

Photo-electric sensors

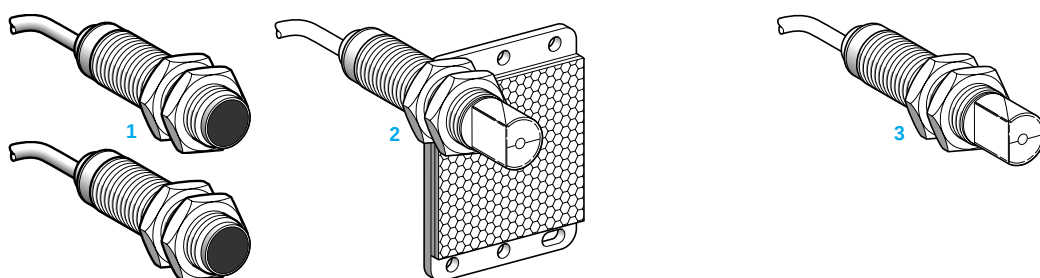
Osiris® optimum sensors
Plastic case, cylindrical, M18 x 1 threaded
d.c. supply. Solid state output

Accessories :
pages 1/154 to 1/159

References, characteristics

1

Design 18



System	Thru-beam 1	Reflex 2	Polarised reflex 2	Diffuse 3
Type of transmission	Infra-red	Infra-red	Red	Infra-red
Nominal sensing distance (Sn)	15 m	4 m (with 50 x 50 mm reflector)	1.5 m (with 50 x 50 mm reflector)	0.10 m

References of pre-cabled versions

3-wire, PNP Light or dark program- mable switching	Line of sight along case axis Line of sight 90° to case axis	XU2-P18PP340 (1)	XU1-P18PP340 (2)	XU9-P18PP340 (2)	XU5-P18PP340
		XU2-P18PP340W (1)	XU1-P18PP340W (2)	XU9-P18PP340W (2)	XU5-P18PP340W
3-wire, NPN Light or dark program- mable switching	Line of sight along case axis Line of sight 90° to case axis	XU2-P18NP340 (1)	XU1-P18NP340 (2)	XU9-P18NP340 (2)	XU5-P18NP340
		XU2-P18NP340W (1)	XU1-P18NP340W (2)	XU9-P18NP340W (2)	XU5-P18NP340W
Weight (kg)		0.220	0.130	0.130	0.110

References of plug-in connector versions

3-wire, PNP Light or dark program- mable switching	Line of sight along case axis Line of sight 90° to case axis	XU2-P18PP340D (1)	XU1-P18PP340D (2)	XU9-P18PP340D (2)	XU5-P18PP340D
		XU2-P18PP340WD (1)	XU1-P18PP340WD (2)	XU9-P18PP340WD (2)	XU5-P18PP340WD
3-wire, NPN Light or dark program- mable switching	Line of sight along case axis Line of sight 90° to case axis	XU2-P18NP340D (1)	XU1-P18NP340D (2)	XU9-P18NP340D (2)	XU5-P18NP340D
		XU2-P18NP340WD (1)	XU1-P18NP340WD (2)	XU9-P18NP340WD (2)	XU5-P18NP340WD
Weight (kg)		0.080	0.060	0.060	0.040

Complementary characteristics not shown under general characteristics (page 1/17)

Connection	Pre-cabled	Diameter 5 mm cable, length 2 m (3), wire c.s.a. : 4 x 0.34 mm ²
	Connector	M12 male connector, 4-pin (suitable female connectors (pre-wired and screw terminal) types 3, 4 & 5, see page 1/160)
Materials	Case : PPS, lenses : PMMA, 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	≤ 30 mA (reflex and diffuse), ≤ 50 mA (thru-beam)	
Maximum switching frequency	500 Hz	
Delays	First-up : ≤ 15 ms ; response : ≤ 1 ms ; recovery : ≤ 1 ms	

(1) Reference for both transmitter and receiver for thru-beam system sensors.

(2) 50 x 50 mm reflector included with reflex and polarised reflex system sensors.

(3) Sensors available with 5 m cable. To order, add the suffix L5 to the reference selected from above.

Example : sensor XU1-P18PP340 with 5 m cable becomes XU1-P18PP340L5.

Photo-electric sensors

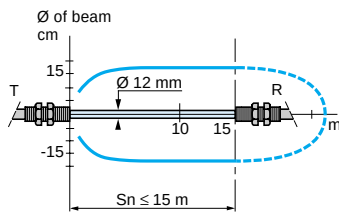
Osiris® optimum sensors
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d.c. supply. Solid state output

