

Proximity Sensors

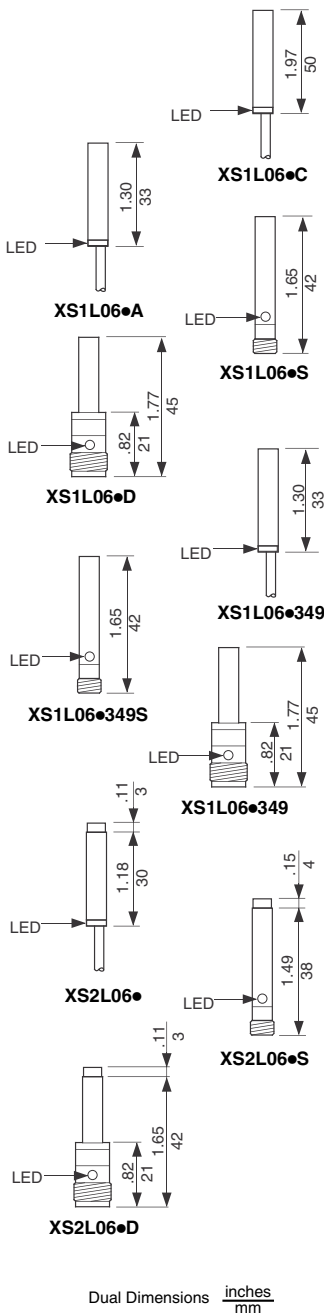
XS Tubular, Inductive Sensors

6.5 mm Diameter, DC; Economy, Short Length, Smooth Barrel



Features

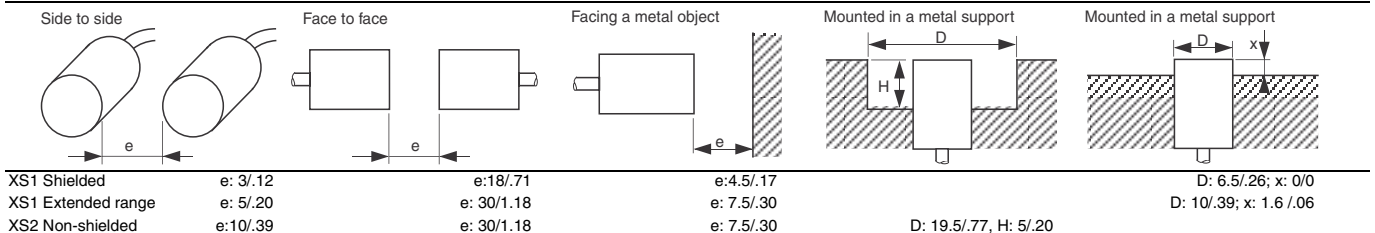
- Faster troubleshooting aided by high visibility 360° indicators
- Economy of size offered by extended range model
- Reduction of relay or software logic using complementary N.O. + N.C. outputs
- Significant replacement time savings by using the patented plastic mounting bracket (no gauging) or connectors
- Trouble-free operation ensured by extensive protective circuitry
- Works with unregulated DC supply powered by 24 V secondary transformer
- Metal mounting nuts included
- Zinc diecast
- Normally closed (N.C.) output available on versions marked ★
- UL Listed, CSA Certified and CE Mark



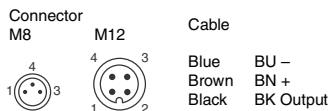
Nominal Sensing Distance	Circuit Type	Voltage Range	Output Mode	Operating Frequency	Indicator LED (see next page)	Mating Connector (see p. 518)	Catalog Number
Stainless steel case							
Shielded, 2 m (6.6') cable							
1.5 mm	PNP	12-24 V	N.O. ★	5000 Hz	A	—	XS1L06PA340
1.5 mm	NPN	12-24 V	N.O. ★	5000 Hz	A	—	XS1L06NA340
1.5 mm	PNP	12-24 V	N.O.+N.C.	5000 Hz	A	—	XS1L06PC410
1.5 mm	NPN	12-24 V	N.O.+N.C.	5000 Hz	A	—	XS1L06NC410
Shielded, connector - nano style							
1.5 mm	PNP	12-24 V	N.O. ★	5000 Hz	B	1 thru 8	XS1L06PA340S
1.5 mm	NPN	12-24 V	N.O. ★	5000 Hz	B	1 thru 8	XS1L06NA340S
Shielded, connector - micro style							
1.5 mm	PNP	12-24 V	N.O.	5000 Hz	B	11,12,13,15,16	XS1L06PA340D
1.5 mm	NPN	12-24 V	N.O.	5000 Hz	B	11,12,14,15,16	XS1L06NA340D
Nickel plated brass case							
Shielded♦, EXTENDED RANGE 2m (6.6') cable							
2.5 mm	PNP	12-24 V	N.O. ★	2500 Hz	A	—	XS1L06PA349
2.5 mm	NPN	12-24 V	N.O. ★	2500 Hz	A	—	XS1L06NA349
Shielded♦, EXTENDED RANGE connector - nano style							
2.5 mm	PNP	12-24 V	N.O.	2500 Hz	B	1 thru 8	XS1L06PA349S
2.5 mm	NPN	12-24 V	N.O.	2500 Hz	B	1 thru 8	XS1L06NA349S
Shielded♦, EXTENDED RANGE connector - micro style							
2.5 mm	PNP	12-24 V	N.O.	2500 Hz	B	11,12,13,15,16	XS1L06PA349D
2.5 mm	NPN	12-24 V	N.O.	2500 Hz	B	11,12,14,15,16	XS1L06NA349D
Stainless steel case							
Non-shielded, 2 m (6.6') cable							
2.5 mm	PNP	12-24 V	N.O.	5000 Hz	A	—	XS2L06PA340
2.5 mm	NPN	12-24 V	N.O.	5000 Hz	A	—	XS2L06NA340
Non-shielded, connector - nano style							
2.5 mm	PNP	12-24 V	N.O.	5000 Hz	B	1 thru 8	XS2L06PA340S
2.5 mm	NPN	12-24 V	N.O.	5000 Hz	B	1 thru 8	XS2L06NA340S
Non-shielded, connector - micro style DC							
2.5 mm	PNP	12-24 V	N.O.	5000 Hz	B	11,12,13,15,16	XS2L06PA340D
2.5 mm	NPN	12-24 V	N.O.	5000 Hz	B	11,12,14,15,16	XS2L06NA340D
2.5 mm	PNP	12-24 V	N.O.+N.C.	5000 Hz	B	11,12,13,15,16	XS2L06PC410D
2.5 mm	NPN	12-24 V	N.O.+N.C.	5000 Hz	B	11,12,14,15,16	XS2L06NC410D

