

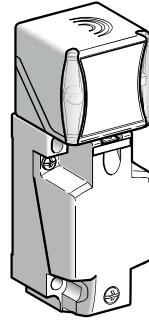
Inductive proximity sensors

OsiSense XS, general purpose

Plastic case, 40 x 40 x 117 mm, plug-in

5 position turret head

| Sensor | Flush mountable in metal | Non flush mountable in metal |
|--------|--------------------------|------------------------------|
|--------|--------------------------|------------------------------|



| | | | | |
|-------------------------------|-----------------------|---------------------|---------------------|---------------------|
| Nominal sensing distance (Sn) | 15 mm | 20 mm | 40 mm | |
| References | | | | |
| 4-wire --- | PNP NO+NC | – | XS8C4A1PCP20 | XS8C4A4PCP20 |
| | NPN NO+NC | – | XS8C4A1NCP20 | XS8C4A4NCP20 |
| 2-wire --- | NO or NC programmable | XS7C4A1DPP20 | XS8C4A1DPP20 | XS8C4A4DPP20 |
| 2-wire (~/-) unprotected (1) | NO or NC programmable | XS7C4A1MPP20 | XS8C4A1MPP20 | XS8C4A4MPP20 |
| Weight (kg) | 0.244 | 0.244 | 0.244 | |

Note: These sensors have an M20 cable entry. They can also be supplied with a PG 13.5 cable entry (e.g. **XS8C4A4PCG13**) or a 1/2" NPT cable entry (e.g. **XS8C4A1MPN12**). Please consult our Customer Care Centre.

| Characteristics | | 0...12 mm | 0...16 mm | 0...32 mm |
|------------------------------------|---------------------------------------|--|-----------|-----------|
| Operating zone | | 0...12 mm | 0...16 mm | 0...32 mm |
| 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 | IP 65, IP 67 and IP 69K | | |
| Temperature | Storage Operation (4) | - 40...+ 85°C - 25...+ 70°C | | |
| Material | | Case: PBT | | |
| Vibration resistance | Conforming to IEC 60068-2-6 | 25 gn, amplitude ± 2 mm (f = 10...55 Hz) | | |
| Shock resistance | Conforming to IEC 60068-2-27 | 50 gn for 11 ms | | |
| Indicators | Output state | Yellow LED | | |
| Rated supply voltage | Power on | Green LED, for 4-wire --- and 2-wire ~/- versions | | |
| | 4-wire --- | 12...48 V with protection against reverse polarity | | |
| | 2-wire --- | 12...48 V with protection against reverse polarity | | |
| Voltage limits (including ripple) | 2-wire ~/- | 24...240 V (~ 50/60 Hz) | | |
| | 4-wire --- | 10...58 V | | |
| | 2-wire --- | 10...58 V | | |
| Current consumption, no-load | 2-wire ~/- | 20...264 V | | |
| | 4-wire --- | < 15 mA | | |
| | 2-wire --- | < 0.6 mA | | |
| Residual current, open state | 2-wire ~/- | 1.5 mA | | |
| | 4-wire --- | < 200 mA with overload and short-circuit protection | | |
| Switching capacity | 2-wire --- | < 100 mA with overload and short-circuit protection | | |
| | 2-wire ~/- | ~: 5...300 mA (1) ---: 5...200 mA (1) | | |
| | 4-wire --- | < 2 V | | |
| Voltage drop, closed state | 2-wire --- | < 4.2 V | | |
| | 2-wire ~/- | < 5.5 V | | |
| | 4-wire --- | Flush mountable: --- 300 Hz, ~ 25 Hz Non flush mountable: --- 150 Hz, ~ 25 Hz | | |
| Maximum switching frequency | First-up | 7 ms (3-wire and 4-wire ---), 20 ms (2-wire --- and 2-wire ~/-) | | |
| | Response | Flush mountable: ≤ 1.2 ms. Non flush mountable: ≤ 1.4 ms | | |
| | Recovery | Flush mountable: ≤ 1.8 ms. Non flush mountable: ≤ 3.5 ms | | |

(1) Sensor must be protected by a 0.4 A quick-blow fuse (reference **XUZ E04**) connected in series with the load (see page 128).

(2) SIL 2 protection can only be obtained by connecting both outputs to a safety PLC. Please refer to the "Safety solutions using Preventa" catalogue.

(3) These sensors are supplied without a cable gland. An adaptable PG 13.5 cable gland 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. Please consult our Customer Care Centre.

