Photo-electric sensors

OsiSense XU multimode

Design 18, metal or plastic Three-wire DC, solid-state output



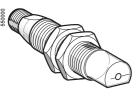
XUB 0●●●NL2



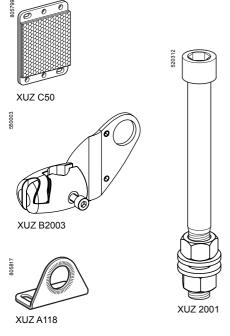
XUB 0●●●WL2



XUB 0●●●NM12

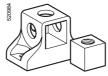


XUB 0●●●WM12



Ø 18 metal								
Pre-cabled (1)								
Sensing distance (Sn) (2) m	Function	Output	Line of sight	Reference	Weight			
015	NO or NC, by programming	PNP	Along case axis	XUB 0BPSNL2	kg 0.105			
depending on whether accessories				XUB 0BPSWL2 (3)	0.103			
		NPN		XUB 0BNSNL2	0.110			
are used				XUB 0BNSWL2 (3)	0.103			
M12 connector			to to dade axio	NOD ODNOTILE (O)	0.110			
015	NO or NC, by	PNP	Along case axis	XUB 0BPSNM12	0.055			
depending on	programming	FINE		XUB 0BPSWM12 (3)	0.060			
whether accessories		NPN		XUB 0BNSNM12	0.055			
are used				XUB 0BNSWM12 (3)	0.060			
Accessories				7.02 02.10112 (0)	0.000			
Description		Connecti-	Line of sight	Reference	Weight			
Docompaion		on	Line of orgin	11010101100	kg			
Thru-beam transmit	ter	Pre-cabled	Along case axis	XUB 0BKSNL2T	0.105			
		(1)	90° to case axis	XUB 0BKSWL2T (3)	0.110			
		M12	Along case axis	XUB 0BKSNM12T	0.055			
		connector	90° to case axis	XUB 0BKSWM12T (3)	0.060			
Reflector 50 x 50 mm	1	_	_	XUZ C50	0.020			
Ø 18 plastic								
Pre-cabled (1)								
Sensing distance	Function	Output	Line of sight	Reference	Weight			
(Sn) (3) m		Cutput	Line of orgin	11010101100	kg			
015	NO or NC, by programming	PNP	Along case axis	XUB 0APSNL2	0.095			
depending on			90° to case axis	XUB 0APSWL2 (3)	0.100			
whether accessories are used		NPN	Along case axis	XUB 0ANSNL2	0.095			
are used			90° to case axis	XUB 0ANSWL2 (3)	0.100			
M12 connector								
W12 connector								
015	NO or NC, by	PNP	Along case axis	XUB 0APSNM12	0.045			
015 depending on	NO or NC, by programming	PNP		XUB 0APSNM12 XUB 0APSWM12 (3)	0.045 0.050			
015 depending on whether accessories		PNP NPN	90° to case axis					
015 depending on			90° to case axis Along case axis	XUB 0APSWM12 (3)	0.050			
015 depending on whether accessories			90° to case axis Along case axis	XUB 0APSWM12 (3) XUB 0ANSNM12	0.050 0.045			
015 depending on whether accessories are used		NPN Connecti-	90° to case axis Along case axis	XUB 0APSWM12 (3) XUB 0ANSNM12 XUB 0ANSWM12 (3)	0.050 0.045 0.050 Weight			
015 depending on whether accessories are used Accessories Description	programming	NPN Connection	90° to case axis Along case axis 90° to case axis	XUB 0APSWM12 (3) XUB 0ANSNM12 XUB 0ANSWM12 (3) Reference	0.050 0.045 0.050 Weight kg			
015 depending on whether accessories are used Accessories	programming	NPN Connection Pre-cabled	90° to case axis Along case axis 90° to case axis Line of sight Along case axis	XUB 0APSWM12 (3) XUB 0ANSNM12 XUB 0ANSWM12 (3) Reference XUB 0AKSNL2T	0.050 0.045 0.050 Weight kg 0.095			
