

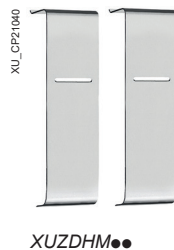
Photo-electric sensors

XUM, general purpose, single mode function

Miniature design, plastic

Three-wire DC, solid-state output

Potentiometer setting for NO/NC, sensitivity



Thru-beam system with adjustable sensitivity

Max./operating sensing distance (Sn)	Function	Output	Connection	Reference	Weight kg
Transmitter + receiver					
30 m/24 m	Light ON (NC)/ Dark ON (NO) configuration by potentiometer	PNP	Pre-cabled (L = 2 m)	XUM2APXBL2	0.096
			M8 connector (4-pin)	XUM2APXBM8	0.026
		NPN	Pre-cabled (L = 2 m)	XUM2ANXBL2	0.096
			M8 connector (4-pin)	XUM2ANXBM8	0.026

Transmitter only (1)

30 m/24 m			Pre-cabled (L = 2 m)	XUM2AKXBL2T	0.063
			M8 connector (4-pin)	XUM2AKXBM8T	0.010

Receiver only (1)

30 m/24 m	Light ON (NC)/ Dark ON (NO) configuration by potentiometer	PNP	Pre-cabled (L = 2 m)	XUM2APXBL2R	0.630
			M8 connector (4-pin)	XUM2APXBM8R	0.010
		NPN	Pre-cabled (L = 2 m)	XUM2ANXBL2R	0.063
			M8 connector (4-pin)	XUM2ANXBM8R	0.010

Accessories for thru-beam system

Description	Dimensions	Sensing distance	Reference	Weight
	mm	m		kg
Vertical diaphragm Sold in lots of 2	0.5 x 6.4	1	XUZDVM05	0.003
	1 x 6.4	1.5	XUZDVM10	0.003
	2 x 6.4	3.5	XUZDVM20	0.003
Horizontal diaphragm Sold in lots of 2	0.5 x 6.4	0.7	XUZDHM05	0.003
	1 x 6.4	1.5	XUZDHM10	0.003
	2 x 6.4	3	XUZDHM20	0.003
Round diaphragm Sold in lots of 2	0.5 x 6.4	0.08	XUZDRM05	0.003
	1 x 6.4	0.3	XUZDRM10	0.003
	2 x 6.4	1.2	XUZDRM20	0.003

Fixing accessories

See page 30443/5.

Cabling accessories

See pages 30444/2 to 30444/7.

(1) To order these references, please consult our Customer Care Centre.

Photo-electric sensors

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XUM9A●XBL2



XUM9A●XBM8



XUZC50



XUZC39



XUZC60S11



XUM8A●XBL2



XUM8A●XBM8

Polarised reflex system with adjustable sensitivity

Sensors

Max./operating sensing distance (Sn)	Function	Output	Connection	Reference	Weight kg
8 m/6.7 m with reflector XUZC50	Light ON (NC)/ Dark ON (NO) configuration by potentiometer	PNP	Pre-cabled (L = 2 m)	XUM9APXBL2	0.063
			M8 connector (4-pin)	XUM9APXBM8	0.010
		NPN	Pre-cabled (L = 2 m)	XUM9ANXBL2	0.063
			M8 connector (4-pin)	XUM9ANXBM8	0.010

Reflectors

Description	Size	Fixing mode	Reference	Weight kg
Rigid square reflectors	100 mm x 100 mm	2 brackets (not provided)	XUZC100	0.035
	51.5 mm x 69 mm	6 holes	XUZC50	0.020
Rigid rectangle reflectors	45 mm x 29 mm	2 holes	XUZC24	0.010
	40 mm x 60 mm	2 holes	XUZC60S11	0.022
Rigid circular reflectors	Ø 39 mm	Adhesive	XUZC39	0.008

Note: All reflectors are IP 67 and IP 69K.

Background suppression system with adjustable sensitivity

Max./operating sensing distance (Sn)	Function	Output	Connection	Reference	Weight kg
300 mm/200 mm (white object or paper)	Light ON (NO)/ Dark ON (NC) configuration by potentiometer	PNP	Pre-cabled (L = 2 m)	XUM8APXBL2	0.063
			M8 connector (4-pin)	XUM8APXBM8	0.010
		NPN	Pre-cabled (L = 2 m)	XUM8ANXBL2	0.063
			M8 connector (4-pin)	XUM8ANXBM8	0.010

Accessories

Fixing accessories

See page 30443/5.

Cabling accessories

See pages 30444/2 to 30444/7.

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Potentiometer setting for NO/NC, sensitivity



Diffuse system with adjustable sensitivity					
Max./operating sensing distance (Sn)	Function	Output	Connection	Reference	Weight kg
Diffuse short range					
0.25 m/0.17 m	Light ON (NO)/ Dark ON (NC) configuration by potentiometer	PNP	Pre-cabled (L = 2 m)	XUM4APXBL2	0.063
			M8 connector (4-pin)	XUM4APXBM8	0.010
		NPN	Pre-cabled (L = 2 m)	XUM4ANXBL2	0.063
			M8 connector (4-pin)	XUM4ANXBM8	0.010
Diffuse medium range					
1.1 m/0.8 m	Light ON (NO)/ Dark ON (NC) configuration by potentiometer	PNP	Pre-cabled (L = 2 m)	XUM6APXBL2	0.063
			M8 connector (4-pin)	XUM6APXBM8	0.010
		NPN	Pre-cabled (L = 2 m)	XUM6ANXBL2	0.063
			M8 connector (4-pin)	XUM6ANXBM8	0.010
Diffuse long range					
1.9 m/1.5 m	Light ON (NO)/ Dark ON (NC) configuration by potentiometer	PNP	Pre-cabled (L = 2 m)	XUM5APXBL2	0.063
			M8 connector (4-pin)	XUM5APXBM8	0.010
		NPN	Pre-cabled (L = 2 m)	XUM5ANXBL2	0.063
			M8 connector (4-pin)	XUM5ANXBM8	0.010

