# Ditec



**Technical manual**

# Ditec AIR600B
# Ditec AIR1000B

Automation for sectional doors

(Translation of the original instructions)

# Index

## Legend

⚠️ This symbol indicates instructions or notes relating to safety which require special attention.

ℹ️ This symbol indicates useful information for the correct operation of the product.

— Indicates the default parameters value

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# General safety precautions



ATTENTION! Important safety instructions.Please follow these instructions carefully. Failure to observe the information given in this manual may lead to severe personal injury or damage to the equipment.Keep these instructions for future reference.
This manual and those for any accessories can be downloaded from www.ditecautomations.com

This installation manual is intended for qualified personnel only • Installation, electrical connections and adjustments must be performed by qualified personnel, in accordance with Good Working Methods and in compliance with the current regulations • Read the instructions carefully before installing the product. Wrong installation could be dangerous • Before installing the product, make sure it is in perfect condition. The packaging materials (plastic, polystyrene, etc.) should not be discarded in the environment or left within reach of children, as they are a potential source of danger • Do not install the product in explosive areas and atmospheres: the presence of inflammable gas or fumes represents a serious safety hazard • Make sure that the temperature range indicated in the technical specifications is compatible with the installation site • Before installing the motorization device, make sure that the existing structure, as well as all the support and guide elements, are up to standards in terms of strength and stability. Verify the stability and smooth mobility of the guided part, and make sure that no risks of fall or derailment subsist. Make all the necessary structural modifications to create safety clearance and to guard or isolate all the crushing, shearing, trapping and general hazardous areas • The motorization device manufacturer is not responsible for failure to observe Good Working Methods when building the frames to be motorized, or for any deformation during use • The safety devices (photocells, safety edges, emergency stops, etc.) must be installed taking into account the applicable laws and directives, Good Working Methods, installation premises, system operating logic and the forces developed by the motorized door or gate • The safety devices must protect against crushing, cutting, trapping and general danger areas of the motorized door or gate. Display the signs required by law to identify hazardous areas • Each installation must bear a visible indication of the data identifying the motorized door or gate • Before connecting the power supply, make sure the plate data correspond to those of the mains power supply. An omnipolar disconnection switch with a contact opening distance of at least 3 mm must be fitted on the mains supply. Check that there is an adequate residual current circuit breaker and a suitable overcurrent cutout upstream of the electrical installation in accordance with Good Working Methods and with the laws in force • When requested, connect the motorized door or gate to an effective earthing system that complies with the current safety standards • Before commissioning the installation to the end user, make sure that the automation is adequately adjusted in order to satisfy all the functional and safety requirements, and that all the command, safety, and manual release devices operate correctly.

During maintenance and repair operations, cut off the power supply before opening the cover to access the electrical parts • The protection cover of the operator must be removed by qualified personnel only.

The electronic parts must be handled using earthed antistatic conductive arms. The manufacturer of the motorization declines all responsibility if component parts not compatible with safe and correct operation are fitted • Only use original spare parts for repairing or replacing products • The installer must supply all information concerning the automatic, manual and emergency operation of the motorized door or gate, and must provide the user with the operation and safety instructions.

# Declaration of incorporation of partly completed machinery
## (Directive 2006/42/EC, Annex II-B)

We,
ASSA ABLOY Entrance Systems AB
Lodjursgatan 10
SE-261 44 Landskrona
Sweden

declare, under our sole responsibility, that the type of equipment with the name:

Ditec AIR600 - AIR1000          Residential garage door drives with radio remote control

complies with the following directives and their amendments:

2006/42/EC Machinery Directive (MD), regarding the following essential health and safety requirements: 1.1.2, 1.1.3, 1.2.1, 1.2.2, 1.2.3, 1.2.4.2, 1.2.6, 1.3.9, 1.4.3, 1.7.2, 1.7.3, 1.7.4, 1.7.4.1, 1.7.4.2.
2014/30/EU Electromagnetic Compatibility Directive (EMCD)
2014/53/EU Directive on Radio Equipment(RED)
2011/65/EU Restriction of Hazardous Substances (RoHS 2)
2015/863/EU Restriction of Hazardous Substances (RoHS Amendment 2)

Harmonised European standards which have been applied:

EN 60335-1:2012+A11:2014+A13:2017+A1:2019+A14:2019+A2:2019+A15:2021+A16:2023
EN 55014-1:2021                    EN 55014-2:2021
ETSI EN 300 220-2 v3.2.1           ETSI EN 300 220-1 v3.1.1
ETSI EN 300 328 v2.2.2             ETSI EN 301 489-17 v3.2.4
ETSI EN 301 489-3 v2.3.2           ETSI EN 301 489-1 v.2.2.3
EN IEC 62311:2020                  EN IEC 62368-1:2020+A11:2020

Other standards or technical specifications which have been applied:

EN IEC 60335-2-95:2023+A11:2023
EN IEC 60335-2-103:2023+A1:2023+A2:2023+A2:2023+A11:2023
EN 12453:2017+A1:2021              IEC 60335-1:2010+A1+A2
IEC 60335-2-95:2019               IEC 60335-2-103:2015+A1:2017+A2:2019
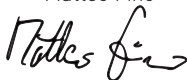FCC CFR 47 - Part 15 Subpart B
ICES-003 Issue 7:2020

EC type examination or certificate issued by a notified or competent body (for full address, please contact ASSA ABLOY Entrance System AB) concerning the equipment.

The manufacturing process guarantees that the equipment complies with the technical documentation.

Responsible for the technical documentation:

Matteo Fino
Ditec S.p.A.
Largo U. Boccioni, 1
21040 Origgio (VA)
Italy

Signed on behalf of ASSA ABLOY Entrance Systems AB by:

| Place | Date | Signature | Position |
|-------|------|-----------|----------|
| Origgio | 2024-06-11 | Matteo Fino | CEO Ditec |

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# UK Declaration of Conformity

We:

ASSA ABLOY Entrance Systems AB
Lodjursgatan 10
SE-261 44 Landskrona
Sweden

Declare under our sole responsibility that the types of equipment with names:

Ditec AIR600 - AIR1000                    Residential garage door drives with radio remote control

complies with the following directives and their amendments:

• Supply of Machinery (Safety) Regulations 2016
• Electromagnetic Compatibility Regulations 2016
• Radio Equipment Regulations 2017
• The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012 (RoHS)

Harmonized European standards that have been applied:

EN 60335-1:2012+A11:2014+A13:2017+A1:2019+A14:2019+A2:2019+A15:2021+A16:2023
EN 55014-1:2021                    EN 55014-2:2021
ETSI EN 300 220-2 v3.2.1           ETSI EN 300 220-1 v3.1.1
ETSI EN 300 328 v2.2.2             ETSI EN 301 489-17 v3.2.4
ETSI EN 301 489-3 v2.3.2           ETSI EN 301 489-1 v.2.2.3
EN IEC 62311:2020                  EN IEC 62368-1:2020+A11:2020

Other standards or technical specifications which have been applied:

EN IEC 60335-2-95:2023+A11:2023
EN IEC 60335-2-103:2023+A1:2023+A2:2023+A2:2023+A11:2023
EN 12453:2017+A1:2021              IEC 60335-1:2010+A1+A2
IEC 60335-2-95:2019               IEC 60335-2-103:2015+A1:2017+A2:2019
FCC CFR 47 - Part 15 Subpart B
ICES-003 Issue 7:2020

The manufacturing process ensures the compliance of the equipment with the technical file.

Responsible for technical file:

Matteo Fino
Ditec S.p.A.
Largo U. Boccioni, 1
21040 Origgio (VA)
Italy

Signed for and on behalf of ASSA ABLOY Entrance Systems AB by:

| Place | Date | Signature | Position |
|---|---|---|---|
| Origgio | 2024-06-11 | Matteo Fino | CEO Ditec |

# 1. Technical data

| | AIR600 | AIR1000 |
|---|---|---|
| Power supply | 100 V~ / 240 V~, -10%/ +10%, 50/60 Hz | 100-120 V~ / 200-240 V~ (selectable by switch), 50/60 Hz<br>**i** in case of 120 V power supply, switch the selector of the power supply unit |
| Power | 100 W | 150 W |
| Motor power supply | 24 V | |
| Control panel | LCU60 | |
| Power supply for accessories | 24 V⎓ / 0,3 A max 2 s<br>24 V⎓ / 0,15 A continuous | |
| Standby | < 0,6 W for AIR600B<br>< 0,8 W for AIR1000B | Networked Equipment (unplugged accessories) |
| Thrust | 600 N | 1000 N |
| Opening speed | 8-22 cm/s adjustable - 20 cm/s (Default) | |
| Closing speed | 8-22 cm/s adjustable - 10 cm/s (Default) | |
| Maximum door area (∗) | 12 m² | 17 m² |
| Maximum door weight | 130 kg | 200 kg |
| Service class | INTENSIVE<br>(tested up to 200,000 cycles) | |
| Intermittence | S2= 60 min (T= 25°C)<br>S3= 75% (T= 25°C) | |
| Cycle/hour ** | 100 (T= 25°C) | |
| Continuous cycles ** | 122 (T= 25°C) | |
| Working temperature (T) | -20°C    +55°C | |
| Degree of protection | IP20 | |
| Noise level L$_{PA}$ | <55 dB (A) (operator only) | |
| Remote control functions / programmable keys | Code BIXMR2    100= ($RO$ → $MU$ → $MU$/ $10$)<br>200= ($RO$ → $MU$ → $MU$/ $20$) | |
| Radio frequency | 433.92 MHz **default** ( $RO$ → $FO$ → $43$ )<br>868.35 MHz ( $RO$ → $FO$ → $86$ ) | **i** RCB100E receiver module included |
| Maximum remote control range | 50 m | |
| Courtesy light | Built in: LED 1750 lms | |

