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**M3tir and M3Xtir handle**  
**PANIC EXIT DEVICE**  
**for emergency exits**

**A207-GB**  
**5001300/2 - 02/19**

Commercial codes  
M3tir emergency handle item 4203101.031  
M3Xtir emergency handle item 4203101.032  
M3tir/MAC3 emergency handle item 4203101.033  
M3Xtir/MAC3 emergency handle item 4203101.034  
M3tir/MAC3 FAILSAFE emerg.handle item 4203101.035  
M3Xtir/MAC3 FAILSAFE emerg.handle item 4203101.036

DoP no. **179-M3tir-01**  
Website <https://www.ninz.it/it/download/dop>  
Classification **3 7 7 B 1 3 4 2 A D**



Name and address of the producer **NINZ S.p.A. - corso Trento 2/ A I-38061 ALA (TN) - ITALY**

Year application trademark **2014**

Standard **EN 179:2008**

Certification authority no. **0425**

CE certification number **0425-CPR-002149**

**Classification no.**

- 1<sup>st</sup> Character - grade 3 - Category of use: high frequency
- 2<sup>nd</sup> Character - grade 7 - Durability: 200.000 cycles
- 3<sup>rd</sup> Character - grade 7 - Mass of the door: over 200kg
- 4<sup>th</sup> Character - grade B - Suitable for use on fire/smoke rated doors
- 5<sup>th</sup> Character - grade 1 - Safety: suitable for emergency exits
- 6<sup>th</sup> Character - grade 3 - Highly resistant to corrosion 96h
- 7<sup>th</sup> Character - grade 4 - Safety of goods: 3000N
- 8<sup>th</sup> Character - grade 2 - Protrusion of the device: up to 100mm
- 9<sup>th</sup> Character - grade A - Activation type: lever handle activation
- 10<sup>th</sup> Character - grade D - Suitable for single or, with inactive leaf normally closed, double exit door, inwardly opening

Suitable for: single exit doors or for active (main) leaf of double exit doors provided that the inactive leaf remains normally closed and opened by lock with deadbolt (019) only; with dimensions of leaves up to 1350x2880mm, mass up to 300kg/leaf, mounted on hinges or pivots, with fire resistance up to EI<sub>2</sub>120 - REI120 and smoke proof. Projection of the handle 67mm.

**SYMBOLS EMPLOYED**



**CAUTION**

Indicates a danger that threatens people and/or material goods. Failure to observe the warnings indicated by this symbol may have serious consequences, such as personal injury and property damage.



**ATTENTION**

Indicates a danger that threatens material goods. Failure to observe the warnings indicated by this symbol may result in damage to material goods.



**NOTICE**

Warnings related to important technical aspects.

**PRODUCT DESCRIPTION**

Emergency devices for one-leaved doors or for the active leaf of two-leaved doors located at emergency exits and activated by lever handle. Composed of installation plates and double square spindle in galvanized steel, internal and external lever handle with cover plate in black plastic (M3tir) or brushed stainless steel (M3Xtir), panic safe lock and nickel-plated brass cylinder with three keys.

**This product does not contain or release any hazardous materials, as per UNI EN standard no. 179 appendix ZA.**

**OPERATION MODE**

From the push side the door cannot be opened if the panic safe lock is closed by key whereas opening is possible from the pull side at any time by using the lever handle.

**WARNINGS**

The M3tir/M3Xtir handle for emergency exit is intended for the installation on doors to be used by people that are accustomed to use the controls of the panic devices for escape routes. Therefore their use is suitable when a panic situation is very unlikely.

The safety features of this product are of fundamental importance to ensure its conformity with EN 179. It is strictly forbidden to introduce any type of modifications apart from those described in these installation instructions.

**RECOMMENDATIONS**

To ensure high level of human safety and appropriate safety levels for material goods, the handle for emergency exit must be installed on doors and doorframes that are in good conditions. The installation of the door itself, therefore, should be checked to ensure that it was installed properly and that nothing obstructs its normal movement.

If rebate sealing are mounted on the door, make sure they do not inhibit proper functioning of the emergency exit device.

The fastening instructions in the present document should be followed scrupulously during installation. Once installation is complete, the installer should give this document to the owner of the activity.

For securing the door in the closed position, do not employ any other latching devices than those specified in the present document. This does not preclude the installation of automatic closing devices.

The M3tir/M3Xtir emergency device is also designed for installation on hollow metal doors with an internal cell structure.

