

Photo-electric sensors

XUB general purpose, single mode function

Cylindrical miniature design 18, plastic

Four-wire DC, solid-state output

Wire setting for NO/NC



XUB2AKXNM12T



XUB2AKXWM12T



XUB2AKXNL2T



XUB2AKXWL2T



XUB2APXNM12R



XUB2APXWM12R



XUB2ANXNL2R



XUB2ANXWL2R

Thru-beam system with adjustable sensitivity

Max./operating sensing distance (Sn)/Line of sight	Function	Output	Connection	Reference	Weight kg
Transmitter (1)					
30 m/20 m Along case axis	–	–	Pre-cabled (L = 2 m)	XUB2AKXNL2T	0 095
			M12 connector (4-pin)	XUB2AKXNM12T	0 040
17 m/12 m 90° to case axis	–	–	Pre-cabled (L = 2 m)	XUB2AKXWL2T	0 095
			M12 connector (4-pin)	XUB2AKXWM12T	0 040

Receiver IO-Link

30 m/20 m Along case axis	NO (Dark ON)/ NC (Light ON) configuration by wire or IO-Link	Autodetect PNP/NPN	M12 connector (4-pin)	XUB2APYNM12R	0 040
			M12 connector (4-pin)	XUB2APYWM12R	0 040
17 m/12 m 90° to case axis	NO (Dark ON)/ NC (Light ON) configuration by wire or IO-Link	Autodetect PNP/NPN	M12 connector (4-pin)	XUB2APYNM12R	0 040
			M12 connector (4-pin)	XUB2APYWM12R	0 040

Receiver

30 m/20 m Along case axis	NO (Dark ON)/ NC (Light ON) configuration by wire	NPN	Pre-cabled (L = 2 m)	XUB2ANXNL2R	0 095
			M12 connector (4-pin)	XUB2ANXNM12R	0 040
17 m/12 m 90° to case axis	NO (Dark ON)/ NC (Light ON) configuration by wire	NPN	Pre-cabled (L = 2 m)	XUB2APXNL2R	0 095
			M12 connector (4-pin)	XUB2APXNM12R	0 040
17 m/12 m 90° to case axis	NO (Dark ON)/ NC (Light ON) configuration by wire	PNP	Pre-cabled (L = 2 m)	XUB2ANXWL2R	0 095
			M12 connector (4-pin)	XUB2ANXWM12R	0 040
17 m/12 m 90° to case axis	NO (Dark ON)/ NC (Light ON) configuration by wire	PNP	Pre-cabled (L = 2 m)	XUB2APXWL2R	0 095
			M12 connector (4-pin)	XUB2APXWM12R	0 040

Accessories

IO-Link Master (2)

See page 70 .

Fixing and other accessories

See page 74 .

Cabling accessories

See page 80 .

(1) All transmitters are compatible with the receivers listed below.

(2) Available 2nd quarter 2024.

Photo-electric sensors

XUB general purpose, single mode function

Cylindrical miniature design 18, metal

Four-wire DC, solid-state output

Wire setting for NO/NC



XUB2BKXNM12T



XUB2BKXWM12T



XUB2BKXNL2T



XUB2BKXWL2T



XUB2BPYNM12R
XUB2BNXNM12R
XUB2BPXNM12R



XUB2BPYWM12R
XUB2BNXWM12R
XUB2BPXWM12R



XUB2BNXNL2R
XUB2BPXNL2R



XUB2BNXWL2R
XUB2BPXWL2R

Thru-beam system with adjustable sensitivity

Max./operating sensing distance (Sn)/Line of sight	Function	Output	Connection	Reference	Weight kg
Transmitter (1)					
30 m/20 m Along case axis	–	–	Pre-cabled (L = 2 m)	XUB2BKXNL2T	0 095
			M12 connector (4-pin)	XUB2BKXNM12T	0 040
17 m/12 m 90° to case axis	–	–	Pre-cabled (L = 2 m)	XUB2BKXWL2T	0 095
			M12 connector (4-pin)	XUB2BKXWM12T	0 040

Receiver IO-Link

30 m/20 m Along case axis	NO (Dark ON)/ NC (Light ON) configuration by wire or IO-Link	Autodetect PNP/NPN	M12 connector (4-pin)	XUB2BPYNM12R	0 040
			M12 connector (4-pin)	XUB2BPYWM12R	0 040
17 m/12 m 90° to case axis	NO (Dark ON)/ NC (Light ON) configuration by wire or IO-Link	Autodetect PNP/NPN	M12 connector (4-pin)	XUB2BPYNM12R	0 040
			M12 connector (4-pin)	XUB2BPYWM12R	0 040

Receiver

30 m/20 m Along case axis	NO (Dark ON)/ NC (Light ON) configuration by wire	NPN	Pre-cabled (L = 2 m)	XUB2BNXNL2R	0 095
			M12 connector (4-pin)	XUB2BNXNM12R	0 040
		PNP	Pre-cabled (L = 2 m)	XUB2BPXNL2R	0 095
			M12 connector (4-pin)	XUB2BPXNM12R	0 040
17 m/12 m 90° to case axis	NO (Dark ON)/ NC (Light ON) configuration by wire	NPN	Pre-cabled (L = 2 m)	XUB2BNXWL2R	0 095
			M12 connector (4-pin)	XUB2BNXWM12R	0 040
		PNP	Pre-cabled (L = 2 m)	XUB2BPXWL2R	0 095
			M12 connector (4-pin)	XUB2BPXWM12R	0 040

Accessories

IO-Link Master (2)

See page 70 .

Fixing and other accessories

See page 74 .

Cabling accessories

See page 80 .

(1) All transmitters are compatible with the receivers listed below.

(2) Available 2nd quarter 2024.

Photo-electric sensors

XUB general purpose, single mode function

Cylindrical miniature design 18, plastic

Four-wire DC, solid-state output

Wire setting for NO/NC

Apelec_CP0720004



XUB●APYNM12
XUB●ANXNM12
XUB●APXNM12

Apelec_CP0720008



XUB●APYWM12
XUB●ANXWM12
XUB●APXWM12

Apelec_CP0720002



XUB●ANXNL2
XUB●APXNL2

Apelec_CP0720006



XUB●ANXWL2
XUB●APXWL2

Diffuse system with adjustable sensitivity, IO-Link

Max./operating sensing distance (Sn)/Line of sight	Function	Output	Connection	Reference	Weight kg
--	----------	--------	------------	-----------	-----------

Long range, red LED emission

1 m/0.7 m Along case axis	NO (Light ON)/ NC (Dark ON) configuration by wire or IO-Link	Autodetect PNP/NPN	M12 connector (4-pin)	XUB5APYNM12	0 040
------------------------------	---	-----------------------	--------------------------	--------------------	-------

Medium range, red LED emission

0.6 m/0.42 m Along case axis	NO (Light ON)/ NC (Dark ON) configuration by wire or IO-Link	Autodetect PNP/NPN	M12 connector (4-pin)	XUB6APYNM12	0 040
---------------------------------	---	-----------------------	--------------------------	--------------------	-------

0.5 m/0.35 m 90° to case axis	NO (Light ON)/ NC (Dark ON) configuration by wire or IO-Link	Autodetect PNP/NPN	M12 connector (4-pin)	XUB6APYWM12	0 040
----------------------------------	---	-----------------------	--------------------------	--------------------	-------

Diffuse system with adjustable sensitivity

Max./operating sensing distance (Sn)/Line of sight	Function	Output	Connection	Reference	Weight kg
--	----------	--------	------------	-----------	-----------

Long range, red LED emission

1 m/0.7 m Along case axis	NO (Light ON)/ NC (Dark ON) configuration by wire	NPN	Pre-cabled (L = 2 m)	XUB5ANXNL2	0 095
			M12 connector (4-pin)	XUB5ANXNM12	0 040
		PNP	Pre-cabled (L = 2 m)	XUB5APXNL2	0 095
			M12 connector (4-pin)	XUB5APXNM12	0 040

Medium range, red LED emission

0.6 m/0.42 m Along case axis	NO (Light ON)/ NC (Dark ON) configuration by wire	NPN	Pre-cabled (L = 2 m)	XUB6ANXNL2	0 095
			M12 connector (4-pin)	XUB6ANXNM12	0 040
		PNP	Pre-cabled (L = 2 m)	XUB6APXNL2	0 095
			M12 connector (4-pin)	XUB6APXNM12	0 040
0.5 m/0.35 m 90° to case axis	NO (Light ON)/ NC (Dark ON) configuration by wire	NPN	Pre-cabled (L = 2 m)	XUB6ANXWL2	0 095
			M12 connector (4-pin)	XUB6ANXWM12	0 040
		PNP	Pre-cabled (L = 2 m)	XUB6APXWL2	0 095
			M12 connector (4-pin)	XUB6APXWM12	0 040

Accessories

IO-Link Master (1)

See page 70 .

