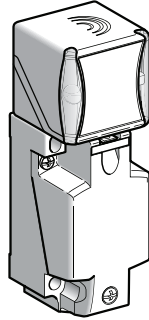


OsiSense™ XS Inductive proximity sensors

General purpose, Plastic case, 40 x 40 x 117 mm,
plug-in, 5 position turret head

2

Sensor	Flush mountable in metal	Non-flush mountable in metal
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Nominal sensing distance (Sn)	15 mm (0.59 in.)	20 mm (0.78 in.)	40 mm (1.57 in.)
Catalog Numbers			
4-wire ---	PNP NO+NC NPN NO+NC	–	XS8C4A1PCP20 XS8C4A1NCP20
2-wire ---	NO or NC programmable	XS7C4A1DPP20	XS8C4A1DPP20 XS8C4A4DPP20
2-wire $(\sim/\text{---})$ unprotected (1)	NO or NC programmable	XS7C4A1MPP20	XS8C4A1MPP20 XS8C4A4MPP20
Weight, kg (lb)	0.244 (0.537)	0.244 (0.537)	0.244 (0.537)

The sensors have and a 1/2 - 20 UNF connector. For 1/2" NPT conduit fitting and screw terminals, change suffix P20 to **N12** (for example XS8C4A1MPN12). For a Pg 13.5 conduit fitting and screw terminals, change suffix P20 to **G13** (for example XS8C4A4PCG13). For a 4 pin connector, change suffix P20 to **M12**. For a 7/8" mini connector, change suffix P20 to **U78**.

Specifications

Operating zone		0–12 mm (0–0.47 in.)	0–16 mm (0–0.62 in.)	0–32 mm (0–1.25 in.)
Product certifications		UL, CSA, CE, TÜV (4-wire versions)		
Conformity to standards		IEC 60947-5-2		
Conformity to safety standards (2)	For XS8C4A●PCP20	EN 62061 (2005): SILcl2, EN 61508 (2010): SIL 2, EN ISO 13849 (2008): PL d		
Reliability data (2)	For XS8C4A●PCP20	MTTFd = 1546 years; PFHd = 7.4 10 ⁻⁸ 1/h		
Connection		Screw terminals, clamping capacity: 2 or 4 x 1.5 mm ² (3)		
Differential travel		3–15% of Sr		
Degree of protection	Conforming to IEC 60529 and DIN 40050	IP65, IP67 and IP69K		
Temperature	Storage Operation (4)	–40 to +85 °C (–40 to +185 °F) –25 to +70 °C (–13 to +158 °F)		
Material		Case: PBT		
Vibration resistance	Conforming to IEC 60068-2-6	25 gn, amplitude ±2 mm (10–55 Hz)		
Shock resistance	Conforming to IEC 60068-2-27	50 gn for 11 ms		
Indicators	Output state Power on	Yellow LED Green LED, for 4-wire --- and 2-wire $\sim/\text{---}$ versions		
Rated supply voltage	4-129wire --- 2-wire --- 2-wire $\sim/\text{---}$	12–48 V with protection against reverse polarity 12–48 V with protection against reverse polarity 24–240 V (\sim 50/60 Hz)		
Voltage limits (including ripple)	4-wire --- 2-wire --- 2-wire $\sim/\text{---}$	10–58 V 10–58 V 20–264 V		
Current consumption, no-load	4-wire ---	< 15 mA		
Residual current, open state	2-wire --- 2-wire $\sim/\text{---}$	< 0.6 mA 1.5 mA		
Switching capacity	4-wire --- 2-wire --- 2-wire $\sim/\text{---}$	< 200 mA with overload and short-circuit protection < 100 mA with overload and short-circuit protection \sim : 5–300 mA (1) --- : 5–200 mA (1)		
Voltage drop, closed state	4-wire --- 2-wire --- 2-wire $\text{---}/\sim$	< 2 V < 4.2 V < 5.5 V		
Maximum switching frequency		< 300 Hz (flush mountable) < 200 Hz (non-flush mountable)		
Delays	First-up Response Recovery	< 7 ms Flush mountable: ≤ 1.2 ms. Non-flush mountable: ≤ 1.4 ms Flush mountable: ≤ 1.8 ms. Non-flush mountable: ≤ 2.5 ms		

(1) Sensor must be protected by a 0.4 A fast-acting fuse (**XUZE04**) connected in series with the load (see page 2/129).

(2) SIL 2 protection can only be obtained by connecting both outputs to a safety PLC. Refer to catalog MKTED208051EN-US, Preventa Machine Safety Products.

(3) These sensors come without a cable connector. An adaptable Pg 13.5 cable connector is available (reference **XSZ PE13**). Accessories are available for connection to an M12 or 7/8"-16UN connector, which can be added to the Pg 13.5 sensor. Consult the Customer Care Center (1-800-435-2121).

