OsiSense® XS Inductive sensors

General purpose with increased range

Schneider Electric

Helping you to find the most efficient solution

The inductive detection function that performs and lasts

A new offer to meet the demands of machine manufacturers for increased range in inductive sensing.

> Easy to install

Contributes to machine compactness
Wider adjustment range

> Robust

Solutions that last

> Readily available

Contributes to machine performance

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Cylindrical inductive proximity sensors

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NOTE: Sensors described in this catalog are designed to be used for standard industrial presence sensing applications. These sensors do not include the self-checking redundant circuitry necessary to allow for their use in safety applications.

Make the most of your energy℠

> Contributes to machine compactness

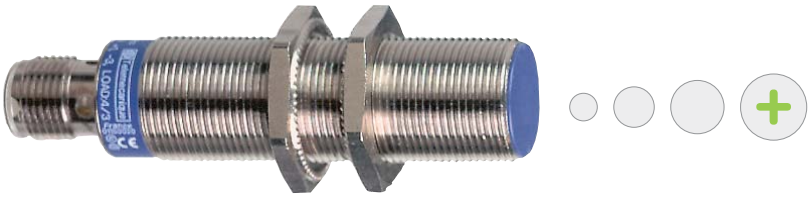
Easy to install:

Compact product (short), easier integration in the machine

- Increased range (x2), sensing distance easier to adjust
- All standard diameters (complete range, from Ø 6.5 to Ø 30 mm)
- Long and short product lengths to meet the most demanding dimension standards on the market
- DC and AC/DC versions available for maximum flexibility

+100%

of the sensing distance for flush mountable models



> Increase the reliability of your solution

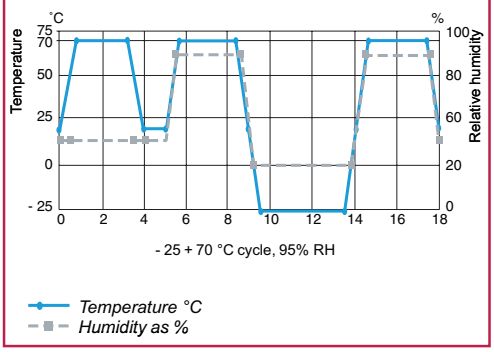
Quality by design:

- Subjected to climatic cycle tests: -25 to +70 °C (-13 to 158 °F) cycle, 95% RH for 3,000 hours under power to verify their ability to maintain specifications over time.

- Resistance to electromagnetic interference–immune to high levels of EMC

- Resistance to environment–IP 65, IP 67 and IP 68 for pre-cabled versions, IP 69K for 12 and 30 mm diameter sensors

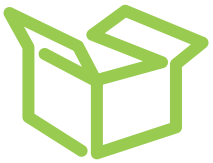
Standards and certifications
Environmental testing



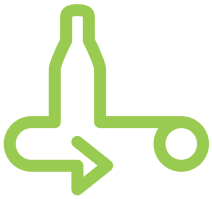
> Contributes to machine performance

Readily available:

- Robust products to meet your needs
- Particularly well-suited for your machines used in sectors such as machine tooling, assembly, packaging, conveying and the automotive industry.


Packaging

Automotive


Materials handling

Machine Tooling

- Proven tried-and-tested performance with worldwide product availability
- You export your machines throughout the world. Schneider Electric has locations in 190 countries.

availability throughout the world

General purpose flush or non-flush mountable, standard or increased range:

A global offer of high-performance inductive sensors to meet your individual needs

XS6..B range
Metal AC or DC
Increased range
2.5 to 22 mm
(0.10 to 0.87 in.)
Flush or non-flush mountable

XS5..BL range
3-wire DC
Metal
Standard range
1.5 to 10 mm
(0.06 to 0.39 in.)
Flush mountable

XS5..B1M range
2-wire AC or DC
Metal
Standard range
2.0 to 10 mm
(0.04 to 0.39 in.)
Flush mountable

XS1... range
3-wire DC
Metal
Increased range
2.5 to 15 mm
(0.10 to 0.59 in.)
Flush mountable

>Selection guide–General purpose inductive sensors

Flush mountable, standard range 1.5 to 10 mm (0.06 to 0.39 in.)

Metal | 3-wire DC

Format	Ø 6.5 mm plain	Ø 8 mm	Ø 12 mm	Ø 18 mm	Ø 30 mm
Sensing dist., mm (in.)	1.5 (0.06)	1.5 (0.06)	2 (0.08)	5 (0.20)	10 (0.39)
Length Short case	33 (1.30)	33 (1.30)	35 (1.38)	39 (1.54)	43 (1.69)
mm (in.) Long Case	51 (2.01)	51 (2.01)	53 (2.09)	62 (2.44)	62 (2.44)
Connection	2 m cable M8 connector	2 m cable M8 connector M12 connector	2 m cable M12 connector	2 m cable M12 connector	2 m cable M12 connector
Supply, DC	12–24 V, 12–48 V	12–24 V, 12–48 V	12–24 V, 12–48 V	12–24 V, 12–48 V	12–24 V, 12–48 V
Output	PNP or NPN	PNP or NPN	PNP or NPN	PNP or NPN	PNP or NPN
Function	NO or NC	NO or NC	NO or NC	NO or NC	NO or NC
Short case model	XS506B1•••	XS508B1•••	XS512B1•••	XS518B1•••	XS530B1•••
Long case model	XS506BL•••	XS508BL•••	XS512BL•••	XS518BL•••	XS530BL•••

Flush mountable, standard range 1.5 to 10 mm (0.06 to 0.39 in.)

Metal | 2-wire DC

Format	Ø 6.5 mm	Ø 8 mm	Ø 12 mm	Ø 18 mm	Ø 30 mm
Sensing dist., mm (in.)	1.5 (0.06)	1.5 (0.06)	2 (0.08)	5 (0.20)	10 (0.39)
Length Short Case	33 (1.30)	33 (1.30)	35 (1.38)	39 (1.54)	43 (1.69)
mm (in.) Long Case	–	51 (2.01)	53 (2.09)	62 (2.44)	62 (2.44)
Connection	2 m cable M12 connector	2 m cable M12 connector	2 m cable M12 connector	2 m cable M12 connector	2 m cable M12 connector
Supply, DC	12–24 V, 12–48 V	12–24 V, 12–48 V	12–24 V, 12–48 V	12–24 V, 12–48 V	12–24 V, 12–48 V
Function	NO or NC	NO or NC	NO or NC	NO or NC	NO or NC
Short case model	XS506BS•••	XS508BS•••	XS512BS•••	XS518BS•••	XS530BS•••
Long case model	–	XS508B1•••	XS512B1•••	XS518B1•••	XS530B1•••

Flush mountable, increased range 2.5 to 15 mm (0.10 to 0.59 in.)

Metal | 3-wire DC

Format	Ø 6.5 mm	Ø 8 mm	Ø 12 mm	Ø 18 mm	Ø 30 mm
Sensing dist., mm (in.)	2.5 (0.10)	2.5 (0.10)	4 (0.16)	8 (0.31)	15 (0.59)
Length Short Case	33 (1.30)	33 (1.30)	35 (1.38)	39 (1.54)	43 (1.69)
mm (in.) Long Case	–	51 (2.01)	53 (2.09)	62 (2.44)	62 (2.44)
Connection	2 m cable M12 connector	2 m cable M12 connector	2 m cable M12 connector	2 m cable M12 connector	2 m cable M12 connector
Supply, DC	12–24 V, 12–48 V	12–24 V, 12–48 V	12–24 V, 12–48 V	12–24 V, 12–48 V	12–24 V, 12–48 V
Output	PNP or NPN	PNP or NPN	PNP or NPN	PNP or NPN	PNP or NPN
Function	NO or NC	NO or NC	NO or NC	NO or NC	NO or NC
Short case model	XS106B3•••	XS108B3•••	XS112B3•••	XS118B3•••	XS130B3•••
Long case model	–	XS608B1•••	XS612B1•••	XS618B1•••	XS630B1•••

Flush mountable, increased range 2 to 15 mm (0.08 to 0.59 in.)

Metal | 2-wire DC

Format	Ø 6.5 mm plain	Ø 8 mm	Ø 12 mm	Ø 18 mm	Ø 30 mm
Sensing dist., mm (in.)	2.5 (0.10)	2.5 (0.10)	4 (0.16)	8 (0.31)	15 (0.59)
Length Short case	33 (1.30)	33 (1.30)	35 (1.38)	39 (1.54)	43 (1.69)
mm (in.) Long Case	51 (2.01)	51 (2.01)	53 (2.09)	62 (2.44)	62 (2.44)
Connection	2 m cable M12 connector	2 m cable M8 connector M12 connector	2 m cable M12 connector	2 m cable M12 connector	2 m cable M12 connector
Supply, DC	12–24 V, 12–48 V	12–24 V, 12–48 V	12–24 V, 12–48 V	12–24 V, 12–48 V	12–24 V, 12–48 V
Function	NO or NC	NO or NC	NO or NC	NO or NC	NO or NC
Short case model	XS606B3•••	XS608B3•••	XS612B3•••	XS618B3•••	XS630B3•••
Long case model	XS606B1•••	XS608B1•••	XS612B1•••	XS618B1•••	XS630B1•••

Selection guide–continued

Flush mountable, standard range 2 to 10 mm (0.08 to 0.39 in.)

Metal | 2-wire AC or DC

Format	Ø 12 mm plain	Ø 18 mm	Ø 30 mm
Sensing dist., mm (in.)	2 (0.08)	5 (0.20)	10 (0.39)
Length Long Case mm (in.)	53 (2.09)	62 (2.44)	62 (2.44)
Connection	2 m cable 1/2″ -20 UNF connector	2 m cable 1/2″ -20 UNF connector	2 m cable 1/2″ -20 UNF connector
Supply, AC or DC	24–240	24–240	24–240
Function	NO or NC	NO or NC	NO or NC
Long case model	XS512B1M•••	XS518B1M•••	XS530B1M•••

Non-flush mountable, increased range 7 to 22 mm (0.28 to 0.87 in.)

Metal | 3-wire DC

Format	Ø 12 mm plain	Ø 18 mm	Ø 30 mm
Sensing dist., mm (in.)	7 (0.28)	12 (0.47)	22 (0.87)
Length Long Case mm (in.)	55 (2.17)	60 (2.36)	63 (2.48)
Connection	2 m cable M12 connector	2 m cable M12 connector	2 m cable M12 connector
Output	PNP or NPN	PNP or NPN	PNP or NPN
Function	NO or NC	NO or NC	NO or NC
Long case model	XS612B4•••	XS618B4•••	XS630B4•••

Flush mountable, increased range 4 to 15 mm (0.16 to 0.59 in.)

Metal | 2-wire AC or DC

Format	Ø 12 mm plain	Ø 18 mm	Ø 30 mm
Sensing dist., mm (in.)	4 (0.16)	8 (0.31)	15 (0.59)
Length Long Case mm (in.)	53 (2.09)	62 (2.44)	62 (2.44)
Connection	2 m cable 1/2″ -20 UNF connector	2 m cable 1/2″ -20 UNF connector	2 m cable 1/2″ -20 UNF connector
Supply, AC or DC	24–240	24–240	24–240
Function	NO or NC	NO or NC	NO or NC
Long case model	XS612B1M•••	XS618B1M•••	XS630B1M•••

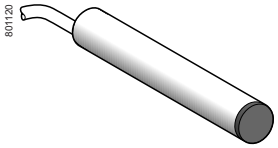
Non-flush mountable, increased range 12 to 22 mm (0.47 to 0.87 in.)

