

# Product data sheet

Specifications



## Photoelectric sensors XU, XUB, multi, Sn 0...20 m, 12...24 VDC, cable 2 m

XUB0BPSNL2

### Main

Range of product	Telemecanique Photoelectric sensors XU
Series name	General purpose multimode
Electronic sensor type	Photo-electric sensor
Sensor name	XUB
Sensor design	Cylindrical M18
Detection system	Multimode
Material	Metal
Line of sight type	Axial
Type of output signal	Discrete
Supply circuit type	DC
Wiring technique	3-wire
Discrete output type	PNP
Discrete output function	1 NO or 1 NC programmable
Electrical connection	Cable
Cable length	2 m
Product specific application	-
Emission	Infrared diffuse Infrared diffuse with background suppression Infrared thru beam Red polarised reflex
[Sn] nominal sensing distance	3 m polarised reflex need reflector XUZC50 20 m thru beam need a transmitter XUB0BKSNL2T 0.12 m diffuse with background suppression 0.3 m diffuse

### Complementary

Enclosure material	Nickel plated brass
Lens material	PMMA
Maximum sensing distance	0.12 m diffuse with background suppression 0.4 m diffuse 30 m thru beam 4.5 m polarised reflex
Output type	Solid state
Add on output	Without

Wire insulation material	PvR
Status LED	1 LED (green) for supply 1 LED (red) for instability 1 LED (yellow) for output state
[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
Maximum voltage drop	<1.5 V (closed state)
Current consumption	35 mA no-load
Maximum delay first up	200 ms
Maximum delay response	2 ms
Maximum delay recovery	2 ms
Setting-up	Self-teaching
Diameter	18 mm
Length	64 mm
Net weight	0.105 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, 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 IP67 double insulation conforming to IEC 60529

## Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Weight	126 g
Package 1 Height	4.2 cm
Package 1 width	9.7 cm
Package 1 Length	13.2 cm
Unit Type of Package 2	S02
Number of Units in Package 2	22
Package 2 Weight	3.136 kg
Package 2 Height	15 cm
Package 2 width	30 cm
Package 2 Length	40 cm

## Offer Sustainability

Sustainable offer status	Green Premium product
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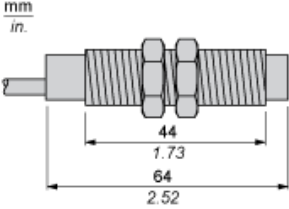
<b>REACH Regulation</b>	<a href="#">REACH Declaration</a>
<b>EU RoHS Directive</b>	Pro-active compliance (Product out of EU RoHS legal scope) <a href="#">EU RoHS Declaration</a>
<b>Mercury free</b>	Yes
<b>RoHS exemption information</b>	Yes
<b>Environmental Disclosure</b>	<a href="#">Product Environmental Profile</a>
<b>Circularity Profile</b>	<a href="#">End of Life Information</a>
<b>California proposition 65</b>	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 <a href="http://www.P65Warnings.ca.gov">www.P65Warnings.ca.gov</a>

## Contractual warranty

<b>Warranty</b>	18 months
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Dimensions

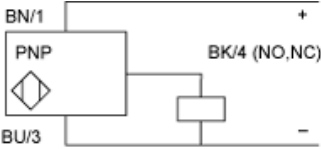
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**Connections and Schemes**

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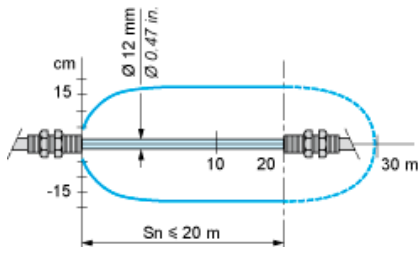
**PNP**



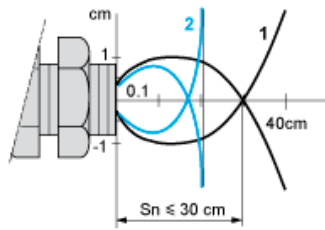
- BN :** Brown
- BU :** Blue
- BK :** Black

**Detection Curves**

**With Thru-beam Accessory (Thru-beam)**

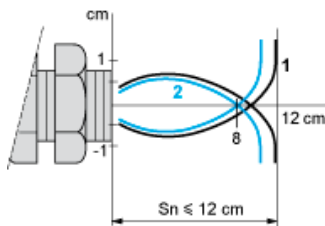


**Without Accessory (Diffuse)**



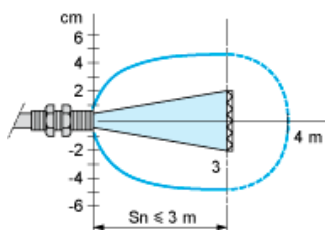
- 1 : White 90%
  - 2 : Grey 18%
- Object 10 x 10 cm

**Without Accessory (Diffuse with background suppression)**



- 1 : White 90%
  - 2 : Grey 18%
- Object 10 x 10 cm

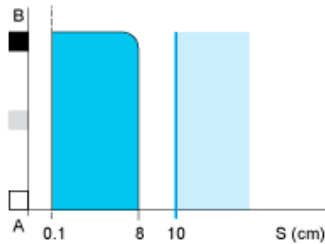
**With reflector (Polarised reflex)**



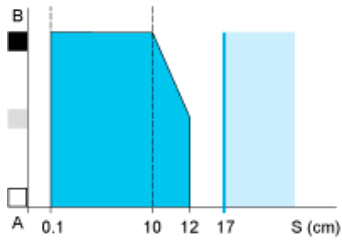
With reflector XUZY50

**Variation of Usable Sensing Distance  $S_u$  (Without accessory, with adjustable background suppression)**

**Teach Mode at Minimum**



### Teach Mode at Maximum

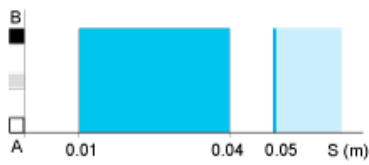


- (1) Black
- (2) Grey
- (3) White
- (4) Sensing range
- (5) Non sensing zone (matt surfaces)

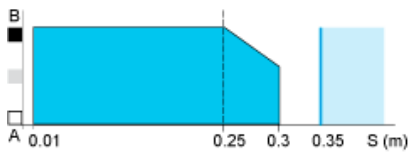
**A-B :** Object reflection coefficient  
 (1) Black 6%  
 (2) Grey 18%  
 (3) White 90%  
 (4) Sensing range  
 (5) Non sensing zone (matt surfaces)

### Variation of Usable Sensing Distance

#### Minimum Setting



#### Maximum Setting



- (1) Black
- (2) Grey
- (3) White
- (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)