

MAC® Multifunctional Access Control

Controlled opening system

Installation on the door of MAC and MAC FAILSAFE systems allows to control access by electric impulse. The particularity of the MAC and MAC FAILSAFE system is to integrate all command and control functions in the lock, which simplifies the electrical works required on site.

Differences between MAC and MAC FAILSAFE systems:

- the MAC systems, in the event of a power failure, allow the opening only via key or panic/emergency exit device. Thus MAC systems are recommended in situations where the door shall remain closed, even in case of power failure.
- the MAC FAILSAFE systems guarantee access in the situation of power failure. Thus MAC FAILSAFE systems are recommended in situations where free passage must be assured, even in case of power failure.

The MAC system offers multiple advantages, such as:

- possibility of 12 or 24V AC/DC power supplies, which avoids problems due to inadequate voltage
- *low current absorption:*
 - at 12V the startup current is 500mA for the first 5-6 sec., before changing to a 250mA maintenance current
 - at 24V the startup current is 1A for 300 millise., before settling to 500mA for 4-5 sec. and finally changing to a 250mA maintenance current for the remaining 25 sec.
- timer incorporated, time set at 30 sec., eliminating the need for external timers. Further, in case of delivery with the door with automatic reset function (reset of the timer) for every door opening
- red/green LED on the cover plate to prevent useless forcing of the handle by signaling whether the opening system is active or not
- possibility of continuous handle activation (always open when desired)
- ready for the connection of an optional remote LED (not supplied) for remote signaling of lock activation/deactivation
- guaranteed access in case of power failure (only for FAILSAFE version)

The MAC and MAC FAILSAFE systems can be delivered installed onto the door with internal wiring through the leaf and electrical contacts between the leaf and the doorframe. The KIT includes a flexible cable sleeve and the electrical cables are to be installed externally.

NOTE

Before the installation of doors with MAC locks it is necessary to prepare the power supply (active door leaf side in case of double leaved doors) at a height of approx. 800mm from the finished floor level and in proximity of the wall angle, where the door frame will be mounted. The power wires must have a section of 0,75-1,0mm² and must be flexible.



Plastic handle with LEDs



Stainless steel handle with LEDs



Double electrical contacts between leaf and doorframe

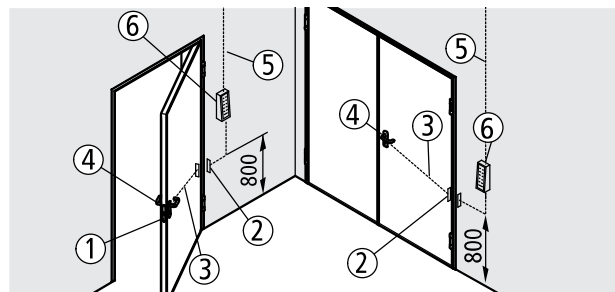


Diagram of components

Delivery together with the door features these installed accessories: lock with solenoid and electronic chip with timer incorporated (1), double electrical contacts between leaf and frame (2), internal wiring inside the leaf (3); supplied to be installed: handle and cover plate with red/green LED and connectors (4). Not included: power supply for doorframe contacts (5), opening button and command accessories (6).

Unlike the delivery together with the door, the KIT (supplied separately from the door) offers a flexible cable sleeve between the door leaf and the power supply instead of the double electrical contacts. In case of a handle the installation of a cable duct onto the door leaf (not supplied) is necessary for the power supply.

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MAC1 AND MAC1 FAILSAFE SYSTEM

Door opening in case of power failure (LED off)

- MAC1: from pull side only by key; from push side by panic bar or emergency handle.
- MAC1 FAILSAFE: from pull side by handle (or key); from push side by panic bar or emergency handle.

Operating mode

The system controls access from the pull side of the door. With the lock locked by key, the access consent is possible via electric impulse (button, badge reader, etc.), which gives power supply in case of MAC1 or it turn off in case of MAC1 FAILSAFE, while opening is always possible from the push side by means of the panic bar or emergency handle. Activation of the handle is signaled by illumination of the "green LED," while the "red LED" indicates when the handle is idle. Both LEDs are off when no power is being supplied.