Metal | 2-wire AC or DC

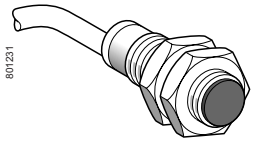
Format	Ø 18 mm	Ø 30 mm
Sensing dist., mm (in.)	12 (0.47)	22 (0.87)
Length Long case, mm (in.)	60 (2.36)	63 (2.48)
Connection	2 m cable M8 connector M12 connector	2 m cable M12 connector
Supply	3-wire 12–24 V	3-wire 12–24 V
Output	PNP or NPN	PNP or NPN
Function	NO or NC	NO or NC
Long case model	XS618B4M•••	XS630B4M•••

OsiSense® Inductive proximity sensors

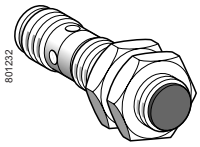
General purpose
Cylindrical, standard range, flush mountable
Three-wire DC, solid-state output



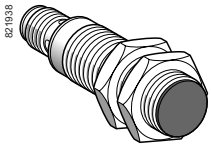
XS506B1●●L2



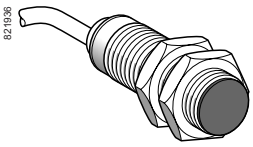
XS508B1●●L2



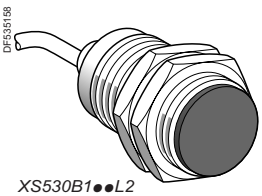
XS512B1●●M12



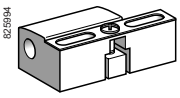
XS518B1●●M12



XS518B1●●●L2



XS530B1●●L2



XSZB1●●

Sensors, 3-wire 12–24 V ⎓, short case model

Sensing dist. Sn, mm (in.)	Function	Output	Connection	Catalog Number	Weight kg	(lb)
Ø 6.5, plain						
1.5 (0.06)	NO	PNP	Pre-cabled *(1)*	**XS506B1PAL2**	0.035	(0.08)
			M8 connector	**XS506B1PAM8**	0.025	(0.06)
			M12 connector	**XS506B1PAM12**	0.025	(0.06)
		NPN	Pre-cabled *(1)*	**XS506B1NAL2**	0.035	(0.08)
			M8 connector	**XS506B1NAM8**	0.025	(0.06)
	NC	PNP	Pre-cabled *(1)*	**XS506B1PBL2**	0.035	(0.08)
			M8 connector	**XS506B1PBM8**	0.025	(0.06)
		NPN	Pre-cabled *(1)*	**XS506B1NBL2**	0.035	(0.08)
			M8 connector	**XS506B1NBM8**	0.025	(0.06)
Ø 8, threaded M8 x 1						
1.5 (0.06)	NO	PNP	Pre-cabled *(1)*	**XS508B1PAL2**	0.035	(0.08)
			M8 connector	**XS508B1PAM8**	0.025	(0.06)
			M12 connector	**XS508B1PAM12**	0.025	(0.06)
		NPN	Pre-cabled *(1)*	**XS508B1NAL2**	0.035	(0.08)
			M8 connector	**XS508B1NAM8**	0.025	(0.06)
			M12 connector	**XS508B1NAM12**	0.025	(0.06)
	NC	PNP	Pre-cabled *(1)*	**XS508B1PBL2**	0.035	(0.08)
			M8 connector	**XS508B1PBM8**	0.025	(0.06)
			M12 connector	**XS508B1PBM12**	0.025	(0.06)
		NPN	Pre-cabled *(1)*	**XS508B1NBL2**	0.035	(0.08)
			M8 connector	**XS508B1NBM8**	0.025	(0.06)
			M12 connector	**XS508B1NBM12**	0.025	(0.06)
Ø 12, threaded M12 x 1						
2 (0.08)	NO	PNP	Pre-cabled *(1)*	**XS512B1PAL2**	0.075	(0.17)
			M12 connector	**XS512B1PAM12**	0.035	(0.08)
		NPN	Pre-cabled *(1)*	**XS512B1NAL2**	0.075	(0.17)
			M12 connector	**XS512B1NAM12**	0.035	(0.08)
	NC	PNP	Pre-cabled *(1)*	**XS512B1PBL2**	0.075	(0.17)
			M12 connector	**XS512B1PBM12**	0.035	(0.08)
		NPN	Pre-cabled *(1)*	**XS512B1NBL2**	0.075	(0.17)
			M12 connector	**XS512B1NBM12**	0.035	(0.08)
Ø 18, threaded M18 x 1						
5 (0.20)	NO	PNP	Pre-cabled *(1)*	**XS518B1PAL2**	0.120	(0.26)
			M12 connector	**XS518B1PAM12**	0.060	(0.13)
		NPN	Pre-cabled *(1)*	**XS518B1NAL2**	0.120	(0.26)
			M12 connector	**XS518B1NAM12**	0.060	(0.13)
	NC	PNP	Pre-cabled *(1)*	**XS518B1PBL2**	0.120	(0.26)
			M12 connector	**XS518B1PBM12**	0.060	(0.13)
		NPN	Pre-cabled *(1)*	**XS518B1NBL2**	0.120	(0.26)
			M12 connector	**XS518B1NBM12**	0.060	(0.13)
Ø 30, threaded M30 x 1.5						
10 (0.39)	NO	PNP	Pre-cabled *(1)*	**XS530B1PAL2**	0.205	(0.45)
			M12 connector	**XS530B1PAM12**	0.145	(0.32)
		NPN	Pre-cabled *(1)*	**XS530B1NAL2**	0.205	(0.45)
			M12 connector	**XS530B1NAM12**	0.145	(0.32)
	NC	PNP	Pre-cabled *(1)*	**XS530B1PBL2**	0.205	(0.45)
			M12 connector	**XS530B1PBM12**	0.145	(0.32)
		NPN	Pre-cabled *(1)*	**XS530B1NBL2**	0.205	(0.45)
			M12 connector	**XS530B1NBM12**	0.145	(0.32)

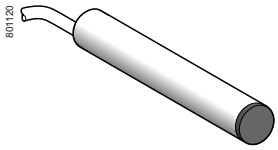
Accessories

Description	For use with sensors	Catalog Number	Weight kg	(lb)
Mounting clamps	Ø 6.5 (plain)	**XSZ B165**	0.005	(0.01)
	Ø 8	**XSZB108**	0.006	(0.01)
	Ø 12	**XSZB112**	0.006	(0.01)
	Ø 18	**XSZB118**	0.010	(0.02)
	Ø 30	**XSZB130**	0.020	(0.02)

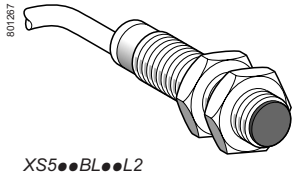
*(1) For a 5 m long cable replace L2 with **L5**; for a 10 m cable replace L2 with **L10**.*
*Example: XS508B1PAL2 becomes **XS508B1PAL5** with a 5 m cable.*

OsiSense® Inductive proximity sensors

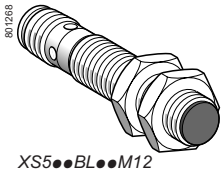
General purpose
Cylindrical, standard range, flush mountable
Three-wire DC, solid-state output



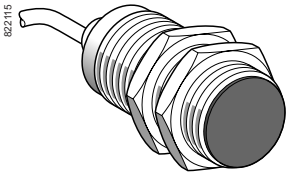
XS506BL●●L2



XS5●●BL●●L2



XS5●●BL●●M12



XS5 30BL●●L2

Sensors, 3-wire 12–48 V ⎓, long case model

Sensing dist. Sn, mm (in.)	Function	Output	Connection	Catalog Number	Weight kg	(lb)
Ø 6.5, plain						
1.5 (0.06)	NO	PNP	Pre-cabled *(1)*	**XS506BLPAL2**	0.035	(0.08)
		NPN	Pre-cabled *(1)*	**XS506BLNAL2**	0.035	(0.08)
Ø 8, threaded M8 x 1						
1.5 (0.06)	NO	PNP	Pre-cabled *(1)*	**XS508BLPAL2**	0.035	(0.08)
			M12 connector	**XS508BLPAM12**	0.025	(0.06)
		NPN	Pre-cabled *(1)*	**XS508BLNAL2**	0.035	(0.08)
			M12 connector	**XS508BLNAM12**	0.025	(0.06)
	NC	PNP	Pre-cabled *(1)*	**XS508BLPBL2**	0.035	(0.08)
			M12 connector	**XS508BLPBM12**	0.025	(0.06)
		NPN	Pre-cabled *(1)*	**XS508BLNBL2**	0.035	(0.08)
			M12 connector	**XS508BLNBM12**	0.025	(0.06)
Ø 12, threaded M12 x 1						
2 (0.08)	NO	PNP	Pre-cabled *(1)*	**XS512BLPAL2**	0.075	(0.17)
			M12 connector	**XS512BLPAM12**	0.035	(0.08)
		NPN	Pre-cabled *(1)*	**XS512BLNAL2**	0.075	(0.17)
			M12 connector	**XS512BLNAM12**	0.035	(0.08)
	NC	PNP	Pre-cabled *(1)*	**XS512BLPBL2**	0.075	(0.17)
			M12 connector	**XS512BLPBM12**	0.035	(0.08)
		NPN	Pre-cabled *(1)*	**XS512BLNBL2**	0.075	(0.17)
			M12 connector	**XS512BLNBM12**	0.035	(0.08)
Ø 18, threaded M18 x 1						
5 (0.20)	NO	PNP	Pre-cabled *(1)*	**XS518BLPAL2**	0.120	(0.26)
			M12 connector	**XS518BLPAM12**	0.060	(0.13)
		NPN	Pre-cabled *(1)*	**XS518BLNAL2**	0.120	(0.26)
			M12 connector	**XS518BLNAM12**	0.060	(0.13)
	NC	PNP	Pre-cabled *(1)*	**XS518BLPBL2**	0.120	(0.26)
			M12 connector	**XS518BLPBM12**	0.060	(0.13)
		NPN	Pre-cabled *(1)*	**XS518BLNBL2**	0.120	(0.26)
			M12 connector	**XS518BLNBM12**	0.060	(0.13)
Ø 30, threaded M30 x 1.5						
10 (0.39)	NO	PNP	Pre-cabled *(1)*	**XS530BLPAL2**	0.205	(0.45)
			M12 connector	**XS530BLPAM12**	0.145	(0.32)
		NPN	Pre-cabled *(1)*	**XS530BLNAL2**	0.205	(0.45)
			M12 connector	**XS530BLNAM12**	0.145	(0.32)
	NC	PNP	Pre-cabled *(1)*	**XS530BLPBL2**	0.205	(0.45)
			M12 connector	**XS530BLPBM12**	0.145	(0.32)
		NPN	Pre-cabled *(1)*	**XS530BLNBL2**	0.205	(0.45)
			M12 connector	**XS530BLNBM12**	0.145	(0.32)

Accessories

Description	For use with sensors	Catalog Number	Weight kg	(lb)
Mounting clamps	Ø 6.5 (plain)	**XSZ B165**	0.005	(0.01)
	Ø 8	**XSZB108**	0.006	(0.01)
	Ø 12	**XSZB112**	0.006	(0.01)
	Ø 18	**XSZB118**	0.010	(0.02)
	Ø 30	**XSZB130**	0.020	(0.04)

*(1) For a 5 m cable replace L2 with **L5**; for a 10 m cable replace L2 with **L10**.*
*Example: XS508BLPAL2 becomes **XS508BLPAL5** with a 5 m cable.*

OsiSense® Inductive proximity sensors

General purpose
Cylindrical, standard range, flush mountable
Three-wire DC, solid-state output

Specifications

Sensor type			XS5●●B1●●M8, XS5●●B1●●M12 XS5●●BL●●M8, XS5●●BL●●M12	XS5●●B1●●L2 XS5●●BL●●L2
Product certifications			UL, CSA, CE	
Connection	Connector		M8 on Ø 6.5 and Ø 8, M12 on Ø 8, Ø 12, Ø 18 and Ø 30	–
	Pre-cabled		–	Length 2 m
Operating zone	Ø 6.5 and Ø 8	**mm**	0–1.2 (0–0.05 in.)	
	Ø 12	**mm**	0–1.6 (0–0.06 in.)	
	Ø 18	**mm**	0–4 (0–0.28 in.)	
	Ø 30	**mm**	0–8 (0–0.31 in.)	
Differential travel		**%**	1–15 of effective sensing distance (Sr)	
Degree of protection	Conforming to IEC 60529		IP 65 and IP 67	IP 65 and IP 68, double insulation ⧈ (except Ø 6.5 and Ø 8: IP 67)
	Conforming to DIN 40050		IP 69K for Ø 12 to Ø 30	
Storage temperature		**°C**	-40 to +85 (-40 to +185 ˚F)	
Operating temperature		**°C**	-25 to +70 (-13 to +158 ˚F)	
Materials	Case		Nickel plated brass (except XS5 06 and XS5 08BL: stainless steel, grade 303)	
	Sensing face		PPS	
	Cable		–	PvR 3 x 0.34 mm² (22 AWG) except **XS506** and **XS508**: 3 x 0.11 mm² (27 AWG)
Vibration resistance	Conforming to IEC 60068-2-6		25 gn, amplitude ± 2 mm (f = 10 to 50 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: circular
Rated supply voltage		**V**	⎓ 12–48 for XS5●●BL, ⎓ 12–24 for XS5 ●●B1 with protection against reverse polarity	
Voltage limits (including ripple)		**V**	⎓ 10–58 for XS5●●BL, ⎓ 10–36 for XS5●●B1	
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	**XS506, XS508, XS512**	**Hz**	5000	
	XS518	**Hz**	2000	
	XS530	**Hz**	1000	
Delays	First-up	**ms**	≤ 10	
	Response	**ms**	≤ 0.1 : **XS506 , XS508** and **XS512** ≤ 0.15 : **XS518** ≤ 0.3 : **XS530**	
	Recovery	**ms**	≤ 0.1 : **XS506, XS508** and **XS512** ≤ 0.35 : **XS518** ≤ 0.7 : **XS530**	

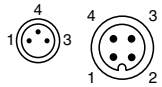
OsiSense® Inductive proximity sensors

General purpose
Cylindrical, standard range, flush mountable
Three-wire DC, solid-state output

