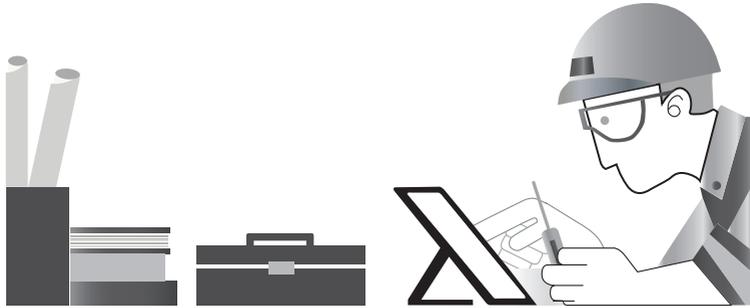


***keyless***<sup>®</sup>

**KBO**

# Tech Handbook



## Introduction and statement of conditions

Despite the attentive and careful realization, update and integration of the contents and integrations in this handbook, these contents and information may contain typing mistakes, inaccuracies or inconsistencies for whom Keyless® does not provide any guarantee - neither explicit nor implicit - not even by way of reliability or expectation. In particular, we do not guarantee completeness, exhaustiveness and compliance with the current organization, company structure or typology, characteristics, marketability and fitness for purpose of the products, services and activities of Keyless®, who is available to provide any relevant information. Keyless® reserves the right to make adjustments and changes to the information contained in the handbook without prior notice, as well as to vary and to change the products, the services and the activities described herein, without it rising any kind of rights for a third-party. In order to reduce paper consumption, we decided to minimise the description inherent to the use and installation in this manual, whilst maintaining the greatest clarity. It is important to keep this handbook to be able to consult it at any time. In case of sale, disposal or removal of the product, make sure that the handbook is given to the new owner, to inform him about the functioning and the related warnings. Read the instructions carefully: they contain important information about installation, use and security. In the interest of improving the internal design, the operational functionality and/or the reliability, Keyless® reserves the right to make adjustments and changes to the products described in this handbook without prior notice nor notification in written or electronic form. Keyless® accepts no responsibility during the use or the implementation of the products or the circuit diagram described herein.

## Rules and guarantees

All Keyless® products have a 24 months warranty from the date of purchase over the whole European territory.

The warranty is valid for products found to have structural manufacturing or functional defects. Under no circumstances should the warranty be understood as onsite, but offsite. The detecting of defects, the dismantling, the shipment of the damaged product to Keyless® headquarters, as well as the delivery charges regarding the intervention, have to be carried out by the installer. Keyless® guarantees the product and its functioning only if the product is correctly installed without adjustments for its only purpose of use; using the product not as intended invalidates the warranty.

Keyless® is not responsible for damages caused to things or people, for the inappropriate use or installation of the product, nor for damages resulting from non-use due to damages or defects, loss of earning, inactivity or non usability. It is up to the installer to communicate a possible defect as soon as possible via e-mail to the address [assistenza@keyless.it](mailto:assistenza@keyless.it).

After a brief evaluation following the handbooks recommended by Keyless®, the defected or malfunctioning product can be returned to be repaired or replaced. The new or repaired product will not have a new 24 months warranty, but it will be covered by the official warranty given at the time of purchase.

All products damaged by power surges, thunderstorms and adverse weather conditions, earthquakes, floodings or break-in attempts performed through mechanical manipulation, erroneous connections or reversed polarity are not covered by warranty.

**All legal disputes are reserved to the jurisdiction of the Foro of Treviso (Italy).**

## Guidebook for the installation

All Keyless® products are certified and under warranty only if **installed by qualified personnel.**

Before you begin the installation, make sure that the system is highly compatible with your power circuit. Under no circumstance is Keyless® and its retailers responsible for erroneous purchase, incompatibility of the products sold and/or installed by unqualified personnel, loss of earnings or money due to malfunctioning of Keyless systems.

THE INSTALLATION AND THE CONNECTION OF THE PRODUCTS MUST BE CARRIED OUT WITHOUT A/C POWER.

Cut the power from the electrical panel or the counter; it is good to install a thermal magnetic circuit breaker with 6A at least to maintain the system, it also has to conform to the local standards in force.

EARTHING THE POWER SUPPLY IS REQUIRED BY LAW.

Keyless® accepts no responsibility for possible damages suffered by people, things, pets or property, due to non-compliance with the rules described herein. The system downstream of the power supply is low voltage (12V) and it does not constitute a danger for people.

# WARNING!

The Keyless units interact with the **negative** terminal.

Relay, door opener button, Day & Night, sensor, etc.

They are connected or bridged  
EXCLUSIVELY to NEGATIVE (GND).

Incorrect connections (positive + 12V)  
**irreversibly damage** the control unit.

It's **Expressly Forbidden** Power third-party equipment  
(Remote controls, electric strikes, electric locks, door opening, relays, etc.)  
with the power supply unit.

Failure to comply with such notice ago  
decaying instantly warranty.



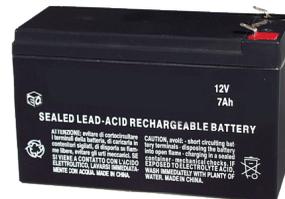
# WARNING!

Lead-acid batteries of the Keyless units  
They must be changed periodically according to their usage status.

Generally a lead-acid battery has a maximum duration of 24 months.  
The duration of time it's determined by the structure of the lead-acid batteries.

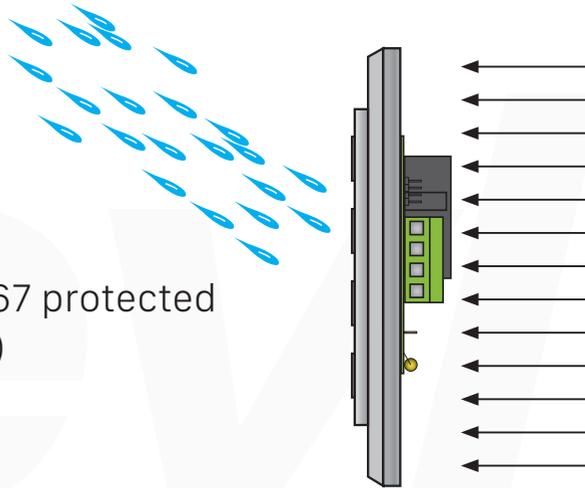
To ensure the continuity of exercise of the Keyless units in case of power failure,  
it's good practice to replace the lead acid battery every 12 months.

