Product data sheet
Characteristics

XCSRC31MM12
RFID Safety switch-Standalone model-EDM +Manual Start-2 new re-pairing enabled

Main

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

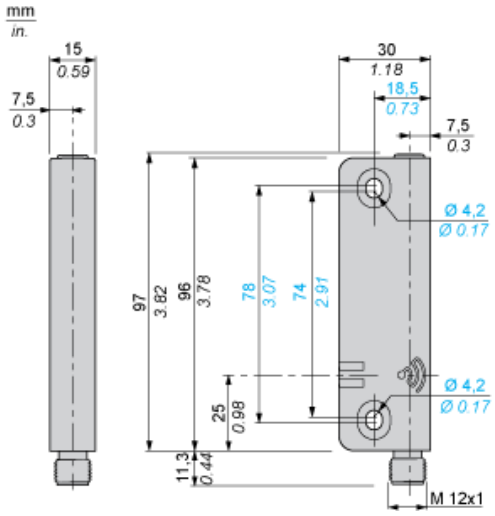
Complementary

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	8
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	400 mA
Switching frequency	<= 0.5 Hz
Discordance time	<= 120 ms
Response time	250 ms typical
Delay first up	5 s
Tightening torque	< 1.5 N.m
Standards	EN/IEC 60947-5-3 EN/IEC 60947-5-2

	ISO 14119
Product certifications	EAC RCM Ecolab IC CSA 22-2 TÜV FCC E2
Marking	CE TÜV CULus FCC EAC RCM 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	PFHD = 5E-10/h EN/IEC 62061 PFHD = 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

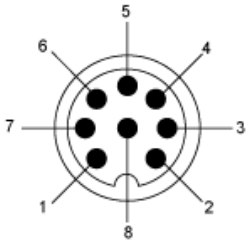
XCSRC31MM12

Dimensions



Connections

M12 Connector, 8-pin

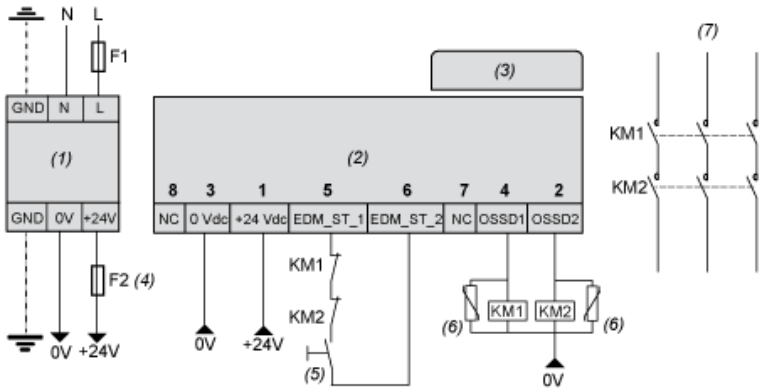


(1) + 24 VDC
(2) OSSD2
(3) 0 VDC
(4) OSSD1
(5) EDM_ST_1
(6) EDM_ST_2
(7) NC (Not connected)
(8) NC (Not connected)

Connections

Wiring Diagram

Cat. 4 / PL=e (EN/ISO 13849-1) / SIL3 (IEC 61508) / SILCL3 IEC 62061)