Wiring diagrams

Connector

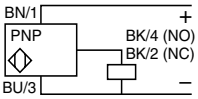
M8 M12



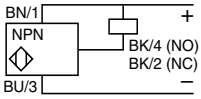
Pre-cabled

BU: Blue
BN: Brown
BK: Black

PNP



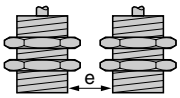
NPN

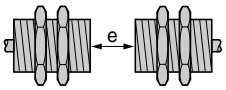


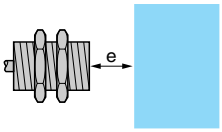
For M8 connector, NO and NC outputs on terminal 4

Setup

Minimum mounting distances (mm)

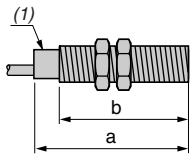






Sensors	Side by side	Face to face	Facing a metal object
Ø 6.5	e ≥ 3	e ≥ 18	e ≥ 4.5
Ø 8	e ≥ 3	e ≥ 18	e ≥ 4.5
Ø 12	e ≥ 4	e ≥ 24	e ≥ 6
Ø 18	e ≥ 10	e ≥ 60	e ≥ 15
Ø 30	e ≥ 20	e ≥ 120	e ≥ 30

Dimensions (mm)



(1) LED

Sensors		Pre-cabled (mm)		M8 connector (mm)		M12 connector (mm)	
Short case model		**a**	**b**	**a**	**b**	**a**	**b**
Ø 6.5	**XS506B1**	33	–	42	–	45	–
Ø 8	**XS508B1**	33	25	42	26	45	24
Ø 12	**XS512B1**	35	25	–	–	50	30
Ø 18	**XS518B1**	39	28	–	–	50	28
Ø 30	**XS530B1**	43	32	–	–	55	32

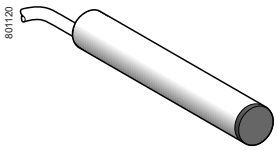
Sensors		Pre-cabled (mm)		M12 connector (mm)	
Long case model		**a**	**b**	**a**	**b**
Ø 6.5	**XS506BL**	51	–	–	–
Ø 8	**XS508BL**	51	42	62	40
Ø 12	**XS512BL**	53	42	62	42
Ø 18	**XS518BL**	62	52	74	52
Ø 30	**XS530BL**	62	52	74	52

OsiSense® Inductive proximity sensors

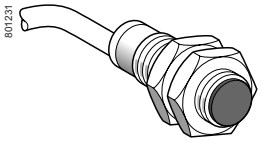
General purpose

Cylindrical, standard range, flush mountable

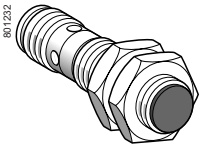
Two-wire DC



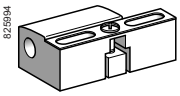
XS506BS●●L2



XS512BS●●L2



XS5●●BS●●M12



XSZB1●●

Sensors, 2-wire 12–24 V ⎓, short case model

Sensing dist. Sn, mm (in.)	Function	Connection	Catalog Number	Weight kg	(lb)
Ø 6.5, plain					
1.5 (0.06)	NO terminals 1 & 4 *(2)*	Pre-cabled *(1)*	**XS506BSCAL2**	0.035	(0.08)
		Remote M12 connector	**XS506BSCAL01M12**	0.050	(0.11)
	NC	Pre-cabled *(1)*	**XS506BSCBL2**	0.035	(0.08)
Ø 8, threaded M8 x 1					
1.5 (0.06)	NO terminals 1 & 4 *(2)*	Pre-cabled *(1)*	**XS508BSCAL2**	0.035	(0.08)
		Remote M12 connector	**XS508BSCAL01M12**	0.050	(0.11)
		Remote M12 connector	**XS508BSCAL08M12**	0.050	(0.11)
	NC	Pre-cabled *(1)*	**XS508BSCBL2**	0.035	(0.08)
		Remote M12 connector	**XS508BSCBL01M12**	0.050	(0.11)
Ø 12, threaded M12 x 1					
2 (0.08)	NO	Pre-cabled *(1)*	**XS512BSDAL2**	0.075	(0.17)
		M12 connector	**XS512BSDAM12**	0.035	(0.08)
	NO terminals 1 & 4 *(2)*	M12 connector	**XS512BSCAM12**	0.035	(0.08)
		Remote M12 connector	**XS512BSCAL08M12**	0.060	(0.13)
	NC	Pre-cabled *(1)*	**XS512BSDBL2**	0.075	(0.17)
		M12 connector	**XS512BSDBM12**	0.035	(0.08)
Ø 18, threaded M18 x 1					
5 (0.20)	NO	Pre-cabled *(1)*	**XS518BSDAL2**	0.120	(0.26)
		M12 connector	**XS518BSDAM12**	0.060	(0.13)
	NO terminals 1 & 4 *(2)*	M12 connector	**XS518BSCAM12**	0.060	(0.13)
		Remote M12 connector	**XS518BSCAL08M12**	0.085	(0.19)
	NC	Pre-cabled *(1)*	**XS518BSDBL2**	0.120	(0.26)
		M12 connector	**XS518BSDBM12**	0.060	(0.13)
Ø 30, threaded M30 x 1.5					
10 (0.39)	NO	Pre-cabled *(1)*	**XS530BSDAL2**	0.205	(0.45)
		M12 connector	**XS530BSDAM12**	0.145	(0.32)
	NO terminals 1 & 4 *(2)*	M12 connector	**XS530BSCAM12**	0.145	(0.32)
		Remote M12 connector	**XS530BSCAL08M12**	0.170	(0.37)
	NC	Pre-cabled *(1)*	**XS530BSDBL2**	0.205	(0.45)
		M12 connector	**XS530BSDBM12**	0.145	(0.32)

Accessories

Description	For use with sensors	Catalog Number	Weight kg	(lb)
Mounting clamps	Ø 6.5 (plain)	**XSZ B165**	0.005	(0.01)
	Ø 8	**XSZB108**	0.006	(0.01)
	Ø 12	**XSZB112**	0.006	(0.01)
	Ø 18	**XSZB118**	0.010	(0.02)
	Ø 30	**XSZB130**	0.020	(0.04)

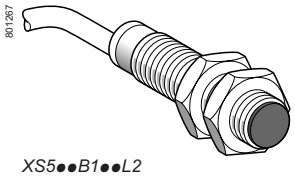
*(1) For a 5 m long cable replace L2 with L5; for a 10 m cable replace L2 with **L10**.*
*Example: XS508BSCAL2 becomes **XS508BSCAL5** with a 5 m cable.*
(2) The NO output is connected to terminals 1 and 4 of the M12 connector.

OsiSense® Inductive proximity sensors

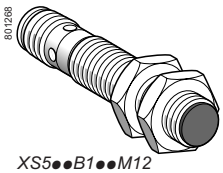
General purpose

Cylindrical, standard range, flush mountable

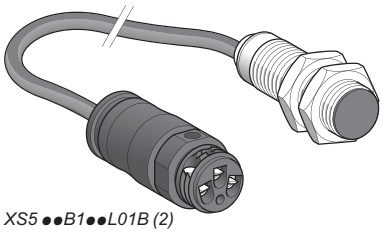
Two-wire DC



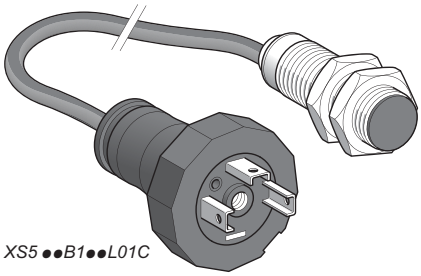
XS5●●B1●●L2



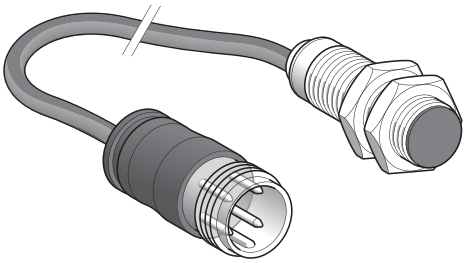
XS5●●B1●●M12



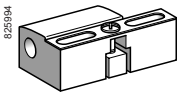
XS5 ●●B1●●L01B (2)



XS5 ●●B1●●L01C



XS5 ●●B1●●L01G



XSZB1●●

Sensors, 2-wire 12–48 V ⎓, long case model

Sensing distance Sn, mm (in.)	Function	Connection	Catalog Number	Weight kg	(lb)
Ø 8, threaded M8 x 1					
1.5 (0.06)	NO	Pre-cabled *(1)*	**XS508B1DAL2**	0.035	(0.08)
		Remote M12 connector	**XS508B1DAL08M12**	0.050	(0.11)
		M12 connector	**XS508B1DAM12**	0.025	(0.06)
	NO terminals 1 & 4 *(3)*	M12 connector	**XS508B1CAM12**	0.025	(0.06)
		Remote M12 connector	**XS508B1CAL08M12**	0.050	(0.11)
	NC	Pre-cabled *(1)*	**XS508B1DBL2**	0.035	(0.08)
		M12 connector	**XS508B1DBM12**	0.025	(0.06)
Ø 12, threaded M12 x 1					
2 (0.08)	NO	Pre-cabled *(1)*	**XS512B1DAL2**	0.075	(0.17)
		Remote 7/8" connector	**XS512B1DAL08U78**	0.050	(0.11)
		M12 connector	**XS512B1DAM12**	0.035	(0.08)
	NO terminals 1 & 4 *(3)*	M12 connector	**XS512B1CAM12**	0.035	(0.08)
		Remote M12 connector	**XS512B1CAL08M12**	0.060	(0.13)
	NC	Pre-cabled *(1)*	**XS512B1DBL2**	0.075	(0.17)
		M12 connector	**XS512B1DBM12**	0.035	(0.08)
		Remote M12 connector	**XS512B1DBL08M12**	0.060	(0.13)
Ø 18, threaded M18 x 1					
5 (0.20)	NO	Pre-cabled *(1)*	**XS518B1DAL2**	0.120	(0.26)
		Low temperature version (- 40 °C)	**XS518B1DAL2TF** *(4)*	0.120	(0.26)
		Remote screw terminal connector *(2)*	**XS518B1DAL01B**	0.085	(0.19)
		Remote DIN 43650A connector	**XS518B1DAL01C**	0.085	(0.19)
		Remote M18 connector	**XS518B1DAL01G**	0.085	(0.19)
		M12 connector	**XS518B1DAM12**	0.060	(0.13)
	NO terminals 1 & 4 *(3)*	M12 connector	**XS518B1CAM12**	0.060	(0.13)
		Remote M12 connector	**XS518B1CAL08M12**	0.085	(0.19)
	NC	Pre-cabled *(1)*	**XS518B1DBL2**	0.120	(0.26)
		M12 connector	**XS518B1DBM12**	0.060	(0.13)
		Remote M12 connector	**XS518B1DBL08M12**	0.085	(0.19)
		Remote screw terminal connector *(2)*	**XS518B1DBL01B**	0.120	(0.26)
Ø 30, threaded M30 x 1.5					
10 (0.39)	NO	Pre-cabled *(1)*	**XS530B1DAL2**	0.205	(0.45)
		Low temperature version (- 40 °C)	**XS530B1DAL2TF** *(4)*	0.120	(0.26)
		M12 connector	**XS530B1DAM12**	0.145	(0.32)
		Remote screw terminal connector *(2)*	**XS530B1DAL01B**	0.205	(0.45)
		Remote DIN 43650A connector	**XS530B1DAL01C**	0.205	(0.45)
		Remote M18 connector	**XS530B1DAL01G**	0.205	(0.45)
	NO terminals 1 & 4 *(3)*	M12 connector	**XS530B1CAM12**	0.145	(0.32)
		Remote M12 connector	**XS530B1CAL08M12**	0.170	(0.37)
	NC	Pre-cabled *(1)*	**XS530B1DBL2**	0.205	(0.45)
		M12 connector	**XS530B1DBM12**	0.145	(0.32)
		Remote screw terminal connector *(2)*	**XS530B1DBL01B**	0.205	(0.37)

Accessories

Description	For use with sensors	Catalog Number	Weight kg	(lb)
Mounting clamps	Ø 8	**XSZB108**	0.006	(0.01)
	Ø 12	**XSZB112**	0.006	(0.01)
	Ø 18	**XSZB118**	0.010	(0.02)
	Ø 30	**XSZB130**	0.020	(0.04)

*(1) For a 5 m cable replace L2 with **L5**; for a 10 m long cable replace L2 with **L10**.*
*Example: XS508B1DAL2 becomes **XS508B1DAL5** with a 5 m long cable.*
(2) Protective cable gland included with remote screw terminal connector.
(3) The NO output is connected to terminals 1 and 4 of the M12 connector.
*(4) For a 5 m long cable replace L2 with **L5**.*
*Example: XS518B1DAL2TF becomes **XS518B1DAL5TF** with a 5 m long cable.*
*For PUR cable, replace the letter L in the reference with **P**.*
*Example: XS518B1DAL2TF becomes **XS518B1DAP2TF** with PUR cable.*
*For a 5 m long PUR cable replace P2 with **P5**.*
*Example: XS518B1DAP2TF becomes **XS518B1DAP5TF** with a 5 m long PUR cable.*