**Violation of such notice  
NOT guaranteed the continuity exercise  
in case of power failure to the control units Keyless**



# WARNING!

Keyless Keypad it's IP67 protected  
on the front part(keys)  
**ONLY**



If Rear part(electronic),  
placed in contact with umidity or water,  
creates malfunction or damage the product and  
**it's instantly void the warranty.**

**It remains to care for people installing the keyboard on (wall, wooden pillars, iron, cement, etc.)  
ENSURE the impermeability!**

We recommend using the following accessories:

**BOXKP15**

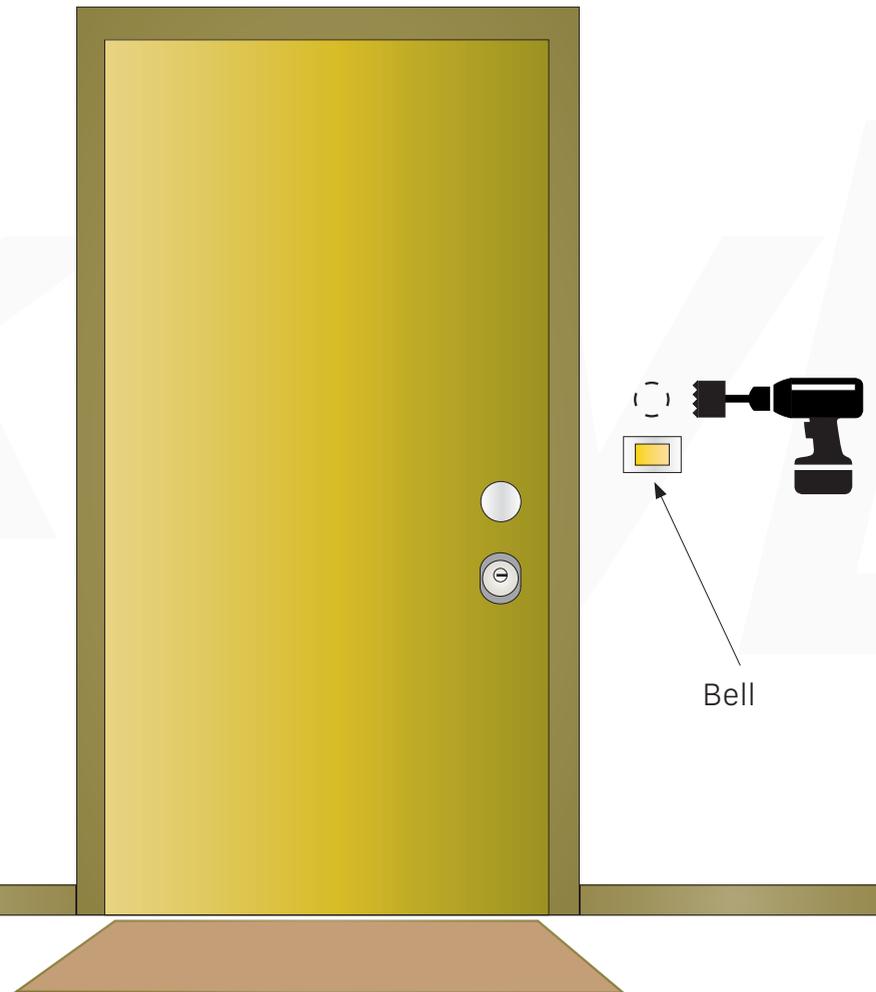
Box IP67 Antivandal for Keypad  
120x103x32mm



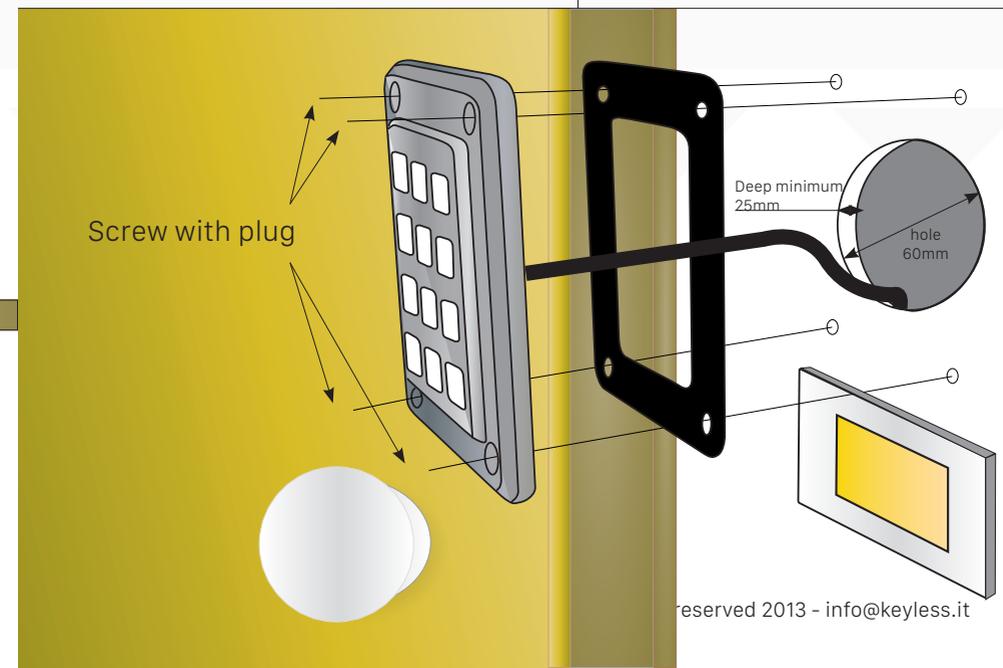
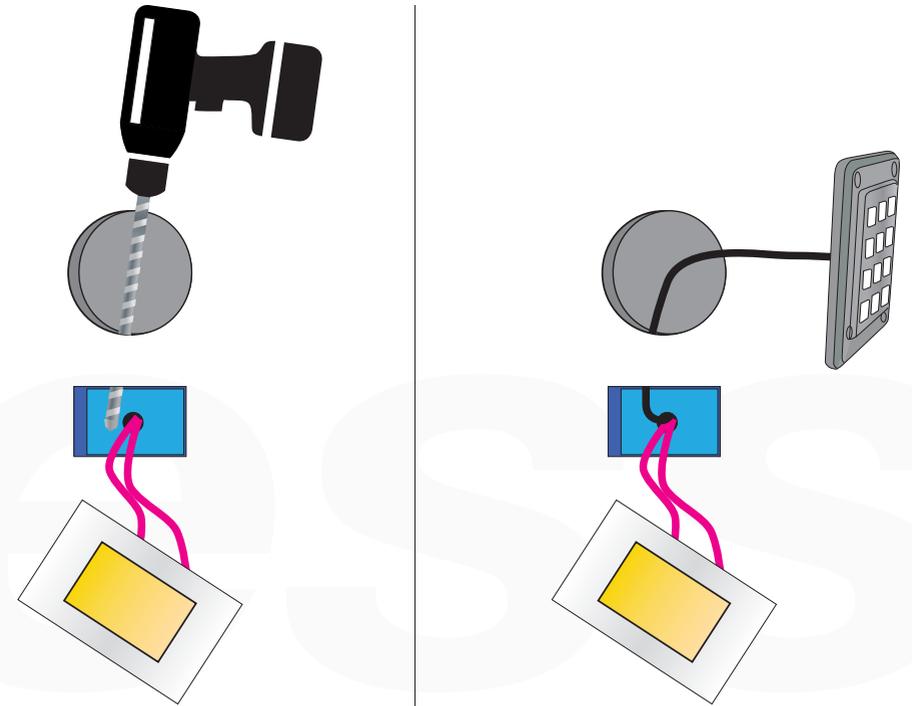
Box container Polymers Keyboard vandal proof IP67.  
It allows you to install the keyboard on any surface (rough wall plastered, facing bricks,  
metal, marble, etc)  
The container and 'tin, and comes with its original seal.  
**The box comes with vandal-proof screws and its special insert**

## Place and fix the keypad

Drill the exterior of the door with a 65mm hole saw to place and fix the anti-vandal keypad. It is possible, however, to install the keypad in any desired place (also outside the door (ex. **On the wall**); in this case, asses the track of the cable.)