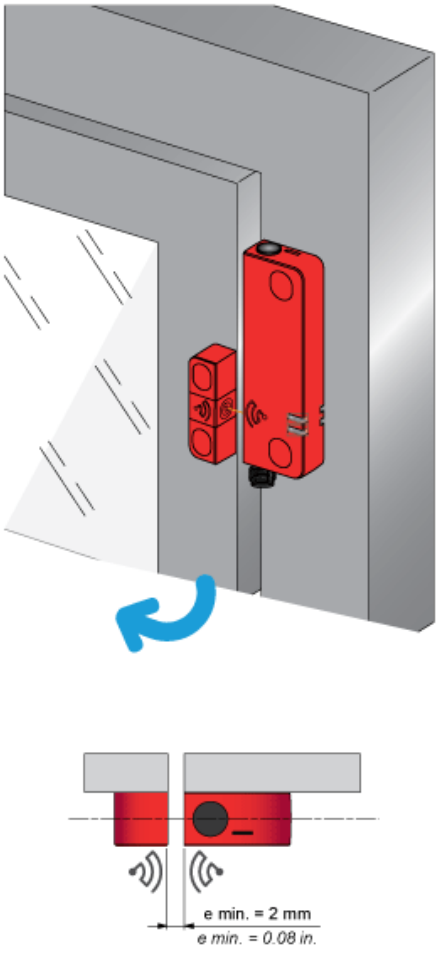
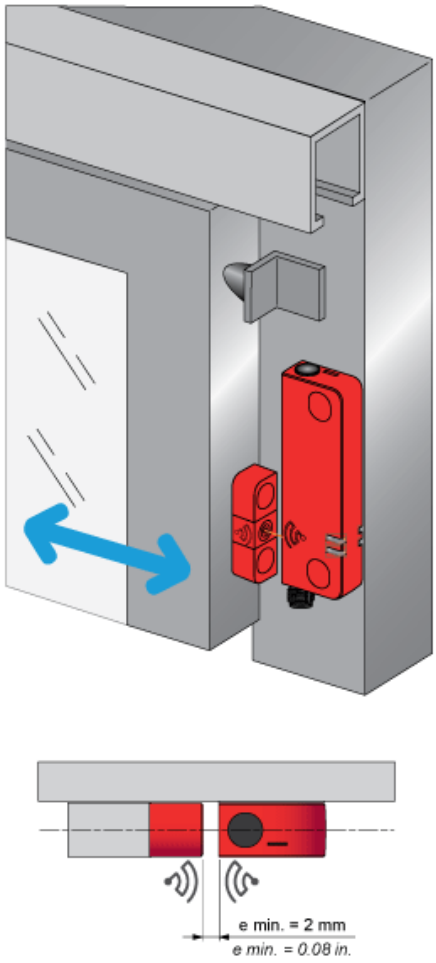


(1) Power Supply
(2) Reader
(3) Transponder
(4) 1 A max.
(5) Restart
(6) Use of arc suppressors for KM1 and KM2 is recommended.
(7) Power circuit

