

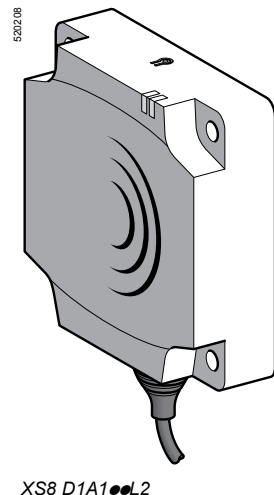
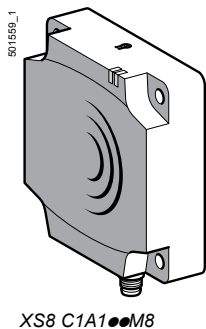
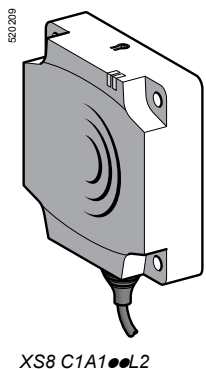
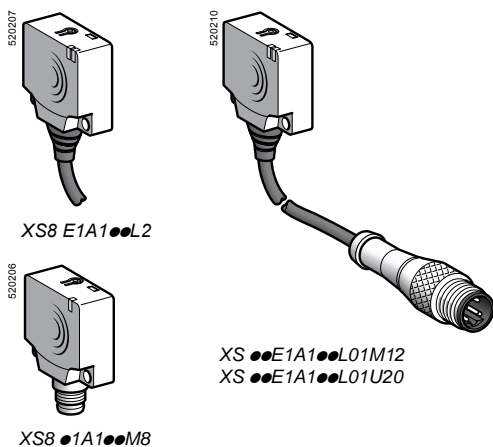
# Inductive proximity sensors

Osiprox® Universal, Osiconcept® (1)

Flat, flush mountable and non flush mountable, forms E, C and D

Two-wire, a.c. or d.c. supply

Three-wire, d.c. supply, solid-state output



## Flat, form E, 26 x 26 x 13 mm (2)

Sensing dist. (Sn) mm	Function	Output	Connection	Reference	Weight kg
<b>Three-wire <math>\equiv</math> with overload and short-circuit protection</b>					
15	NO	PNP	Pre-cabled (L = 2 m) (3)	<b>XS8 E1A1PAL2</b>	0.075
			M8 connector	<b>XS8 E1A1PAM8</b>	0.040
			Remote M12 connector	<b>XS8 E1A1PAL01M12</b>	0.040
	NPN	Pre-cabled (L = 2 m) (3)	<b>XS8 E1A1NAL2</b>	0.075	
		M8 connector	<b>XS8 E1A1NAM8</b>	0.040	
		Remote M12 connector	<b>XS8 E1A1NAL01M12</b>	0.040	
NC	PNP	Pre-cabled (L = 2 m) (3)	<b>XS8 E1A1PBL2</b>	0.075	
		M8 connector	<b>XS8 E1A1PBM8</b>	0.040	
		Remote M12 connector	<b>XS8 E1A1PBL01M12</b>	0.040	
	NPN	Pre-cabled (L = 2 m) (3)	<b>XS8 E1A1NBL2</b>	0.075	
		M8 connector	<b>XS8 E1A1NBM8</b>	0.040	
		Remote M12 connector	<b>XS8 E1A1NBL01M12</b>	0.040	

## Two-wire $\sim$ or $\equiv$ unprotected (4)

15	NO	-	Pre-cabled (L = 2 m) (3)	<b>XS8 E1A1MAL2</b>	0.070
			Remote 1/2" - 20 UNF connec.	<b>XS8 E1A1MAL01U20</b>	0.040
NC	-	-	Pre-cabled (L = 2 m) (3)	<b>XS8 E1A1MBL2</b>	0.070
			Remote 1/2" - 20 UNF connec.	<b>XS8 E1A1MBL01U20</b>	0.040

