

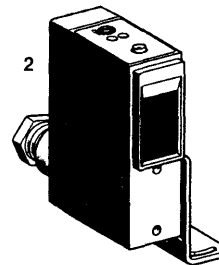
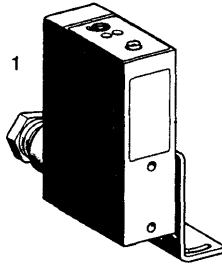
Photo-electric detectors

Osiris® universal detectors
d.c. supply. Solid state output
Screw terminals

Accessories
pages 2/118 to 2/123

References, characteristics

Compact design



System	Thru-beam 1	Reflex 1	Polarised reflex 2	Diffuse with adjustable background suppression 1	
Type of transmission	Infra-red	Infra-red	Red	Infra-red	
Nominal sensing distance (Sn)	15 m	8 m (with Ø 80 mm reflector)	6 m (with Ø 80 mm reflector)	0.7 m	1.2 m
Output cable gland (1)	n° 11 plastic (rear)	n° 11 plastic (rear)	n° 11 plastic (rear)	n° 11 plastic (rear)	n° 11 plastic (rear)

References

3-wire PNP & NPN	Light or dark programmable switching	XUJ-K103534	XUJ-K06353	XUJ-K063539	XUJ-K703538	XUJ-K123538
Transmitter		XUJ-M1000	-	-	-	-
Weight (kg)		0.200	0.200	0.200	0.200	0.200

Characteristics

Product certifications	CE, CSA, UL	
Ambient air temperature	Operation : - 25...+ 60 °C. Storage : - 40...+ 80 °C	
Vibration resistance	7 gn, amplitude ± 1.5 mm (f = 10...55 Hz), conforming to IEC 68-2-6	
Shock resistance	30 gn, duration 11 ms, conforming to IEC 68-2-27	
Degree of protection	IP 67 conforming to IEC 529 and IP 671 conforming to NF C 20-010 / ☐ double insulated	
Connection	Screw terminals, capacity : 2 x 1.5 mm ² or 1 x 2.5 mm ²	
Materials	Case : PEI (2) ; window (polarised model) : PMMA	
Rated supply voltage	12...24 V with protection against reverse polarity	
Voltage limits	10...38 V (including ripple)	
Switching capacity (sealed)	≤ 200 mA with overload and short-circuit protection	
Voltage drop, closed state	≤ 1.5 V	≤ 2.2 V
Current consumption, no-load	≤ 45 mA	
Maximum switching frequency	200 Hz	
Delays	First-up : ≤ 15 ms ; response : ≤ 2 ms ; recovery : ≤ 2 ms	

Function table

Function	Thru-beam and reflex systems				Diffuse system			
	No object present in the beam		Object present in the beam		No object present in the beam		Object present in the beam	
Output state (PNP and NPN) indicators : yellow LED (illuminated when detector output is ON), green LED (verification of correct operation)	Light switching							
Dark switching								

(1) Detectors with other types of cable output :

Cable output	Position	Suffix to be added to references stated above
n° 9 plastic cable gland	Bottom	P9
1/2" NPT	Rear	H7
20 mm ISO	Rear	H29

Example : detector XUJ-K103534 with n° 9 plastic cable gland, becomes XUJ-K103534P9

(2) PEI : high quality synthetic resin providing excellent withstand to shocks, vibration and the effects of external agents frequently encountered in industry : alcohol, salts, petroleum, oils, grease, washing agents (diluted sodium carbonate 4 %, nitric acid 2 %), formaldehyde vapour, splashing lactic acid, etc.

Other versions

Detectors for use in low temperature applications (down to - 40 °C).
Please consult your Regional customer centre.

Photo-electric detectors

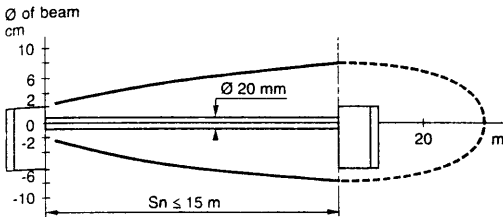
Osiris® universal detectors
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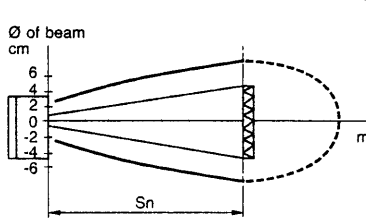
Curves, dimensions, schemes

Detection curves

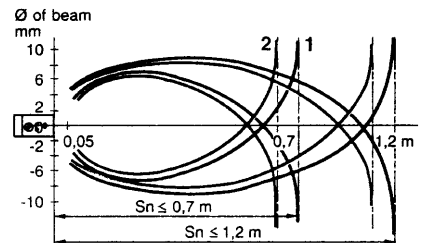
Thru-beam system



Infra-red reflex system/polarised reflex system



Diffuse system (side approach recommended)

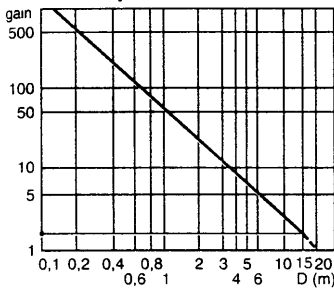


$S_n \leq 8$ m : infra-red
 $S_n \leq 6$ m : polarised

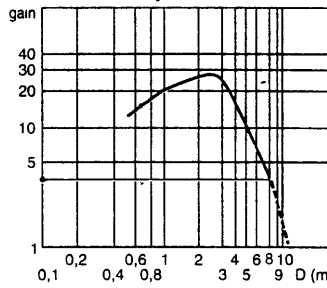
Object 20 x 20 cm,
 1 White 90 % 2 Black 6 %