Accessories :
pages 1/154 to 1/159

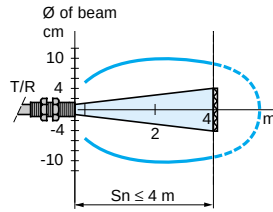
Curves, dimensions, schemes

Detection curves

Thru-beam system

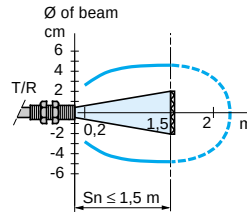


Reflex system



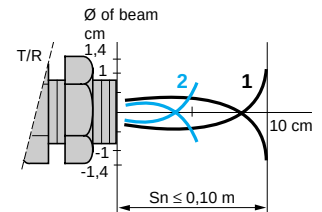
With reflector XUZ-C50

Polarised reflex system



With reflector XUZ-C50

Diffuse system



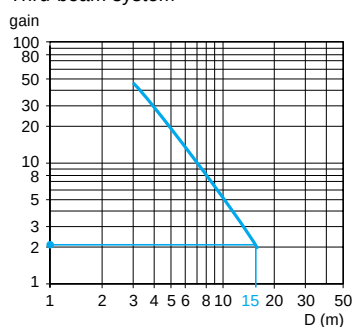
Object 10 x 10 cm

1 White 90%

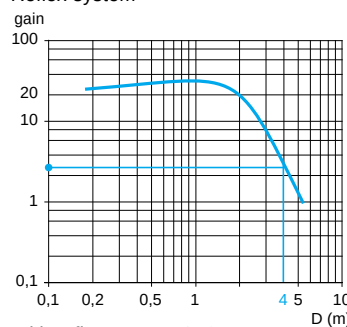
2 Grey 18%

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

Thru-beam system

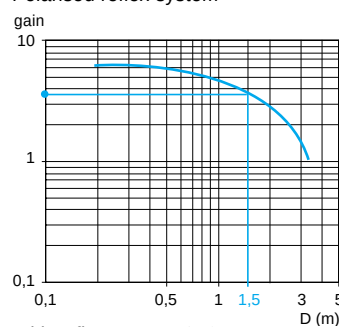


Reflex system



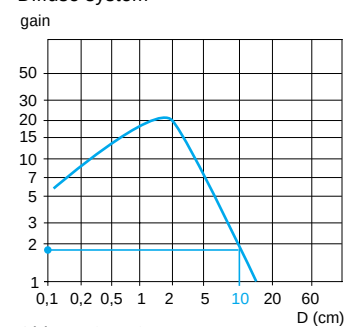
With reflector XUZ-C50

Polarised reflex system



With reflector XUZ-C50

Diffuse system

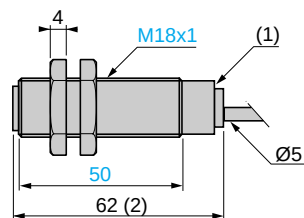


Object 10 x 10 cm

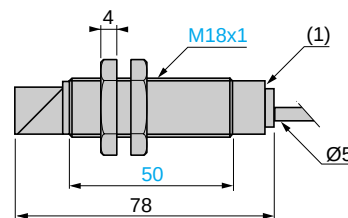
White 90%

Dimensions

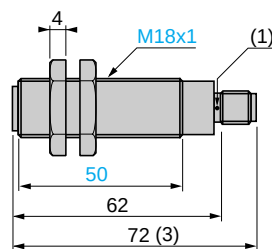
XU●P18●●340



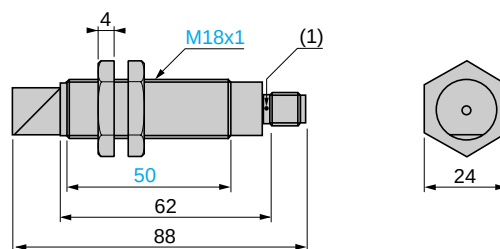
XU●P18●●340W



XU●P18●●340D



XU●P18●●340WD



(1) LED

(2) 64 for XU9-P18●●340

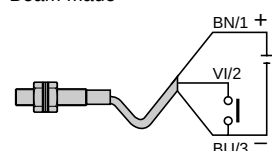
(3) 74 for XU9-P18●●340D

Cable connections

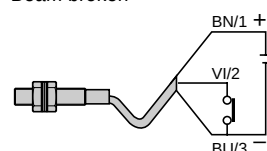
- (-) BU (Blue)
- (+) BN (Brown)
- (OUT) BK (Black)
- (Prog.) OG (Orange)
- (Test) VI (Violet) for thru-beam transmitter only

Beam break test (for thru-beam transmitter only)

Beam made



Beam broken

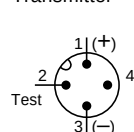


Fixing nut tightening torque : < 15 N.m

Connector tightening torque : 2 N.m

Connector schemes (sensor connector pin view)

Transmitter



Thru-beam receiver, reflex and diffuse

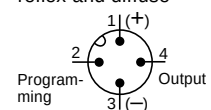


Photo-electric sensors

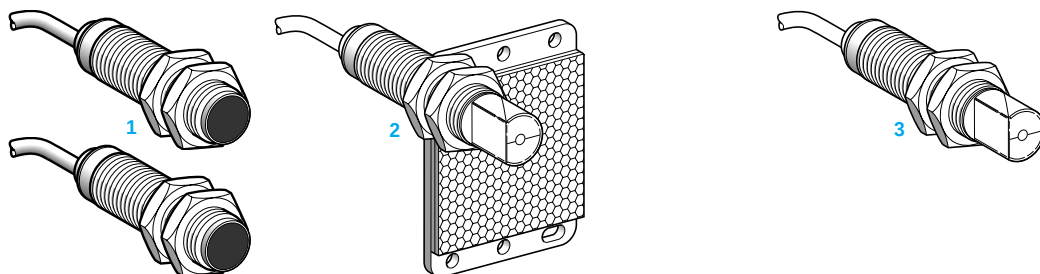
Osiris® optimum sensors
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Accessories :
pages 1/154 to 1/159

References, characteristics

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Type of transmission	Infra-red	Infra-red	Red	Infra-red
Nominal sensing distance (Sn)	15 m	4 m (with 50 x 50 mm reflector)	1.5 m (with 50 x 50 mm reflector)	0.10 m

References of pre-cabled versions

3-wire, PNP Light or dark program- mable switching	Line of sight along case axis Line of sight 90° to case axis	XU2-N18PP340 (1) XU2-N18PP340W (1)	XU1-N18PP340 (2) XU1-N18PP340W (2)	XU9-N18PP340 (2) XU9-N18PP340W (2)	XU5-N18PP340 XU5-N18PP340W
3-wire, NPN Light or dark program- mable switching	Line of sight along case axis Line of sight 90° to case axis	XU2-N18NP340 (1) XU2-N18NP340W (1)	XU1-N18NP340 (2) XU1-N18NP340W (2)	XU9-N18NP340 (2) XU9-N18NP340W (2)	XU5-N18NP340 XU5-N18NP340W
Weight (kg)		0.270	0.155	0.155	0.135

References of plug-in connector versions

3-wire, PNP Light or dark program- mable switching	Line of sight along case axis Line of sight 90° to case axis	XU2-N18PP340D (1) XU2-N18PP340WD (1)	XU1-N18PP340D (2) XU1-N18PP340WD (2)	XU9-N18PP340D (2) XU9-N18PP340WD (2)	XU5-N18PP340D XU5-N18PP340WD
3-wire, NPN Light or dark program- mable switching	Line of sight along case axis Line of sight 90° to case axis	XU2-N18NP340D (1) XU2-N18NP340WD (1)	XU1-N18NP340D (2) XU1-N18NP340WD (2)	XU9-N18NP340D (2) XU9-N18NP340WD (2)	XU5-N18NP340D XU5-N18NP340WD
Weight (kg)		0.130	0.085	0.085	0.065

Complementary characteristics not shown under general characteristics (page 1/17)

Connection	Pre-cabled	Diameter 5 mm cable, length 2 m (3), wire c.s.a. : 4 x 0.34 mm ²
	Connector	M12 male connector, 4-pin (suitable female connectors (pre-wired and screw terminal) types 3, 4 & 5, see page 1/160)
Materials	Case : nickel plated brass, lens : PMMA, 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	≤ 30 mA (reflex and diffuse), ≤ 50 mA (thru-beam)	
Maximum switching frequency	500 Hz	
Delays	First-up : ≤ 15 ms ; response : ≤ 1 ms ; recovery : ≤ 1 ms	

(1) Reference for both transmitter and receiver for thru-beam system sensors.