OsiSense® Inductive proximity sensors

General purpose
Cylindrical, standard range, flush mountable
Two-wire DC

Specifications

Sensor type			XS5●●B1●●M12, XS5●●BS●●M12	XS5●●B1D●L2, XS5●●BSD●L2
Product certifications			UL, CSA, CE	
Connection	Connector		M12	–
	Pre-cabled		–	Length 2 m
	Remote connector		Remote M12 connector (L01M12), screw terminal (L01B), DIN 43650A (L01C) and remote M18 connector (L01G) on 0.15 m flying lead. Remote M12 (L08M12) or 7/8" (L08U78) connector on 0.80 m flying lead.	
Operating zone	Ø 6.5	**mm**	0–1.2 (0–0.05 in.)	
	Ø 8	**mm**	0–1.2 (0–0.05 in.)	
	Ø 12	**mm**	0–1.6 (0–0.06 in.)	
	Ø 18	**mm**	0–4 (0–0.16 in.)	
	Ø 30	**mm**	0–8 (0–0.31 in.)	
Differential travel		**%**	1–15 of effective sensing distance (Sr)	
Degree of protection	Conforming to IEC 60529		IP 65 and IP 67	IP 65 and ⧈ IP 68, double insulation (except Ø 6.5 and Ø 8: IP 67)
Storage temperature		**°C**	-40 to +85 (-40 to +185 °F)	
Operating temperature		**°C**	-25 to +70 (-13 to +158 °F) ; TF products: - 40 to + 70 (-40 to +158°F)	
Materials	Case		Nickel plated brass (except XS506 and XS508B1: stainless steel, grade 303)	
	Sensing face		PPS	
	Cable		–	PvR 2 x 0.34 mm² (22 AWG) except XS506 and XS508: 2 x 0.11 mm² (27 AWG) PUR available *(1)*
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: circular
Rated supply voltage		**V**	⎓ 12–48 non-polarized for XS5●●B1D, ⎓ 12–24 non-polarized for XS5●●BS (except Ø 6.5 and Ø 8 short case models, which are polarized) with protection against reverse polarity	
Voltage limits (including ripple)		**V**	⎓ 10–58 for XS5●●B1D, ⎓ 10–36 for XS5●●BS	
Switching capacity		**mA**	1.5–100 with overload and short-circuit protection	
Voltage drop, closed state		**V**	≤ 4	
Residual current, open state		**mA**	≤ 0.5	
Maximum switching frequency	**XS506, XS508, XS512**	**Hz**	4000	
	XS518	**Hz**	3000	
	XS530	**Hz**	2000	
Delays	First-up	**ms**	≤ 10	
	Response	**ms**	≤ 0.2 : **XS506, XS508** and **XS512** ≤ 0.15 : **XS518** ≤ 0.3 : **XS530**	
	Recovery	**ms**	≤ 0.2 (except **XS530B1**: ≤ 0.3)	

*(1) For PUR cable, replace the letter L in the reference with **P**. Example: XS506BSDAL2 becomes **XS5 06BSDAP2** with PUR cable.*

OsiSense® Inductive proximity sensors

General purpose
Cylindrical, standard range, flush mountable
Two-wire DC

Wiring diagrams

Connector

M12

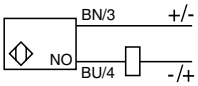
Pre-cabled

BU: Blue
BN: Brown

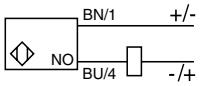
2-wire ⎓ non-polarized

NO output

XS5●●B1DA●●●

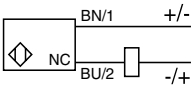


XS5●●B1CA●●●



NC output

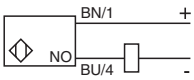
XS5●●B1DB●●●



2-wire ⎓ polarized

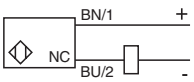
NO output

XS508BSCA●●●



NC output

XS508BSCB●●●

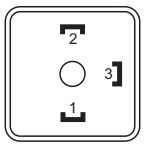


Remote connectors LO1B, LO1C, LO1G

Screw terminal (LO1B)

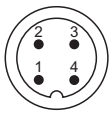
The terminal numbering differs according to the version (⎓ 2-wire, ⎓ 3-wire, ∿ 2-wire).

DIN 43650 A (LO1C)



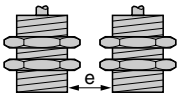
The NO or NC outputs are connected to terminal 2.

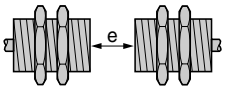
M18 (LO1G)

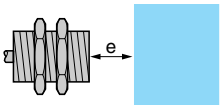


Setup

Minimum mounting distances (mm)

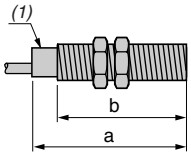






	Side by side	Face to face	Facing a metal object
Ø 6.5	e ≥ 3	e ≥ 18	e ≥ 4.5
Ø 8	e ≥ 3	e ≥ 18	e ≥ 4.5
Ø 12	e ≥ 4	e ≥ 24	e ≥ 6
Ø 18	e ≥ 10	e ≥ 60	e ≥ 15
Ø 30	e ≥ 20	e ≥ 120	e ≥ 30

Dimensions (mm)



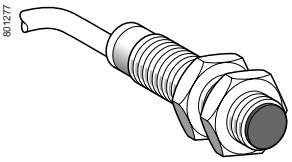
(1) LED

Sensors		Pre-cabled (mm)		M8 connector (mm)		M12 connector (mm)	
Short case model		**a**	**b**	**a**	**b**	**a**	**b**
Ø 6.5	**XS506BS**	33	–	42	–	45	–
Ø 8	**XS508BS**	33	25	42	26	45	24
Ø 12	**XS512BS**	35	25	–	–	50	30
Ø 18	**XS518BS**	39	28	–	–	50	28
Ø 30	**XS530BS**	43	32	–	–	55	32

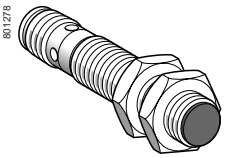
Sensors		Pre-cabled (mm)		M12 connector (mm)	
Long case model		**a**	**b**	**a**	**b**
Ø 8	**XS508B1**	51	42	62	40
Ø 12	**XS512B1**	53	42	62	42
Ø 18	**XS518B1**	62	52	74	52
Ø 30	**XS530B1**	62	52	74	52

OsiSense® Inductive proximity sensors

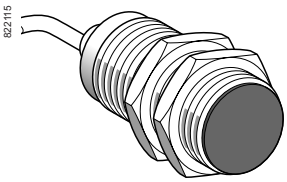
General purpose
Cylindrical, standard range, flush mountable
Two-wire AC or DC *(1)*



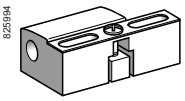
XS5●●B1M●L2



XS5●●B1M●U20



XS530B1●●L2



XSZB1●●

Sensors, 2-wire 24–240 V ∿, long case model

Ø 12, threaded M12 x 1

Sensing distance Sn, mm (in.)	Function	Connection	Catalog Number	Weight kg	(lb)
2 (0.08)	NO	Pre-cabled *(1)*	**XS512B1MAL2**	0.075	(0.17)
		1/2"-20UNF connector	**XS512B1MAU20**	0.025	(0.06)
	NC	Pre-cabled *(1)*	**XS512B1MBL2**	0.075	(0.17)
		1/2"-20UNF connector	**XS512B1MBU20**	0.025	(0.06)

Ø 18, threaded M18 x 1

Sensing distance Sn, mm (in.)	Function	Connection	Catalog Number	Weight kg	(lb)
5 (0.20)	NO	Pre-cabled *(1)*	**XS518B1MAL2**	0.100	(0.22)
		1/2"-20UNF connector	**XS518B1MAU20**	0.060	(0.13)
	NC	Pre-cabled *(1)*	**XS518B1MBL2**	0.100	(0.22)
		1/2"-20UNF connector	**XS518B1MBU20**	0.060	(0.13)

Ø 30, threaded M30 x 1.5

Sensing distance Sn, mm (in.)	Function	Connection	Catalog Number	Weight kg	(lb)
10 (0.39)	NO	Pre-cabled *(1)*	**XS530B1MAL2**	0.205	(0.45)
		1/2"-20UNF connector	**XS530B1MAU20**	0.145	(0.32)
	NC	Pre-cabled *(1)*	**XS530B1MBL2**	0.205	(0.45)
		1/2"-20UNF connector	**XS530B1MBU20**	0.145	(0.32)

Accessories

Description	For use with sensors	Catalog Number	Weight kg	(lb)
Mounting clamps	Ø 12	**XSZB112**	0.006	(0.01)
	Ø 18	**XSZB118**	0.010	(0.02)
	Ø 30	**XSZB130**	0.020	(0.04)

*(1) For a 5 m long cable replace L2 with **L5**; for a 10 m cable replace L2 with **L10**.*
*Example: XS512B1MAL2 becomes **XS512B1MAL5** with a 5 m cable.*

OsiSense® Inductive proximity sensors

General purpose
Cylindrical, standard range, flush mountable
Two-wire AC or DC

Specifications

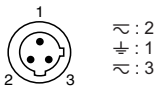
Sensor type			XS5●●B1M●U20	XS5●●B1M●L2
Product certifications			UL, CSA, CE	
Connection	Connector		1/2"-20UNF	–
	Pre-cabled		–	Length 2 m
Operating zone	Ø 12	**mm**	0–1.6 (0–0.05 in.)	
	Ø 18	**mm**	0–4 (0–0.16 in.)	
	Ø 30	**mm**	0–8 (0–0.31 in.)	
Differential travel		**%**	1–15 of effective sensing distance (Sr)	
Degree of protection	Conforming to IEC 60529		IP 65 and IP 67	IP 65 and IP 68, double insulation ⧈
	Conforming to DIN 40050		IP 69K	
Storage temperature		**°C**	-40 to +85 (-40 to +185 °F)	
Operating temperature		**°C**	-25 to +70 (-13 to +158 °F)	
Materials	Case		Nickel plated brass	
	Sensing face		PPS	
	Cable		–	PvR 2 x 0.34 mm ² (22 AWG)
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: circular
Rated supply voltage		**V**	∿ or ⎓ 24–240 (∿ 50/60 Hz)	
Voltage limits (including ripple)		**V**	∿ or ⎓ 20–264	
Switching capacity	**XS512B1M●●●**	**mA**	5–200 *(1)*	
	XS518B1M●●●, XS530B1M●●●	**mA**	∿ 5–300 or ⎓ 5–200 *(1)*	
Voltage drop, closed state		**V**	≤ 5.5	
Residual current, open state		**mA**	≤ 0.8	
Maximum switching frequency	**XS512B1●●●, XS518B1M●●●**	**Hz**	∿ 25 or ⎓ 1000	
	XS530B1M●●●	**Hz**	∿ 25 or ⎓ 500	
Delays	First-up	**ms**	≤ 20 **XS512B1M●●●**, ≤ 25 **XS518B1M●●●** and **XS530B1M●●●**	
	Response	**ms**	≤ 0.5	
	Recovery	**ms**	≤ 0.2 **XS512B1M●●●**, ≤ 0.5 **XS518B1M●●●**, ≤ 2 **XS530B1M●●●**	

(1) A 0.4 A "fast-acting" fuse must be connected in series with the load.

