

XCSRC12M12

Preventa RFID safety switch, Telemecanique
Safety switches XCS, contactless Daisy Chain
model, Unique pairing



Main

| | |
|---------------------------|-----------------------------------|
| Range of Product | Telemecanique Safety switches XCS |
| Product or Component Type | Preventa RFID safety switch |
| Component name | XCSRC |

Complementary

| | |
|--|--|
| Design | Rectangular, standard |
| Size | Transponder 50 x 15 x 15 mm Reader 119.6 x 30 x 15 mm |
| Material | Valox |
| Electrical Connection | 2 male connectors |
| Connector Type | M12 male |
| Type of output stage | Solid-state, PNP |
| Safety outputs | 2 NO |
| Number of poles | 5 |
| Local signalling | Green, orange and red 2 multi-colour LEDs |
| [Sao] assured operating sensing distance | 0.39 in (10 mm) face to face |
| [Sar] assured release sensing distance | 1.38 in (35 mm) face to face |
| Approach directions | 3 directions-transponder with rotary sensing face |
| [Ue] rated operational voltage | 24 V DC - 20...10 %)SELV or PELV EN/IEC 60204-1 |
| [Ie] rated operational current | 60 mA |
| [Ui] rated insulation voltage | 30 V DC |
| [Uimp] rated impulse withstand voltage | 0.8 kV IEC 60947-5-2 |
| Protection Type | Short-circuit protection |
| Maximum switching voltage | 26.4 V DC |
| Switching capacity in mA | 200 mA |
| Switching frequency | <= 0.5 Hz |
| risk time | 120 ms + 18 ms per additional switch connected in series |
| Response time | 120 ms + 50 ms typical per additional switch connected in series |
| Maximum delay first up | 5 s |
| Tightening torque | < 1.5 N.m |
| Standards | ISO 14119 EN/IEC 60947-5-2 EN/IEC 60947-5-3 |
| Product Certifications | Ecolab IC TÜV EAC E2 RCM FCC CSA 22-2 |

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| | |
|---------------------------------------|--|
| Marking | IC TÜV FCC CULus RCM EAC CE |
| Safety level | SIL 3 EN/IEC 61508 SILCL 3 EN/IEC 62061 PL = e EN/ISO 13849-1 Category 4 EN/ISO 13849-1 |
| Safety reliability data | PFH_D = 5E-10/h EN/IEC 62061 PFH_D = 5E-10/h EN/ISO 13849-1 |
| Mission time | 20 year(s) |
| Ambient Air Temperature for Operation | -13...158 °F (-25...70 °C) |
| Ambient Air Temperature for Storage | -40...185 °F (-40...85 °C) |
| Vibration resistance | 10 gn 10...150 Hz)EN/IEC 60068-2-6 |
| Shock resistance | 30 gn 11 ms EN/IEC 60068-2-27 |
| Electrical shock protection class | Class III EN/IEC 61140 |
| IP degree of protection | IP65 conforming to EN/IEC 60529 IP66 conforming to EN/IEC 60529 IP67 conforming to EN/IEC 60529 IP69K conforming to DIN 40050 |

Ordering and shipping details

| | |
|-------------------|-----------------------------|
| Category | 22455-LIGHT CURTAINS - XUSL |
| Discount Schedule | DS2 |
| GTIN | 3389119634885 |
| Returnability | No |
| Country of origin | FR |

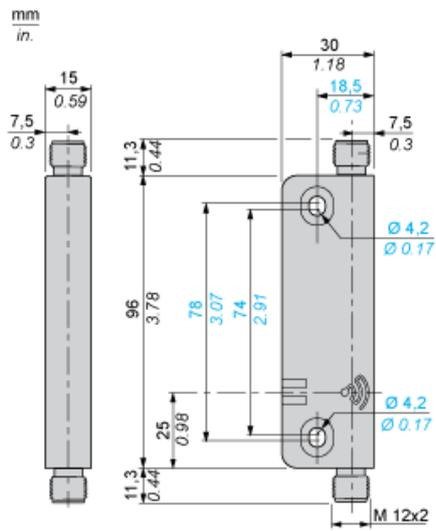
Packing Units

| | |
|------------------------------|------------------------|
| Unit Type of Package 1 | PCE |
| Number of Units in Package 1 | 1 |
| Package 1 Height | 0.39 in (1.0 cm) |
| Package 1 Width | 1.97 in (5.0 cm) |
| Package 1 Length | 3.94 in (10.0 cm) |
| Package 1 Weight | 3.74 oz (106.0 g) |
| Unit Type of Package 2 | S01 |
| Number of Units in Package 2 | 12 |
| Package 2 Height | 5.91 in (15.0 cm) |
| Package 2 Width | 5.91 in (15.0 cm) |
| Package 2 Length | 15.75 in (40.0 cm) |
| Package 2 Weight | 3.18 lb(US) (1.444 kg) |