(2) 50 x 50 mm reflector included with reflex and polarised reflex system sensors.

(3) Sensors available with 5 m cable. To order, add the suffix L5 to the reference selected from above.

Example : sensor XU1-N18PP340 with 5 m cable becomes XU1-N18PP340L5.

Photo-electric sensors

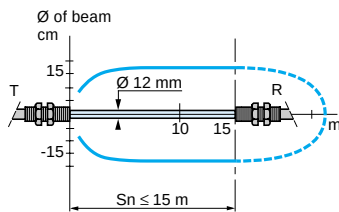
Osiris® optimum sensors
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Accessories :
pages 1/154 to 1/159

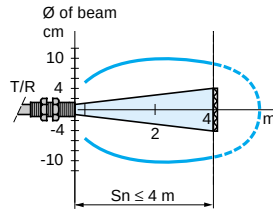
Curves, dimensions, schemes

Detection curves

Thru-beam system

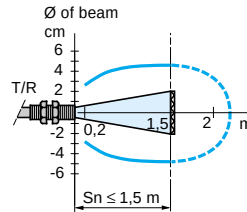


Reflex system



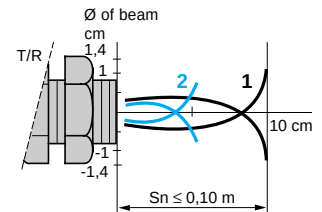
With reflector XUZ-C50

Polarised reflex system



With reflector XUZ-C50

Diffuse system



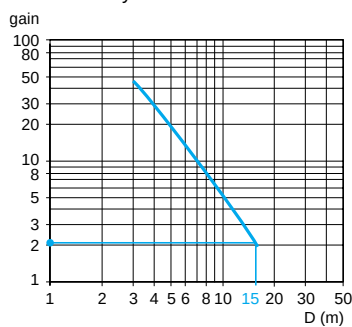
Object 10 x 10 cm

1 White 90%

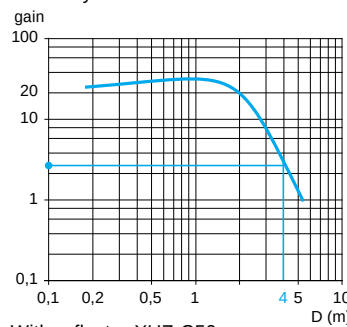
2 Grey 18%

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

Thru-beam system

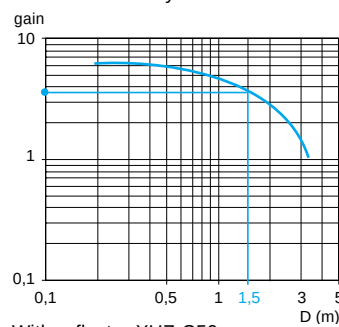


Reflex system



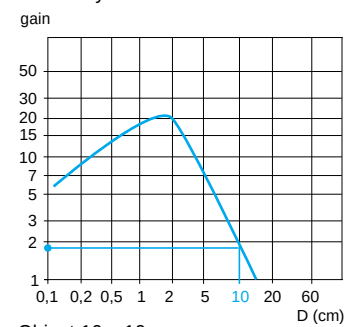
With reflector XUZ-C50

Polarised reflex system



With reflector XUZ-C50

Diffuse system

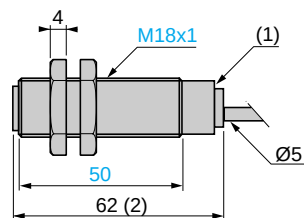


Object 10 x 10 cm

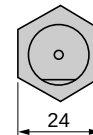
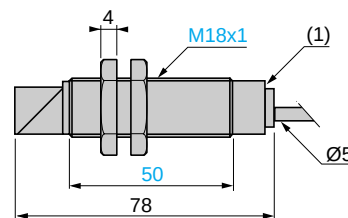
White 90%

Dimensions

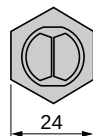
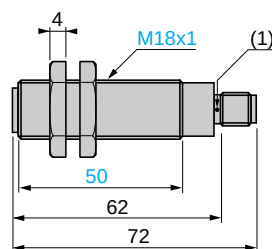
XU●-N18●●340



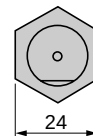
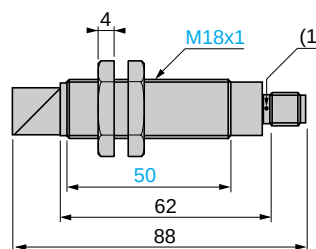
XU●-N18●●340W



XU●-N18●●340D



XU●-N18●●340WD



(1) LED

(2) 64 for XU9-N18●●340

Fixing nut tightening torque : < 15 N.m

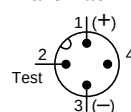
Connector tightening torque : 2 N.m

Cable connections

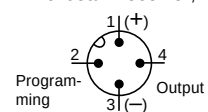
- (-) BU (Blue)
- (+) BN (Brown)
- (OUT) BK (Black)
- (Prog.) OG (Orange)
- (Test) VI (Violet) for thru-beam transmitter only

Connector schemes (Sensor connector pin view)

Transmitter

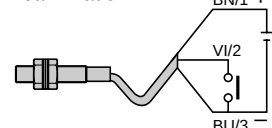


Thru-beam receiver, reflex and diffuse



Beam break test (for thru-beam transmitter only)

Beam made



Beam broken

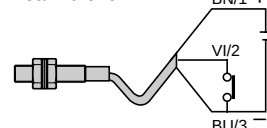


Photo-electric sensors

Osiris® universal sensors, design 18
Plastic or metal case, cylindrical, M18 x 1 threaded
Solid state output

Presentation

1

Plastic case

With sensitivity
adjustment and
stability LED

CE

d.c. supply

Pre-cabled or plug-in connector
Line of sight along case axis (1)



