

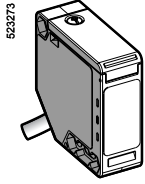
Photo-electric sensors

OsiSense XU, general purpose, single mode function

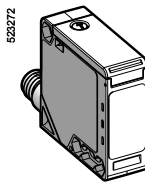
Compact design, 50 x 50

Five-wire AC or DC, 1 CO relay output

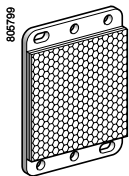
Three-wire DC, solid-state output



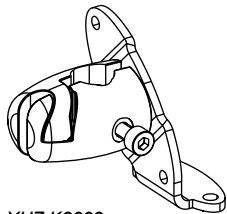
XUK A...L2



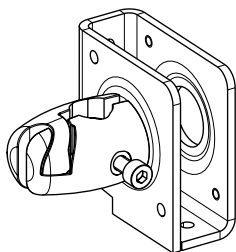
XUK A...M12



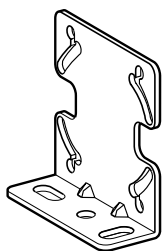
XUZ C50



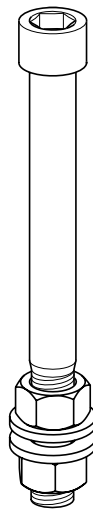
XUZ K2003



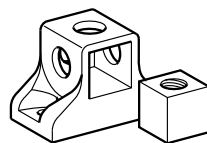
XUZ K2004



XUZ A51



XUZ 2001



XUZ 2003

Sensing distance (Sn) m	Function	Output	Connection	Reference	Weight kg
Diffuse system with adjustable sensitivity					
DC					
1	NO	PNP	Pre-cabled (L = 2 m) (1)	XUK 5APANL2	0.190
			M12 connector	XUK 5APANM12	0.070
	NPN	PNP	Pre-cabled (L = 2 m) (1)	XUK 5ANANL2	0.190
			M12 connector	XUK 5ANANM12	0.070
	NC	PNP	Pre-cabled (L = 2 m) (1)	XUK 5APBNL2	0.190
			M12 connector	XUK 5APBNM12	0.070
NPN	PNP	Pre-cabled (L = 2 m) (1)	XUK 5ANBNL2	0.190	
		M12 connector	XUK 5ANBNM12	0.070	
AC or DC					
1	NO + NC	Relay	Pre-cabled (L = 2 m) (1)	XUK 5ARCNL2	0.190
Polarised reflex system					
DC					
5	NO	PNP	Pre-cabled (L = 2 m) (1)	XUK 9APANL2	0.190
			M12 connector	XUK 9APANM12	0.070
	NPN	PNP	Pre-cabled (L = 2 m) (1)	XUK 9ANANL2	0.190
			M12 connector	XUK 9ANANM12	0.070
	NC	PNP	Pre-cabled (L = 2 m) (1)	XUK 9APBNL2	0.190
			M12 connector	XUK 9APBNM12	0.070
NPN	PNP	Pre-cabled (L = 2 m) (1)	XUK 9ANBNL2	0.190	
		M12 connector	XUK 9ANBNM12	0.070	
DC or AC					
5	NO + NC	Relay	Pre-cabled (L = 2 m) (1)	XUK 9ARCNL2	0.190
	Reflector 50 x 50 mm (2)	-	-	XUZ C50	0.020
Reflex system					
DC					
7	NO	PNP	Pre-cabled (L = 2 m) (1)	XUK 1APANL2	0.070
			M12 connector	XUK 1APANM12	0.070
	NPN	PNP	Pre-cabled (L = 2 m) (1)	XUK 1ANANL2	0.070
			M12 connector	XUK 1ANANM12	0.070
	NC	PNP	Pre-cabled (L = 2 m) (1)	XUK 1APBNL2	0.070
			M12 connector	XUK 1APBNM12	0.070
NPN	PNP	Pre-cabled (L = 2 m) (1)	XUK 1ANBNL2	0.070	
		M12 connector	XUK 1ANBNM12	0.070	
AC or DC					
7	NO + NC	Relay	Pre-cabled (L = 2 m) (1)	XUK 1ARCNL2	0.175
	Reflector 50 x 50 mm (2)	-	-	XUZ C50	0.020
Thru-beam system					
DC					
Transmitter 30	-	-	Pre-cabled (L = 2 m) (1)	XUK 2AKSNL2T	0.190
	-	-	M12 connector	XUK 2AKSNM12T	0.070
Receiver 30	NO	PNP	Pre-cabled (L = 2 m) (1)	XUK 2APANL2R	0.140
			M12 connector	XUK 2APANM12R	0.075
	NPN	PNP	Pre-cabled (L = 2 m) (1)	XUK 2ANANL2R	0.140
			M12 connector	XUK 2ANANM12R	0.075
	NC	PNP	Pre-cabled (L = 2 m) (1)	XUK 2APBNL2R	0.140
			M12 connector	XUK 2APBNM12R	0.075
NPN	PNP	Pre-cabled (L = 2 m) (1)	XUK 2ANBNL2R	0.140	
		M12 connector	XUK 2ANBNM12R	0.075	
AC or DC					
Transmitter, 30	-	-	Pre-cabled (L = 2 m) (1)	XUK 2ARCNL2T	0.140
Receiver, 30	NO + NC	Relay	Pre-cabled (L = 2 m) (1)	XUK 2ARCNL2R	0.070
Fixing accessories (2)					
Description				Reference	Weight kg
3D fixing kit for use on M12 rod, for XUK or XUZ C50				XUZ K2003	0.170
3D fixing kit for use on M12 rod, with protective cover for XUK				XUZ K2004	0.270
M12 rod				XUZ 2001	0.050
Support for M12 rod				XUZ 2003	0.150
Fixing bracket				XUZ A51	0.050

(1) For a 5 m long cable replace L2 by L5; for a 10 m long cable replace L2 by L10. Example: XUK 5APANL2 becomes XUK 5APANL5 or XUK 5APANL10.