Photo-electric sensors

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Potentiometer setting for NO/NC, sensitivity



XUZASM04



XUZASM03



XUZASM02



XUZA50



XUZASM05

Accessories for all XUM miniature sensors

Fixing accessories

Description	For use with sensors	Reference	Weight kg
Rear mounting bracket Supplied with 2 M3 screws	XUM●A●XBL2 XUM●A●XBM8	XUZASM04	0.030
Wrap around vertical mounting bracket, for pre-cabled sensors Supplied with 2 M3 screws	XUM●A●XBL2	XUZASM03	0.062
Wrap around horizontal mounting bracket, for pre-cabled sensors Supplied with 2 M3 screws	XUM●A●XBL2	XUZASM02	0.030
Metal fixing bracket Supplied with 2 M3 screws	XUM●A●XBL2 XUM●A●XBM8	XUZA50	0.025

Setting-up accessory

Air blower mounting block (1) for cleaning the sensitive face of the sensor, using compressed air.	XUM●A●XBL2 XUM●A●XBM8	XUZASM05	0.030
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Supplied with 2 mounting screws (M3 x 20),
1 air supply port plugging screw for the
unused port (of 2 available) and 1 gasket.

Cabling accessories

See pages 30444/2 to 30444/7.

(1) The air tube is not provided.

Photo-electric sensors

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Three-wire DC, solid-state output

Potentiometer setting for NO/NC, sensitivity

Characteristics					
Sensor type			XUM●A●XBM8		XUM●A●XBL2
Product certifications				CE, UKCA, cULus EAC, RCM <i>(pending)</i>	
Connection	Connector			M8	–
	Pre-cabled			–	Length: 2 m
Nominal sensing distance Sn	Système barrage	XUM2	m	30 (with excess gain = 1) 24 (with excess gain = 2)	
	Polarised reflex system (using a 50 x 50 mm reflector XUZC50)	XUM9	m	0.05...8 (with excess gain = 1) 0.05...6.7 (with excess gain = 2)	
	Background suppression system	XUM8	mm	4 mm...300 mm: White paper or object. Sn (90%) 5 mm...265 mm: Grey object. Sn (18%) 8 mm...200 mm: Black object. Sn (6%)	
	Diffuse system (using a white paper 200 x 200 mm)	XUM4	m	0.25 (with excess gain = 1) 0.17 (with excess gain = 2)	
		XUM5	m	1.9 (with excess gain = 1) 1.5 (with excess gain = 2)	
		XUM6	m	1.1 (with excess gain = 1) 0.8 (with excess gain = 2)	
Hysteresis				2 % < H < 20 % at Sn	
Type of transmission	Red			Thru-beam system XUM2 Polarised reflex system XUM9 Background suppression system XUM8 Diffuse system XUM6	
	Infrared			Diffuse system XUM4 and XUM5	
Degree of protection	Conforming to IEC 60529			IP 65, IP 67	
Storage temperature			°C	- 40...+ 70	
Operating temperature			°C	- 30...+ 55	
Materials	Case			PBT	
	Lens			PMMA	
	Display			PC	
	Cable			–	PVC
Vibration resistance	Conforming to IEC 60068-2-6			Frequency range: 10 to 500 Hz Acceleration: 9 gn	
Shock resistance	Conforming to IEC 60068-2-27			Peak acceleration: 100 gn Duration of the pulse: 11 ms	
Indicator lights	Output state			Yellow LED	
	Stability			Green LED (XUM4, XUM5, XUM6, XUM8, XUM9)	
	Power on			Green LED (XUM2)	
Rated supply voltage			V	≐ 12...24 with protection against reverse polarity	
Voltage limits (including ripple)			V	≐ 12...24	
Current consumption, no-load			mA	< 20 max.	
Switching capacity			mA	100	
Voltage drop, closed state			V	≤ 2	
Maximum switching frequency			Hz	1000	
Delays	First-up		ms	< 100	
	Response		ms	0.5	
	Recovery		ms	0.5	

Photo-electric sensors

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Three-wire DC, solid-state output

Potentiometer setting for NO/NC, sensitivity

Wiring schemes

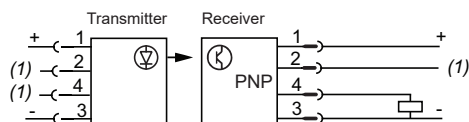
Thru-beam system

M8 connector - 4 pins



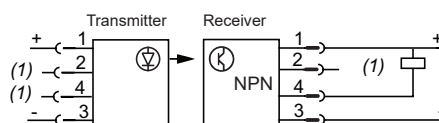
PNP

XUM2APXBM8



NPN

XUM2ANXBM8



Pre-cabled - 3 wires

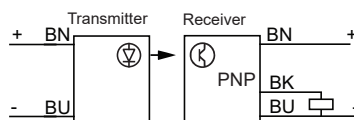
(-) BU (Blue)

(+) BN (Brown)

OUT/Output BK (Black)