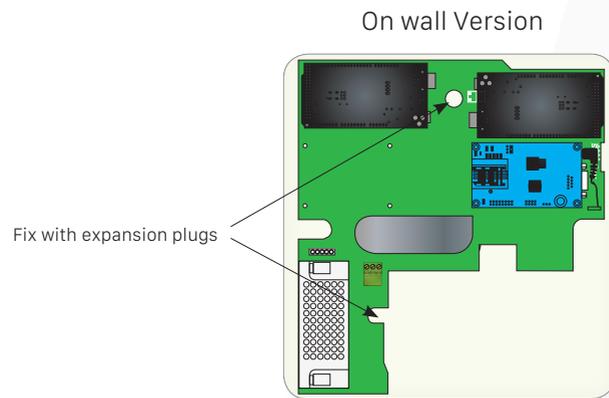
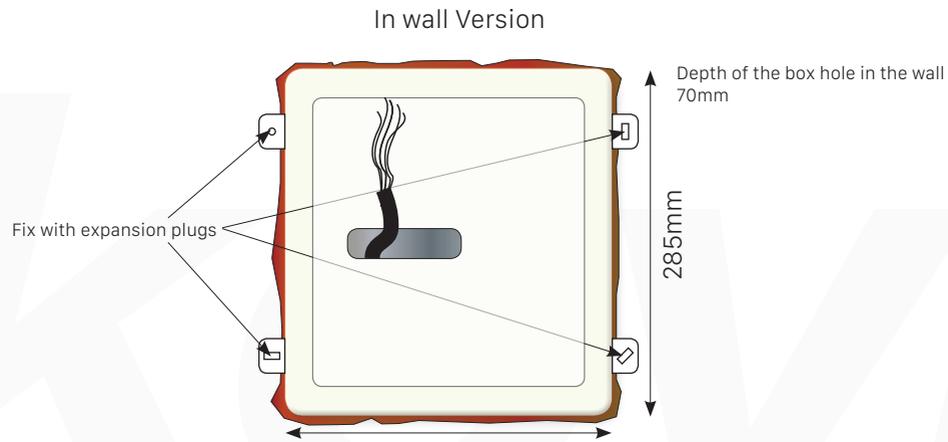


Drilling diagonally, and 'possible to channel the keyboard cable in corrugated bell. This opportunity 'makes much more' easy passage of the cable through the wall to reach the central unit comfortably.



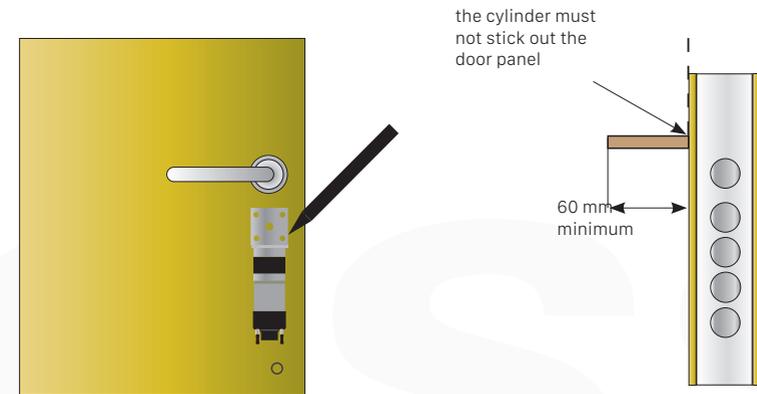
## Position and fix the control unit

The external control unit can be placed anywhere desired, within a maximum distance of 100 meters from the door with two simple screws directly on the wall. The internal control unit is to be placed inside the wall **WITHOUT CEMENT(concrete)** and simply fixed with 4 expansion plugs; the lid is bigger and it covers all the disturbing sights.



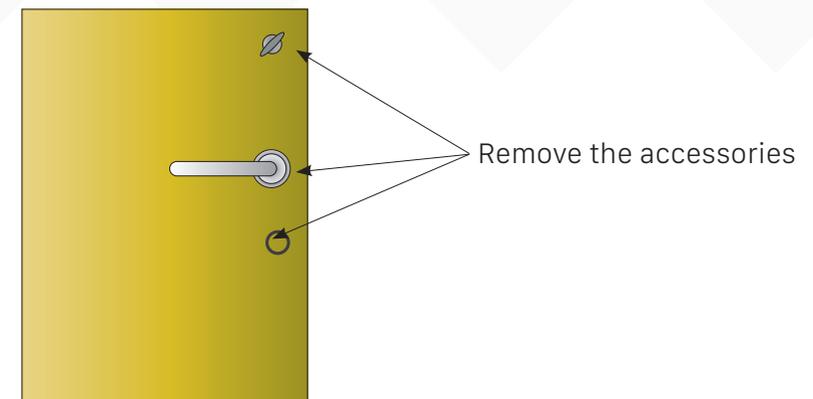
## Position the engine and draw the position

Remove the knob inside the door, place the head of the engine by inserting the shaft of the cylinder/knob in the hole with bushes (THE CYLINDER MUST NOT STICK OUT THE DOOR PANEL, UNLIKE THE SHAFT THAT MUST STICK OUT AT LEAST 60 mm.) Draw with a pencil the perimeter of the engine and the head, and mark also the holes for the screws and for the cables.



## Dismantle the door panel and the accessories

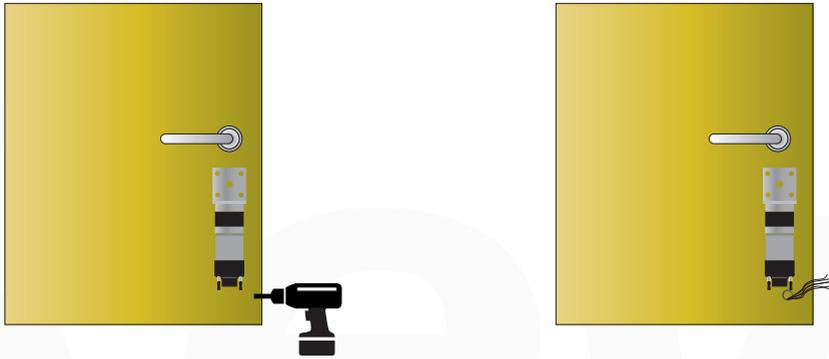
Unscrew the peephole and the knob of the door chain, remove the handle through the specific fastenings (grub screws, fasteners), take off the tab inside the cylinder. Unscrew the frames of the panel and the possible fastenings ad hoc (it depends on the version of the door), remove the door panel.



