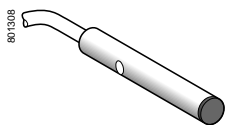


# Inductive proximity sensors

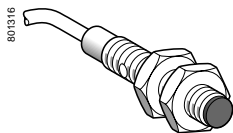
## Osiprox® Application

Miniature, cylindrical, flush mountable and non flush mountable

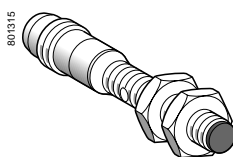
Three-wire or four-wire, d.c. supply, solid-state output



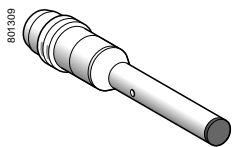
XS1 L04●●310



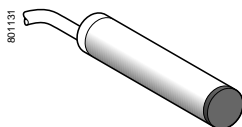
XS1 N05●●310



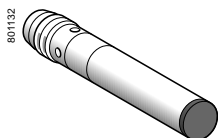
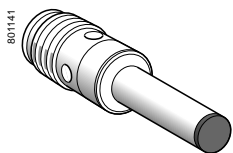
XS1 N05●●311S



XS1 L04●●310S



XS● L06●●340

XS● L06●●340S  
XS● L06●●349S

XS● L06●●340D

### Ø 4 plain (1)

Sensing distance (Sn) mm	Function	Output	Connection (2)	Reference	Weight kg
<b>Brass case, flush mountable</b>					
1	NO	PNP	Pre-cabled (L = 2 m)	XS1 L04PA310	0.025
			M8 connector	XS1 L04PA310S	0.010
			M12 connector	XS1 L04PA310D	0.015
	NPN	Pre-cabled (L = 2 m)	XS1 L04NA310	0.025	
		M8 connector	XS1 L04NA310S	0.010	
		M12 connector	XS1 L04NA310D	0.015	
NC	PNP	Pre-cabled (L = 2 m)	XS1 L04PB310	0.025	
		M8 connector	XS1 L04PB310S	0.010	
		M12 connector	XS1 L04PB310D	0.015	
NPN	PNP	Pre-cabled (L = 2 m)	XS1 L04NB310	0.025	
		M8 connector	XS1 L04NB310S	0.010	
		M12 connector	XS1 L04NB310D	0.015	

### Stainless steel case, flush mountable

0.8	NO	PNP	Pre-cabled (L = 2 m)	XS1 L04PA311	0.025
			M8 connector	XS1 L04PA311S	0.010
	NPN	Pre-cabled (L = 2 m)	XS1 L04NA311	0.025	
		M8 connector	XS1 L04NA311S	0.010	

### Ø 5 (1)

Sensing distance (Sn) mm	Function	Output	Connection (2)	Reference	Weight kg
<b>Brass case, flush mountable</b>					
1	NO	PNP	Pre-cabled (L = 2 m)	XS1 N05PA310	0.030
			M8 connector	XS1 N05PA310S	0.010
	NPN	Pre-cabled (L = 2 m)	XS1 N05NA310	0.030	
		M8 connector	XS1 N05NA310S	0.010	
NC	PNP	Pre-cabled (L = 2 m)	XS1 N05PB310	0.030	
		M8 connector	XS1 N05PB310S	0.010	

### Stainless steel case, flush mountable

0.8	NO	PNP	Pre-cabled (L = 2 m)	XS1 N05PA311	0.030
			M8 connector	XS1 N05PA311S	0.015
	NPN	Pre-cabled (L = 2 m)	XS1 N05NA311	0.030	
		M8 connector	XS1 N05NA311S	0.015	

### Ø 6.5 plain (1)

Sensing distance (Sn) mm	Function	Output	Connection (2)	Reference	Weight kg	
<b>Stainless steel case, flush mountable</b>						
1.5	NO	PNP	Pre-cabled (L = 2 m)	XS1 L06PA340	0.025	
			M8 connector	XS1 L06PA340S	0.010	
			M12 connector	XS1 L06PA340D	0.015	
			NPN	Pre-cabled (L = 2 m)	XS1 L06NA340	0.010
				M8 connector	XS1 L06NA340S	0.025
				M12 connector	XS1 L06NA340D	0.015
	NC	PNP	Pre-cabled (L = 2 m)	XS1 L06PB340	0.025	
			M8 connector	XS1 L06PB340S	0.010	
			NPN	Pre-cabled (L = 2 m)	XS1 L06NB340	0.025
				M8 connector	XS1 L06NB340S	0.010
				M12 connector	XS1 L06NB340D	0.015
			NO+NC	PNP	Pre-cabled (L = 2 m)	XS1 L06PC410
NPN	Pre-cabled (L = 2 m)	XS1 L06NC410			0.025	

### Brass case, flush mountable

2.5	NO	PNP	Pre-cabled (L = 2 m)	XS1 L06PA349	0.025	
			M8 connector	XS1 L06PA349S	0.010	
			M12 connector	XS1 L06PA349D	0.015	
			NPN	Pre-cabled (L = 2 m)	XS1 L06NA349	0.025
				M8 connector	XS1 L06NA349S	0.010
				M12 connector	XS1 L06NA349D	0.015
	NC	PNP	Pre-cabled (L = 2 m)	XS1 L06PB349	0.025	
			M8 connector	XS1 L06PB349S	0.010	
			NPN	Pre-cabled (L = 2 m)	XS1 L06NB349	0.025
				M8 connector	XS1 L06NB349S	0.010
				M12 connector	XS1 L06NB349D	0.015

