

# XUB0APSNM12

Photoelectric sensors XU, XUB, multi, Sn 0...20 m, 12...24 VDC, 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	Plastic
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 XUB0AKSNM12T 0.12 M diffuse with background suppression 0.3 m diffuse

## Complementary

Enclosure material	PBT
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	0.045 kg

## Environment

Product certifications	CSA[RETURN]UL[RETURN]CE
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	9.7 cm
Package 1 Weight	42.9 g
Unit Type of Package 2	S01
Number of Units in Package 2	22
Package 2 Height	15.0 cm
Package 2 Width	15.0 cm
Package 2 Length	40.0 cm
Package 2 Weight	1.305 kg
Unit Type of Package 3	P06
Number of Units in Package 3	704
Package 3 Height	75.0 cm
Package 3 Width	80.0 cm
Package 3 Length	60.0 cm
Package 3 Weight	48.116 kg

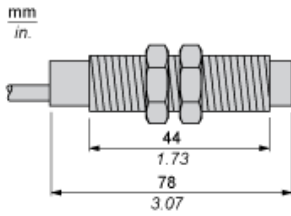
## Offer Sustainability

Sustainable offer status	Green Premium product
California proposition 65	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>
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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## Wiring Schemes

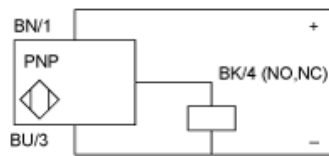
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### M12 Connector



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

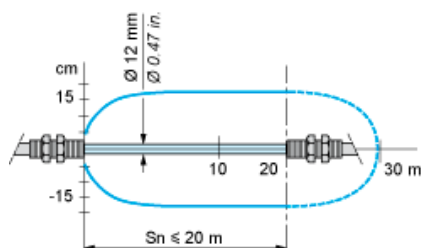
### Receiver, PNP Output



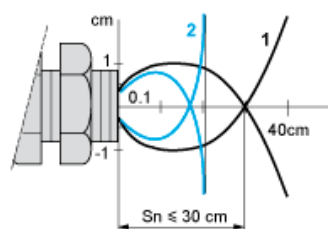
- BN : Brown
- BU : Blue
- BK : Black

Detection Curves

With Thru-beam Accessory (Thru-beam)

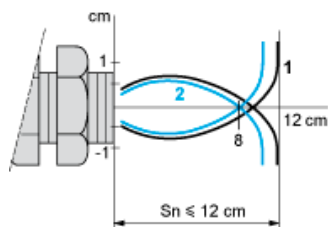


Without Accessory (Diffuse)



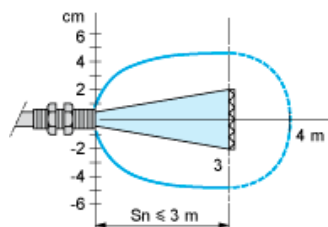
- 1 : White 90%
  - 2 : Grey 18%
- Object 10 x 10 cm

Without Accessory (Diffuse with background suppression)



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

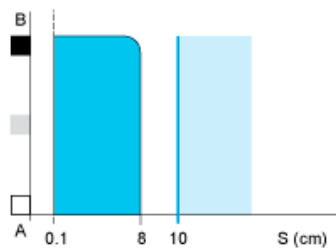
With reflector (Polarised reflex)



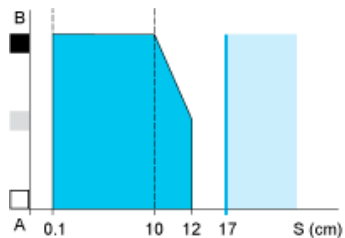
With reflector XU50

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

Teach Mode at Minimum



Teach Mode at Maximum



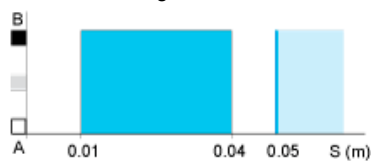
- (1) Black 6%
- (2) Grey 18%
- (3) White 90%
- (4) Sensing range
- (5) Non sensing zone (matt surfaces)

A-B : Object reflection coefficient

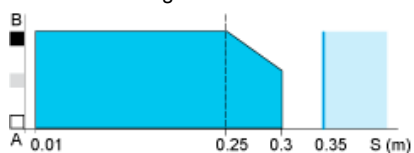
- (1) Black 6%
- (2) Grey 18%
- (3) White 90%
- (4) Sensing range
- (5) Non sensing zone (matt surfaces)

## 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)