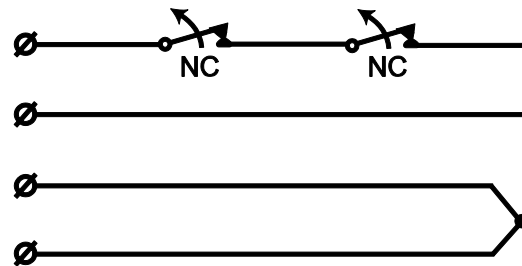
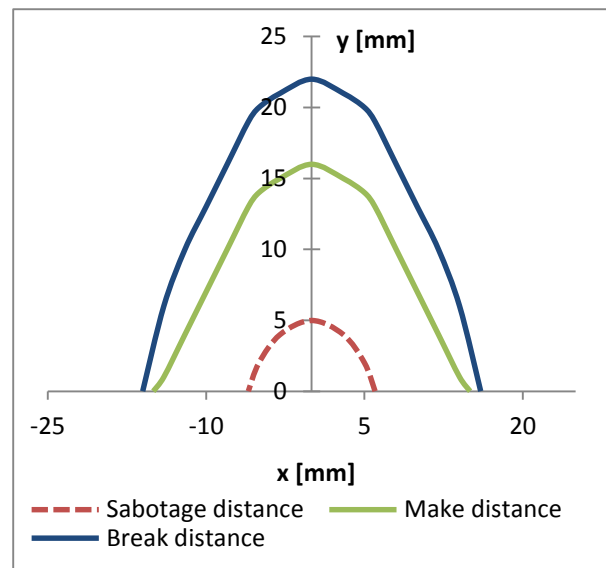




CIRCUIT DIAGRAM



DISTANCE DIAGRAM – WOOD



DESCRIPTION

MC 270 is a versatile high security magnetic contact used in both alarm and security access control systems for protection of doors, gates and windows against unauthorized opening and against external magnetic field. A range of accessories makes the contact suitable for a variety of applications.

MC 270 is certified according to EN 50131-2-6:2008.

MOUNTING INSTRUCTIONS

- Contact and magnet should be installed axially, corresponding to each other.
- Self-cutting and self-locking thread enables direct installation in ϕ 10 mm holes in wood and plastic.

TECHNICAL DATA

Working environment	Wood	Steel
Sabotage distance	max. 5 mm	not recommended
Make distance	typ. 16 mm +/- 40 %	not recommended
Break distance	typ. 22 mm +/- 40 %	not recommended
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	
Cable	2 m, ϕ 3,2 mm, 4x0,14 mm ²	
Environmental class (EN50130-5:2011)	IIIA	
Operating temperature range	-40°C to +55°C	
Operating humidity range	max. 95% r. h.	
Housing material	aluminum alloy	
Dimensions:		
Contact part	ϕ 11 x 36 mm	
Magnet part	ϕ 11 x 14 mm	
Security grade (EN50131-2-6:2008)	3	
Approvals	ITR 13/2014	

OPERATING PRINCIPLE

MC 270 magnetic contact has two parts: the contact part with alarm and sabotage reed switches and the magnet part. In its neutral position 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. This reduces the influence of the magnetic field on the reed switch until it opens and activates an alarm.

MC 270 has an extra sabotage reed switch to protect the contact from sabotage with an external magnet. When an external magnet is applied to the contact, the sabotage reed switch opens and activates an alarm. The sabotage switch can be also opened by the corresponding (friendly) magnet. The distance between the contact and the corresponding magnet, at which the sabotage reed switch opens is called sabotage distance.

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

INSTALLATION

Contact and magnet must be aligned axially in the frames and leaves of the monitored objects (windows, doors etc.). Offset will reduce the working distances and may result in faulty operation or lower security. The contact should be mounted in the stationary part of the monitored object (ex. door frame) and the magnet in the movable part (ex. door

leaf). Before mounting, holes must be drilled. The self-cutting and self-locking thread of the housing enables easy and reliable installation in ϕ 10 mm holes in wood and plastic.

Twisting the contact housing counterclockwise 2-3 times before mounting will protect the cable from mechanical stress.