Offer Sustainability

| | |
|----------------------------|---|
| Sustainable offer status | Green Premium product |
| California proposition 65 | WARNING: This product can expose you to chemicals including: Diisononyl phthalate (DINP), which is known to the State of California to cause cancer, and Di-isodecyl phthalate (DIDP), which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov |
| REACH Regulation | REACH Declaration |
| EU RoHS Directive | Pro-active compliance (Product out of EU RoHS legal scope) EU RoHS Declaration |
| Mercury free | Yes |
| RoHS exemption information | Yes |
| Environmental Disclosure | Product Environmental Profile |

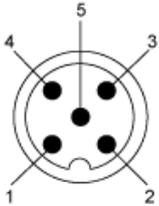
Dimensions



Connections

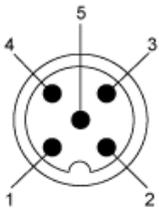
M12 Connectors, 5-pin

Output Connector



- (1) + 24 VDC
- (2) OSSD2 (O2)
- (3) 0 VDC
- (4) OSSD1 (O1)
- (5) Diagnosis Out (Do)

Input Connector

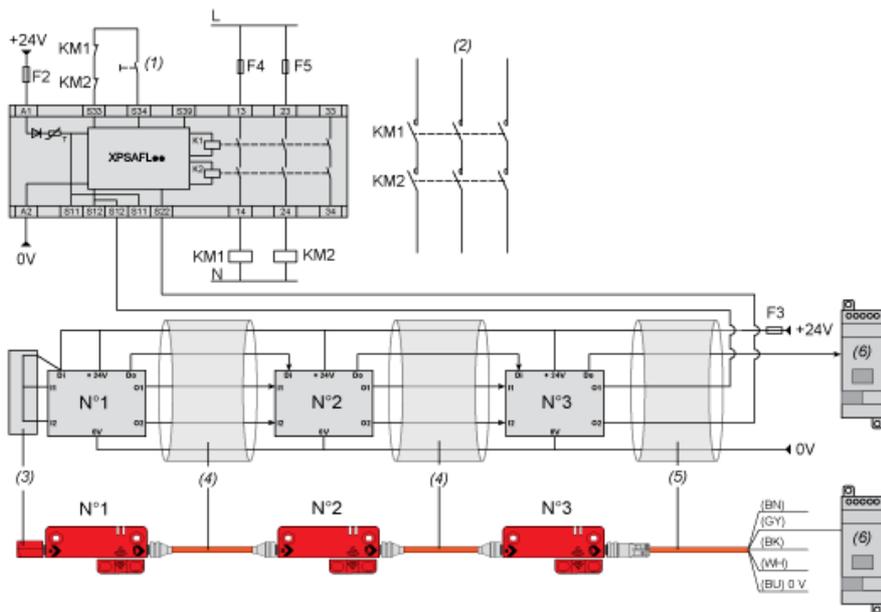


- (1) + 24 VDC
- (2) INPUT 2 (I2)
- (3) 0 VDC
- (4) INPUT 1 (I1)
- (5) Diagnosis In (Di)

Connections

Wiring Diagram: Series Connection

Cat. 4 / PL=e (EN/ISO 13849-1) / SIL3 (IEC 61508) / SILCL3 IEC 62061), if combined with an appropriate Preventa XPS Safety module PL=e / SIL3