## Flat, form C, 40 x 40 x 15 mm (2)

Sensing dist. (Sn) mm	Function	Output	Connection	Reference	Weight kg
<b>Three-wire <math>\equiv</math> with overload and short-circuit protection</b>					
25	NO	PNP	Pre-cabled (L = 2 m) (3)	<b>XS8 C1A1PAL2</b>	0.095
			M8 connector	<b>XS8 C1A1PAM8</b>	0.060
			Remote M12 connector	<b>XS8 C1A1PAL01M12</b>	0.060
	NPN	Pre-cabled (L = 2 m) (3)	<b>XS8 C1A1NAL2</b>	0.095	
		M8 connector	<b>XS8 C1A1NAM8</b>	0.060	
		Remote M12 connector	<b>XS8 C1A1NAL01M12</b>	0.060	
NC	PNP	Pre-cabled (L = 2 m) (3)	<b>XS8 C1A1PBL2</b>	0.095	
		M8 connector	<b>XS8 C1A1PBM8</b>	0.060	
		Remote M12 connector	<b>XS8 C1A1PBL01M12</b>	0.060	
	NPN	Pre-cabled (L = 2 m) (3)	<b>XS8 C1A1NBL2</b>	0.095	
		M8 connector	<b>XS8 C1A1NBM8</b>	0.060	
		Remote M12 connector	<b>XS8 C1A1NBL01M12</b>	0.060	

## Two-wire $\sim$ or $\equiv$ unprotected (4)

25	NO	-	Pre-cabled (L = 2 m) (3)	<b>XS8 C1A1MAL2</b>	0.090
			Remote 1/2" - 20 UNF connec.	<b>XS8 C1A1MAL01U20</b>	0.060
NC	-	-	Pre-cabled (L = 2 m) (3)	<b>XS8 C1A1MBL2</b>	0.090
			Remote 1/2" - 20 UNF connec.	<b>XS8 C1A1MBL01U20</b>	0.060

## Flat, form D, 80 x 80 x 26 mm (2)

Sensing dist. (Sn) mm	Function	Output	Connection	Reference	Weight kg
<b>Three-wire <math>\equiv</math> with overload and short-circuit protection</b>					
60	NO	PNP	Pre-cabled (L = 2 m) (3)	<b>XS8 D1A1PAL2 (5)</b>	0.340
			M12 connector	<b>XS8 D1A1PAM12 (5)</b>	0.300
			NPN	Pre-cabled (L = 2 m) (3)	<b>XS8 D1A1NAL2 (5)</b>
	NC	PNP	M12 connector	<b>XS8 D1A1NAM12 (5)</b>	0.300
			Pre-cabled (L = 2 m) (3)	<b>XS8 D1A1PBL2 (5)</b>	0.340
			M12 connector	<b>XS8 D1A1PBM12 (5)</b>	0.300
NPN	Pre-cabled (L = 2 m) (3)	<b>XS8 D1A1NBL2 (5)</b>	0.340		
	M12 connector	<b>XS8 D1A1NBM12 (5)</b>	0.300		

## Two-wire $\sim$ or $\equiv$ unprotected (4)

60	NO	-	Pre-cabled (L = 2 m) (3)	<b>XS8 D1A1MAL2 (5)</b>	0.340
			1/2" - 20 UNF connector	<b>XS8 D1A1MAU20 (5)</b>	0.300
NC	-	-	Pre-cabled (L = 2 m) (3)	<b>XS8 D1A1MBL2 (5)</b>	0.340
			1/2" - 20 UNF connector	<b>XS8 D1A1MBU20 (5)</b>	0.300

(1) For further information on Osiconcept®, see page 37316/2

(2) For accessories, see page 37317/2.

(3) For a 5 m long cable, replace L2 with L5, and for a 10 m long cable, replace L2 with L10.

(4) It is essential to connect a 0.4 A quick-blow fuse in series with the load.

(5) For clipping onto 35 mm omega rail or 80 x 80 x 40 mm format, add DIN to the end of the reference. Example: **XS8 D1A1PAL2 DIN**.