**indicative cycles considering a 2350 mm high door and factory settings (default opening speed of 20 cm/s and closing speed of 10 cm/s). Speeds are configurable up to 22 cm/s. With higher speeds, the number of cycles increases. A cycle is considered an opening maneuver followed by a closing maneuver

**i** ∗ the maximum door area was calculated based on a weight of 10.9 kg/m²

| | TS100X3 - TS150X2 | TS100X4 - TS200X2 |
|---|---|---|
| Track system length | 3300 mm | 4400 mm |
| Maximum carriage stroke | 2875 mm | 3975 mm |
| Maximum door height | 2350 mm | 3450 mm |

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# 2. Product description

L'automazione è adatta all'uso con porte sezionali bilanciate e porte basculanti a contrappesi (con accessorio opzionale).
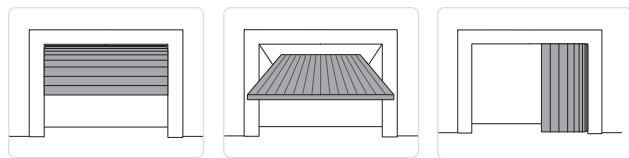
# 3. Operating Instructions

**USE**: For single-family/multi-family entrances with heavy use.

- The performance characteristics refer to the recommended weight (approx. 2/3 of the maximum permitted weight). When used with the maximum permitted weight, a reduction in the above mentioned performance levels can be expected.
- The service class, running times and number of consecutive cycles are merely indicative, having been statistically determined under average operating conditions and therefore not necessarily applicable to specific conditions of use.
- Each automatic entrance has variable elements such as friction, balancing and environmental factors, all of which may substantially alter the performance characteristics or working life of the entrance itself or its components (including the automatic devices). The installer should apply suitable safety conditions for each particular installation

# 4. Machinery Directive

Pursuant to Machinery Directive (2006/42/EC) the installer who automatize a door or gate has the same obligations as the manufacturer of machinery and as such must:

- prepare the technical file which must contain the documents indicated in Annex V of the Machinery Directive;
  (The technical documentation must be kept and placed at the disposal of competent national authorities for at least ten years from the date of manufacture of the motorized door);
- draw up the EC Declaration of Conformity in accordance with Annex II-A of the Machinery Directive and deliver it to the customer;
- affix the EC marking on the motorized door in accordance with point 1.7.3 of Annex I of the Machinery Directive.

# 5. Applications with generic sectional doors

## Maximum door dimensions - AIR600B (max door weight = 130 kg)
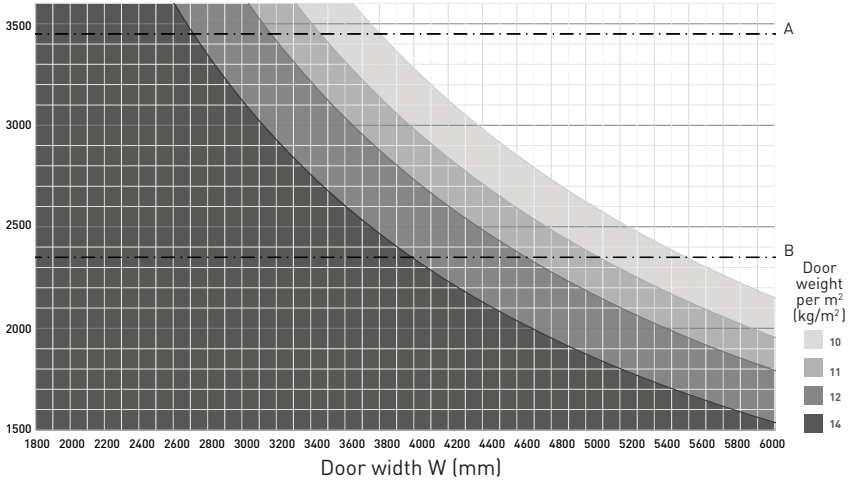


A - H max TS100X4 - TS200X2= 3450 mm
B - H max TS100X3 - TS150X2 = 2350 mm

## Maximum door dimensions - AIR1000B (max door weight = 200 kg)

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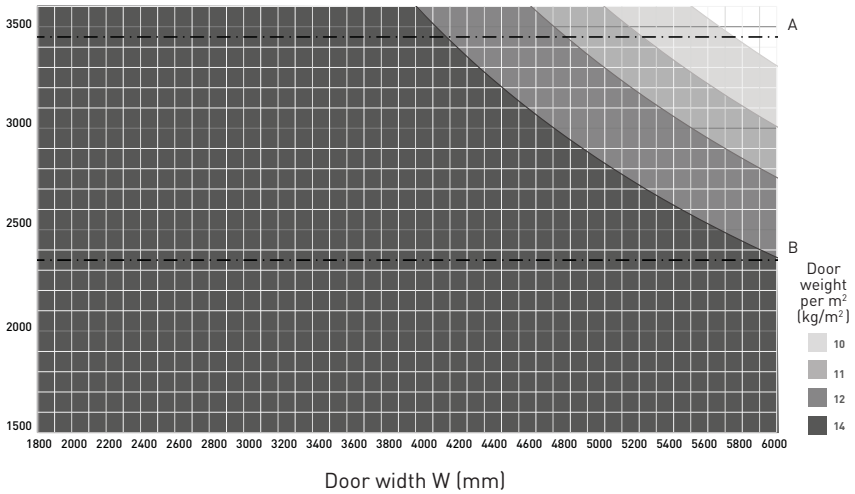
▲ **Example 1: sectional door 3.5 m wide and 2.3 m high, weight 12 kg/m²**
It is possible to use AIR600B with TS100X3 rail because it is within the area formed by the 12 kg/m² curve

● **Example 2: sectional door 3.5 m wide and 2.7 m high, weight 12 kg/m²**
It is possible to use AIR600B with TS100X4 rail because it falls within the area formed by the 12 kg²/m curve

■ **Example 3: sectional door 4 m wide and 2.6 m high, weight 14 kg/m²**
It is NOT possible to use AIR600B with TS100X4 rail because it is NOT within the area formed by the 14 kg/m² curve.
It is recommended to use AIR1000B.