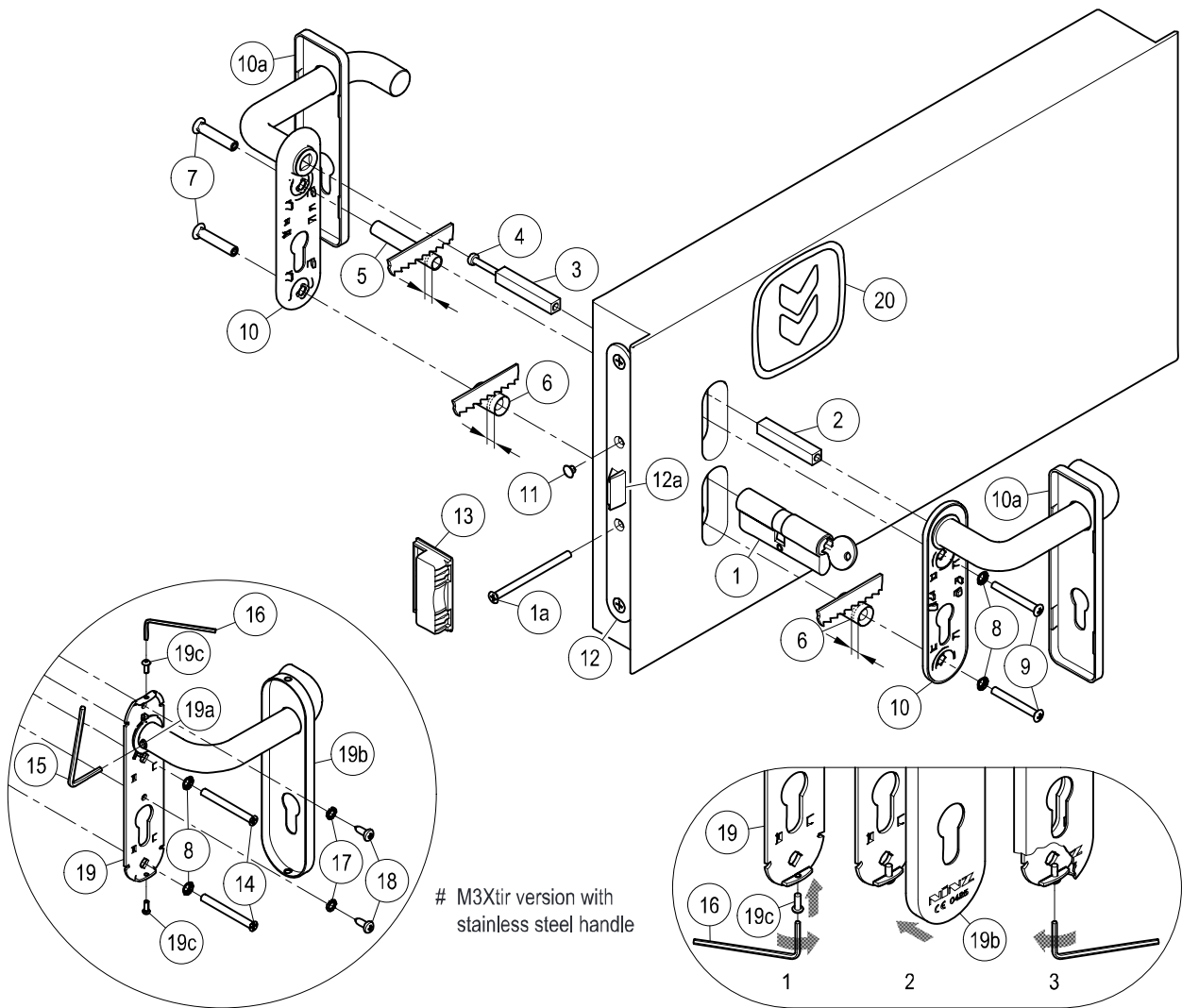
If a door closer is needed to return the door to the closed position, care should be taken not to make the opening step more difficult for children, the elderly and the disabled.

A pictogram (arrow) should be positioned immediately above the handle activation lever on the internal side of the door.



**All of the included components described herein must be positioned and mounted in conformity with the present document.**

**Any cylinder supplied by the customer must comply with DIN standard 18254.**



# M3Xtir version with stainless steel handle

### CONTENTS OF THE M3tir/M3Xtir PANIC DEVICE PACKAGE

position	pcs.	description
1, 1a	01	Double nickel-plated cylinder with three keys and fastening screw
2, 3	01	Threaded square spindle 9x9x(55+55)mm
4	01	M5 screw for threaded square spindle
5	01	Spacer Ø10,3mm
6	02	Spacer Ø15mm
7	02	M5 threaded insert
8	02	Countersunk toothed washer
9	02	M5x45mm countersunk pan head screw
10	02	Handle with galvanized steel installation plate
10a	02	Black plastic cover plate
11	01	Black cap hole Ø8,8mm

position	pcs.	description
# 14	02	M5x50mm countersunk flat head screw
# 15	01	S3 hex key
# 16	01	S2 hex key
# 17	04	Toothed washer
# 18	04	Pan head self tapping screw Ø4,2x13mm
# 19, 19a	02	Stainless steel handle with galvanized steel installation plate and fastening socket set screw
# 19b	02	Stainless steel cover plate
# 19c	02	M3x8mm pan head screw
20	01	Adhesive pictogram (green arrow)
-	01	M3tir/M3Xtir handle set installation instructions


Please note that article 4 of the MD of 03 November 2004 obliges the installer to write up, sign and provide the owner of the activity with a declaration of proper installation that makes explicit reference to the instructions supplied by the exit device manufacturer.