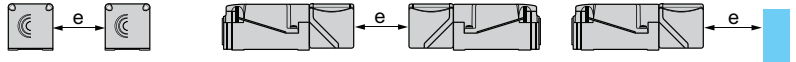
(4) Sensors are available for very low temperatures with suffix **TF**, –40 to +70 °C (–40 to +158 °F) or very high temperatures with suffix **TT**, –25 to +85 °C (–13 to +185 °F). Consult the Customer Care Center (1-800-435-2121).

OsiSense™ XS

Inductive proximity sensors

General purpose, Plastic case, 40 x 40 x 117 mm, plug-in, 5 position turret head

Minimum mounting distances (mm)

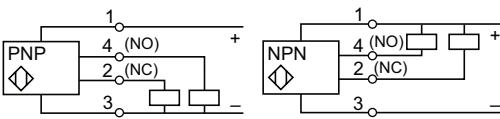


		Side by side	Face to face	Facing a metal object
Sensors flush mountable in metal	XS7C4A1●●	$e \geq 60$	$e \geq 120$	$e \geq 45$
	XS8C4A1●●	$e \geq 80$	$e \geq 160$	$e \geq 60$
Sensors non-flush mountable in metal	XS8C4A4●●	$e \geq 160$	$e \geq 320$	$e \geq 120$

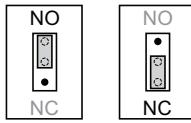
Wiring diagrams

NO + NC outputs

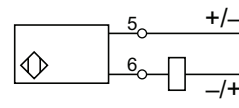
4-wire ...



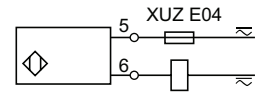
NO or NC outputs, depending on position of link



2-wire ... (non-polarized)

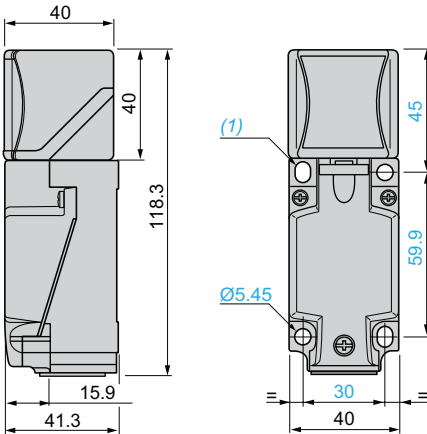


2-wire ~ or ... (programmable)

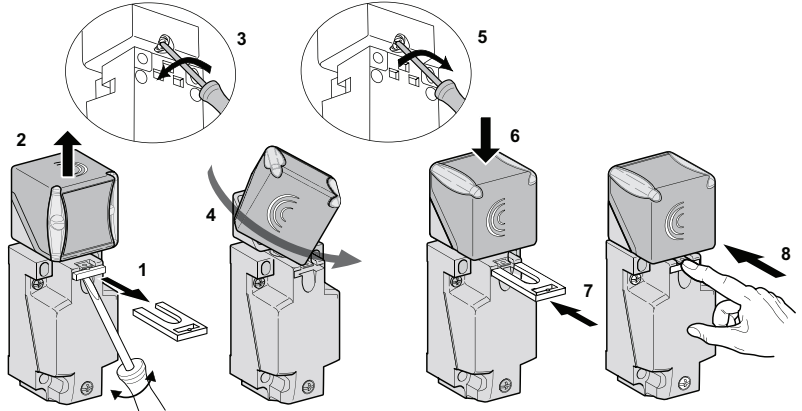


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Dimensions (mm)



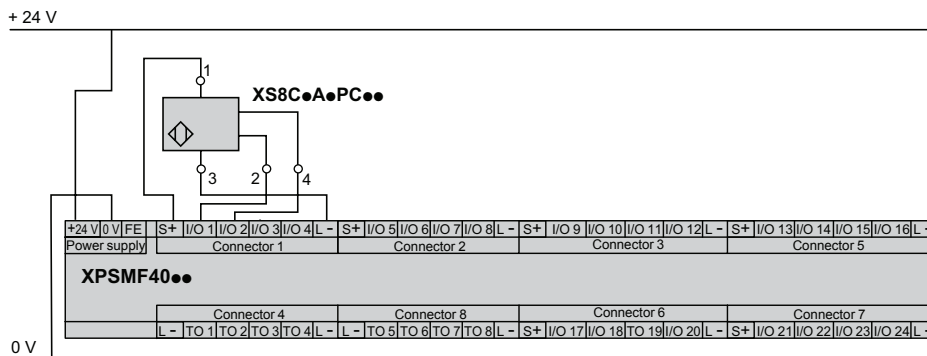
Head positions



(1) 2 elongated holes $\varnothing 5.3 \times 7$ cm.

Tightening torque of cover mounting screws and clamp screws: $< 1.2 \text{ N}\cdot\text{m}$ (10.6 lb-in)

Example SIL 2 wiring diagram (with Preventa XPSMF40 safety PLC)



SFF (safe failure fraction): 92.68 %
DC (diagnosis coverage): 75.8 %

S+: 24 V
L-: 0 V
I/O 1–24: safety I/O