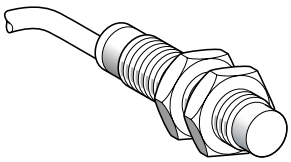
Inductive proximity sensors

Osiprox® Application, food and beverage processing series

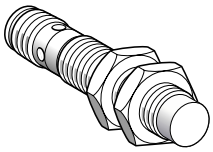
Cylindrical, stainless steel, non flush mountable
Three-wire, d.c. supply, solid-state output

DF532016



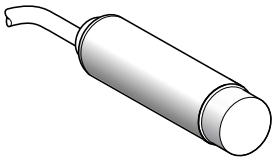
XS2 ●●SA●●L2

DF532015



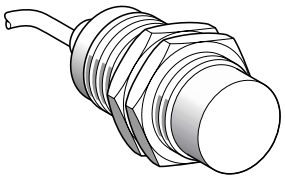
XS2 ●●SA●●M12

534440



XS2 L2SA●●L2

822116



XS2 30SA●●L2

503663



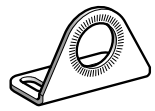
XUZ B2005

522363



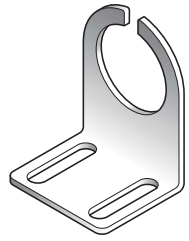
XSZ BS12

805817



XUZ A118

503863



XSZ BS30

Ø 12, threaded M12 x 1

Sensing dist. (Sn) mm	Function	Output	Connection	Reference	Weight kg
7	NO	PNP	Pre-cabled (L = 2 m) *(1)*	**XS2 12SAPAL2**	0.075
			M12 connector	**XS2 12SAPAM12**	0.035
		NPN	Pre-cabled (L = 2 m) *(1)*	**XS2 12SANAL2**	0.075
			M12 connector	**XS2 12SANAM12**	0.035

Ø 18, threaded M18 x 1

Sensing dist. (Sn) mm	Function	Output	Connection	Reference	Weight kg
12	NO	PNP	Pre-cabled (L = 2 m) *(1)*	**XS2 18SAPAL2**	0.120
			M12 connector	**XS2 18SAPAM12**	0.060
		NPN	Pre-cabled (L = 2 m) *(1)*	**XS2 18SANAL2**	0.120
			M12 connector	**XS2 18SANAM12**	0.060

Ø 18, plain

Sensing dist. (Sn) mm	Function	Output	Connection	Reference	Weight kg
12	NO	PNP	Pre-cabled (L = 2 m) *(1)*	**XS2 L2SAPAL2**	0.120
			M12 connector	**XS2 L2SAPAM12**	0.060
		NPN	Pre-cabled (L = 2 m) *(1)*	**XS2 L2SANAL2**	0.120
			M12 connector	**XS2 L2SANAM12**	0.060

Ø 30, threaded M30 x 1.5

Sensing dist. (Sn) mm	Function	Output	Connection	Reference	Weight kg
22	NO	PNP	Pre-cabled (L = 2 m) *(1)*	**XS2 30SAPAL2**	0.205
			M12 connector	**XS2 30SAPAM12**	0.145
		NPN	Pre-cabled (L = 2 m) *(1)*	**XS2 30SANAL2**	0.205
			M12 connector	**XS2 30SANAM12**	0.145

Accessories *(2)*

Description	For use with	Reference	Weight kg
Plastic fixing clamp, 24.1 mm centres, with locking screw	Ø 18 sensor, plain case	**XUZ B2005**	0.007
Stainless steel fixing bracket	Ø 12 sensor	**XSZ BS12**	0.060
	Ø 18 sensor	**XUZ A118**	0.045
	Ø 30 sensor	**XSZ BS30**	0.080

Connecting cables

Description	Type	Cable length m	Reference	Weight kg
Pre-wired M12 connectors Female, 4-pin, stainless steel clamping ring	Straight	2	**XZC PA1141L2**	0.090
		5	**XZC PA1141L5**	0.210
		10	**XZC PA1141L10**	0.410
	Elbowed	2	**XZC PA1241L2**	0.090
		5	**XZC PA1241L5**	0.210
		10	**XZC PA1241L10**	0.410
M12 jumper cable Male, 3-pin, stainless steel clamping ring	Straight	2	**XZC RA151140A2**	0.095
		5	**XZC RA151140A5**	0.200

*(1) For a 5 m long cable replace L2 by **L5**; for a 10 m long cable replace L2 by **L10**.*
*Example: **XS2 12SAPAL2** becomes **XS2 12SAPAL5** with a 5 m long cable.*
(2) For further information, see page 37317/2.