★ To order a normally closed (N.C.) version, change **A** to **B**, example; XS1L06PA340 to XS1L06PB340.
 ♦ See dimension x below.

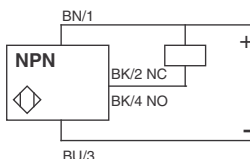
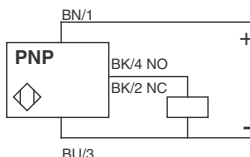
Minimum Mounting Clearances (mm/inches)



Wiring

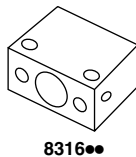
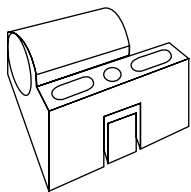
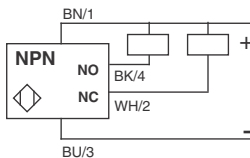
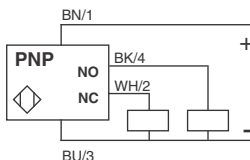


3 wire NO or NC wire color/ connector pin



M8 connector, N.O. and N.C. to pin 4.

4 wire NO + NC



Connector Cables (M8 or S suffix; M12 or D suffix)

XSZCS101	Nano Conn., 3 pin, 2 m, straight
XSZCS111	Nano Conn., 3 pin, 2 m, 90°
XSZCD101Y	Micro Conn., 4 pin, 2 m, straight
XSZCD111Y	Micro Conn., 4 pin, 2 m, 90°

For additional cable options and lengths see p. 518
Accessories..... page 298

Specifications

Mechanical			
Usable sensing range	Shielded	Standard Range	0 to 1.2 mm
		Extended Range	0 to 2 mm
	Non-shielded		0 to 2 mm
Standard temperature range		Standard Range	-25° C to +70° C (-13° F to +158° F)
		Extended Range	-25° C to 50° C (13° F to 122° F)
Enclosure rating - cable (for connector see p. 518)	NEMA Type		3, 4X, 6P, 12, 13
	IEC Type		IP67
Enclosure material	Case		Nickel plated Brass
	Sensing face		PBT
Vibration resistance	(IEC 60068.2.6)		25 G, amplitude +/- 2 mm, f =10-55Hz
Shock resistance	(IEC 60068.2.27)		50 G duration 11 ms
Standard target size (steel)			6.5 mm x 6.5 mm
Differential (% of Sr)			15%
Repeatability (% of Sr)			3%
LED indicator type	A		360° ring LED: Shows output status
	B		One LED visible from 4 quadrants: Shows output status
Cable	3 wire		27 AWG (0.11mm ²), PvR
	4 wire (N.O. + N.C.)		28 AWG (0.08mm ²), PvR

Electrical			
Voltage range – nominal			12 to 24 Vdc
Voltage limit (including ripple)			10 to 38 Vdc
Voltage drop (across switch), closed state			2V (2.6V extended range)
Maximum load current			200 mA
Current consumption (no load)			10 mA
On delay (max.)		Standard Range	0.1 ms
		Extended Range	.2 ms
Off delay (max.)		Standard Range	0.1 ms
		Extended Range	.2 ms
Power-up delay (max.)			5 ms
Protective circuitry	Short circuit protection		Yes
	Overload		Yes
	Radio frequency immunity (RFI)		IEC 61000-4-3 L3
	Electrostatic; transients; impulse		IEC 61000-4-2 L2; IEC 61000-4-4 L3; 60947.5.2 L3
	Reverse polarity protection		Yes
Agency Listings	E164869 CCN NRKH CR 44087 Class 3211 03		

Options

Description		Suffix
Extended temperature range (cable type and standard sensing distance only)	Down to -40° C (-40° F)	TF
Extended cable length	16.4 ft. (5 meter) cable	L1
	32.8 ft. (10 meter) cable	L2

Accessories

Description	Catalog Number
Mounting bracket, plastic	XSZB165
Mounting bracket, diecast zinc	831606

Note: Refer to p. 351, for target material correction coefficient Km.

Proximity Sensors