

# Product data sheet

## Characteristics

# XCSRC31MM12

Preventa RFID safety switch, Telemecanique  
Safety switches XCS, Standalone model EDM  
+Manual Start 2 new re pairing enabled



### 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: 108.3 x 30 x 15 mm
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	Green, orange and red 2 multi-colour LEDs
[Sao] assured operating sensing distance	10 mm face to face
[Sar] assured release sensing 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
[Uiimp] 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
risk time	120 ms
Response time	250 ms typical
Maximum delay first up	5 s
Tightening torque	< 1.5 N.m
Standards	ISO 14119 EN/IEC 60947-5-3 EN/IEC 60947-5-2
Product certifications	TÜV FCC E2 Ecolab CSA 22-2 EAC IC RCM

Marking	CULus IC EAC TÜV RCM FCC CE
Safety level	SIL 3 conforming to EN/IEC 61508 SILCL 3 conforming to EN/IEC 62061 PL = e conforming to EN/ISO 13849-1 Category 4 conforming to EN/ISO 13849-1
Safety reliability data	PFH<SUB>D</SUB> = 5E-10/h conforming to EN/IEC 62061 PFH<SUB>D</SUB> = 5E-10/h conforming to EN/ISO 13849-1
Mission time	20 year(s)
Ambient air temperature for operation	-25...70 °C
Ambient air temperature for storage	-40...85 °C
Vibration resistance	10 gn (f= 10...150 Hz) conforming to EN/IEC 60068-2-6
Shock resistance	30 gn for 11 ms conforming to EN/IEC 60068-2-27
Electrical shock protection class	Class III conforming to 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

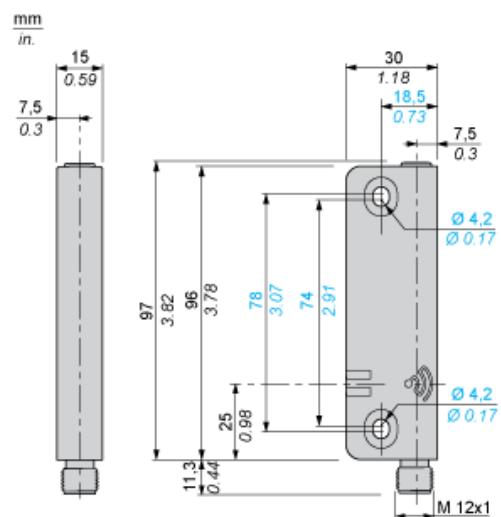
### Packing Units

Package 1 Weight	0.103 kg
Package 1 Height	0.200 dm
Package 1 width	1.100 dm
Package 1 Length	1.500 dm

### Offer Sustainability

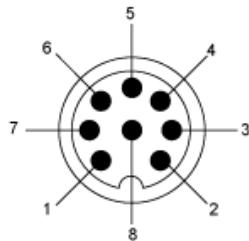
Sustainable offer status	Green Premium product
REACH Regulation	 <a href="#">REACH Declaration</a>
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope)  <a href="#">EU RoHS Declaration</a>
Mercury free	Yes
RoHS exemption information	 <a href="#">Yes</a>
Environmental Disclosure	 <a href="#">Product Environmental Profile</a>

Dimensions



## Connections

### M12 Connector, 8-pin

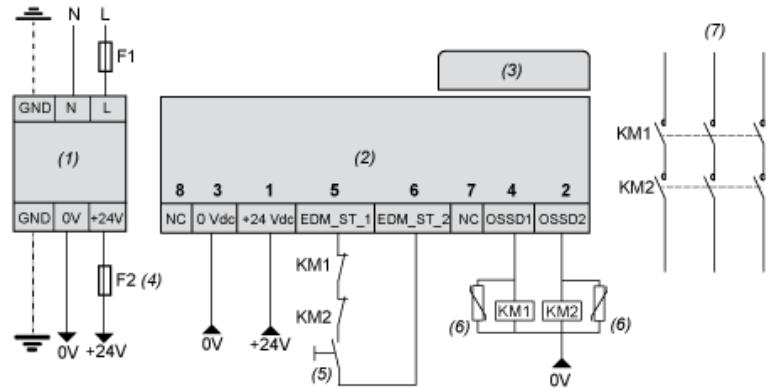


- (1) + 24 VDC
- (2) OSSD2
- (3) 0 VDC
- (4) OSSD1
- (5) EDM\_ST\_1
- (6) EDM\_ST\_2
- (7) NC (Not connected)
- (8) NC (Not connected)