## Reassemble the door panel

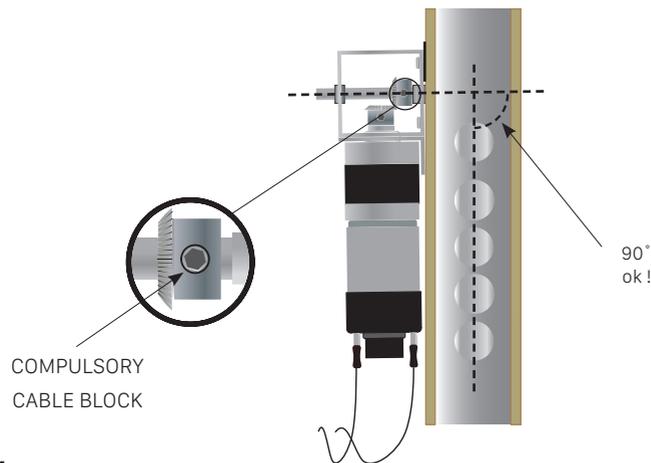
**Warning !! Before you close the control unit, see the scheme "Settings and special controls" on page 15**

Drill with a 10mm diameter bit the internal door panel where drawn with the pencil. Reassemble the door panel and its components (peephole, handle, knob, door chain), connecting the cables to the engine through the 10mm hole.



## Place and fix the engine

Insert the cylinder head on the shaft. Fix the head of the screws on the door panel being careful NOT to change the perpendicularity of the shaft to the cylinder. If it does not fit, add volume on the head with paper or plastic inserts. Then fix the screws, and BEFORE you tighten the grov screw of the bevel herical gear with a 2,5mm socket wrench, test if the shaft FREELY ROTATES through the knob.

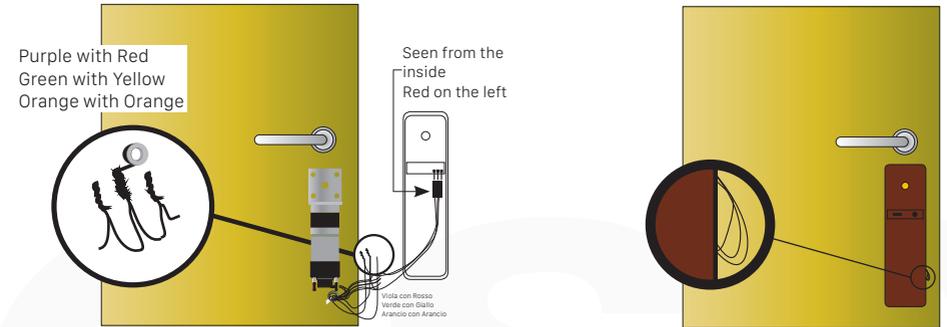


## Place, connect and fix the cover with buttons

Connect the two wires (2x0,50mmq) on the provided Fastons.

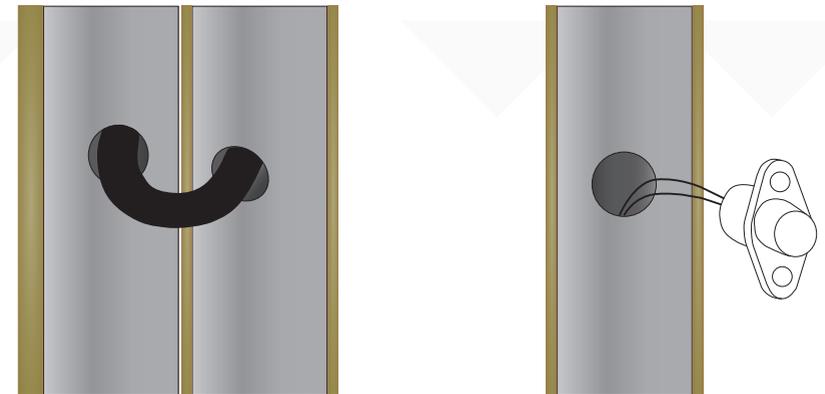
Fasten with duct tape the control wires of the Cover with the same colors of the ones on the control unit.

Insert the Cover on the engine and fix the provided screw being careful NOT TO PINCH THE WIRES by placing them on the back of the engine. Then fix the knob on the cylinder shaft.



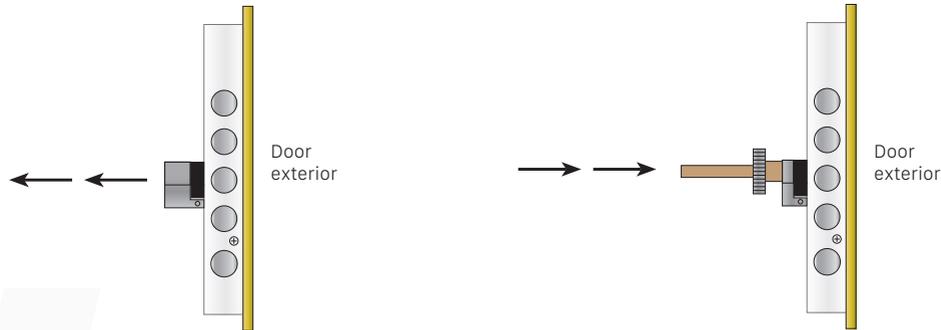
## Position and fix the cable gland and the sensor

Pierce the door stop and the hinge frame to place and fix the cable gland. Install the door sensor and check if it works when the door is closed; if it does not, adjust it with frames.



## Install the special half cylinder

Unlock the cylinder block screw (if any), extract the cylinder.  
Insert and lock the special half cylinder.



## Place and fix the Inside motor plate

The Inside motor plate, to place the engine in the internal part of the armoured door, is to be fixed with the two screws of the defender with a 38mm interaxis distance.

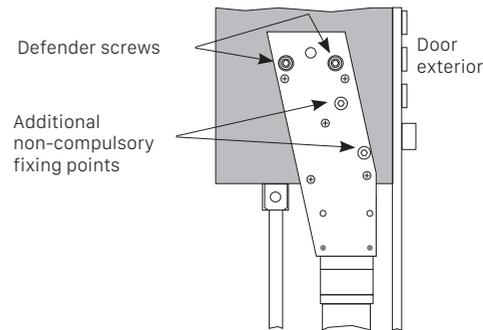
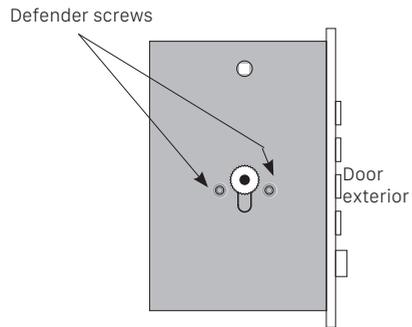
Unscrew and remove the screws of the defender.