### Maximum door dimensions - AIR600B (max door weight = 130 kg)

Door weight per m² (kg/m²)
- 10
- 11
- 12
- 14

# 6. Dimensions

350

250

145

30

3560 mm (with 3.3 m guide)
4660 mm (with 4.4 m guide)
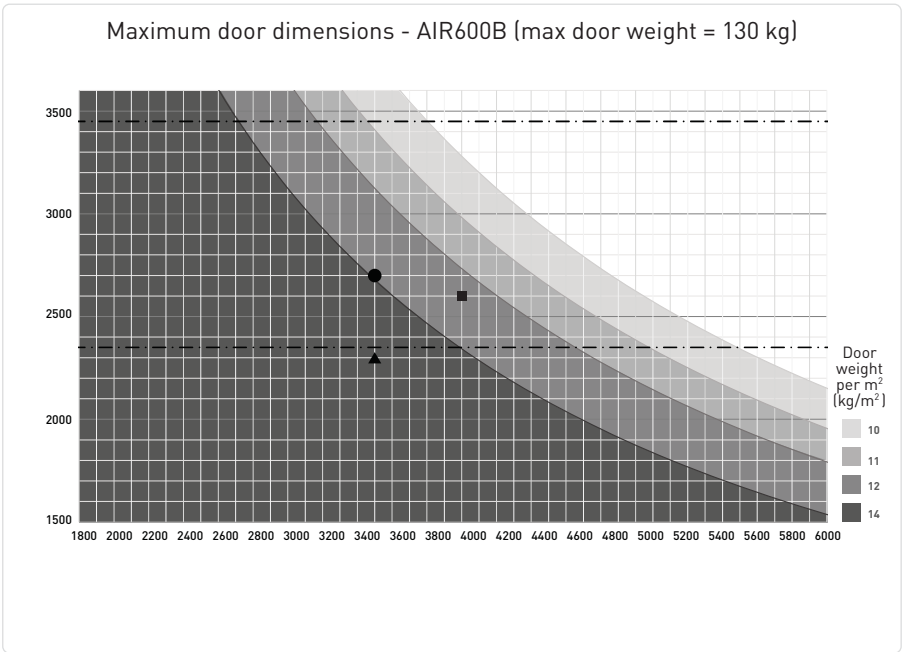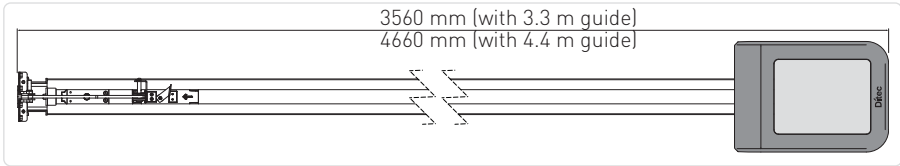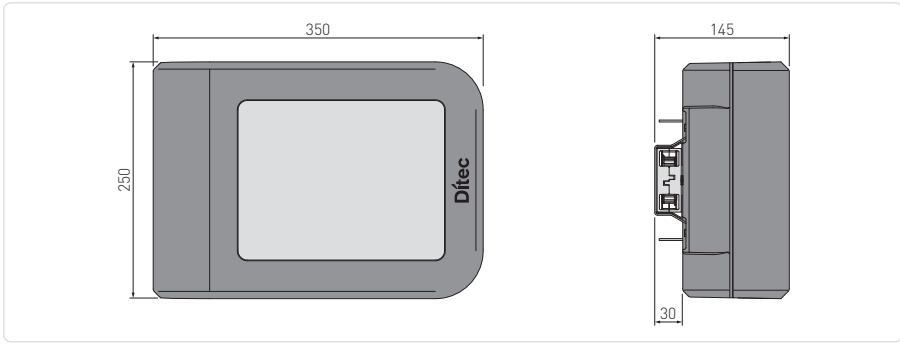
# 7. Installation type
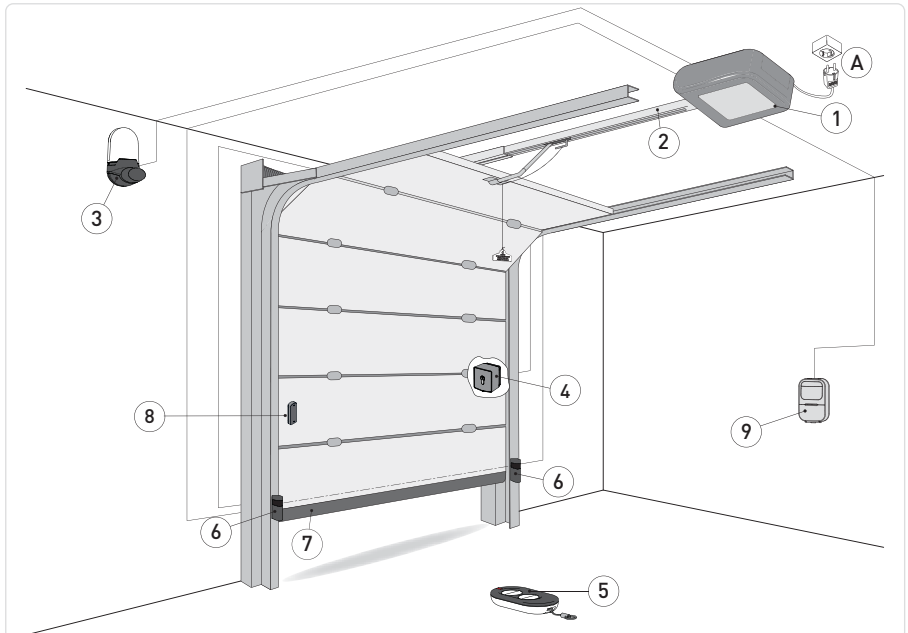


| Ref. | Code | Description | Cable |
|------|------|-------------|-------|
| 1 | Ditec AIR600B<br>Ditec AIR1000B | Automation + control panel | 3G x 1.5 mm² |
| A | | Connect the power supply to a suitable earthed socket, about 10-50cm from the pulling unit fixing position. | |
| 2 | TS100X3 - TS150X2<br>TS100X4 - TS200X2 | Belt drive system with 3,3 m steel guide<br>Belt drive system with 4,4 m steel guide | |
| 3 | FLM | Flashing light | 2 x 1 mm² |
| | FL24 | Antenna (integrated in the flashing light) | RG-58 coax cable (50 Ω) |
| 4 | AXK4 | Digital combination wireless keypad | / |
| | AXK5M<br>AXK5N<br>AXK5NM<br>AXK5NI | Wall-mounted key-operated selector switch with European cylinder<br>Semi-recessed key-operated selector switch with European cylinder<br>Wall-mounted key-operated selector switch without cylinder<br>Semi-recessed key-operated selector switch without cylinder | 4 x 0.5 mm² |
| | AXR7 | RFID reader unit | 5 x 0.5 mm² |
| 5 | ZEN | Transmitter | / |
| 6 | LIN2<br>LIN2B<br>AXP2<br>LAB4 | 4-wire photocells | 4 x 0.5 mm² |
| | LIN3 | 2-wire photocells with auto-test | 2 x 0.5 mm² |
| 7 | SOFAP20<br>SOF2M20-SOF3M20<br>SOFA15-SOFA20-SOFA25 | Pre-assembled passive safety edge<br>Active edge flush with mechanical contact and microswitches<br>Resistive safety edge 8.2kΩ | 2 x 0.5 mm² min |
| 8 | GOPAVT/GOPAVRS/GOPAVR | Radio system for safety edges | / |
| 9 | WS3 | Wall-Station | 2 x 0.5 mm² min |

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# 8. Main components
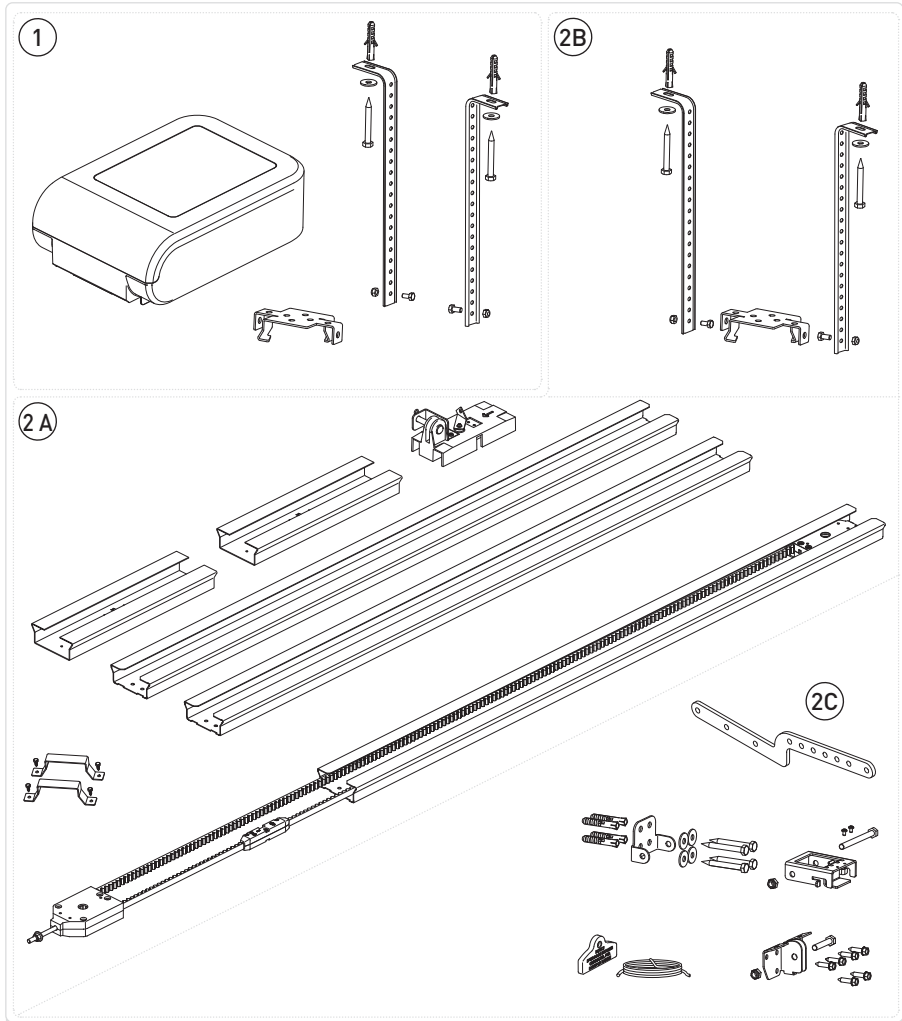


| Ref. | Description |
|:---:|:---|
| **1** | Automation |
| **2A** | Drive system |
| **2B** | Ceiling fixing system |
| **2C** | Guide and arm fixing brackets |

# 9. Installation

## 9.1 Assembly guide

Assemble the drive unit as shown in the figures.