Fixing and other accessories

See page 74 .

Cabling accessories

See page 80 .

(1) Available 2nd quarter 2024.

Photo-electric sensors

XUB general purpose, single mode function

Cylindrical miniature design 18, metal

Four-wire DC, solid-state output

Wire setting for NO/NC



XUB•BPYNM12
XUB•BNXNM12
XUB•BPXNM12



XUB6BPYWM12
XUB6BNXWM12
XUB6BPXWM12



XUB•BNXNL2
XUB•BPXNL2



XUB6BNXWL2
XUB6BPXWL2

Diffuse system with adjustable sensitivity, IO-Link

Max./operating sensing distance (Sn)/Line of sight	Function	Output	Connection	Reference	Weight kg
Long range, red LED emission					
1 m/0.7 m Along case axis	NO (Light ON)/ NC (Dark ON) configuration by wire or IO-Link	Autodetect PNP/NPN	M12 connector (4-pin)	XUB5BPYNM12	0 040
Medium range, red LED emission					
0.6 m/0.42 m Along case axis	NO (Light ON)/ NC (Dark ON) configuration by wire or IO-Link	Autodetect PNP/NPN	M12 connector (4-pin)	XUB6BPYNM12	0 040
0.5 m/0.35 m 90° to case axis	NO (Light ON)/ NC (Dark ON) configuration by wire or IO-Link	Autodetect PNP/NPN	M12 connector (4-pin)	XUB6BPYWM12	0 040

Diffuse system with adjustable sensitivity

Max./operating sensing distance (Sn)/Line of sight	Function	Output	Connection	Reference	Weight kg
Long range, red LED emission					
1 m/0.7 m Along case axis	NO (Light ON)/ NC (Dark ON) configuration by wire	NPN	Pre-cabled (L = 2 m)	XUB5BNXNL2	0 095
			M12 connector (4-pin)	XUB5BNXNM12	0 040
		PNP	Pre-cabled (L = 2 m)	XUB5BPXNL2	0 095
			M12 connector (4-pin)	XUB5BPXNM12	0 040
Medium range, red LED emission					
0.6 m/0.42 m Along case axis	NO (Light ON)/ NC (Dark ON) configuration by wire	NPN	Pre-cabled (L = 2 m)	XUB6BNXNL2	0 095
			M12 connector (4-pin)	XUB6BNXNM12	0 040
		PNP	Pre-cabled (L = 2 m)	XUB6BPXNL2	0 095
			M12 connector (4-pin)	XUB6BPXNM12	0 040
0.5 m/0.35 m 90° to case axis	NO (Light ON)/ NC (Dark ON) configuration by wire	NPN	Pre-cabled (L = 2 m)	XUB6BNXWL2	0 095
			M12 connector (4-pin)	XUB6BNXWM12	0 040
		PNP	Pre-cabled (L = 2 m)	XUB6BPXWL2	0 095
			M12 connector (4-pin)	XUB6BPXWM12	0 040

Accessories

IO-Link Master (1)

See page 70 .

Fixing and other accessories

See page 74 .

Cabling accessories

See page 80 .

(1) Available 2nd quarter 2024.

Photo-electric sensors

XUB general purpose, single mode function

Cylindrical miniature design 18, plastic

Four-wire DC, solid-state output

Wire setting for NO/NC

Apcello_CP0720004



XUB9APYNM12
XUB9ANXNM12
XUB9APXNM12

Apcello_CP0720008



XUB9APYWM12
XUB9ANXWM12
XUB9APXWM12

Apcello_CP0720002



XUB9ANXNL2
XUB9APXNL2

Apcello_CP0720006



XUB9ANXWL2
XUB9APXWL2

Polarised reflex system with adjustable sensitivity, IO-Link

Plastic, red LED emission

Max./operating sensing distance (Sn)/Line of sight	Function	Output	Connection	Reference	Weight kg
7 m/5 m Along case axis	NO (Dark ON)/ NC (Light ON) configuration by wire or IO-Link	Autodetect PNP/NPN	M12 connector (4-pin)	XUB9APYNM12	0 040
5.5 m/4 m 90° to case axis	NO (Dark ON)/ NC (Light ON) configuration by wire or IO-Link	Autodetect PNP/NPN	M12 connector (4-pin)	XUB9APYWM12	0 040

Polarised reflex system with adjustable sensitivity

Plastic, red LED emission

Max./operating sensing distance (Sn)/Line of sight	Function	Output	Connection	Reference	Weight kg		
7 m/5 m Along case axis	NO (Dark ON)/ NC (Light ON) configuration by wire	NPN	Pre-cabled (L = 2 m)	XUB9ANXNL2	0 095		
			M12 connector (4-pin)	XUB9ANXNM12	0 040		
		PNP	Pre-cabled (L = 2 m)	XUB9APXNL2	0 095		
			M12 connector (4-pin)	XUB9APXNM12	0 040		
		5.5 m/4 m 90° to case axis	NO (Dark ON)/ NC (Light ON) configuration by wire	NPN	Pre-cabled (L = 2 m)	XUB9ANXWL2	0 095
					M12 connector (4-pin)	XUB9ANXWM12	0 040
PNP	Pre-cabled (L = 2 m)	XUB9APXWL2	0 095				
		M12 connector (4-pin)	XUB9APXWM12	0 040			

Accessories

IO-Link Master (1)

See page 70 .

Fixing and other accessories

See page 74 .

Cabling accessories

See page 80 .

(1) Available 2nd quarter 2024.

Photo-electric sensors

XUB general purpose, single mode function

Cylindrical miniature design 18, metal

Four-wire DC, solid-state output

Wire setting for NO/NC



XUB9BPYNM12
XUB9BNXNM12
XUB9BPXNM12



XUB9BPYWM12
XUB9BNXWM12
XUB9BPXWM12



XUB9BNXNL2
XUB9BPXNL2



XUB9BNXWL2
XUB9BPXWL2

Polarised reflex system with adjustable sensitivity, IO-Link

Metal, red LED emission

Max./operating sensing distance (Sn)/Line of sight	Function	Output	Connection	Reference	Weight kg
7 m/5 m Along case axis	NO (Dark ON)/ NC (Light ON) configuration by wire or IO-Link	Autodetect PNP/NPN	M12 connector (4-pin)	XUB9BPYNM12	0 040
5.5 m/4 m 90° to case axis	NO (Dark ON)/ NC (Light ON) configuration by wire or IO-Link	Autodetect PNP/NPN	M12 connector (4-pin)	XUB9BPYWM12	0 040

Polarised reflex system with adjustable sensitivity

Max./operating sensing distance (Sn)/Line of sight	Function	Output	Connection	Reference	Weight kg
Metal, red LED emission					
7 m/5 m Along case axis	NO (Dark ON)/ NC (Light ON) configuration by wire	NPN	Pre-cabled (L = 2 m)	XUB9BNXNL2	0 095
			M12 connector (4-pin)	XUB9BNXNM12	0 040
5.5 m/4 m 90° to case axis	NO (Dark ON)/ NC (Light ON) configuration by wire	PNP	Pre-cabled (L = 2 m)	XUB9BPXNL2	0 095
			M12 connector (4-pin)	XUB9BPXNM12	0 040
		NPN	Pre-cabled (L = 2 m)	XUB9BNXWL2	0 095
			M12 connector (4-pin)	XUB9BNXWM12	0 040
5.5 m/4 m 90° to case axis	NO (Dark ON)/ NC (Light ON) configuration by wire	PNP	Pre-cabled (L = 2 m)	XUB9BPXWL2	0 095
			M12 connector (4-pin)	XUB9BPXWM12	0 040

Accessories

IO-Link Master (1)

See page 70 .

Fixing and other accessories

See page 74 .

Cabling accessories

See page 80 .

(1) Available 2nd quarter 2024.