Wiring diagrams

Connector

1/2"-20UNF

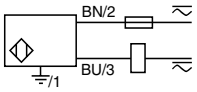


Pre-cabled

BU: Blue
BN: Brown

2-wire ∿ or ⎓

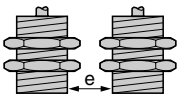
NO or NC output

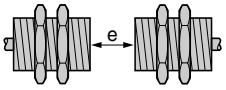


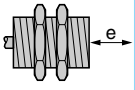
⏚: on connector models only

Setup

Minimum mounting distances (mm)

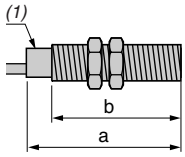






Sensor	Side by side	Face to face	Facing a metal object
Ø 12	e ≥ 8	e ≥ 48	e ≥ 12
Ø 18	e ≥ 16	e ≥ 100	e ≥ 25
Ø 30	e ≥ 30	e ≥ 180	e ≥ 45

Dimensions (mm)



Sensor	Pre-cabled (mm)		Connector (mm)	
	a	b	a	b
XS512B1M	53	42	62	42
XS518B1M	62	52	73	52
XS530B1M	62	52	73	52

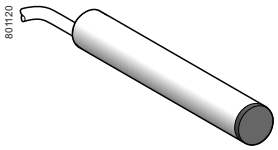
(1) LED

OsiSense® Inductive proximity sensors

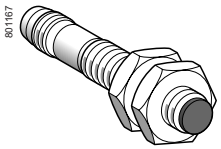
General purpose

Cylindrical, increased range, flush mountable

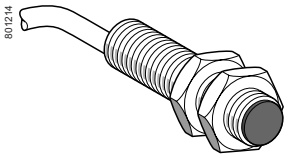
Three-wire DC, solid-state output



XS106B3●●L2



XS108B3●●M8



XS112B3●●L2

Sensors, 3-wire 12–24 V ⎓, short case model

Sensing distance Sn, mm (in.)	Function	Output	Connection	Sold in lots of	Catalog Number	Weight kg	(lb)
Ø 6.5, plain							
2.5 (0.10)	NO	PNP	Pre-cabled *(1)*	1	**XS106B3PAL2**	0.060	(0.13)
			M8 connector	1	**XS106B3PAM8**	0.030	(0.07)
			M12 connector	1	**XS106B3PAM12**	0.050	(0.11)
			Pre-cabled	20	**XS106B3PAL2TQ**	0.980	(2.16)
			M8 connector	20	**XS106B3PAM8TQ**	0.320	(0.71)
		NPN	Pre-cabled	1	**XS106B3NAL2**	0.060	(0.13)
			M8 connector	1	**XS106B3NAM8**	0.030	(0.07)
	NC	PNP	Pre-cabled *(1)*	1	**XS106B3PBL2**	0.060	(0.13)
			M8 connector	1	**XS106B3PBM8**	0.030	(0.07)
		NPN	Pre-cabled	1	**XS106B3NBL2**	0.060	(0.13)
			M8 connector	1	**XS106B3NBM8**	0.030	(0.07)
Ø 8, threaded M8 x 1							
2.5 (0.10)	NO	PNP	Pre-cabled *(1)*	1	**XS108B3PAL2**	0.070	(0.15)
			M8 connector	1	**XS108B3PAM8**	0.030	(0.07)
			M12 connector	1	**XS108B3PAM12**	0.060	(0.13)
			Pre-cabled	20	**XS108B3PAL2TQ**	1.120	(2.47)
			M8 connector	20	**XS108B3PAM8TQ**	0.460	(1.01)
			M12 connector	20	**XS108B3PAM12TQ**	0.940	(2.07)
		NPN	Pre-cabled *(1)*	1	**XS108B3NAL2**	0.070	(0.15)
			M8 connector	1	**XS108B3NAM8**	0.030	(0.07)
			M12 connector	1	**XS108B3NAM12**	0.060	(0.13)
			Pre-cabled	20	**XS108B3NAL2TQ**	1.120	(2.47)
			M8 connector	20	**XS108B3NAM8TQ**	0.460	(1.01)
	NC	PNP	Pre-cabled *(1)*	1	**XS108B3PBL2**	0.070	(0.15)
			M8 connector	1	**XS108B3PBM8**	0.030	(0.07)
			M12 connector	1	**XS108B3PBM12**	0.060	(0.13)
		NPN	Pre-cabled *(1)*	1	**XS108B3NBL2**	0.070	(0.15)
			M8 connector	1	**XS108B3NBM8**	0.030	(0.07)
			M12 connector	1	**XS108B3NBM12**	0.060	(0.13)
Ø 12, threaded M12 x 1							
4 (0.16)	NO	PNP	Pre-cabled *(1)*	1	**XS112B3PAL2**	0.090	(0.20)
			M12 connector	1	**XS112B3PAM12**	0.030	(0.07)
			Pre-cabled	20	**XS112B3PAL2TQ**	1.600	(3.53)
			M12 connector	20	**XS112B3PAM12TQ**	0.470	(1.04)
		NPN	Pre-cabled *(1)*	1	**XS112B3NAL2**	0.090	(0.20)
			M12 connector	1	**XS112B3NAM12**	0.030	(0.07)
			Pre-cabled	20	**XS112B3NAL2TQ**	1.600	(3.53)
			M12 connector	20	**XS112B3NAM12TQ**	0.470	(1.04)
	NC	PNP	Pre-cabled *(1)*	1	**XS112B3PBL2**	0.090	(0.20)
			M12 connector	1	**XS112B3PBM12**	0.030	(0.07)
			M12 connector	20	**XS112B3PBM12TQ**	0.470	(1.04)
		NPN	Pre-cabled *(1)*	1	**XS112B3NBL2**	0.090	(0.20)
			M12 connector	1	**XS112B3NBM12**	0.030	(0.07)

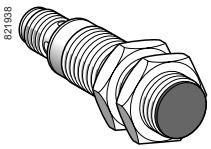
*(1) For a 5 m cable replace L2 with **L5**.*
*Example: XS106B3PAL2 becomes **XS106B3PAL5** with a 5 m cable.*

OsiSense® Inductive proximity sensors

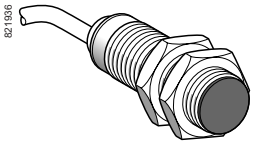
General purpose

Cylindrical, increased range, flush mountable

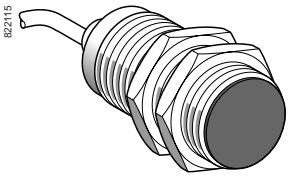
Three-wire DC, solid-state output



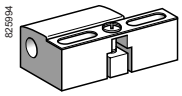
XS118B3●●M12



XS118B3●●L2



XS130B3●●L2



XSZB1●●

Sensors, 3-wire 12–24 V ⎓, short case model *(continued)*

Sensing distance Sn, mm (in.)	Function	Output	Connection	Sold in lots of	Catalog Number	Weight kg	(lb)
Ø 18, threaded M18 x 1							
8 (0.31)	NO	PNP	Pre-cabled *(1)*	1	**XS118B3PAL2**	0.110	(0.24)
			M12 connector	1	**XS118B3PAM12**	0.060	(0.13)
			Pre-cabled	20	**XS118B3PAL2TQ**	2.000	(4.41)
			M12 connector	20	**XS118B3PAM12TQ**	1.140	(2.51)
		NPN	Pre-cabled *(1)*	1	**XS118B3NAL2**	0.110	(0.24)
			M12 connector	1	**XS118B3NAM12**	0.060	(0.13)
			Pre-cabled	20	**XS118B3NAL2TQ**	2.000	(4.41)
			M12 connector	20	**XS118B3NAM12TQ**	1.140	(2.51)
	NC	PNP	Pre-cabled *(1)*	1	**XS118B3PBL2**	0.110	(0.24)
			M12 connector	1	**XS118B3PBM12**	0.060	(0.13)
		NPN	Pre-cabled *(1)*	1	**XS118B3NBL2**	0.110	(0.24)
			M12 connector	1	**XS118B3NBM12**	0.060	(0.13)
Ø 30, threaded M30 x 1.5							
15 (0.59)	NO	PNP	Pre-cabled *(1)*	1	**XS130B3PAL2**	0.180	(0.40)
			M12 connector	1	**XS130B3PAM12**	0.130	(0.29)
			Pre-cabled	20	**XS130B3PAL2TQ**	3.360	(7.41)
			M12 connector	20	**XS130B3PAM12TQ**	2.000	(4.41)
		NPN	Pre-cabled *(1)*	1	**XS130B3NAL2**	0.180	(0.40)
			M12 connector	1	**XS130B3NAM12**	0.130	(0.29)
			M12 connector	20	**XS130B3NAM12TQ**	2.000	(4.41)
	NC	PNP	Pre-cabled *(1)*	1	**XS130B3PBL2**	0.180	(0.40)
			M12 connector	1	**XS130B3PBM12**	0.130	(0.29)
		NPN	Pre-cabled *(1)*	1	**XS130B3NBL2**	0.180	(0.40)
			M12 connector	1	**XS130B3NBM12**	0.130	(0.29)

Accessories

Description	For use with sensors	Catalog Number	Weight kg	(lb)
Mounting clamps	Ø 6.5 (plain)	**XSZB165**	0.005	(0.01)
	Ø 8 (M8 x 1)	**XSZB108**	0.006	(0.01)
	Ø 12 (M12 x 1)	**XSZB112**	0.006	(0.01)
	Ø 18 (M18 x 1)	**XSZB118**	0.010	(0.02)
	Ø 30 (M30 x 1.5)	**XSZB130**	0.020	(0.04)

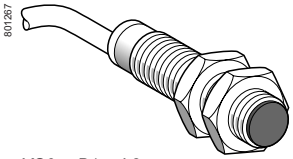
*(1) For a 5 m long cable replace L2 with **L5**.*
*Example: XS118B3PAL2 becomes **XS118B3PAL5** with a 5 m long cable.*

OsiSense® Inductive proximity sensors

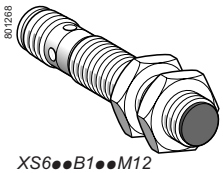
General purpose

Cylindrical, increased range, flush mountable

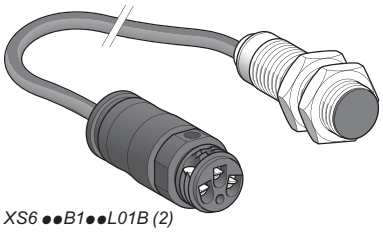
Three-wire DC, solid-state output



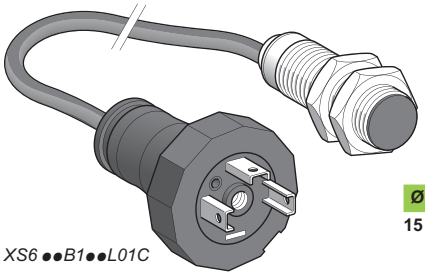
XS6●●B1●●L2



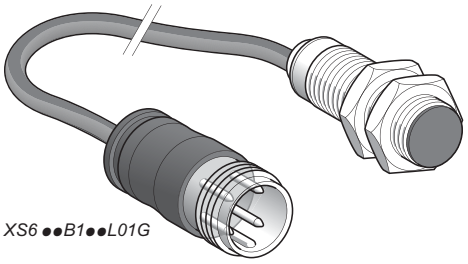
XS6●●B1●●M12



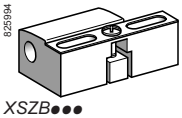
XS6 ●●B1●●L01B (2)



XS6 ●●B1●●L01C



XS6 ●●B1●●L01G



XSZB●●●

Sensors, 3-wire 12–48 V ⎓, long case model

Sensing dist. Sn, mm (in.)	Function	Output	Connection	Catalog Number	Weight kg	(lb)
Ø 8, threaded M8 x 1						
2.5 (0.10)	NO	PNP	Pre-cabled *(1)*	**XS608B1PAL2**	0.035	(0.08)
			M12 connector	**XS608B1PAM12**	0.015	(0.03)
		NPN	Pre-cabled *(1)*	**XS608B1NAL2**	0.035	(0.08)
			M12 connector	**XS608B1NAM12**	0.015	(0.03)
	NC	PNP	Pre-cabled *(1)*	**XS608B1PBL2**	0.035	(0.08)
			M12 connector	**XS608B1PBM12**	0.015	(0.03)
		NPN	Pre-cabled *(1)*	**XS608B1NBL2**	0.035	(0.08)
			M12 connector	**XS608B1NBM12**	0.015	(0.03)
Ø 12, threaded M12 x 1						
4 (0.16)	NO	PNP	Pre-cabled *(1)*	**XS612B1PAL2**	0.075	(0.17)
			M12 connector	**XS612B1PAM12**	0.020	(0.04)
		NPN	Pre-cabled *(1)*	**XS612B1NAL2**	0.075	(0.17)
			M12 connector	**XS612B1NAM12**	0.020	(0.04)
	NC	PNP	Pre-cabled *(1)*	**XS612B1PBL2**	0.075	(0.17)
			M12 connector	**XS612B1PBM12**	0.020	(0.04)
		NPN	Pre-cabled *(1)*	**XS612B1NBL2**	0.075	(0.17)
			M12 connector	**XS612B1NBM12**	0.020	(0.04)
Ø 18, threaded M18 x 1						
8 (0.31)	NO	PNP	Pre-cabled *(1)*	**XS618B1PAL2**	0.100	(0.22)
			M12 connector	**XS618B1PAM12**	0.040	(0.09)
			Remote screw term. connector	**XS618B1PAL01B** *(2)*	0.100	(0.22)
			Remote DIN 43650 connector	**XS618B1PAL01C**	0.100	(0.22)
			Remote M18 connector	**XS618B1PAL01G**	0.100	(0.22)
		NPN	Pre-cabled *(1)*	**XS618B1NAL2**	0.100	(0.22)
			M12 connector	**XS618B1NAM12**	0.040	(0.09)
			Remote screw term. connector	**XS618B1NAL01B** *(2)*	0.100	(0.22)
			Remote DIN 43650 connector	**XS618B1NAL01C**	0.100	(0.22)
	NC	PNP	Pre-cabled *(1)*	**XS618B1PBL2**	0.100	(0.22)
			M12 connector	**XS618B1PBM12**	0.040	(0.09)
			Remote screw term. connector	**XS618B1PBL01B** *(2)*	0.100	(0.22)
			Remote DIN 43650 connector	**XS618B1PBL01C**	0.100	(0.22)
		NPN	Pre-cabled *(1)*	**XS618B1NBL2**	0.100	(0.22)
			M12 connector	**XS618B1NBM12**	0.040	(0.09)
			Remote screw term. connector	**XS618B1NBL01B** *(2)*	0.100	(0.22)
			Remote DIN 43650 connector	**XS618B1NBL01C**	0.100	(0.22)
Ø 30, threaded M30 x 1.5						
15 (0.59)	NO	PNP	Pre-cabled *(1)*	**XS630B1PAL2**	0.205	(0.45)
			M12 connector	**XS630B1PAM12**	0.145	(0.32)
			Remote screw term. connector	**XS630B1PAL01B** *(2)*	0.205	(0.45)
			Remote DIN 43650 connector	**XS630B1PAL01C**	0.205	(0.45)
			Remote M18 connector	**XS630B1PAL01G**	0.205	(0.45)
		NPN	Pre-cabled *(1)*	**XS630B1NAL2**	0.205	(0.45)
			M12 connector	**XS630B1NAM12**	0.145	(0.32)
			Remote screw term. connector	**XS630B1NAL01B** *(2)*	0.205	(0.45)
			Remote DIN 43650 connector	**XS630B1NAL01C**	0.205	(0.45)
	NC	PNP	Pre-cabled *(1)*	**XS630B1PBL2**	0.205	(0.45)
			M12 connector	**XS630B1PBM12**	0.145	(0.32)
			Remote screw term. connector	**XS630B1PBL01B** *(2)*	0.205	(0.45)
			Remote DIN 43650 connector	**XS630B1PBL01C**	0.205	(0.45)
			Remote M18 connector	**XS630B1PBL01G**	0.205	(0.45)
		NPN	Pre-cabled *(1)*	**XS630B1NBL2**	0.205	(0.45)
			M12 connector	**XS630B1NBM12**	0.145	(0.32)
			Remote screw term.connector	**XS630B1NBL01B** *(2)*	0.205	(0.45)
			Remote DIN 43650 connector	**XS630B1NBL01C**	0.205	(0.45)