- The panic lock (12) and the respective strike box (counter-strike) (13) are delivered already mounted on the door!

### TOOLS REQUIRED

Medium-sized Philips-head screwdriver or electric screwdriver, electric drill with Ø2mm drill bit for steel, fine-toothed hack-saw.

## IMPORTANT

- Installation should be carried out by qualified personnel only and in strict conformity with the instructions supplied.
- For a correct installation all supplied components must be used, including spacers and toothed washers.
-  - No variations are allowed, and only components indicated in the package contents may be used.
- Before proceeding with installation, check the package contents to ensure that no pieces are missing.
- Any different installation configuration from that illustrated on page 2/4 is not allowed.

## INSTALLATION

- Insert the key, rotate the cam in vertical position and insert the cylinder (1) into lock (12). Use the screw (1a) to fasten it provisionally; then remove the key.
- Insert the square spindles (2 and 3) into lock, connecting and tightening with the screw (4). Verify that the latch bolt (12a) can be retreated independently from push side and from pull side.
- Adjust the plastic spacers (5 and 6) to the thickness of the leaf so that they do not protrude more than 1mm from it.
- In case of M3Xtir stainless steel handle (19), screw onto their installation plates the screws (19c), just enough to insert the cover plates (19b).
- Insert the two threaded inserts (7) in the installation plate of one handle (10 or 19), making sure that they are well-centred.
- Insert the two spacers (5 and 6) over the threaded inserts and apply the handle on the push-side of the door, being careful to center the square spindle and the inserts over their respective holes.
- Apply the second handle (10 or 19) to the pull-side of the door after inserting the screws (9 or 14), toothed washers (8) and spacer (6). Center the square spindle, cylinder and screws, starting the screws by hand before fastening them with the screwdriver, avoiding any deformation of the installation plates.
- Use the handles from pull-side and push-side to ensure that the latch bolt (12a) of the panic safe lock opens easily and fully.
- In case of M3Xtir stainless steel handle, tighten the two socket set screws (19a) with the S3 hex wrench (15).
- Finish fastening of the cylinder (1), insert the little cap hole (11) in the open hole of the panic safe lock (12).




- Use the M3tir or M3Xtir handle to ensure that the latch bolt opens easily and fully; use the same method to check the opening of the latch bolt by using the key. Test the door in both open and closed positions, from both sides of the door. If necessary file down the plastic strike box (13), when the opening becomes difficult due to friction.

- In case of M3Xtir stainless steel handle (19) it is also necessary to fasten their installation plates using the Ø4,2x13mm self-tapping screws (18) and their toothed washers (17) after drilling holes in the metal panel with the Ø2mm drill bit. Insert the covers (19b) onto the handles (drw. 2). Using the S2 hex key (16) to unscrew the screws (19c) until the covers become fixed, avoiding any deformations (drw. 3). Insert and fasten the socket set screws (19a) well with the S3 hex key (15).
- In case of M3tir plastic handle (10), clip the cover plates (10a) manually onto their installation plates.
- Apply the pictogram (20) with the green arrow on the internal surface of the door, just above the emergency handle.





- Lastly, use a dynamometer to measure the force required on the lever of the handle to free the lock. Record this force measurement in the present document.

## USE

- Ensure that the door always opens easily.
- Avoid unnecessary strains on or handling of the handle.
- Protect the handle from external atmospheric agents.
- Ensure that nothing hinders the free movement of the lever of handle.
- Do not paint the lock.
- Use the handle properly, do not pull them in the wrong direction.
- Do not leave the key in the lock.
-  - Make sure that any damaged or malfunctioning parts are replaced immediately.

## MAINTENANCE

To ensure that door usage conforms with regulations, the following maintenance checks should be carried out at least once a month:

- Confirm that all of the installed components correspond with those listed in the present instructions and that no other latching devices than those originally installed have been added to the door.
- Inspect and activate the emergency handle to verify that all of its components are in satisfactory operational condition.
- Use a dynamometer to confirm that the release force shows no significant differences from the forces recorded at the time of installation.
-  - Check whether all screws are fully tightened, tightening any that may have loosened.
- Check whether handle and key can be moved with minimal effort, and that the latch bolt of the safe lock retreats from the strike box without offering resistance. If the door has become difficult to open due to friction, the resistance can be reduced by filing the strike box down to the appropriate height.
- Ensure that the latch bolt exits completely when the handle is released.
-  - Check whether the inserts and strike boxes are blocked in any way and eliminate any obstructions.
- This product don't requires any special maintenance. Grease should be used to lubricate periodically the internal workings of lock and handle (do not use the spray for the MAC locks).
- For normal cleaning use mild detergents for M3tir handle or a cleaning agent designed specifically for stainless steel for M3Xtir handle.



- Any adjustments that become necessary must be carried out by qualified personnel using original NINZ replacement parts.



- The owner of the activity is responsible for keeping the declaration of correct installation on file, conducting proper emergency device maintenance in accordance with all of the manufacturer's maintenance guidelines, keeping maintenance and check-up records and preserving the present document.