Photo-electric sensors

XUB general purpose, single mode function

Cylindrical miniature design 18, plastic

Four-wire DC, solid-state output

Wire setting for NO/NC

Characteristics			
Sensor type		XUB2APY●M12R, XUB2BPY●M12R, XUB2A●X●M12T, XUB2A●X●M12R, XUB2B●X●M12T, XUB2B●X●M12R, XUB5APYNM12, XUB5BPYNM12, XUB5A●X●M12, XUB5B●X●M12, XUB6APY●M12, XUB6APY●M12, XUB6A●X●M12, XUB6B●X●M12, XUB9APY●M12, XUB9BPY●M12 XUB9A●X●M12, XUB9B●X●M12	
		XUB2A●X●L2T, XUB2A●X●L2R, XUB2B●X●L2T, XUB2B●X●L2R, XUB5A●X●L2, XUB5B●X●L2, XUB6A●X●L2, XUB6B●X●L2, XUB9A●X●L2, XUB9B●X●L2	
Product certifications		CE, UKCA, cULus	
Connection	Connector	M12	
	Pre-cabled	–	
		Length: 2 m	
Sensing distance Excess gain = 1 : maximum sensing distance Excess gain = 2 : nominal sensing distance	Thru-beam system XUB2	Along case axis (axial)	m 30 (with excess gain = 1) 20 (with excess gain = 2)
		90° to case axis (radial)	m 17 (with excess gain = 1) 12 (with excess gain = 2)
	Diffuse system XUB5 (using a white paper 200 x 200 mm)	Along case axis (axial)	m 1 (with excess gain = 1) 0.7 (with excess gain = 2)
		Diffuse system XUB6 (using a white paper 200 x 200 mm)	Along case axis (axial)
	Polarised reflex system XUB9 (using a 50 x 50 mm reflector XUZC50)	90° to case axis (radial)	m 0.5 (with excess gain = 1) 0.35 (with excess gain = 2)
		Along case axis	m 7 (with excess gain = 1) 5 (with excess gain = 2)
Blind zone		mm	0 (white object and potentiometer max.)
Sensing distance setting		Potentiometer 1 turn (+/- 220 degrees)	
Colour of detection light beam		Red (except XUB2 transmitter)	
Output type		PNP/NPN (or autodetect PNP/NPN with IO-Link)	
Hysteresis		2% < H < 20% at Sn	
Degree of protection	Conforming to IEC 60529	IP65, IP67	
	Conforming to DIN 40050-9	IP69K (M12 connector versions only)	
Artificial optical radiation	Conforming to IEC 62471	Class 0 (risk exempt)	
Radiated disturbances emissions	Conforming to EN 55011/CISPR 1	Class A	
Storage temperature		°C	-40...+70
Operating temperature		°C	-30...+55
Materials	Case	XUB2A, XUB5A, XUB6A and XUB9A: PBT/PC XUB2B, XUB5B, XUB6B and XUB9B: brass	
	Back cap	MABS	
	Potentiometer screw	PBT	
	Lens cover	PMMA	
	Cable	–	PVC
Vibration resistance	Conforming to IEC 60068-2-6	Frequency range: 10 to 55 Hz Acceleration: 7 gn	
Shock resistance	Conforming to IEC 60068-2-27	Peak acceleration: 30 gn Duration of the pulse: 11 ms	
Rated supply voltage		V	12 . 24 --- with protection against reverse polarity
Voltage limits (including ripple)		V	10 . 30 ---
Current consumption, no-load		mA	< 20/IO-Link: < 30
Switching capacity		mA	100
Voltage drop, closed state		V	≤ 2
Maximum switching frequency		Hz	1000
Delays	First-up	ms	< 100/IO-Link : < 300
	Response	ms	0.5 max.
	Recovery	ms	0.5 max

Photo-electric sensors

XUB general purpose, single mode function

Cylindrical miniature design 18

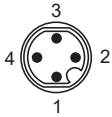
Four-wire DC, solid-state output

Wire setting for NO/NC

Wiring schemes

Thru-beam system

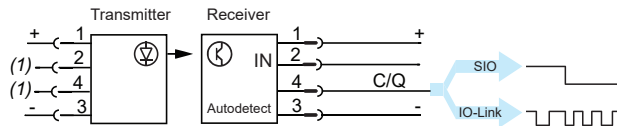
M12 connector - 4 pins, plastic and metal, IO-Link



Pin	Signal	Definition
1	+	+ 24 V $\overline{\text{DC}}$
2	IN	+ = NO - = NC Open = NO
3	-	0 V $\overline{\text{DC}}$
4	Q	Switching signal (SIO)
	C	IO-Link communication

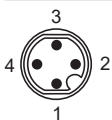
Autodetect PNP/NPN or by IO-Link

XUB2•PYNM12R, XUB2•PYWM12R, XUB2•KXNM12T, XUB2•KXWM12T



Note: IODD IO-Link files available on our website www.telemecanique.com/iolink

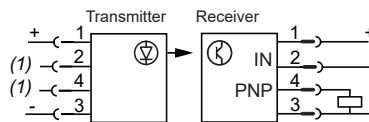
M12 connector - 4 pins, plastic and metal



Pin	Signal	Definition
1	+	+ 24 V $\overline{\text{DC}}$
2	IN	+ = NO - = NC Open = NO
3	-	0 V $\overline{\text{DC}}$
4	Q	Switching signal (SIO)

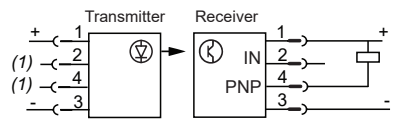
PNP

XUB2•PXNM12R, XUB2•PXWM12R,
XUB2•KXNM12T, XUB2•KXWM12T



NPN

XUB2•NXNM12R, XUB2•NXWM12R,
XUB2•KXNM12T, XUB2•KXWM12T

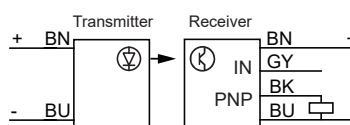


Pre-cabled - 4 wires, plastic and metal

+BN (Brown)
IN (input) GY (Grey)
OUT (output) BK (Black)
-BU (Blue)

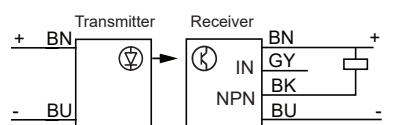
PNP

XUB2•PXNL2R, XUB2•APXWL2R,
XUB2•KXNL2T, XUB2•KXWL2T



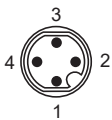
NPN

XUB2•NXNL2R, XUB2•NXWL2R,
XUB2•KXNL2T, XUB2•KXWL2T



Diffuse system

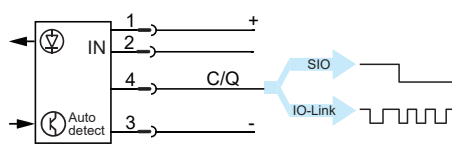
M12 connector - 4 pins, plastic and metal, IO-Link



Pin	Signal	Definition
1	+	+ 24 V $\overline{\text{DC}}$
2	IN	+ = NO - = NC Open = NO
3	-	0 V $\overline{\text{DC}}$
4	Q	Switching signal (SIO)
	C	IO-Link communication

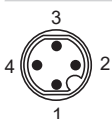
Autodetect PNP/NPN or by IO-Link

XUB5APYNM12, XUB6APYNM12, XUB6APYWM12, XUB5BPYNM12, XUB6BPYNM12,
XUB6BPYWM12



Note: IODD IO-Link files available on our website www.telemecanique.com/iolink

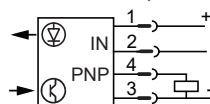
M12 connector - 4 pins, plastic and metal



Pin	Signal	Definition
1	+	+ 24 V $\overline{\text{DC}}$
2	IN	+ = NO - = NC Open = NO
3	-	0 V $\overline{\text{DC}}$
4	Q	Switching signal (SIO)

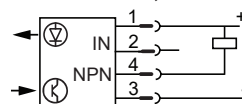
PNP

XUB5APXNM12, XUB6APXNM12,
XUB6APXWM12, XUB5BPXNM12,
XUB6BPXNM12, XUB6BPXWM12,



NPN

XUB5ANXNM12, XUB6ANXNM12,
XUB6ANXWM12, XUB5BNXNM12,
XUB6BNXNM12, XUB6BNXWM12

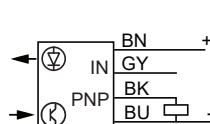


Pre-cabled - 4 wires, plastic and metal

+BN (Brown)
IN (input) GY (Grey)
OUT (output) BK (Black)
-BU (Blue)

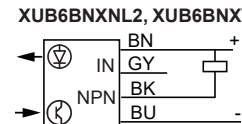
PNP

XUB5APXNL2, XUB6APXNL2, XUB6APXWL2,
XUB5BPXNL2, XUB6BPXNL2, XUB6BPXWL2



NPN

XUB5ANXNL2, XUB6ANXNL2,
XUB6ANXWL2, XUB5BNXNL2,
XUB6BNXNL2, XUB6BNXWL2



(1) Not connected.

