

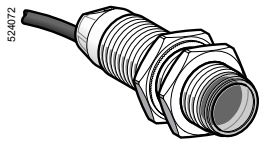
# Photo-electric sensors

Osiris® Application, packaging series

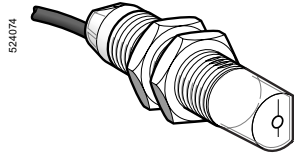
For detection of transparent materials

Design 18, plastic or stainless steel

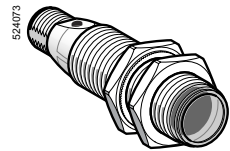
Three-wire d.c., solid-state output



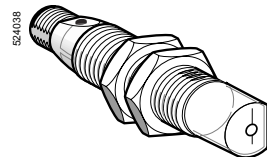
XUB T●●●NL2



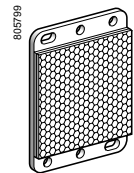
XUB T●●●WL2



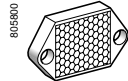
XUB T●●●NM12



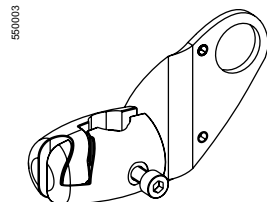
XUB T●●●WM12



XUZ C50



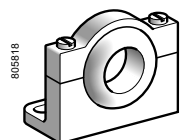
XUZ C24



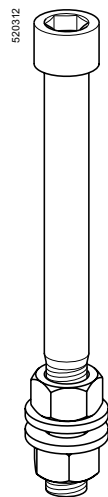
XUZ B2003



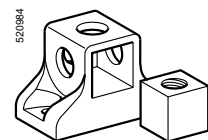
XUZ A118



XUZ A218



XUZ 2001



XUZ 2003

## Ø 18 plastic, coaxial polarized reflex with teach mode

Sensing distance (Sn) m	Function	Line of sight	Output	Reference	Weight kg
<b>Pre-cabled (1)</b>					
0...1.4 (0...55.11")	NO or NC, by programming	Along case axis	PNP	<b>XUB TAPSNL2</b>	0.110 (0.24 lbs)
	With reflector XUZ C50		NPN	<b>XUB TANSNL2</b>	0.110 (0.24 lbs)
0...0.8 (0...31.49")	NO or NC, by programming	90° to case axis	PNP	<b>XUB TAPSWL2</b>	0.113 (0.24 lbs)
	With reflector XUZ C50		NPN	<b>XUB TANSWL2</b>	0.113 (0.24 lbs)
<b>M12 connector</b>					
0...1.4 (0...55.11")	NO or NC, by programming	Along case axis	PNP	<b>XUB TAPSNM12</b>	0.045 (0.09 lbs)
	With reflector XUZ C50		NPN	<b>XUB TANSNM12</b>	0.045 (0.09 lbs)
0...0.8 (0...31.49")	NO or NC, by programming	90° to case axis	PNP	<b>XUB TAPSWM12</b>	0.048 (0.09 lbs)
	With reflector XUZ C50		NPN	<b>XUB TANSWM12</b>	0.048 (0.09 lbs)

## Ø 18 stainless steel, coaxial polarized reflex with teach mode

Sensing distance (Sn) m	Function	Line of sight	Output	Reference	Weight kg
<b>Pre-cabled (1)</b>					
0...1.4 (0...55.11")	NO or NC, by programming	Along case axis	PNP	<b>XUB TSPSNL2</b>	0.135 (0.29 lbs)
	With reflector XUZ C50		NPN	<b>XUB TSNSNL2</b>	0.135 (0.29 lbs)
0...0.8 (0...31.49")	NO or NC, by programming	90° to case axis	PNP	<b>XUB TSPSWL2</b>	0.138 (0.29 lbs)
	With reflector XUZ C50		NPN	<b>XUB TSNSWL2</b>	0.138 (0.29 lbs)
<b>M12 connector</b>					
0...1.4 (0...55.11")	NO or NC, by programming	Along case axis	PNP	<b>XUB TSPSNM12</b>	0.070 (0.15 lbs)
	With reflector XUZ C50		NPN	<b>XUB TSNSNM12</b>	0.070 (0.15 lbs)
0...0.8 (0...31.49")	NO or NC, by programming	90° to case axis	PNP	<b>XUB TSPSWM12</b>	0.073 (0.15 lbs)
	With reflector XUZ C50		NPN	<b>XUB TSNSWM12</b>	0.073 (0.15 lbs)

## Accessories for XUB T●●●●● (2)

Description	Dimensions	Reference	Weight kg
<b>Universal reflector</b> (without blind zone)	50 x 50 mm	<b>XUZ C50</b>	0.020 (0.04 lbs)
<b>Reflector</b> for sensing distances less 0.45 m	24 x 21 mm	<b>XUZ C24</b>	0.007 (0.01 lbs)

## Mounting accessories (3)

Description	Reference	Weight kg
<b>3D mounting kit</b> for use on M12 rod for XUB T or XUZ C50	<b>XUZ B2003</b>	0.170 (0.37 lbs)
<b>M12 rod</b>	<b>XUZ 2001</b>	0.050 (0.11 lbs)
<b>Support for M12 rod</b>	<b>XUZ 2003</b>	0.150 (0.33 lbs)
<b>Stainless steel mounting bracket</b>	<b>XUZ A118</b>	0.045 (0.09 lbs)
<b>Plastic Mounting bracket</b> with adjustable ball-joint	<b>XUZ A218</b>	0.035 (0.07 lbs)

(1) For a 5 m long cable, replace L2 by L5.

