XCSRC10M12

Safety RFID contactless switch - Single model - Unique pairing

Main

Range of product	Preventa Safety detection
Product or component type	Preventa RFID safety switch
Component name	XCSRC

Complementary

|	
Design	Rectangular, standard
Size	50 x 15 x 15 mm transponder 108.3 x 30 x 15 mm reader
Material	Valox
Electrical connection	1 male connector
Connector type	M12 male
Type of output stage	Solid-state, PNP
Safety outputs	2 NO
Number of poles	5
Local signalling	2 multi-colour LEDs green, orange and red
[Sa] assured operating distance	10 mm face to face
[Sar] assured tripping distance	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 conforming to 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
Discordance time	<= 120 ms
Response time	120 ms typical
Delay first up	5 s
Tightening torque	< 1.5 N.m
Standards	EN/IEC 60947-5-2 EN/IEC 60947-5-3 ISO 14119
Product certifications	CSA 22-2 FCC IC TÜV Ecolab RCM EAC E2
Marking	CE TÜV EAC RCM CULus

Schneider Electric

|	FCC IC
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
Service life	20 yr
Ambient air temperature for operation	-25...70 °C
Ambient air temperature for storage	-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 EN/IEC 60529 IP66 EN/IEC 60529 IP67 EN/IEC 60529 IP69K DIN 40050

Environment

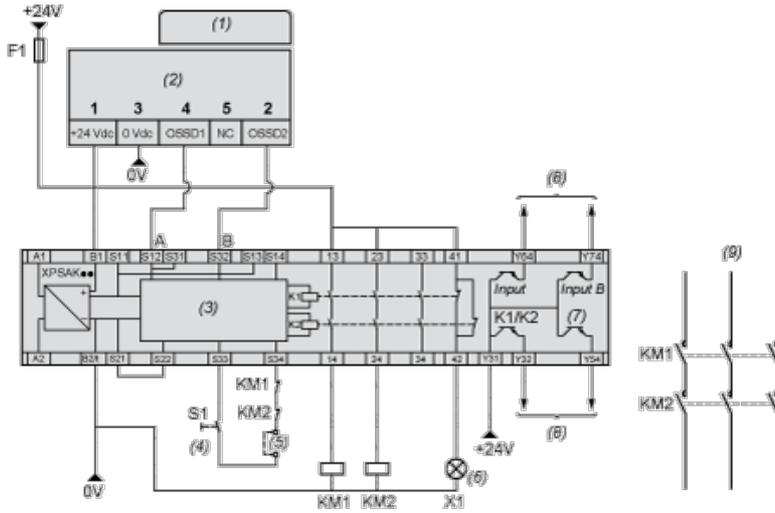## Dimensions
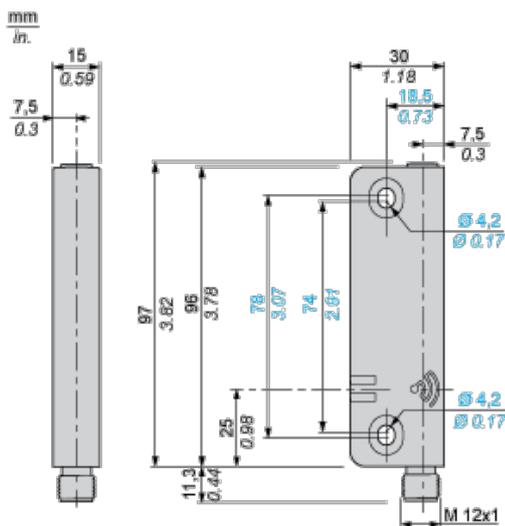
Connections

M12 Connector, 5-pin
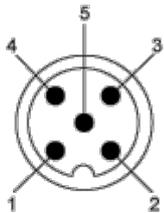
(1) + 24 VDC

(2) OSSD2

(3) 0 VDC

(4) OSSD1

(5) NC (Not connected)