Photo-electric sensors

XUB general purpose, single mode function

Cylindrical miniature design 18

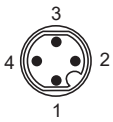
Four-wire DC, solid-state output

Wire setting for NO/NC

Wiring schemes (continued)

Polarised reflex system

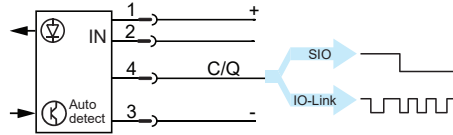
M12 connector - 4 pins, plastic and metal, IO-Link



Pin	Signal	Definition
1	+	+ 24 V $\overline{\text{---}}$
2	IN	+ = NO - = NC Open = NO
3	-	0 V $\overline{\text{---}}$
4	Q	Switching signal (SIO)
	C	IO-Link communication

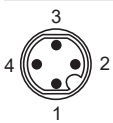
Autodetect PNP/NPN or by IO-Link

XUB9APYNM12, XUB9APYWMM12, XUB9BPYNM12, XUB9BPYWMM12



Note: IODD IO-Link files available on our website www.telemecanique.com/iolink

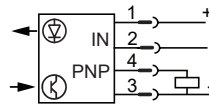
M12 connector - 4 pins, plastic and metal



Pin	Signal	Definition
1	+	+ 24 V $\overline{\text{---}}$
2	IN	+ = NO - = NC Open = NO
3	-	0 V $\overline{\text{---}}$
4	Q	Switching signal (SIO)

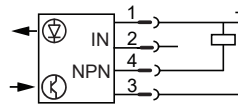
PNP

XUB9APXNM12, XUB9APXWMM12,
XUB9BPXNM12, XUB9BPXWMM12



NPN

XUB9ANXNM12, XUB9ANXWMM12,
XUB9BNXNM12, XUB9BNXWMM12

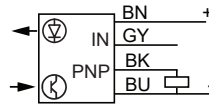


Pre-cabled - 4 wires, plastic and metal

+BN (Brown)
IN (input) GY (Grey)
OUT (output) BK (Black)
-BU (Blue)

PNP

XUB9APXNL2, XUB9BAPXWL2,
XUB9BPXNL2, XUB9BPXWL2



NPN

XUB9ANXNL2, XUB9ANXWL2,
XUB9BNXNL2, XUB9BNXWL2

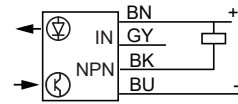


Photo-electric sensors

XUB general purpose, single mode function

Cylindrical miniature design 18

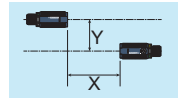
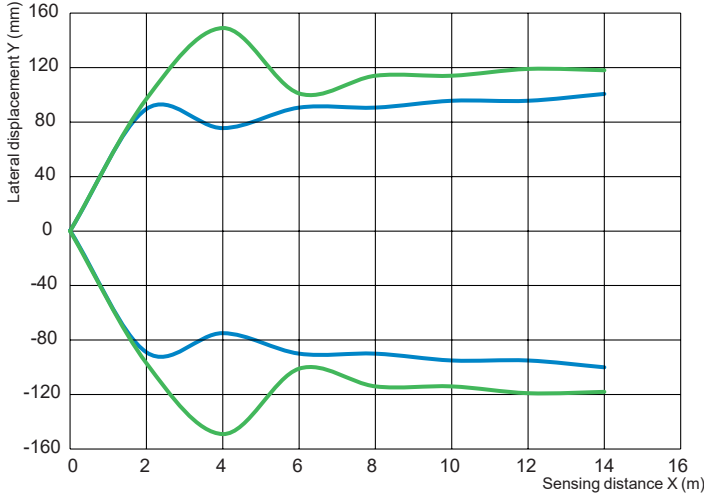
Four-wire DC, solid-state output

Wire setting for NO/NC

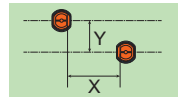
Detection curves

Thru-beam system: XUB2

Lateral displacement

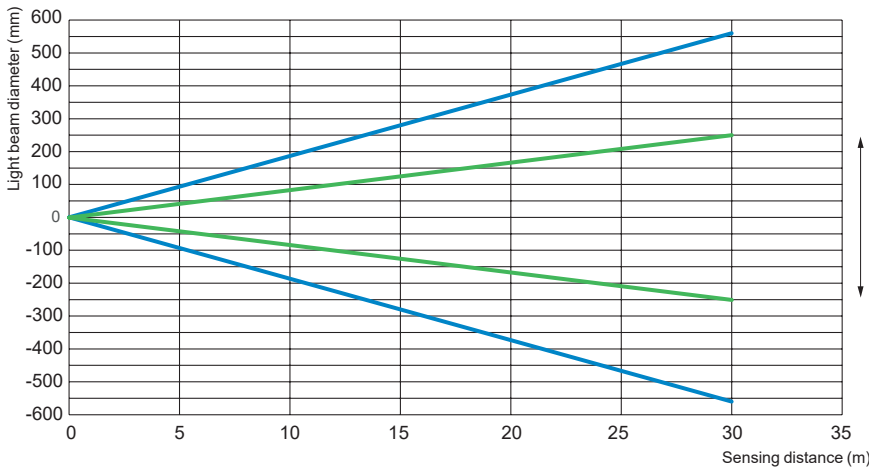


Line of sight: along case axis (axial)



Line of sight: 90° to case axis (radial)

Light beam diameter

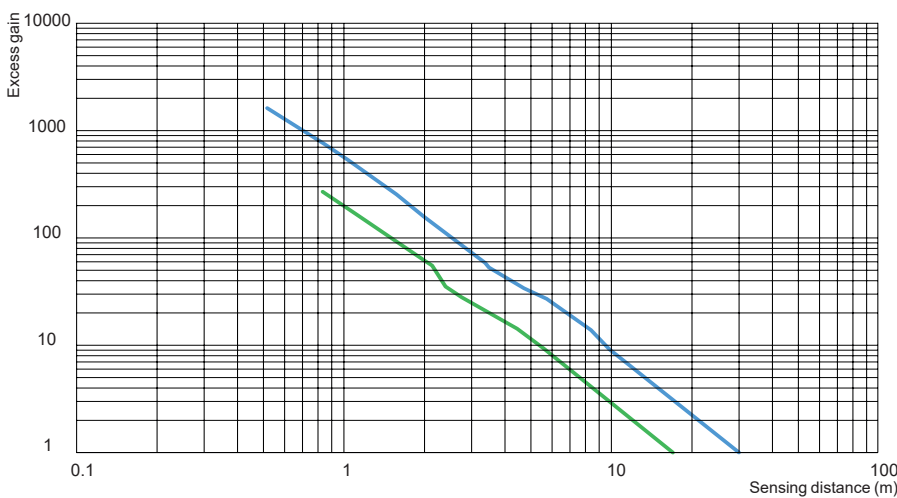


∅ Spot diameter

Line of sight: 90° to case axis (radial)

Line of sight: along case axis (axial)

Excess gain



Line of sight: 90° to case axis (radial)

Line of sight: Along case axis (axial)

Photo-electric sensors

XUB general purpose, single mode function

Cylindrical miniature design 18

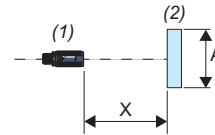
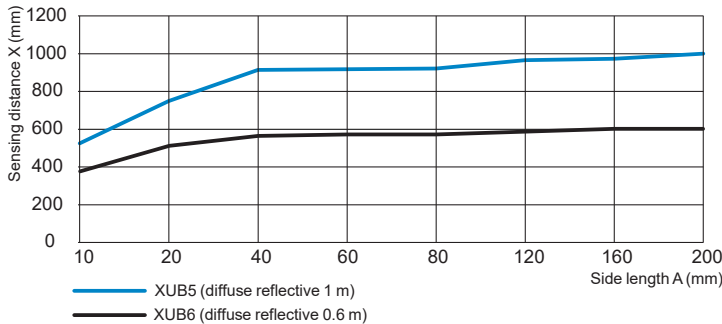
Four-wire DC, solid-state output

Wire setting for NO/NC

Detection curves (continued)