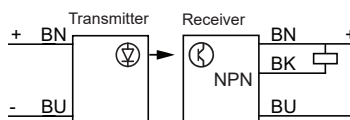
PNP

XUM2APXBL2



NPN

XUM2ANXBL2



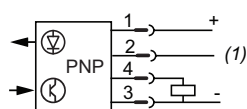
Polarised reflex, background suppression and diffuse systems

M8 connector - 4 pins



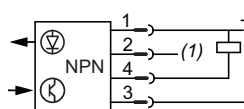
PNP

XUM●APXBM8



NPN

XUM●ANXBM8



Pre-cabled - 3 wires

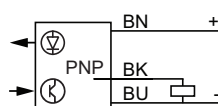
(-) BU (Blue)

(+) BN (Brown)

OUT/Output BK (Black)

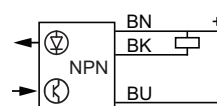
PNP

XUM●APXBL2



NPN

XUM●ANXBL2



(1): Not connected.

Photo-electric sensors

XUM, general purpose, single mode function

Miniature design, plastic

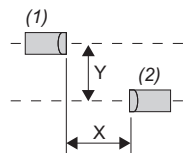
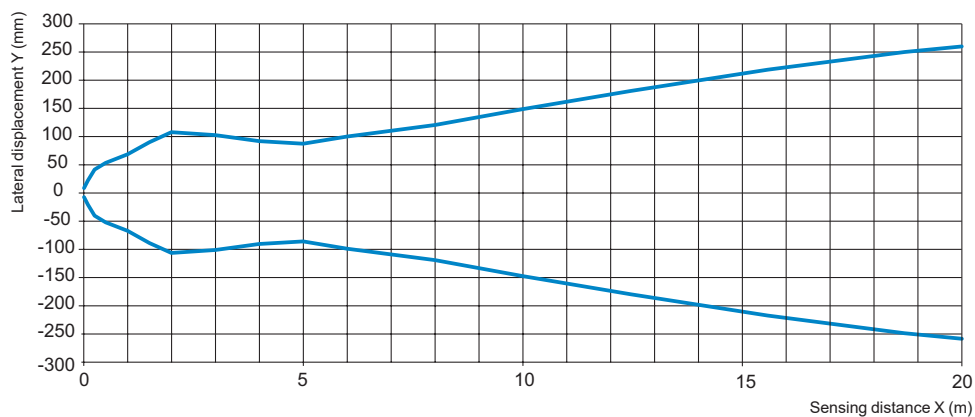
Three-wire DC, solid-state output