For availability, please consult our Customer Care Centre.
(2) For further information, see page 5/158.

Characteristics		XUK ●●●●M12	XUK ●●●●L2
Sensor type		UL, CSA, CE	
Product certifications		M12 connector	
Connection		Pre-cabled, length: 2 m	
Sensing distance		0.28 / 0.28 without accessory (diffuse with background suppression)	
nominal Sn / maximum		0.8 / 1.2 without accessory (diffuse)	
(excess gain = 2) (excess gain = 1)		4 / 5.7 with reflector (polarised reflex)	
Type of transmission		30 / 35 with transmitter for thru-beam function (thru-beam)	
Degree of protection		Infrared, except polarised reflex (red)	
Conforming to IEC 60529		IP 65, double insulation	
Storage temperature		°C - 40...+ 70	
Operating temperature		°C - 25...+ 55	
Materials		Case: PBT	
		Lens: PMMA	
		Cable: - PvR	
Vibration resistance		Conforming to IEC 60068-2-6	
Shock resistance		Conforming to IEC 60068-2-27	
Indicator lights		Output state: Yellow LED (transmission present for XUK 0●●●●●T)	
		Supply on: Green LED	
		Optical alignment aid/dirty: Red LED (except for XUK 0●●●●●T)	
Alarm output		mA ≤ 50 with overload and short-circuit protection (except XUK 0ARCT●)	
Rated supply voltage		PNP/NPN: V 12...24 --- with protection against reverse polarity	
		Relay output: V - ≈ 24...240	
Voltage limits (including ripple)		PNP/NPN: V 10...36 ---	
		Relay output: V - ≈ 20...264	
Current consumption, no-load		PNP/NPN: mA ≤ 35; 20 for XUK 0AK●●●●T	
Power consumption		Relay output: W - 3 ~ or ---	
Switching capacity		PNP/NPN: mA ≤ 100 with overload and short-circuit protection	
		Relay output: A - 3 ~ or ---	
Voltage drop, closed state		V ≤ 1.5	
Time delay		Relay output: s 0...10 on-delay, off-delay, monostable	
Maximum switching frequency		PNP/NPN: Hz 250 (200 for diffuse with background suppression)	
		Relay output: Hz - 20	
Delays		First-up: ms < 200 (PNP/NPN); < 300 (relay output)	
		Response: ms < 2 (PNP/NPN); < 25 (relay output) (< 2.5 for diffuse with background suppression)	
		Recovery: ms < 2 (PNP/NPN); < 25 (relay output) (< 2.5 for diffuse with background suppression)	

Wiring schemes

M12 connector

3 (-)
1 (+)
4 OUT/Output
2 Alarm or beam break input (1)

Pre-cabled

(-) BU (Blue)
(+) BN (Brown)
OUT/Output BK (Black)
Alarm/WH (White)
Beam break input (1)/VI (Violet)

Receiver, PNP output

Thru-beam transmitter ---

Transmitter

Input 2/VI:
- not connected: beam made
- connected to -: beam broken

Pre-cabled, relay output

(~) BU (Blue)
(~) BN (Brown)
Relay common/GY (Grey)
NO BK (Black)
NC WH (White)

Receiver, NPN output

Thru-beam transmitter ~

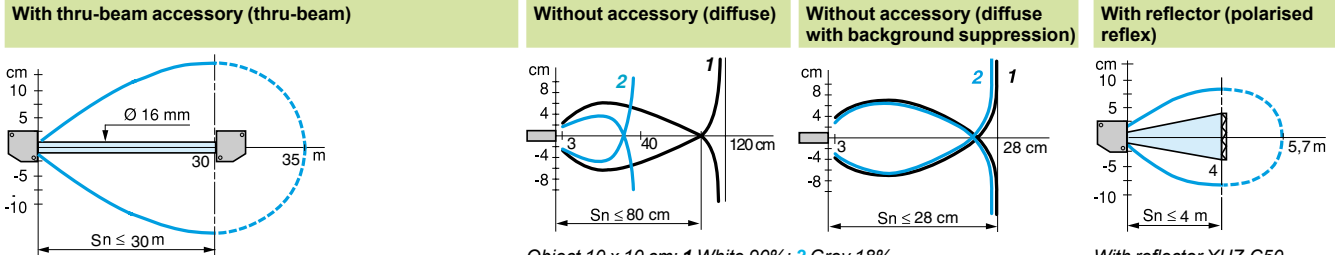
Transmitter

Relay output

See connection on page 9/44

(1) Beam break input on thru-beam transmitter only.

Detection curves



Variation of usable sensing distance Su (without accessory, with adjustable background suppression)