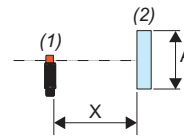
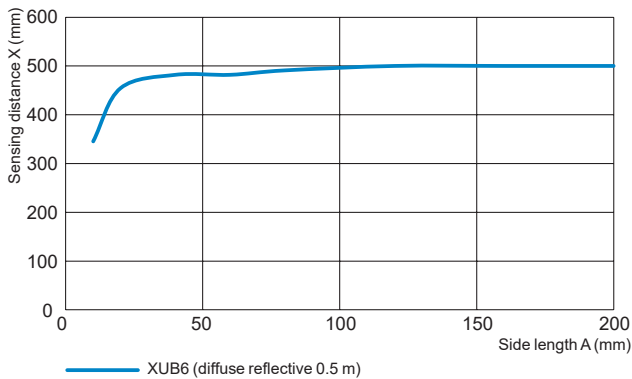
Diffuse system: XUB5 and XUB6

Minimum object size/sensing distance. Line of sight: along case axis (axial)



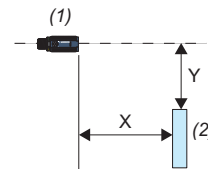
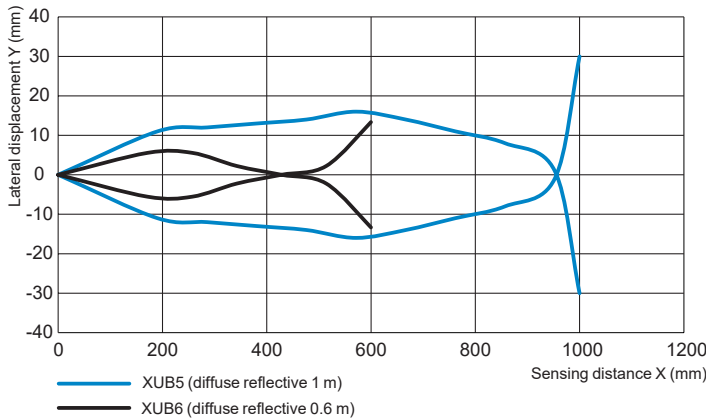
(1): Sensor
 (2): Object (white matt paper of A mm square)
 A: Side length (mm)
 X: Sensing distance (mm)

Minimum object size/sensing distance. Line of sight: 90° to case axis (radial)



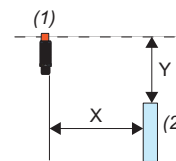
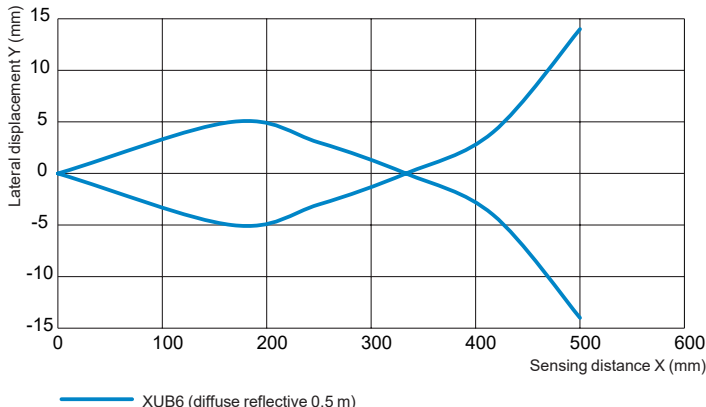
(1): Sensor
 (2): Object (white matt paper of A mm square)
 A: Side length (mm)
 X: Sensing distance (mm)

Lateral displacement. Line of sight: along case axis (axial)



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

Lateral displacement. Line of sight: 90° to case axis (radial)



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

Photo-electric sensors

XUB general purpose, single mode function

Cylindrical miniature design 18

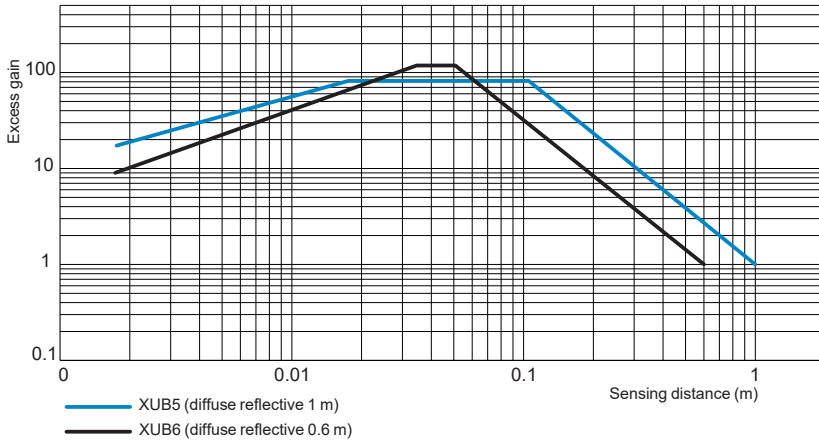
Four-wire DC, solid-state output

Wire setting for NO/NC

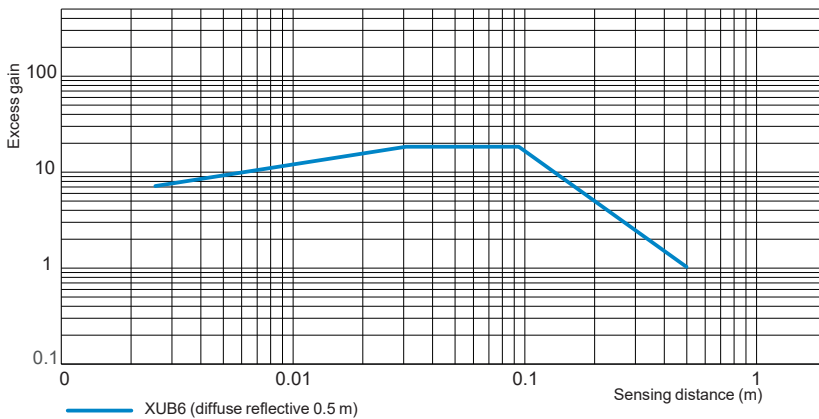
Detection curves (continued)

Diffuse system: XUB5 and XUB6 (continued)

Excess gain. Line of sight: along case axis (axial)

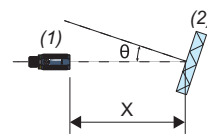
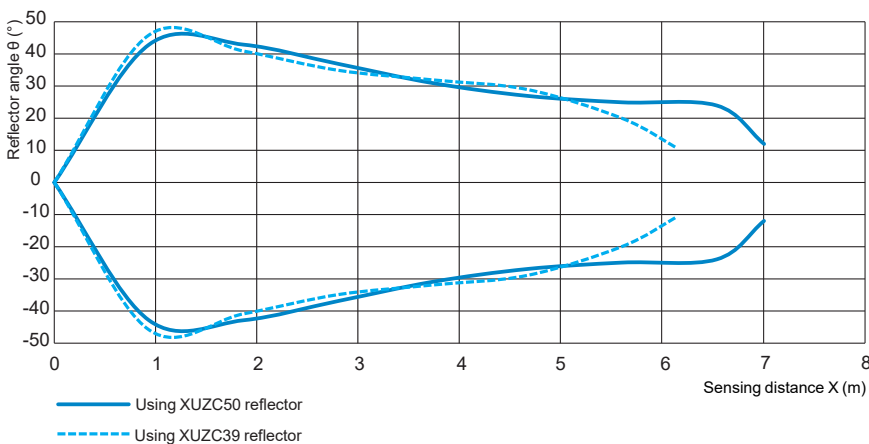


Excess gain. Line of sight: 90° to case axis (radial)

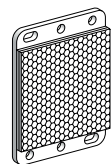


Polarised reflex system: XUB9

Reflector angle. Line of sight: along case axis (axial)



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



XUZC50



XUZC39

Photo-electric sensors

XUB general purpose, single mode function

Cylindrical miniature design 18

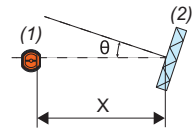
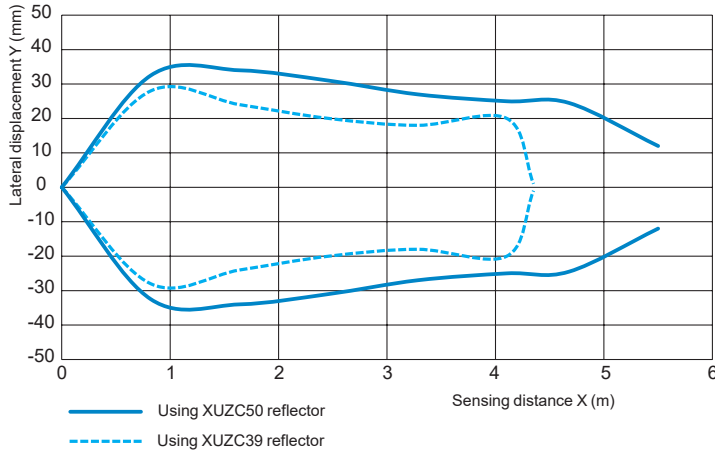
Four-wire DC, solid-state output