Potentiometer setting for NO/NC, sensitivity

Detection curves

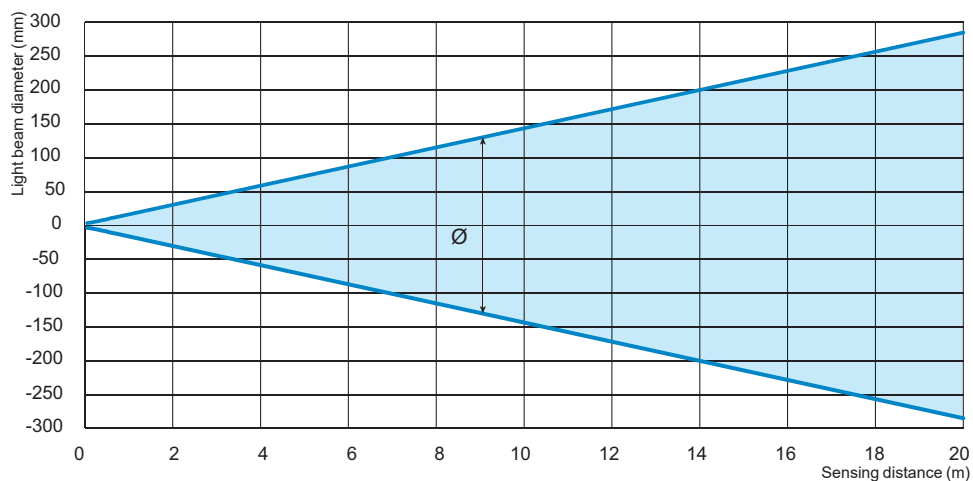
Thru-beam system: XUM2

Lateral displacement



(1): Transmitter
(2): Receiver

Light beam diameter



Excess gain

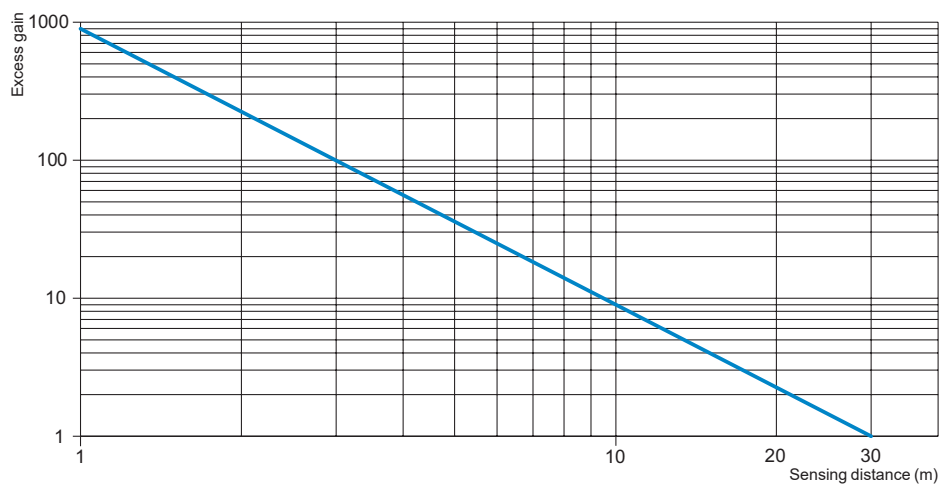


Photo-electric sensors

XUM, general purpose, single mode function

Miniature design, plastic

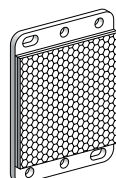
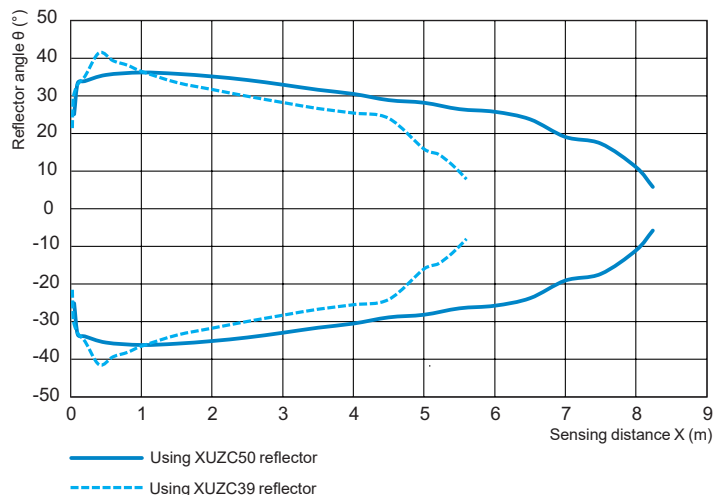
Three-wire DC, solid-state output

Potentiometer setting for NO/NC, sensitivity

Detection curves

Polarised reflex system: XUM9

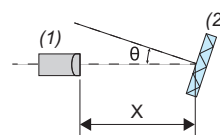
Reflector angle



XUZC50

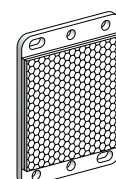
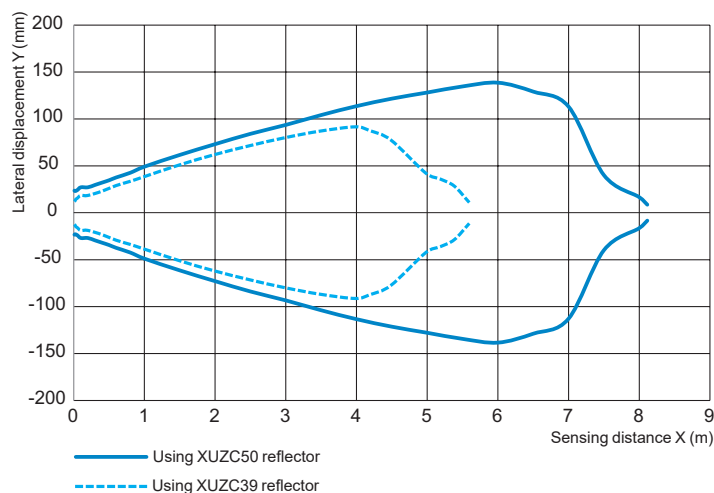


XUZC39



(1): Sensor
(2): Reflector
 θ : Reflector angle (°)
X: Sensing distance (m)

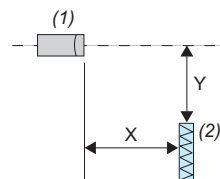
Lateral displacement



XUZC50

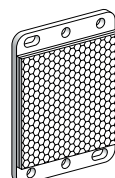
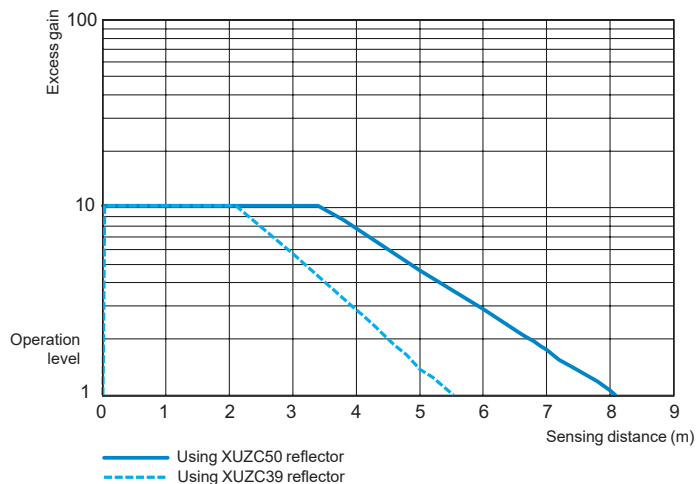


XUZC39



(1): Sensor
(2): Reflector
Y: Lateral displacement (mm)
X: Sensing distance (m)

Excess gain



XUZC50



XUZC39

XUM, general purpose, single mode function

Miniature design, plastic

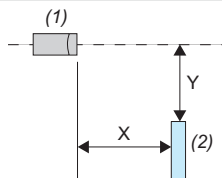
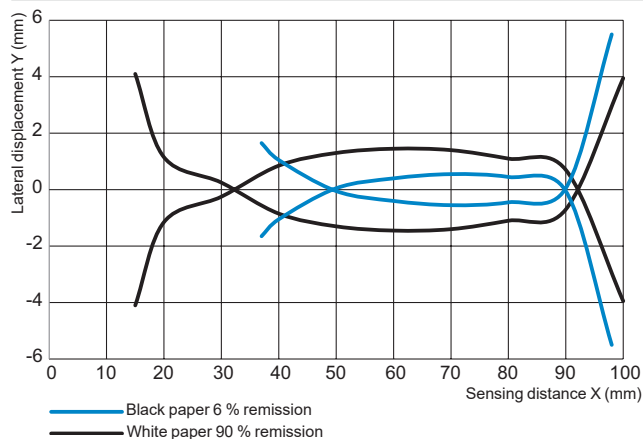
Three-wire DC, solid-state output