Connections

Schneider Electric

Wiring Diagram: Connection to a Safety Relay

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
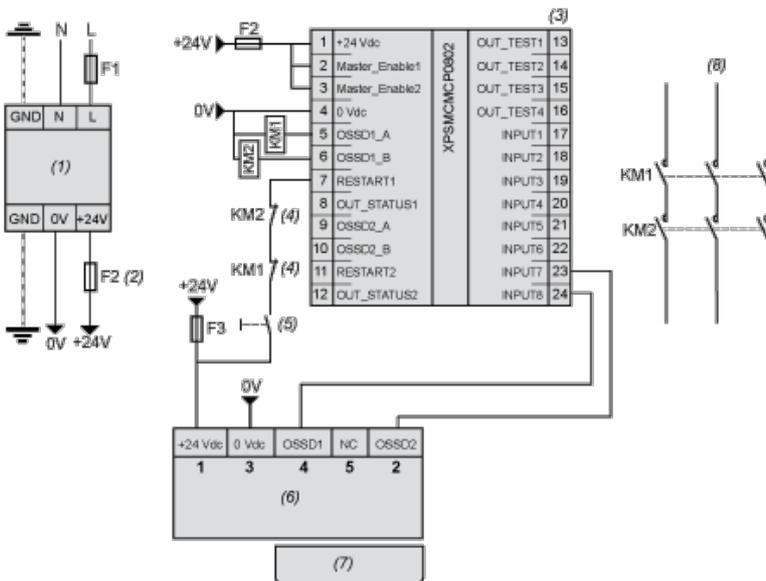

(1) Transponder

(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

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

Connections

Wiring Diagram: Connection to a Safety Controller

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

(1) Power supply

(2) 1 A max.

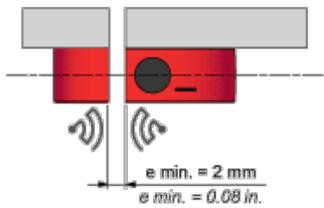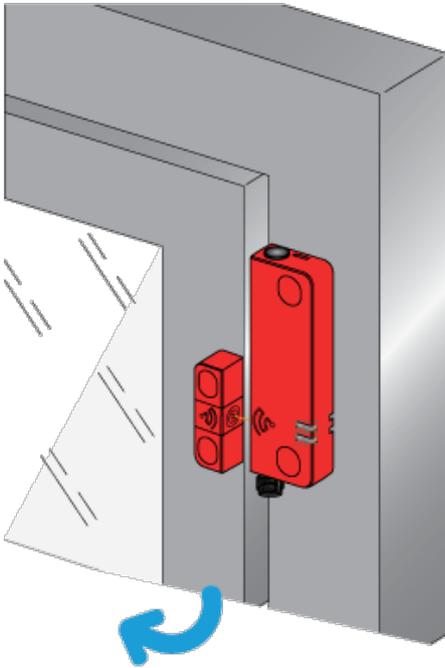(3) Safety controller

(4) Feedback

(5) Restart

(6) Reader

(7) Transponder

(8) Power circuit

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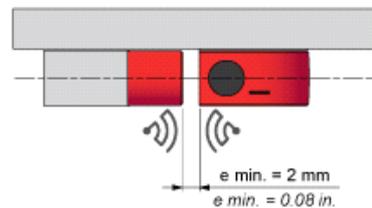
Mounting and Clearance

Face to Face Mounting (Preferred Configuration)

Example n°1	Example n°2

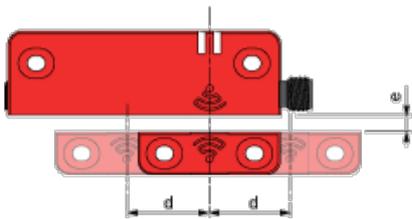**e :** Recommended minimum mounting distance between transponder and reader.
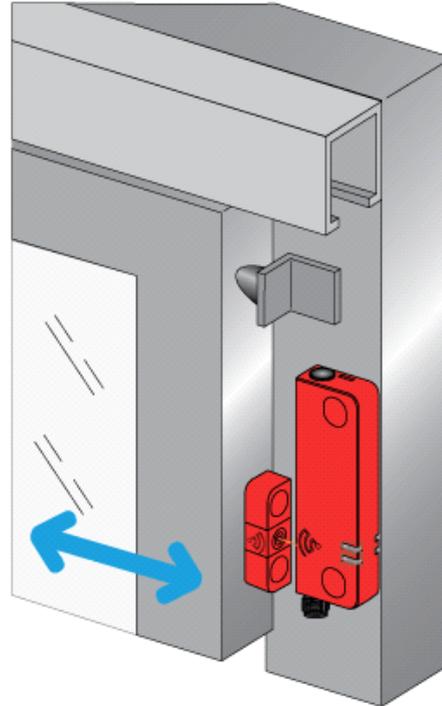
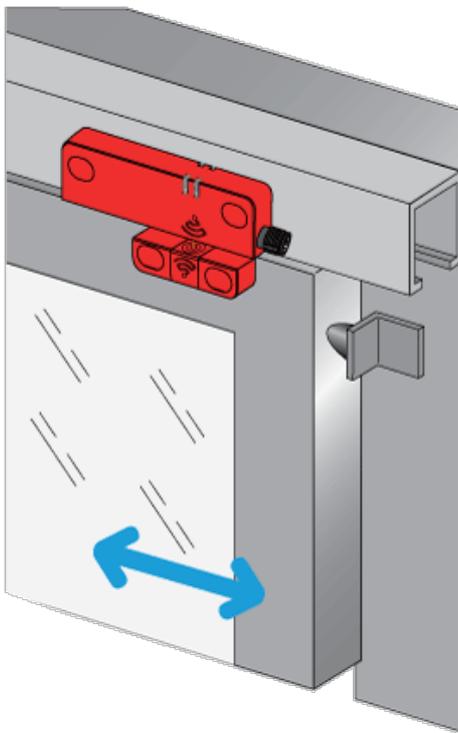**e :** Recommended minimum mounting distance between transponder and reader.