* Number of rail and connectors depending on the configuration.
Here is TS100X3 as an example.
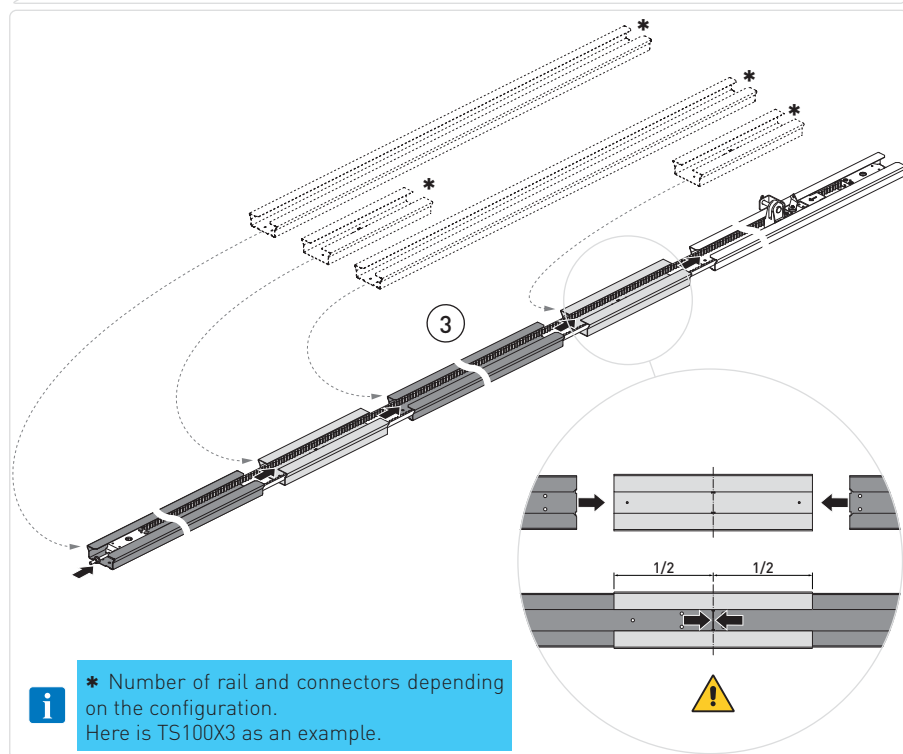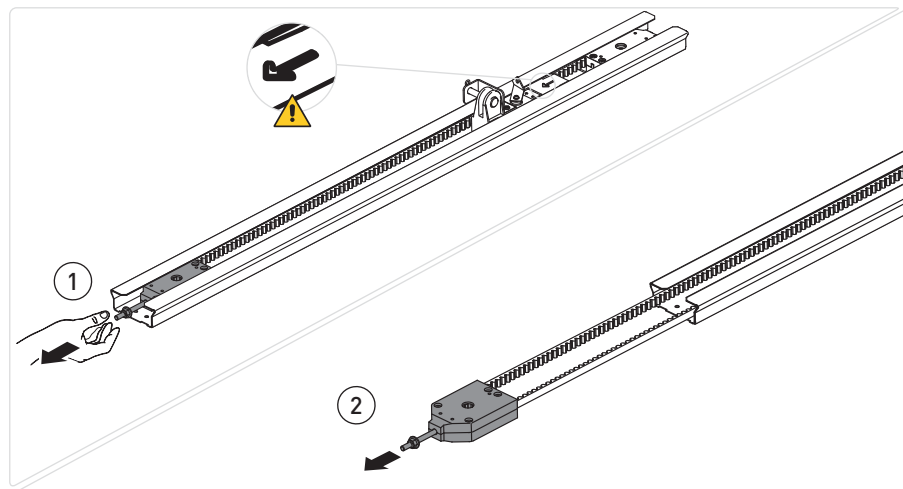
## 9.2 Tensioning the belt
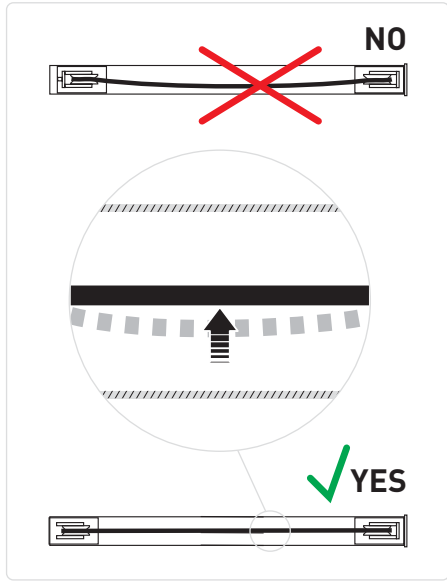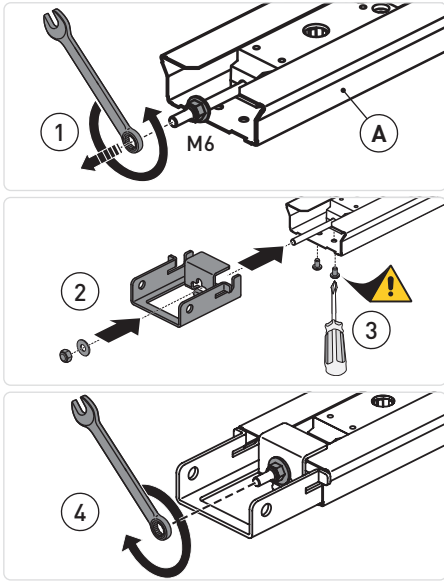


Tighten the locking nut until the belt is correctly tensioned [X] within the guide.
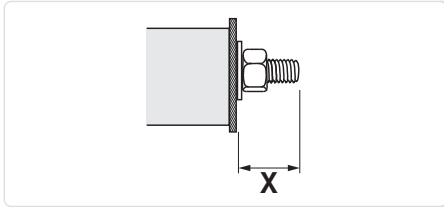
| A | X |
|---|---|
| TS150X2 | 12-15 mm |
| TS100X3 | 12-15 mm |
| TS100X4 | 15-18 mm |
| TS200X2 | 15-18 mm |

## 9.3 Assembling the automation



①

②

M6

or

②

M6
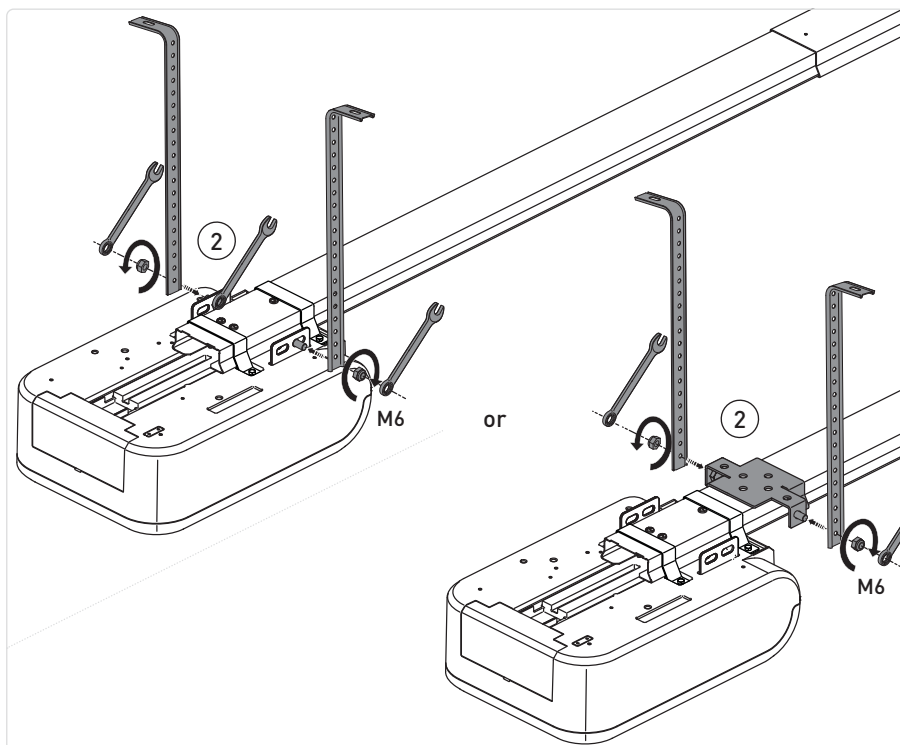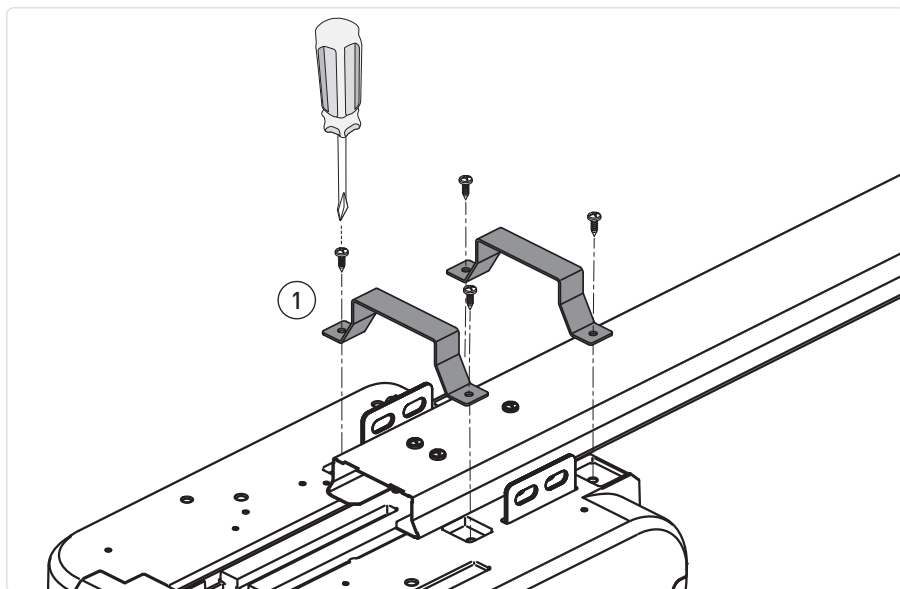
## 9.4 Rail mechanical installation
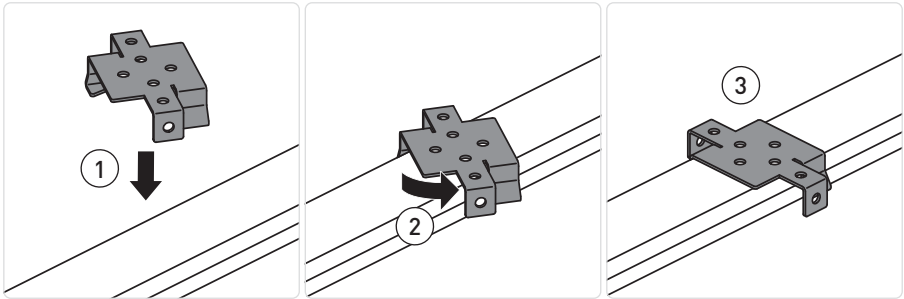


