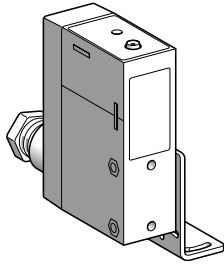


Photo-electric sensors

Osiris® Application, mechanical handling series
With analogue output signal 4...20 mA and 0...10 V ⁽¹⁾
d.c. supply. Solid-state output

Compact design



System	Diffuse
Type of transmission	Infrared
Nominal sensing distance (Sn)	20...80 cm
References	
3-wire, PNP	XUJ K803538
Weight (kg)	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 60068-2-6
Shock resistance	20 gn, duration 11 ms, conforming to IEC 60068-2-27
Degree of protection	IP 67 conforming to IEC 529 and IP 671 conforming to NF C 20-010
Connection	Screw terminals, capacity : 2 x 1.5 mm ² or 1 x 2.5 mm ²
Materials	Case : PEI (2)
Rated supply voltage	≡ 24 V
Voltage limits	≡ 20...30 V (including ripple)
Output current	20 mA Minimum 4 mA
Output voltage (Vs)	≡ 0...10 V
Output voltage drift in relation to temperature	< 10 % between - 25 and + 60 °C
Output voltage drift in relation to object colour	< 10
Current consumption, no-load	≤ 35 mA
Maximum switching frequency	10 Hz (for an output voltage variation of 1 V)
Delays	First-up : ≤ 150 ms
Indicator light	The luminosity of the LED is proportional to the output voltage

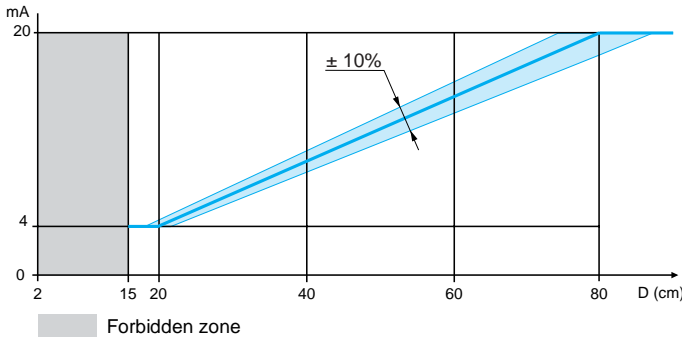
(1) Applications : position control, monitoring of concentricity or eccentricity, closed loop regulation, monitoring of displacement, etc.

(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.

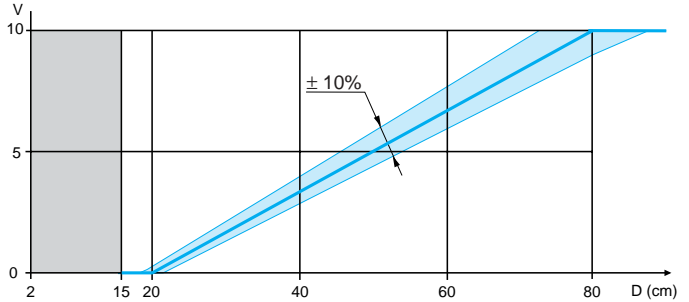
Photo-electric sensors

Osiris® Application, mechanical handling series
With analogue output signal 4...20 mA and 0...10 V
d.c. supply. Solid-state output

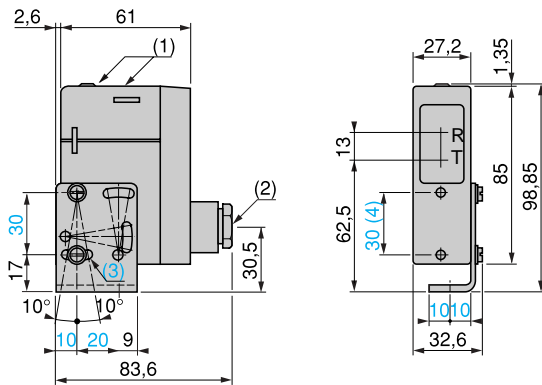
Output signal (related to distance of object)
Test performed with 20 x 20 cm, white 90 % object
Output current



Output voltage



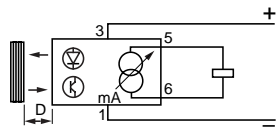
Dimensions



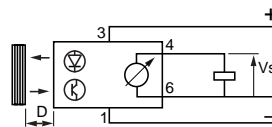
- (1) LED
- (2) n° 11 plastic cable gland
- (3) 1 elongated hole \varnothing 4.2 x 14
- (4) Front fixing (\varnothing 4 screws and inserts supplied)

Wiring schemes (3-wire ---)

Diffuse system
Output current



Output voltage



Load characteristics

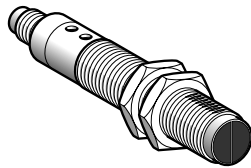
- Output current : the output current varies between 4 and 20 mA depending on the distance of the object and therefore, the load must be less than 1 k Ω .
- Output voltage : since the minimum rated output current of the detector is 10 mA, the load must always have a resistive value of more than 1 k Ω .