015 depending on whether accessories are used Accessories Description	programming	Connection Pre-cabled (1)	90° to case axis Along case axis 90° to case axis Line of sight Along case axis 90° to case axis	XUB 0APSWM12 (3) XUB 0ANSNM12 XUB 0ANSWM12 (3) Reference XUB 0AKSNL2T XUB 0AKSWL2T (3)	0.050 0.045 0.050 Weight kg 0.095 0.100			
015 depending on whether accessories are used Accessories Description	programming	NPN Connection Pre-cabled (1) M12	90° to case axis Along case axis 90° to case axis Line of sight Along case axis 90° to case axis Along case axis	XUB 0APSWM12 (3) XUB 0ANSNM12 XUB 0ANSWM12 (3) Reference XUB 0AKSNL2T XUB 0AKSWL2T (3) XUB 0AKSNM12T	0.050 0.045 0.050 Weight kg 0.095 0.100 0.045			
015 depending on whether accessories are used Accessories Description Thru-beam transmit	programming	Connection Pre-cabled (1)	90° to case axis Along case axis 90° to case axis Line of sight Along case axis 90° to case axis Along case axis	XUB 0APSWM12 (3) XUB 0ANSNM12 XUB 0ANSWM12 (3) Reference XUB 0AKSNL2T XUB 0AKSWL2T (3) XUB 0AKSNM12T XUB 0AKSWM12T (3)	0.050 0.045 0.050 Weight kg 0.095 0.100 0.045			
015 depending on whether accessories are used Accessories Description Thru-beam transmit	programming	NPN Connection Pre-cabled (1) M12	90° to case axis Along case axis 90° to case axis Line of sight Along case axis 90° to case axis Along case axis	XUB 0APSWM12 (3) XUB 0ANSNM12 XUB 0ANSWM12 (3) Reference XUB 0AKSNL2T XUB 0AKSWL2T (3) XUB 0AKSNM12T	0.050 0.045 0.050 Weight kg 0.095 0.100 0.045			
015 depending on whether accessories are used Accessories Description Thru-beam transmit Reflector 50 x 50 mm Fixing accessories	programming	NPN Connection Pre-cabled (1) M12	90° to case axis Along case axis 90° to case axis Line of sight Along case axis 90° to case axis Along case axis	XUB 0APSWM12 (3) XUB 0ANSNM12 XUB 0ANSWM12 (3) Reference XUB 0AKSNL2T XUB 0AKSWL2T (3) XUB 0AKSNM12T XUB 0AKSWM12T (3) XUB 0AKSWM12T (3) XUZ C50	0.050 0.045 0.050 Weight kg 0.095 0.100 0.045 0.050			
015 depending on whether accessories are used Accessories Description Thru-beam transmit	programming	NPN Connection Pre-cabled (1) M12	90° to case axis Along case axis 90° to case axis Line of sight Along case axis 90° to case axis Along case axis	XUB 0APSWM12 (3) XUB 0ANSNM12 XUB 0ANSWM12 (3) Reference XUB 0AKSNL2T XUB 0AKSWL2T (3) XUB 0AKSNM12T XUB 0AKSWM12T (3) XUB 0AKSWM12T (3) XUZ C50	0.050 0.045 0.050 Weight kg 0.095 0.100 0.045 0.050 0.020			
015 depending on whether accessories are used Accessories Description Thru-beam transmit Reflector 50 x 50 mm Fixing accessorid	ter es (4)	Connection Pre-cabled (1) M12 connector	90° to case axis Along case axis 90° to case axis Line of sight Along case axis 90° to case axis 4long case axis 90° to case axis -	XUB 0APSWM12 (3) XUB 0ANSNM12 XUB 0ANSWM12 (3) Reference XUB 0AKSNL2T XUB 0AKSNL2T (3) XUB 0AKSNM12T XUB 0AKSNM12T XUB 0AKSWM12T (3) XUZ C50 Reference	0.050 0.045 0.050 Weight kg 0.095 0.100 0.045 0.050 Weight kg			
