

# XUK8AKSNL2

Photoelectric sensors XU, photo electric laser sensor, XUK, BGS, Sn 1 m, 12...24 VDC, cable 2 m



## Main

Range of product	Telemecanique Photoelectric sensors XU
Series name	General purpose single mode
Electronic sensor type	Photo-electric sensor
Sensor name	XUK
Sensor design	Compact 50 x 50
Detection system	Diffuse with background suppression
Material	Plastic
Type of output signal	Discrete
Supply circuit type	DC
Wiring technique	3-wire
Discrete output type	PNP or NPN
Discrete output function	1 NO or 1 NC programmable
Electrical connection	Cable
Cable length	2 m
Product specific application	-
Emission	Infrared laser, modulated diffuse with background suppression class 1
[Sn] nominal sensing distance	1 m diffuse with background suppression

## Complementary

Enclosure material	PC
Lens material	PMMA
Maximum sensing distance	1 m diffuse with background suppression
Minimum object diameter for detection	2 mm
Output type	Solid state
Add on output	Without, <= 50 mA with overload and short-circuit protection
Cable composition	5 x 0.34 mm <sup>2</sup>
Wire insulation material	PVC
Cable outer diameter	6 mm
Status LED	1 LED (green) for supply on 1 LED (yellow) for output state 1 LED (red) for alignment assistance
[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	300 ms
Maximum delay response	2 ms
Maximum delay recovery	2 ms
Setting-up	Sensitivity adjustment by potentiometer
Depth	50 mm
Height	50 mm
Width	18 mm

Net weight	0.19 kg
Kit composition	With XUZA51 bracket fixing

## Environment

Product certifications	CE
Ambient air temperature for operation	-25...55 °C
Ambient air temperature for storage	-30...70 °C
Vibration resistance	7 gn (f = 10...55 Hz) conforming to IEC 60068-2-6
Shock resistance	10 gn (duration = 11 ms) conforming to IEC 60068-2-27
IP degree of protection	IP65 double insulation conforming to IEC 60529

## Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	4.2 cm
Package 1 Width	9.7 cm
Package 1 Length	13.2 cm
Package 1 Weight	228 g
Unit Type of Package 2	S02
Number of Units in Package 2	12
Package 2 Height	15 cm
Package 2 Width	30 cm
Package 2 Length	40 cm
Package 2 Weight	3.2 kg

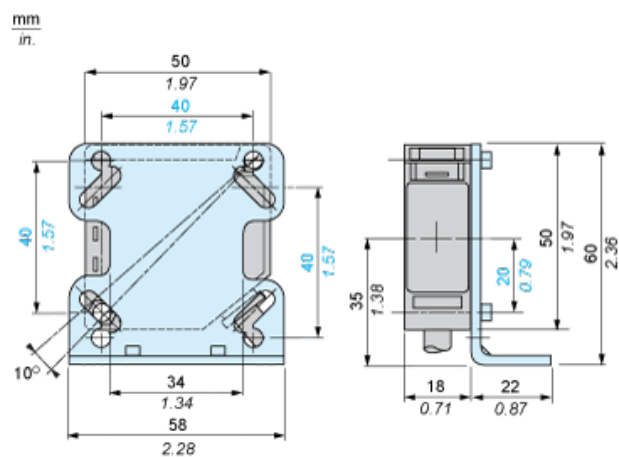
## Offer Sustainability

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>

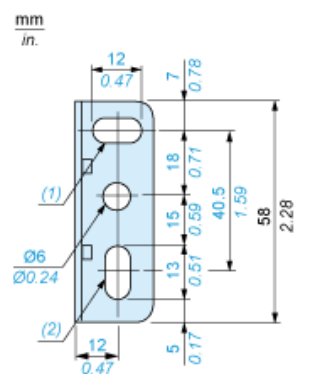
## Contractual warranty

Warranty	18 months
----------	-----------

## Dimensions



## Bracket fixing



- (1) 1 elongated hole Ø 6 x 12
- (2) 1 elongated hole Ø 6 x 13

## Wiring Schemes

### NO/NC Programming

PNP Output



NPN Output



BN : Brown

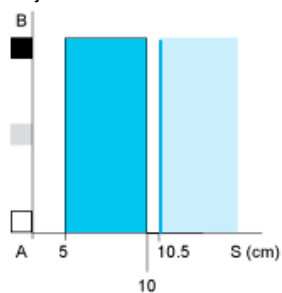
BU : Blue

BK : Black

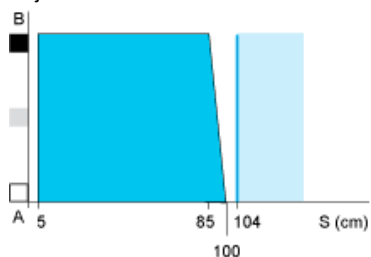
## Detection Curves

### Variation of Usable Sensing Distance $S_u$

Adjustment at 10 cm



Adjustment at 1 m

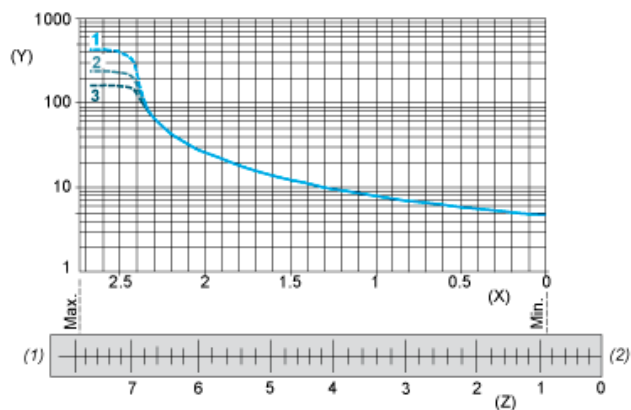


- (1) Black 6%
- (2) Grey 18%
- (3) White 90%
- (4) Sensing range
- (5) Non sensing zone (matt surfaces)

A-B : Object reflection coefficient

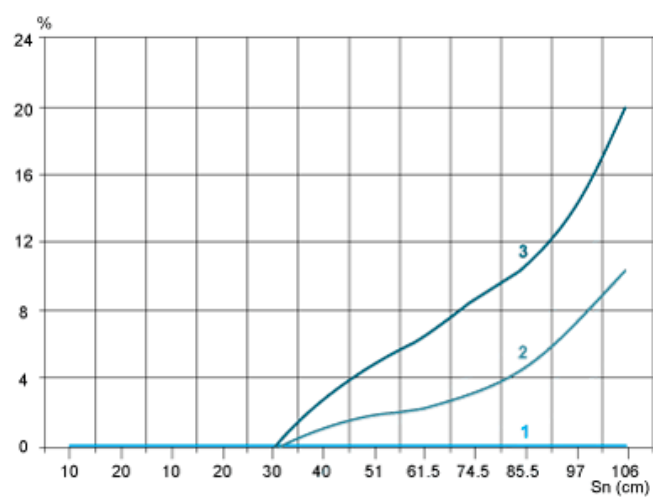
- (1) Black 6%
- (2) Grey 18%
- (3) White 90%
- (4) Sensing range
- (5) Non sensing zone (matt surfaces)

### Sensing Distance Adjustment



- 1 : White 90%
- 2 : Grey 18%
- 3 : Black 6%
- (Y) Sensing distance (cm)
- (X) Number of turns on potentiometer
- (Z) Setting indicator position (mm)

## Relative Difference in Sensing Distances According to Object Colour



- 1 : White 90%
- 2 : Grey 18%
- 3 : Black 6%