For sites where it is impossible to mount the contact directly, a range of accessories is available.

Only non-ferromagnetic screws may be used when mounting the contact using accessories.

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 function of the magnetic contact.

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

RESISTORS (OPTIONAL)

MC 270 is available in two additional options with resistors of the chosen value: MC 270-R with one resistor parallel to the alarm switch and MC 270-2R with two resistors in 2EOL configuration.

DISTANCE TABLE

Contact	Accessory	Distance on wood [mm]		
		Sabotage	Make	Break
MC 270	-	max 5	16	22
	MC 200-S11	max 5	16	22
	MC 200-S21	max 5	16	22
	MC 200-S31	max 5	16	22

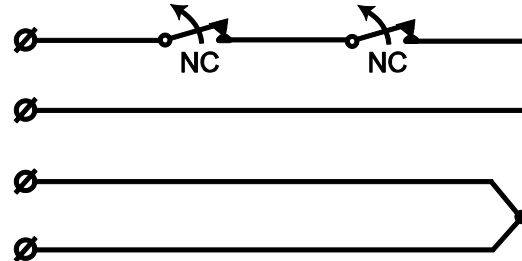
Mounting product on steel is not recommended.

We reserve the right to changes without notice.

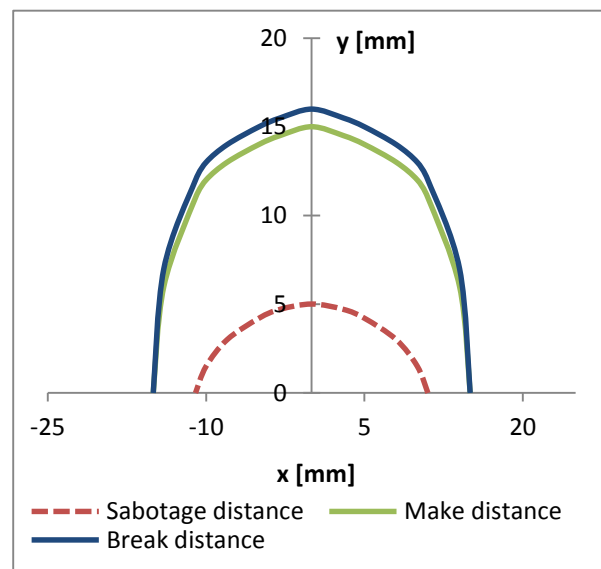
Instruction Manual MC 275



CIRCUIT DIAGRAM



DISTANCE DIAGRAM – WOOD



DESCRIPTION

MC 275 is a versatile high security magnetic contact used in both alarm and security access control systems for protection of doors, gates and windows against unauthorized opening and external magnetic field. The construction of the contact enables rotation during mounting, thus protecting the cable from mechanical stress. A range of accessories makes the contact suitable for a variety of applications.

MC 275 is certified according to EN 50131-2-6:2008.

MOUNTING INSTRUCTIONS

- Contact and magnet should be installed axially, corresponding to each other.
- Self-cutting and self-locking thread enables direct installation in ϕ 10 mm holes in wood and plastic.

TECHNICAL DATA

Working environment	Wood	Steel
Sabotage distance	max. 5 mm	not recommended
Make distance	typ. 15 mm +/- 40 %	not recommended
Break distance	typ. 16 mm +/- 40 %	not recommended
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	
Cable	2 m, ϕ 3,2 mm, 4x0,14 mm ²	
Environmental class (EN50130-5:2011)	IIIA	
Operating temperature range	-40°C to +55°C	
Operating humidity range	max. 95% r. h.	
Housing material	aluminium alloy	
Dimensions:		
Contact part	ϕ 11 x 36 mm	
Magnet part	ϕ 11 x 14 mm	
Security grade (EN50131-2-6:2008)	3	
Approvals	ITR 6/2014	

OPERATING PRINCIPLE

MC 275 magnetic contact has two parts: the contact part with alarm and sabotage reed switches and the magnet part. In its neutral position 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. This reduces the influence of the magnetic field on the reed switch until it opens and activates an alarm.