Potentiometer setting for NO/NC, sensitivity

Detection curves (continued)

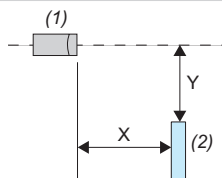
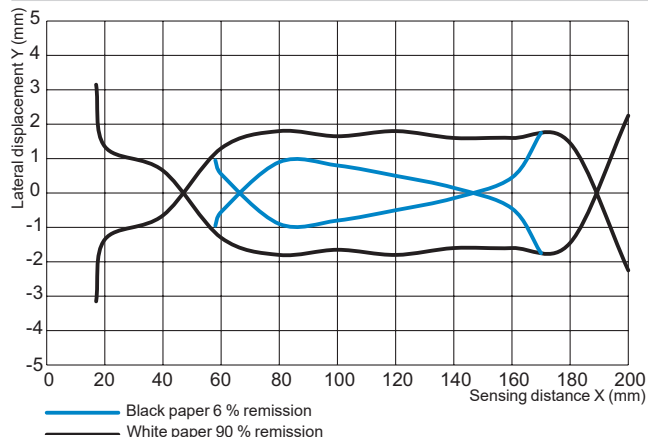
Background suppression system: XUM8

Lateral displacement (preset 100 mm)



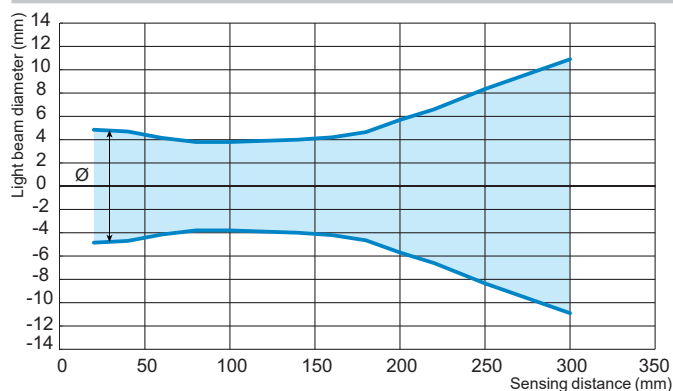
(1): Sensor
 (2): Object (200 mm square white and black mat paper)
 X: Sensing distance (mm)
 Y: Lateral displacement (mm)

Lateral displacement (preset 200 mm)

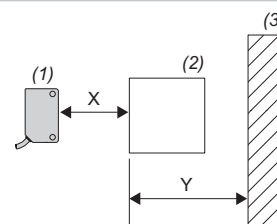
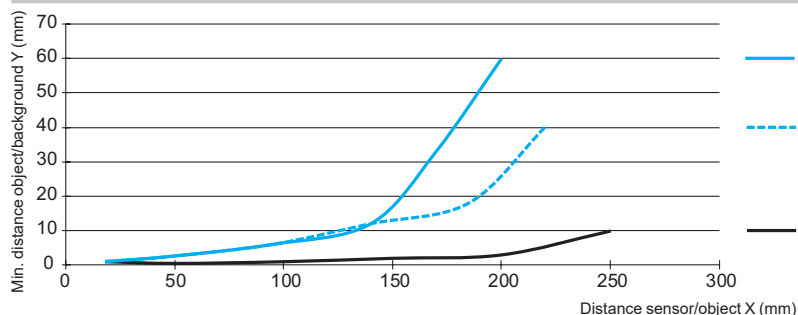


(1): Sensor
 (2): Object (200 mm square white and black mat paper)
 X: Sensing distance (mm)
 Y: Lateral displacement (mm)

Light beam diameter



Minimum distance between the object to detect and white background



(1): Sensor
 (2): Object
 (3): Background
 X: Distance sensor/object (mm)
 Y: Min. distance object/background (mm)

Photo-electric sensors

XUM, general purpose, single mode function

Miniature design, plastic

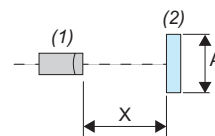
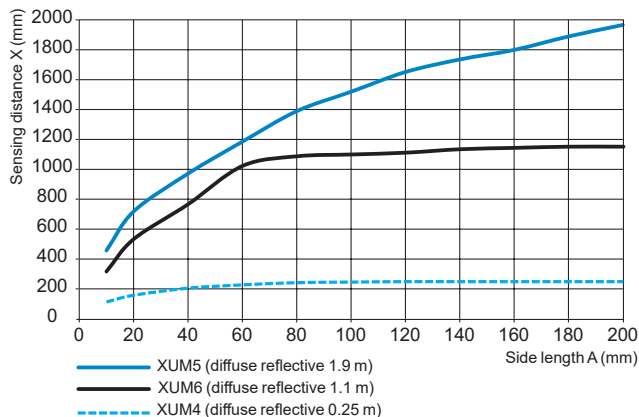
Three-wire DC, solid-state output

Potentiometer setting for NO/NC, sensitivity

Detection curves (continued)

