

# Product datasheet

Specifications



## photo-electric sensor - XUB - multi - Sn 0..20m - 12..24VDC - M12

XUB0BNSNM12

XUB0BNSNM12 has not been replaced. Please contact your customer care centre for more information.

⚠ Discontinued

### 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	NPN
Discrete output function	1 NO or 1 NC programmable
Electrical connection	1 male connector M12, 4 pins
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 XUB0BKSNM12T 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

<b>Status LED</b>	1 LED (green) for supply 1 LED (red) for instability 1 LED (yellow) for output state
<b>[Us] rated supply voltage</b>	12...24 V DC with reverse polarity protection
<b>Supply voltage limits</b>	10...36 V DC
<b>Switching capacity in mA</b>	<= 100 mA (overload and short-circuit protection)
<b>Switching frequency</b>	<= 250 Hz
<b>Maximum voltage drop</b>	<1.5 V (closed state)
<b>Current consumption</b>	35 mA no-load
<b>Maximum delay first up</b>	200 ms
<b>Maximum delay response</b>	2 ms
<b>Maximum delay recovery</b>	2 ms
<b>Setting-up</b>	Self-teaching
<b>Diameter</b>	18 mm
<b>Length</b>	78 mm
<b>Net weight</b>	0.055 kg

## Environment

<b>Product certifications</b>	CE UL CSA
<b>Ambient air temperature for operation</b>	-25...55 °C
<b>Ambient air temperature for storage</b>	-40...70 °C
<b>Vibration resistance</b>	7 gn, amplitude = +/- 1.5 mm (f = 10...55 Hz) conforming to IEC 60068-2-6
<b>Shock resistance</b>	30 gn (duration = 11 ms) conforming to IEC 60068-2-27
<b>IP degree of protection</b>	IP65 double insulation conforming to IEC 60529 IP67 double insulation conforming to IEC 60529 IP69K double insulation conforming to DIN 40050

## Packing Units

<b>Unit Type of Package 1</b>	PCE
<b>Number of Units in Package 1</b>	1
<b>Package 1 Weight</b>	70.0 g
<b>Package 1 Height</b>	6.6 cm
<b>Package 1 width</b>	9.4 cm
<b>Package 1 Length</b>	4.4 cm
<b>Unit Type of Package 2</b>	S01
<b>Number of Units in Package 2</b>	22
<b>Package 2 Weight</b>	1.776 kg
<b>Package 2 Height</b>	15 cm
<b>Package 2 width</b>	15 cm
<b>Package 2 Length</b>	40 cm

## Offer Sustainability

<b>Sustainable offer status</b>	Green Premium product
<b>REACH Regulation</b>	<a href="#">REACH Declaration</a>

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<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>	<a href="#">Yes</a>
<b>Environmental Disclosure</b>	<a href="#">Product Environmental Profile</a>
<b>Circularity Profile</b>	<a href="#">End of Life Information</a>

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### **Contractual warranty**

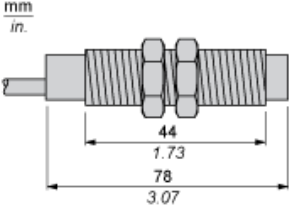
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<b>Warranty</b>	18 months
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Dimensions

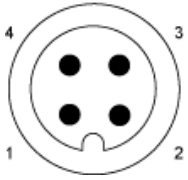
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**Wiring Schemes**

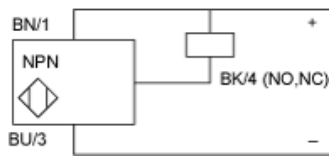
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**M12 Connector**



- 1 : (+)
- 2 : Beam break input (1)
- 3 : (-)
- 4 : OUT/Output
- (1) Beam break input on thru-beam transmitter only

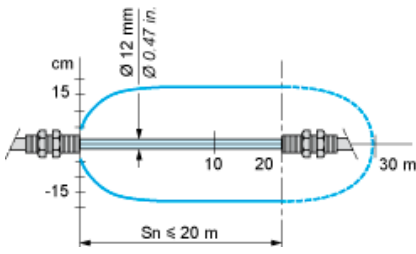
**Receiver, NPN Output**



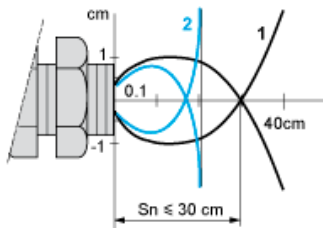
- BN :** Brown
- BU :** Blue
- BK :** Black

**Detection Curves**

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

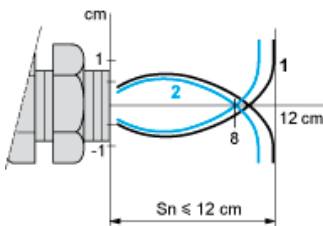


**Without Accessory (Diffuse)**



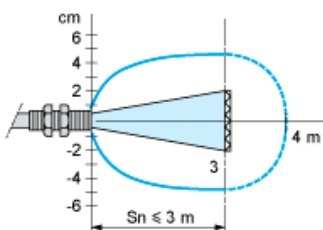
- 1 : White 90%
  - 2 : Grey 18%
- Object 10 x 10 cm

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



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

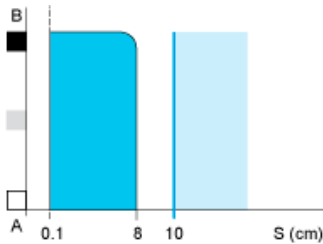
**With reflector (Polarised reflex)**



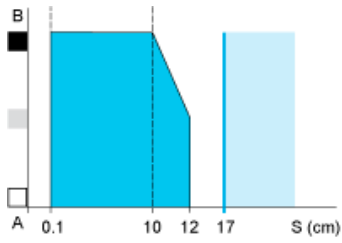
With reflector XUZC50

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

Teach Mode at Minimum



### Teach Mode at Maximum

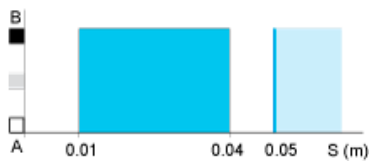


- (1) Black
- (2) Grey
- (3) White
- (4) Sensing range
- (5) Non sensing zone (matt surfaces)

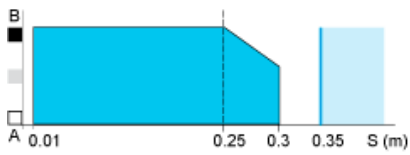
- A-B :** Object reflection coefficient
- (1) Black 6%
  - (2) Grey 18%
  - (3) White 90%
  - (4) Sensing range
  - (5) Non sensing zone (matt surfaces)

### 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)