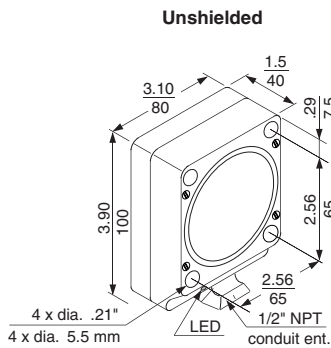
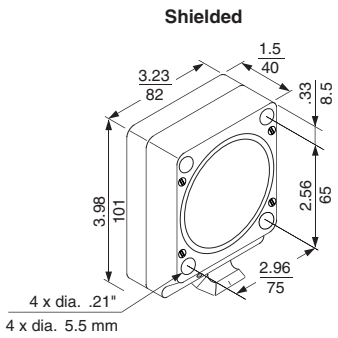


# Proximity Sensors

## XSD Rectangular, Inductive Sensors

### Long Range Block, AC and DC – Plug-in



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

#### Features

Rectangular low profile switch 3.5" square by 1.63" high ( 88.4 x 41.4 mm) designed for very demanding industrial applications.

- Housings: Plastic (thermoplastic polyester)
- LED indicators: target sensed, power on and short circuit (selected models)
- Timer model available for jamming applications
- Plug-in modular design
- Radio Frequency Immunity (RFI)
- Short circuit protection (SCP) (selected models)
- Alternate frequency models for side by side mounting (selected models)
- DC models: complementary outputs (PNP or NPN)
- AC models: selectable normally open (N.O.) or normally closed (N.C.)
- UL Listed, CSA Certified and CE marked

#### 40 mm (1.57") Sensing Range, Shielded

Circuit Type	Output Mode	Voltage Range ▲	Max. Load	Residual (Leakage) Current	Operating Frequency Maximum	LED/SCP★	Catalog Number
<b>DC Model, Screw Terminals</b>							
2 wire	N.O.	12-48 V	100 mA	0.5 mA	180 Hz	Yes	XSDC407138

#### 40 mm (1.57") Sensing Range, Non-shielded

<b>DC Model, Screw Terminals</b>							
2 wire	N.O.	12-48 V	100 mA	0.5 mA	180 Hz	Yes/Yes	XSDC407139
PNP	N.O. + N.C.	12-48 V	200 mA	–	50 Hz	Yes/Yes	XSDH407339†
NPN	N.O. + N.C.	12-48 V	200 mA	–	50 Hz	Yes/Yes	XSDJ407339†
<b>AC Model, Screw Terminals</b>							
2 wire	N.O./N.C.	24-240 V	500 mA	1.5 mA (P) ■	10 Hz	Yes/No	XSDA400519†
2 wire	N.O./N.C.	24-240 V	500 mA	1.5 mA (P) ■	10 Hz	3★/Yes	XSDA405539†
<b>AC Model Mini Style Connector, 3 Pins ◊</b>							
2 wire	N.O./N.C.	24-240 V	500 mA	1.5 mA (P) ■	10 Hz	Yes/No	XSDA400519R3†
2 wire	N.O./N.C.	24-240 V	500 mA	1.5 mA (P) ■	10 Hz	3★/Yes	XSDA405539R3†
<b>AC Model with Timer</b>							
2 wire	N.O./N.C.	24-240 V	500 mA	3.5 mA (R) ■	10 Hz	Yes/No	XSDT023319

#### 50 mm (2") Sensing Range, Shielded

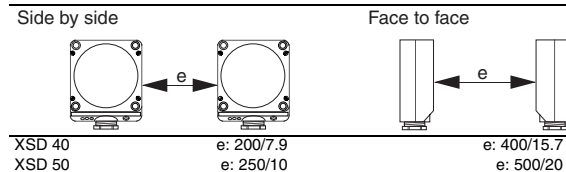
<b>AC/DC Model, Screw Terminals</b>							
2 wire	N.O./N.C.	24-240 V	5-100 mA DC 5-500 mA AC	1.7mA at 120V 3 mA at 240V ●	10 Hz	3★/Yes	XSDM500538

#### 50 mm (2") Sensing Range, Non-shielded

<b>DC Model, Screw Terminals</b>							
2 wire	N.O.	12-48 V	100 mA	0.5 mA	180 Hz	Yes/Yes	XSDC507139
<b>AC Model, Screw Terminals</b>							
2 wire	N.O./N.C.	24-240 V	500 mA	1.5 mA	10 Hz	Yes/No	XSDA500519
2 wire	N.O./N.C.	24-240 V	500 mA	1.5 mA	10 Hz	3★/Yes	XSDA505539
<b>AC Model Mini Style Connector, 3 Pins ◊</b>							
2 wire	N.O./N.C.	24-240 V	500 mA	1.5 mA	10 Hz	Yes/No	XSDA500519R†
2 wire	N.O./N.C.	24-240 V	500 mA	1.5 mA	10 Hz	3★/Yes	XSDA505539R†