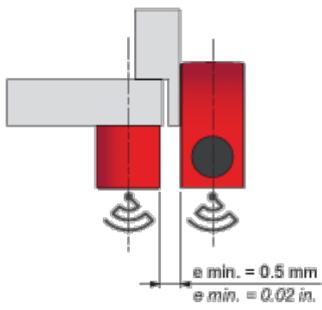### Face to Face Mounting (Preferred Configuration)
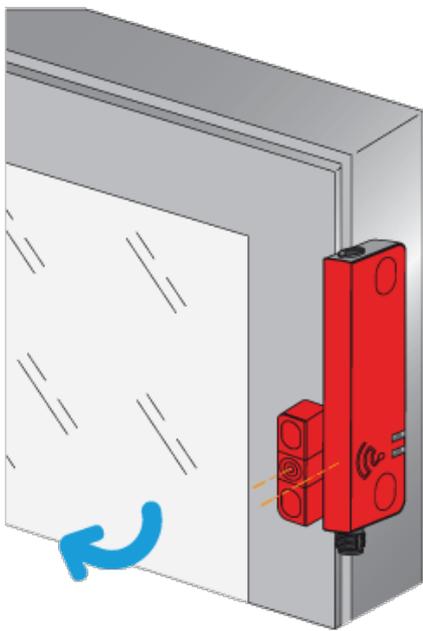
Example n°3

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

d : Detection limit

Mounting and Clearance
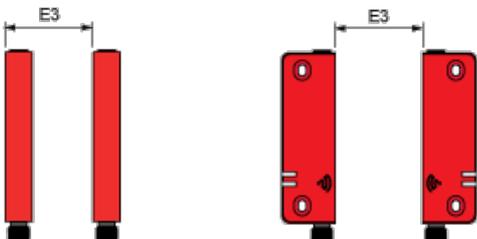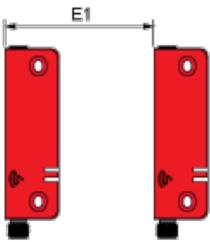
Side by Side Mounting

Correct Mounting Configuration

e: Recommended minimum mounting distance between transponder and reader.

Mounting and Clearance

Minimum Mounting Clearances between Safety Switches

Dimensions in mm

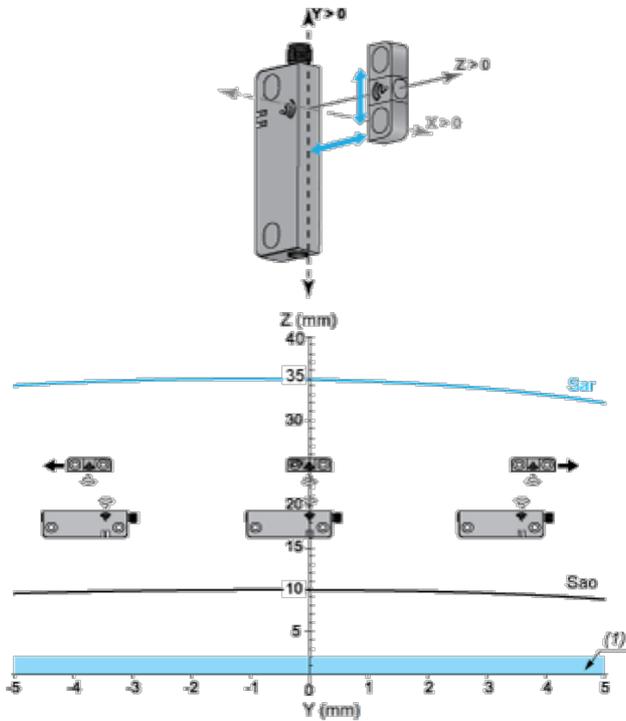| E1 min.	E2 min.	E3 min.

| 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)

