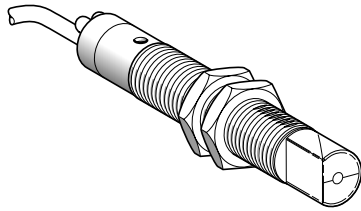


Photo-electric sensors

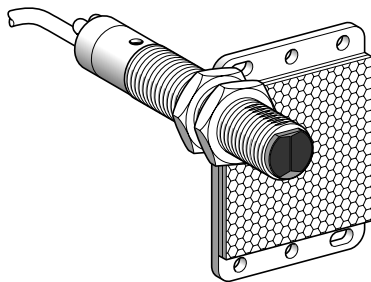
OsiSense XU Application

Design 18

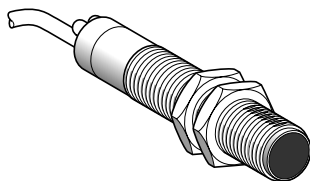
Two-wire AC ⁽¹⁾ or DC, solid-state output with adjustable sensitivity



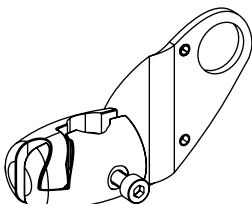
XU5M18M●230W
XU8M18M●230W



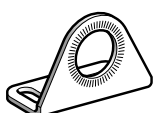
XU9M18M●230



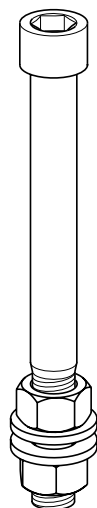
XU2M18M●230



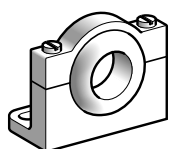
XUZA218



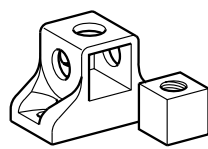
XUZA118



XU2001



XUZA218



XU2003

Diffuse system with adjustable background suppression

Sensing distance (Sn) m	Function	Line of sight	Connection	Reference	Weight kg
0.12	NO	Along case axis	Pre-cabled (L = 2 m) (2)	XU8M18MA230	0.150
			1/2"-20UNF	XU8M18MA230K	0.075
		90° to case axis	Pre-cabled (L = 2 m) (2)	XU8M18MA230W	0.150
	NC	Along case axis	Pre-cabled (L = 2 m) (2)	XU8M18MB230	0.150
			1/2"-20UNF	XU8M18MB230K	0.075
		90° to case axis	Pre-cabled (L = 2 m) (2)	XU8M18MB230W	0.150
			1/2"-20UNF	XU8M18MB230WK	0.075

Diffuse system

Sensing distance (Sn) m	Function	Line of sight	Connection	Reference	Weight kg
0.40	NO	Along case axis	Pre-cabled (L = 2 m) (2)	XU5M18MA230	0.150
			1/2"-20UNF	XU5M18MA230K	0.075
		90° to case axis	Pre-cabled (L = 2 m) (2)	XU5M18MA230W	0.150
	NC	Along case axis	Pre-cabled (L = 2 m) (2)	XU5M18MB230	0.150
			1/2"-20UNF	XU5M18MB230K	0.075
		90° to case axis	Pre-cabled (L = 2 m) (2)	XU5M18MB230W	0.150
			1/2"-20UNF	XU5M18MB230WK	0.075

Polarised reflex system ⁽³⁾

Sensing distance (Sn) m	Function	Line of sight	Connection	Reference	Weight kg
2	NO	Along case axis	Pre-cabled (L = 2 m) (2)	XU9M18MA230	0.170
			1/2"-20UNF	XU9M18MA230K	0.090
		90° to case axis	Pre-cabled (L = 2 m) (2)	XU9M18MA230W	0.170
	NC	Along case axis	Pre-cabled (L = 2 m) (2)	XU9M18MB230	0.170
			1/2"-20UNF	XU9M18MB230K	0.095
		90° to case axis	Pre-cabled (L = 2 m) (2)	XU9M18MB230W	0.170
			1/2"-20UNF	XU9M18MB230WK	0.090

Thru-beam system ⁽⁴⁾

Sensing distance (Sn) m	Function	Line of sight	Connection	Reference	Weight kg
15	NO	Along case axis	Pre-cabled (L = 2 m) (2)	XU2M18MA230	0.285
			1/2"-20UNF	XU2M18MA230K	0.155
		90° to case axis	Pre-cabled (L = 2 m) (2)	XU2M18MA230W	0.285
	NC	Along case axis	Pre-cabled (L = 2 m) (2)	XU2M18MA230WK	0.155
			1/2"-20UNF	XU2M18MA230WK	0.155
		90° to case axis	Pre-cabled (L = 2 m) (2)	XU2M18MB230	0.285
			1/2"-20UNF	XU2M18MB230K	0.155
			Pre-cabled (L = 2 m) (2)	XU2M18MB230W	0.285
			1/2"-20UNF	XU2M18MB230WK	0.155

Fixing accessories ⁽⁵⁾

Description	Reference	Weight kg
3D fixing kit for use on M12 rod, for XU●M18 or XU2C50	XUZA2003	0.170
M12 rod	XU2001	0.050
Support for M12 rod	XU2003	0.150
Stainless steel fixing bracket	XUZA118	0.045
Plastic fixing bracket with adjustable ball-joint	XUZA218	0.035

(1) These sensors do not incorporate overload or short-circuit protection and therefore, it is essential to connect a 0.4 A "quick-blow" fuse in series with the load.