## Connections

### Wiring Diagram

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

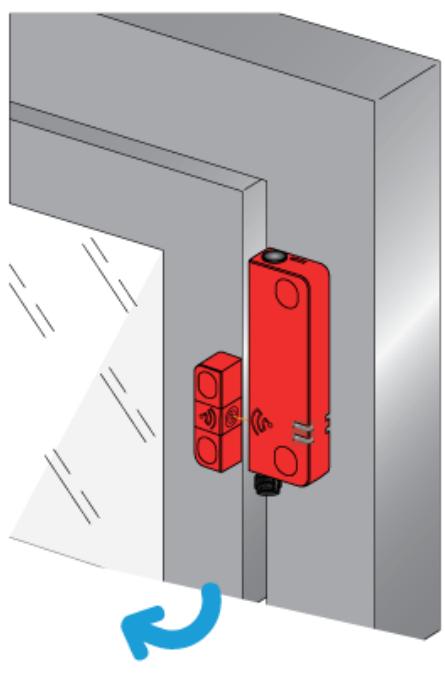
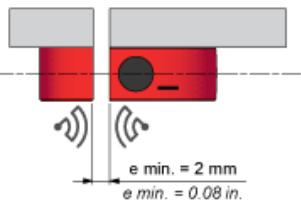
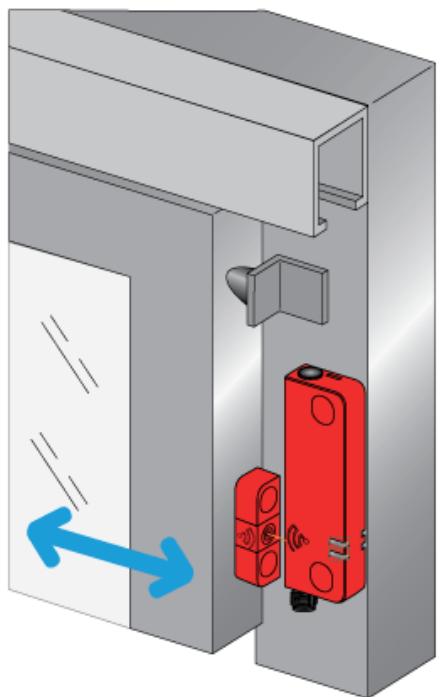
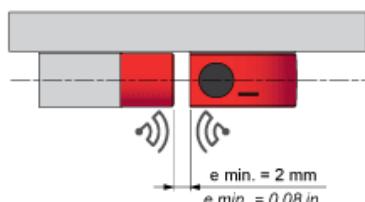


- (1) Power Supply
- (2) Reader
- (3) Transponder
- (4) 1 A max.
- (5) Restart
- (6) Use of arc suppressors for KM1 and KM2 is recommended.
- (7) Power circuit

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

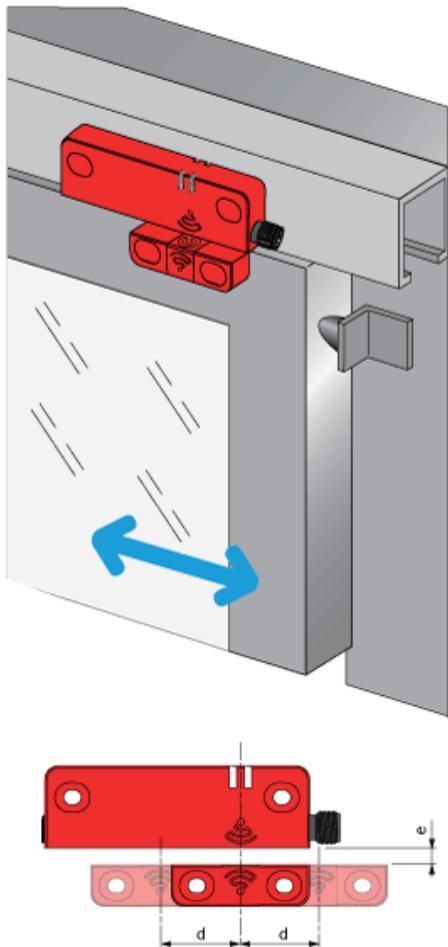
## Mounting and Clearance

### Face to Face Mounting (Preferred Configuration)

Example n°1	Example n°2
  <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 mm. (e: recommended minimum mounting distance between transponder and reader)  
min.

