

Product data sheet

XCSRC10M12

Safety RFID switch XCSRC, contactless, single model, unique pairing, M12

Main

Range of product	Telemecanique Safety switches XCS
Product or component type	Preventa RFID safety switch
Component name	XCSRC
Design	Rectangular, standard
Sensor design	RECTANGULAR STANDARD
ETIM classification	ETIM 9 - EC002544 - Magnetic proximity switch
Connector type	M12 male
Material	Valox
Approach directions	3 directions-transponder with rotary sensing face
Number of poles	5
Safety level	SIL 3 conforming to IEC 61508, SILCL 3 conforming to IEC 62061, PL = e conforming to ISO 13849-1, category 4 conforming to ISO 13849-1
Safety reliability data	PFHD = 5E-10/h conforming to IEC 62061, PFHD = 5E-10/h conforming to ISO 13849-1
[Sa] assured operating distance	10 mm face to face
[Sar] assured tripping distance	35 mm face to face
Product certifications	CSA 22-2 E2 Ecolab FCC IC RCM TÜV
Marking	CE cULus EAC FCC IC RCM TÜV
Standards	IEC 60947-5-2 IEC 60947-5-3 ISO 14119
Indivisible sale quantity	1

Complementary

Electrical connection	1 male connector
[Ue] rated operational voltage	24 V DC (- 20...10 %)SELV or PELV conforming to IEC 60204-1

The information provided in this documentation contains general descriptions and/or technical characteristics of the performance of the products contained herein.
This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications.
It is the duty of any such user or integrator to perform the appropriate and complete risk analysis, evaluation and testing of the products with respect to the relevant specific application or use thereof.
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Maximum switching voltage	26.4 V DC
[Uimp] rated impulse withstand voltage	0.8 kV conforming to IEC 60947-5-2
Switching capacity in mA	200 mA
[Ui] rated insulation voltage	30 V DC
[Ie] rated operational current	60 mA
Electrical shock protection class	Class III conforming to IEC 61140
Response time	120 ms typical
Protection type	Short-circuit protection
Local signalling	Green, orange and red 2 multi-colour LEDs
Safety outputs	2 NO
Type of output stage	Solid-state, PNP
Tightening torque	< 1.5 N.m
Switching frequency	<= 0.5 Hz
Discordance time	120 ms
Delay first up	5 s
Service life	20 year
Size	Transponder: 50 x 15 x 15 mm, reader: 108.3 x 30 x 15 mm

Environment

IP degree of protection	IP65 conforming to IEC 60529, IP66 conforming to IEC 60529, IP67 conforming to IEC 60529, IP69K conforming to DIN 40050
Ambient air temperature for operation	-25-70 °C
Ambient air temperature for operation	-25...70 °C
Ambient air temperature for storage	-40...85 °C
Shock resistance	30 gn for 11 ms conforming to IEC 60068-2-27
Vibration resistance	10 gn (f= 10-150 Hz) conforming to IEC 60068-2-6

Offer Sustainability

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

Warranty

Warranty	18 months

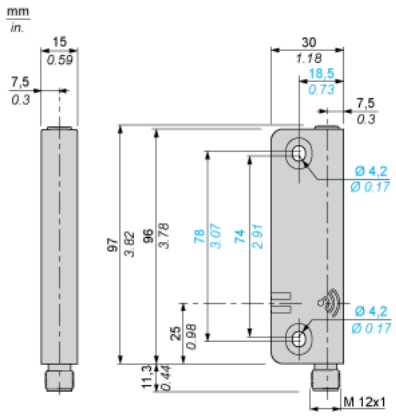
Packing Units

Country of origin	FR (France)
Unit type of package 1	PCE
Number of units in package 1	1

New Package 1 GTIN-13	3666916059326
Package 1 height	3.7 cm
Package 1 width	14.9 cm
Package 1 length	18 cm
Package 1 weight	0.106 kg
Unit type of package 2	S01
Number of units in package 2	12
New Package 2 GTIN 14	13666916059323
Package 2 height	15 cm
Package 2 width	15 cm
Package 2 length	40 cm
Package 2 weight	1.427 kg
Unit type of package 3	S02
Number of units in package 3	10
New Package 3 GTIN 14	23666916059320
Package 3 height	15 cm
Package 3 width	30 cm
Package 3 length	40 cm

