

# Product datasheet

Specifications



## photo-electric laser sensor - XUK - BGS - Sn 1m - 12..24VDC - cable 2m

Local distributor code: 388766231 XUK8AKSNL2

EAN Code : 3389110057638

### 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

<b>[Us] rated supply voltage</b>	12...24 V DC with reverse polarity protection
<b>Supply voltage limits</b>	10...36 V DC
<b>Switching capacity in mA</b>	<= 100 mA (overload and short-circuit protection)
<b>Switching frequency</b>	<= 250 Hz
<b>Maximum voltage drop</b>	<1.5 V (closed state)
<b>Current consumption</b>	35 mA no-load
<b>Maximum delay first up</b>	300 ms
<b>Maximum delay response</b>	2 ms
<b>Maximum delay recovery</b>	2 ms
<b>Setting-up</b>	Sensitivity adjustment by potentiometer
<b>Depth</b>	50 mm
<b>Height</b>	50 mm
<b>Width</b>	18 mm
<b>Net weight</b>	0.19 kg
<b>Kit composition</b>	With XUZA51 bracket fixing

## Environment

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

## Packing Units

<b>Unit Type of Package 1</b>	PCE
<b>Number of Units in Package 1</b>	1
<b>Package 1 Weight</b>	228.0 g
<b>Package 1 Height</b>	4.2 cm
<b>Package 1 width</b>	9.7 cm
<b>Package 1 Length</b>	13.2 cm
<b>Unit Type of Package 2</b>	CAR
<b>Number of Units in Package 2</b>	1
<b>Package 2 Weight</b>	230.0 g
<b>Package 2 Height</b>	4.2 cm
<b>Package 2 width</b>	9.7 cm
<b>Package 2 Length</b>	13.2 cm
<b>Unit Type of Package 3</b>	S02
<b>Number of Units in Package 3</b>	12
<b>Package 3 Weight</b>	3.2 kg
<b>Package 3 Height</b>	15.0 cm

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<b>Package 3 width</b>	30.0 cm
<b>Package 3 Length</b>	40.0 cm

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## Offer Sustainability

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

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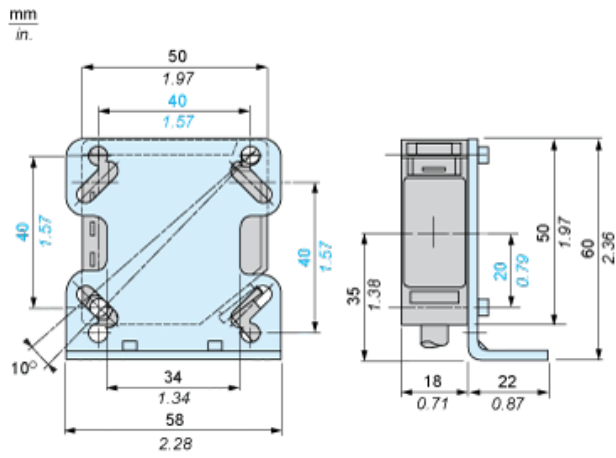
## Contractual warranty

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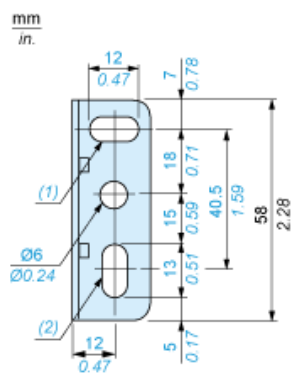
<b>Warranty</b>	18 months
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**Dimensions**



**Bracket fixing**



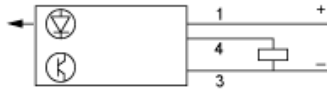
- (1) 1 elongated hole  $\varnothing 6 \times 12$
- (2) 1 elongated hole  $\varnothing 6 \times 13$

## Wiring Schemes

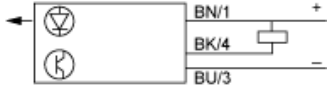
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### NO/NC Programming

PNP Output



NPN Output

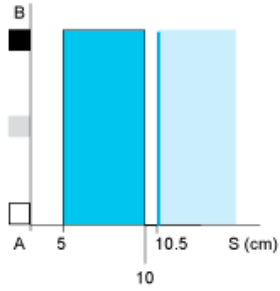


**BN :** Brown  
**BU :** Blue  
**BK :** Black

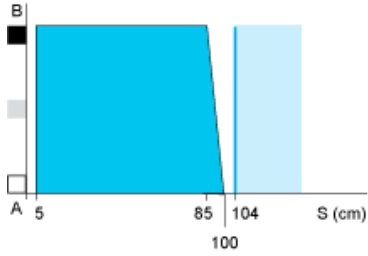
**Detection Curves**

**Variation of Usable Sensing Distance Su**

Adjustment at 10 cm



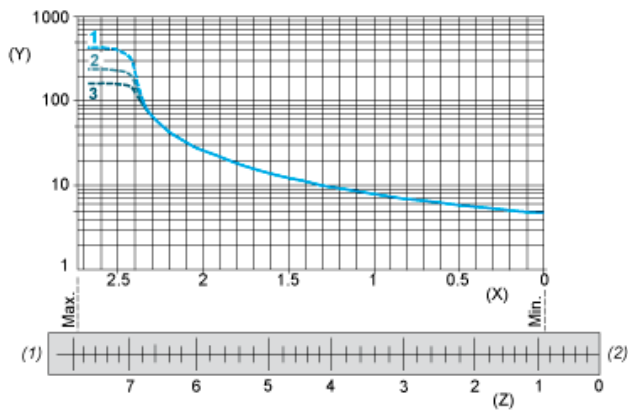
Adjustment at 1 m



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

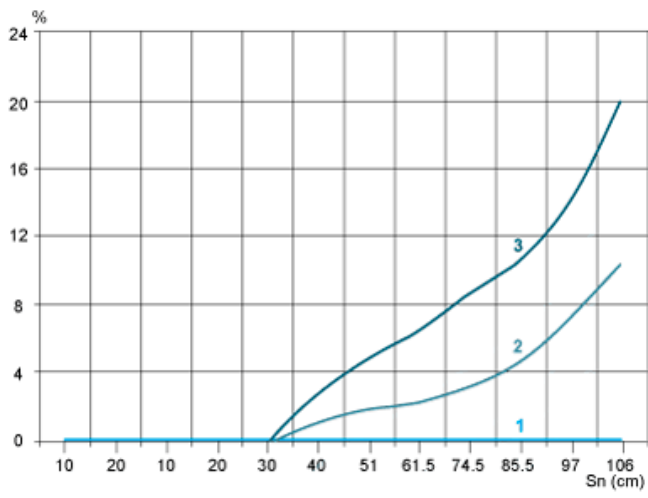
- A-B :** Object reflection coefficient
- (1) Black 6%
  - (2) Grey 18%
  - (3) White 90%
  - (4) Sensing range
  - (5) Non sensing zone (matt surfaces)

**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%