

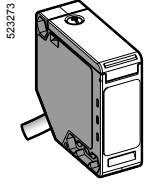
# Photo-electric sensors

OsiSense XU, general purpose, single mode function

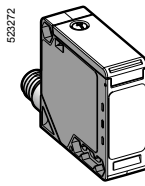
Compact design, 50 x 50

Five-wire AC or DC, 1 CO relay output

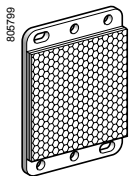
Three-wire DC, solid-state output



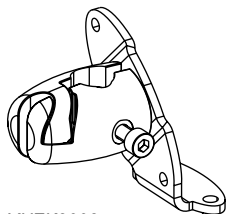
XUK-A-L2



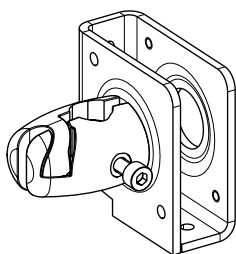
XUK-A-M12



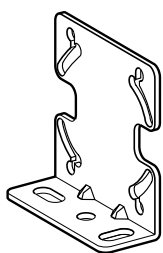
XUZC50



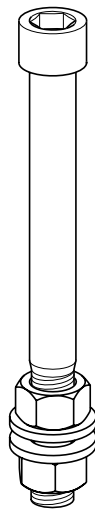
XUZK2003



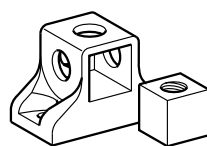
XUZK2004



XUZA51



XUZ2001



XUZ2003

Sensing distance (Sn) m	Function	Output	Connection	Reference	Weight kg	
<b>Diffuse system with adjustable sensitivity</b>						
<b>DC</b>						
1	NO	PNP	Pre-cabled (L = 2 m) (1) M12 connector	XUK5APANL2 XUK5APANM12	0.190 0.070	
		NPN	Pre-cabled (L = 2 m) (1) M12 connector	XUK5ANANL2 XUK5ANANM12	0.190 0.070	
	NC	PNP	Pre-cabled (L = 2 m) (1) M12 connector	XUK5APBNL2 XUK5APBNM12	0.190 0.070	
		NPN	Pre-cabled (L = 2 m) (1) M12 connector	XUK5ANBNL2 XUK5ANBNM12	0.190 0.070	
	<b>AC or DC</b>					
	1	NO + NC	Relay	Pre-cabled (L = 2 m) (1)	XUK5ARCNL2	0.190
<b>Polarised reflex system</b>						
<b>DC</b>						
6	NO	PNP	Pre-cabled (L = 2 m) (1) M12 connector	XUK9APANL2 XUK9APANM12	0.190 0.070	
		NPN	Pre-cabled (L = 2 m) (1) M12 connector	XUK9ANANL2 XUK9ANANM12	0.190 0.070	
	NC	PNP	Pre-cabled (L = 2 m) (1) M12 connector	XUK9APBNL2 XUK9APBNM12	0.190 0.070	
		NPN	Pre-cabled (L = 2 m) (1) M12 connector	XUK9ANBNL2 XUK9ANBNM12	0.190 0.070	
	<b>DC or AC</b>					
	6	NO + NC	Relay	Pre-cabled (L = 2 m) (1)	XUK9ARCNL2	0.190
	Reflector 50 x 50 mm (2)	-	-	XUZC50	0.020	
<b>Reflex system</b>						
<b>DC</b>						
7	NO	PNP	Pre-cabled (L = 2 m) (1) M12 connector	XUK1APANL2 XUK1APANM12	0.070 0.070	
		NPN	Pre-cabled (L = 2 m) (1) M12 connector	XUK1ANANL2 XUK1ANANM12	0.070 0.070	
	NC	PNP	Pre-cabled (L = 2 m) (1) M12 connector	XUK1APBNL2 XUK1APBNM12	0.070 0.070	
		NPN	Pre-cabled (L = 2 m) (1) M12 connector	XUK1ANBNL2 XUK1ANBNM12	0.070 0.070	
	<b>AC or DC</b>					
	7	NO + NC	Relay	Pre-cabled (L = 2 m) (1)	XUK1ARCNL2	0.175
	Reflector 50 x 50 mm (2)	-	-	XUZC50	0.020	
<b>Thru-beam system</b>						
<b>DC</b>						
Transmitter 30	-	-	Pre-cabled (L = 2 m) (1) M12 connector	XUK2AKSNL2T XUK2AKSNM12T	0.190 0.070	
	Receiver 30	NO	PNP	Pre-cabled (L = 2 m) (1) M12 connector	XUK2APANL2R XUK2APANM12R	0.140 0.075
NPN			Pre-cabled (L = 2 m) (1) M12 connector	XUK2ANANL2R XUK2ANANM12R	0.140 0.075	
NC		PNP	Pre-cabled (L = 2 m) (1) M12 connector	XUK2APBNL2R XUK2APBNM12R	0.140 0.075	
		NPN	Pre-cabled (L = 2 m) (1) M12 connector	XUK2ANBNL2R XUK2ANBNM12R	0.140 0.075	
<b>AC or DC</b>						
Transmitter, 30	-	-	Pre-cabled (L = 2 m) (1)	XUK2ARCNL2T	0.140	
Receiver, 30	NO + NC	Relay	Pre-cabled (L = 2 m) (1)	XUK2ARCNL2R	0.070	
<b>Fixing accessories (2)</b>						
Description				Reference	Weight kg	
3D fixing kit for use on M12 rod, for XUK or XUZC50				XUZK2003	0.170	
3D fixing kit for use on M12 rod, with protective cover for XUK				XUZK2004	0.270	
M12 rod				XUZ2001	0.050	
Support for M12 rod				XUZ2003	0.150	
Fixing bracket				XUZA51	0.050	

(1) For a 5 m long cable replace L2 by L5; for a 10 m long cable replace L2 by L10. Example: XUK5APANL2 becomes XUK5APANL5 or XUK5APANL10.

