



## DESCRIPTION

MC 470 is a high security magnetic contact for surface mount with protection against magnetic interference and an opening contact. It can be used in security system and industrial control systems for protection of doors and windows against unauthorized opening. It is easy to mount and has 6 screw terminals with wire guards.

MC 470 is certified to EN 50131-2-6:2008 Grade 3, Class I.

## CIRCUIT DIAGRAM (SHOWN WITHOUT MAGNETIC FIELD)

Fig. 1. MC 470

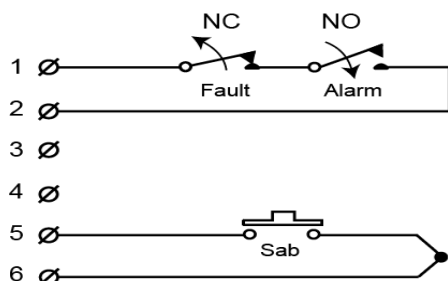
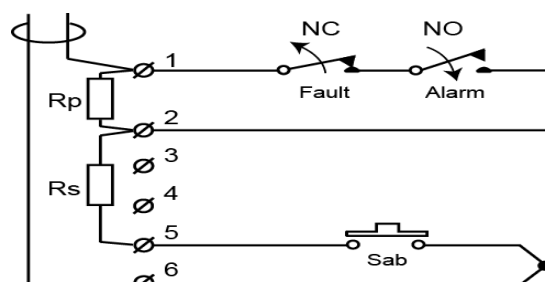


Fig. 2. MC 470 with resistors mounted in terminals for balanced loop



## DISTANCE TABLE

The distance in the table below is measured along the Y-axis when the contact part and the magnet part is mounted in parallel and the arrows point to each other.

	Distance in mm	Tolerance
Make	24	± 10%
Break	26	±10%
Sabotage	10	Max

## TECHNICAL DATA

Working environment	Wood	Steel
Sabotage distance	max 10 mm	Use accessories <sup>a)</sup>
Make distance	typ. 24 mm ± 10 %	Use accessories <sup>a)</sup>
Break distance	typ. 26 mm ± 10 %	Use accessories <sup>a)</sup>
Contact type	form A, SPST	
Switching voltage max.	48 V DC/AC	
Switching current max.	400 mA DC/peak AC	
Contact rating max.	10 W	
Estimated life expectancy	>20 million switching operations at 10 V/4 mA	
Environmental class: EN50130-5:2011	Class I	
Operating temperature range	+5°C to +40°C	
Operating humidity	max. 95% RH	
IP Class	IP 43	
Housing material	plastic ABS	
Dimensions Contact part	65 x 15,6 x 19,6 mm	
Magnet part	65 x 15,1 x 16,1 mm	
Security grade: EN50131-2-6:2008	Grade 3	
Approvals	EN-ST-000205, SBSC 9-201, F&P 10.212-13319, FG MKT-1019/09, INCERT B-582-1003	

<sup>a)</sup> If mounted on steel, always use additional spacers MC 400-3 and MC 400-4 under contact and magnet and check carefully the distances.

## OPERATING PRINCIPLE

MC 470 magnetic contact has two parts: the contact part with alarm and sabotage reed switches and magnet part. When correctly mounted the alarm reed switch remains closed under the force of the magnetic field. Opening the monitored object increases the distance between the reed switch and the magnet reduces the influence of the magnetic field on the reed switch until it opens and activate an alarm.

MC 470 has extra sabotage reed switches to protect the contact from sabotage (interference) with an external magnet. When an external magnet is applied to the contact, the sabotage reed switches open and activate alarm. The sabotage switches can also be open when the magnet is too close. The distance between the contact and the corresponding magnet, at which the sabotage reed switches open is called sabotage distance.

**Notice.** Please mount the contact and magnet so the arrow point to each other.

**Notice.** Magnetic contacts should not be installed in the vicinity of strong magnetic fields or on magnetic material.

## INSTALLATION

Contact and magnet should be installed in parallel, corresponding to each other. Offset will reduce the working distances and may result in faulty operation or lower security. Arrows on the contact and magnet inner housings must point to each other. The contact should be mounted

## MOUNTING INSTRUCTIONS

- Contact and magnet should be installed in parallel, corresponding to each other. Offset will reduce the working distances and may result in faulty operation.

Spacers must be used for installation on ferromagnetic surfaces on the stationary part of the monitored object (ex. door frame) and the magnet on the movable part (ex. door leaf).

For sites where it is impossible to mount the contact directly, spacers and aluminum brackets are available. Spacers enable installation of the contact on ferromagnetic surfaces. Brackets can be used to mount the contact parts away from a ferromagnetic surface or to solve problems

with aligning the contact with the magnet. Contact and/or magnet should be screwed to the oval slots in the brackets and adjusted to a suitable position.

Only non-ferromagnetic screws may be used for mounting the contact.

**For the most adequate distance for mounting, magnetic part should be placed close to the contact part to get Sabotage distance, then move away magnetic part to get minimum Make distance.**

After the installation, use an ohmmeter to check the electrical connections and test the operation of the magnetic contact.

**Warning:** Applying excessive force to the housing of the contact may damage the glass body of the reed switches inside.

**Warning:** Appropriate accessories must be used for installation in ferromagnetic environment.

## ORDER INFORMATION

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Models available	Description
MC 470	For separate alarm loop and sabotage loop

### Accessories

Model	Description
MC-L	L bracket in Al
MC-Z	Z-bracket in Al
MC 400-3	Extra spacer for contact 7mm
MC 400-4	Extra spacer for magnet 7mm

We reserve the right to changes without notice.