**TS100X3**
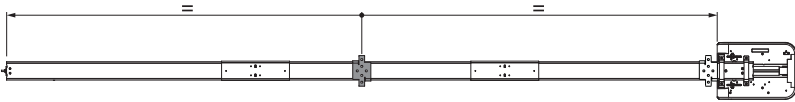


**TS100X4**



**TS150X2**



**TS200X2**

M6

M6

④

⑤

H max
400mm

H min
0mm

≥100 mm

min. 55 mm

25÷160 mm



6

A

**M8**

⑦

⑧

⑨
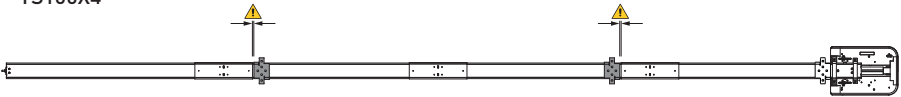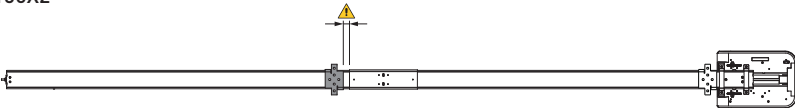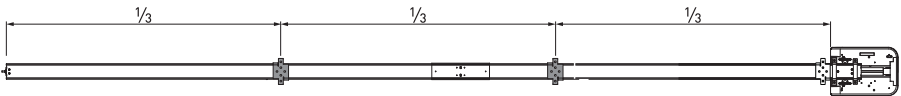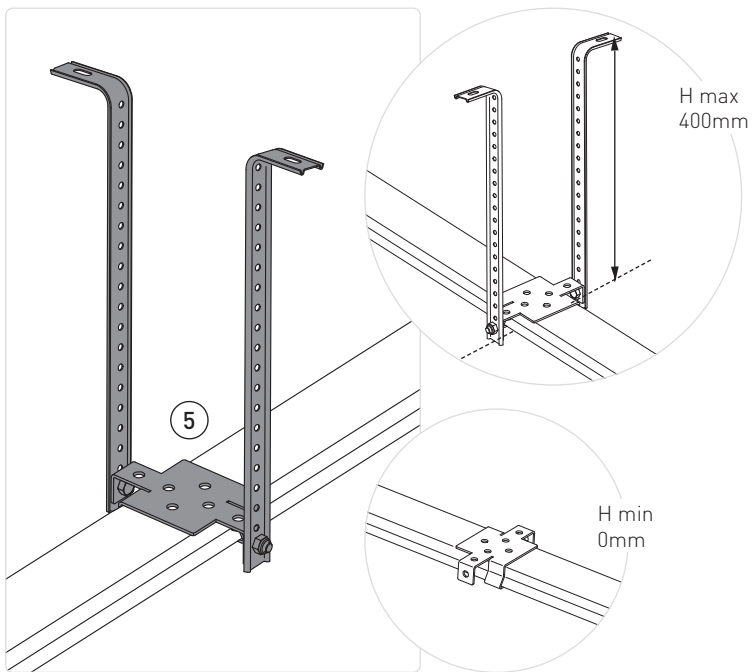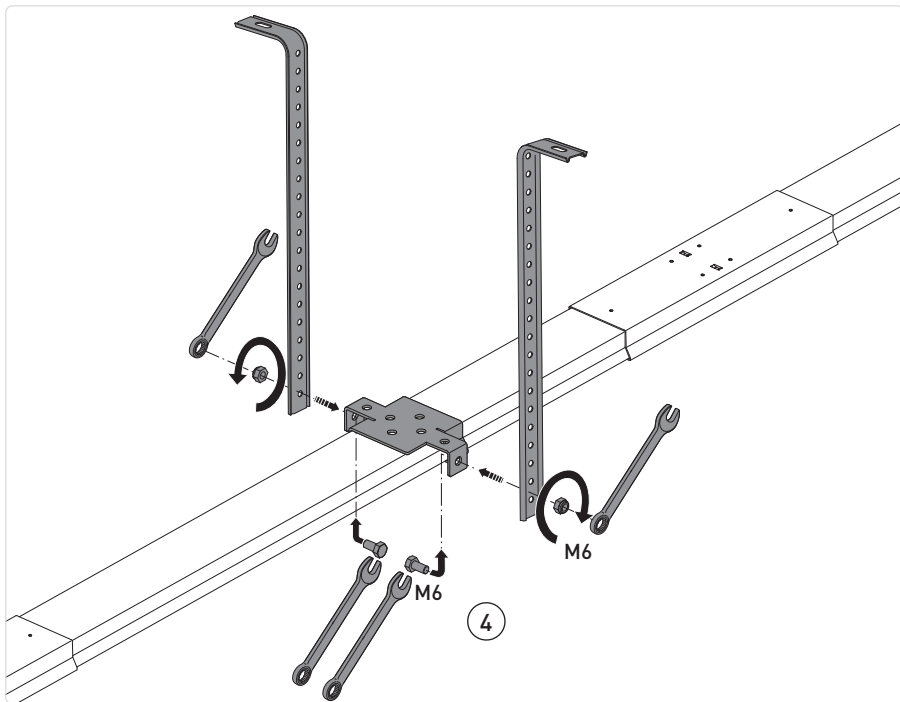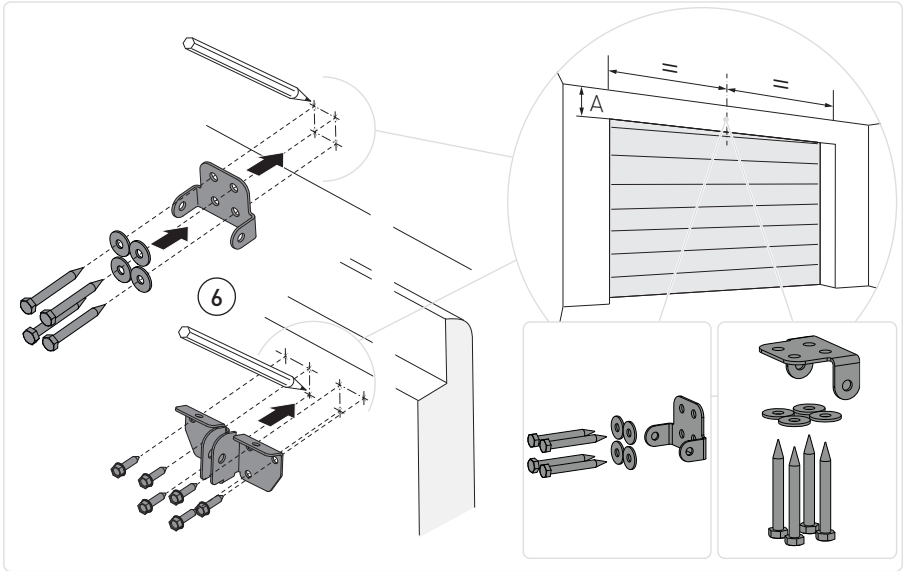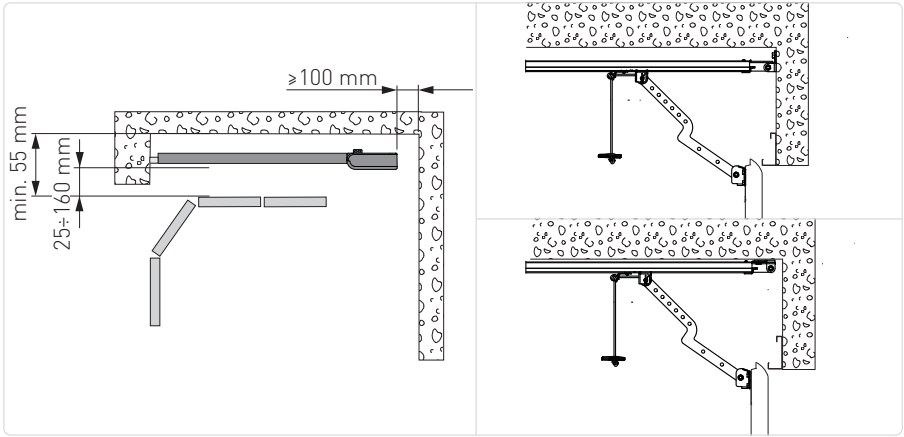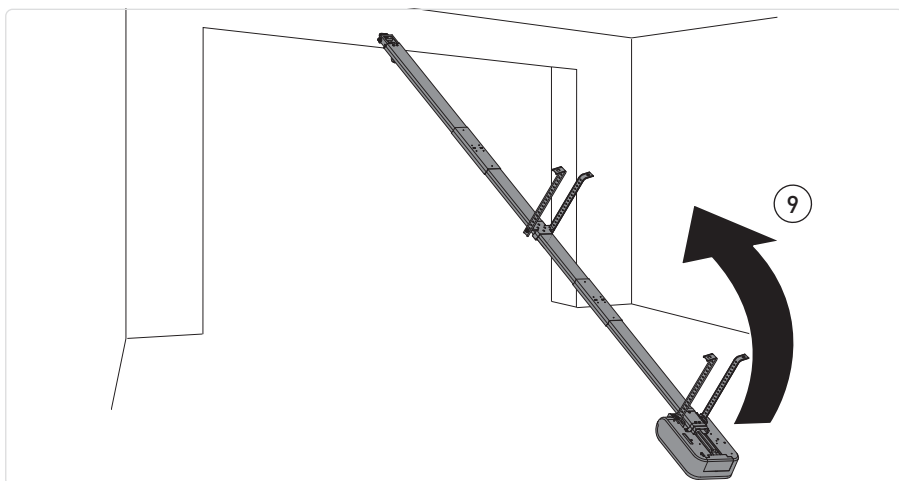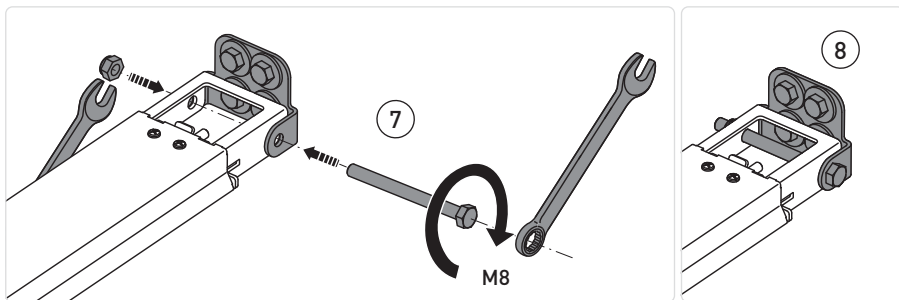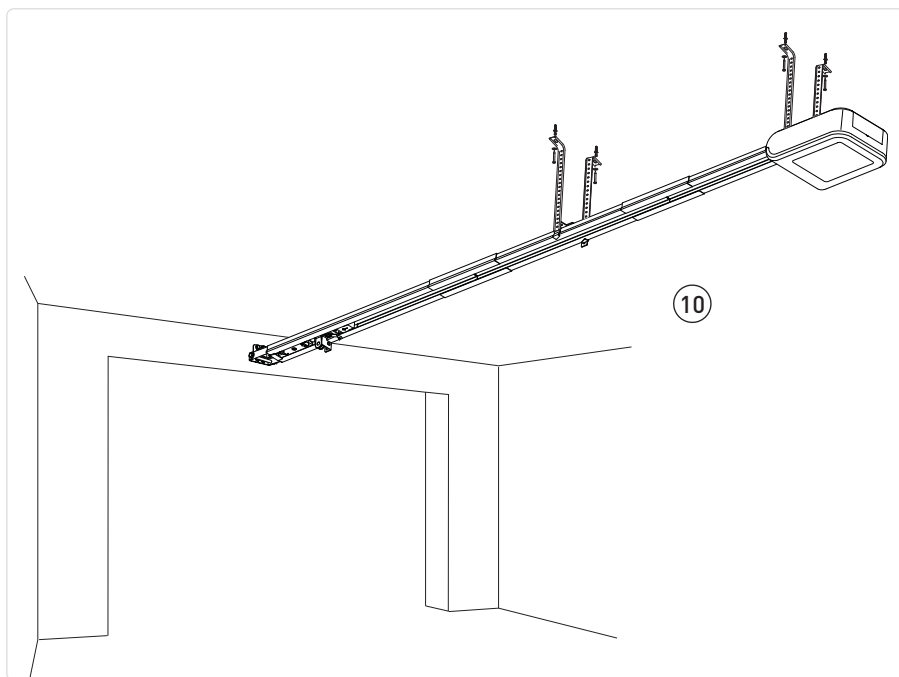
- Check the stability of the door, and make sure it moves smoothly.
- It must be possible to open and close the door easily and smoothly by hand.
- The automation must only be installed in dry places.
- With the pulling unit on the ground, fix the guide to the wall.
- Raise the pulling unit and bend the brackets as necessary (any excess parts can be removed), then attach to the ceiling.