Page 1/24

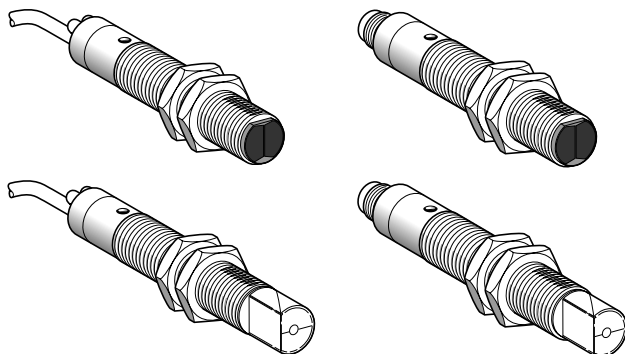
Metal case

With sensitivity
adjustment and
stability LED

CE

d.c. supply

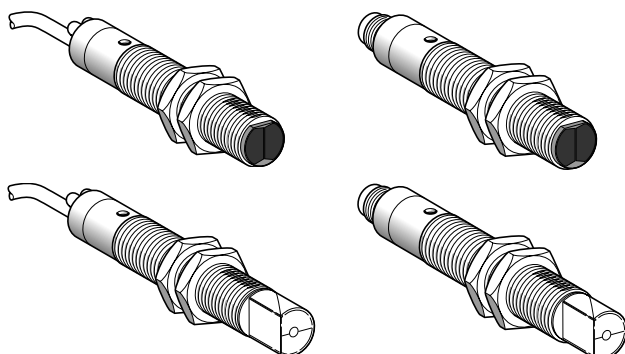
Pre-cabled or plug-in connector
Line of sight along case axis or 90° to case axis



Page 1/26

a.c. or d.c.
supply

Pre-cabled or plug-in connector
Line of sight along case axis or 90° to case axis



Page 1/28

(1) Line of sight 90° to case axis possible using mirror adaptor accessory.

Photo-electric sensors

Osiris® universal sensors, design 18
Plastic or metal case, cylindrical, M18 x 1 threaded
Solid state output

Common general characteristics, schemes

Sensing characteristics

Nominal sensing distance	Thru-beam system : 15 m Reflex system : 4 m Polarised reflex system : 2 m Diffuse system : 10 and 40 cm
--------------------------	--

Environment

Product certifications	CE, UL, CSA
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 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

Function table

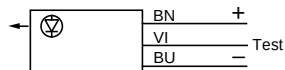
	Function	Thru-beam and reflex systems		Diffuse system	
		No object present in the beam	Object present in the beam	No object present in the beam	Object present in the beam
Output state (PNP or NPN) indicator (illuminated when sensor output ON)	Light switching				
	Dark switching				

Schemes

Wiring schemes (3-wire ~)

Pre-cabled versions

Transmitter



Light switching (no object present)

Thru-beam receiver & reflex

Diffuse

PNP output

NPN output

OG

BN

BK

BU

+

~

-

Test

OG

BN

BK

BU

+

~

-

Test

OG

BN

BK

BU

+

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Test

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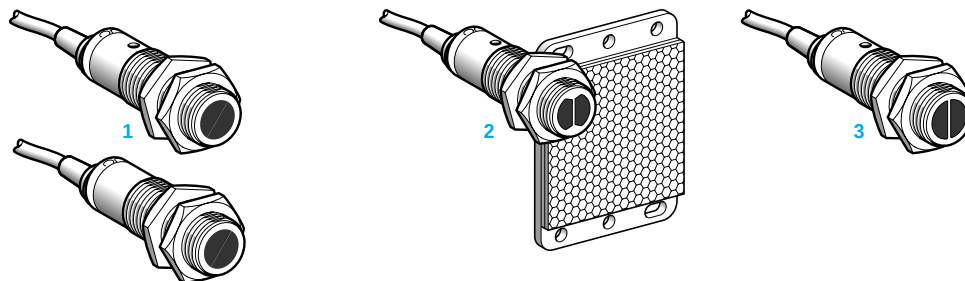
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With sensitivity adjustment and stability LED

Accessories :
pages 1/154 to 1/159

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Nominal sensing distance (Sn)	15 m (transmitter + receiver)	4 m (with 50 x 50 mm reflector)	2 m (with 50 x 50 mm reflector)	0.10 m	0.40 m

References of pre-cabled versions

3-wire, PNP	Light or dark programmable switching	XU2-B18PP340 (1)	XU1-B18PP340 (2)	XU9-B18PP340 (2)	XU8-B18PP340	XU5-B18PP340
3-wire, NPN	Light or dark programmable switching	XU2-B18NP340 (1)	XU1-B18NP340 (2)	XU9-B18NP340 (2)	XU8-B18NP340	XU5-B18NP340
Weight (kg)		0.150	0.095	0.095	0.075	0.075

References of plug-in connector versions

3-wire, PNP	Light or dark programmable switching	XU2-B18PP340D (1)	XU1-B18PP340D (2)	XU9-B18PP340D (2)	XU8-B18PP340D	XU5-B18PP340D
3-wire, NPN	Light or dark programmable switching	XU2-B18NP340D (1)	XU1-B18NP340D (2)	XU9-B18NP340D (2)	XU8-B18NP340D	XU5-B18NP340D
Weight (kg)		0.040	0.040	0.040	0.020	0.020

Complementary characteristics not shown under general characteristics (page 1/23)

Connection	Pre-cabled	Diameter 4 mm cable, length 2 m, wire c.s.a. : 4 x 0.22 mm ² (3 x 0.22 mm ² for thru-beam transmitter)
	Connector	M12 male connector, 4-pin (suitable female connectors (pre-wired and screw terminal) types 3, 4 & 5, see page 1/160)
Materials	Case : PC/ABS ; lens : PMMA ; 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	< 35 mA (reflex and diffuse) ; ≤ 50 mA (thru-beam)	
Maximum switching frequency	500 Hz (thru-beam system : 400 Hz)	
Delays	First-up : ≤ 30 ms ; response : ≤ 1 ms ; recovery : ≤ 1 ms (thru-beam system : 1.5 ms)	

(1) Reference for both transmitter and receiver for thru-beam system sensors.

(2) 50 x 50 mm reflector included with reflex system and polarised reflex system sensors.

Note : These products are equivalent to the discontinued XUB short case sensors. See cross-reference tables, pages 1/162 and 1/163.