Wire setting for NO/NC

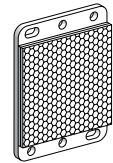
Detection curves (continued)

Polarised reflex system: XUB9 (continued)

Reflector angle. Line of sight: 90° to case axis (radial)



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

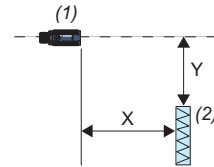
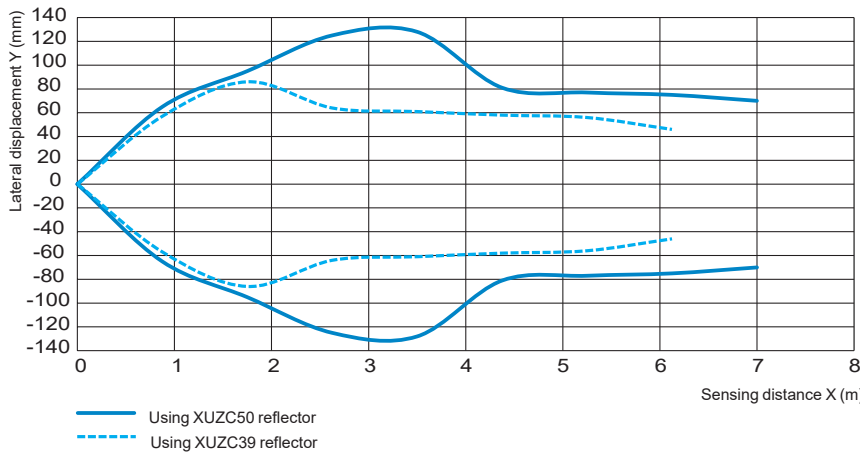


XUZC50

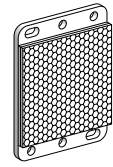


XUZC39

Lateral displacement. Line of sight: along case axis (axial)



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

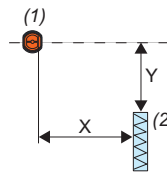
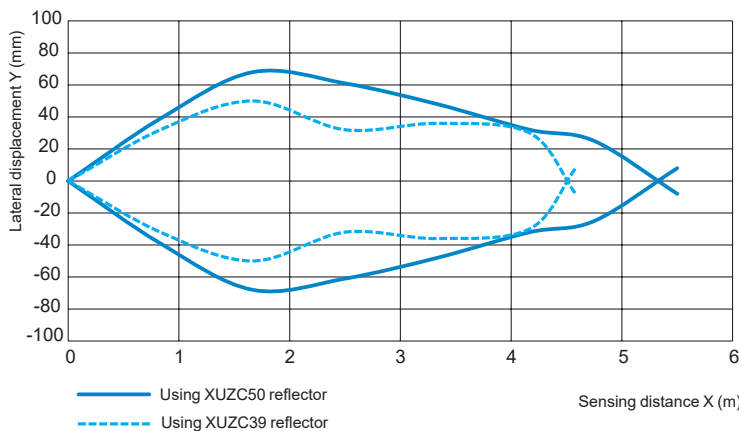


XUZC50

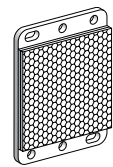


XUZC39

Lateral displacement. Line of sight: along case axis (axial)



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



XUZC50



XUZC39

Photo-electric sensors

XUB general purpose, single mode function

Cylindrical miniature design 18, plastic

Four-wire DC, solid-state output

Wire setting for NO/NC

Detection curves (continued)

Polarised reflex system: XUB9 (continued)

Excess gain

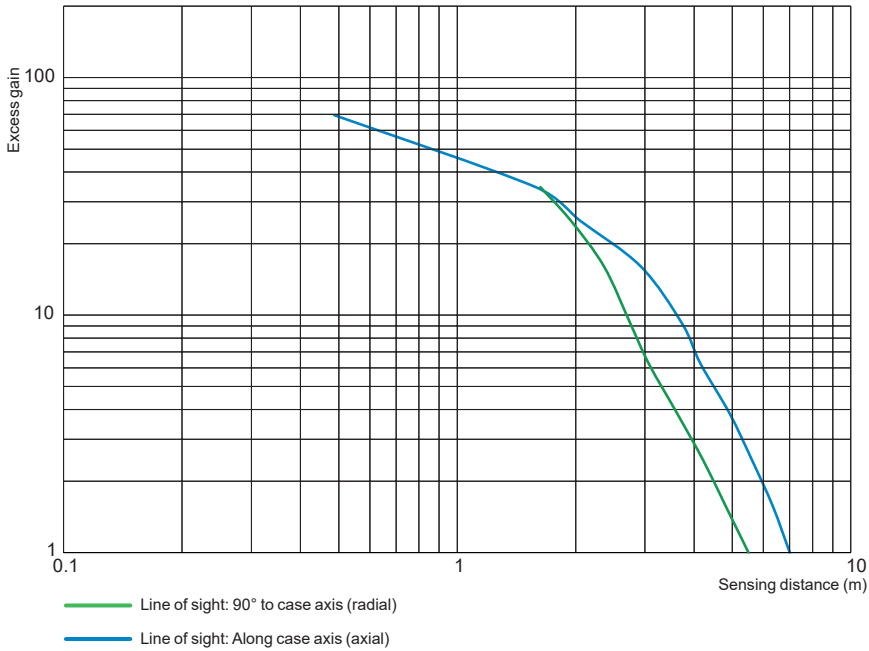


Photo-electric sensors

XUB general purpose, single mode function

Cylindrical miniature design 18, plastic

Four-wire DC, solid-state output

Wire setting for NO/NC

Thru-beam system, plastic, M12 connector version

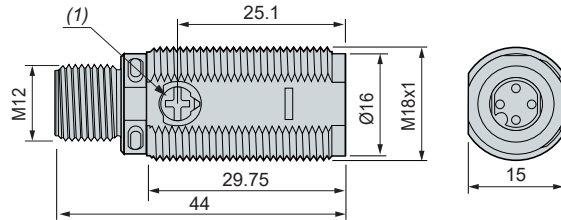
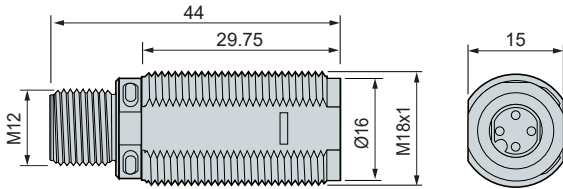
Line of sight: along case axis (axial)

Transmitter

XUB2AKXNM12T

Receiver

XUB2APYNM12R, XUB2ANXNM12R, XUB2APXNM12R



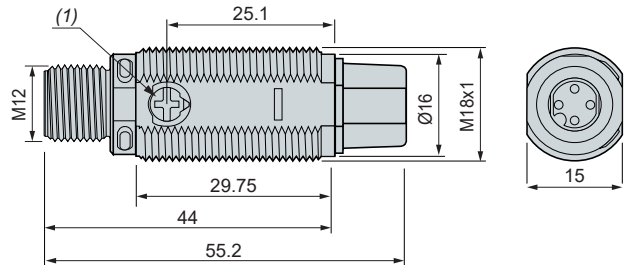
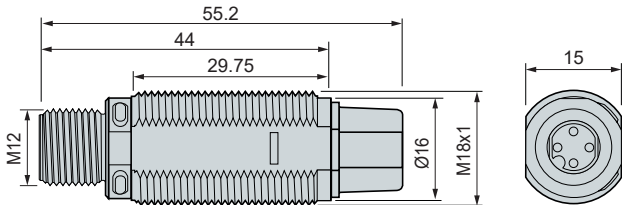
Line of sight: 90° to case axis (radial)