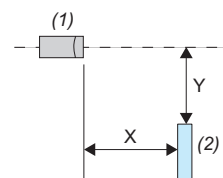
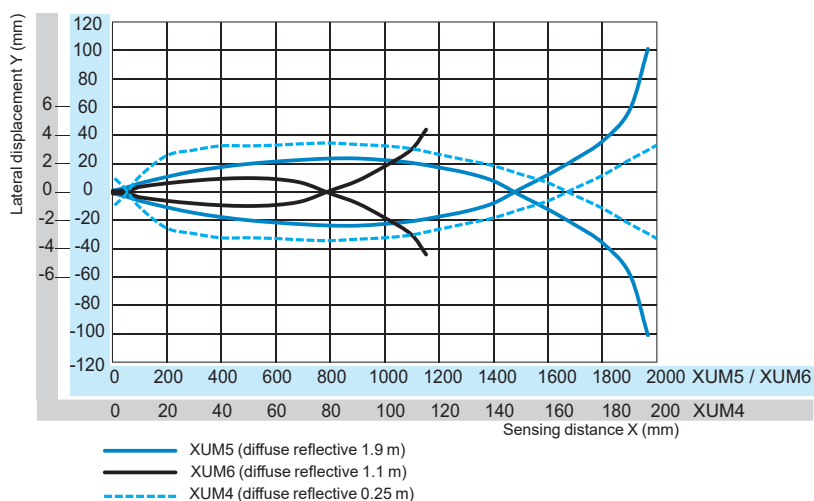
Diffuse system: XUM4, XUM5 and XUM6

Object size/sensing distance



(1): Sensor
(2): Object (white mat paper of A mm square)
A: Side length (mm)
X: Sensing distance (mm)

Lateral displacement



(1): Sensor
(2): Object (200 x 200 mm square white paper)
X: Sensing distance (mm)
Y: Lateral displacement (mm)

Excess gain

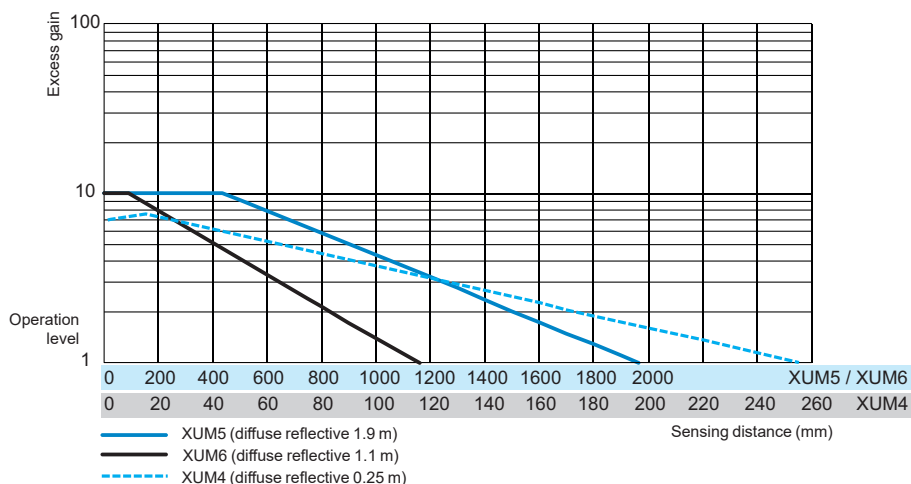


Photo-electric sensors

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Potentiometer setting for NO/NC, sensitivity

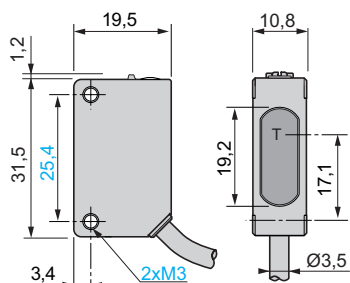
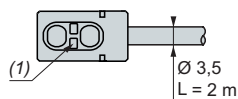
Thru-beam system

Pre-cabled version

Transmitter

Description - XUM2A●XBL2

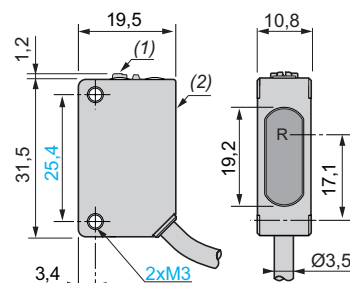
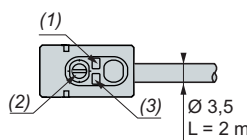
Dimensions - XUM2A●XBL2



Receiver

Description - XUM2A●XBL2

Dimensions - XUM2A●XBL2

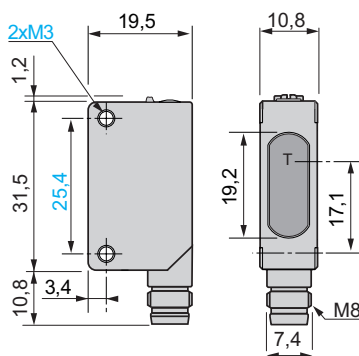
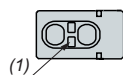


M8 connector version

Transmitter

Description - XUM2A●XBM8

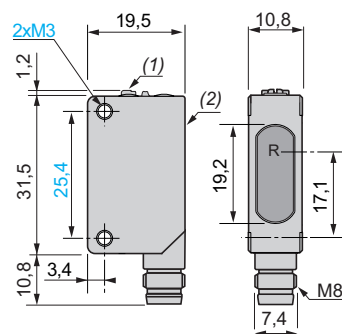
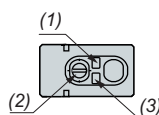
Dimensions - XUM2A●XBM8



Receiver

Description - XUM2A●XBM8

Dimensions - XUM2A●XBM8



(1) Power ON indicator (green).