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## Characteristics

Sensor types		XS8 E ●●●●●M8, XS8 C ●●●●●M8, XS8 D ●●●●●M12, XS8 D ●●●●●U20	XS8 E ●●●●●L01M12, XS8 E ●●●●●L01U20, XS8 C ●●●●●L01M12, XS8 C ●●●●●L01U20	XS8 E ●●●●●L2, XS8 C ●●●●●L2, XS8 D ●●●●●L2
Product certifications		UL, CSA, CE		
Connection	Connector	M8 except XS8 ●●●●●M12: M12 XS8 ●●●●●U20: 1/2" 20UNF	0.15 m flying lead with remote connec. XS8 ●●●●●L01M12: M12, XS8 ●●●●●L01U20: 1/2" 20UNF	–
	Pre-cabled	–	–	Length: 2 m
Sensing distance and adjustment zone	XS8 E	Nominal sensing dist. Sn	<b>mm</b> 0...15 non flush mounted configuration / 0...10 flush mounted configuration	
		Fine adjustment zone	<b>mm</b> 5...15 non flush mounted configuration / 5...10 flush mounted configuration	
	XS8 C	Nominal sensing dist. Sn	<b>mm</b> 0...25 non flush mounted configuration / 0...15 flush mounted configuration	
		Fine adjustment zone	<b>mm</b> 8...25 non flush mounted configuration / 8...15 flush mounted configuration	
XS8 D	Nominal sensing dist. Sn	<b>mm</b> 0...60 non flush mounted configuration / 0...40 flush mounted configuration		
	Fine adjustment zone	<b>mm</b> 20...60 non flush mounted configuration / 20...40 flush mounted configuration		
Differential travel		%		
Degree of protection		Conforming to IEC 60529	IP 67 double insulation □ (except for M8 connector: IP 67)	IP 68 □
Storage temperature range		°C - 40...+85		
Operating temperature range		°C - 25...+70		
Materials	Case	PBT		
	Pre-cabled	PvR 3 x 0.34 mm <sup>2</sup> ∩ and PvR 2 x 0.34 mm <sup>2</sup> ∩		
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		
Indicator	Output state	Yellow LED		
	Supply on and teach mode	Green LED		
Rated supply voltage	3-wire	<b>V</b> 12...24 with protection against reverse polarity		
	2-wire	<b>V</b> ~ or ∩ 24...240 (~ 50/60 Hz)		
Voltage limits (including ripple)	3-wire	<b>V</b> 10...36		
	2-wire	<b>V</b> ~ or ∩ 20...264		
Current consumption, no-load		3-wire	<b>mA</b> ≤ 10	
Residual current, open state		2-wire	<b>mA</b> ≤ 1.5	
Switching capacity		3-wire	<b>mA</b> ≤ 100 XS8 E, ≤ 200 XS8 C and XS8 D, with overload and short-circuit protection	
		2-wire	<b>mA</b> 5...200 ∩ XS8 E, 5...300 ~ XS8 C and XS8 D, 5...200 ∩ XS8 C and XS8 D.	
Voltage drop, closed state	3-wire	<b>V</b> ≤ 2		
	2-wire	<b>V</b> ≤ 5.5		
Maximum switching frequency		<b>Hz</b> 2000 XS8 E, 1000 XS8 C, 150 XS8 D		
Delays	First-up	<b>ms</b> ≤ 10 XS8 E, XS8 C and XS8 D (3-wire), ≤ 10 XS8 E and XS8 C, ≤ 15 XS8 D (2-wire)		
	Response	<b>ms</b> ≤ 0.3		
	Recovery	<b>ms</b> ≤ 0.8 XS8 E and XS8 C, ≤ 6 XS8 D		

## Wiring scheme

Connector	Pre-cabled	PNP/M12 or M8	NPN/M12 or M8	2-wire 1/2" - 20 UNF
	BU: Blue BN: Brown BK: Black  See connection on page 30210/3.			
For M8 connector, NO and NC output on terminal 4.				

## Setting-up

Minimum mounting distances (mm)		e ≥	XS8 E	XS8 C	XS8 D
Side by side	Flush mounted		40	60	200
	Non flush mounted		150	125	600
Face to face	Flush mounted		80	120	400
	Non flush mounted		300	250	not recommended
Facing a metal object		e ≥	10	15	40

## Dimensions

	XS8 C/D/E					XS8 C/D				XS8 E			
(1) LED						(2) Teach mode button				(3) For CHC type screws			
Sensor	A (cable)	A (connector)	B	C	D	E	F	G	H	E	F	G	H
XS8 E	14	11	26	13	8,8	20	3,5	6,8	6,6				
XS8 C	14	11	40	15	9,8	33	4,5	8,3	13,6				
XS8 D	23	14	80	26	16	65	5,5	8,5	37,8				