Photo-electric sensors

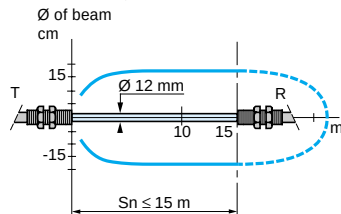
Osiris® universal sensors. Plastic case, cylindrical, M18 x 1 threaded
d.c. supply. Solid state output
With sensitivity adjustment and stability LED

Accessories :
pages 1/154 to 1/159

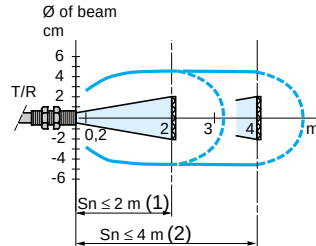
Curves, dimensions, schemes

Detection curves

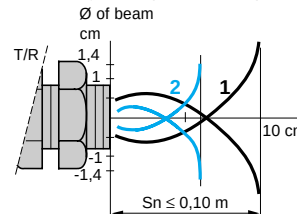
Thru-beam system



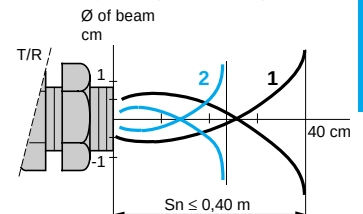
Reflex system



Diffuse system (Sn = 10 cm)



Diffuse system (Sn = 40 cm)



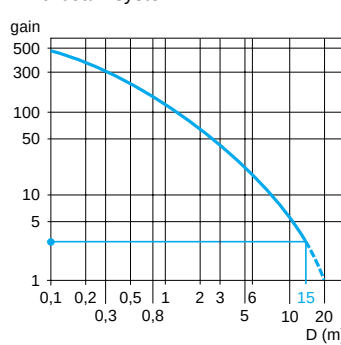
With reflector XUZ-C50
(1) Polarised reflex XU9-B18●P340
(2) Reflex XU1-B18●P340

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

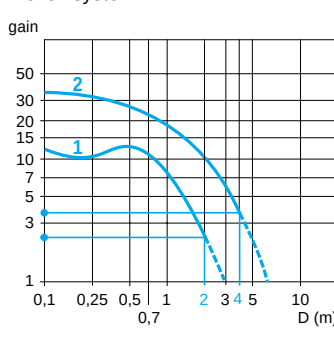
Object 20 x 20 cm
1 White 90%
2 Grey 18%

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

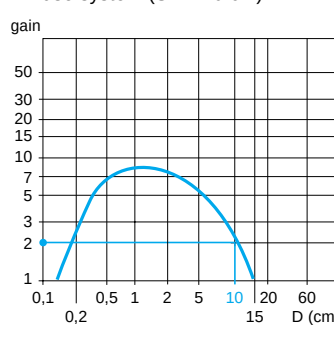
Thru-beam system



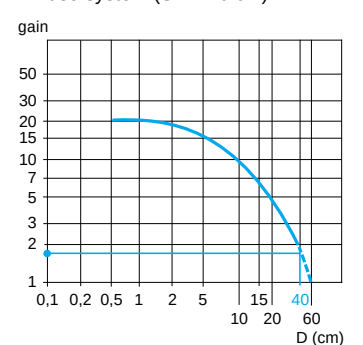
Reflex system



Diffuse system (Sn = 10 cm)



Diffuse system (Sn = 40 cm)



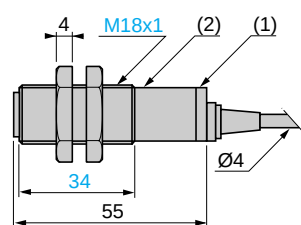
With reflector XUZ-C50
1 Polarised reflex XU9-B18●P340
2 Reflex XU1-B18●P340

Object 10 x 10 cm
White 90%

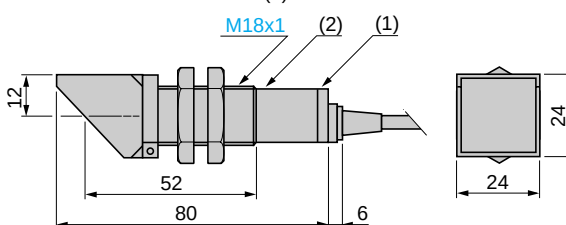
Object 20 x 20 cm
White 90%

Dimensions

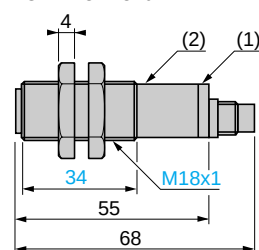
XU●-B18●P340



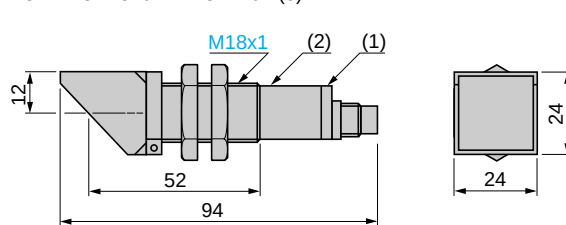
XU●-B18●P340 + XUB-Z0● (3)



XU●-B18●P340D



XU●-B18●P340D + XUB-Z0● (3)



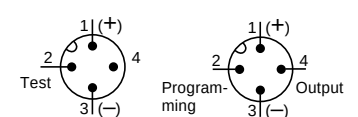
Cable connections

(-) BU (Blue)
(+) BN (Brown)
(OUT) BK (Black)
(Prog.) OG (Orange)
(Test) VI (Violet) for thru-beam transmitter only

Connector schemes

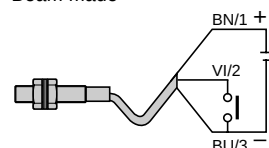
Sensor connector pin view

Transmitter Thru-beam receiver, reflex and diffuse



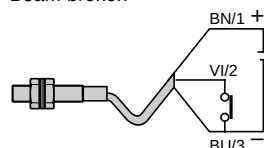
(1) LED
(2) Adjustment potentiometer
(3) XUB-Z0● : mirror adaptor for reflecting beam through 90°, see page 1/154

Beam break test (for thru-beam transmitter only)
Beam made



Fixing nut tightening torque : < 4 N.m
Connector tightening torque : 2 N.m

Beam broken



Verification of correct operation
Thru-beam and reflex systems

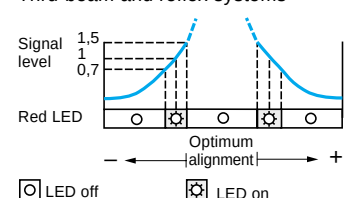


Photo-electric sensors

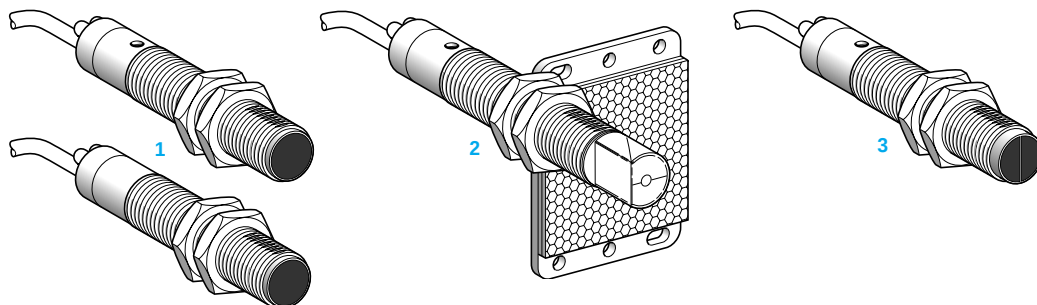
Osiris® universal sensors. Metal case, cylindrical, M18 x 1 threaded
d.c. supply. Solid state output
With sensitivity adjustment and stability LED