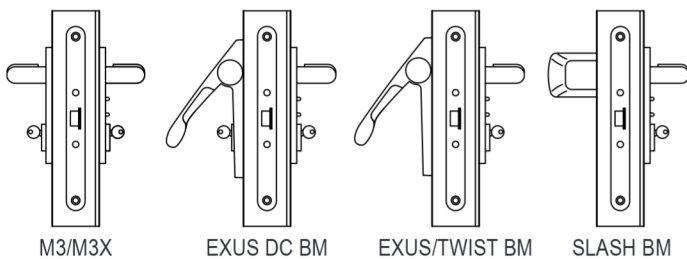
**ATTENTION**

In case of power failure, from the side of the handle with LED the door can be opened only by key with the MAC system, while the door can be opened at any time with the MAC FAILSAFE system.

The installation instructions and the wiring diagram are the same for both systems.

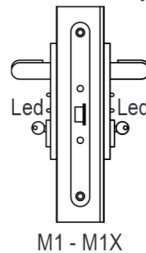
For a regular operation and in order to avoid efforts on the lock, the space between the door-leaf and the catch must be  $\geq 6\text{mm}$ .

**MAC1 and MAC1 FAILSAFE** - operating from push side of the door by emergency handle or panic bar and from pull side by handle with led. Only the pull side of the door is controlled (handle with LED). With lock key-locked, the access consent is possible via electric impulse (button, badge reader, etc.), which gives power supply to the magnet 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. If the lock is not key-locked, opening is always possible, even from the pull side. Both systems can be combined with the Exus, Twist, Slash models of panic bars, with external handle type BM, otherwise with the M3 or M3X emergency handle, see drawing below.



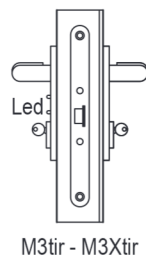
**MAC2 and MAC2 FAILSAFE** - operating from both sides of the door by handle with led.

Both sides of the door are controlled (pull and push sides). With lock key-locked, the access consent is possible via electric impulse (button, badge reader, etc.), which gives power supply to the magnet in case of MAC2 or it turn off in case of MAC2 FAILSAFE. If the lock is not key-locked opening is always possible from both sides. Both systems can be combined with M1 and M1X double handles, see drawing on the side.



**MAC3 and MAC3 FAILSAFE** - operating by: emergency handle from pull side of the door and handle with led from push side.

Only the push side of the door is controlled (handle with LED). With lock key-locked, the access consent is possible via electric impulse (button, badge reader, etc.), which gives power supply to the magnet 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. If the lock is not key-locked, opening is always possible, even from the push side. The system can be combined with the M3tir or M3Xtir emergency handle, see drawing on the side.



**GENERAL TECHNICAL DATA**

- Lock **CE** marked in accordance with EN 12209: 2003/AC: 2005
- Certificate Nr. 0497/CPD/4265/11
- Notified body 0497
- Power supply 12 or 24 VAC/VDC  $\pm 10\%$
- Absorptions:
  - at 12 V the start-up current is of 500 mA for the firsts 5-6 sec., before changing to a fixed current absorption of a 250 mA;
  - at 24 V the start-up current is of 1 A for 300 millisc., before changing to 500 mA for 4-5 sec. and sets then to a fixed current absorption of 250 mA for the remaining time
- Timer incorporated with fixed time of 30 sec. and automatic reset (zeroing of the timer) every time the door is opened
- Possibility of continuous power supply ("day time" function)
- Ready for possible remote LED (not supplied) with max absorption of 20 mA, for remote signalling of the activation/deactivation of the lock
- Guaranteed access in case of power failure (only for FAILSAFE version)

**OPERATION MODE**

**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. MAC2: from both sides by key only. MAC2 FAILSAFE: from both sides by handle (or key). MAC3: from push side only by key; from pull side by emergency handle. MAC3 FAILSAFE: from push side by handle (or key); from pull side by emergency handle.

**Timed function**

The handle activation is controlled by a timed electric impulse to the lock, time duration fixed 30 sec., after of which the handle is disabled consequently. If the door is opened within the 30 seconds, the timer is automatically reset to zero (automatic reset). The electric consent is possible by: unlock button, "Access" code keypad, card-based control system and biometric fingerprint reader.

**Continuous "day time" function**

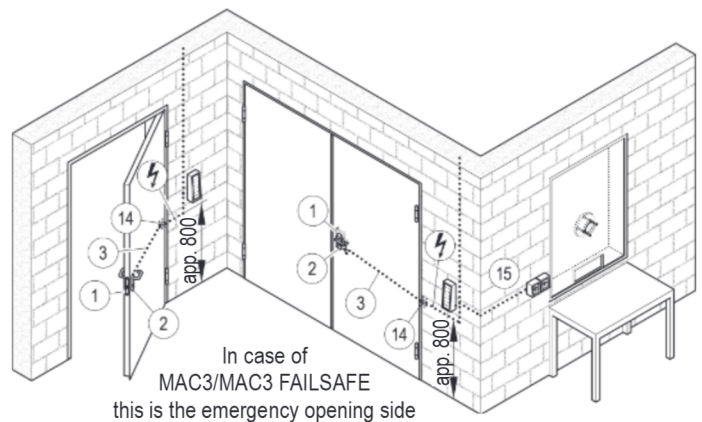
In this mode the handle is continuously enabled by an electric button (not supplied) for a longer period (for example during the day), which keeps the lock always enabled. While the handle is enabled the green LED is always ON. Only while the door is open it switches to OFF (red) state and then to ON (green) again once the doors is completely shut.

