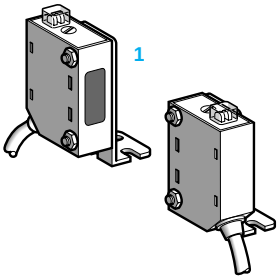
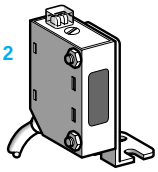
Osiris® optimum detectors
d.c. supply. Solid state output
Pre-cabled

Accessories :
pages 2/118 to 2/123

References, characteristics

Miniature design





System	Thru-beam 1	Reflex 2	Polarised reflex 2	Diffuse 2	
Type of transmission	Infra-red	Infra-red	Red	Infra-red	Red
Nominal sensing distance (Sn)	**8 m**	**4 m** (with Ø 80 mm reflector)	**2 m** (with Ø 80 mm reflector)	**0.40 m**	**0.10 m**

References

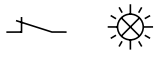
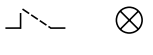
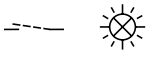
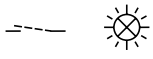
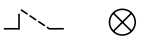
3-wire, PNP	Light or dark programmable switching	**XUM-LH0854**	**XUM-LH0451**	**XUM-LH0259**	**XUM-LH4055**	**XUM-LH1055**
3-wire, NPN	Light or dark programmable switching	**XUM-LJ0854**	**XUM-LJ0451**	**XUM-LJ0259**	**XUM-LJ4055**	**XUM-LJ1055**
Transmitter		**XUM-LH0803**	–	–	–	–
Weight (kg)		0.080	0.080	0.080	0.080	0.080

Characteristics

Product certifications	CE. UL, CSA
Ambient air temperature	Operation : - 25…+ 55 °C. Storage : - 30…+ 70 °C
Vibration resistance	7 gn, amplitude ± 1.5 mm (f = 10…55 Hz), conforming to IEC 68-2-6
Shock resistance	50 gn, 3 axes, 3 times
Degree of protection	IP 67 conforming to IEC 529
Connection	Pre-cabled, diameter 4 mm, length 2 m, wire c.s.a. : 4 x 0.2 mm² (3 x 0.22 mm² for thru-beam transmitter)
Materials	Case : ABS/PC ; lens : PMMA/PC ; cable : PVC
Rated supply voltage	⎓ **12…24 V with protection against reverse polarity**
Voltage limits	⎓ 10…30 V (including ripple)
Switching capacity (sealed)	≤ **100 mA with overload and short-circuit protection**
Voltage drop, closed state	≤ 1.5 V
Current consumption, no-load	Thru-beam : ≤ 50 mA ; reflex, diffuse : ≤ 35 mA
Maximum switching frequency	500 Hz (400 Hz for thru-beam system)
Delays	First-up : ≤ 30 ms ; response : 1 ms ; recovery : 1 ms (1.5 ms response and recovery for thru-beam system)

Function table

Output state (PNP or NPN) indicator : yellow LED (illuminated when detector output is ON)

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
Light switching				
Dark switching				

Osiris® optimum detectors
d.c. supply. Solid state output
Pre-cabled

Accessories :
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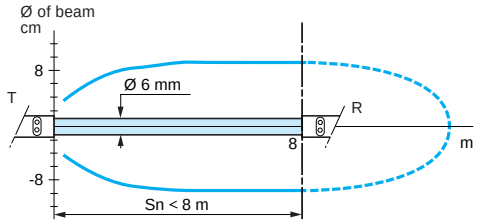
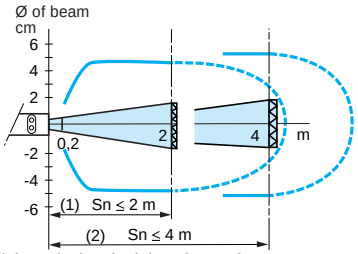
Curves, dimensions, schemes

Detection curves

Thru-beam system

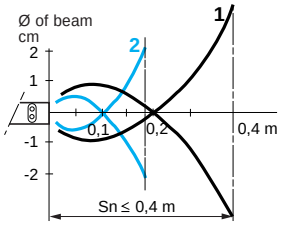


Reflex system



(1) Polarised (2) Infra-red

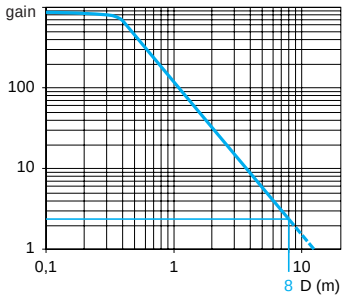
Diffuse system (example Sn = 0.4 m)