Place the motor plate being careful to wedge the teeth of the gear wheel into the cylinder, insert the screws of the defender, fix all the elements.

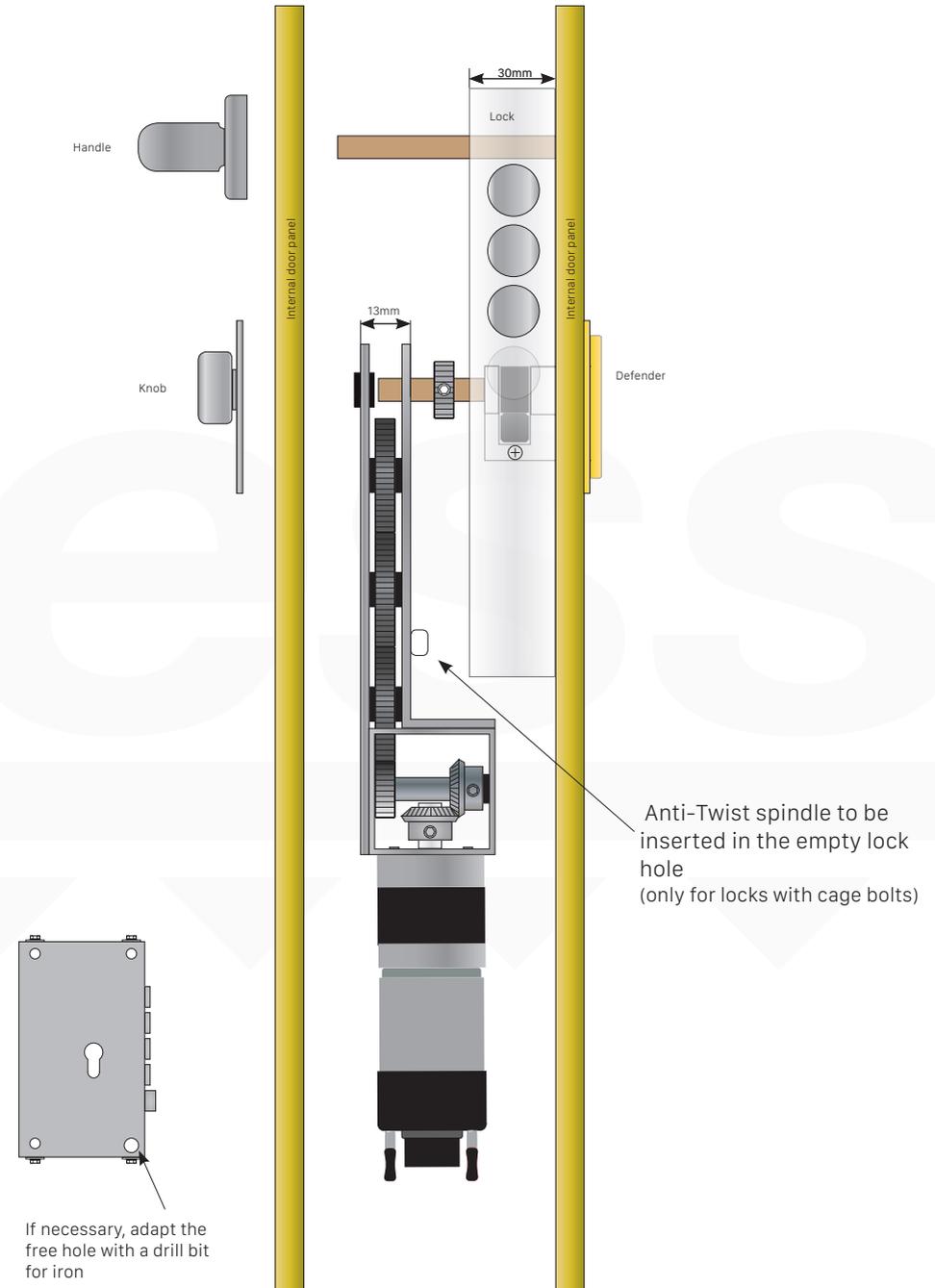
The plate is also suitable to be fixed on a third point (according to the version of the locks). In case there are cage bolts, fix the third point in as herein described.

WARNING!!

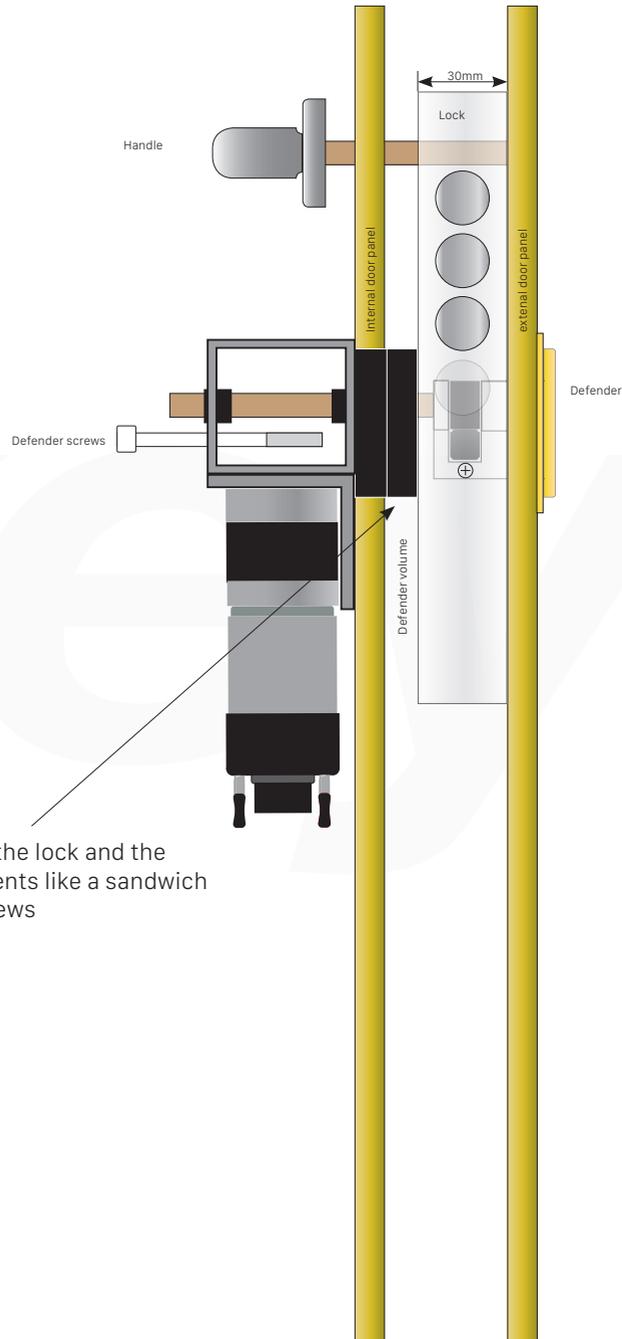
**DO NOT use any kind of lubricant for the gears.**