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## 9.5  Assembling and fastening the arm
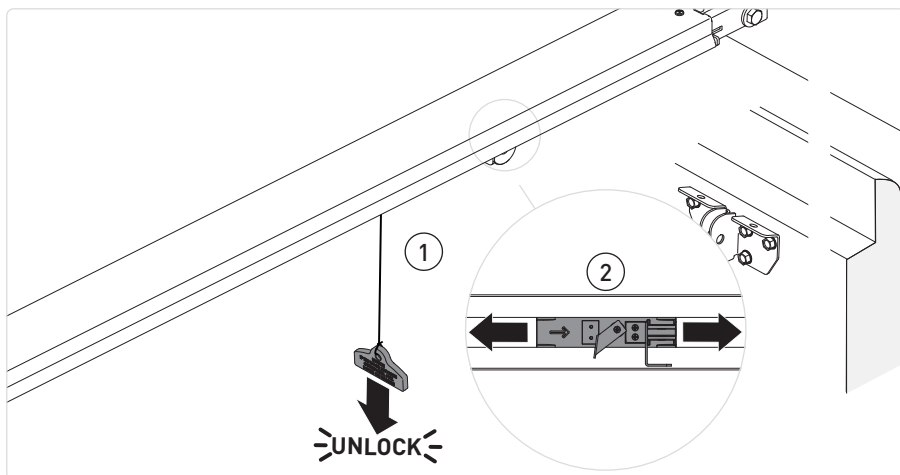


• Unlock the automation by pulling the cord downwards until the lock release lever is triggered
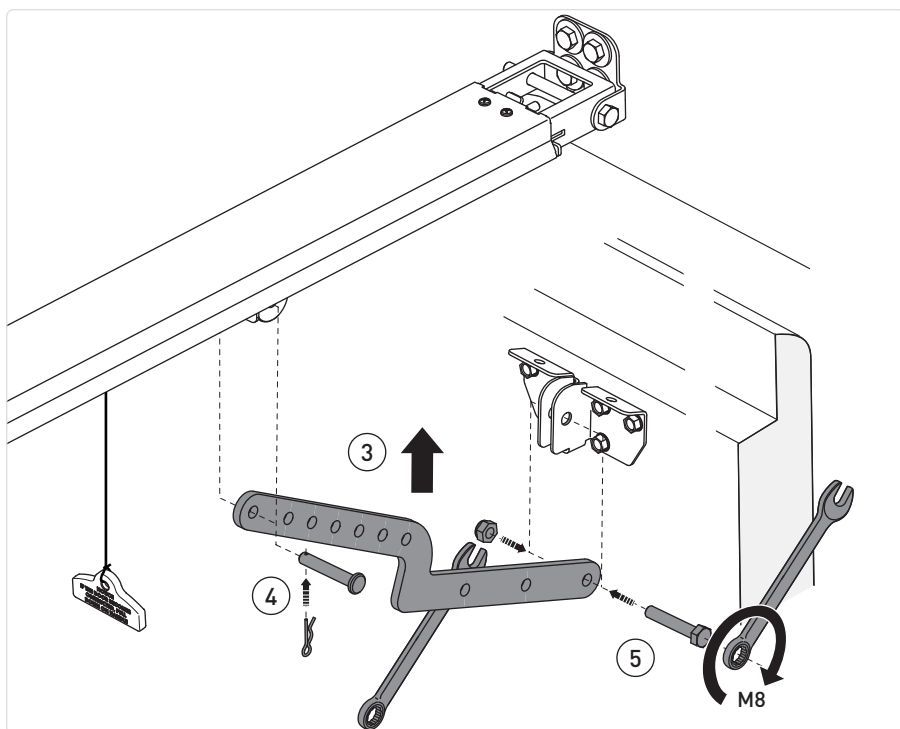


• Bring the carriage near the closed door, and fix the arm as shown above.

