

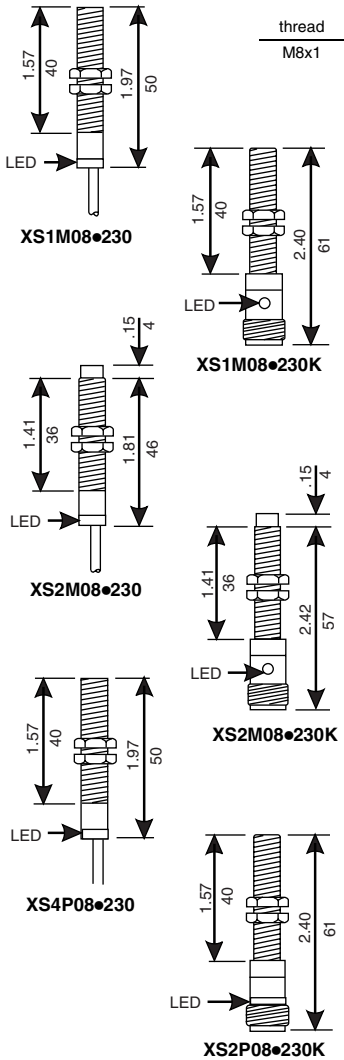
# Proximity Sensors

## XS Tubular, Inductive Sensors

### 8 mm Diameter, AC/DC; Universal Standard Length



Proximity Sensors



#### Features

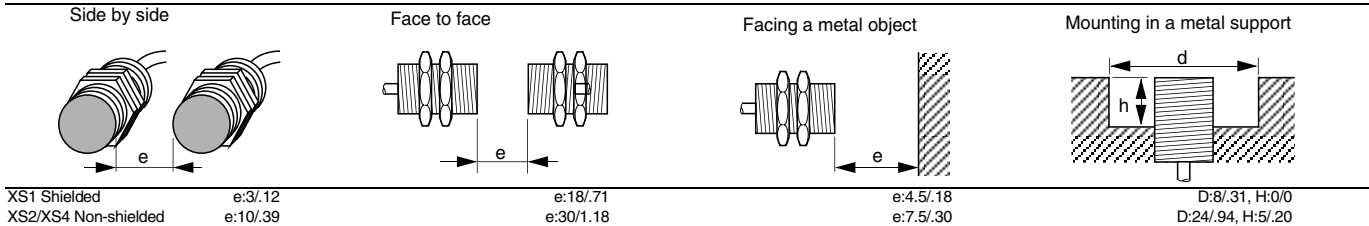
- Faster troubleshooting aided by high visibility 360° indicator
- Rugged case designed for aggressive environments.
- Worry-free replacement: standard length, extended temperature range, AC or DC power supply
- Significant replacement time savings using patented plastic mounting bracket (no gauging) or connectors
- Trouble-free operation ensured by extensive protective circuitry
- Normally closed (N.C.) output available on versions marked★
- Plastic mounting nuts for plastic and lock nuts for metal housing included
- UL Listed, CSA Certified and CE Mark

Nominal Sensing Distance	Output Mode	Voltage Range		Operating Frequency		Indicator LED (see next page)	Mating Connector Style (see p. 518)	Catalog Number
		AC	DC	AC	DC			
<b>Nickel plated brass case</b>								
<b>Shielded, 2m (6.6') cable</b>								
1.5 mm	N.O. ★	24-240 V	24-210 V	25 Hz	4000 Hz	A	—	XS1M08MA230
<b>Shielded, connector - micro style AC</b>								
1.5 mm	N.O. ★	24-240 V	24-210 V	25 Hz	4000 Hz	B	17,18	XS1M08MA230K
<b>Non-shielded, 2m (6.6') cable</b>								
2.5 mm	N.O. ★	24-240 V	24-210 V	25 Hz	3000 Hz	A	—	XS2M08MA230
<b>Non-shielded, connector - micro style AC</b>								
2.5 mm	N.O. ★	24-240 V	24-210 V	25 Hz	3000 Hz	B	17,18	XS2M08MA230K
<b>Plastic case</b>								
<b>Non-shielded, 2m (6.6') cable</b>								
2.5 mm	N.O. ★	24-240 V	24-210 V	25 Hz	3000 Hz	A	—	XS4P08MA230
<b>Non-shielded, connector - micro style AC</b>								
2.5 mm	N.O. ★	24-240 V	24-210 V	25 Hz	3000 Hz	A	17,18	XS4P08MA230K

