



## Main

Range of product	OsiSense 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	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	0.39 ft (0.12 m) diffuse with background suppression 0.98 ft (0.3 m) diffuse 9.84 ft (3 m) polarised reflex need reflector XUZC50 65.62 ft (20 m) thru beam need a transmitter XUB0AKSNM12T

## Complementary

Enclosure material	PBT
Lens material	PMMA
Maximum sensing distance	0.39 ft (0.12 m) diffuse with background suppression 1.31 ft (0.4 m) diffuse 98.43 ft (30 m) thru beam 14.76 ft (4.5 m) polarised reflex
Output type	Solid state
Add on output	Without
Status LED	1 LED (green) supply 1 LED (red) instability 1 LED (yellow) 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
Voltage drop	1.5 V (closed state)
Current consumption	35 mA (no-load)
Delay first up	< 200 ms
Delay response	< 2 ms
Delay recovery	< 2 ms
Setting-up	Self-teaching
Diameter	0.71 in (18 mm)
Length	3.07 in (78 mm)
Product weight	0.1 lb(US) (0.045 kg)

The information provided in this documentation contains general descriptions and/or technical characteristics of the products contained herein. This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications. It is the duty of any such user or integrator to perform the appropriate and complete risk analysis, evaluation and testing of the products with respect to the relevant specific application or use thereof. Neither Schneider Electric Industries SAS nor any of its affiliates or subsidiaries shall be responsible or liable for misuse of the information contained herein.

## Environment

product certifications	CE CSA UL
ambient air temperature for operation	-13...131 °F (-25...55 °C)
ambient air temperature for storage	-40...158 °F (-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

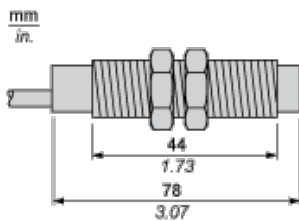
## Offer Sustainability

Not Green Premium product	Not Green Premium product
Compliant - since 0821 - Schneider Electric declaration of conformity	Compliant - since 0821 - Schneider Electric declaration of conformity
Reference not containing SVHC above the threshold	Reference not containing SVHC above the threshold
WARNING: This product can expose you to chemicals including:	WARNING: This product can expose you to chemicals including:
Diisononyl phthalate (DINP), which is known to the State of California to cause cancer, and	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.	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 more information go to <a href="http://www.p65warnings.ca.gov">www.p65warnings.ca.gov</a>

## Contractual warranty

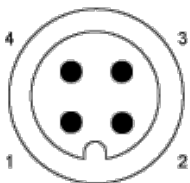
Warranty period	18 months
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## Dimensions



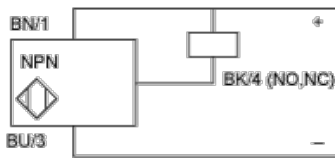
## Wiring Schemes

### M12 Connector



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

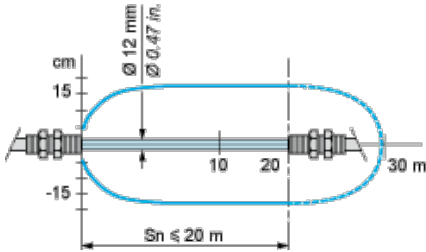
### Receiver, NPN Output



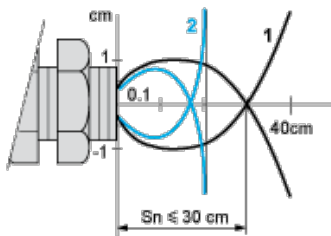
BN : Brown  
 BU : Blue  
 BK : Black

## Detection Curves

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

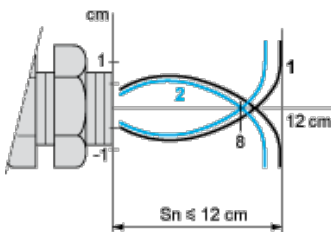


### Without Accessory (Diffuse)



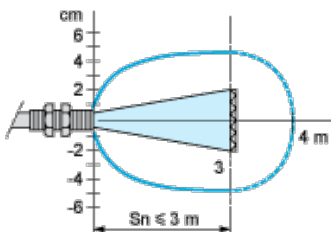
1 : White 90%  
 2 : Grey 18%  
 Object 10 x 10 cm

### Without Accessory (Diffuse with background suppression)



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

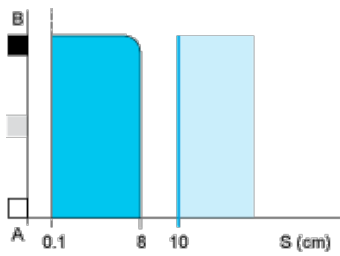
### With reflector (Polarised reflex)



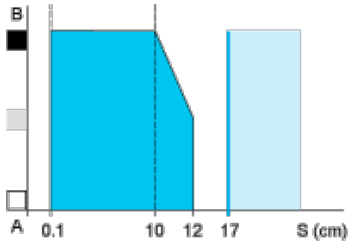
With reflector XUZC50

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

Teach Mode at Minimum



**Teach Mode at Maximum**



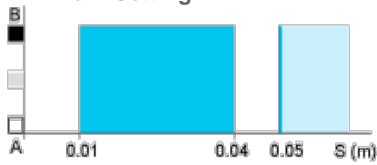
- (1) Black 6%
- (2) Grey 18%
- (3) White 90%
- (4) Sensing range
- (5) Non sensing zone (matt surfaces)

A-B :Object reflection coefficient

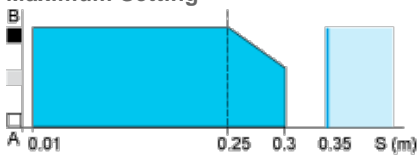
- (1) Black 6%
- (2) Grey 18%
- (3) White 90%
- (4) Sensing range
- (5) Non sensing zone (matt surfaces)

**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)