Accessories :
pages 1/154 to 1/159

References, characteristics

1

Design 18



System	Thru-beam 1	Polarised reflex 2	Diffuse 3	Diffuse with adjustable background suppression 3
Type of transmission	Infra-red	Red	Infra-red	Infra-red
Nominal sensing distance (Sn)	15 m (transmitter + receiver)	2 m (with 50 x 50 mm reflector)	0.4 m	0.1 m (0.08...0.12 m)

References of pre-cabled versions

3-wire, PNP Light or dark program- mable switching	Line of sight along case axis Line of sight 90° to case axis	XU2-M18PP340 (1) XU2-M18PP340W (1)	XU9-M18PP340 (2) XU9-M18PP340W (2)	XU5-M18PP340 XU5-M18PP340W	XU8-M18PP340 (4) XU8-M18PP340W (4)
3-wire, NPN Light or dark program- mable switching	Line of sight along case axis Line of sight 90° to case axis	XU2-M18NP340 (1) XU2-M18NP340W (1)	XU9-M18NP340 (2) XU9-M18NP340W (2)	XU5-M18NP340 XU5-M18NP340W	XU8-M18NP340 (4) XU8-M18NP340W (4)
Weight (kg)		0.285	0.170	0.150	0.150

References of plug-in connector versions

3-wire, PNP Light or dark program- mable switching	Line of sight along case axis Line of sight 90° to case axis	XU2-M18PP340D (1) XU2-M18PP340WD (1)	XU9-M18PP340D (2) XU9-M18PP340WD (2)	XU5-M18PP340D XU5-M18PP340WD	XU8-M18PP340D (4) XU8-M18PP340WD (4)
3-wire, NPN Light or dark program- mable switching	Line of sight along case axis Line of sight 90° to case axis	XU2-M18NP340D (1) XU2-M18NP340WD (1)	XU9-M18NP340D (2) XU9-M18NP340WD (2)	XU5-M18NP340D XU5-M18NP340WD	XU8-M18NP340D (4) XU8-M18NP340WD (4)
Weight (kg)		0.155	0.095	0.075	0.075

Complementary characteristics not shown under general characteristics (page 1/23)

Connection	Pre-cabled	Diameter 5 mm cable, length 2 m (3), wire c.s.a. : 4 x 0.34 mm ² (3 x 0.34 mm ² for thru-beam transmitter)
	Connector	M12 male connector, 4-pin (suitable female connectors (pre-wired and screw terminal) types 3, 4 & 5, see page 1/160)
Materials	Case : nickel plated brass, lens : PMMA, 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	≤ 35 mA (reflex and diffuse), ≤ 50 mA (thru-beam)	
Maximum switching frequency	500 Hz	
Delays	First-up : ≤ 15 ms ; response : ≤ 1 ms ; recovery : ≤ 1 ms	

(1) Reference for both transmitter and receiver for thru-beam system sensors.

(2) 50 x 50 mm reflector included with polarised reflex system sensors.

(3) Sensors available with 5 m cable, To order, add the suffix L5 to the reference selected from above.

Example : sensor XU9-M18PP340 with 5 m cable becomes XU9-M18PP340L5.

(4) These sensors do not incorporate stability LED.

Photo-electric sensors

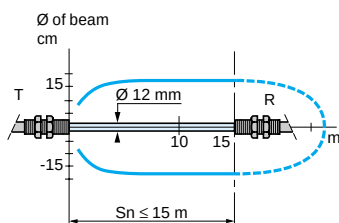
Osiris® universal sensors. Metal case, cylindrical, M18 x 1 threaded
d.c. supply. Solid state output
With sensitivity adjustment and stability LED

Accessories :
pages 1/154 to 1/159

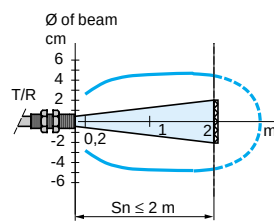
Curves, dimensions, schemes

Detection curves

Thru-beam system

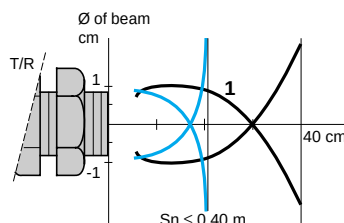


Polarised reflex system



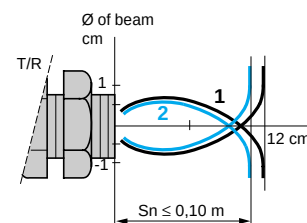
With reflector XUZ-C50

Diffuse system ($S_n = 40 \text{ cm}$)



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

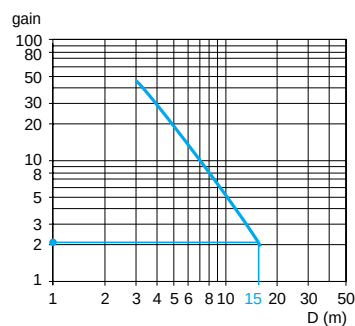
Diffuse system with background suppression ($S_n = 10 \text{ cm}$)



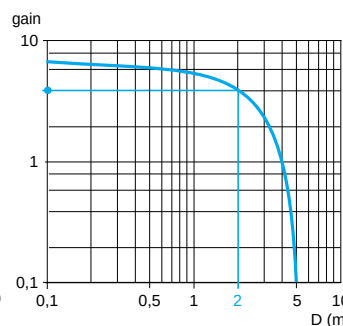
Object 10 x 10 cm
1 White 90%
2 Grey 18%

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

Thru-beam system

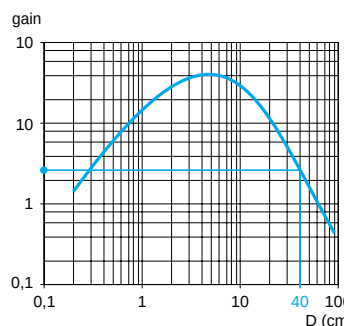


Polarised reflex system



With reflector XUZ-C50

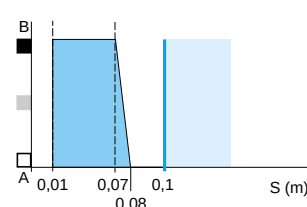
Diffuse system ($S_n = 40 \text{ cm}$)