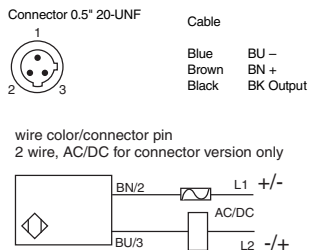
★ To order a normally closed (N.C.) version, change **A** to **B**, example; XS1M08MA230 to XS1M08MB230.

Dual Dimensions  $\frac{\text{inches}}{\text{mm}}$

#### Minimum Mounting Clearances (mm/inches)



**Wiring**



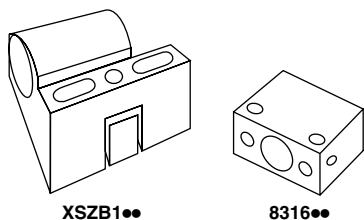
**Specifications**

<b>Mechanical</b>		
Usable sensing range	Shielded	0 to 1.2 mm
	Non-shielded	0 to 2 mm
Standard temperature range	-25° C to +80° C (-13° F to +176° F)	
Enclosure rating - cable (for connector, see page 518)	NEMA Type	3, 4X, 6P, 12, 13
	IEC Type	IP67
Enclosure material	Nickel plated brass	Case: Nickel plated Brass Sensing face: PBT
	Plastic	PBT
Tightening torque (max.)	Nickel plated brass	9 N•m (79.6 lb-ft)
	Plastic	1 N•m (.74 lb-ft)
Vibration resistance	(IEC 60068.2.6)	25 G, amplitude +/- 2 mm, f =10-55 Hz
Shock resistance	(IEC60068.2.27)	50 G duration 11 ms
Standard target size (steel)	8 mm x 8 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	2 wire	27 AWG (0.11 mm <sup>2</sup> ), PvR
<b>Electrical</b>		
Voltage range	24 to 240 Vac (50/60 Hz), 24 to 210 Vdc	
Voltage limit (including ripple)	20 to 264 Vac/Vdc	
Maximum Voltage drop (across switch), closed state	5.5V	
Inrush current (inductive @ 20ms)	2A	
Minimum load current	5 mA	
Maximum load current	100 mA	
	20 ≤ Vdc ≤ 58 IEC 60947-5-2 Utilization category DC-13 Vdc > 58 IEC 60947-5-2 Utilization category DC-12	
Residual (leakage) current, open state	24 Vac/Vdc	0.8 mA
	120 Vac/Vdc	1.5 mA
On delay (max.)	.2 ms	
Off delay (max.)	.2 ms	
Power-up delay (max.)	40 ms	
Protective circuitry	Short circuit protection	No★
	Radio frequency immunity (RFI)	IEC 61000-4-3 L3
	Electrostatic; transients; impulse	IEC 61000-4-2 L4; IEC 61000-4-4 L4; 60947.5.2 L3
Agency Listings	E164869 CCN NRKH                  CR 44087 Class 3211 03	

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**Options**

Description		Suffix
Extended temperature range (cable type 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
Plastic mounting nuts	XSZE208
Metal mounting lock nuts	XSZE108
Mounting bracket, plastic	XSZB108
Mounting bracket, diecast zinc	831608

**Note:** Refer to p. 351, for target material correction coefficient Km.  
 ★ See p. 298 for protective fuses.

**Connector Cables (U20 or K suffix)**

XSZCK101Y	Micro Conn., 3 pin, 2 m, straight
XSZCK111Y	Micro Conn., 3 pin, 2 m, 90°

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