

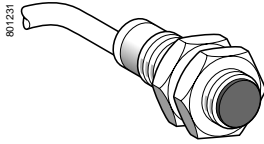
# Inductive proximity sensors

Osiprox® Application

Plastic, cylindrical, non flush mountable

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

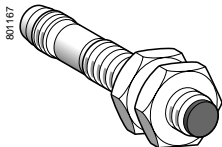
Three-wire, d.c. supply, solid-state output



XS4 P●●●●340  
XS4 P●●●●230



XS4 P●●●●340D  
XS4 P●●●●230K



XS4 P08●●340S

Sensing distance (Sn) (mm)	Function	Output	Connection	Reference	Weight kg
<b>Ø 8 (1)</b>					
<b>Three-wire ≡</b>					
2.5	NO	PNP	Pre-cabled (L = 2 m) (2)	XS4 P08PA340	0.025
			M8 connector	XS4 P08PA340S	0.010
	NPN	PNP	Pre-cabled (L = 2 m) (2)	XS4 P08NA340	0.025
			M8 connector	XS4 P08NA340S	0.010
	NC	PNP	Pre-cabled (L = 2 m) (2)	XS4 P08PB340	0.025
			M8 connector	XS4 P08PB340S	0.010
NPN	PNP	Pre-cabled (L = 2 m)	XS4 P08NB340	0.025	
		M8 connector	XS4 P08NB340S	0.010	
<b>2-wire ~ or ≡</b>					
2.5	NO		Pre-cabled (L = 2 m) (2)	XS4 P08MA230	0.030
			1/2" - 20 UNF connector	XS4 P08MA230K	0.020
	NC		Pre-cabled (L = 2 m) (2)	XS4 P08MB230	0.030
			1/2" - 20 UNF connector	XS4 P08MB230K	0.020
<b>Ø 12 (1)</b>					
<b>Three-wire ≡</b>					
4	NO	PNP	Pre-cabled (L = 2 m) (2)	XS4 P12PA340	0.060
			M12 connector	XS4 P12PA340D	0.020
	NPN	PNP	Pre-cabled (L = 2 m) (2)	XS4 P12NA340	0.060
			M12 connector	XS4 P12NA340D	0.020
	NC	PNP	Pre-cabled (L = 2 m) (2)	XS4 P12PB340	0.060
			M12 connector	XS4 P12PB340D	0.020
NPN	PNP	Pre-cabled (L = 2 m) (2)	XS4 P12NB340	0.060	
		M12 connector	XS4 P12NB340D	0.020	
<b>2-wire ~ or ≡</b>					
4	NO		Pre-cabled (L = 2 m) (2)	XS4 P12MA230	0.065
			1/2" - 20 UNF connector	XS4 P12MA230K	0.030
	NC		Pre-cabled (L = 2 m) (2)	XS4 P12MB230	0.065
			1/2" - 20 UNF connector	XS4 P12MB230K	0.030
<b>Ø 18 (1)</b>					
<b>Three-wire ≡</b>					
8	NO	PNP	Pre-cabled (L = 2 m) (2)	XS4 P18PA340	0.090
			M12 connector	XS4 P18PA340D	0.030
	NPN	PNP	Pre-cabled (L = 2 m) (2)	XS4 P18NA340	0.090
			M12 connector	XS4 P18NA340D	0.030
	NC	PNP	Pre-cabled (L = 2 m) (2)	XS4 P18PB340	0.090
			M12 connector	XS4 P18PB340D	0.030
NPN	PNP	Pre-cabled (L = 2 m) (2)	XS4 P18NB340	0.090	
		M12 connector	XS4 P18NB340D	0.030	
<b>2-wire ~ or ≡</b>					
8	NO		Pre-cabled (L = 2 m) (2)	XS4 P18MA230	0.100
			M12 connector	XS4 P18MA230K	0.040
	NC		Pre-cabled (L = 2 m) (2)	XS4 P18MB230	0.100
			M12 connector	XS4 P18MB230K	0.040
<b>Ø 30 (1)</b>					
<b>Three-wire ≡</b>					
15	NO	PNP	Pre-cabled (L = 2 m) (2)	XS4 P30PA340	0.120
			M12 connector	XS4 P30PA340D	0.060
	NPN	PNP	Pre-cabled (L = 2 m) (2)	XS4 P30NA340	0.120
			M12 connector	XS4 P30NA340D	0.060
	NC	PNP	Pre-cabled (L = 2 m) (2)	XS4 P30PB340	0.120
			M12 connector	XS4 P30PB340D	0.060
NPN	PNP	Pre-cabled (L = 2 m) (2)	XS4 P30NB340	0.120	
		M12 connector	XS4 P30NB340D	0.060	
<b>2-wire ~ or ≡</b>					
15	NO		Pre-cabled (L = 2 m) (2)	XS4 P30MA230	0.140
			1/2" - 20 UNF connector	XS4 P30MA230K	0.080
	NC		Pre-cabled (L = 2 m) (2)	XS4 P30MB230	0.140
			1/2" - 20 UNF connector	XS4 P30MB230K	0.080

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

(2) For a 5 m long cable, add L1 to the reference and for a 10 m long cable, add L2 to the reference.

