt surfaces)

A-B : Object reflection coefficient

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

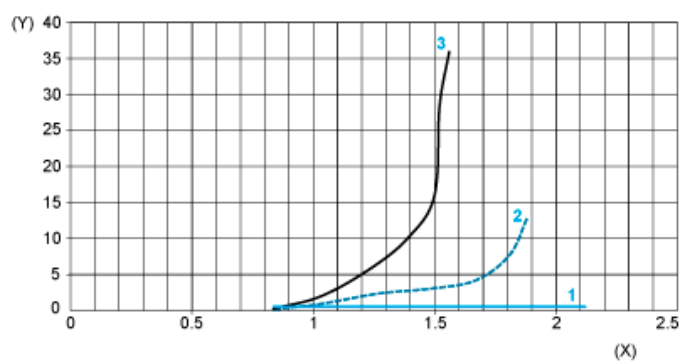
### Detection Curves



- 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