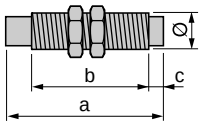
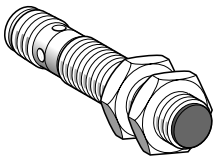
Inductive proximity sensors

Osiprox® Application
Sensors for welding machine applications (1)
Cylindrical type. Metal case, Teflon coated steel, threaded

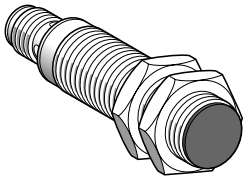
Flush mountable in metal



Lengths (mm) :
a = Overall
b = Threaded section
c = For non flush mounting sensors



a = 60
b = 40
Ø = M12 x 1



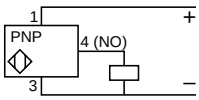
a = 60
b = 40
Ø = M18 x 1

		Teflon front face	**Teflon front face**
Nominal sensing distance (Sn)		**2 mm**	**5 mm**
References			
3-wire ⎓ PNP NO		**XS1 M12PAW01D**	**XS1 M18PAW01D**
Weight (kg)		0.025	0.060
Characteristics			
Connection		**M12 connector**	
Degree of protection conforming to IEC 60529		IP 67	
Operating zone		**0…1.6 mm**	**0…4 mm**
Repeat accuracy		3 % of Sr	
Differential travel		1…20 % of Sr	
Operating temperature		- 25…+ 70 °C	
Output state indication		LED, 4 viewing ports at 90°	
Rated supply voltage		**⎓ 12…24 V with protection against reverse polarity**	
Voltage limits (including ripple)		⎓ 10…36 V	
Switching capacity		**0…250 mA with overload and short-circuit protection**	
Voltage drop, closed state		≤ 2.5 V	
Current consumption, no-load		≤ 15 mA	
Immunity to electromagnetic fields		≤ 140 mT	
Maximum switching frequency		1000 Hz	500 Hz
Delays	First-up	≤ 10 ms	≤ 10 ms
	Response	≤ 0.1 ms	≤ 0.2 ms
	Recovery	≤ 0.4 ms	≤ 0.6 ms

Wiring schemes

M12 connector

3-wire ⎓, PNP, NO output



Depending on connector page 30210/3.

(1) Sensors particularly resistant to welding machine electromagnetic fields.

Accessories :
page 37317/2

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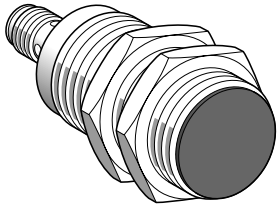
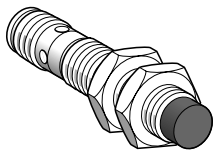
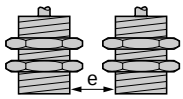
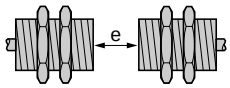
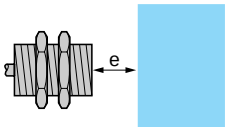
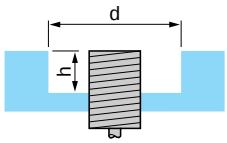
		Non flush mountable in metal
		
a = 60 b = 40 Ø = M30 x 1,5		a = 60 b = 36 c = 4 Ø = M12 x 1
Teflon front face		**Teflon front face**
10 mm		**4 mm**
XS1 M30PAW01D		**XS2 M12PAW01D**
0.145		0.025
M12 connector		
IP 67		
0…8 mm		**0…3.2 mm**
3 % of Sr		
1…20 % of Sr		
- 25…+ 70 °C		
LED, 4 viewing ports at 90°		
⎓ **12…24 V with protection against reverse polarity**		
⎓ 10…36 V		
0…250 mA with overload and short-circuit protection		
≤ 2.5 V		
≤ 15 mA		
≤ 140 mT		
250 Hz		1000 Hz
≤ 10 ms		≤ 10 ms
≤ 0.7 ms		≤ 0.2 ms
≤ 5 ms		≤ 0.4 ms

Setting-up

Minimum mounting distances (mm)	Side by side	Face to face	Facing a metal object	Mounted in a metal support
				
XS1 M12 flush mountable	e ≥ 0	e ≥ 7	e ≥ 6	d ≥ 12, h ≥ 0
XS1 M18 flush mountable	e ≥ 0	e ≥ 16	e ≥ 9	d ≥ 18, h ≥ 0
XS1 M30 flush mountable	e ≥ 0	e ≥ 20	e ≥ 20	d ≥ 30, h ≥ 0
XS2 M12 non flush mountable	e ≥ 15	e ≥ 9	e ≥ 11	d ≥ 36, h ≥ 8

Fixing nut tightening torque XS1 M12, **XS2 M12** : < 15 N.m ; **XS1 M18** : < 35 N.m ; **XS1 M30** : < 50 N.m