Example: XS4 P08PA340 becomes XS4 P08PA340L1 with a 5 m long cable.

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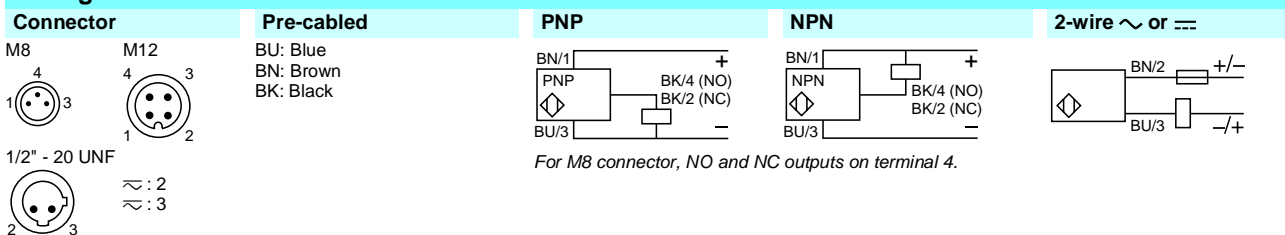
Three-wire, d.c. supply, solid-state output

## Characteristics

Sensor type		XS4 P●●●●●●S, XS4 P●●●●●●K, XS4 P●●●●●●D	XS4 P●●●●●●	
Product certifications		UL, CSA, CE		
Connection	Connector	M8 on Ø 8 3-wire M12 on Ø 12 to Ø 30 3-wire 1/2" - 20 UNF on Ø 8 to Ø 30 2-wire	–	
	Pre-cabled	–	Length: 2 m	
Operating zone	Ø 8	mm	0...2	
	Ø 12	mm	0...3.2	
	Ø 18	mm	0...6.4	
	Ø 30	mm	0...12	
Degree of protection	Conforming to IEC 60529	IP 67	IP 68 (except Ø 8: IP 67)	
Storage temperature range		°C - 40...+ 85		
Operating temperature range		°C - 25...+ 80		
Materials	Case	PPS		
	Pre-cabled	PvR 3 x 0.34 mm <sup>2</sup> — and 2 x 0.34 mm <sup>2</sup> ~ (except Ø 8: 0.11 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		
Output state indication		LED, annular		
Rated supply voltage	3-wire PNP/NPN	V	— 12...24 with protection against reverse polarity	
	2-wire	V	~ or — 24...240 (50/60 Hz)	
Voltage limits (including ripple)	3-wire PNP/NPN	V	— 10...38	
	2-wire	V	~ or — 20...264	
Current consumption, no-load	3-wire PNP/NPN	mA	≤ 10	
Residual current, open state	2-wire	mA	≤ 0.6	
Switching capacity	3-wire PNP/NPN	mA	0...200 with overload and short-circuit protection	
	2-wire (1)	mA	5...100 for Ø 8, 5...200 for Ø 12, 5...200 — and 5...300 ~ for Ø 18 and 30	
Voltage drop, closed state	3-wire PNP/NPN	V	≤ 2	
	2-wire	V	≤ 5.5	
Maximum switching frequency	3-wire —	kHz	5 for XS4 P08, XS4 P12, 2 for XS4 P18, 1 for XS4 P30	
	2-wire —	kHz	3 for XS4 P08, XS4 P12, 2 for XS4 P18, 1 for XS4 P30	
	2-wire ~	Hz	25 for XS4 P08, XS4 P12, XS4 P18, XS4 P30	
Delays	First-up	3-wire	ms	< 10
		2-wire	ms	< 40
	Response	3-wire	ms	< 0.1 for XS4 P08, XS4 P12, < 0.15 for XS4 P18, < 0.3 for XS4 P30
		2-wire	ms	< 0.2
	Recovery	3-wire	ms	< 0.1 for XS4 P08, XS4 P12, < 0.35 for XS4 P18, < 0.7 for XS4 P30
		2-wire	ms	< 0.2 for XS4 P08, XS4 P12, XS4 P18, < 0.4 for XS4 P30

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

## Wiring scheme



See connection on page 30210/3.

## Setting-up

### Minimum mounting distances (mm)

Ø	Side by side		Face to face		Facing a metal object	
	e	e	e	e	e	e
Ø 8	e ≥ 10	e ≥ 10	e ≥ 30	e ≥ 30	e ≥ 7.5	e ≥ 7.5
Ø 12	e ≥ 16	e ≥ 16	e ≥ 48	e ≥ 48	e ≥ 12	e ≥ 12
Ø 18	e ≥ 16	e ≥ 16	e ≥ 96	e ≥ 96	e ≥ 24	e ≥ 24
Ø 30	e ≥ 60	e ≥ 60	e ≥ 180	e ≥ 180	e ≥ 45	e ≥ 45

## Dimensions

XS4	3-wire				2-wire			
	Pre-cabled (mm)		Connector (mm)		Pre-cabled (mm)		Connector (mm)	
	a	b	a	b	a	b	a	b
Ø 8	33	26	42	26	50	40	61	40
Ø 12	33	26	48	27	50	42	61	42
Ø 18	33.5	26	48	29	60	51.5	70	51.5
Ø 30	40.5	33	50	34	60	51.5	70	51.5