MC 275 has an extra sabotage reed switch to protect the contact from sabotage with an external magnet. When an external magnet is applied to the contact, the sabotage reed switch opens and activates an alarm. The sabotage switch can be also opened by the corresponding (friendly) magnet. The distance between the contact and the corresponding magnet, at which the sabotage reed switch opens is called sabotage distance.

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

INSTALLATION

Contact and magnet must be aligned axially in the frames and leaves of the monitored objects (windows, doors etc.). Offset will reduce the working distances and may result in faulty operation or lower security. The contact should be mounted

in the stationary part of the monitored object (ex. door frame) and the magnet in the movable part (ex. door leaf). Before mounting, holes must be drilled. The self-cutting and self-locking thread of the housing enables easy and reliable installation in ϕ 10 mm holes in wood and plastic.

For sites where it is impossible to mount the contact directly, a range of accessories is available.

Only non-ferromagnetic screws may be used when mounting the contact using accessories.

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 function of the magnetic contact.

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

RESISTORS (OPTIONAL)

MC 275 is available in two additional options with resistors of the chosen value: MC 275-R with one resistor parallel to the alarm switch and MC 275-2R with two resistors in 2EOL configuration.

DISTANCE TABLE

Contact	Accessory	Distance on wood [mm]		
		Sabotage	Make	Break
MC 275	-	max 5	15	16
	MC 200-S11	max 5	15	16
	MC 200-S19	max 5	15	16
	MC 200-S21	max 5	15	16
	MC 200-S31	max 5	15	16

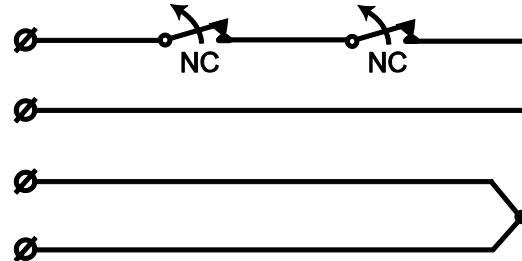
X – not recommended

We reserve the right to changes without notice.

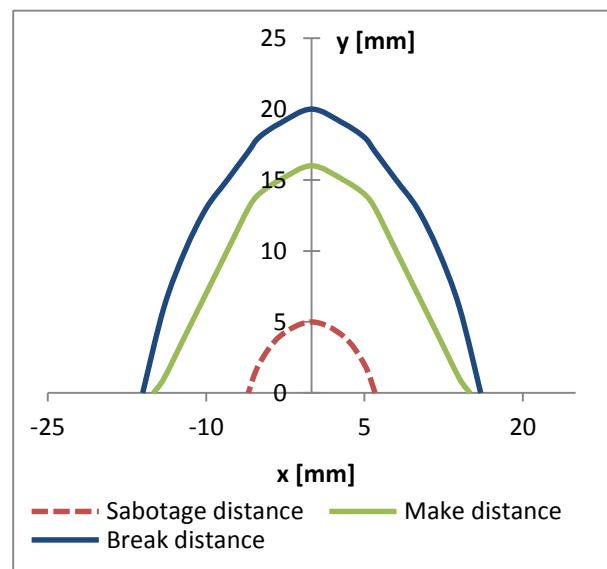
Instruction Manual MC 370



CIRCUIT DIAGRAM



DISTANCE DIAGRAM – WOOD



DESCRIPTION

MC 370 is a versatile high security magnetic contact used in both alarm and security access control systems for protection of doors, gates and windows against unauthorized opening and external magnetic field. A range of accessories makes the contact suitable for a variety of applications.

MC 370 is certified according to EN 50131-2-6:2008.

MOUNTING INSTRUCTIONS

- Contact and magnet should be installed axially, corresponding to each other.
- Catch-bolts on the housing enable direct installation in ϕ 8 mm holes in wood.