Accessories

Description	For use with sensors	Catalog Number	Weight kg	(lb)
Mounting clamps	Ø 8	**XSZB108**	0.006	(0.01)
	Ø 12	**XSZB112**	0.006	(0.01)
	Ø 18	**XSZB118**	0.010	(0.02)
	Ø 30	**XSZB130**	0.020	(0.02)

*(1) For a 5 m cable replace L2 with **L5**; for a 10 m cable replace L2 with **L10**.*
*Example: XS608B1PAL2 becomes **XS608B1PAL5** with a 5 m cable.*
(2) Protective cable gland included with remote screw terminal connector.

OsiSense® Inductive proximity sensors

General purpose
Cylindrical, increased range, flush mountable
Three-wire DC, solid-state output

Specifications

Sensor type			XS1/XS6●●B●●●M8	XS1/XS6●●B●●●M12	XS1/XS6●●B●●●L2
Product certifications			UL, CSA, CE		
Connection	Connector		M8	M12	–
	Pre-cabled		–	–	Length 2 m
	Remote connector		Remote screw terminal (L01B), DIN 43650 (L01C) or M18 connector (L01G) on 0.15 m flying lead		
Operating zone	Ø 6.5 and Ø 8	**mm**	0–2 (0–0.08 in.)		
	Ø 12	**mm**	0–3.2 (0–0.13 in.)		
	Ø 18	**mm**	0–6.4 (0–0.25 in.)		
	Ø 30	**mm**	0–12 (0–0.47 in.)		
Differential travel		**%**	1–15 of effective sensing distance (Sr)		
Degree of protection	Conforming to IEC 60529		IP 65 and IP 67		IP 65 and IP 68, double insulation ⧈ except Ø 6.5 and Ø 8: IP 67
	Conforming to DIN 40050		IP 69K for Ø 12, 18 and 30 sensors		
Storage temperature		**°C**	-40 to +85 (-40 to +185 °F)		
Operating temperature		**°C**	-25 to +70 (-13 to +158 °F)		
Materials	Case		Nickel plated brass (except **XS608**: stainless steel, grade 303)		
	Sensing face		PPS		
	Cable		–		PvR 3 x 0.34 mm² (22 AWG) except Ø 6.5 and 8: 3 x 0.11 mm (27 AWG)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, circular
Rated supply voltage		**V**	**XS1**: ⎓ 12–24 with protection against reverse polarity **XS6**: ⎓ 12–48 with protection against reverse polarity		
Voltage limits (including ripple)		**V**	**XS1**: ⎓ 10–36; **XS6**: ⎓ 10–58		
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	Ø 6.5, Ø 8 and Ø 12	**Hz**	2500		
	Ø 18	**Hz**	1000		
	Ø 30	**Hz**	500		
Delays	First-up	**ms**	≤ 10		
	Response	**ms**	≤ 0.2 for Ø 6.5, Ø 8 and Ø 12, ≤ 0.3 for Ø 18, ≤ 0.6 for Ø 30		
	Recovery	**ms**	≤ 0.2 for Ø 6.5, Ø 8 and Ø 12, ≤ 0.7 for Ø 18, ≤ 1.4 for Ø 30		

Wiring diagrams

Connector

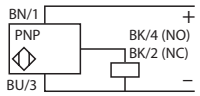
M8

M12

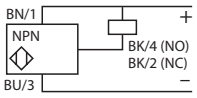
Pre-cabled

BU: Blue
BN: Brown
BK: Black

PNP



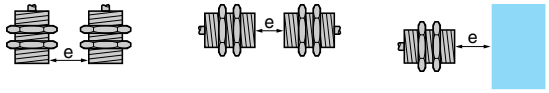
NPN



For M8 connector, NO and NC outputs on terminal 4

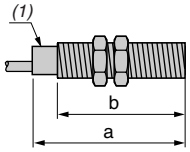
Setup

Minimum mounting distances (mm)



Sensors	Side by side	Face to face	Facing a metal object
Ø 6.5	e ≥ 5	e ≥ 30	e ≥ 8
Ø 8	e ≥ 5	e ≥ 30	e ≥ 8
Ø 12	e ≥ 8	e ≥ 50	e ≥ 12
Ø 18	e ≥ 16	e ≥ 100	e ≥ 24
Ø 30	e ≥ 30	e ≥ 180	e ≥ 45

Dimensions (mm)



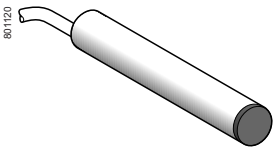
(1) LED

Sensors		Pre-cabled (mm)		M8 connector (mm)		M12 connector (mm)	
Short case model		**a**	**b**	**a**	**b**	**a**	**b**
Ø 6.5	**XS106B3**	33	–	42	–	45	–
Ø 8	**XS108B3**	33	25	42	26	45	24
Ø 12	**XS112B3**	35	25	–	–	50	30
Ø 18	**XS118B3**	39	28	–	–	50	28
Ø 30	**XS130B3**	43	32	–	–	55	32

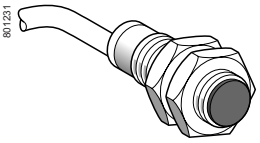
Sensors		Pre-cabled (mm)		M12 connector (mm)	
Long case model		**a**	**b**	**a**	**b**
Ø 8	**XS6 08B1**	51	42	62	40
Ø 12	**XS612B1**	53	42	62	42
Ø 18	**XS618B1**	62	52	74	52
Ø 30	**XS630B1**	62	52	74	52

OsiSense® Inductive proximity sensors

General purpose
Cylindrical, increased range, flush mountable
Two-wire DC, solid-state output


801120

XS606B3●●L2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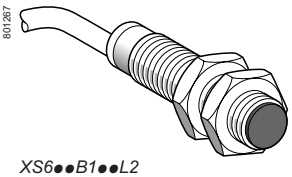
XS612B3●●L2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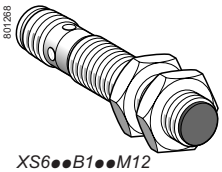
XS6●●B1●●L2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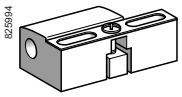
XS6●●B1●●M12


829994

XSZB1●●

Sensors, 2-wire 12–24 V ⎓, short case model

Sensing dist. Sn, mm (in.)	Function	Connection	Catalog Number	Weight kg	(lb)
Ø 6.5, plain					
2.5 (0.10)	NO	Pre-cabled *(1)*	**XS606B3CAL2**	0.060	(0.13)
		Remote M12 connector	**XS606B3CAL01M12**	0.070	(0.15)
	NC	Pre-cabled *(1)*	**XS606B3CBL2**	0.060	(0.13)
Ø 8, threaded M8 x 1					
2.5 (0.10)	NO	Pre-cabled *(1)*	**XS608B3CAL2**	0.070	(0.15)
		Remote M12 connector	**XS608B3CAL01M12**	0.070	(0.15)
	NC	Pre-cabled *(1)*	**XS608B3CBL2**	0.070	(0.15)
		Remote M12 connector	**XS608B3CBL01M12**	0.070	(0.15)
Ø 12, threaded M12 x 1					
4 (0.16)	NO	Pre-cabled *(1)*	**XS612B3DAL2**	0.090	(0.20)
		M12 connector	**XS612B3DAM12**	0.030	(0.07)
	NC	Pre-cabled *(1)*	**XS612B3DBL2**	0.090	(0.20)
		M12 connector	**XS612B3DBM12**	0.030	(0.07)
Ø 18, threaded M18 x 1					
8 (0.31)	NO	Pre-cabled *(1)*	**XS618B3DAL2**	0.110	(0.24)
		M12 connector	**XS618B3DAM12**	0.060	(0.13)
	NC	Pre-cabled *(1)*	**XS618B3DBL2**	0.110	(0.24)
		M12 connector	**XS618B3DBM12**	0.060	(0.13)
Ø 30, threaded M30 x 1.5					
15 (0.59)	NO	Pre-cabled *(1)*	**XS630B3DAL2**	0.180	(0.40)
		M12 connector	**XS630B3DAM12**	0.130	(0.29)
	NC	Pre-cabled *(1)*	**XS630B3DBL2**	0.180	(0.40)
		M12 connector	**XS630B3DBM12**	0.180	(0.40)

Sensors, 2-wire 12–48 V ⎓, long case model

Sensing dist. Sn, mm (in.)	Function	Connection	Catalog Number	Weight kg	(lb)
Ø 6.5, plain					
2.5 (0.10)	NO	Pre-cabled *(1)*	**XS606B1DAL2**	0.060	(0.13)
	NC	Pre-cabled *(1)*	**XS606B1DBL2**	0.060	(0.13)
Ø 8, threaded M8 x 1					
2.5 (0.10)	NO	Pre-cabled *(1)*	**XS608B1DAL2**	0.035	(0.08)
		M12 connector	**XS608B1DAM12**	0.015	(0.03)
	NC	Pre-cabled *(1)*	**XS608B1DBL2**	0.035	(0.08)
		M12 connector	**XS608B1DBM12**	0.015	(0.03)
Ø 12, threaded M12 x 1					
4 (0.16)	NO	Pre-cabled *(1)*	**XS612B1DAL2**	0.180	(0.40)
		M12 connector	**XS612B1DAM12**	0.020	(0.44)
	NC	Pre-cabled *(1)*	**XS612B1DBL2**	0.075	(0.17)
		M12 connector	**XS612B1DBM12**	0.020	(0.44)
Ø 18, threaded M18 x 1					
8 (0.31)	NO	Pre-cabled *(1)*	**XS618B1DAL2**	0.100	(0.22)
		M12 connector	**XS618B1DAM12**	0.040	(0.09)
	NC	Pre-cabled *(1)*	**XS618B1DBL2**	0.100	(0.22)
		M12 connector	**XS618B1DBM12**	0.040	(0.09)
Ø 30, threaded M30 x 1.5					
15 (0.59)	NO	Pre-cabled *(1)*	**XS630B1DAL2**	0.205	(0.45)
		M12 connector	**XS630B1DAM12**	0.145	(0.32)
	NC	Pre-cabled *(1)*	**XS630B1DBL2**	0.205	(0.45)
		M12 connector	**XS630B1DBM12**	0.145	(0.32)

Accessories

Description	For use with sensors	Catalog Number	Weight kg	(lb)
Mounting clamps	Ø 6.5 (plain)	**XSZB165**	0.005	(0.01)
	Ø 8 (M8 x 1)	**XSZB108**	0.006	(0.01)
	Ø 12 (M12 x 1)	**XSZB112**	0.006	(0.01)
	Ø 18 (M18 x 1)	**XSZB118**	0.010	(0.02)
	Ø 30 (M30 x 1.5)	**XSZB130**	0.020	(0.04)

*(1) For a 5 m cable replace L2 with **L5**.*
*Example: XS606B3CAL2 becomes **XS606B3CAL5** with a 5 m cable.*

