

Product data sheet

Characteristics

XUK0AKSAM12

photo-electric sensor - XUK - multi - Sn 0..30m
- 12..24VDC - M12



Main

Range of product	Telemecanique Photoelectric sensors XU
Series name	General purpose multimode
Electronic sensor type	Photo-electric sensor
Sensor name	XUK
Sensor design	Compact 50 x 50
Detection system	Multimode
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	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	4 M polarised reflex need reflector XUZC50 30 M thru beam need a transmitter XUK0AKSAM12T 0.28 M diffuse with background suppression 0.8 m diffuse

Complementary

Enclosure material	PBT
Lens material	PMMA
Maximum sensing distance	35 M thru beam 0.28 M diffuse with background suppression 1.2 M diffuse 5.7 m polarised reflex
Output type	Solid state
Add on output	With alarm output, <= 50 mA with overload and short-circuit protection
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

Depth	50 mm
Height	50 mm
Width	18 mm
Net weight	0.09 kg

Environment

Product certifications	CE[RETURN]CSA[RETURN]UL
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

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	5.0 cm
Package 1 Width	7.0 cm
Package 1 Length	10.0 cm
Package 1 Weight	69.0 g
Unit Type of Package 2	S01
Number of Units in Package 2	22
Package 2 Height	15 cm
Package 2 Width	15 cm
Package 2 Length	40 cm
Package 2 Weight	1.836 kg
Unit Type of Package 3	P06
Number of Units in Package 3	704
Package 3 Height	75 cm
Package 3 Width	40 cm
Package 3 Length	80 cm
Package 3 Weight	67.23 kg

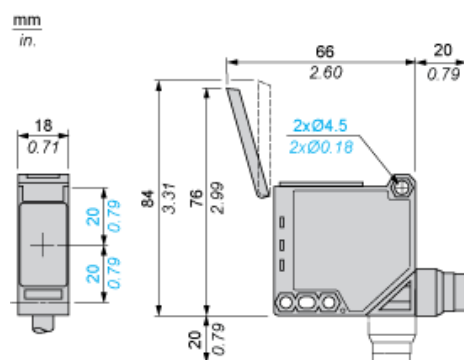
Offer Sustainability

Sustainable offer status	Green Premium product
REACH Regulation	 REACH Declaration
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope)
Mercury free	Yes
RoHS exemption information	 Yes

Contractual warranty

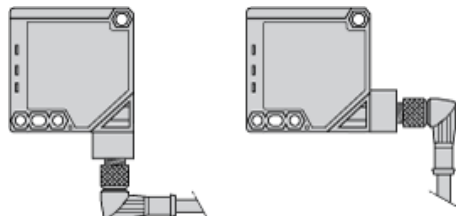
Warranty	18 months
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Dimensions



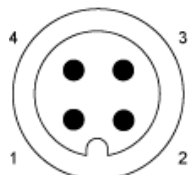
Mounting and Clearance

Possible Orientation of Elbowed Connector



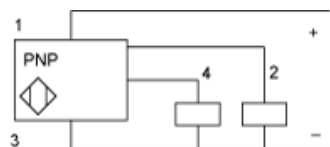
Wiring Schemes

M12 Connector

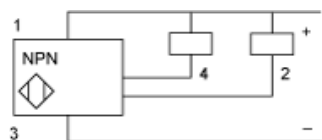


- 1 : (+)
- 2 : Alarm input
- 3 : (-)
- 4 : OUT/Output

PNP Output

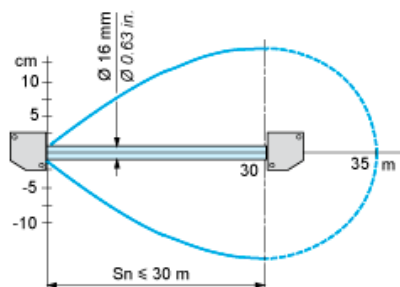


NPN Output

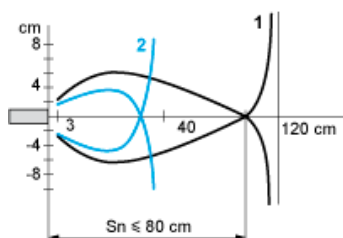


Detection Curves

With Thru-beam Accessory (Thru-beam)

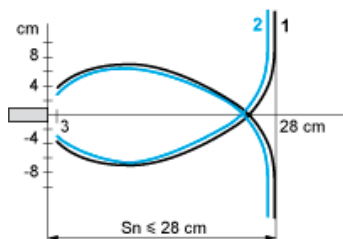


Without Accessory (Diffuse)



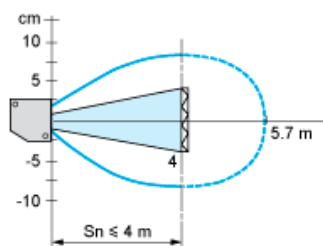
1 : White 90%
2 : Grey 18%
Object 10 x 10 cm

Without Accessory (Diffuse with background suppression)



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

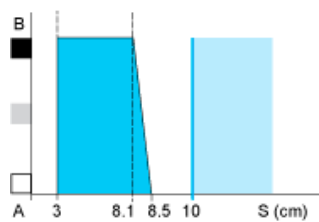
With reflector (Polarised reflex)



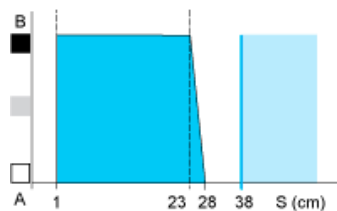
With reflector XUZC50

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)