## Detail for installation with spindle for cage bolts



**Detail for external installation for armoured doors with defender interaxis distance 31/38**



Add volume between the lock and the panel, fix all the elements like a sandwich with the defender screws

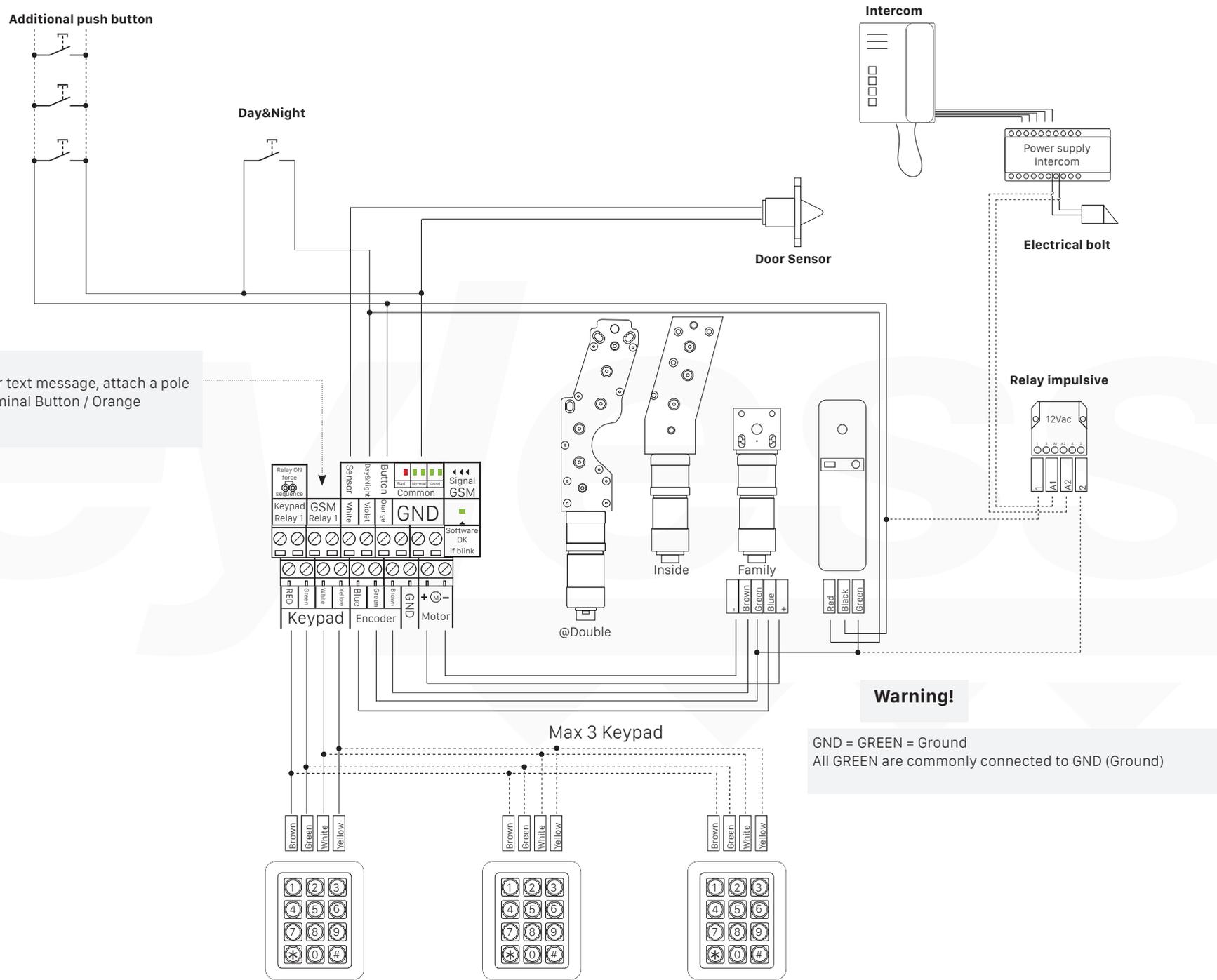
**Cable and connection**

Connect the Central unit with the appropriate cable various components (keyboard, sensor, motor commands), taking care to follow the legend colors and not reverse the polarity.

FOLLOW THE SCHEME



**Relay 1 GSM**  
 To open the door with a phone call or text message, attach a pole to the GND and the other pole to terminal Button / Orange



LED flashing green  
(Every 3 sec.) Determines the activities software

**Day&Night**  
The Day & Night function (when connected to a switch / button / switch with GND), avoid closing the door sent

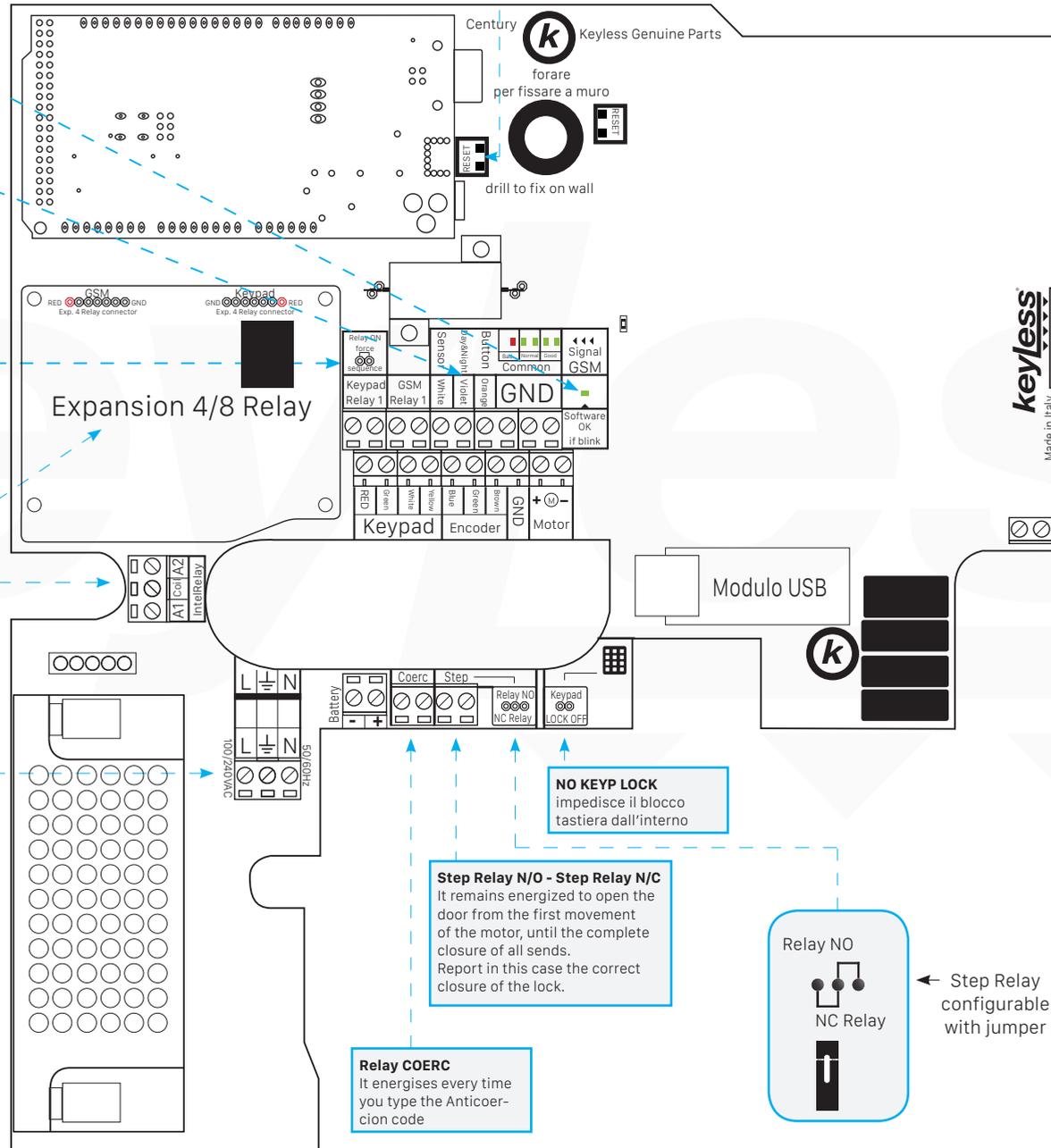
**Relay ON**  
Relay 1 also activates the internal button. active also forcibly Furthermore the relay after the engine even without opening the latch release. (indispensable for the door opener to motorized arm)