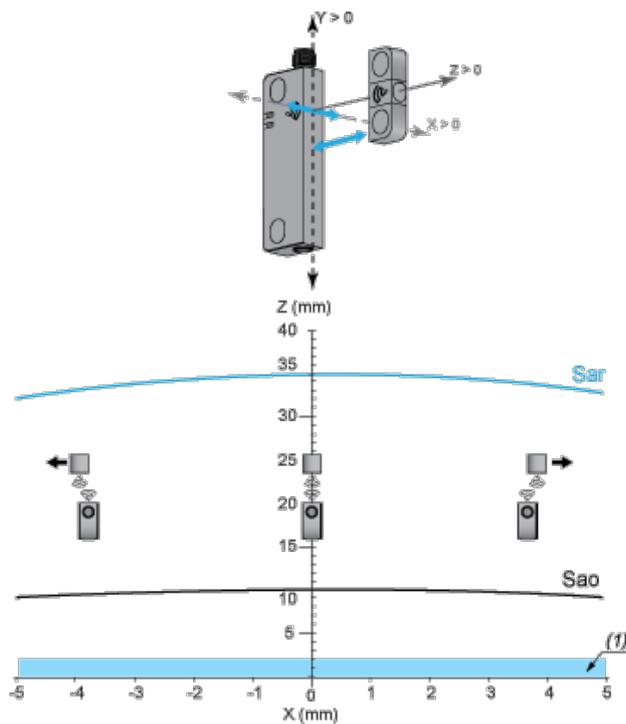**Sao and Sar sensing distances along Y axis as function of Z (longitudinal misalignment for X=0)**

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)
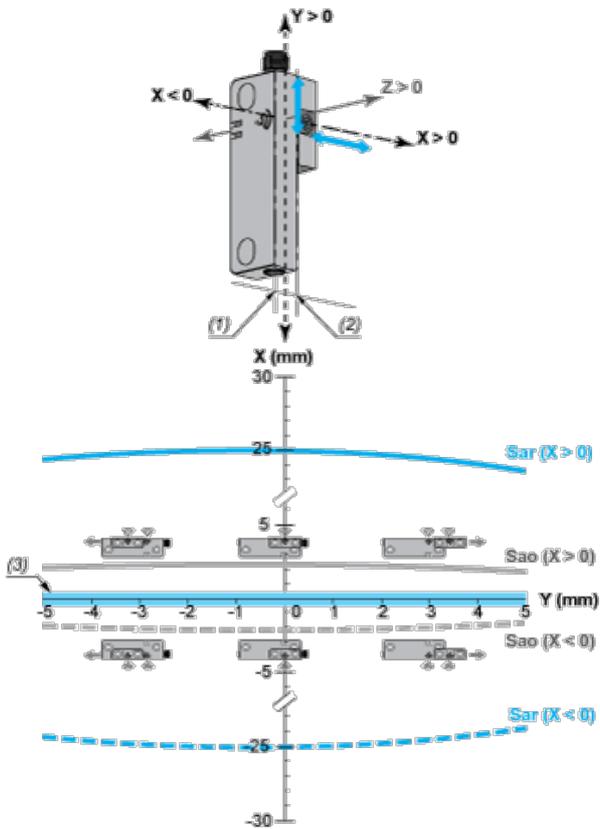

Sar: Assured release distance

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)
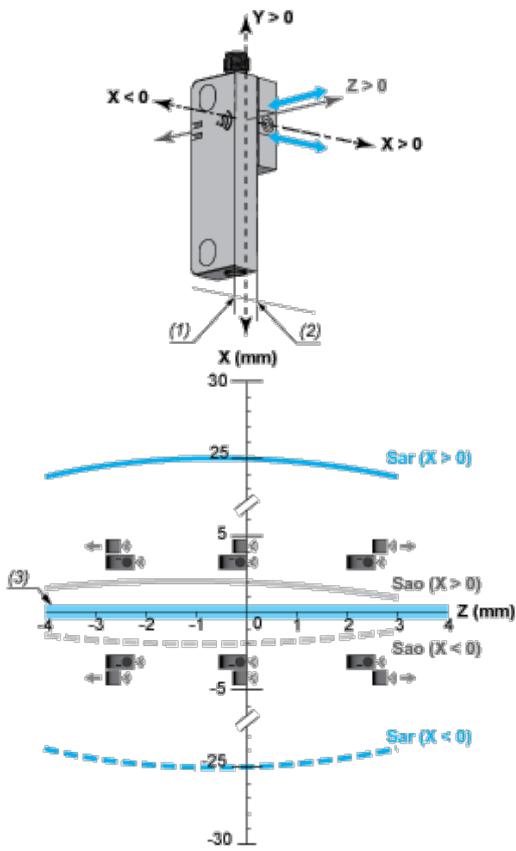

Sar: Assured release distance

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.