

Product data sheet

XUK0AKSAM12

Photoelectric sensor XUK, multimode, Sn 0...30 m, 12...24 VDC, M12, NO/NC

Main

Range of product	Telemecanique Photoelectric sensors XU
Series name	General purpose multimode
Sensor name	XUK
Electronic sensor type	Photo-electric sensor
Sensor design	Compact 50 x 50
Product specific application	Not applicable
ETIM classification	ETIM 9 - EC002717 - Retroreflective photoelectric sensor
Material	Plastic
Lens material	PMMA
Enclosure material	PBT
[Sn] nominal sensing distance	4-4 m polarised reflex need reflector XUZC50, 30-30 m thru beam need a transmitter XUK0AKSAM12T, 0.28-0.28 m diffuse with background suppression, 0.8-0.8 m diffuse
Maximum sensing distance	35 m thru beam, 0.28 m diffuse with background suppression, 1.2 m diffuse, 5.7 m polarised reflex
Wiring technique	3-wire
Detection system	Multimode
Delay response	2 ms
Indivisible sale quantity	1

Complementary

Sensing range	0...30 m
Electrical connection	1 male connector M12, 4 pins
Supply voltage limits	10-36 V DC
[Us] rated supply voltage	12...24 V DC with reverse polarity protection
Supply circuit type	DC
Switching capacity in mA	<= 100 mA (overload and short-circuit protection)
Maximum voltage drop	<1.5 V (closed state)
Current consumption	<= 35 mA no-load
Emission	Infrared diffuse, infrared diffuse with background suppression, infrared thru beam, red polarised reflex
Setting-up	Self teaching

The information provided in this documentation contains general descriptions and/or technical characteristics of the performance of the products contained herein.
This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications.
It is the duty of any such user or integrator to perform the appropriate and complete risk analysis, evaluation and testing of the products with respect to the relevant specific application or use thereof.
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Output type	Solid state
Type of output signal	Discrete
Add on output	With alarm output, <= 50 mA with overload and short-circuit protection
Discrete output type	PNP or NPN
Discrete output function	1 NO or 1 NC programmable
Switching frequency	250 Hz
Status LED	1 LED (green) for supply, 1 LED (red) for instability, 1 LED (yellow) for output state
Delay first up	200 ms
Delay recovery	2 ms
Height	50 mm
Width	18 mm
Depth	50 mm
Product weight	0.09 kg

Environment

IP degree of protection	IP65 double insulation conforming to IEC 60529
Ambient air temperature for storage	-40...70 °C
Shock resistance	30 gn (duration = 11 ms) conforming to IEC 60068-2-27
Vibration resistance	7 gn, amplitude = +/- 1.5 mm (f = 10-55 Hz) conforming to IEC 60068-2-6

Offer Sustainability

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 www.P65Warnings.ca.gov

Warranty

Warranty	18 months

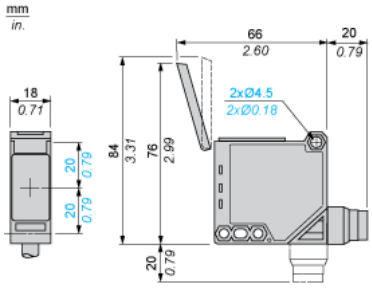
Packing Units

Country of origin	ID (Indonesia)
Unit type of package 1	PCE
Number of units in package 1	1
New Package 1 GTIN-13	3666916033753
Package 1 height	5 cm
Package 1 width	7 cm
Package 1 length	10 cm
Package 1 weight	0.09 kg
Unit type of package 2	S01
Number of units in package 2	22
New Package 2 GTIN 14	13666916033750

Package 2 height	15 cm
Package 2 width	15 cm
Package 2 length	40 cm
Package 2 weight	0.0018 kg
Unit type of package 3	S02
Number of units in package 3	44
New Package 3 GTIN 14	23666916033757
Package 3 height	15 cm
Package 3 width	30 cm
Package 3 length	40 cm
Package 3 weight	0.069 kg

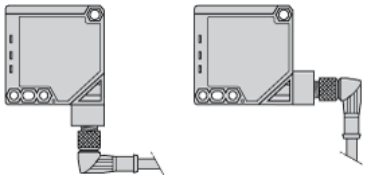
Technical Drawings

Dimensions



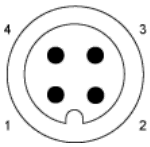
Mounting and Clearance

Possible Orientation of Elbowed Connector



Wiring Schemes

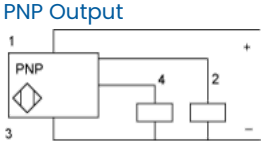
M12 Connector



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

Wiring Schemes

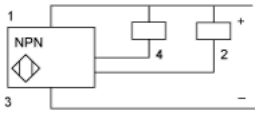
PNP Output



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

Wiring Schemes

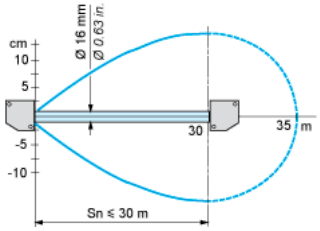
NPN Output



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

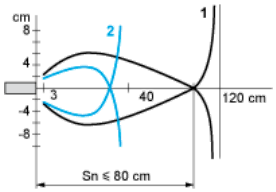
Detection Curves

With Thru-beam Accessory (Thru-beam)



Detection Curves

Without Accessory (Diffuse)

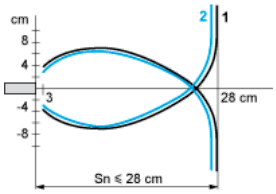


- 1 : White 90%
- 2 : Grey 18%

Object 10 x 10 cm

Detection Curves

Without Accessory (Diffuse with background suppression)

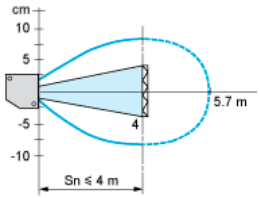


- 1 : White 90%
- 2 : Grey 18%
- 1 : White 90%
- 2 : Grey 18%

Object 10 x 10 cm

Detection Curves

With reflector (Polarised reflex)

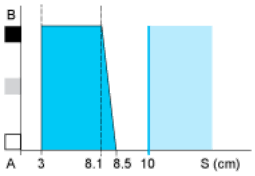


- 1 : White 90%
- 2 : Grey 18%
- 1 : White 90%
- 2 : Grey 18%

With reflector XUZC50

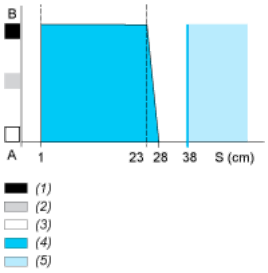
Detection Curves

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



- 1 : White 90%
- 2 : Grey 18%
- 1 : White 90%
- 2 : Grey 18%

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



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