**Espansione 4/8 Relay**  
(optional)

**IntelRelay**  
(optional)

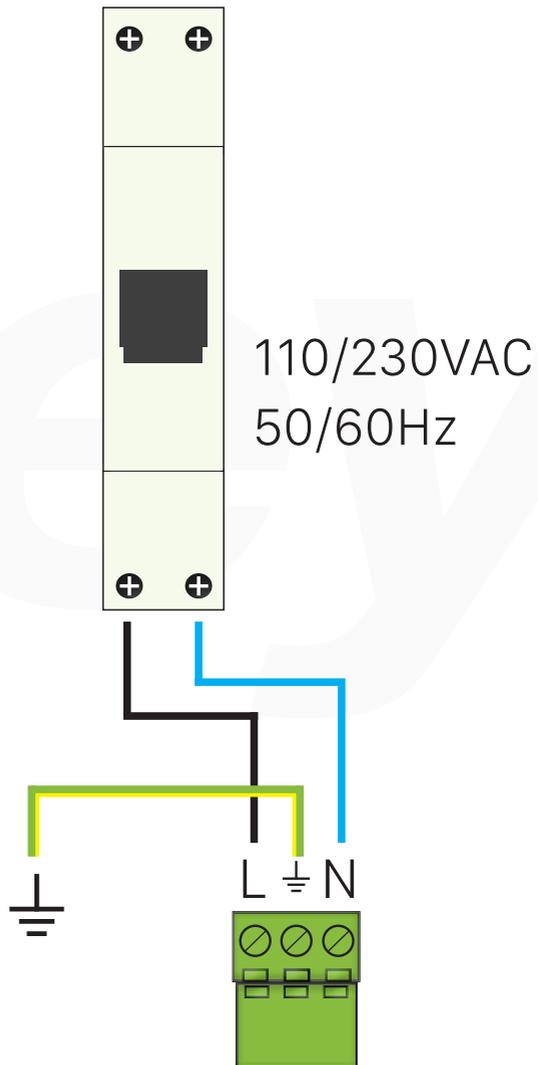
**Power line**  
100/240VAC  
50/60Hz

**RESET CENTRAL UNIT**  
Shortcut 2 - 3 seconds shows the keypad unit to the factory settings  
During the reset, the green LED stops flashing



## Power on

WITH DOOR OPEN, now you can **power on** and setup the system



## Special automatic settings always active and not disabled

### Anticoercion

In the case of forced opening of the armed threat (coercion), **relay COERC pulse for 1 second**

### How to pulse

Example	user code to open door 45023
Digit on coercion	digit personal user code +1 on last number
Digit	4502 <b>4</b>

### Sliding code

To avoid the visual memory of those around you, you can enter up to 24 numbers randomly before the opening code

### How to slide the code

Example	user code to open door 45023
Open with sliding code	digitar randomly 34074367820 <b>45023</b>

### Keypad lock

The system automatically protects the opening of the door by the random password attempts.  
After 30 keystrokes with the wrong users code (of 6 users code), is blocked for 3 minutes.

**If set (see special function commands 651)**, excites the preset relay which may for example be connected to cameras, alarms, surveillance systems, lights, etc ....

### Attempts to open in time slots NOT permitted

In the case of opening attempt in time slots NOT permitted,

If set (see special function commands 651), excites the preset relay which may for example be connected to cameras, alarms, surveillance systems, lights, etc ....

## System settings and setup

Program the system by setting

**9 = Masterpassword** (see example below)

**3 = Data and time** (see example below)

### notice!

Programming the keypad menu is now possible **ONLY WITH THE DOOR OPEN**

#### set Masterpassword

**9** ← type

55028 ← type new Masterpassword(es. 55028)

**#** ← to store

55028 ← type Masterpassword again

**#** ← to store

🎵 The ringtone (melody) confirms the operation

### notice!

**the Masterpassword** is to ACCESS THE MENU. **IT DOES NOT OPEN** the door

#### Date and time setting

**3** ← type

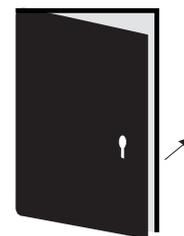
1503101832 ← type date and local time (ex. 10 March 2015 18:32 hours)  
In accordance with the format **year/month/day/hour/minutes**

🎵 The ringtone (melody) confirms the operation

## Now close the door to set the automatic interlock limit of the engine

### notice!

leave someone inside the door during this operation



Open all



Close all



### notice!

keep the door **closed with your hands** during this operation

(to keep the door leaf from moving and the mismatching of the key turns where they meet)

When done setting the interlock limit of the engine,  
keep the **door opened** and proceed with the **rest of the setting**

## Special settings

**666** ← factory reset  
(resets the whole system and the keypad control unit to the original state)

**(IT DOES NOT RESET the GSM Communicator)**

### Choose version Day&Night (setup anytime available)

**750** ← type (default = it automatically sets when first started)

this mode allows you to activate version Day&Night from the engine Cover or from an external switch on step relay mode



The ringtone (melody) confirms the operation

**760** ← type

This mode allows you to activate version Day&Night with a single press on impulsive mode from any remote button



The ringtone (melody) confirms the operation

## Special settings

**620** ← sets the threshold of the motor pulses, for notices of the mechanical opening of the lock  
# ← To store (default = 250 pulses)

