

# 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	6.56 ft (2 m)
Product Specific Application	-
Emission	Infrared laser, modulated diffuse with background suppression class 1
[Sn] nominal sensing distance	3.28 ft (1 m) diffuse with background suppression

## Complementary

Enclosure Material	PC
Lens material	PMMA
Maximum sensing distance	3.28 ft (1 m) diffuse with background suppression
Minimum object diameter for detection	0.08 in (2 mm)
Output Type	Solid state
Add on output	Without, <= 50 mA overload and short-circuit protection
Cable composition	5 x 0.34 mm <sup>2</sup>
Wire insulation material	PVC
Cable outer diameter	0.24 in (6 mm)
Status LED	1 LED green)supply on 1 LED yellow)output state 1 LED red)alignment assistance
[Us] rated supply voltage	12...24 V DC 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	1.97 in (50 mm)
Height	1.97 in (50 mm)

Width	0.71 in (18 mm)
Net Weight	0.42 lb(US) (0.19 kg)
Kit composition	With XUZA51 bracket fixing

## Environment

Product Certifications	CE
Ambient air temperature for operation	-13...131 °F (-25...55 °C)
Ambient Air Temperature for Storage	-22...158 °F (-30...70 °C)
Vibration resistance	7 gn 10...55 Hz) IEC 60068-2-6
Shock resistance	10 gn 11 ms) IEC 60068-2-27
IP degree of protection	IP65 double insulation IEC 60529






## Ordering and shipping details

Category	22481-SENSORS, PHOTOELECTRIC
Discount Schedule	DS2
GTIN	3389110057638
Nbr. of units in pkg.	1
Package weight(Lbs)	8.04 oz (228.0 g)
Returnability	No
Country of origin	ID

## Packing Units

Unit Type of Package 1	PCE
Package 1 Height	1.65 in (4.2 cm)
Package 1 width	3.82 in (9.7 cm)
Package 1 Length	5.20 in (13.2 cm)
Unit Type of Package 2	CAR
Number of Units in Package 2	1
Package 2 Weight	8.11 oz (230.0 g)
Package 2 Height	1.65 in (4.2 cm)
Package 2 width	3.82 in (9.7 cm)
Package 2 Length	5.20 in (13.2 cm)
Unit Type of Package 3	S02
Number of Units in Package 3	12
Package 3 Weight	7.05 lb(US) (3.2 kg)
Package 3 Height	5.91 in (15 cm)
Package 3 width	11.81 in (30 cm)
Package 3 Length	15.75 in (40 cm)

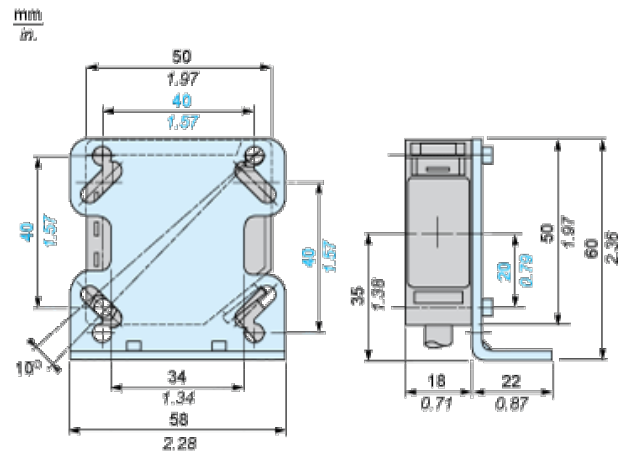
## Offer Sustainability

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>
REACH Regulation	 <a href="#">REACH Declaration</a>
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope)  <a href="#">EU RoHS Declaration</a>
Mercury free	Yes
RoHS exemption information	 <a href="#">Yes</a>
Environmental Disclosure	 <a href="#">Product Environmental Profile</a>
Circularity Profile	 <a href="#">End Of Life Information</a>

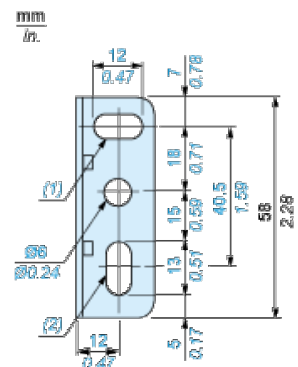
Contractual warranty

Warranty	18 months
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## 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

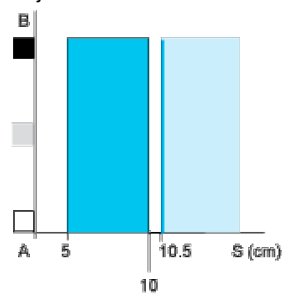
BU : Blue

BK : Black

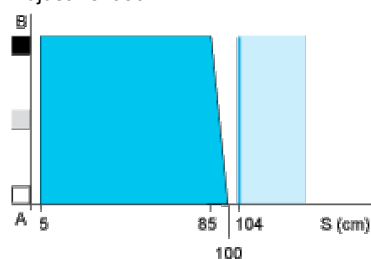
## Detection Curves

### Variation of Usable Sensing Distance $S_u$

Adjustment at 10 cm



Adjustment at 1 m

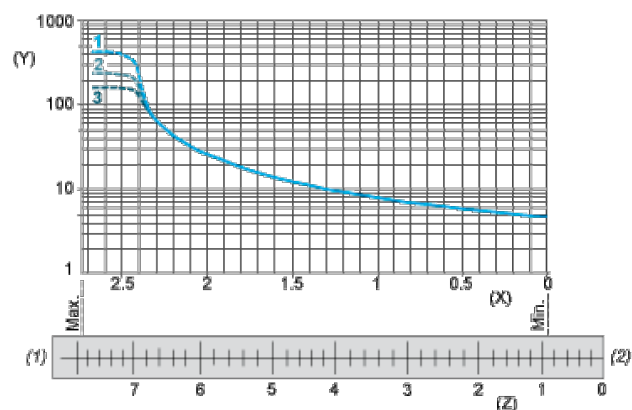


- (1) Black 6%
- (2) Grey 18%
- (3) White 90%
- (4) Sensing range
- (5) Non sensing zone (matt surfaces)

A-B : Object reflection coefficient

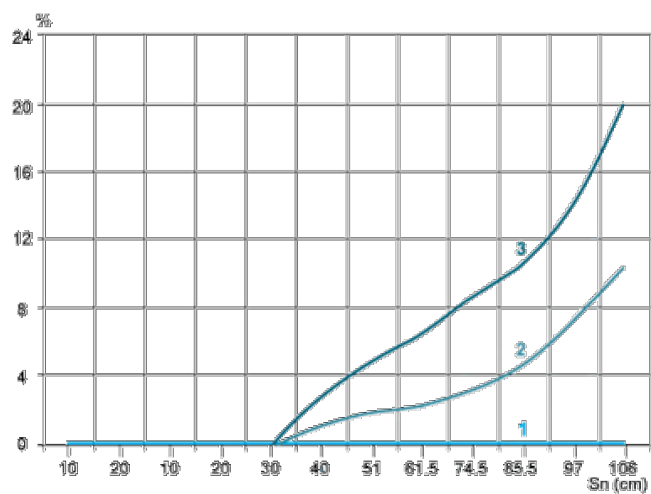
- (1) Black 6%
- (2) Grey 18%
- (3) White 90%
- (4) Sensing range
- (5) Non sensing zone (matt surfaces)

### 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%