**SIGNALLING ON THE DOOR**

The system status is signalled by two LED placed on the installation plate. The green LED signals that the door is not locked, whereas the red indicates that the door is locked. Both LED are off when no power is being supplied.

**REMOTE SIGNALLING**

A fourth wire can bring an optionally remote signal, to a control unit indicating the activation of the handle. In case of continuous "day time" function, the remote signalling is always active until the power supply is switched off. In case of timed function the remote signal is active for 30 sec. or less if opened before.



Both MAC and MAC FAILSAFE access control system can be installed onto one-leaved doors or on the main leaf of two-leaved doors in REVER, UNIVER or PROGET versions.

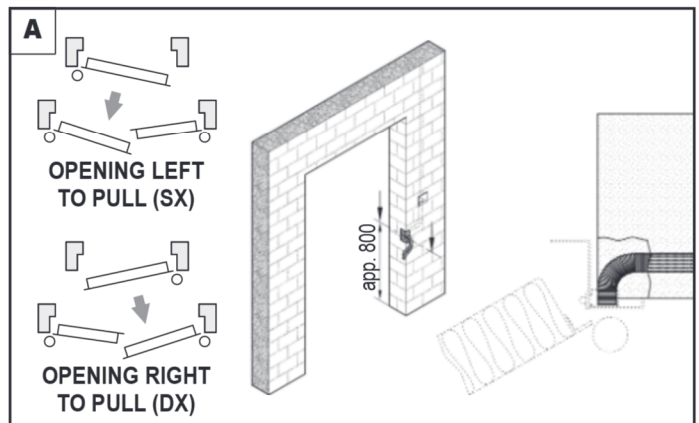
The doors equipped with the MAC or MAC FAILSAFE system are series supplied with:

- 1) lock composed of the magnet and the 30 sec. timer;
- 2) (MAC1, MAC1 FAILSAFE, MAC3 or MAC3 FAILSAFE) single- or (MAC2 or MAC2 FAILSAFE) double-handled with red/green LED that signal the activation of the handle(s);
- 3) leaf with inside wiring for lock's power supply;
- 14) electrical contacts between leaf and frame;
- 15) ready for eventual remote LED (not supplied) connected to a control unit signalling the activation of the handle;
- splitter cable for MAC2 or MAC2 FAILSAFE (not represented).

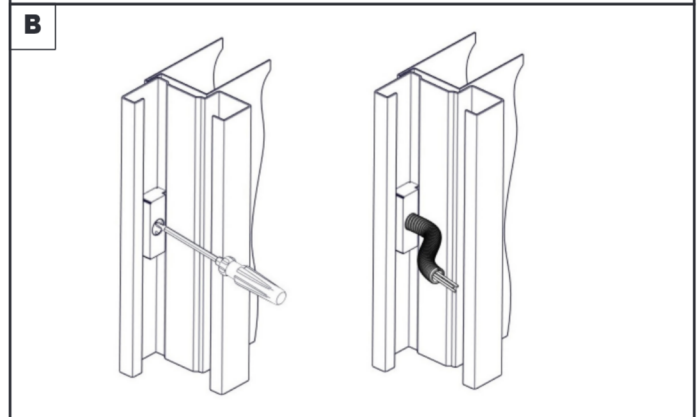
**IMPORTANT:** any command and supply accessories must be ordered separately; the power wires (⚡) to the contacts of the door must be supplied by the customer. The power wires must have a maximal section of 0,75-1,0mm<sup>2</sup> and must be flexible.

## MAC or MAC FAILSAFE SYSTEM INSTALLATION INSTRUCTIONS

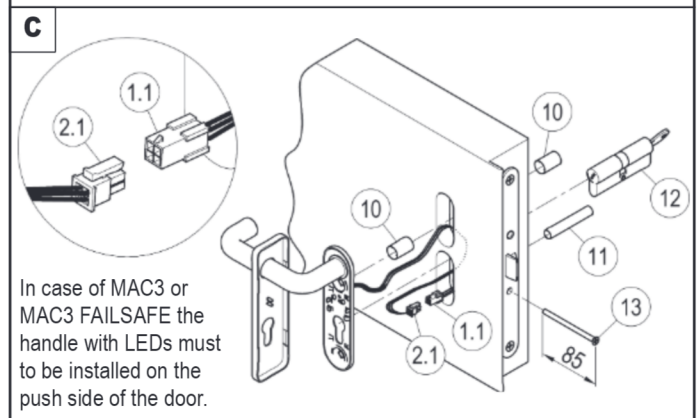
**A -** Verify the door's opening direction. Check the correct position of the cable sheath. The drawing represents a door swinging to the right.