Excess gain curves (ambient temperature : + 25 °C)

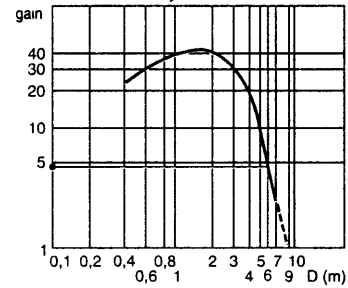
Thru-beam system



Infra-red reflex system



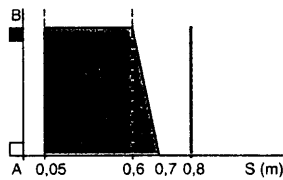
Polarised reflex system



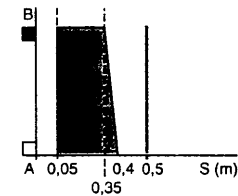
Variation of usable sensing distance S (Diffuse system)

XUJ-K703538

Potentiometer at maximum

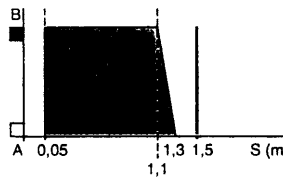


Potentiometer at minimum

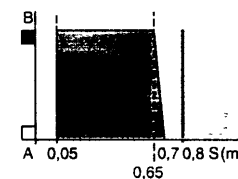


XUJ-K123538

Potentiometer at maximum



Potentiometer at minimum

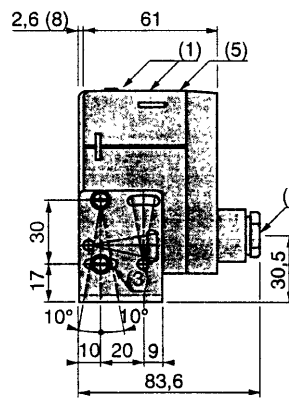


A-B : Object reflection coefficient
 ■ Black 6 %, □ Grey 18 %, □ White 90 %
 ■ Sensing range, □ Non detection zone

With reflector XUZ-C80

Dimensions

XUJ-.....

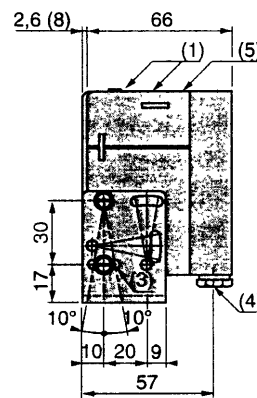


- (1) LED
- (2) n° 11 plastic cable gland
- (3) 1 elongated hole Ø 4.2 x 14
- (4) n° 9 plastic cable gland
- (5) Sensitivity potentiometer

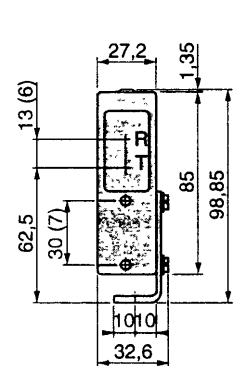
With reflector XUZ-C80

Dimensions

XUJ-.....P9



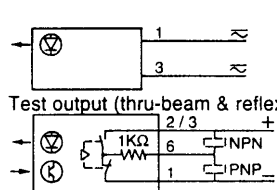
Front face (common view)



- (6) Receiver (R) and Transmitter (T) are reversed on diffuse system detectors with background suppression
- (7) Front fixing (Ø 4 screws and inserts supplied)
- (8) Applicable only to polarised reflex system detectors

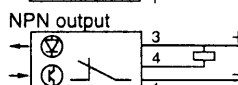
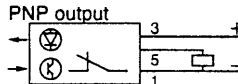
Wiring schemes (3-wire ...)

Transmitter

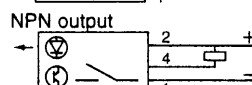
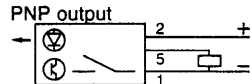


Light switching (no object present)

Thru-beam receiver & reflex

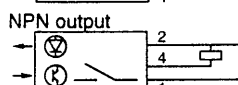
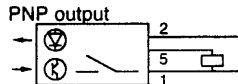


Diffuse

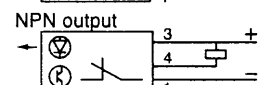
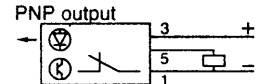


Dark switching (no object present)

Thru-beam receiver & reflex



Diffuse



Terminal connections

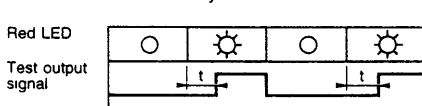
Solid state output

- 1 ⊖ (-)
- 2 ⊕ (+) Dark switching (1)
- 3 ⊕ (+) Light switching (1)
- 4 ⊖ (-) NPN
- 5 ⊖ (-) PNP
- 6 ⊖ (-) TEST

(1) (+) light and dark are reversed for diffuse systems

Test output

Thru-beam and reflex systems



State 0 : output connected to -
 State 1 : output connected to +
 $t = 160$ ms

Verification of correct operation

Thru-beam and reflex systems