- 100 mA for DC.
- PLC applications: P= PLC compatible. R= Bleeder resistor needed.
- † Also available with alternate frequency. Add F to catalog number. No additional charge.
- ‡ 1 LED for power ON, 1 LED for output ON, 1 LED for SCP triggered.
- ◊ Mating connector see p. 518.
- ★ For devices without SCP, see p. 298 for protective fuses.

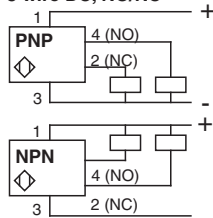
#### Minimum Mounting Clearances (Except XSDM500538) (mm/inches)



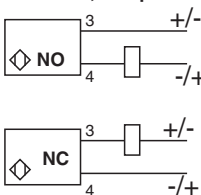
**Wiring**



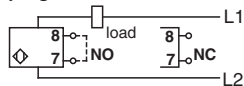
**3 wire DC, NO/NC**



**2 wire DC, non polarized**



**2 wire AC and AC/DC, programmable NO/NC**



**Specifications**

<b>Mechanical</b>					
Usable Sensing Range★	24-48 mm (0.94" - 1.89")				
Standard Temperature Range	-13° F to +158° F (-25° C to +70° C)				
Enclosure Rating	NEMA Type	3,4 X (indoor), 12,13			
	IEC Type	IP67			
Vibration Resistance	25 G, amplitude ± 2 mm, f =10-55 Hz				
Shock Resistance	50 G for 11 ms				
Standard Target Size (Mild Steel)	120 x 120 mm (4.7" x 4.7")				
Differential	Maximum 20%				
Repeatability	Maximum 5%				
Cable, PVC	Screw Maximum, #16 AWG				
<b>Electrical</b>	<b>AC Models</b>		<b>DC Models</b>		
			<b>2 wire</b>	<b>4 wire</b>	<b>AC/DC Models</b>
Voltage range max. (including ripple)	20-264 V		10-58 V	10-58 V	20-264 V
Voltage Drop (Across Switch)	5.5 V★		4 V	1.8 V	6 V
Inrush Current (Inductive @ 20mS)	2 A		-	-	2 A
Minimum Load Current	5 mA		1.5 mA	-	5 mA
Current consumption (No Load)	-		-	10 mA	-
On Delay (max.)	30 ms		0.2 ms	10 ms	40 ms
Off Delay (max.)	20 ms		3 ms	10 ms	60 ms
Power-up Delay (max.)	120 ms		5 ms	10 ms	100 ms
Reverse Polarity Protection	-		Standard	Standard	-
Radio Frequency Immunity (RFI)	4 cm (1.6") Minimum from antenna				
Agency Listings	E 164353 ■ CCN NRKH		LR 44087 ★ Class 3211 03	FM: J.I. OROH9.AX (3610, 3611)	

★ Timer model voltage drop is 4.5 V.

**Options**

Description	Suffix
Extended Temperature Rangea	
to +185° F (85° C) (▼ Not Available on AC Models with SCP)	TT
to -40° F (-40° C)	TF

Ex: XSD605539 TTR3

**Replacement Modules**

Description	Catalog Number
<b>DC 2 Wire</b>	
Base Receptacle, N.O. Contact	ZSDZ03
N.O. Contact Switch	ZSDC607139
Base Receptacle, N.O./N.C.	ZSDZ02
N.O./N.C. Contact Switch	ZSDC607319
<b>DC 3 Wire</b>	
Base Receptacle	ZSDZ02
PNP Switch	ZSDH607339
NPN Switch	ZSDJ607339
<b>AC 2 Wire</b>	
Base Receptacle	ZSDZ01
1 LED, N.O. SCP Switch	ZSDA600519
3 LED, SCP Switch	ZSDA605539
AC/DC	ZSDM600539

▼ Refer to p. 351 for target material correction coefficient Km.

**Connector Cables (A or R3 suffix)**

XSZCA901Y	Mini Conn., 3 pin, 2 m, straight
XSZCA911Y	Mini Conn., 3 pin, 2 m, 90°

For additional cable options and lengths see p. 518