

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

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	1224 V DC with reverse polarity protection
Supply voltage limits	1036 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

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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	-2555 °C
Ambient air temperature for storage	-4070 °C
Vibration resistance	7 gn, amplitude = +/- 1.5 mm (f = 1055 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

1 doking Office	
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

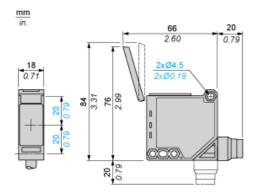
Contractual warranty

Warranty	18 months

Product data sheet Dimensions Drawings

XUK0AKSAM12

Dimensions

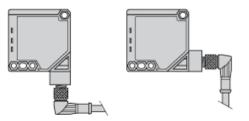


Product data sheet Mounting and Clearance

XUK0AKSAM12

Mounting and Clearance

Possible Orientation of Elbowed Connector

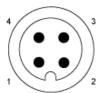


Product data sheet Connections and Schema

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Wiring Schemes

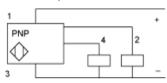
M12 Connector



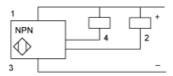
(+) Alarm input 1: 2:

3: (-) OUT/Output

PNP Output



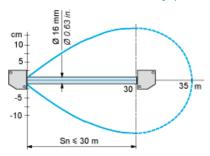
NPN Output



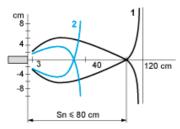
XUK0AKSAM12

Detection Curves

With Thru-beam Accessory (Thru-beam)



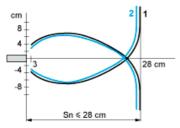
Without Accessory (Diffuse)



1: White 90% 2: Grey 18%

Object 10 x 10 cm

Without Accessory (Diffuse with background suppression)

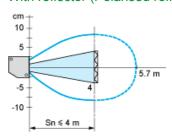


1: White 90%

2: Grey 18%

Object 10 x 10 cm

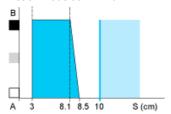
With reflector (Polarised reflex)



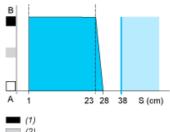
With reflector XUZC50

Variation of Usable Sensing Distance Su (Without accessory, with adjustable background suppression)

Teach Mode at Minimum



Teach Mode at Maximum





A-B : Object reflection coefficient

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