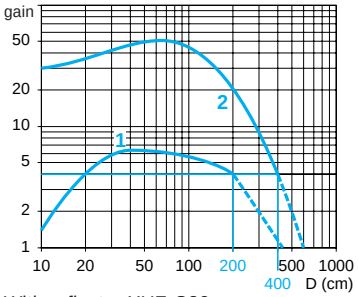
Object 10 x 10 cm
1 White 90 %
2 Grey 18 %

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

Thru-beam system

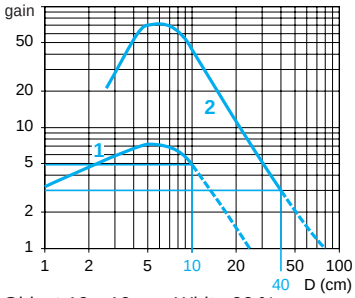


Reflex system



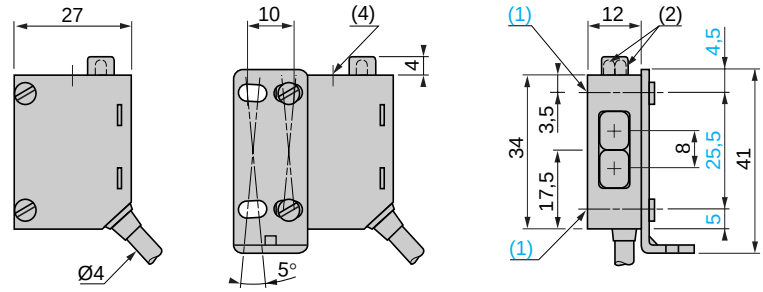
With reflector XUZ-C80
1 Polarised **2** Infra-red

Diffuse system

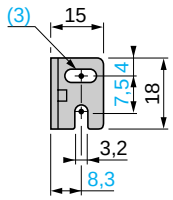


Object 10 x 10 cm, White 90 %
1 Sn = 0.1 m, **2** Sn = 0.4 m

Dimensions



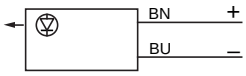
Bracket fixing



(1) Elongated hole Ø 3 x 4
(2) LED
(3) Elongated hole Ø 8.2 x 3.2
(4) Sensitivity adjustment potentiometer

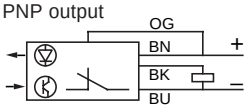
Wiring schemes (3-wire ⎓)

Transmitter

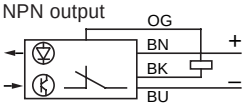


Light switching (no object present)

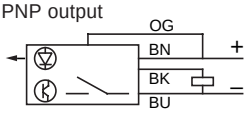
Thru-beam receiver & reflex
PNP output



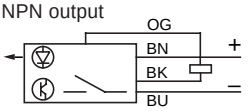
NPN output



Diffuse
PNP output

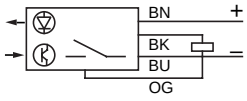


NPN output

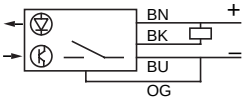


Dark switching (no object present)

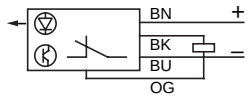
Thru-beam receiver & reflex
PNP output



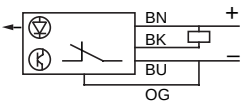
NPN output



Diffuse
PNP output

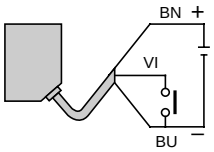


NPN output

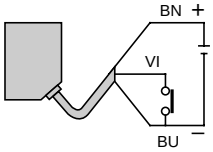


Beam break test (for XUM-LH0803 only)

Beam made



Beam broken



Cable connections

Solid state output

- (–)	BU	(Blue)
- (+)	BN	(Brown)
- (OUT)	BK	(Black)
- (Prog.)	OG	(Orange)
- (Test)	VI	(Violet)