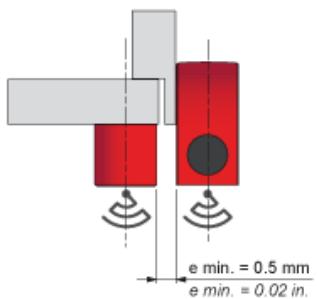
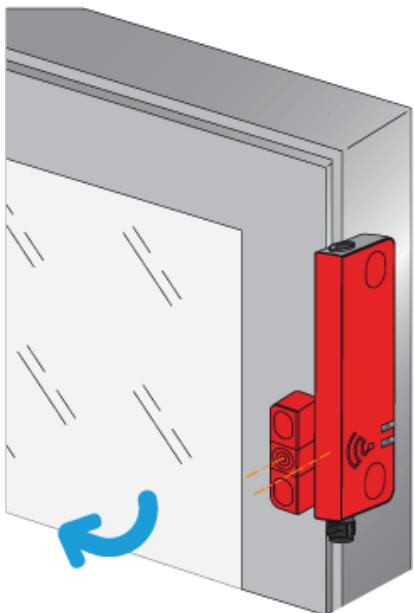
d : Detection limit

## Mounting and Clearance

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### Side by Side Mounting

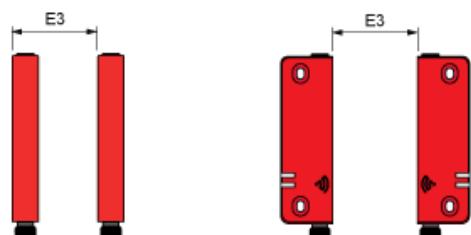
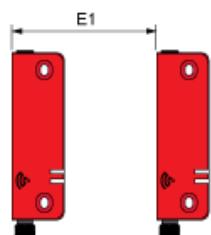
Correct Mounting Configuration



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

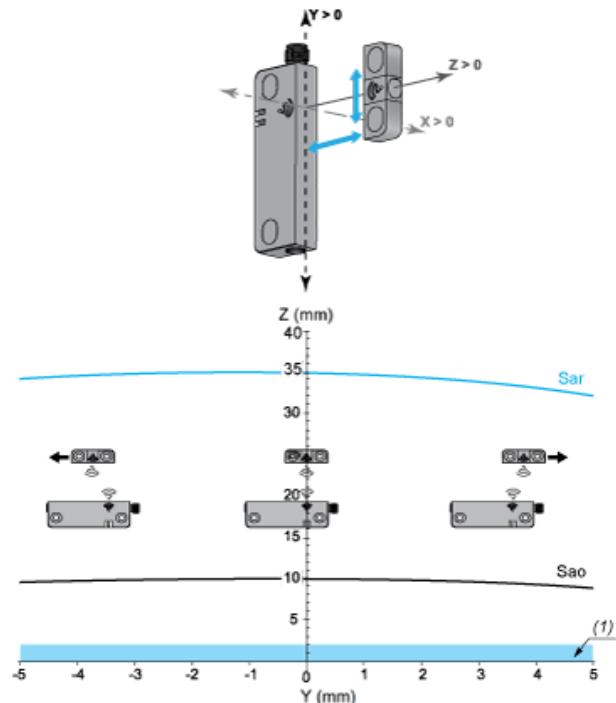
Dimensions in in.

