## Instruction Manual

## 4-MC472-01

## Magnetic Contact Surface mounting

### MC 472



#### DESCRIPTION

MC 472 is a versatile surface-mounted high security magnetic contact with switch function NC/NO. It is design to be used in both alarm and security access control systems for protection of doors and windows. It is recommended to be used in Banks, Museums, Jewelry etc. It is protected against unauthorized opening and external magnetic field. It is equipped with an opening protection switch.

# TECHNICAL DATA

Working environment	Wood	Steel
Make distance	Typ. 26 mm +/– 20 %	not recommended <sup>a)</sup>
Break distance	Typ. 30 mm +/– 20 %	not recommended <sup>a)</sup>
Sabotage distance	Max. 5 mm	not recommended <sup>a)</sup>
Contact type	form C, SPDT	
Switching voltage max.	48 V DC/AC	
Switching current max.	250 mA DC/180 mA AC	
Contact rating max.	5 W	
Environmental class (EN50130-5:2011)	Class II	
Operating temperature range	-10°C to +55°C	
Operating humidity	max. 95% RH	
Housing material	ABS plastic	
IP protection class	IP 43	
Dimensions:		
Contact part	65 x 15,6 x 19,6 mm	
Magnet part	65 x 15,1 x 16,1 mm	
Approvals:		
EN50131-2-6:2008	Grade 3, Environmental Class II	
SSF 1014-5	Alarm class 3, Environmental Cl	ass II

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

#### **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 or lower security.
- Spacers must be used for installation on ferromagnetic surfaces.

#### **CIRCUIT DIAGRAM**



#### **OPERATING PRINCIPLE**

MC 472 magnetic contact has two parts: the contact part with a reed switch and the magnet part. In its neutral position the 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. This causes a change in position of the reed switch and as a result – the path of the signal.

The reed inside MC 472 is biased with an internal magnet to protect the contact from sabotage using an external magnet. When an external magnet is applied to the contact, the reed changes over. The switch can be also opened by the corresponding (friendly) magnet. The distance between the contact and the corresponding magnet, at which the reed switches over a second time is called sabotage distance.

#### 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 on the stationary part of the monitored object (i.e. door frame) and the magnet on the movable part (i.e. door leaf).

## Magnetic contacts should not be installed in the vicinity of strong magnetic fields.

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.

**NOTE:** Always install magnet and contact parts with arrows facing each other.

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.