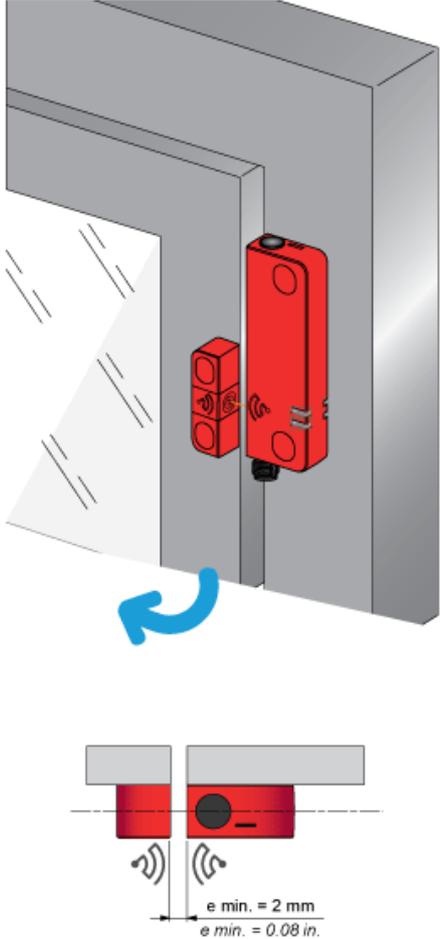
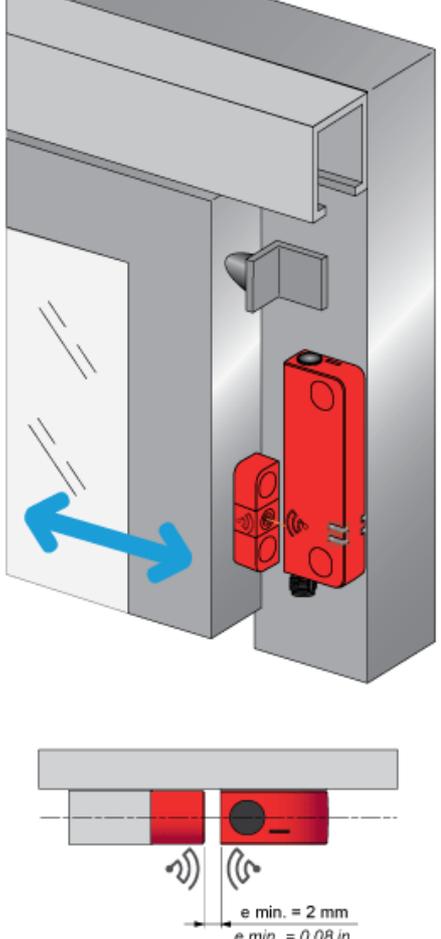


- (1) Start
- (2) Power circuit
- (3) Loopback device
- (4) M12/M12 female jumpers
- (5) Pre-wired female connectors
- (6) Diagnostic module (option)

NOTE: KM1 and KM2 contactors must have force-guided contacts.

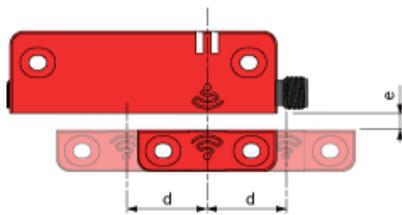
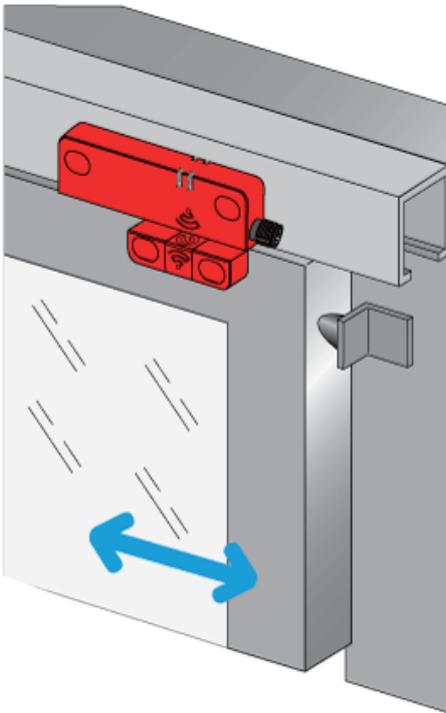
Mounting and Clearance

Face to Face Mounting (Preferred Configuration)

| Example n°1 | Example n°2 |
|--|---|
|  <p>e: Recommended minimum mounting distance between transponder and reader.</p> |  <p>e: Recommended minimum mounting distance between transponder and reader.</p> |

Face to Face Mounting (Preferred Configuration)