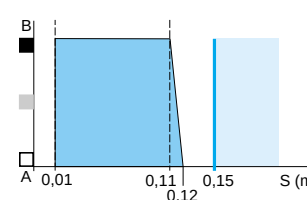
Object 10 x 10 cm
White 90%

Variation of usable sensing distance S

Diffuse system with adjustable background suppression
Potentiometer at minimum

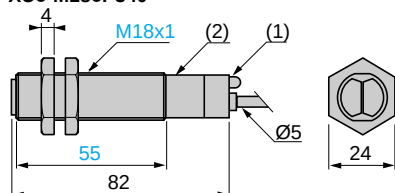


Diffuse system with adjustable background suppression
Potentiometer at maximum

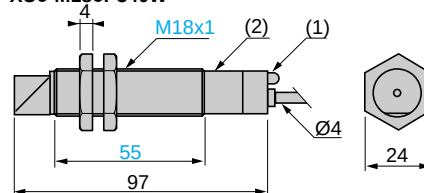


Dimensions

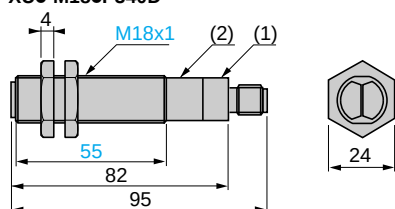
XU-M18-P340



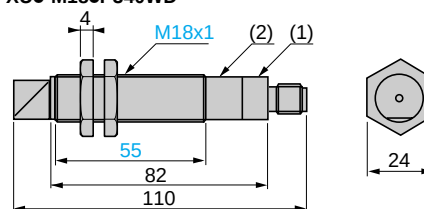
XU-M18-P340W



XU-M18-P340D



XU-M18-P340WD



(1) LED

(2) Potentiometer

Cable connections

- (-) BU (Blue)
- (+) BN (Brown)
- (OUT) BK (Black)
- (Prog.) OG (Orange)
- (Test) VI (Violet) for thru-beam transmitter only

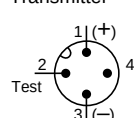
Fixing nut tightening torque : 15 N.m

Connector tightening torque : 2 N.m

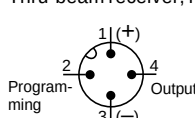
Connector schemes

Sensor connector pin view

Transmitter

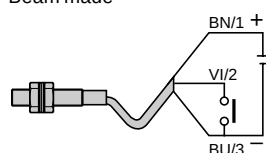


Thru-beam receiver, reflex and diffuse

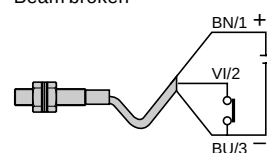


Beam break test (for thru-beam transmitter only)

Beam made

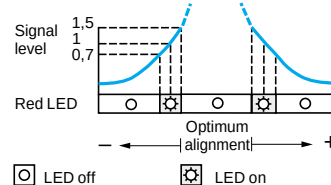


Beam broken



Verification of correct operation

Thru-beam and reflex systems



Red LED

LED off

LED on

Photo-electric sensors

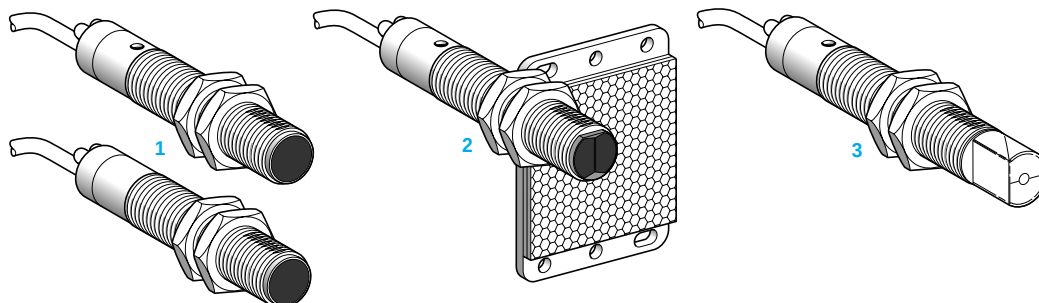
Osiris® universal sensors. Metal case, cylindrical, M18 x 1 threaded
a.c. or d.c. supply. Solid state output
With sensitivity adjustment

Accessories :
pages 1/154 to 1/159

References, characteristics

1

Design 18



System	Thru-beam 1	Polarised reflex 2	Diffuse 3	Diffuse with adjustable background suppression 3
Type of transmission	Infra-red	Red	Infra-red	Infra-red
Nominal sensing distance (Sn)	15 m (transmitter + receiver)	2 m (with 50 x 50 mm reflector)	0.4 m	0.1 m (0.08...0.12 m)

References of pre-cabled versions

2-wire Light switching	Line of sight along case axis	XU2-M18MB230 (1)	XU9-M18MB230 (2)	XU5-M18MA230	XU8-M18MA230
	Line of sight 90° to case axis	XU2-M18MB230W (1)	XU9-M18MB230W (2)	XU5-M18MA230W	XU8-M18MA230W
2-wire Dark switching	Line of sight along case axis	XU2-M18MA230 (1)	XU9-M18MA230 (2)	XU5-M18MB230	XU8-M18MB230
	Line of sight 90° to case axis	XU2-M18MA230W (1)	XU9-M18MA230W (2)	XU5-M18MB230W	XU8-M18MB230W
Weight (kg)		0.285	0.170	0.150	0.150

References of plug-in connector versions

2-wire Light switching	Line of sight along case axis	XU2-M18MB230K (1)	XU9-M18MB230K (2)	XU5-M18MA230K	XU8-M18MA230K
	Line of sight 90° to case axis	XU2-M18MB230WK (1)	XU9-M18MB230WK (2)	XU5-M18MA230WK	XU8-M18MA230WK
2-wire Dark switching	Line of sight along case axis	XU2-M18MA230K (1)	XU9-M18MA230K (2)	XU5-M18MB230K	XU8-M18MB230K
	Line of sight 90° to case axis	XU2-M18MA230WK (1)	XU9-M18MA230WK (2)	XU5-M18MB230WK	XU8-M18MB230WK
Weight (kg)		0.155	0.095	0.075	0.075

Complementary characteristics not shown under general characteristics (page 1/23)

Connection	Pre-cabled	Diameter 5 mm cable, length 2 m (3), wire c.s.a. : 2 x 0.5 mm²
	Connector	Ø 12 male, 3-pin (suitable female connectors (pre-wired and screw terminal) types 6 & 7, see pages 1/160 and 1/161)
Materials	Case : nickel plated brass, lens : PMMA, cable : PVC	
Rated supply voltage	— or ~ 24...240 V	
Voltage limits	— or ~ 20...264 V (including ripple on —)	
Switching capacity (sealed)	10...200 mA (4)	
Voltage drop, closed state	< 6 V	
Residual current, open state	< 1.5 mA	
Maximum switching frequency	25 Hz	
Delays	First-up : ≤ 300 ms ; response : ≤ 20 ms ; recovery : ≤ 20 ms	

(1) Reference for both transmitter and receiver for thru-beam system sensors.