Transmitter

XUB2AKXWM12T

Receiver

XUB2APYWM12R, XUB2ANXWM12R, XUB2APXWM12R



Thru-beam system, plastic, pre-cabled version

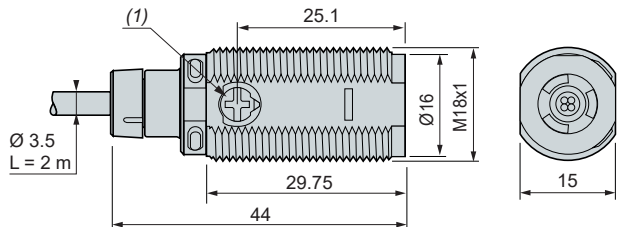
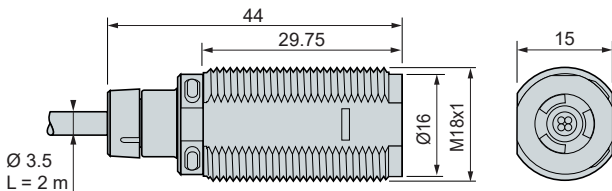
Line of sight: along case axis (axial)

Transmitter

XUB2AKXNL2T

Receiver

XUB2ANXNL2R, XUB2APXNL2R



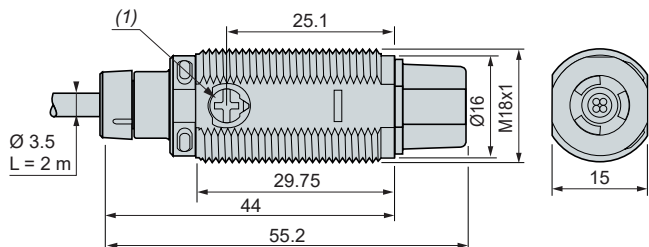
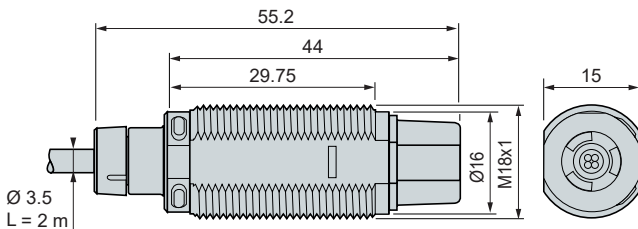
Pre-cabled version, line of sight 90° to case axis

Transmitter

XUB2AKXWL2T

Receiver

XUB2ANXWL2R, XUB2APXWL2R



(1) Adjustment potentiometer (sensitivity).

Photo-electric sensors

XUB general purpose, single mode function

Cylindrical miniature design 18, metal

Four-wire DC, solid-state output

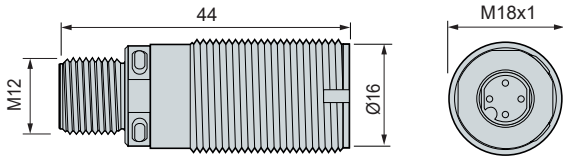
Wire setting for NO/NC

Thru-beam system, metal, M12 connector version

Line of sight: along case axis (axial)

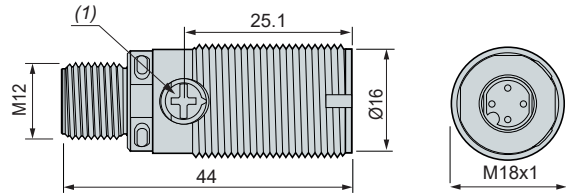
Transmitter

XUB2BKXNM12T



Receiver

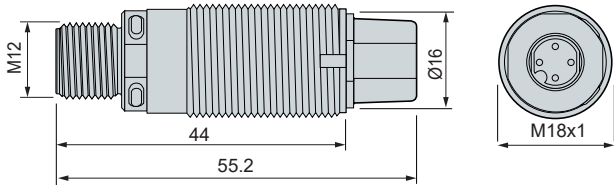
XUB2BPYNM12R, XUB2BNXNM12R, XUB2BPXNM12R



Line of sight: 90° to case axis (radial)

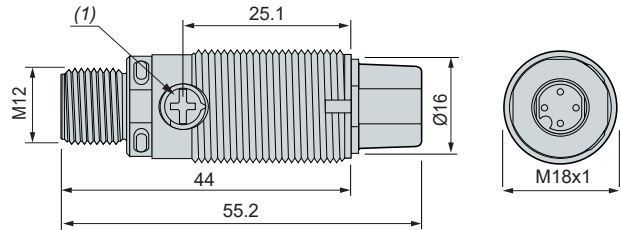
Transmitter

XUB2BKXWM12T



Receiver

XUB2BPYWM12R, XUB2BNXWM12R, XUB2BPXWM12R

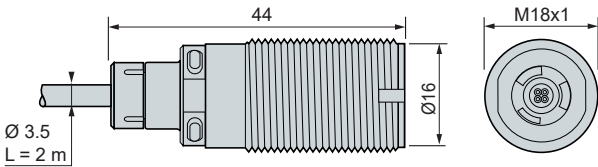


Thru-beam system, metal, pre-cabled version

Line of sight: along case axis (axial)

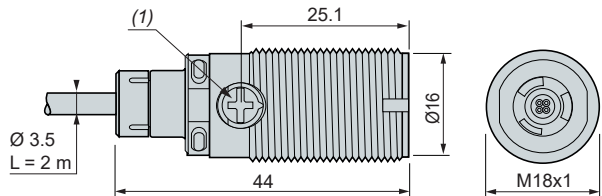
Transmitter

XUB2BKXNL2T



Receiver

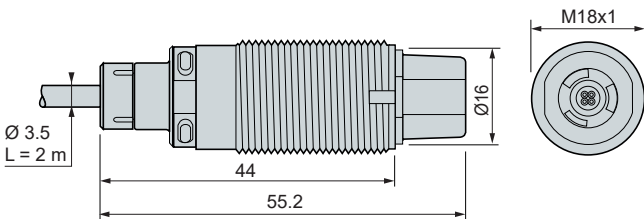
XUB2BNXNL2R, XUB2BPXNL2R



Line of sight: 90° to case axis (radial)

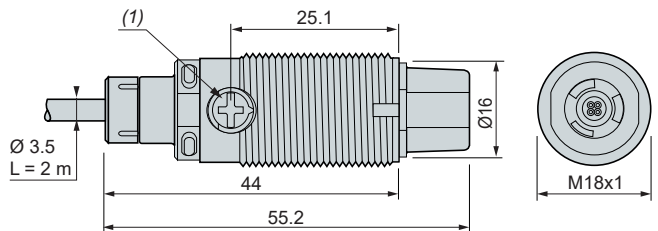
Transmitter

XUB2BKXWL2T



Receiver

XUB2BNXWL2R, XUB2BPXWL2R



(1) Adjustment potentiometer (sensitivity).

Photo-electric sensors

XUB general purpose, single mode function

Cylindrical miniature design 18

Four-wire DC, solid-state output

Wire setting for NO/NC

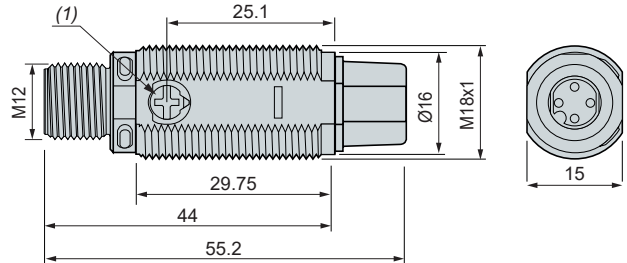
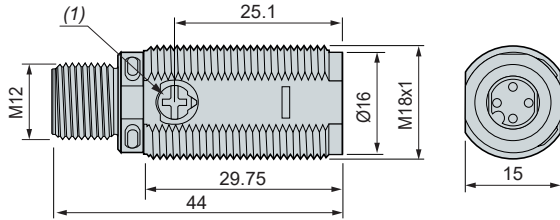
Diffuse system, plastic, M12 connector version

Line of sight: along case axis (axial)

XUB5ANXNM12, XUB6ANXNM12, XUB5APXNM12, XUB6APXNM12, XUB5APYNM12 and XUB6APYNM12

Line of sight: 90° to case axis (radial)

XUB6ANXWM12, XUB6APXWM12 and XUB6APYWM12



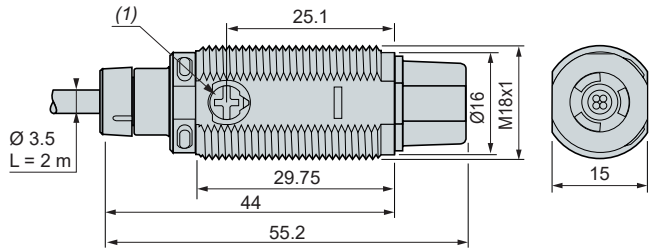
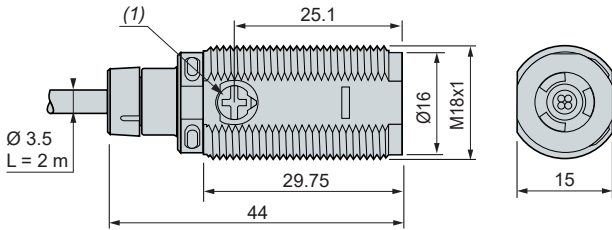
Diffuse system, plastic, pre-cabled version