(2) For a 5 m long cable add L5.

Example: XU2M18MA230 becomes XU2M18MA230L5.

(3) 50 x 50 mm reflector XU2C50 included with polarised reflex system.

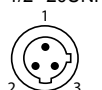
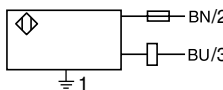
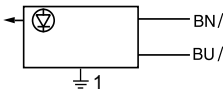
(4) Comprising both thru-beam transmitter and receiver.

(5) For further information, see page 164.

Characteristics		XU2M, XU5M, XU8M, XU9M	XU2M, XU5M, XU8M, XU9M●●●●●●●●K
Sensor type		UL, CSA, CE	
Product certifications		UL, CSA, CE	
Connection	Connector	–	1/2"-20UNF
	Pre-cabled	Length: 2 m	–
Sensing distance nominal S_n / maximum (excess gain = 2) (excess gain = 1)	m	0.12 / 0.12 diffuse with background suppression	
	m	0.4 / 0.6 diffuse	
	m	2 / 3 polarised reflex	
	m	15 / 20 thru-beam	
Type of transmission		Infrared, except XU9 (red)	
Degree of protection	Conforming to IEC 60529	IP 67, double insulation \square	IP 67
Storage temperature		°C -40...+70	
Operating temperature		°C -25...+55	
Materials		Case: nickel plated brass; Lens: PMMA; Cable: PvR	
Vibration resistance	Conforming to IEC 60068-2-6	7 gn, amplitude ± 1.5 mm (f = 10 to 55 Hz)	
Shock resistance	Conforming to IEC 60068-2-27	30 gn, duration 11 ms	
Indicator lights	Output state	Yellow LED	
	Stability	Red LED (for reflex and thru-beam only)	
Rated supply voltage		V \sim 24...240	
Voltage limits (including ripple)		V \sim 20...264	
Residual current, open state		mA < 1.5	
Switching capacity		mA 10...200 (1)	
Voltage drop, closed state		V 6	
Maximum switching frequency		Hz 25	
Delays	First-up	ms < 300	
	Response	ms < 20	
	Recovery	ms < 20	

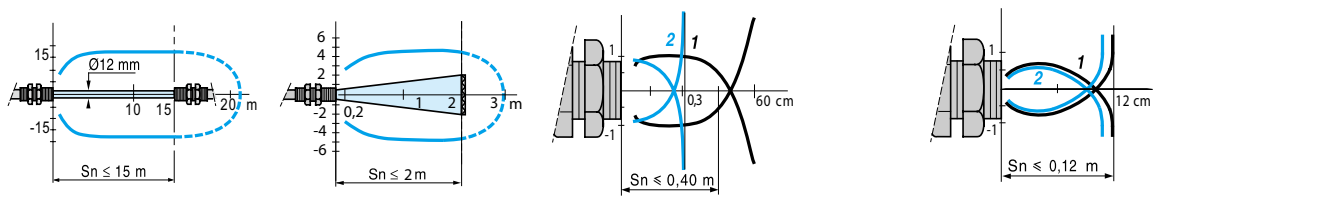
(1) These sensors do not incorporate overload or short-circuit protection and therefore, it is essential to connect a 0.4 A "quick-blow" fuse in series with the load.

Wiring schemes

Connector	Pre-cabled	2-wire \sim or \dots	Transmitter
1/2"-20UNF 1 \perp 2 \sim 3 \sim 	(\sim) BU (Blue) (\sim) BN (Brown)	 BN/2 BU/3 1 \perp ⊥ on connector models	 BN/2 BU/3 1 \perp ⊥ on connector models

Detection curves

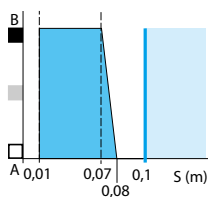
Thru-beam system	Polarised reflex system	Diffuse system	Diffuse system with adjustable background suppression
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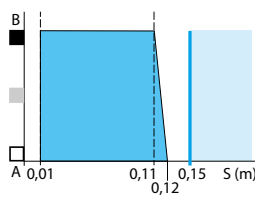
With reflector XUZC50 Object 10 x 10 cm; 1 White 90%; 2 Grey 18%

Variation of usable sensing distance S_u

Potentiometer set at minimum



Potentiometer set at maximum



A-B: object reflection coefficient

- Black 6%
- Grey 18%
- White 90%
- Sensing range
- Non sensing zone (matt surfaces)

Dimensions

XU●	Pre-cabled (mm)		Connector (mm)	
	a	b	a	b
Ø 18, line of sight along case axis	82	55	95	55
Ø 18, line of sight 90° to case axis	97	55	110	55