



**DESCRIPTION**

MC 440 is a magnetic contact with opening switch for surface mount. It can be used in security- and industrial control systems for protection of doors and windows against unauthorized opening. It is easy to mount and has screw terminals with wire guards. It is available with built-in resistors of any value and configuration on customer request. With enclosed plastic distances it is possible to mount the contact on steel. Accessories like Z-bracket and L-bracket can be used in the installation when needed.

**CIRCUIT DIAGRAM**

Fig 1. MC 440 with configuration for separate sabotage loop:

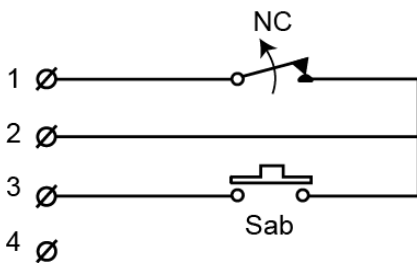


Fig.2. One resistor Rp parallel over reed mounted in the terminals with many contacts in a loop:

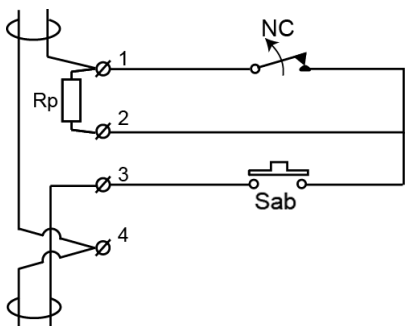


Fig 3. Two resistors mounted in the terminals for an end of line contact when only one contact is used in the loop:

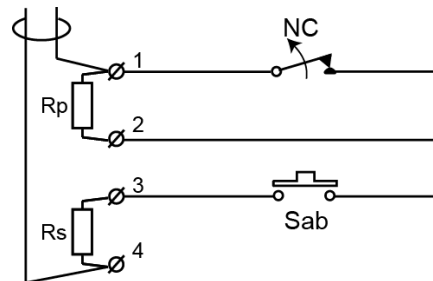
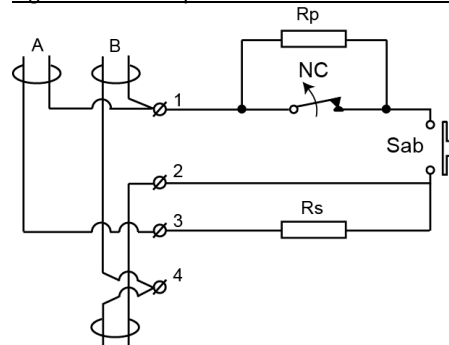


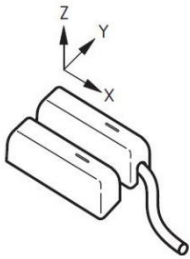
Fig. 4. MC 440-PRpSRs with built-in resistors:



A = End-of-line using 2 resistors.

B = Using only the Rp resistor to mount more contacts in one loop.

## DISTANCES/DIRECTIONS



## TECHNICAL DATA

Working environment	Wood <sup>1)</sup>	Steel <sup>1)</sup>
Y direction Make distance	typ. 37 mm ± 5mm	typ. 24 mm ± 8mm
Break distance	typ. 44 mm ± 5mm	typ. 30 mm ± 8mm
X Left direction Make distance	typ. 13 mm ± 5mm	typ. 10 mm ± 8mm
Break distance	typ. 14 mm ± 5mm	typ. 12 mm ± 8mm
X Right direction Make distance	typ. 11 mm ± 5mm	typ. 12 mm ± 8mm
Break distance	typ. 12 mm ± 5mm	typ. 13 mm ± 8mm
Z direction Make distance	typ. 52 mm ± 5mm	typ. 25 mm ± 8mm
Break distance	typ. 56 mm ± 5mm	typ. 28 mm ± 8mm
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	
Housing protection	IP43, IK04	
Housing material	plastic ABS	
Dimensions: Contact part	65 x 14,8 x 20,6 mm	
Dimensions: Magnet part	65 x 14,5 x 14,8 mm	
Security grade: EN50131-2-6:2008; VdS	Grade 2	
Approvals	EN-ST-000204, SBSC 9-210, F&P 10.212-13506, FG MKT-1014/09, INCERT B-582-1003, NF&A2P 2124030003A0	

<sup>1)</sup> Make distance is always shorter than break distance

## OPERATING PRINCIPLE

MC 440 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 reduces the influence of the magnetic field on the reed switch until it opens and activates an alarm/signal.

**The vicinity of strong magnetic fields close to the contact may impact the magnetic contact negatively and distances/spacers are recommended to be used.**

## INSTALLATION

Contact and magnet should be installed in parallel, above or besides, facing each other. The arrows on the contact and the magnet shall point towards each other. The contact should be mounted 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 aluminium brackets are available. Spacers enable installation of the contact on magnetic surfaces. Brackets can be used to mount the contact part away from magnetic 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.

Non-magnetic screws are to be used for mounting the contact.

All distances are in mm and may vary.

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

**Excessive force to the contact or the magnet may have negative impact on the product's performance.**

**Always use supplied spacers or other accessory when installing on magnetic surface.**

## ORDER INFORMATION

MC 440 is available with build in resistors (1% tolerance) of any chosen value.

For the contact serie MC 400 the resistors can be self-mounted to the terminals of the product of any chosen value by installer. MC 440 is universal and can be used with one resistor in parallel to the alarm switch mounted on terminal 1 and 2 or with two resistors: one in parallel mounted on terminal 1 and 2 and one in series to the reed mounted on terminal 3 and 4.

MC 400-PRpSRs is the universal contact with built-in resistor. It is universal for one and two resistors by connecting the loop either A to terminal 1 and 2 for a parallel resistor to reed or B connected to terminal 1 and 3 for two resistors  $R_p$  and  $R_s$ . We keep a stock of some units with built-in standard resistor values. If in this case the two resistors have different value use S in front of the value in series and P for parallel to the reed contact when ordering. Any resistance values with tolerance 1% can be ordered with min. quantity of 100pcs.

For special orders of built-in resistors use the following ordering information MC 440-PRpSRs

- Parallel to reed use prefix P and resistor value
- In series with reed use prefix S and resistor value
- With the same value of  $R_p$  and  $R_s$  use MC 440-2xR

## ORDER INFORMATION

Models available	Description
MC 440	Universal contact for balanced loop with resistor to be mounted on terminals.
MC 440-PRpSRs	Universal contact with build in resistors build in on special order

**Universal contact with 2 resistors built-in, normally kept in stock. The design allows installer to use one or both.**

MC 440-PRpSRs	Description
MC 440-2x1k	With resistor 1,0k parallel over reed and 1k in series
MC 440-2x2,2k	With resistor 2,2k parallel over reed and 2,2k in series.
MC 440-2x3,3k	With resistor 3,3k parallel over reed. and 3,3k in series
MC 440-2x4,7k	With resistor 4,7k parallel over reed. and 4,7k in series
MC 440-2x5,6k	With resistor 5,6k parallel over reed. and 5,6k in series

## Accessories

Model	Description
MCL	L bracket in Al
MC-Z	Z – bracket in Al
MC 400-6	Extra spacer for contact 7mm
MC 400-7	Extra spacer for magnet 7mm

We reserve the right to changes without notice.