Characteristics, schemes, setting-up, dimensions

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Characteristics

Sensor type			XS2 ●●SA●●M12	XS2 ●●SA●●L2
Product certifications/approvals			UL, CSA, CE	
Connection	Connector		M12	–
	Pre-cabled		–	Length: 2 m
Operating zone	Ø 12	**mm**	**0…5.6**	
	Ø 18	**mm**	**0…9.6**	
	Ø 30	**mm**	**0…17.6**	
Differential travel		**%**	1...15 of real sensing distance (Sr)	
Degree of protection	Conforming to IEC 60529		IP 67	IP 68, double insulation ⧈
	DIN 40050		IP 69 K	
Storage temperature		**°C**	- 40…+ 85	
Operating temperature		**°C**	- 25…+ 85 *(1)*	
Materials	Case		Stainless steel, grade 316 L	
	Cable		–	Non-poisonous PVC, 3 x 0.34 mm^2
Vibration resistance	Conforming to IEC 60068-2-6		25 gn, amplitude ± 2 mm (f = 10 to 55 Hz)	
Shock resistance	Conforming to IEC 60068-2-27		50 gn, duration 11 ms	
Output state indication			Yellow LED: 4 viewing ports at 90°	Yellow LED: annular
Rated supply voltage		**V**	⎓ 12…24 with protection against reverse polarity	
Voltage limits (including ripple)		**V**	⎓ 10…36	
Switching capacity		**mA**	⩽ 200 with overload and short-circuit protection	
Voltage drop, closed state		**V**	⩽ 2	
Current consumption, no-load		**mA**	⩽ 10	
Maximum switching frequency	**XS2 12SA●●●●**	**Hz**	2500	
	XS2 18SA●●●● and **XS2 L2●●●●**	**Hz**	1000	
	XS2 30SA●●●●	**Hz**	500	
Delays	First-up	**ms**	⩽ 10	
	Response	**ms**	⩽ 0.2 Ø12, ⩽ 0.3 Ø18, ⩽ 0.6 Ø30	
	Recovery	**ms**	⩽ 0.2 Ø12, ⩽ 0.7 Ø18, ⩽ 1.4 Ø30	

(1) + 100 °C for cleaning and sterilization phases whilst not in service.

Wiring schemes

Connector

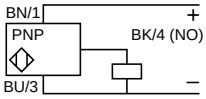
M12



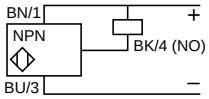
Pre-cabled

BU: Blue
BN: Brown
BK: Black

PNP

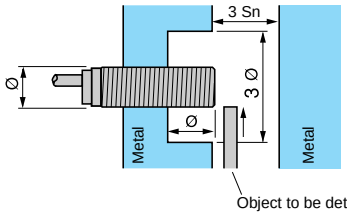


NPN

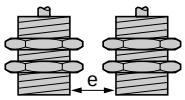


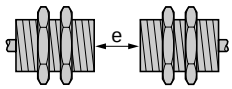
See connection on page 30210/3.

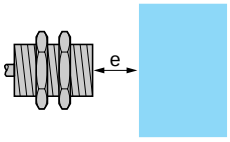
Setting-up



Minimum mounting distances (mm)



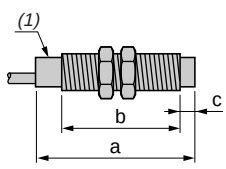




	Side by side	Face to face	Facing a metal object
Ø 12	e ⩾ 48	e ⩾ 84	e ⩾ 21
Ø 18	e ⩾ 72	e ⩾ 144	e ⩾ 36
Ø 30	e ⩾ 120	e ⩾ 264	e ⩾ 66

Dimensions

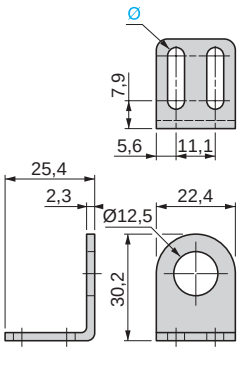
XS2



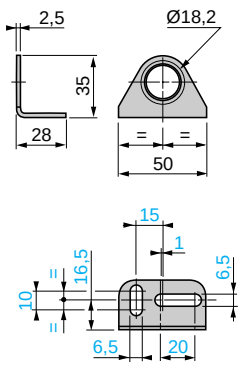
(1) LED

XS2	Pre-cabled (mm) a	b	Connector (mm) a	b	c
Ø 12	54.5	38	61	37	5
Ø 18	60	40	70	42	8
Ø 30	62.5	41	70	36	13

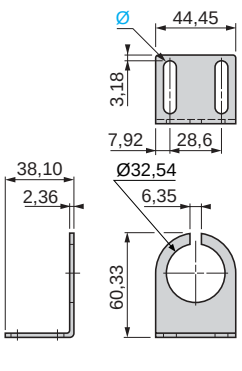
XSZ BS12



XUZ A118



XSZ BS30



Ø : 2 elongated holes Ø 7.14 x 29.36