T: Transmission.

(1) Output indicator (yellow)
(2) Setting potentiometer (sensitivity).
(3) Power ON indicator (green).

R: Reception.
(1) Setting potentiometer (sensitivity).
(2) Setting potentiometer (output).

Photo-electric sensors

XUM, general purpose, single mode function

Miniature design, plastic

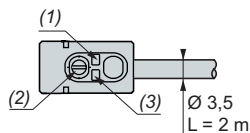
Three-wire DC, solid-state output

Potentiometer setting for NO/NC, sensitivity

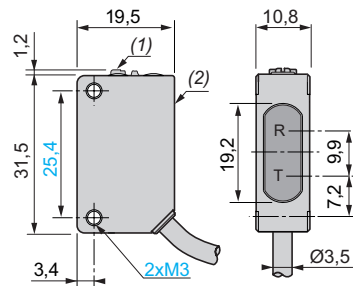
Polarised reflex system

Pre-cabled version

Description - XUM9A●XBL2

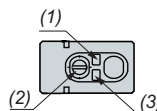


Dimensions - XUM9A●XBL2

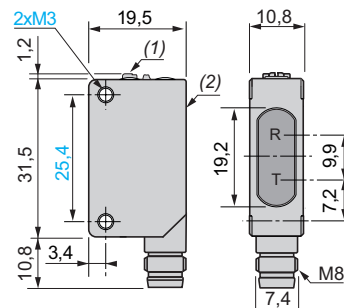


M8 connector version

Description - XUM9A●XBM8

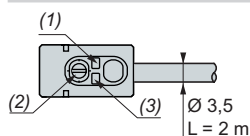


Dimensions - XUM9A●XBM8

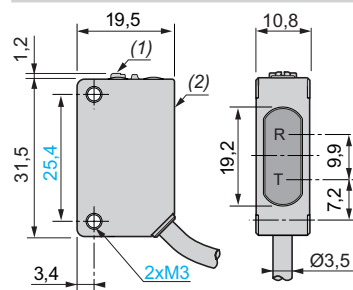


Background suppression system

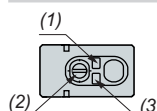
Description - XUM8A●XBL2



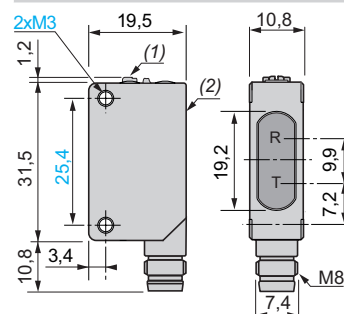
Dimensions - XUM8A●XBL2



Description - XUM8A●XBM8

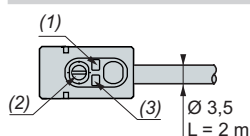


Dimensions - XUM8A●XBM8

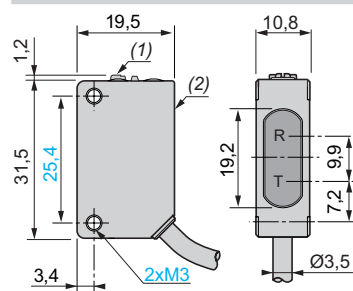


Diffuse system

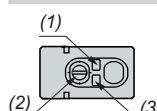
Description - XUM5A●XBL2, XUM6A●XBL2, XUM4A●XBL2



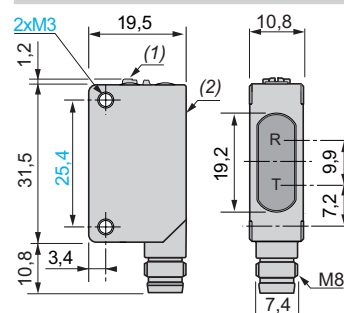
Dimensions - XUM5A●XBL2, XUM6A●XBL2, XUM4A●XBL2



Description - XUM5A●XBM8, XUM6A●XBM8, XUM4A●XBM8



Dimensions - XUM5A●XBM8, XUM6A●XBM8, XUM4A●XBM8



- (1) Output indicator (yellow)
(2) Setting potentiometer (sensitivity)
(3) Stability indicator (green).

- R: Reception.
T: Transmission.
(1) Setting potentiometer (sensitivity).
(2) Setting potentiometer (output).

- (1) Output indicator (yellow)
(2) Setting potentiometer (sensitivity)
(3) Stability indicator (green).

- R: Reception.
T: Transmission.
(1) Setting potentiometer (sensitivity).
(2) Setting potentiometer (output).

