

## Product data sheet

### Characteristics

# XUB0BPSNM12

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



### 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	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
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	78 mm
Net weight	0.055 kg



## Environment

Product certifications	CSA[RETURN]CE[RETURN]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 IP69K double insulation conforming to DIN 40050

## Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	4.2 cm
Package 1 Width	6.7 cm
Package 1 Length	9.6 cm
Package 1 Weight	67 g
Unit Type of Package 2	S01
Number of Units in Package 2	22
Package 2 Height	15 cm
Package 2 Width	15 cm
Package 2 Length	40 cm
Package 2 Weight	1.78 kg

## 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)
Mercury free	Yes
RoHS exemption information	 <a href="#">Yes</a>

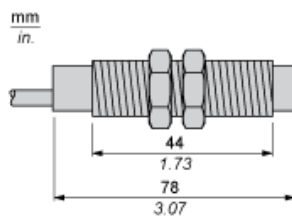
## Contractual warranty

Warranty	18 months
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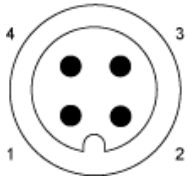
Dimensions

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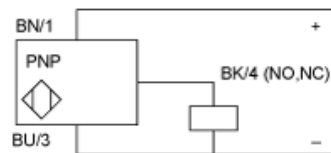
## Wiring Schemes

### M12 Connector



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

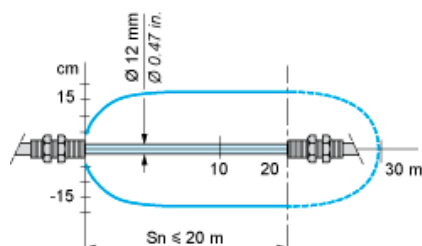
### Receiver, PNP Output



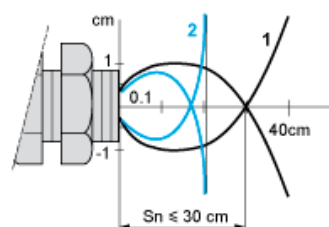
BN : Brown  
BU : Blue  
BK : Black

## Detection Curves

### With Thru-beam Accessory (Thru-beam)



### Without Accessory (Diffuse)

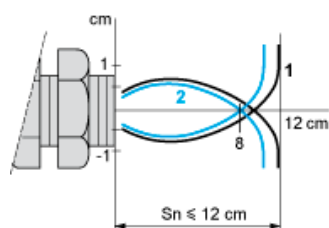


1 : White 90%

2 : Grey 18%

Object 10 x 10 cm

### Without Accessory (Diffuse with background suppression)

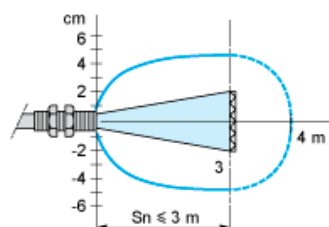


1 : White 90%

2 : Grey 18%

Object 10 x 10 cm

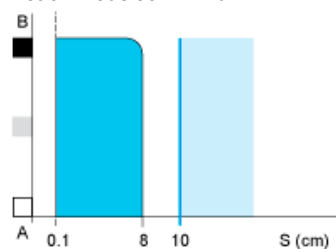
### With reflector (Polarised reflex)



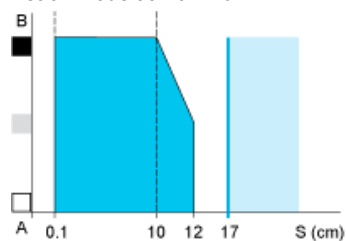
With reflector XUZC50

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

Teach Mode at Minimum



Teach Mode at Maximum



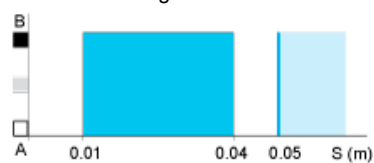
- (1) Black 6%
- (2) Grey 18%
- (3) White 90%
- (4) Sensing range
- (5) Non sensing zone (matt surfaces)

A-B : Object reflection coefficient

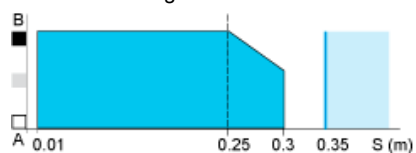
- (1) Black 6%
- (2) Grey 18%
- (3) White 90%
- (4) Sensing range
- (5) Non sensing zone (matt surfaces)

## Variation of Usable Sensing Distance

Minimum Setting



Maximum Setting



- (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)