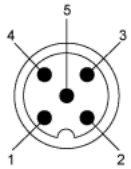
Technical Drawings

Dimensions



Connections

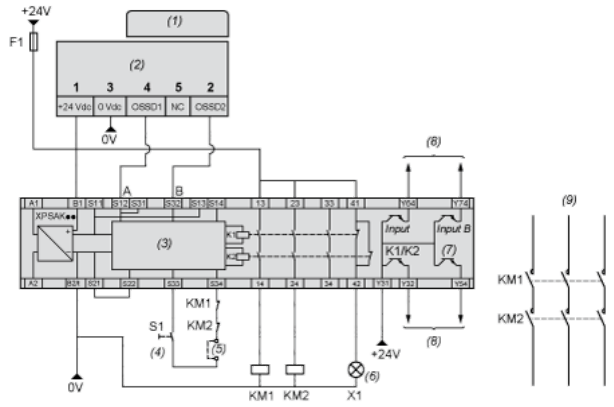
M12 Connector, 5-pin



- (1) + 24 VDC
- (2) OSSD2
- (3) 0 VDC
- (4) OSSD1
- (5) NC (Not connected)

Connections

Wiring Diagram: Connection to a Safety Relay



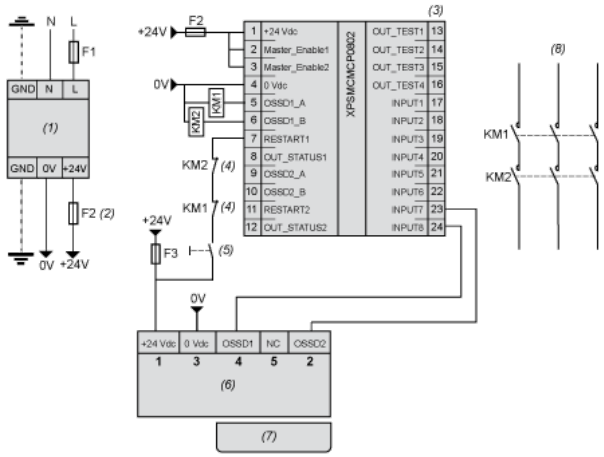
- (1) Transponder
- (2) Reader
- (3) Logic
- (4) Start
- (5) ESC: External start conditions
- (6) H1: indicator light deactivated
- (7) Fuse. Operating status of internal electronic fuse
- (8) To PLC
- (9) Power circuit

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

NOTE:

Connections

Wiring Diagram: Connection to a Safety Controller



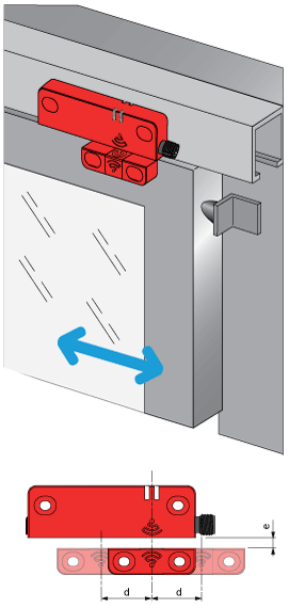
- (1) Power supply
- (2) 1 A max.
- (3) Safety controller
- (4) Feedback
- (5) Restart
- (6) Reader
- (7) Transponder
- (8) Power circuit

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

NOTE:

Mounting and Clearance

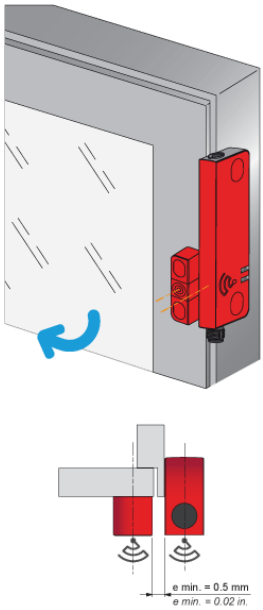
Face to Face Mounting (Preferred Configuration)



- e min. > 2 mm. (e: recommended minimum mounting distance between transponder and reader)
- d : Detection limit

Mounting and Clearance

Side by Side Mounting

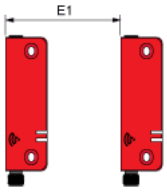


- e: Recommended minimum mounting distance between transponder and reader.