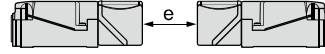
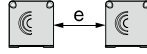
(4) Sensors are available for very low temperatures (suffix **TF**: - 40°C, + 70°C) or very high temperatures (suffix **TT**: - 25°C, + 85°C). Please consult our Customer Care Centre.

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5 position turret head

Setting-up precautions

Minimum mounting distances (mm)

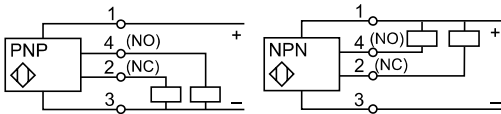


| | | Side by side | Face to face | Facing a metal object |
|--------------------------------------|-----------|--------------|--------------|-----------------------|
| Sensors flush mountable in metal | XS7C4A1●● | $e \geq 60$ | $e \geq 120$ | $e \geq 45$ |
| | XS8C4A1●● | $e \geq 80$ | $e \geq 160$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

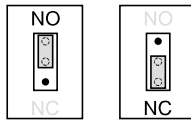
Wiring schemes

NO + NC outputs

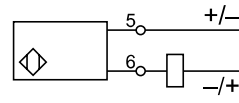
4-wire ...



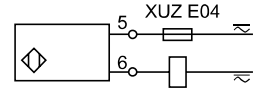
NO or NC outputs, depending on position of link



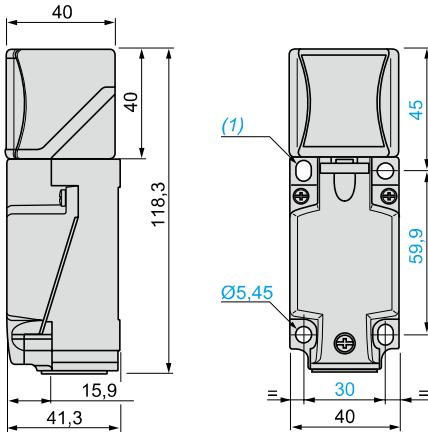
2-wire ... (non polarised)



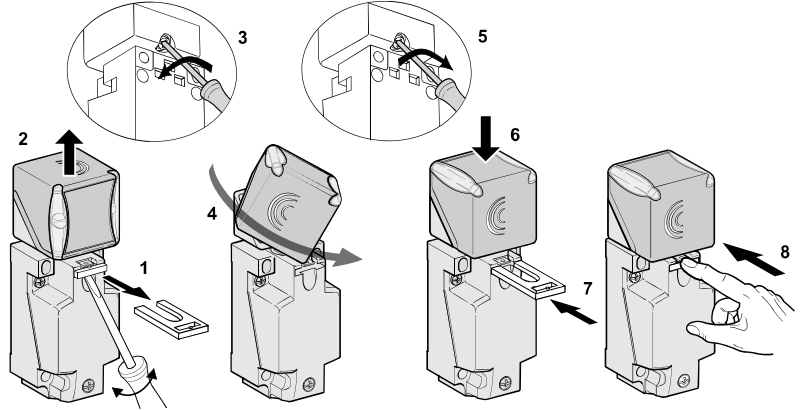
2-wire ~ or ... (programmable)



Dimensions



Head positions

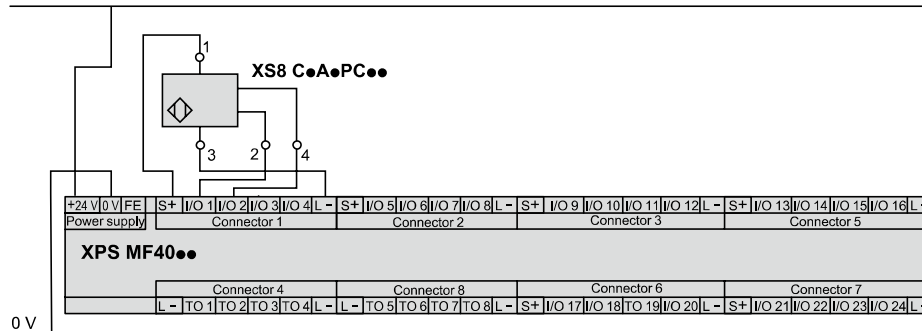


(1) 2 elongated holes $\varnothing 5.3 \times 7$ cm.

Tightening torque of cover fixing screws and clamp screws: < 1.2 Nm

Example SIL 2 wiring scheme (with Preventa XPS MF40 safety PLC)

+ 24 V



SFF (Safe Failure Fraction): 92,68 %
DC (Diagnosis Coverage): 75,8 %

S+: 24 V
L-: 0 V
I/O 1...24: safety I/O