Photo-electric sensors

XUM, general purpose, single mode function

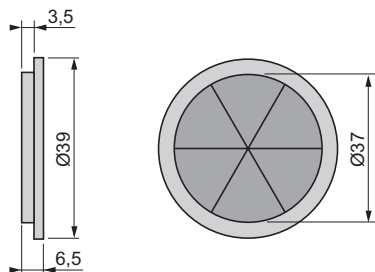
Miniature design, plastic

Accessories

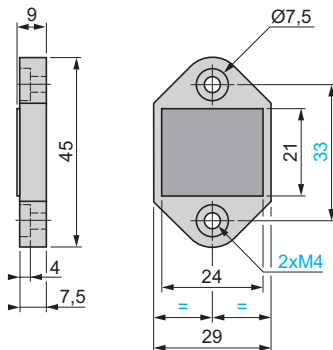
Accessories

Reflectors

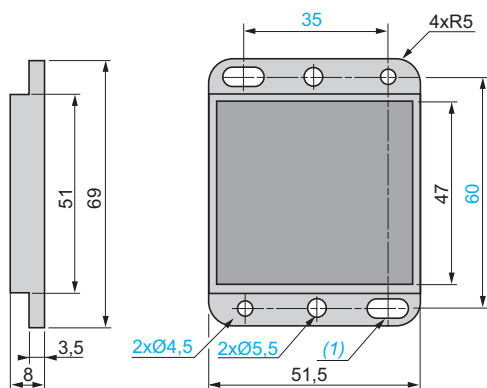
XUZC39



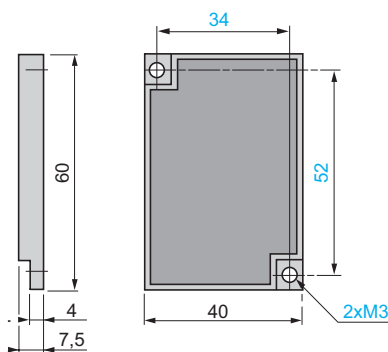
XUZC24



XUZC50

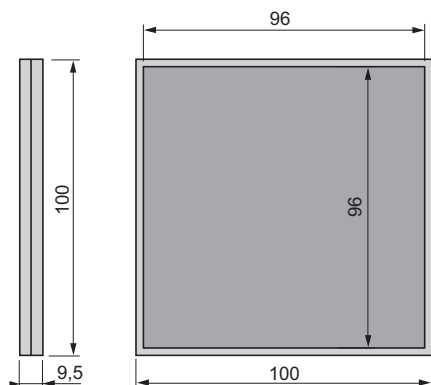


XUZC60S11



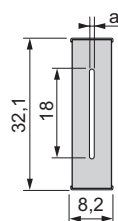
(1) 2 elongated holes Ø 4.5 x 8

XUZC100

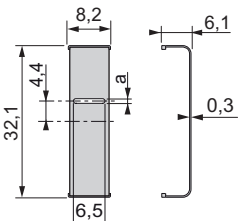


Diaphragms

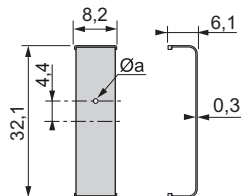
XUZDVM●●



XUZDHM●●



XUZDRM●●



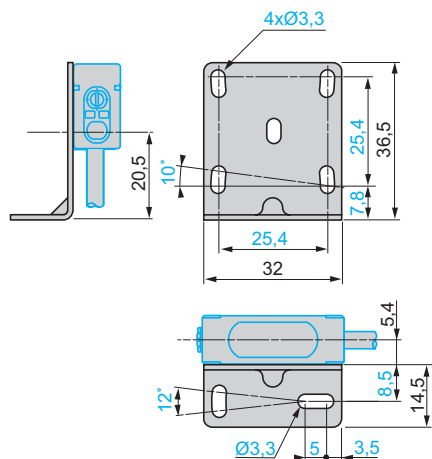
Reference a (mm)

XUZDVM05	0.5
XUZDVM10	1
XUZDVM20	2
XUZDHM05	0.5
XUZDHM10	1
XUZDHM20	2
XUZDRM05	Ø 0.5
XUZDRM10	Ø 1
XUZDRM20	Ø 2

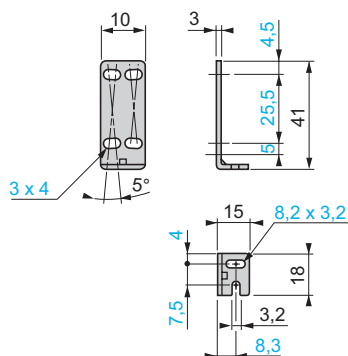
Accessories (continued)

Fixing brackets

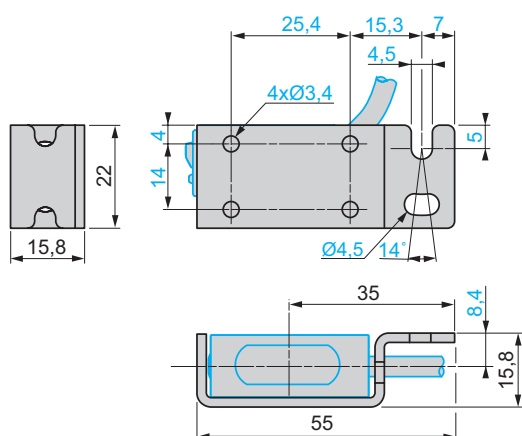
XUZASM04



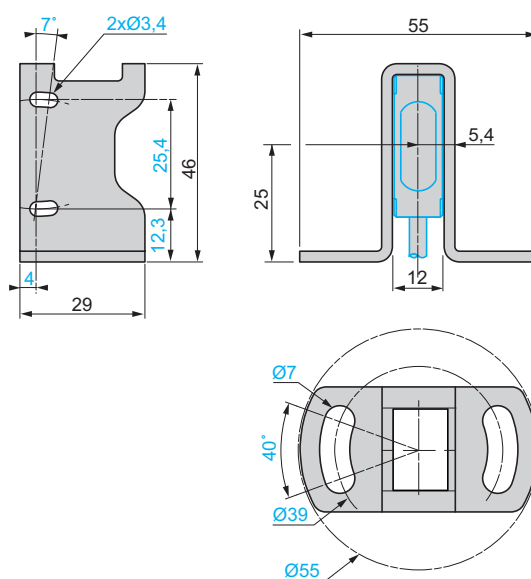
XUZA50



XUZASM02



XUZASM03



Air blower mounting block

XUZASM05