OsiSense® Inductive proximity sensors

General purpose

Cylindrical, increased range, flush mountable

Two-wire DC, solid-state output

Specifications

Sensor type			XS6●●B3D●M12, XS6●●B1D●M12	XS6●●B3D●L2, XS6●●B1D●L2
Product certifications			UL, CSA, CE	
Connection	Connector		M12 or remote M12 connector (L01M12) on 0.15 m flying lead	
	Pre-cabled		Length 2 m	
Operating zone	Ø 6.5 and Ø 8	**mm**	0–2 (0–0.08 in.)	
	Ø 12	**mm**	0–3.2 (0–0.13 in.)	
	Ø 18	**mm**	0–6.4 (0–0.25 in.)	
	Ø 30	**mm**	0–12 (0–0.47 in.)	
Differential travel		**%**	1–15 of effective sensing distance (Sr)	
Degree of protection	Conforming to IEC 60529		IP 65 and IP 67	IP 65 and IP 68 double isolation ⧈ (except Ø 6.5 and Ø 8: IP 67)
	Conforming to DIN 40050		IP 69K	
Storage temperature		**°C**	-40 to +85 (-40 to +185 °F)	
Operating temperature		**°C**	-25 to +70 (-13 to +158 °F)	
Materials	Case		Nickel plated brass (except **XS606B1D** or **XS608B1D**: stainless steel, grade 303)	
	Sensing face		PPS	
	Cable		PvR 2 x 0.34 mm² (22 AWG) except Ø 6.5 and Ø 8: 2 x 0.11 mm² (27 AWG)	
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°	
Rated supply voltage		**V**	⎓ 12–48 non-polarized for XS6●●B1D, ⎓ 12–24 non-polarized for XS6●●B3D (except Ø 6.5 and Ø 8 short case models, which are polarized), with protection against reverse polarity	
Voltage limits (including ripple)		**V**	⎓ 10–58 for XS6●●B1D ⎓ 10–36 for XS6●●B3D	
Switching capacity		**mA**	≤ 100 with overload and short-circuit protection	
Voltage drop, closed state		**V**	4	
Current consumption, no-load		**mA**	≤ 0.5 mA	
Maximum switching frequency	Ø 6.5, Ø 8	**Hz**	3000	
	Ø 12	**Hz**	2000	
	Ø 18	**Hz**	1000	
	Ø 30	**Hz**	500	
Delays	First-up	**ms**	≤ 10	
	Response	**ms**	≤ 0.3	
	Recovery	**ms**	≤ 0.3	

Wiring diagrams

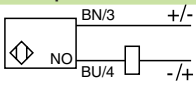
M12 connector

Pre-cabled

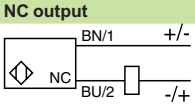
BU: Blue
BN: Brown

2-wire ⎓ non-polarized

NO output

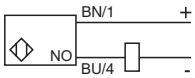


NC output

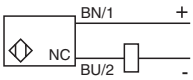


2-wire ⎓ polarized

XS6●●B3CA

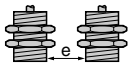


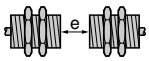
XS6●●B3CB



Setting-up

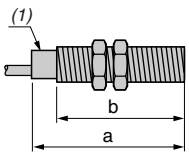
Minimum mounting distances (mm)





Sensors	Side by side	Face to face	Facing a metal object
Ø 6.5	e ≥ 5	e ≥ 30	e ≥ 8
Ø 8	e ≥ 5	e ≥ 30	e ≥ 8
Ø 12	e ≥ 8	e ≥ 50	e ≥ 12
Ø 18	e ≥ 16	e ≥ 100	e ≥ 25
Ø 30	e ≥ 30	e ≥ 180	e ≥ 45

Dimensions (mm)



(1) LED

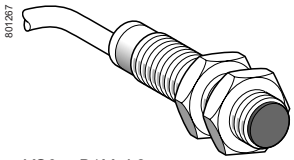
Sensors		Pre-cabled (mm)		M12 connector (mm)	
Short case model		**a**	**b**	**a**	**b**
Ø 6.5	**XS606B3D**	33	–	–	–
Ø 8	**XS608B3D**	33	25	–	24
Ø 12	**XS612B3D**	35	25	50	30
Ø 18	**XS618B3D**	39	28	50	28
Ø 30	**XS630B3D**	43	32	55	32
Long case model		**a**	**b**	**a**	**b**
Ø 6.5	**XS606B1D**	51	–	–	–
Ø 8	**XS608B1D**	51	42	62	40
Ø 12	**XS612B1D**	53	42	62	42
Ø 18	**XS618B1D**	62	52	74	52
Ø 30	**XS630B1D**	62	52	74	52

OsiSense® Inductive proximity sensors

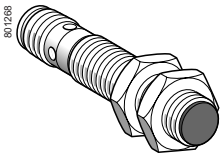
General purpose

Cylindrical, increased range, flush mountable

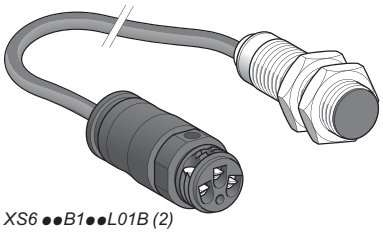
Two-wire AC or DC *(1)*



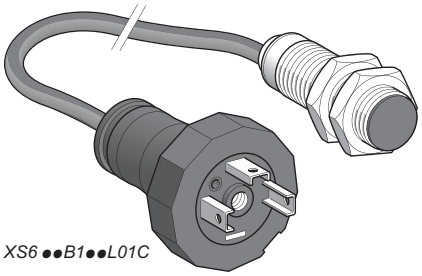
XS6●●B1M●L2



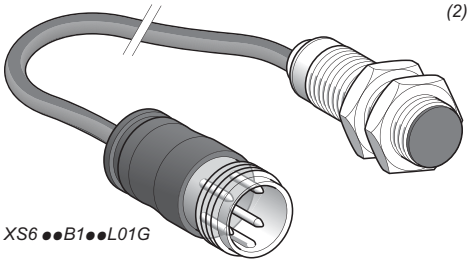
XS6●●B1●●U20



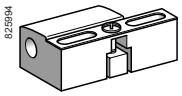
XS6 ●●B1●●L01B (2)



XS6 ●●B1●●L01C



XS6 ●●B1●●L01G



XSZB1●●

Sensors, 2-wire 24–240 V ⎓, long case model

Sensing distance Sn, mm (in.)	Function	Connection	Catalog Number	Weight kg	(lb)
Ø 12, threaded M12 x 1					
4 (0.16)	NO	Pre-cabled *(1)*	**XS612B1MAL2**	0.075	(0.17)
		1/2"-20UNF connector	**XS612B1MAU20**	0.025	(0.06)
	NC	Pre-cabled *(1)*	**XS612B1MBL2**	0.075	(0.17)
		1/2"-20UNF connector	**XS612B1MBU20**	0.025	(0.06)
Ø 18, threaded M18 x 1					
8 (0.31)	NO	Pre-cabled *(1)*	**XS618B1MAL2**	0.100	(0.22)
		1/2"-20UNF connector	**XS618B1MAU20**	0.060	(0.13)
		Remote screw terminal connector	**XS618B1MAL01B** *(2)*	0.100	(0.22)
		Remote DIN 43650A connector	**XS618B1MAL01C**	0.100	(0.22)
		Remote M18 connector	**XS618B1MAL01G**	0.100	(0.22)
	NC	Pre-cabled *(1)*	**XS618B1MBL2**	0.100	(0.22)
		1/2"-20UNF connector	**XS618B1MBU20**	0.060	(0.13)
		Remote screw terminal connector	**XS618B1MBL01B** *(2)*	0.100	(0.22)
		Remote DIN 43650A connector	**XS618B1MBL01C**	0.100	(0.22)
		Remote M18 connector	**XS618B1MBL01G**	0.100	(0.22)
Ø 30, threaded M30 x 1.5					
15 (0.59)	NO	Pre-cabled *(2)*	**XS630B1MAL2**	0.205	(0.45)
		1/2"-20UNF connector	**XS630B1MAU20**	0.145	(0.32)
		Remote screw terminal connector	**XS630B1MAL01B** *(2)*	0.205	(0.45)
		Remote DIN 43650A connector	**XS630B1MAL01C**	0.205	(0.45)
		Remote M18 connector	**XS630B1MAL01G**	0.205	(0.45)
	NC	Pre-cabled *(2)*	**XS630B1MBL2**	0.205	(0.45)
		1/2"-20UNF connector	**XS630B1MBU20**	0.145	(0.32)
		Remote screw terminal connector	**XS6 30B1MBL01B** *(2)*	0.205	(0.45)
		Remote DIN 43650A connector	**XS6 30B1MBL01C**	0.205	(0.45)
		Remote M18 connector	**XS6 30B1MBL01G**	0.205	(0.45)

Accessories

Description	For use with sensors	Catalog Number	Weight kg	(lb)
Mounting clamps	Ø 12	**XSZB112**	0.006	(0.01)
	Ø 18	**XSZB118**	0.010	(0.02)
	Ø 30	**XSZB130**	0.020	(0.04)

*(1) For a 5 m cable replace L2 with **L5**; for a 10 m cable replace L2 with **L10**.*
*Example: XS612B1MAL2 becomes **XS612B1MAL5** with a 5 m cable.*
(2) Protective cable gland included with remote screw terminal connector.

OsiSense® Inductive proximity sensors

General purpose
Cylindrical, increased range, flush mountable
Two-wire AC or DC

Specifications

Sensor type			XS6●●B1M●U20	XS6●●B1M●L●
Product certifications			UL, CSA, CE	
Connection	Connector		1/2" - 20 UNF	–
	Pre-cabled		–	Length 2 m
	Remote connector		Remote screw terminal (L01B), DIN 43650A (L01C) or M18 connector (L01G) on 0.15 m flying lead	
Operating zone	Ø 12	mm	0–3.2 (0–0.13 in.)	
	Ø 18	mm	0–6.4 (0–0.25 in.)	
	Ø 30	mm	0–12 (0–0.47 in.)	
Differential travel		%	1–15 of effective sensing distance (Sr)	
Degree of protection	Conforming to IEC 60529		IP 65 and IP 67	IP 65 and IP 68 double isolation ⧈
	Conforming to DIN 40050		IP 69K	
Storage temperature		°C	-40 to +85 (-40 to +185 °F)	
Operating temperature		°C	-25 to +70 (-13 to +158 °F)	
Materials	Case		Nickel plated brass	
	Sensing face		PPS	
	Cable		PvR 2 x 0.34 mm² (22 AWG)	
Vibration resistance	To IEC 60068-2-6		25 gn, amplitude ± 2 mm (f = 10 to 55 Hz)	
Shock resistance	To IEC 60068-2-27		50 gn, duration 11 ms	
Output state indication			Yellow LED: circular on pre-cabled version Yellow LED with 4 viewing ports at 90° on connector version	
Rated supply voltage		V	≂ 24–240 (~ 50/60 hZ)	
Voltage limits (including ripple)		V	≂ 20–264	
Switching capacity	**XS612B1M●●●**	mA	5–200 *(2)*	
	XS618B1M●●●, XS630B1M●●●	mA	∼ 5–300 or ⎓ 5–200 *(1)*	
Voltage drop, closed state		V	⩽ 5.5	
Current consumption, no-load		mA	⩽ 0.8	
Maximum switching frequency (a.c./d.c. supply)	Ø 12	Hz	⎓ 1000 / ∼ 25	
	Ø 18	Hz	⎓ 1000 / ∼ 25	
	Ø 30	Hz	⎓ 500 / ∼ 25	
Delays	First-up	ms	⩽ 25 for Ø 18 and Ø 30 sensors; ⩽ 20 for Ø 12 sensors	
	Response	ms	⩽ 0.5	
	Recovery	ms	⩽ 0.2 for Ø 12 sensors; ⩽ 0.5 for Ø 18 sensors; ⩽ 2 for Ø 30 sensors	

(1) A 0.4 A "fast-acting" fuse must be connected in series with the load.