Example n°3



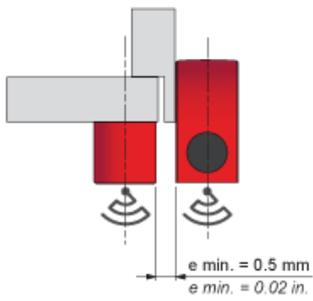
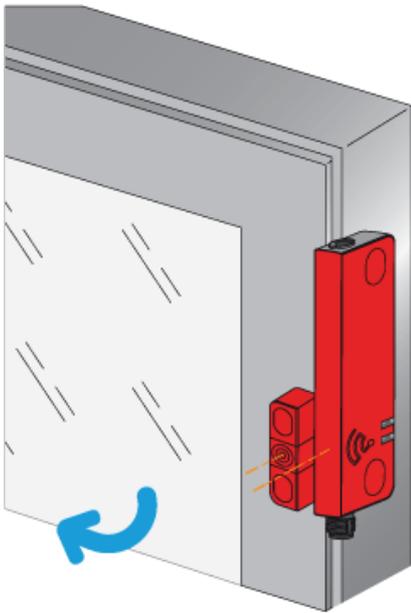
$e > 2 \text{ mm}$. (e: recommended minimum mounting distance between transponder and reader)
min.

d : Detection limit

Mounting and Clearance

Side by Side Mounting

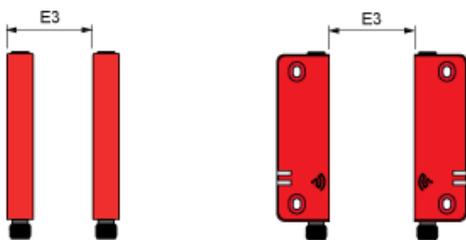
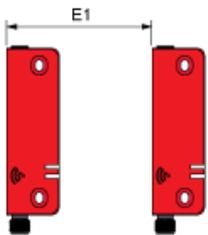
Correct Mounting Configuration



e: Recommended minimum mounting distance between transponder and reader.

Mounting and Clearance

Minimum Mounting Clearances between Safety Switches



Dimensions in mm

| E1 min. | E2 min. | E3 min. |
|---------|---------|---------|
| 45 | 150 | 65 |

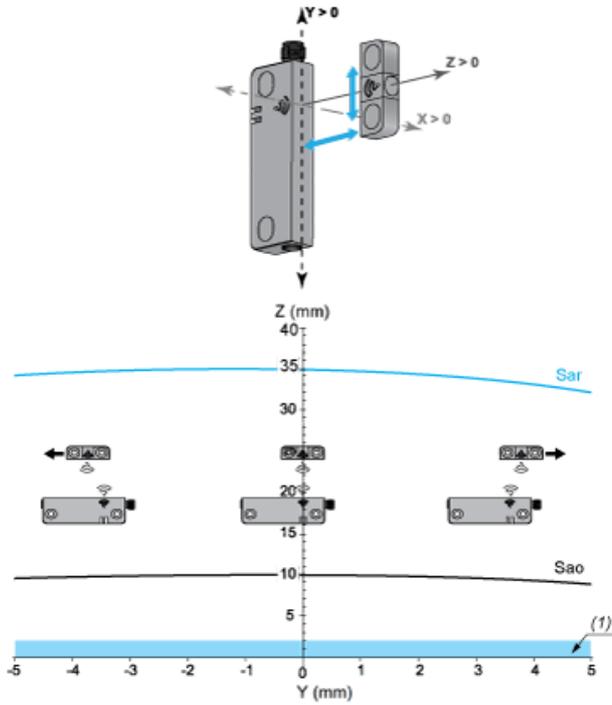
Dimensions in in.

| E1 min. | E2 min. | E3 min. |
|---------|---------|---------|
| 1.77 | 5.91 | 2.56 |

Detection Curves

Face to Face Mounting (Preferred Configuration)

Sao and Sar sensing distances along Y axis as function of Z (longitudinal misalignment for X=0)

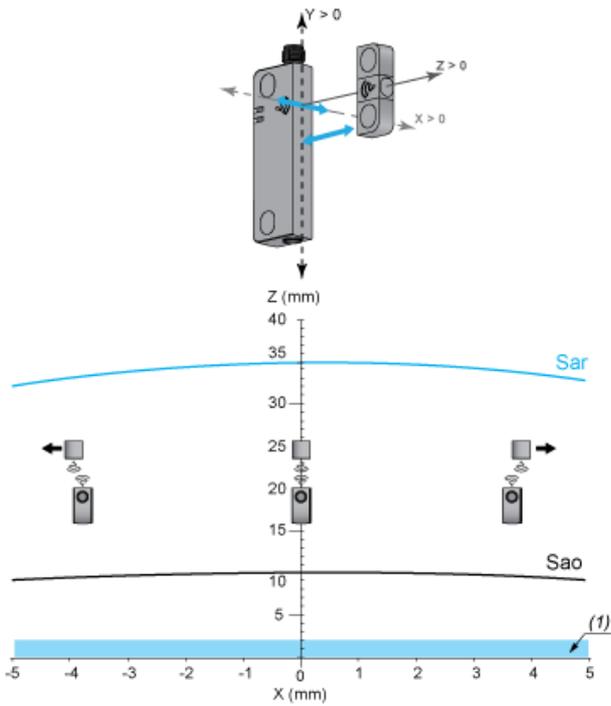


Sar: Assured release distance

Sao: Assured operating distance

(1) Recommended minimum mounting distance between transponder and reader.