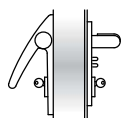
Timed function

In this mode, the activation time lasts 30 seconds before the handle is returned to idle. In case of delivery with the door, if the door is opened within the 30 seconds, the timer is automatically reset to zero.

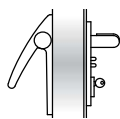
Continuous "day time" function

In this mode the handle is continuously enabled by an electric switch (not supplied) for a longer period (for example during the day), which keeps the lock always enabled. The green LED remains switched on (not valid for the "Kit" version) and is switched off only for the period between the door's opening and its fully closure.

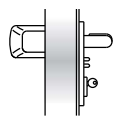
MAC1 can be combined with any BM type panic bar and M3 emergency handles (to be ordered on the side).



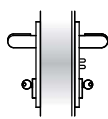
EX DC BM



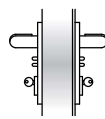
EX/TW BM



SL BM



M3



M1

MAC2 AND MAC2 FAILSAFE SYSTEM

Door opening in case of power failure (LED off)

- MAC2: from both sides by key only.
- MAC2 FAILSAFE: from both sides by handle (or key).

Operating mode

The system controls access from both sides of the door. With the lock locked by key, the access consent is possible via electric impulse (button, badge reader, etc.), which gives power supply in case of MAC2 or it turn off in case of MAC2 FAILSAFE. Activation of both handles is signaled by illumination of the "green LED," with the "red LED" signaling when the handles are idle. Both LEDs are off when no power is being supplied.

Timed function

In this mode, the activation time lasts 30 seconds before both handles are returned to idle. In case of delivery with the door, if the door is opened within the 30 seconds, the timer is automatically reset to zero.

Continuous "day time" function

In this mode both handles are continuously enabled by an electric switch (not supplied) for a longer period (for example during the day), which keeps the lock always enabled. The green LEDs remain switched on (not valid for the "Kit" version) and are switched off only for the period between the door's opening and its fully closure.

MAC2 standard delivery with M1 plastic handle. Upon request an M1X stainless steel handle can be delivered (to be ordered on the side).

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MAC3 AND MAC3 FAILSAFE SYSTEM

Door opening in case of power failure (LED off)

- MAC3: from push side only by key; from pull side by the M3tir/M3Xtir emergency handle.
- MAC3 FAILSAFE: from push side by handle (or key); from pull side by the M3tir/M3Xtir emergency handle.

Operating mode

The system controls access from the push side of the door. With the lock locked by key, the access consent is possible via electric impulse (button, badge reader, etc.), which gives power supply in case of MAC3 or it turn off in case of MAC3 FAILSAFE, while opening is always possible from the pull side by means of the emergency handle. Activation of the handle is signaled by illumination of the "green LED," while the "red LED" indicates when the handle is idle. Both LEDs are off when no power is being supplied.

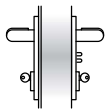
Timed function

In this mode, the activation time lasts 30 seconds before the handle is returned to idle. In case of delivery with the door, if the door is opened within the 30 seconds, the timer is automatically reset to zero.

Continuous "day time" function

In this mode the handle is continuously enabled by an electric switch (not supplied) for a longer period (for example during the day), which keeps the lock always enabled. The green LED remains switched on (not valid for the "Kit" version) and is switched off only for the period between the door's opening and its fully closure.

MAC3 standard delivery with M3tir plastic handle. Upon request an M3Xtir stainless steel handle can be delivered (to be ordered on the side).



M3tir

NOTE

Before the installation of doors with MAC locks it is necessary to prepare the power supply (active door leaf side in case of double leaved doors) at a height of approx. 800mm from the finished floor level and in proximity of the wall angle, where the door frame will be mounted. The power wires must have a section of 0,75-1,0mm² and must be flexible.