015 depending on whether accessories are used Accessories Description Thru-beam transmit Reflector 50 x 50 mm Fixing accessorides Description 3D fixing kit for use of	ter es (4)	Connection Pre-cabled (1) M12 connector	90° to case axis Along case axis 90° to case axis Line of sight Along case axis 90° to case axis 4long case axis 90° to case axis -	XUB 0APSWM12 (3) XUB 0ANSNM12 XUB 0ANSWM12 (3) Reference XUB 0AKSNL2T XUB 0AKSWL2T (3) XUB 0AKSWM12T XUB 0AKSWM12T XUB 0AKSWM12T XUB 0AKSWM12T XUB 0AKSWM12T XUB 0AKSWM12T XUZ C50 Reference XUZ B2003	0.050 0.045 0.050 Weight kg 0.095 0.100 0.045 0.050 Weight kg 0.170			
015 depending on whether accessories are used Accessories Description Thru-beam transmit Reflector 50 x 50 mm Fixing accessorides Description 3D fixing kit for use of M12 rod	ter n es (4)	Connection Pre-cabled (1) M12 connector	90° to case axis Along case axis 90° to case axis Line of sight Along case axis 90° to case axis 4long case axis 90° to case axis -	XUB 0APSWM12 (3) XUB 0ANSNM12 XUB 0ANSWM12 (3) Reference XUB 0AKSNL2T XUB 0AKSWL2T (3) XUB 0AKSWM12T XUB 0AKSWM12T XUB 0AKSWM12T XUB 0AKSWM12T XUB 0AKSWM12T XUB 0AKSWM12T XUZ B2003 XUZ B2003 XUZ 2001	0.050 0.045 0.050 Weight kg 0.095 0.100 0.045 0.050 Weight kg 0.170 0.050			
015 depending on whether accessories are used Accessories Description Thru-beam transmit Reflector 50 x 50 mm Fixing accessorides accessorial ac	ter es (4) on M12 rod, for	Connection Pre-cabled (1) M12 connector	90° to case axis Along case axis 90° to case axis Line of sight Along case axis 90° to case axis 4long case axis 90° to case axis -	XUB 0APSWM12 (3) XUB 0ANSNM12 XUB 0ANSWM12 (3) Reference XUB 0AKSNL2T XUB 0AKSWL2T (3) XUB 0AKSWM12T XUB 0AKSWM12T XUB 0AKSWM12T XUB 0AKSWM12T XUB 0AKSWM12T XUZ C50 Reference XUZ B2003 XUZ 2001 XUZ 2003	0.050 0.045 0.050 Weight kg 0.095 0.100 0.045 0.050 Weight kg 0.170 0.050 0.150			
015 depending on whether accessories are used Accessories Description Thru-beam transmit Reflector 50 x 50 mm Fixing accessorides Description 3D fixing kit for use of M12 rod	ter n es (4) on M12 rod, for g bracket	Connection Pre-cabled (1) M12 connector - XUB or XUZ	90° to case axis Along case axis 90° to case axis Line of sight Along case axis 90° to case axis 4long case axis 90° to case axis -	XUB 0APSWM12 (3) XUB 0ANSNM12 XUB 0ANSWM12 (3) Reference XUB 0AKSNL2T XUB 0AKSWL2T (3) XUB 0AKSWM12T XUB 0AKSWM12T XUB 0AKSWM12T XUB 0AKSWM12T XUB 0AKSWM12T XUB 0AKSWM12T XUZ B2003 XUZ B2003 XUZ 2001	0.050 0.045 0.050 Weight kg 0.095 0.100 0.045 0.050 Weight kg 0.170 0.050			