## 9.6  Cables passage



Locations for 2.9x6.5 self-tapping screws (not included) for attaching any cable ties or optional accessory (e.g., CONT1 + GOPAVRS)
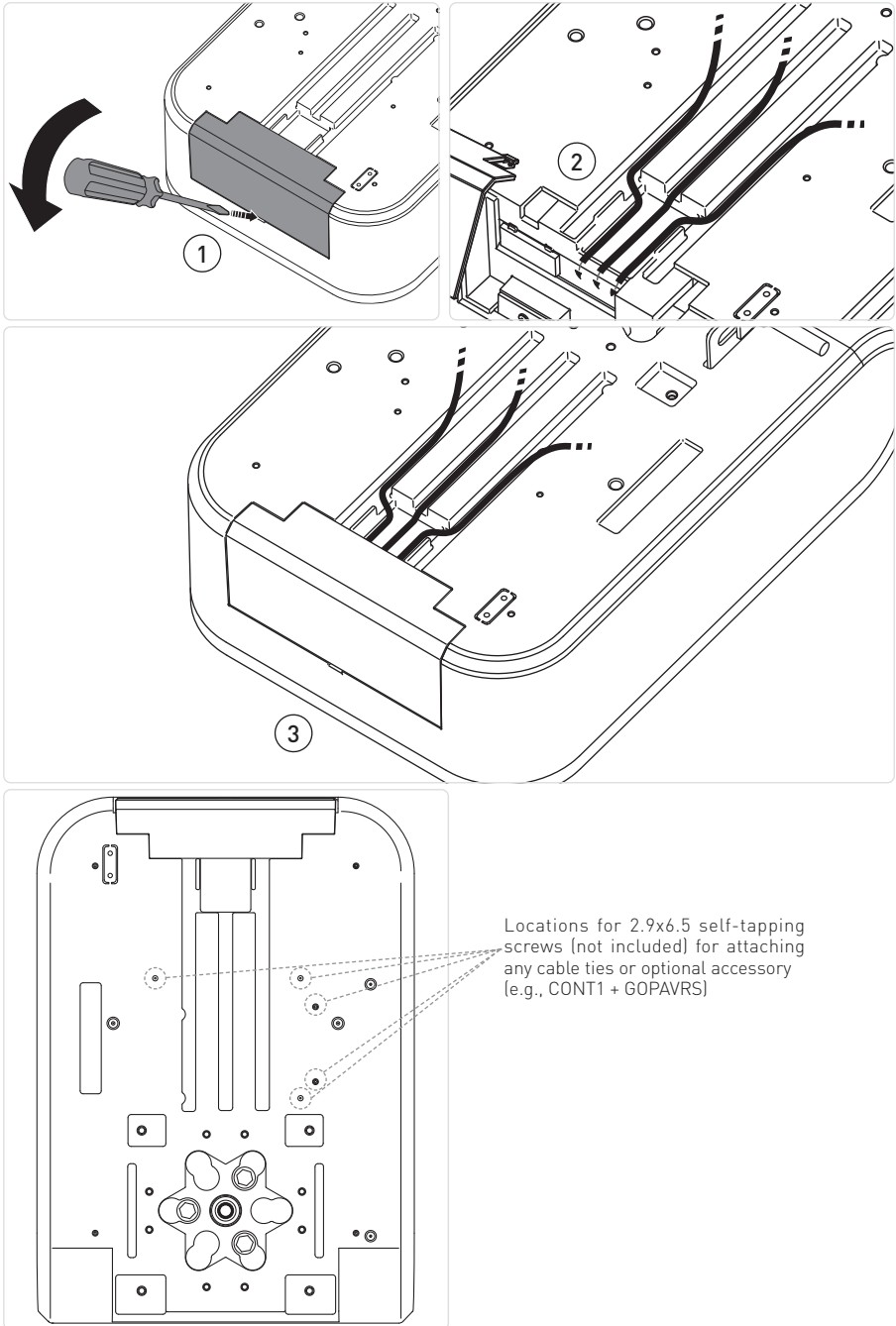
# 10. Electrical connections

Installation, electrical connections and adjustments must be performed by qualified personnel, in accordance with Good Working Methods and in compliance with the current regulations.
The automation must be installed in compliance with Standards EN12453, EN12445 and EN12635. The safety devices must be working properly.
Garages without a second entrance must be equipped with an external emergency release device (to be ordered separately).
If there is a pedestrian door incorporated into the garage door, it must be equipped with a safety device that prevents it being activated when the garage door is open. This safety device must be connected to the EMERGENCY STOP.

⚠ Before making the electrical connection, check that the data on the nameplate match those on the power supply network. Provide an omnipolar switch/disconnector on the power supply network with a contact opening distance of 3 mm or more. Ensure the presence of a suitable residual current and overvoltage protection device upstream of the electrical system.

Secure the cable by means of the cable clamp and only unsheathe it at the terminal.
Connections to the electrical distribution network and any other low-voltage conductors (230 V), in the section outside the automation system, must be made with corrugated pipes that are independent and separate from the path of connections to the control and safety devices (SELV= Safety Extra Low Voltage). Make sure there are no sharp edges that could damage the power cord.

⚠ Ensure that the mains connection cables, any other low-voltage cables (230 V), and safety extra-low voltage safety accessory connection cables in the portion located inside the product are kept well separated from the gear motor body.

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## 10.1 LCU60E electronic board

The figure shows the LCU60E electronic board and its connectors for connection to the power supply, motor and accessories.
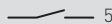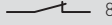


L = 175 mm (433 MHz)
L = 90 mm (868 MHz)

Stop
Closing safety device
Step-by-step
Wall-Station
24 V⎓/ Photocells
Electric lock
Flashing light

ENTER    UP
ESC    DOWN

ANT  0  9  8  5  1
- WS +
24V PX
- LP +

J6    J7    J8    J5    J11

J10
J14
RADIO RX
J9
J17    BIXMR2

J13    SCI

J4
LED internal light (built-in)

J3    J1
Motor    BAT
BBK1500X1 (optional)

