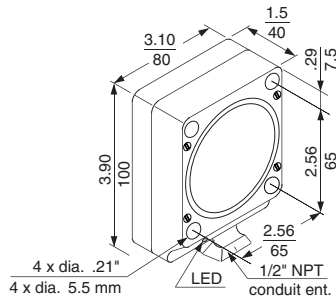


# Proximity Sensors

## XSD Rectangular, Inductive Sensors

### Long Range Block, AC and DC; Adjustable Sensing Range



#### Features:

Rectangular low profile switch 3.5" square by 1.63" high ( 88.4 x 41.4 mm) designed for very demanding industrial applications. Especially recommended for long sensing range applications with metal in the background.

- Housings: Plastic (thermoplastic polyester)
- Adjustable sensing range (30 to 60mm); sensitivity can be decreased below the maximum usable sensing distance (48mm) to cancel the metal background influence (20 turn potentiometer under the front plastic cap). For fixed long sensing distance, see page 280.
- LED indicators: target sensed, power on and short circuit (selected models)
- Plug-in modular design
- AC/DC model available
- Radio Frequency Immunity (RFI)
- Short Circuit Protection (SCP) (selected models)
- 1/2" NPT conduit entrance
- Protected, captive saddle clamp terminals in ready-to-wire position
- DC models: complementary outputs PNP or NPN
- AC models: programmable output N.O./N.C.
- UL Listed and CSA Certified

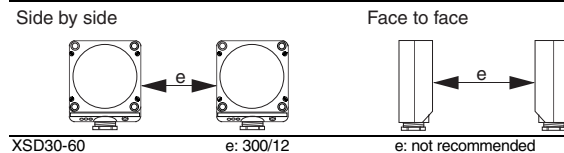
**NOTE:** Sensors are delivered and adjusted from the factory for maximum sensing distance. **Do not attempt to increase the sensing distance above the factory setting; sensor behavior becomes unpredictable.**

#### 30-60 mm (2.36") sensing range, Non-shielded

Circuit Type	Output Mode	Voltage Range	Max. Load	Residual (leakage) Current Max	Operating Frequency Maximum	LED/SCP★	Catalog Number
<b>DC model, 2 and 3 wire screw terminals</b>							
2 wire	N.O.	12-48 V	100 mA	0.8 mA	20 Hz	Yes/Yes	XSDC607139
2 wire	N.O./N.C.	12-48 V	100 mA	0.8 mA	20 Hz	Yes/No	XSDC607319
PNP	N.O./N.C.	12-48 V	200 mA	—	50 Hz	Yes/Yes	XSDH607339
NPN	N.O./N.C.	12-48 V	200 mA	—	50 Hz	Yes/Yes	XSDJ607339
<b>AC model, screw terminals</b>							
2 wire	N.O./N.C.	24-240 V	500 mA	1.7 mA ②	10 Hz	Yes/No	XSDA600519
2 wire	N.O./N.C.	43-132 V	500 mA	1.7 mA ②	10 Hz	3③/Yes	XSDA605539
<b>AC and DC models, screw terminals</b>							
2 wire	N.O./N.C.	24-240 Vac	500 mA	1.7 mA @ 120 V ② ■			
		24-210 Vdc	100 mA	115 V	10 Hz	3③/Yes	XSDM600539
<b>AC and AC/DC models, mini style receptacle, 3 pins</b>							
2 wire	N.O./N.C.	24-240 V	500 mA	1.7 mA ②	10 Hz	Yes/No	XSDA600519R3
2 wire	N.O./N.C.	93-132 V	500 mA	1.7 mA ②	10 Hz	3③/Yes	XSDA605539R3
2 wire	N.O./N.C.	24-240 Vac	500 mA	1.7 mA ②			
		24-210 Vdc	100 mA	1.7 mA @ 120 V ② ■	10 Hz	3③/Yes	XSDM600539R3

- ② PLC compatible.
- ③ 1 LED for power OUT and 1 LED for output ON, 1 LED for SCP triggered.
- < 1 mA @ 24 V, < 3 mA @ 240 V
- ★ For devices without SCP, see p. 298 for protective fuses.

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



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

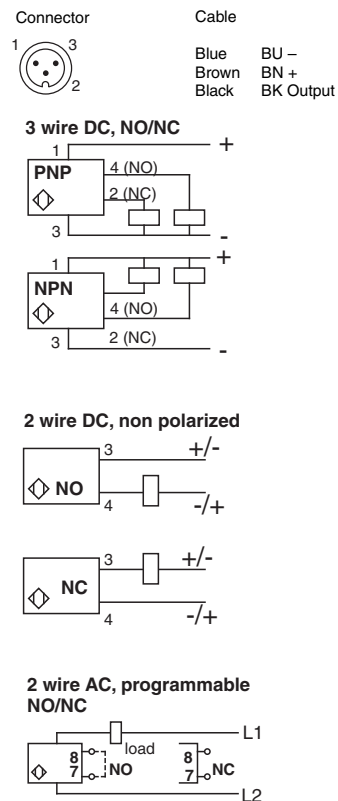
Proximity Sensors

# Proximity Sensors

## XSD Rectangular, Inductive Sensors

### Long Range Block, AC and DC; Adjustable Sensing Range

#### Wiring



#### Specifications

Mechanical					
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, 6, 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 120mm (4.7" x 4.7")				
Differential	Max. 20%				
Repeatability	Max. 5%				
Cable, PVC	Screw terminals, #16 AWG				
Electrical	AC Models	DC Models			AC/DC Models
		2 wire, N.O.	2 wire, N.O./N.C.	4 wire	
Voltage range (including ripple)	20-264 V	10-58 V	10-58 V	10-58 V	20-264 V
Voltage drop (across switch)	4.5 V	4 V	7 V	1.8 V	6 V
Inrush current (inductive @ 20ms)	2 A	-	-	-	2 A
Minimum load current	5 mA	-	1.5 V	-	5 mA
Current consumption (no load)	-	10 mA	-	10 mA	-
On delay (max.)	30 ms	5 ms	5 ms	10 ms	40 ms
Off delay (max.)	20 ms	40 ms	25 ms	10 ms	60 ms
Power-up delay (max.)	120 ms	75 ms	30 ms	10 ms	100 ms
Reverse polarity protection	-	Standard	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)

#### Options

Description	Suffix
Extended temperature range★	
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 page 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

Proximity Sensors