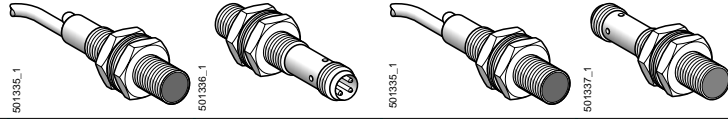


Photo-electric sensors

Osiris® Application, assembly series
Metal case, cylindrical, M8 x 1 threaded
d.c. supply. Solid-state output

Design 8



Connection	Pre-cabled	■	–	■	–
	Connector	–	■	–	■
System		Thru-beam	Thru-beam	Diffuse	Diffuse
Type of transmission		Infrared	Infrared	Infrared	Infrared
Nominal sensing distance (Sn)		2 m	2 m	0.05 m	0.05 m

References

3-wire, PNP	N/O function (object detection)	XUA H0214	XUA H0214S	XUA H0515	XUA H0515S
	N/C function	XUA H0224	XUA H0224S	XUA H0525	XUA H0525S
3-wire, NPN	N/O function (object detection)	XUA J0214	XUA J0214S	XUA J0515	XUA J0515S
	N/C function	XUA J0224	XUA J0224S	XUA J0525	XUA J0525S
Transmitter		XUA H0203	XUA H0203S	–	–
Weight (kg)		0.050	0.015	0.50	0.015

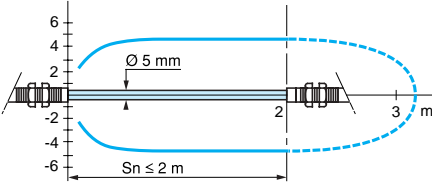
Characteristics

Product certifications		CE, UL, CSA			
Ambient air temperature	Operation	- 25...+ 55 °C			
	Storage	- 30...+ 70 °C			
Vibration resistance	Conforming to IEC 60068-2-6	7 gn, amplitude ± 1.5 mm (f = 10...55 Hz)			
Shock resistance	Conforming to IEC 60068-2-27	30 gn, duration 11 ms			
Degree of protection	Conforming to IEC 529	IP 67	IP 65	IP 67	IP 65
	Conforming to NF C 20-010	IP 673	–	IP 673	–
Connection	Pre-cabled	Diameter 3.5 mm, length 2 m, wire c.s.a.: 3 x 0.14 mm ²			
	Connector	M8 female connectors, 3-pin, see page 30210/2			
Materials	Case	Nickel plated brass			
	Cable	PVC	–	PVC	–
	Lenses	PMMA			
Rated supply voltage		= 12...24 V with protection against reverse polarity			
Voltage limits (including ripple)		= 10...30 V			
Switching capacity (sealed)		≤ 100 mA with overload and short-circuit protection			
Voltage drop, closed state		≤ 1.8 V			
Current consumption, no-load	Transmitter	≤ 20 mA			
	Receiver	≤ 20 mA			
	Diffuse	≤ 25 mA			
Maximum switching frequency		2000 Hz		700 Hz	
Delays	First-up	≤ 20 ms			
	Response and recovery	≤ 0.25 ms		≤ 0.75 ms	
Function table	Function	Diffuse or thru-beam system		Object in beam	
Output state (PNP or NPN) indicator: red LED (illuminated when sensor output is ON)	N/O	No object in beam		Object in beam	
	N/C	No object in beam		Object in beam	

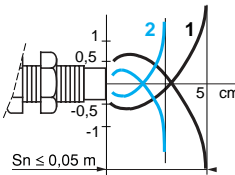
Curves

Detection curves

Thru-beam system



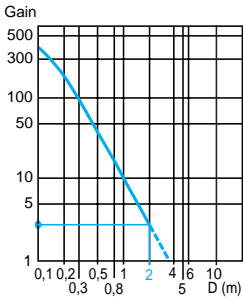
Diffuse system



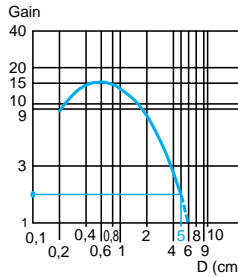
Object 5 x 5 cm; 1 White 90 %; 2 Grey 18 %

Excess gain curves (ambient temperature: $\pm 25^\circ\text{C}$)

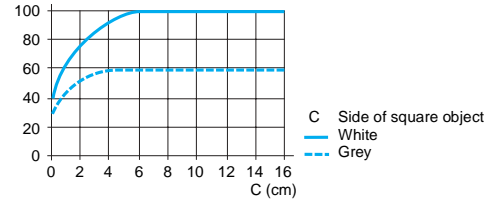
Thru-beam system



Diffuse system



Variation of sensing distance S_n

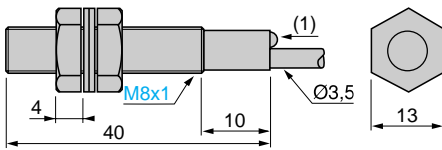


Detection differential (H) when the object approaches from the front at the nominal distance: H y 25 % of S_n

Object 5 x 5 cm, White 90 %

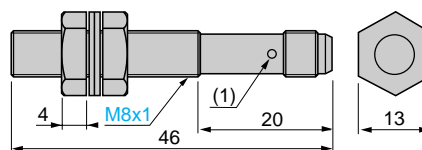
Dimensions

XUA



(1) LED

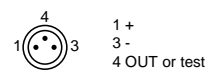
XUA ●●●●●S



(1) LED 4 viewing ports at 90°.

Note: fixing nut tightening torque: < 2 N.m

M8 connector

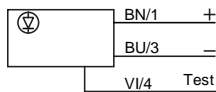


See connection on page 30210/2

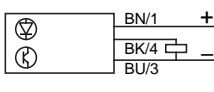
Schemes (3-wire \equiv)

XUA

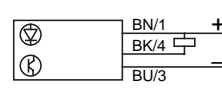
Transmitter



PNP

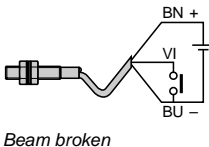


NPN

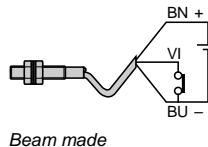


Beam break test

Only applicable to thru-beam transmitter XUA H0203

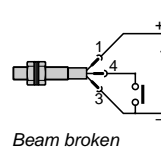


Beam broken

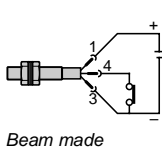


Beam made

Only applicable to thru-beam transmitter XUA H0203S



Beam broken



Beam made