Example: XUB TAPSNL2 becomes XUB TAPSNL5.

(2) For further information, see page 37012/3.

(3) For further information, see page 37012/2.

# Photo-electric sensors

Osiris® Application, packaging series

For detection of transparent materials

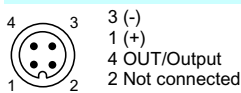
Design 18, plastic or stainless steel

Three-wire d.c., solid-state output

Characteristics		XUB T●●●● M12	XUB T●●●● L2
Sensor type			
Product certifications		UL, CSA, C E	
Connection	Connector	M12	–
	Pre-cabled	–	Length: 2 m
Nominal sensing distance $S_n$	Line of sight along case axis	m	0 to 1.4 (0 to 55.11") with reflector XUZ C50 0 to 0.45 (0 to 17.71") with reflector XUZ C24
	Line of sight 90° to case axis	m	0 to 0.8 (0 to 31.49") with reflector XUZ C50 0 to 0.45 (0 to 17.71") with reflector XUZ C24
Beam divergence		1.5° (Ø 37 mm spot at 1.4 m)	
Blind zone		0	
Preferred approach direction		Any	
Type of transmission		Coaxial polarised red	
Degree of protection		IP 65, IP 67, double insulation □	
Temperature	Storage	°C	- 40...+ 70 (-40...+158° F)
	Operation	°C	0...+ 55 (32...+131° F)
Materials	Case	XUB TA●●●●●: plastic, PBT XUB TS●●●●●: stainless steel (grade 304Cu)	
	Lens	PMMA	
	Cable	PvR	
Vibration resistance	Conforming to IEC 60068-2-6	7 gn, amplitude ± 1 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	
	Supply on	Green LED	
	Stability	Red LED	
Rated supply voltage		VDC	---12...24 with protection against reverse polarity
Voltage limits (including ripple)		VDC	---10...32
Current consumption, no-load		mA	45
Switching capacity per output		mA	≤ 100 with overload and short-circuit protection
Voltage drop, closed state		VDC	≤ 1.5
Maximum switching frequency		Hz	1000
Delays	First-up	ms	< 200
	Response and recovery	µs	< 500

## Wiring schemes

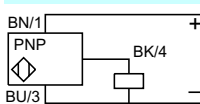
### M12 connector



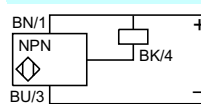
### Pre-cabled

(-) BU (Blue)  
(+) BN (Brown)  
OUT/Output BK (Black)

### PNP



### NPN



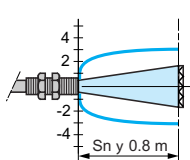
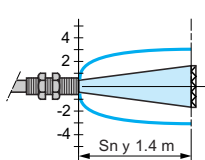
See connection on page 30210/2.

## Detection curves

### With reflector XUZ C50

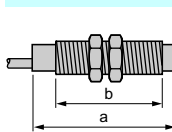
Line of sight along case axis

Line of sight 90° to case axis



## Dimensions

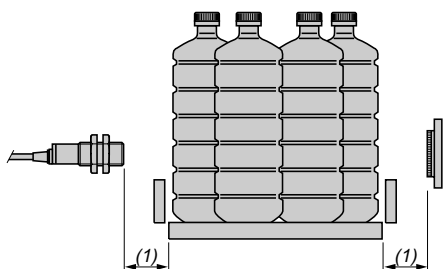
### XUB T●●●●



	Pre-cabled (mm)		Plug-in connector (mm)	
	a	b	a	b
Ø 18, line of sight along case axis	64	44	78	44
Ø 18, line of sight 90° to case axis	78	44	92	44

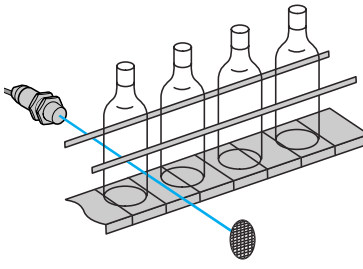
## Setting-up

### Recommended distances and application restraints

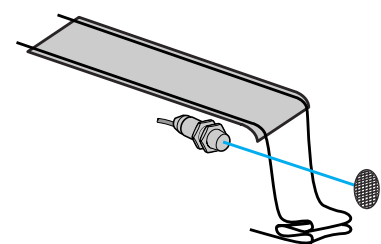


(1) No blind zone.

## Application examples



Detection of transparent bottles.



Detection of plastic film.