**B -** Open the connection box which is located on the back hinge side of the doorframe. Place the doorframe according to the specific installation instructions. Insert the cable sheath for the wire into the connection box. Assemble the door, including the accessories, except the cylinder, according to the specific installation instructions.



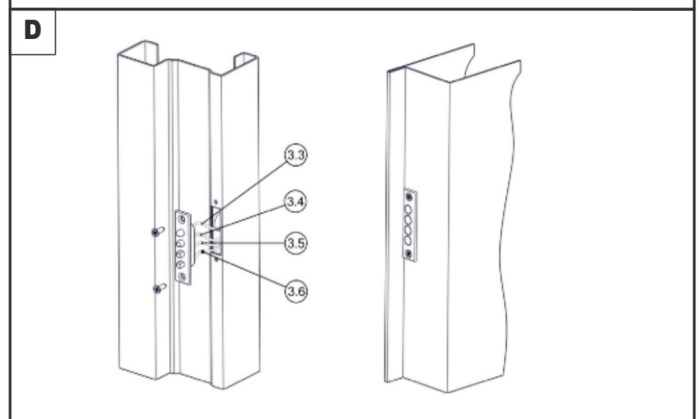
**C -** Insert the (2.1) connector of the handle from the door's top slot, to the bottom slot and connect it with the (1.1) connector from the lock. In MAC2 or MAC 2 FAILSAFE case, link both connectors of the splitter cable to those of the two handles. During connection be careful that the lever of the male connector matches with the socket of the female connector. For the installation of emergency handle and/or panic bar, change the position of spacers (10 and 11), indicated in the installation instructions, be careful not to tighten too much the screws that cross them. Then insert the cylinder (12) and fasten it with the screw (13) of 85 mm length supplied. Warning: do not to use screws with different length.



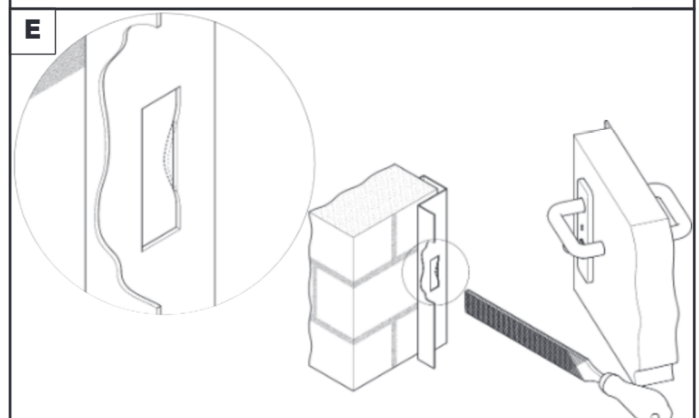
**D -** Unscrew the contact placed on the doorframe and carry out the electrical connection, as shown on the next page.

**ATTENTION:** with direct current power supply (DC) the polarities must be respected. The power wires must have a maximal section of 0,75-1,0mm<sup>2</sup> and must be flexible.

Refasten the contact and check the correspondence of that on the doorframe with that on the door. Close the door by key and verify that the operation corresponds to the MAC or MAC FAILSAFE systems indications. Check the timed or continuous "day time" functions. Then definitively fasten the door.



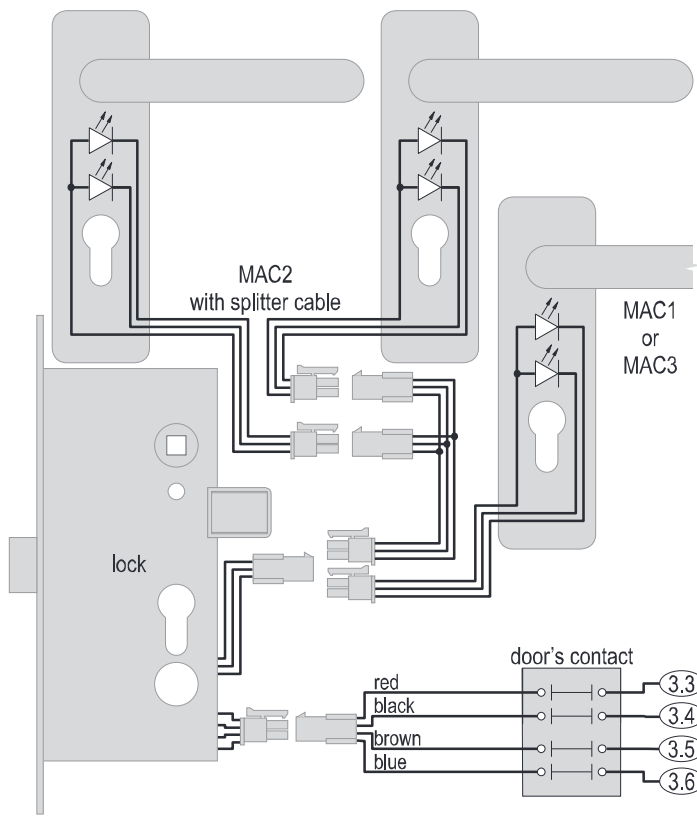
**E - WARNING:** when the door is provided with FF rebate sealing, the catch groove for the lock must be filed (see drawing) just enough so the door opens without any effort.