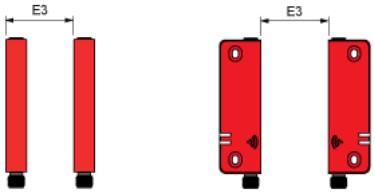
Correct Mounting Configuration

Mounting and Clearance

Minimum Mounting Clearances between Safety Switches

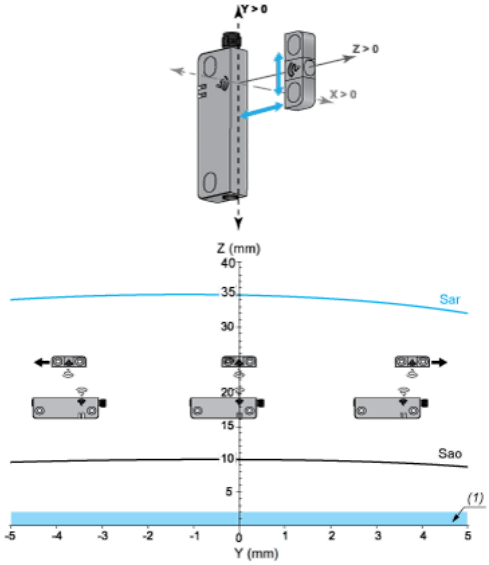






Detection Curves

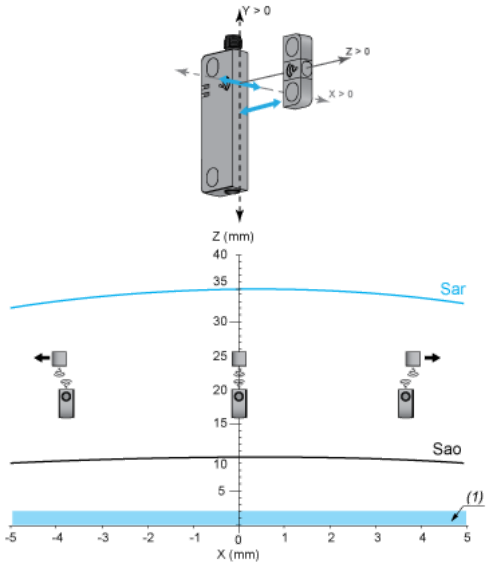
Face to Face Mounting (Preferred Configuration)



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

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

Detection Curves

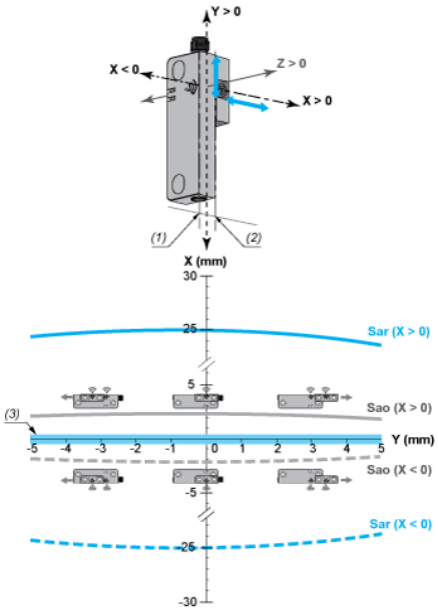


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- (1) Recommended minimum mounting distance between transponder and reader.
- Sar: Assured release distance
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- (1) Recommended minimum mounting distance between transponder and reader.

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

Detection Curves

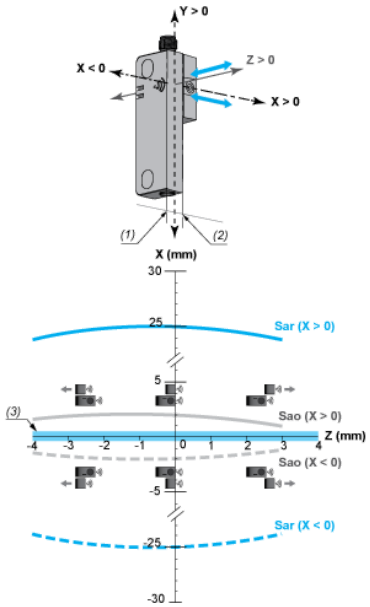
Side by Side Mounting



- 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 Y axis as function of X (longitudinal misalignment for Z=0mm)

Detection Curves



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