**640** ← sets the interlock limit: turn the knob until you reach the desired closing point

# ← To store (default = It sets automatically)

**650** ← sets the waiting time before the door locks  
(es. 8 = 8 seconds) max 60 seconds

# ← To store (default = 1 sec. - MAX 60 sec.)

**651** ← sets the relays to activate after some events (too many wrong attempts to log in, entering outside planned time slots, mechanical rotation of the cylinder)  
(ex. 12) = activates relay 1 and 2 sequentially

# ← To store

**652** ← sets the relay to activate when the password expires  
(ex. 3) = activates relay nr 3

# ← To store

**670** ← sets the acoustic signal for error when there is an obstacle in the closing 0-100 (ex. 60 =over 60 % closing does not result in acoustic error)

# ← To store (default = 50%)

**690** ← sets the latch-bolt release. It can be changed if necessary.

# ← To store (default = 100 pulses) (0 =No latch-bolt)

**699** ← deletes ALL the users...(NOT the Masterpassword)

**5** ← one step forward (engine)

**8** ← one step backward (engine)

**00000** ← performs a ringtone to evaluate the volume of the keypad

**\*** ← Exits the operation or the menu

### Add new user code

1 ← type  
 23098 ← type new user code(ex. 23098)  
 # ← to store  
 23098 ← type again new user code  
 # ← to store

### Type of user(set the time slot rules)

**full** Every day and time  
 0 ← type(for no limits code h24/265)  
 # ← to store

**semi** Only some day and time  
 25 ← type(for limited code(ex. Tuesday, Friday))  
 # ← To store  
 15321947 ← type(valid time slot(ez. from 15:32 to 19:47))  
 # ← To store  
 for add days and different time slot(do it again)  
 or store the days and time slot  
 # ← To store

023 ← type(sequence on code activate motor + relay2 + relay3)

Choose Relays or motor	Some example empty = motor only 013 = motor + relay1 + relay3 102 = relay1 + motor + relay2 1302 = relay1 + relay3 + motor + relay2 134 = relay1 + relay3 + relay4 4130 = relay4 + relay1 + relay3 + motor max 8 actions	Max 8 actions for each code 0 = motor 1 = relay1 - on central unit board 2 = relay2 - expansion 4 relay 3 = relay3 - expansion 4 relay 4 = relay4 - expansion 4 relay 5 = relay5 - expansion 4 relay 7 = pause 5 seconds 9 = pause 1 second
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# ← To store the new user code  
 # ← To store the new user code  
 Wait musical tone(melody) for confirmation

### Delete user code

2 ← type  
 23098 ← user code to delete(ex. 23098)  
 # ← To store  
 Wait musical tone(melody) for confirmation

### Store on USB

61 ← type  
 Save on USB Stick all users code and the last 1500 events  
 Wait musical tone(melody) for confirmation

### reset EEPROM USB

622 ← type  
 Reset the entire USB EEPROM  
 Wait musical tone(melody) for confirmation

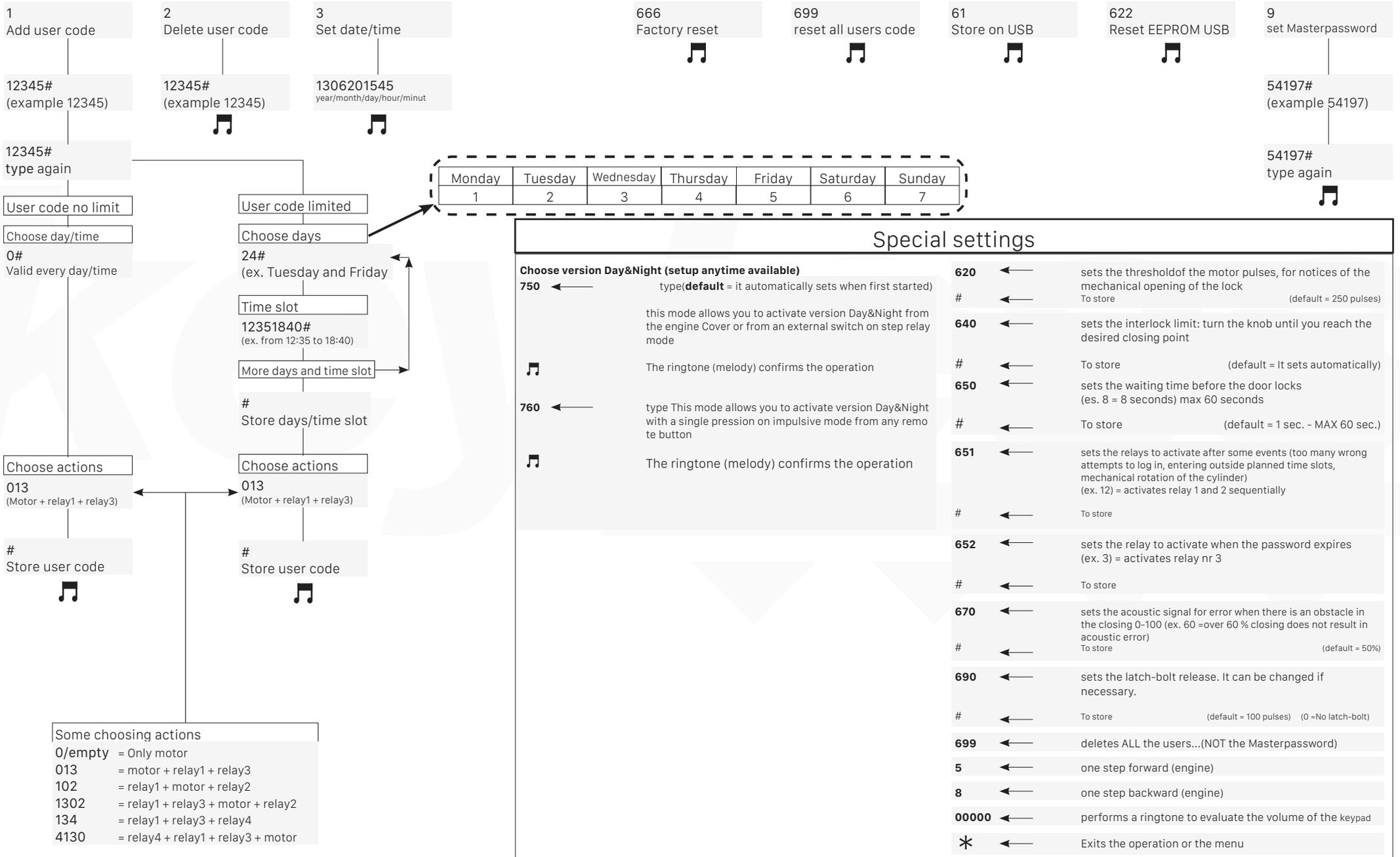
### System reset factory setup

666 ← type  
 Reset the entire system to factory setup  
 Wait musical tone(melody) for confirmation

### Reset all users code

699 ← type  
 Reset all users code(Masterpassword excluded)  
 Wait musical tone(melody) for confirmation

Masterpassword DON'T open door  
To program the menu, digit Masterpassword with door open.



**Example of relay configuration with actions(with expansion Cod. EXP4RELAY ONLY)**