Sao and Sar sensing distances along X axis as function of Z (transverse misalignment for Y=0)

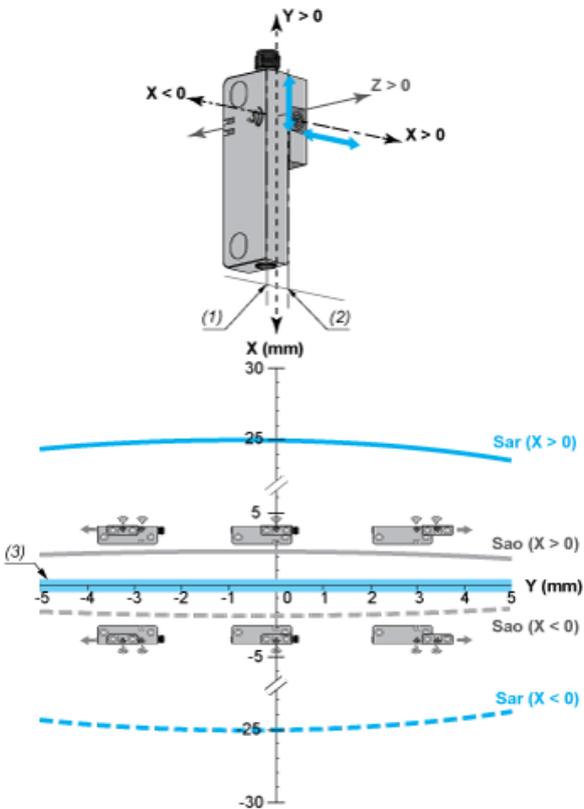


Sar: Assured release distance
 Sao: Assured operating distance
 (1) Recommended minimum mounting distance between transponder and reader.

Detection Curves

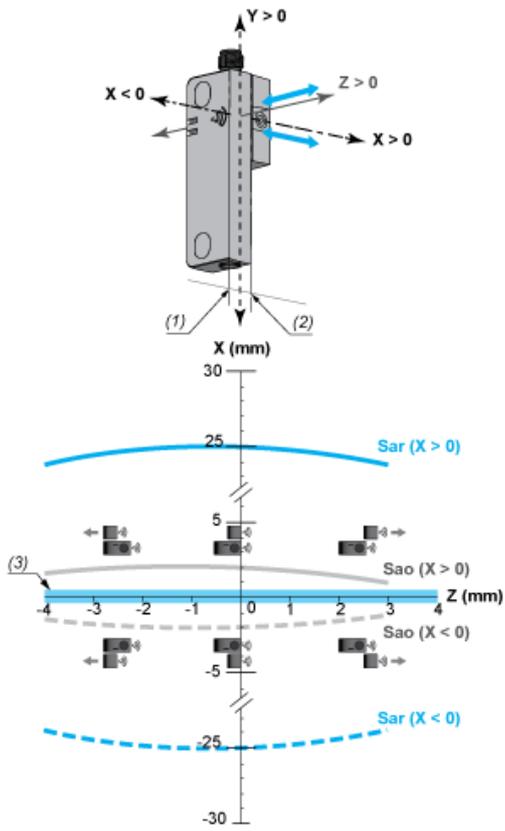
Side by Side Mounting

Sao and Sar sensing distances along Y axis as function of X (longitudinal misalignment for Z=0mm)



Sar: Assured release distance
 Sao: Assured operating distance
 (1) $X=0$ for $X < 0$
 (2) $X=0$ for $X > 0$
 (3) Recommended minimum mounting distance between transponder and reader.

Sao and Sar sensing distances along Z axis as function of X (transverse misalignment for Y=0mm)



- Sar: Assured release distance
- Sao: Assured operating distance
- (1) $X=0$ for $X < 0$
- (2) $X=0$ for $X > 0$
- (3) Recommended minimum mounting distance between transponder and reader.