Verification of correct operation

Thru-beam and reflex systems

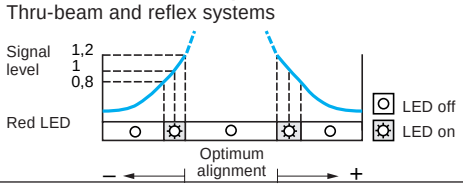


Photo-electric detectors

Osiris® optimum detectors
d.c. supply. Solid state output
Connector

Accessories :
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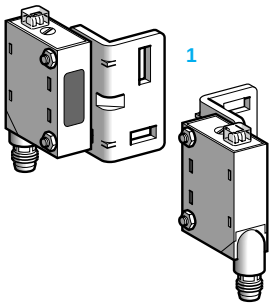
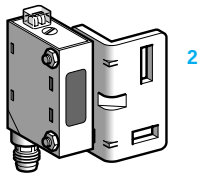
References, characteristics

Miniature design





System	Thru-beam 1	Reflex 2	Polarised reflex 2	Diffuse 2	
Type of transmission	Infra-red	Infra-red	Red	Infra-red	Red
Nominal sensing distance (Sn)	**8 m**	**4 m** (with Ø 80 mm reflector)	**2 m** (with Ø 80 mm reflector)	**0.40 m**	**0.10 m**

References

3-wire, PNP	Light or dark programmable switching	**XUM-LH0854S**	**XUM-LH0451S**	**XUM-LH0259S**	**XUM-LH4055S**	**XUM-LH1055S**
3-wire, NPN	Light or dark programmable switching	**XUM-LJ0854S**	**XUM-LJ0451S**	**XUM-LJ0259S**	**XUM-LJ4055S**	**XUM-LJ1055S**
Transmitter		**XUM-LH0803S**	–	–	–	–
Weight (kg)		0.030	0.030	0.030	0.030	0.030

Characteristics

Product certifications	CE. UL, CSA
Ambient air temperature	Operation : - 25…+ 55 °C. Storage : - 30…+ 70 °C
Vibration resistance	7 gn, amplitude ± 1.5 mm (f = 10…55 Hz), conforming to IEC 68-2-6
Shock resistance	50 gn, 3 axes, 3 times
Degree of protection	IP 65 conforming to IEC 529
Connection	Connector (suitable female extension cables types 8 and 9, see page 2/125)
Materials	Case : ABS/PC ; lens : PMMA/PC
Rated supply voltage	⎓ **12…24 V with protection against reverse polarity**
Voltage limits	⎓ 10…30 V (including ripple)
Switching capacity (sealed)	≤ **100 mA with overload and short-circuit protection**
Voltage drop, closed state	≤ 1.5 V
Current consumption, no-load	Thru-beam : ≤ 50 mA ; reflex, diffuse : ≤ 35 mA
Maximum switching frequency	500 Hz (400 Hz for thru-beam system)
Delays	First-up : ≤ 30 ms ; response : 1 ms ; recovery : 1 ms (1.5 ms response and recovery for thru-beam system)

Function table

Output state (PNP or NPN) indicator : yellow LED (illuminated when detector output is ON)

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
Light switching				
Dark switching				

Osiris® optimum detectors
d.c. supply. Solid state output
Connector

Curves, dimensions, schemes

Accessories :
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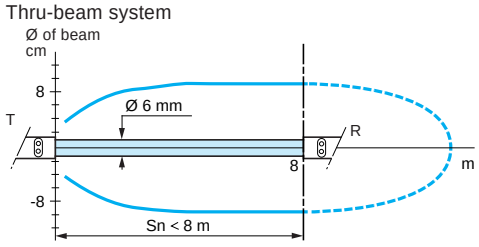
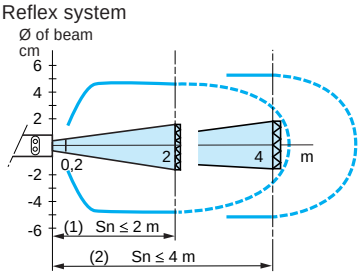
Detection curves