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

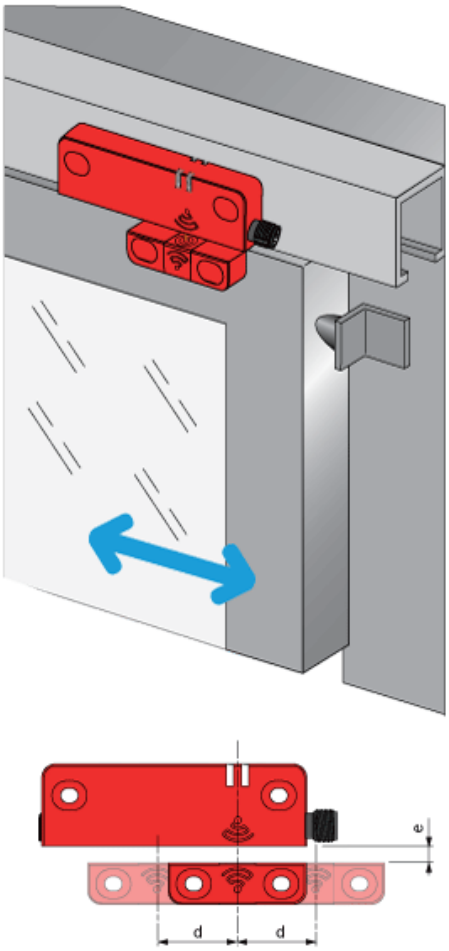
Mounting and Clearance

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

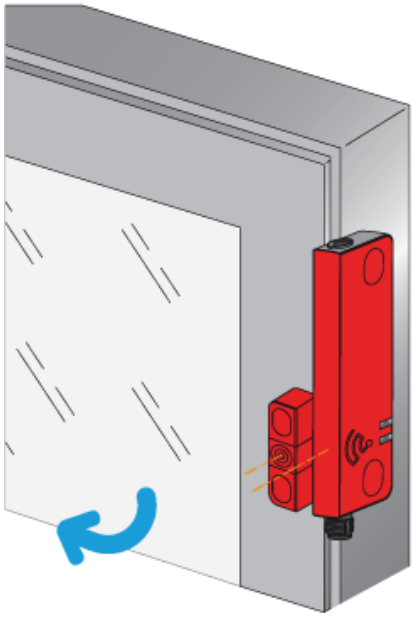


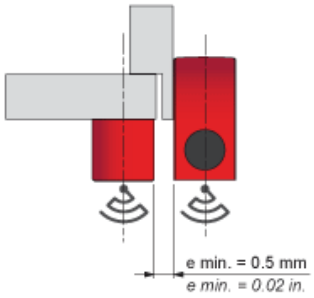
e min. > 2 mm. (e: recommended minimum mounting distance between transponder and reader)
d : Detection limit

Mounting and Clearance

Side by Side Mounting

Correct Mounting Configuration

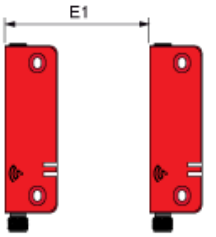


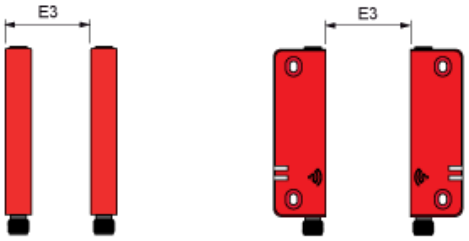


e: Recommended minimum mounting distance between transponder and reader.

Mounting and Clearance

Minimum Mounting Clearances between Safety Switches





Dimensions in mm

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

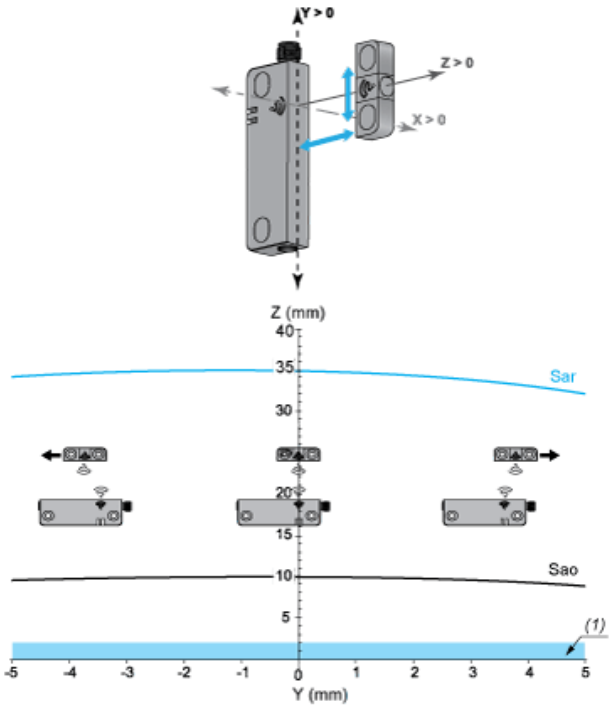
Dimensions in in.