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)

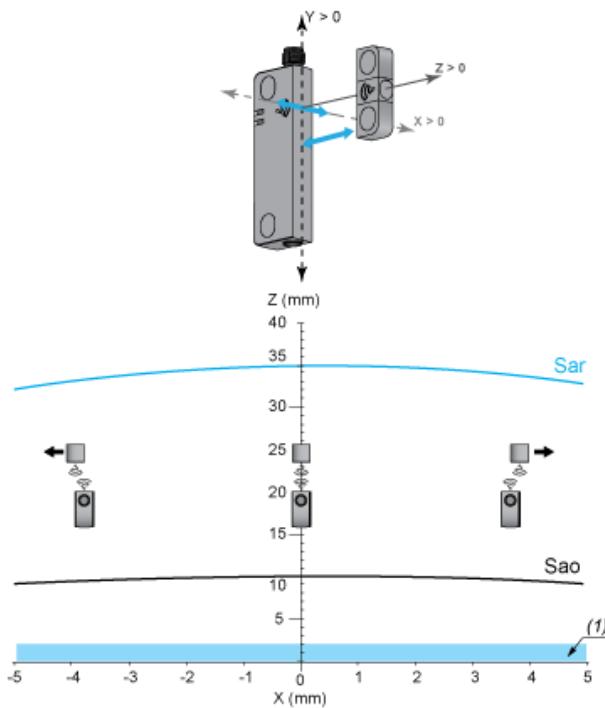


Sar: Assured release distance

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

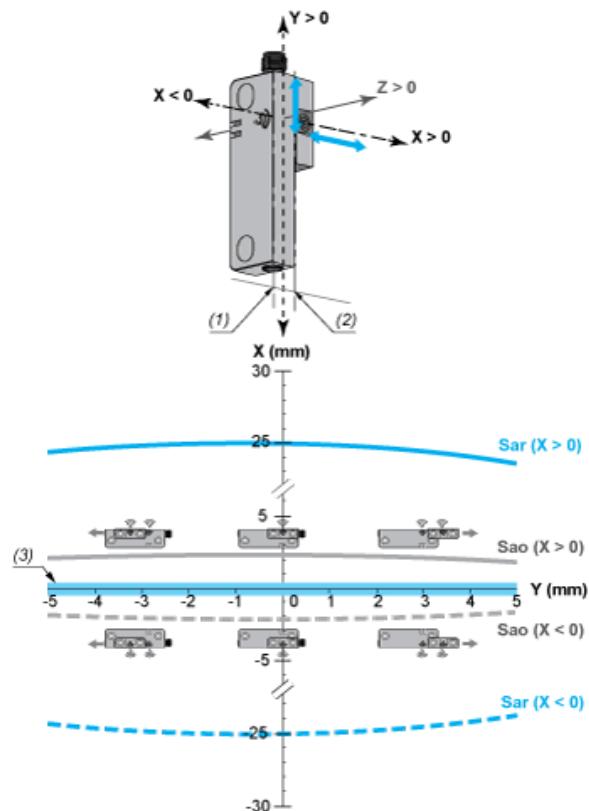
Sao: Assured operating distance

(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

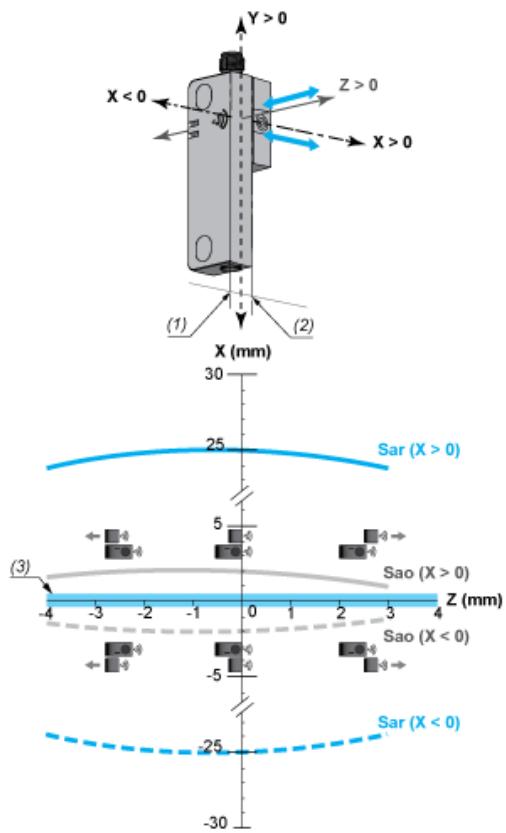
Sao: Assured operating distance

(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.