For availability, please consult our Customer Care Centre.

(2) For further information, see page 164.

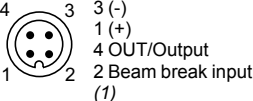
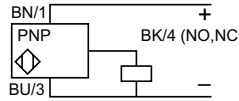
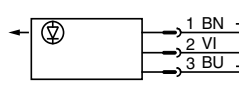
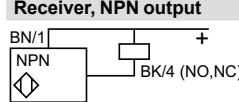
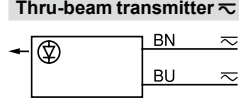
# Photo-electric sensors

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

## Characteristics

		XUK●●●●M12	XUK●●●●L2
Sensor type			
Product certifications		UL, CSA, CE	
Connection		M12 connector	Pre-cabled, length: 2 m
Sensing distance		PNP/NPN or relay output 1 / 1.5 diffuse	
nominal Sn / maximum		PNP/NPN or relay output 6 / 8 polarised reflex	
(excess gain = 2) (excess gain = 1)		PNP/NPN or relay output 7 / 10 reflex	
		PNP/NPN or relay output 30 / 45 thru-beam	
Type of transmission		Infrared, except polarised reflex (red)	
Degree of protection		Conforming to IEC 60529 IP 65, double insulation □	
Storage temperature		°C - 40...+ 70	
Operating temperature		°C - 25...+ 55	
Materials		Case PBT Lens PMMA Cable - PVC	
Vibration resistance		Conforming to IEC 60068-2-6 7 gn, amplitude ± 1.5 mm (f = 10 to 55 Hz)	
Shock resistance		Conforming to IEC 60068-2-27 30 gn, duration 11 ms	
Indicator lights		Output state Yellow LED (except for XUK2●●●●●T) Supply on Green LED (only for XUK2●●●●●T)	
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	
Power consumption		Relay output W - ≈ 2	
Switching capacity		PNP/NPN mA ≤ 100 with overload and short-circuit protection Relay output A - ≈ 3	
Voltage drop, closed state		V ≤ 1.5	
Maximum switching frequency		PNP/NPN Hz 250 Relay output Hz - 20	
Delays		First-up ms < 15 (PNP/NPN); < 60 (relay output) Response ms < 2 (PNP/NPN); < 25 (relay output) Recovery ms < 2 (PNP/NPN); < 25 (relay output)	

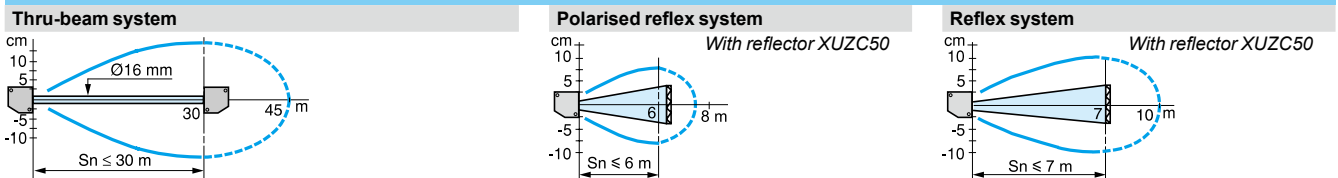
## Wiring schemes

M12 connector	Pre-cabled, PNP/NPN	Receiver, PNP output	Thru-beam transmitter ---
 <p>4 3 3 (-) 1 2 1 (+) 4 OUT/Output 2 Beam break input (1)</p>	<p>(-) BU (Blue) (+) BN (Brown) OUT/Output BK (Black) Beam break input (1) VI (Violet)</p>	 <p>BN/1 PNP BK/4 (NO,NC) BU/3</p>	 <p>1 BN + 2 VI 3 BU -</p>
	<p>Pre-cabled, relay output</p> <p>(~) BU (Blue), (~) BN (Brown) Relay common/GY (Grey) NO BK (Black) NC WH (White)</p>	 <p>BN/1 NPN BK/4 (NO,NC) BU/3</p>	 <p>BN ~ BU ~</p>

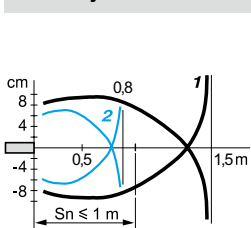
Input 2/VI:  
- not connected: beam made  
- connected to -: beam broken

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

## Detection curves



## Diffuse system



Object: 10 x 10 cm,  
1: white 90%, 2: grey 18%

## Dimensions