Line of sight: along case axis (axial)

XUB5ANXL2, XUB6ANXL2, XUB5APXL2 and XUB6APXL2

Line of sight: 90° to case axis (radial)

XUB6ANXWL2 and XUB6APXL2



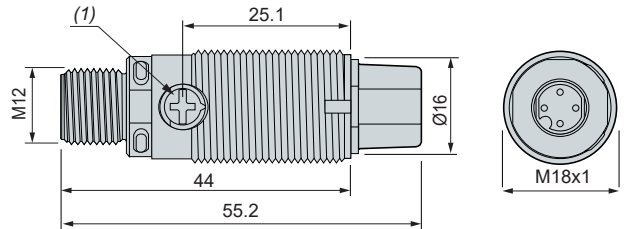
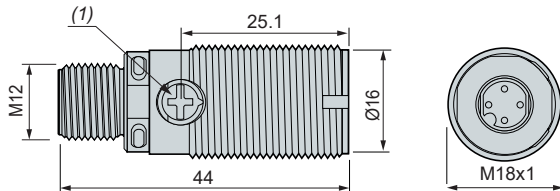
Diffuse system, metal, M12 connector version

Line of sight: along case axis (axial)

XUB5BNXNM12, XUB6BNXNM12, XUB5BPXNM12, XUB6BPXNM12, XUB5BPYNM12 and XUB6BPYNM12

Line of sight: 90° to case axis (radial)

XUB6BNXWM12, XUB6BPXWM12 and XUB6BPYWM12



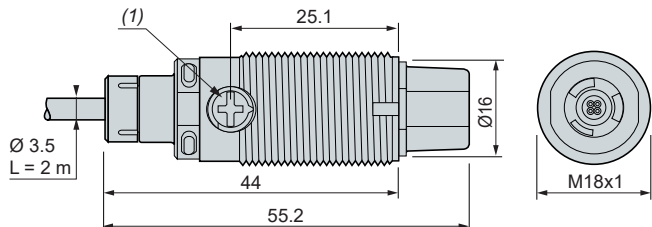
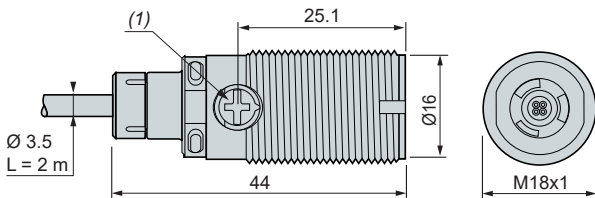
Diffuse system, metal, pre-cabled version

Line of sight: along case axis (axial)

XUB5BNXL2, XUB6BNXL2, XUB5BPXL2 and XUB6BPXL2

Line of sight: 90° to case axis (radial)

XUB6BNXWL2 and XUB6BPXL2



(1) Adjustment potentiometer (sensitivity).

Photo-electric sensors

XUB general purpose, single mode function

Cylindrical miniature design 18

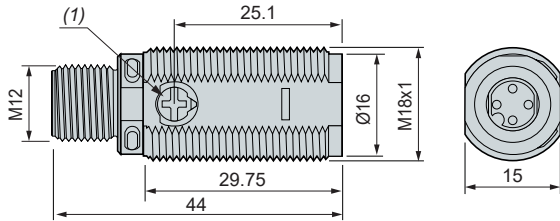
Four-wire DC, solid-state output

Wire setting for NO/NC

Polarised reflex system, plastic, M12 connector version

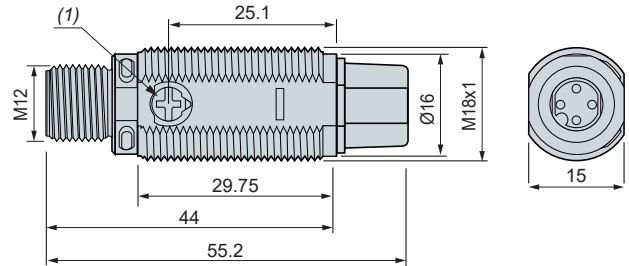
Line of sight: along case axis (axial)

XUB9ANXNM12, XUB9APXNM12 and XUB9APYNM12



Line of sight: 90° to case axis (radial)

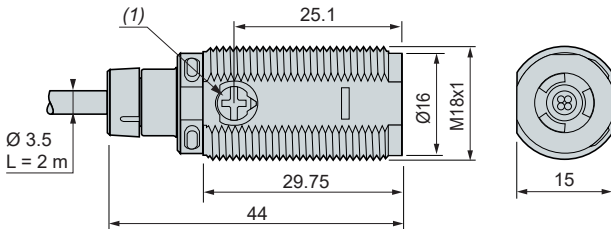
XUB9ANXWM12, XUB9APXWM12 and XUB9APYWM12



Polarised reflex system, plastic, pre-cabled version

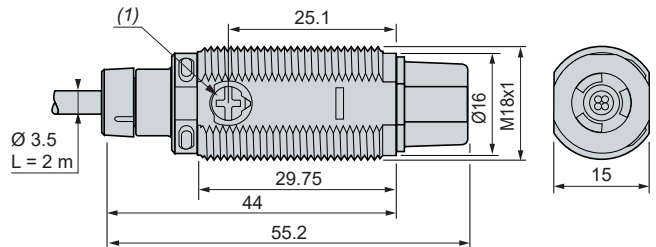
Line of sight: along case axis (axial)

XUB9ANXNL2 and XUB9APXNL2



Line of sight: 90° to case axis (radial)

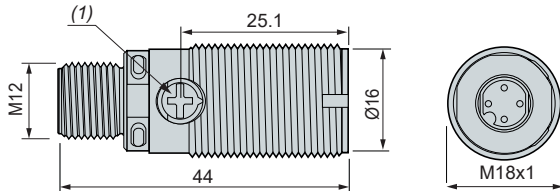
XUB9ANXWL2 and XUB9APXWL2



Polarised reflex system, metal, M12 connector version

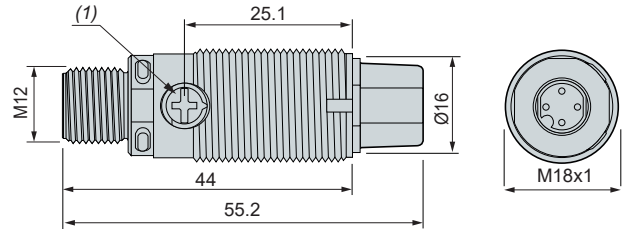
Line of sight: along case axis (axial)

XUB9BNXNM12, XUB9BPXNM12 and XUB9BPNM12



Line of sight: 90° to case axis (radial)

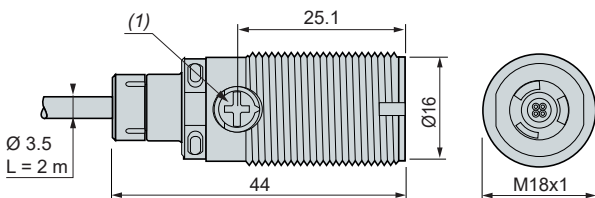
XUB9BNXWM12, XUB9BPXWM12 and XUB9BPYWM12



Polarised reflex system, metal, pre-cabled version

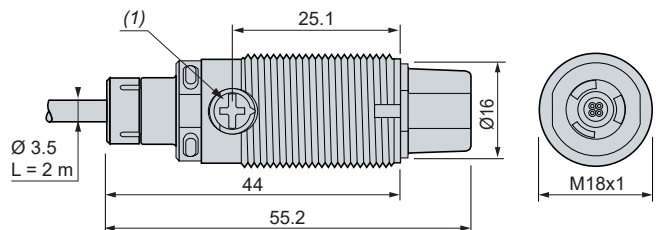
Line of sight: along case axis (axial)

XUB9BNXNL2 and XUB9BPXNL2



Line of sight: 90° to case axis (radial)

XUB9BNXWL2 and XUB9BPYWL2



(1) Adjustment potentiometer (sensitivity).