Wiring diagrams

Connector *(1)*

1/2"-20UNF

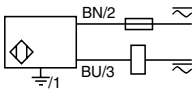
≂ : 2
⏚ : 1
≂ : 3

Pre-cabled

BU: Blue
BN: Brown

2-wire ∼ or ⎓

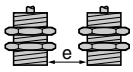
NO or NC output

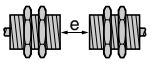


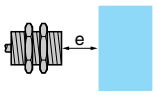
⏚: *on connector models only*

Setup

Minimum mounting distances (mm)

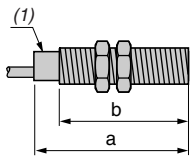






Sensors	Side by side	Face to face	Facing a metal object
Ø 12	e ≥ 8	e ≥ 50	e ≥ 12
Ø 18	e ≥ 16	e ≥ 100	e ≥ 25
Ø 30	e ≥ 30	e ≥ 180	e ≥ 45

Dimensions (mm)



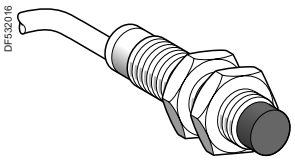
(1) LED

Sensors		Pre-cabled (mm)		Connector (mm)	
		a	b	a	b
Ø 12	**XS612B1M●**	53	42	62	42
Ø 18	**XS618B1M●**	62	52	73	52
Ø 30	**XS630B1M●**	62	52	73	52

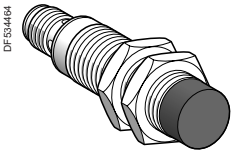
OsiSense® Inductive proximity sensors

General purpose

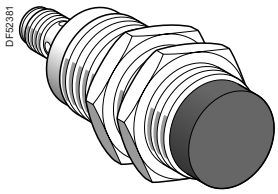
Cylindrical, increased range, non-flush mountable
Three-wire DC, solid-state output



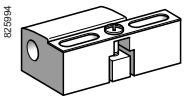
XS612B4●●L2



XS618B4●●M12



XS630B4●●M12



XSZB●●●

Sensors, 3-wire ⎓ 12–48 V, long case model

Ø 12, threaded M12 x 1

Sensing distance Sn, mm (in.)	Function	Output	Connection	Catalog Number	Weight kg	(lb)
7 (0.28)	NO	PNP	Pre-cabled *(1)*	**XS612B4PAL2**	0.075	(0.17)
			M12 connector	**XS612B4PAM12**	0.020	(0.04)
		NPN	Pre-cabled *(1)*	**XS612B4NAL2**	0.075	(0.17)
			M12 connector	**XS612B4NAM12**	0.020	(0.04)
	NC	PNP	Pre-cabled *(1)*	**XS612B4PBL2**	0.075	(0.17)
			M12 connector	**XS612B4PBM12**	0.020	(0.04)
		NPN	Pre-cabled *(1)*	**XS612B4NBL2**	0.075	(0.17)
			M12 connector	**XS612B4NBM12**	0.020	(0.04)

Ø 18, threaded M18 x 1

Sensing distance Sn, mm (in.)	Function	Output	Connection	Catalog Number	Weight kg	(lb)
12 (0.47)	NO	PNP	Pre-cabled *(1)*	**XS618B4PAL2**	0.100	(0.22)
			M12 connector	**XS618B4PAM12**	0.040	(0.09)
		NPN	Pre-cabled *(1)*	**XS618B4NAL2**	0.100	(0.22)
			M12 connector	**XS618B4NAM12**	0.040	(0.09)
	NC	PNP	Pre-cabled *(1)*	**XS618B4PBL2**	0.100	(0.22)
			M12 connector	**XS618B4PBM12**	0.040	(0.09)
		NPN	Pre-cabled *(1)*	**XS618B4NBL2**	0.100	(0.22)
			M12 connector	**XS618B4NBM12**	0.040	(0.09)

Ø 30, threaded M30 x 1.5

Sensing distance Sn, mm (in.)	Function	Output	Connection	Catalog Number	Weight kg	(lb)
22 (0.87)	NO	PNP	Pre-cabled *(1)*	**XS630B4PAL2**	0.205	(0.45)
			M12 connector	**XS630B4PAM12**	0.145	(0.32)
		NPN	Pre-cabled *(1)*	**XS630B4NAL2**	0.205	(0.45)
			M12 connector	**XS630B4NAM12**	0.145	(0.32)
	NC	PNP	Pre-cabled *(1)*	**XS630B4PBL2**	0.205	(0.45)
			M12 connector	**XS630B4PBM12**	0.145	(0.32)
		NPN	Pre-cabled *(1)*	**XS630B4NBL2**	0.205	(0.45)
			M12 connector	**XS630B4NBM12**	0.145	(0.32)

Accessories

Description	For use with sensors	Catalog Number	Weight kg	(lb)
Mounting clamps	Ø 12	**XSZB112**	0.006	(0.01)
	Ø 18	**XSZB118**	0.010	(0.02)
	Ø 30	**XSZB130**	0.020	(0.04)

*(1) For a 5 m cable replace L2 with **L5**; for a 10 m cable replace L2 with **L10**.*
*Example: XS612B4PAL2 becomes **XS612B4PAL5** with a 5 m cable.*

OsiSense® Inductive proximity sensors

General purpose

Cylindrical, increased range, non-flush mountable

Three-wire DC, solid-state output

Specifications

Sensor type			XS6●●B4●●M12	XS6●●B4●●L2
Product certifications			UL, CSA, CE	
Connection	Connector		M12	–
	Pre-cabled		–	Length 2 m
Operating zone	Ø 12	**mm**	0–5.6 (0–0.22 in.)	
	Ø 18	**mm**	0–9.6 (0–0.38 in.)	
	Ø 30	**mm**	0–17.6 (0–0.69 in.)	
Differential travel		**%**	1–15 of effective sensing distance (Sr)	
Degree of protection	Conforming to IEC 60529		IP 65 and IP 67	IP 65 and IP 68, double insulation ⧈
Storage temperature		**°C**	-40 to +85 (-40 to +185 °F)	
Operating temperature		**°C**	-25 to +70 (-13 to +158 °F)	
Materials	Case		Nickel plated brass	
	Sensing face		PPS	
	Cable		–	PvR 3 x 0.34 mm² (22 AWG)
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: circular
Rated supply voltage		**V**	⎓ 12–48 with protection against reverse polarity	
Voltage limits (including ripple)		**V**	⎓ 10–58	
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	**XS612B4●●●●**	**Hz**	2500	
	XS618B4●●●●	**Hz**	1000	
	XS630B4●●●●	**Hz**	500	
Delays	First-up	**ms**	≤ 10	
	Response	**ms**	≤ 0.2 for Ø 12, ≤ 0.3 for Ø 18, ≤ 0.6 for Ø 30	
	Recovery	**ms**	≤ 0.2 for Ø 12, ≤ 0.7 for Ø 18, ≤ 1.4 for Ø 30	

Wiring diagrams

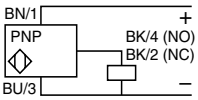
Connector

M12

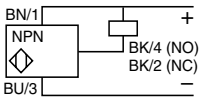
Pre-cabled

BU: Blue
BN: Brown
BK: Black

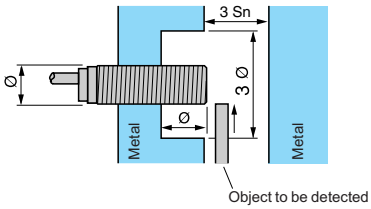
PNP



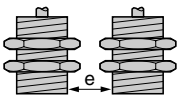
NPN

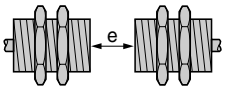


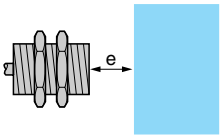
Setup



Minimum mounting distances (mm)

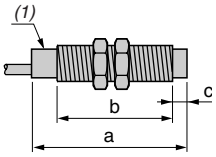






	Side by side	Face to face	Facing a metal object
Ø 12	e ≥ 48	e ≥ 84	e ≥ 21
Ø 18	e ≥ 72	e ≥ 144	e ≥ 36
Ø 30	e ≥ 120	e ≥ 264	e ≥ 66

Dimensions (mm)



	Pre-cabled (mm)		**Connector** (mm)		
XS6	**a**	**b**	**a**	**b**	**c**
Ø 12	55	42	66	42	5
Ø 18	60	44	72	44	8
Ø 30	63	41	74	41	13

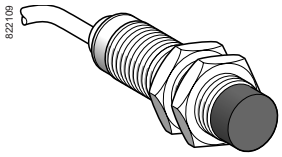
(1) LED

OsiSense® Inductive proximity sensors

General purpose

Cylindrical, increased range, non-flush mountable

Two-wire AC or DC

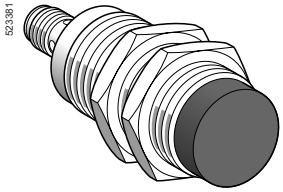


XS6●●B4M●L2

Sensors, 2-wire ≂ 24–240 V, long case model

Ø 18, threaded M18 x 1

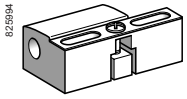
Sensing distance Sn, mm (in.)	Function	Connection	Catalog Number	Weight kg	(lb)
12 (0.47)	NO	Pre-cabled *(1)*	**XS618B4MAL2**	0.120	(0.26)
		1/2"-20UNF connector	**XS618B4MAU20**	0.060	(0.13)
	NC	Pre-cabled *(1)*	**XS618B4MBL2**	0.120	(0.26)
		1/2"-20UNF connector	**XS618B4MBU20**	0.060	(0.13)



XS6●●B4M●U20

Ø 30, threaded M30 x 1.5

Sensing distance Sn, mm (in.)	Function	Connection	Catalog Number	Weight kg	(lb)
22 (0.87)	NO	Pre-cabled *(1)*	**XS630B4MAL2**	0.205	(0.45)
		1/2"-20UNF connector	**XS630B4MAU20**	0.145	(0.32)
	NC	Pre-cabled *(1)*	**XS630B4MBL2**	0.205	(0.45)
		1/2"-20UNF connector	**XS630B4MBU20**	0.145	(0.32)



XSZB1●●

Accessories

Description	For use with sensors	Catalog Number	Weight kg	(lb)
Mounting clamps	Ø 18	**XSZB118**	0.010	(0.02)
	Ø 30	**XSZB130**	0.020	(0.04)

*(1) For a 5 m cable replace L2 with **L5**; for a 10 m cable replace L2 with **L10**.*
*Example: XS618B4MAL2 becomes **XS618B4MAL5** with a 5 m cable.*

OsiSense® Inductive proximity sensors

General purpose

Cylindrical, increased range, non-flush mountable

Two-wire AC or DC

Specifications

Sensor type			XS6●●B4M●U20	XS6●●B4M●L2
Product certifications			UL, CSA, CE	
Connection	Connector		1/2"-20UNF	–
	Pre-cabled		–	Length 2 m
Operating zone	Ø 18	**mm**	0–9.6 (0–0.38 in.)	
	Ø 30	**mm**	0–17.6 (0–0.69 in.)	
Differential travel		**%**	1–15 of effective sensing distance (Sr)	
Degree of protection	Conforming to IEC 60529		IP 65 and IP 67	IP 65 and IP 68, double insulation ⧈
Storage temperature		**°C**	-40 to +85 (-40 to +185 °F)	
Operating temperature		**°C**	-25 to +70 (-13 to +158 °F)	
Materials	Case		Nickel plated brass	
	Sensing face		PPS	
	Cable		–	PvR 2 x 0.34 mm² (22 AWG)
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: circular
Rated supply voltage		**V**	∿ or ⎓ 24–240 (∿ 50/60 Hz)	
Voltage limits (including ripple)		**V**	∿ or ⎓ 20–264	
Switching capacity		**mA**	∿ 5–300 or ⎓ 5–200 *(1)*	
Voltage drop, closed state		**V**	≤ 5.5	
Residual current, open state		**mA**	≤ 0.8	
Maximum switching frequency	**XS618B4M●●●**	**Hz**	∿ 25 or ⎓ 1000	
	XS630B4M●●●	**Hz**	∿ 25 or ⎓ 300	
Delays	First-up	**ms**	≤ 30 **XS618B4M●●●** and **XS630B4M●●●**	
	Response	**ms**	≤ 0.5	
	Recovery	**ms**	≤ 0.5 **XS618B4M●●●**, ≤ 2 **XS630B4M●●●**	

(1) A 0.4 A "fast-acting" fuse must be connected in series with the load.

Wiring diagrams

Connector

1/2"-20UNF

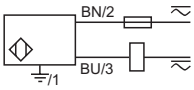
⎓ : 2
⏚ : 1
⎓ : 3

Pre-cabled

BU: Blue
BN: Brown

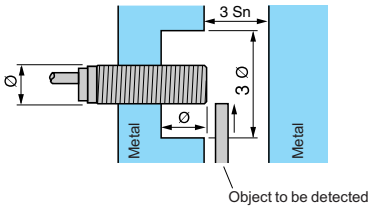
2-wire ∿ or ⎓

NO or NC output

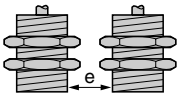


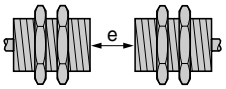
⏚: on connector models only

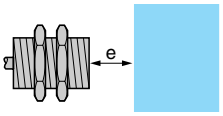
Setup



Minimum mounting distances (mm)

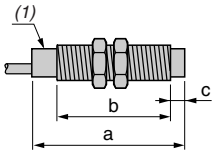






	Side by side	Face to face	Facing a metal object
Ø 18	e ≥ 72	e ≥ 144	e ≥ 36
Ø 30	e ≥ 120	e ≥ 264	e ≥ 66

Dimensions (mm)



(1) LED

XS6	Pre-cabled (mm) a	Pre-cabled (mm) b	Connector (mm) a	Connector (mm) b	Connector (mm) c
Ø 18	60	44	72	44	8
Ø 30	63	41	74	41	13

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