### Stainless steel case, non flush mountable

2.5	NO	PNP	Pre-cabled (L = 2 m)	XS2 L06PA340	0.025
			M8 connector	XS2 L06PA340S	0.010
			M12 connector	XS2 L06PA340D	0.015
	NPN	Pre-cabled (L = 2 m)	XS2 L06NA340	0.025	
		M8 connector	XS2 L06NA340S	0.010	
		M12 connector	XS2 L06NA340D	0.015	

(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

Example: XS1 L04PA310 becomes XS1 L04PA310L1 with a 5 m long cable.

# Inductive proximity sensors

Osiprox® Application

Miniature, cylindrical, flush mountable and non flush mountable

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

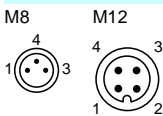
## Characteristics

Sensor type		XS1 ●●●●●●S; XS1 ●●●●●●D; XS2 L06●A340●	XS1 ●●●●●●; XS2 L06●A340
Product certifications		UL, CSA, C€	
Connection (1)	Connector	M8 on XS1 ●●●●●●S and M12 on XS1 ●●●●●●D	–
	Pre-cabled	–	Length: 2 m
Operating zone	Ø 4	mm	0...0.8 (brass), 0...0.6 (stainless steel)
	Ø 5	mm	0...0.8 (brass), 0...0.6 (stainless steel)
	Ø 6.5 flush mountable	mm	0...2 (brass), 0...1.2 (stainless steel)
	Ø 6.5 non flush mountable	mm	0...2 (stainless steel)
Degree of protection	Conforming to IEC 60529	IP 67	
Storage temperature range		°C - 40...+ 85	
Operating temperature range		°C - 25...+ 70 (- 25...+ 55 for XS1 L06●●349)	
Materials	Case	Nickel plated brass or stainless steel grade 303	
	Pre-cabled	PvR 3 x 0.11 mm <sup>2</sup> or 4 x 0.08 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, 4 viewing ports at 90°	LED, annular
Rated supply voltage		V --- 5...24 for the XS1 L04●●●●●● and XS1 N05●●●●●● --- 12...24 for the XS● L06●●●●●●	
Voltage limits (including ripple)		V --- 5...30 for the XS1 L04●●●●●● and XS1 N05●●●●●● --- 10...38 for the XS● L06●●●●●●	
Current consumption, no-load		mA ≤ 10	
Switching capacity		3-wire PNP/NPN mA ≤ 100 with overload and short-circuit protection ≤ 200 for XS● L06 with overload and short-circuit protection	
Voltage drop, closed state		V ≤ 2	
Maximum switching frequency		kHz 5 2.5 for XS1 L06●●349●	
Delays	First-up	ms ≤ 5	
	Response	ms ≤ 0.1, ≤ 0.2 for XS1 L06●●349●	
	Recovery	ms ≤ 0.1, ≤ 0.2 for XS1 L06●●349●	

(1) Detection curves, see page 31170/2.

## Wiring scheme

### Connector

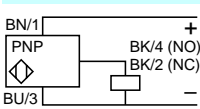


See connection on page 30210/3.

### Pre-cabled

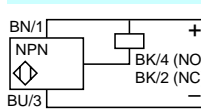
BU : Blue  
BN : Brown  
BK : Black  
WH : White

### PNP 3-wire

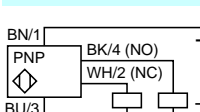


For M8 connector, NO and NC on terminal 4.

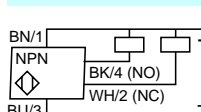
### NPN 3-wire



### PNP 4-wire



### NPN 4-wire



## Setting-up

### Minimum mounting distances (mm)

Sensor	Side by side	Face to face	Facing a metal object
Ø 4	e ≥ 2	e ≥ 12	e ≥ 3
Ø 5	e ≥ 2	e ≥ 12	e ≥ 3
Ø 6.5	e ≥ 3	e ≥ 18	e ≥ 4.5
Ø 6.5, XS2 L06●A340●	e ≥ 5	e ≥ 30	e ≥ 7.5
Ø 6.5, XS1 L06●●349●	e ≥ 10	e ≥ 30	e ≥ 7.5

### Tightening torque

Stainless steel: 2.2 N.m

Brass: 1.6 N.m

## Dimensions

Sensor	Pre-cabled			M8 connector			M12 connector		
	a	b	c	a	b	c	a	b	c
Ø 4	29	29	–	41	24	–	–	–	–
Ø 5	29	29	–	41	24	–	–	–	–
Ø 6.5	33	30	–	42	34	–	45	24	–
Ø 6.5, XS2 L06●A340●	33	27	3	42	31	3	45	21	3
Ø 6.5, XS1 L06●●410	50	47	–	–	–	–	–	–	–