## USE AND MAINTENANCE

It is advised to periodically verify the correct operation of the control system and that the lock is always closed by key. The MAC and MAC FAILSAFE systems require no special maintenance. The internal mechanisms of the lock must be regularly lubricated with non fluid greases. In order to avoid dirtying of the electrical parts, it is not advisable to use spray products. Periodically clean the electrical contacts between the door and the doorframe.

**WARNING:** a difficult opening of the door or repeated activation of the handle with the red LED turned on, can damage the lock.



**Absorptions:**

- 12 V, start-up of 500 mA for 5-6 sec., then 250 mA;
- 24 V, start-up of 1 A for 300 millsec., then 500 mA per 4-5 sec., at last 250 mA;
- remote LED max. 20 mA.

**Wirings:**

- ③.③ + 12/24 VAC/VDC, COM
  - ③.④ - 12/24 VAC/VDC
  - ③.⑤ NO (normally open)
  - ③.⑥ - remote LED (optionally)
- (respect polarity with DC)

wirings with ⑨+⑤			
	3.3 + 5f + 9c + 9f	3.4 + 5g + 9g	3.5 + 9d
optional	4a + 5e	4b + 5d	4c + 5f
	3.6 + 4d	4c + 5f	6c + 9a
	6b + 9b		
⚠	5a → L 230 V ~ - 5b → N 230 V ~ - 5c → ⊥		
	T → keypad		
⌚	0,5' + 30 sec.		

wirings with ⑧			
	3.3 + 8c + 8d	3.4 + 8e	3.5 + 8b
optional	4a + 8i	4b + 8h	4c + 8d
	3.6 + 4d	4c + 8d	6c + 8b
	6b + 8c		
⚠	8k → N 230 V ~ - 8n → L 230 V ~ - 8o → ⊥		
	L.I. → internal badge reader - L.E. → external badge reader		
⌚	1,0' + 30 sec.		

wirings with ⑦+⑤			
	3.3 + 5f + 7a	3.4 + 5g	3.5 + 7b
optional	4a + 5e	4b + 5d	4c + 5f
	3.6 + 4d	4c + 5f	6c + 7b
	6b + 7a		
⚠	5a → L 230 V ~ - 5b → N 230 V ~ - 5c → ⊥		
	Tr. → 230 V ~ → 9 V = adapter		
⌚	30 sec.		