Terminal connections

- 1 \varnothing - (-)
- 2 \varnothing
- 3 \varnothing - (+)
- 4 \varnothing - Sortie courant
- 5 \varnothing - Sortie tension
- 6 \varnothing - (-)

Terminals 1 and 6 connected internally.

Design 18



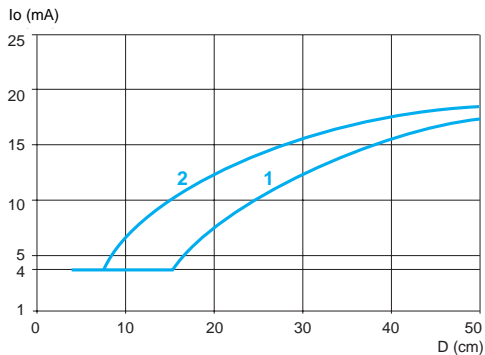
System	Diffuse
Type of transmission	Infrared
Nominal sensing distance (Sn)	5...40 cm
References	
3-wire, PNP	XU5 M18AB20D
Weight (kg)	0.075
Characteristics	
Product certifications	CE, CSA, UL
Ambient air temperature	Operation : - 25...+ 55 °C. Storage : - 40...+ 70 °C
Vibration resistance	25 gn, amplitude ± 2 mm (f = 10...55 Hz), conforming to IEC 60068-2-6
Shock resistance	30 gn, duration 11 ms, conforming to IEC 60068-2-27
Degree of protection	IP 67 conforming to IEC 529 and IP 671 conforming to NF C 20-010
Connection	M12 male connector, 4-pin (suitable extension cables and female connectors, see page 30210/2)
Materials	Case : nickel plated brass, lens : PMAA
Rated supply voltage	≡ 12...24 V
Voltage limits	≡ 10...30 V (including ripple)
Output current	Maximum 20 mA Minimum 4 mA
Output current drift in relation to temperature	< 10 % between - 25 and + 55 °C, < 5 % between 0 and + 40 °C
Output current drift in relation to supply	< 3 %
Current consumption, no-load	≤ 30 mA
Maximum switching frequency	20 Hz (for an output current variation of 10 mA)
Delays	First-up : ≤ 50 ms
Indicator light	The luminosity of the LED is proportional to the output current I _e = 20 mA : indicator light at maximum intensity I _e = 4 mA : indicator light at minimum intensity

(1) Applications : position control, monitoring of concentricity or eccentricity, closed loop regulation, monitoring of displacement, etc.

Photo-electric sensors

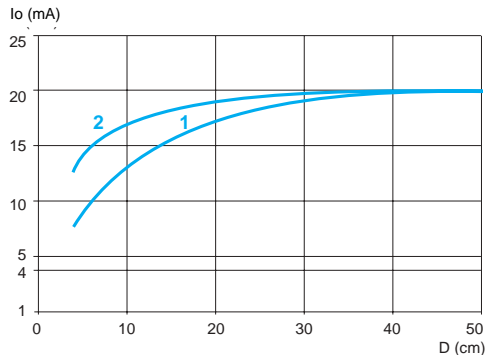
Osiris® Application, mechanical handling series
With analogue output signal 4...20 mA
d.c. supply

Output signal (related to distance of object) Potentiometer set at maximum



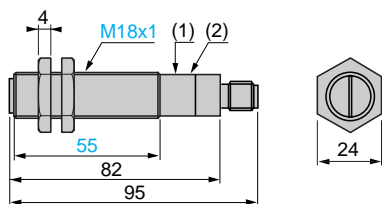
- 1 White 90 % object
- 2 Grey 15 % object

Potentiometer set at minimum



- 1 White 90 % object
- 2 Grey 15 % object

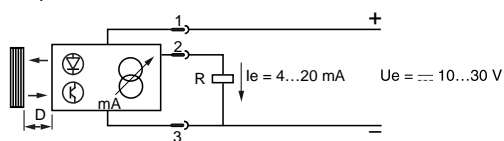
Dimensions



- (1) Potentiometer
 - (2) LED, green
- Fixing nut tightening torque : 15 N.m
Connector tightening torque : 2 N.m

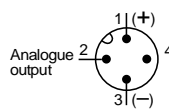
Wiring schemes

Diffuse system
Output current



Connector scheme

Detector connector pin view



Depending on connector page 30210/2.

Load characteristics (R)

The output current varies between 4 and 20 mA, depending on the distance of the object, and therefore, the load must be less than 800 Ω for a 24 V supply and less than 300 Ω for a 12 V supply.