(2) 50 x 50 mm reflector included with polarised reflex system sensors.

(3) Sensors available with 5 m cable. To order, add the suffix **L5** to the reference selected from above.

Example : sensor **XU9-M18MA230** with 5 m cable becomes **XU9-M18MA230L5**.

(4) These sensors do not incorporate overload or short-circuit protection and therefore, it is recommended that a 0.8 A "quick-blow" fuse be connected in series with the load. See page 1/156.

Photo-electric sensors

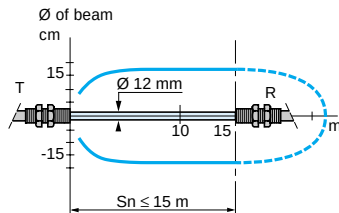
Osiris® universal sensors. Metal case, cylindrical, M18 x 1 threaded
a.c. or d.c. supply. Solid state output
With sensitivity adjustment

Accessories :
pages 1/154 to 1/159

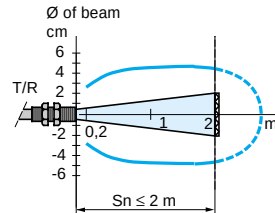
Curves, dimensions, schemes

Detection curves

Thru-beam system

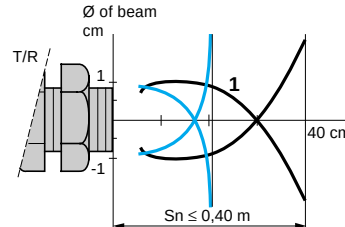


Polarised reflex system



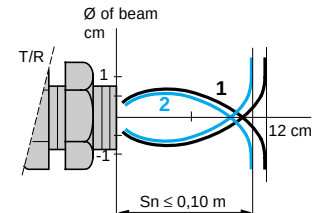
With reflector XUZ-C50

Diffuse system ($S_n = 40$ cm)



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

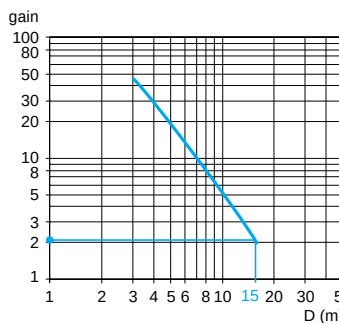
Diffuse system with background suppression ($S_n = 10$ cm)



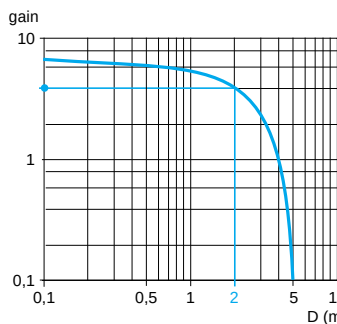
Object 10 x 10 cm
1 White 90%
2 Grey 18%

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

Thru-beam system

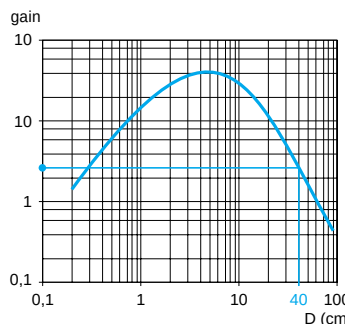


Polarised reflex system



With reflector XUZ-C50

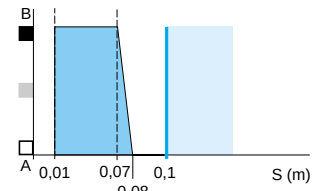
Diffuse system ($S_n = 40$ cm)



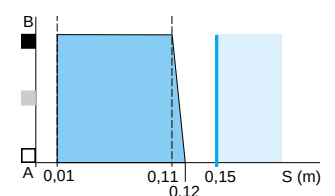
Object 10 x 10 cm
White 90%

Variation of usable sensing distance S

Diffuse system with adjustable background suppression
Potentiometer at minimum



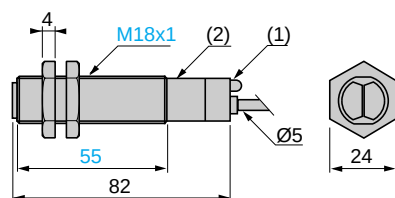
Diffuse system with adjustable background suppression
Potentiometer at maximum



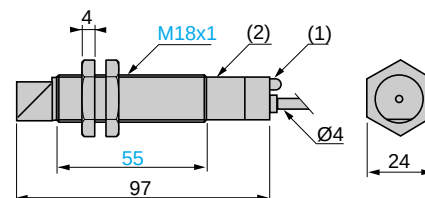
A-B : Object reflection coefficient
 Black 6 %
 Grey 18 %
 White 90 %
 Sensing range
 Non sensing zone (Matt surfaces)

Dimensions

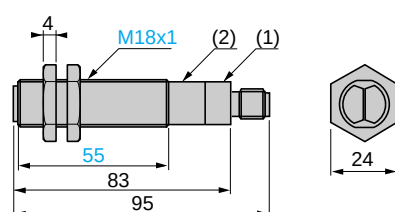
XU●M18M●230



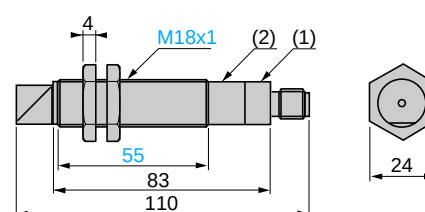
XU●M18M●230W



XU●M18M●230K



XU●M18M●230WK



(1) LED

(2) Potentiometer

Cable connections

- (BU) BU (Blue)
- (BN) BN (Brown)

Fixing nut tightening torque : 15 N.m

Connector tightening torque : 2 N.m

Connector scheme

Sensor connector pin view

Thru-beam, reflex and diffuse



Attention : It is essential that a load be connected in series with the sensor.