- (1) For a 5 m long cable, replace L2 by L5.
 Example: XUB 0BPSNL2 becomes XUB 0BPSNL5.
 - For availability, please consult our Customer Care Centre.
- (2) For further information, see page 5/31.
- (3) For line of sight 90° to case axis versions, see sensing distances on page5/31. (4) For further information, see page 5/158.





XUZ A218

Characteristics, schemes, curves, dimensions

Photo-electric sensors

OsiSense XU multimode
Design 18, metal or plastic
Three-wire DC, solid-state output

Sensor type			XUB 0	XUB 0	XUB 0000L2, XUB 0000L2T
Product certifications			UL, CSA, C€		,
Connection	Connector		M12 –		-
	Pre-cabled		_		Length: 2 m
Sensing maximum distance (excess gai	n = 1)		Line of sight along case axis	Line of sight 90° to case axis	Accessory
nominal Sn / (excess gain = 2)		m	0.12 / 0.12	0.11 / 0.11	Without (diffuse with background suppression)
		m	0.3 / 0.4	0.2 / 0.3	Without (diffuse)
		m	2/3	1.5/2	With reflector (polarised reflex)
		m	15 / 20	7 / 10	With thru-beam transmitter (thru-beam
Type of transmission			Infrared, except fo	r polarised reflex (red)	
Degree of protection	Conforming to IEC 60529		IP 65, IP 67, doubl	le insulation 🗉	
Storage temperature		°C	- 40+ 70		
Operating temperature		°C	- 25+ 55		
Materials			Case: nickel plate	d brass for XUB 0B or Pt	BT for XUB 0A; 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 (transmission present for XUB 0●●●●● T)		
	Supply on		Green LED		
	Optical alignment aid/dirty		Red LED (except for XUB 0 ••• • T)		
Rated supply voltage		V	== 1224 with protection against reverse polarity		
Voltage limits (including ripple)		V	== 1036		
Current consumption, no-load		mA	35 (20 for XUB 0●●●●● T)		
Switching capacity		mA	≤ 100 with overload and short-circuit protection		
Voltage drop, closed state		٧	< 1.5		
Maximum switching frequency		Hz	250 (200 for diffuse with background suppression)		
Delays	First-up	ms	< 200		
	Response	ms	< 2 (< 2.5 for diffuse with background suppression)		
	Recovery	ms	< 2 (< 2.5 for diffuse with background suppression)		

Wiring schemes

See connection on page 9/44.

M12 connector

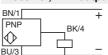


3 (-) 1 (+) 4 OUT/Output 2 Beam break input (1)

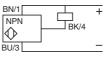
Pre-cabled

(-) BU (Blue) (+) BN (Brown) OUT/Output BK (Black) Beam break input (1) VI (Violet)

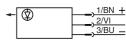
Receiver, PNP output



Receiver, NPN output



Thru-beam transmitter

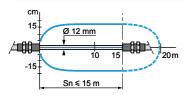


Input 2/VI:

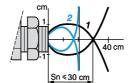
- not connected: beam made - connected to -: beam broken

Detection curves (line of sight along case axis)

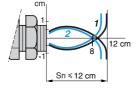
With thru-beam accessory (thru-beam)



Without accessory (diffuse)

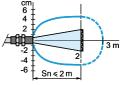


Without accessory (diffuse with background suppression)





With reflector

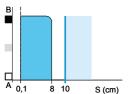


Object: 10 x 10 cm, 1: white 90%, 2: grey 18%

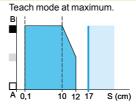
With reflector XUZ C50

Variation of usable sensing distance Su (without accessory, with adjustable background suppression

Teach mode at minimum.



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



Dimensions

XUB



Ø 18, line of sight along case axis
Ø 18, line of sight 90° to case axis

Pre-cabled (mm)		Connector (mm)		
а	b	a	b	
64 (2)	44	78 (2)	44	
78	44	92	44	

- (1) Beam break input on thru-beam transmitter only.
- (2) For XUB 0 • • T, 64 becomes 62 mm and 78 becomes 76 mm.