Thru-beam system

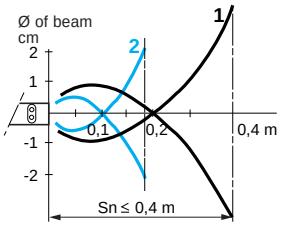


Reflex system



(1) Polarised (2) Infra-red

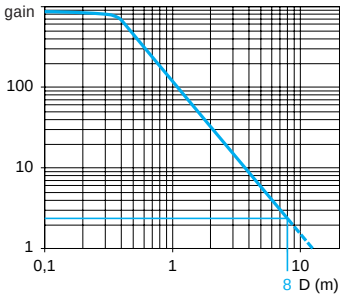
Diffuse system (example Sn = 0.4 m)



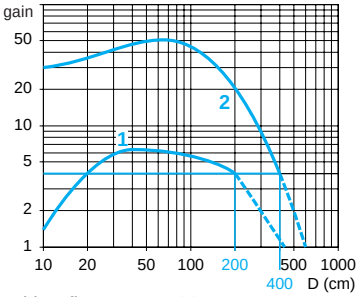
Object 10 x 10 cm
1 White 90 %
2 Grey 18 %

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

Thru-beam system

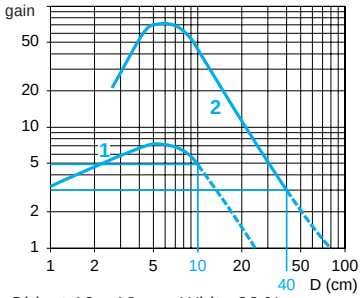


Reflex system



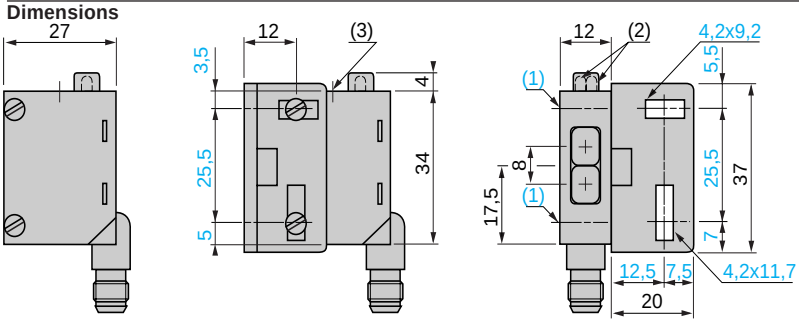
With reflector XUZ-C80
1 Polarised **2** Infra-red

Diffuse system



Object 10 x 10 cm, White 90 %
1 Sn = 0.1 m, **2** Sn = 0.4 m

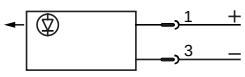
Dimensions



(1) Elongated hole Ø 3 x 4
(2) LED
(3) Sensitivity adjustment potentiometer

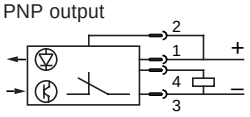
Wiring schemes (3-wire ⎓)

Transmitter

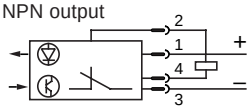


Light switching (no object present)

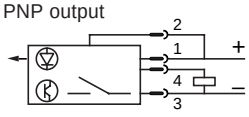
Thru-beam receiver & reflex
PNP output



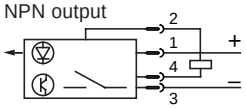
NPN output



Diffuse
PNP output

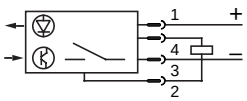


NPN output

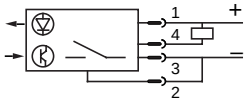


Dark switching (no object present)

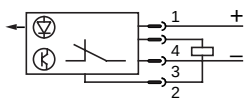
Thru-beam receiver & reflex
PNP output



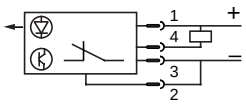
NPN output



Diffuse
PNP output

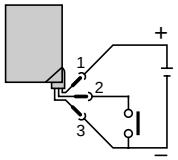


NPN output

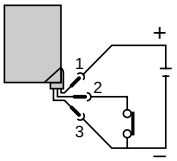


Beam break test (for XUM-LH0803S only)

Beam made



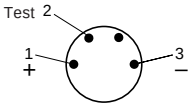
Beam broken



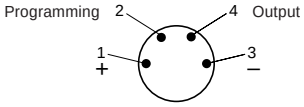
Connector schemes

Solid state output. Detector connector pin view

Transmitter



Thru-beam receiver, reflex and diffuse



Verification of correct operation

Thru-beam and reflex systems