TECHNICAL DATA

Working environment	Wood	Steel
Sabotage distance	max. 5 mm	not recommended
Make distance	typ. 16 mm +/- 40 %	not recommended
Break distance	typ. 20 mm +/- 40 %	not recommended
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	
Cable	2 m, ϕ 3,2 mm, 4x0,14 mm ²	
Environmental class (EN50130-5:2011)	IIIA	
Operating temperature range	-40°C to +55°C	
Operating humidity range	max. 95% r. h.	
Housing material	plastic ABS	
Dimensions:		
Contact part	ϕ 9 x 36 mm	
Magnet part	ϕ 9 x 13,6 mm	
Security grade (EN50131-2-6:2008)	3	
Approvals	ITR 7/2014	

OPERATING PRINCIPLE

MC 370 magnetic contact has two parts: the contact part with alarm and sabotage reed switches and the magnet part. In its neutral position 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. This reduces the influence of the magnetic field on the reed switch until it opens and activates an alarm.

MC 370 has an extra sabotage reed switch to protect the contact from sabotage with an external magnet. When an external magnet is applied to the contact, the sabotage reed switch opens and activates an alarm. The sabotage switch can be also opened by the corresponding (friendly) magnet. The distance between the contact and the corresponding magnet, at which the sabotage reed switch opens is called sabotage distance.

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

INSTALLATION

Contact and magnet must be aligned axially in the frames and leaves of the monitored objects (windows, doors etc.). Offset will reduce the working distances and may result in faulty operation or lower security. The contact should be mounted in the stationary part of the monitored object (ex. door frame)

DISTANCE TABLE

Contact	Accessory	Distance on wood [mm]		
		Sabotage	Make	Break
MC 370	-	max 5	16	20
	MC 300-S1	max 5	16	20
	MC 300-S11	max 5	16	20
	MC 300-S21	max 5	16	20
	MC 300-S31	max 5	16	20

X – not recommended

and the magnet in the movable part (ex. door leaf). Before mounting, holes must be drilled. Catch-bolts on the housing enable direct installation in ϕ 8 mm holes in wood.

Twisting the contact housing counterclockwise 2-3 times before mounting will protect the cable from mechanical stress.

For sites where it is impossible to mount the contact directly, a range of accessories is available.

Only non-ferromagnetic screws may be used when mounting the contact using accessories.

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 function of the magnetic contact.

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

RESISTORS (OPTIONAL)

MC 370 is available in two additional options with resistors of the chosen value: MC 370-R with one resistor parallel to the alarm switch and MC 370-2R with two resistors in 2EOL configuration.



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

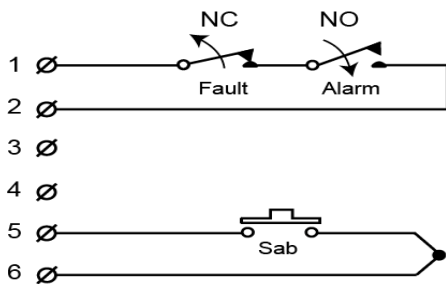
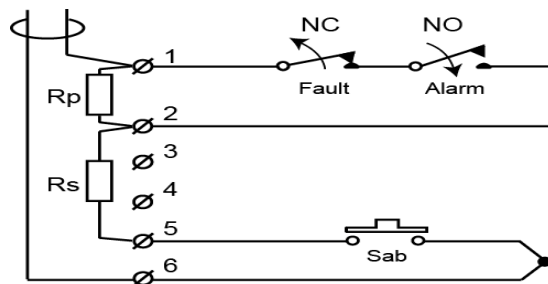


Fig. 2. MC 470 with resistors mounted in terminals for balanced loop



DISTANCE TABLE

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

	Distance in mm	Tolerance in mm
Make	24	+/- 3
Break	26	+/- 3
Sabotage	10	Max

TECHNICAL DATA

Working environment	Wood	Steel
Sabotage distance	max 10 mm	not recommended ^{a)}
Make distance	typ. 24 mm +/- 10 %	not recommended ^{a)}
Break distance	typ. 26 mm +/- 10 %	not recommended ^{a)}
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, Class 1	
Approvals	SBSC, F&P, FG, INCERT	

^{a)} – if need on steel 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

ORDER INFORMATION

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

Accessories

Model	Description
MCL	L bracket in Al
MCZ	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.