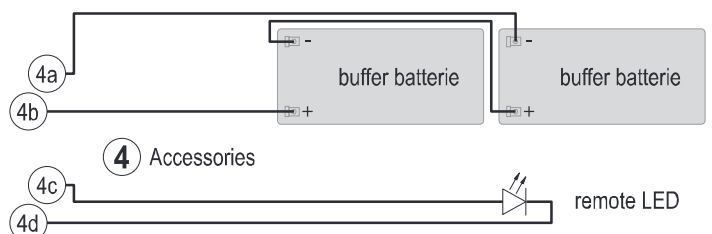
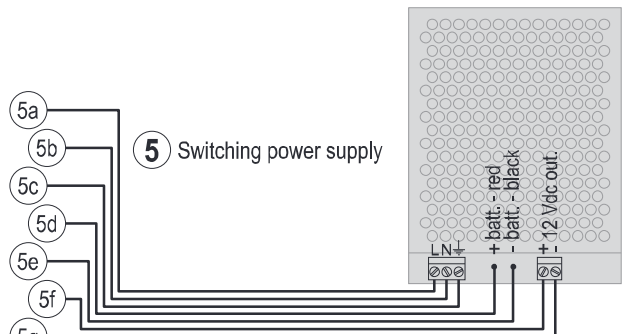
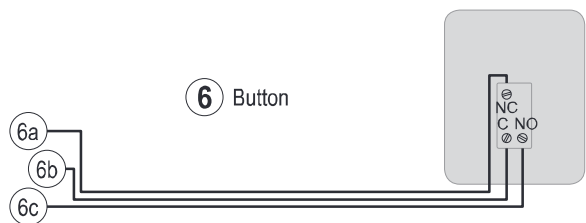
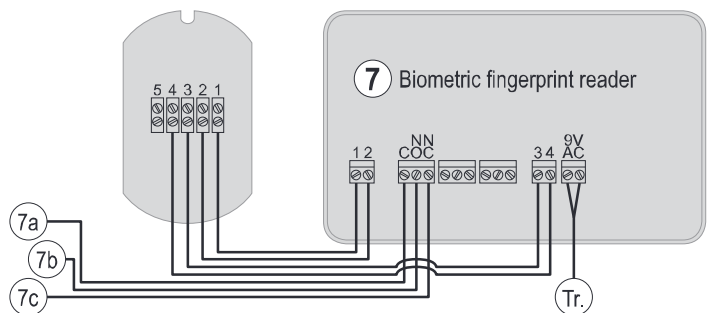
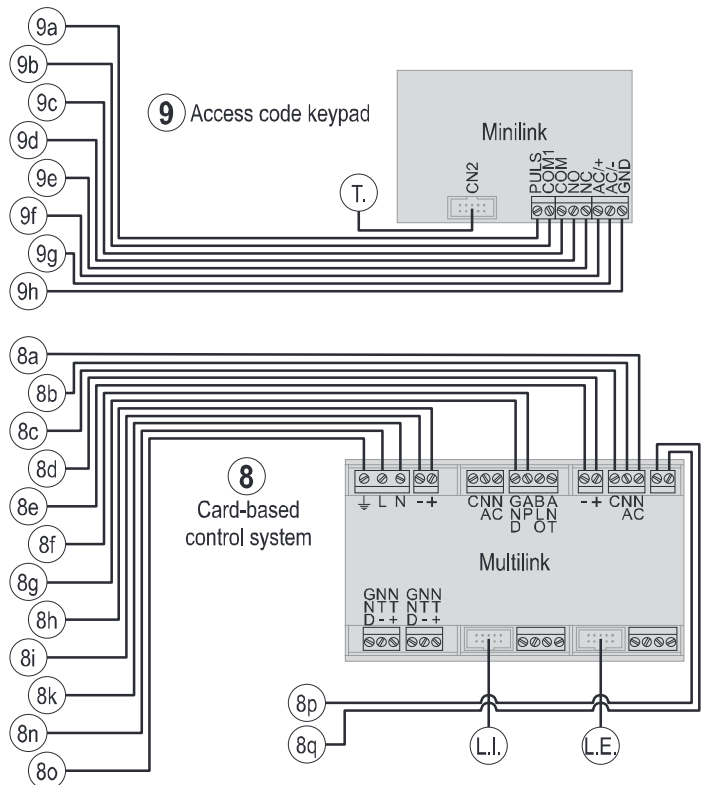
wirings with ⑥+⑤			
	3.3 + 5f + 6b	3.4 + 5g	3.5 + 6c
optional	4a + 5e	4b + 5d	4c + 5f
	3.6 + 4d	4c + 5f	
⚠	5a → L 230 V ~ - 5b → N 230 V ~ - 5c → ⊥		
⌚	30 sec.		

Notes: ' = adjust to minimum timing of ⑨ or ⑧.

**Icons:**

- ⚠ = attention: danger. Operation to be carried out by qualified personnel;
- ~ = alternating current (a.c.); = = direct current (d.c.); ⊥ = ground;
- ⌚ = timings.

**ATTENTION: the lock must be always powered!**  
The access consent is possible via electric impulse of + 12/24 Vac/ cc on 3.5 wire (brown)



TROUBLESHOOTING - PROBLEMS	SOLVING
The red LED of the handle (or of both handles) is off	<ol style="list-style-type: none"> <li>1) Check that the connectors 1.1 and 2.1 are correctly connected as depicted in the drawing C of page 2;</li> <li>2) Check that the lock is properly supplied, as at page 3 depicted (+ 12/24 Vac/dc to the wire 3.3; - 12/24 Vac/dc to the wire 3.4).</li> </ol>
The green LED of the handle (or of both handles) not switch to on providing the access impulse (consent)	<ol style="list-style-type: none"> <li>1) Check that the connectors 1.1 and 2.1 are correctly connected as depicted in the drawing C of page 2;</li> <li>2) Check the electric impulse for access consent of +12/24 Vac/dc on the wire 3.5 (see page 3).</li> </ol>
Both LEDs of the handle (or of both handles) are on, but the lock does not work	Verify that are guaranteed the start-up current and the absorption current indicated on page 1 (GENERAL TECHNICAL DATA) and 3 (Absorptions).
The system properly connected and power supplied, does not control the access	Check that the lock is locked by key.
The FAILSAFE lock, while being locked by key, always allows the opening	Check that the lock is properly supplied, as at page 3 depicted (+ 12/24 Vac/dc to the wire 3.3; - 12/24 Vac/dc to the wire 3.4).
The electrical system was executed with 2 wires only (power supply); see the A169-GB instruction in case of replacement of SCA system	<ol style="list-style-type: none"> <li>1) Connect both the 3.3 (red) and the 3.5 (brown) wires to one wire of electrical power supply (12/24 Vac) or at the positive in case of direct current (+12/24 Vdc);</li> <li>2) Connect the 3.4 wire (black) with the other power supply wire (12/24 Vac) or at the negative in case of direct current (- 12/24 Vdc).</li> </ol> <p><b>ATTENTION:</b> this connection is possible with MAC locks only (not with MAC FAILSAFE), furthermore the installation of a timer is required. The green LED of the handle (or of both handles) become switch to on only by the electric impulse for the access consent.</p>