



**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	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[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)

## Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	4.200 cm
Package 1 Width	9.400 cm
Package 1 Length	13.200 cm
Package 1 Weight	192.000 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	4.724 kg

## Offer Sustainability

Sustainable offer status	Green Premium product
California proposition 65	WARNING: This product can expose you to chemicals including: Diisobutyl 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 <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>

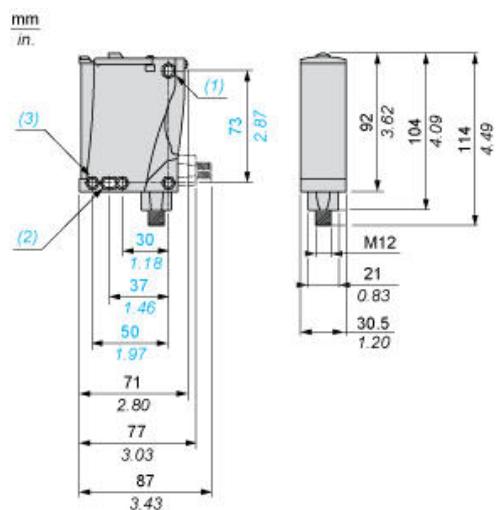
## Contractual warranty

Warranty	18 months
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Dimensions

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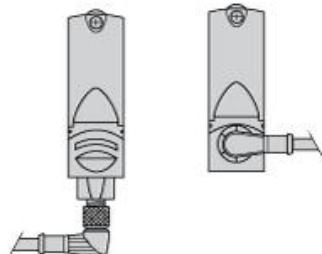


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Mounting and Clearance

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Possible Orientation of Elbowed Connector (Rear View)

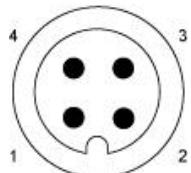


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### Wiring Schemes

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#### M12 Connector



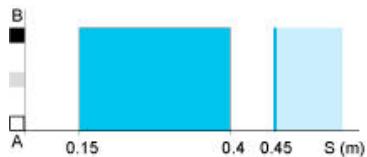
#### PNP/NPN DC

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

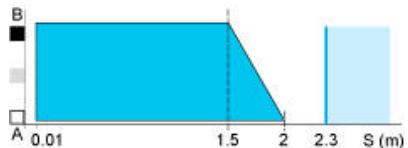
## Detection Curves

### Variation of Usable Sensing Distance Su

Teach Mode at Minimum



Teach Mode at Maximum

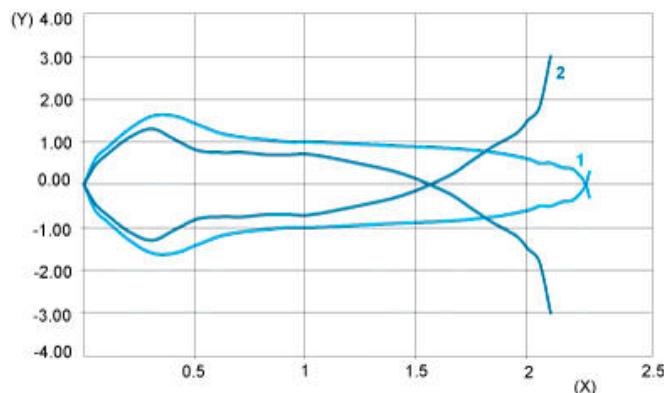


- (1)
- (2)
- (3)
- (4)
- (5)

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%

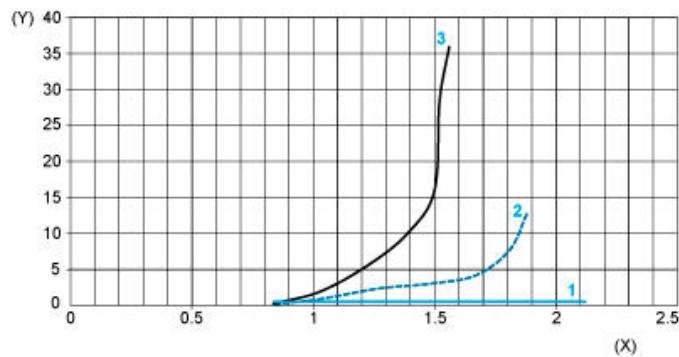
2 : Grey 18%

(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