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

Detection Curves

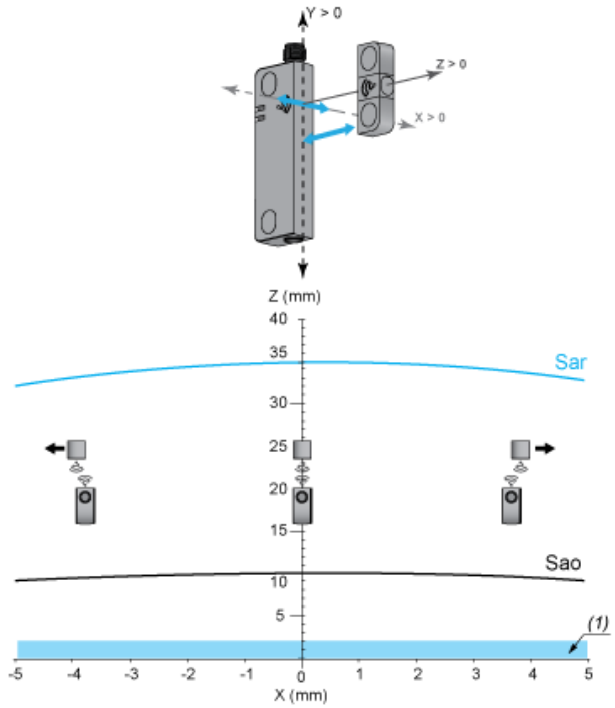
Face to Face Mounting (Preferred Configuration)

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)

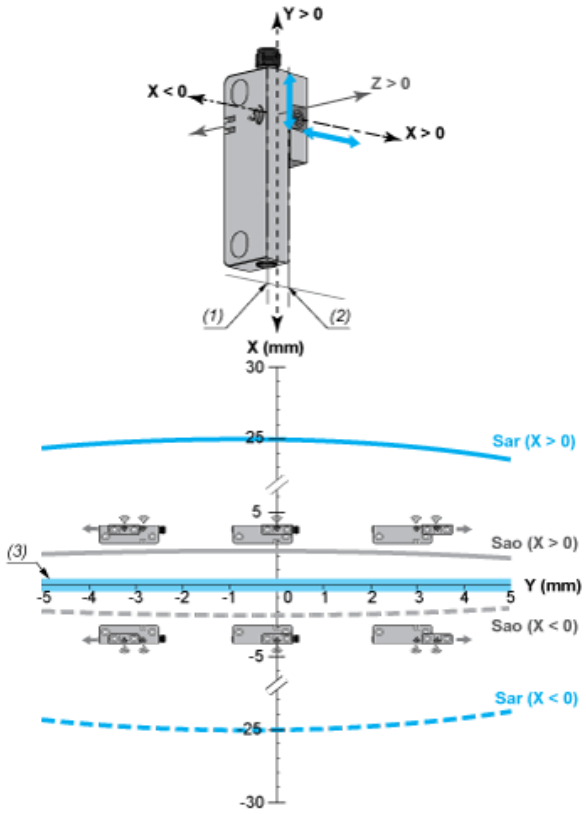


Sar: Assured release distance
Sao: Assured operating distance
(1) Recommended minimum mounting distance between transponder and reader.

Detection Curves

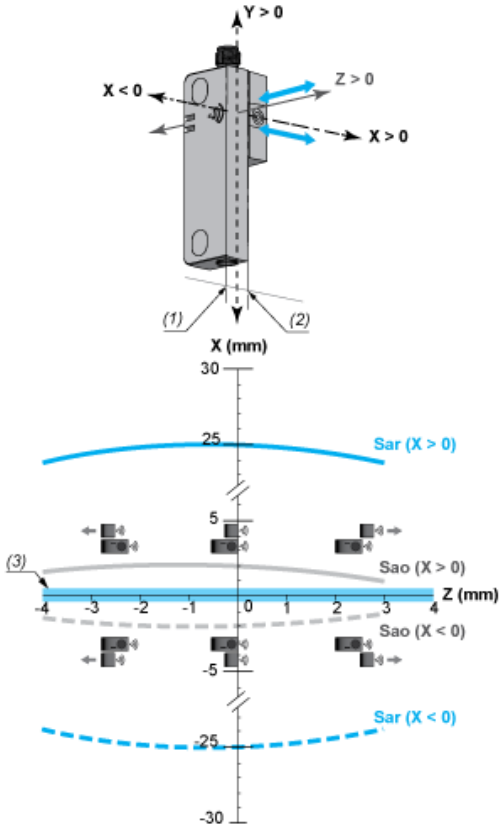
Side by Side Mounting

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.