N
⏚
L
Power supply
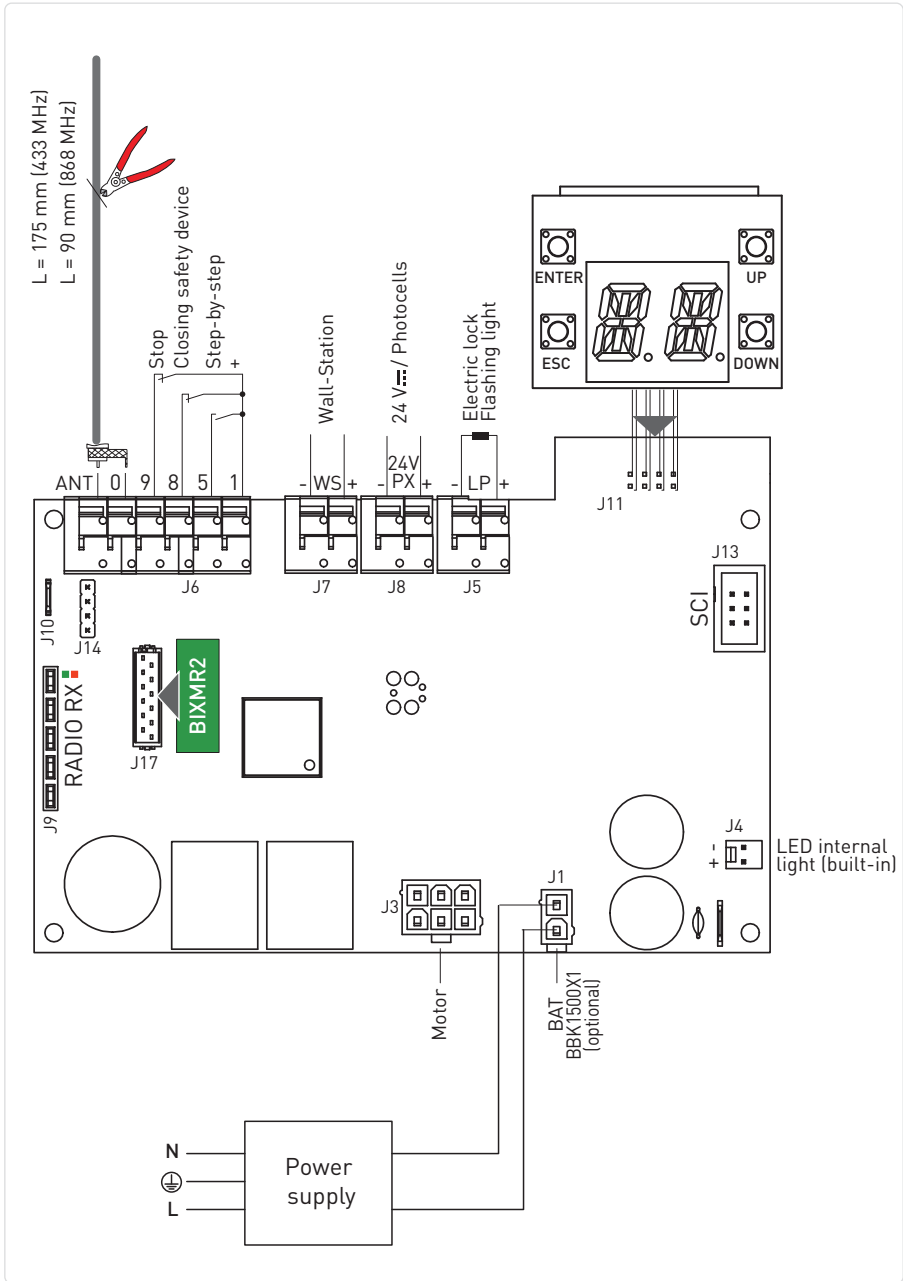
IP2433EN

## 10.2 Reports
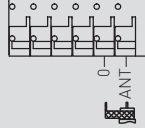
| LED Red 🟥 | LED Green 🟩 | Description |
|---|---|---|
| off | off | Card off or not working. |
| 1 Blink every second | off | LCU card on and working.<br>RCB (radio/BLE/WiFi) card absent or not working |
| off | 1 Blink every second | LCU card on and working.<br>RCB50 (radio) board present and functioning |
| off | 2 Blinks every second | LCU card on and working.<br>RCB100 (radio/BLE) card present and functioning |
| off | 3 Blinks every second | LCU card on and functioning.<br>RCB201 (WiFi) card on SCI present and functioning |
| off | 4 Blinks every second | LCU card on and functioning.<br>RCB50 (radio) + RCB201 (WiFi) card present and functioning |
| off | 5 Blinks every second | LCU card on and functioning.<br>RCB100 (radio/BLE) + RCB201 (WiFi) card present and functioning |

# 11. Commands

| Function | | Command | Description |
|---|---|---|---|
| NO | STEP-BY-STEP | 1 ⟋ 5 | When selecting $IO \rightarrow TS \rightarrow FS$, the closure of the contact NO activates a sequential opening or closing operation: opening-stop-closing-opening. The "opening-stop-closing-opening" sequence can be changed to "opening-stop-closing-stop-opening" by selecting $OM \rightarrow PP$. |
| | OPENING | | With $IO \rightarrow TS \rightarrow F3$ selection, closing the contact activates the opening maneuver |
| NC | CLOSING SA-FETY DEVICE | 1 ⟋ 8 | The opening of the NC contact triggers a reversal of the movement (reopening) during the closing operation, and the flashing of the courtesy light.<br>After the 3rd consecutive reversal movement, the automatic closure is disabled (if active).<br>The reversal contact is used by the contacts of the 4 wire photo-cells and safety devices to signal the detection of an obstacle to the LCU60E board. |
| NC | STOP | 1 ⟋ 9 | The opening of the safety contact causes the current operation to stop.<br>If $IO \rightarrow RS \rightarrow SP$,automatic closure is disabled when terminals 1-9 recloses.<br>If $IO \rightarrow RS \rightarrow ST$,automatic closure remains enabled when terminals 1-9 recloses.<br>ℹ️ **NOTE:** the flashing light makes a blink |

# 12. Outputs and accessories

| Function | Output | Value of accessories | Description |
|---|---|---|---|
| Accessories power supply | -\|24 PX\|+ | 24 V DC / 0.3 A max 2 s / 24 V DC / 0.15 A continuous | Accessory power output |
| Integrated led light | J4 | 1750 lm | The internal LED light is connected to the board via connector J4. On AIR1000B it is possible to change the built-in LED light to the 3500 lms LED light (optional, see section 20.2) ⚠️ **WARNING:** An external third-party light cannot be connected on terminal J4. |
| Configurable output | LP | 12 V - 24 V⎓ 3 A max for 3 s 1 A continuous | Output `LP` factory configured as flashing light ON-OFF `LP → 03`. It is possible to select preflashing settings from the `0M → M0` and/or `0M → MC` menu. To change the operation mode of the LP output refer to the `IO → LP` selection. |
| Radio antenna | 0 ANT | | When using the standard antenna, the following measurements are recommended: 433 MHz (175 mm) - 868 MHz (90 mm). Use a RG-58 type coaxial cable (50 Ω) to connect an external antenna (ref. GOL148REA). |
| Module radio receiver | RADIO RX | | RCB100E radio receiver module (standard) configurable from control panel: - 433.92 MHz ( `R0 → F0 → 43` ) - default - 868.35 MHz ( `R0 → F0 → 86` ) RCB50E compatible radio receiver module (optional) ⚠️ **WARNING:** The insertion and extraction of the receiver module must be done by paying attention to the direction of positioning and in the absence of power. |
| Module memory remote controls | COM | BIXMR2 | Allows operation configurations to be saved using the `BF → SM` function. Saved configurations can be recalled using the `BF → RC` function. The memory module enables the storage of radio controls. In case of electronic panel replacement, the memory module in use can be inserted into the new control panel. ⚠️ **WARNING:** The insertion and extraction of the receiver module must be done by paying attention to the direction of positioning and in the absence of power. |
| DC power supply | J1 | DC power supply | Power supply: 36 V DC. Without line voltage present, in battery operation mode: 24 V DC. With line voltage present the batteries are kept charged. With no line voltage present, the switchboard is powered by the batteries until the line is restored or until the battery voltage drops below the safety threshold. In the last case, the electronic control panel shuts down. ℹ️ **NOTE:** lThe operating temperature of rechargeable batteries is between +0°C and 40°C. To check the voltage level of the batteries refer to menu `BF → BL`. |

## 12.1 Wiring the accessories

### 12.1.1  4-wire photocells (ref. LIN2, AXP2, LAB4)

The photocells can be connected to the LCU60E board as described in the figure below
To activate the photocells set $IO \rightarrow DB \rightarrow PH$.
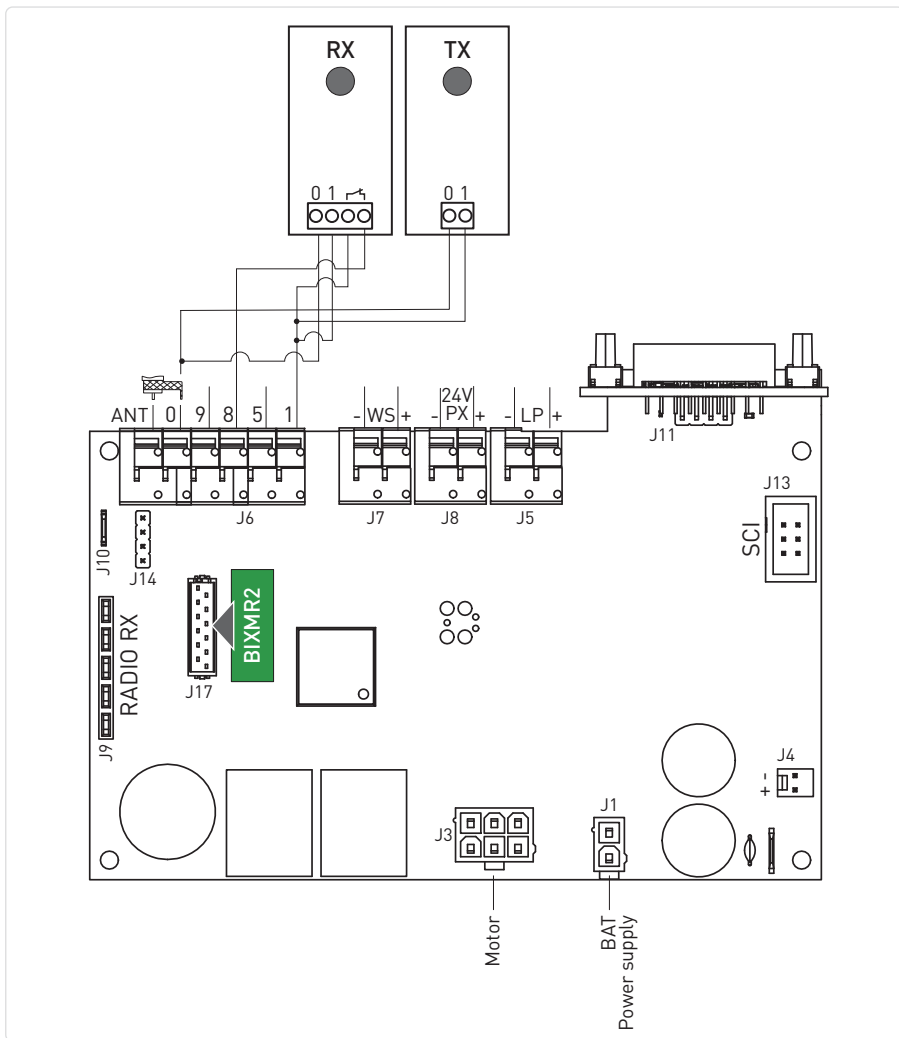


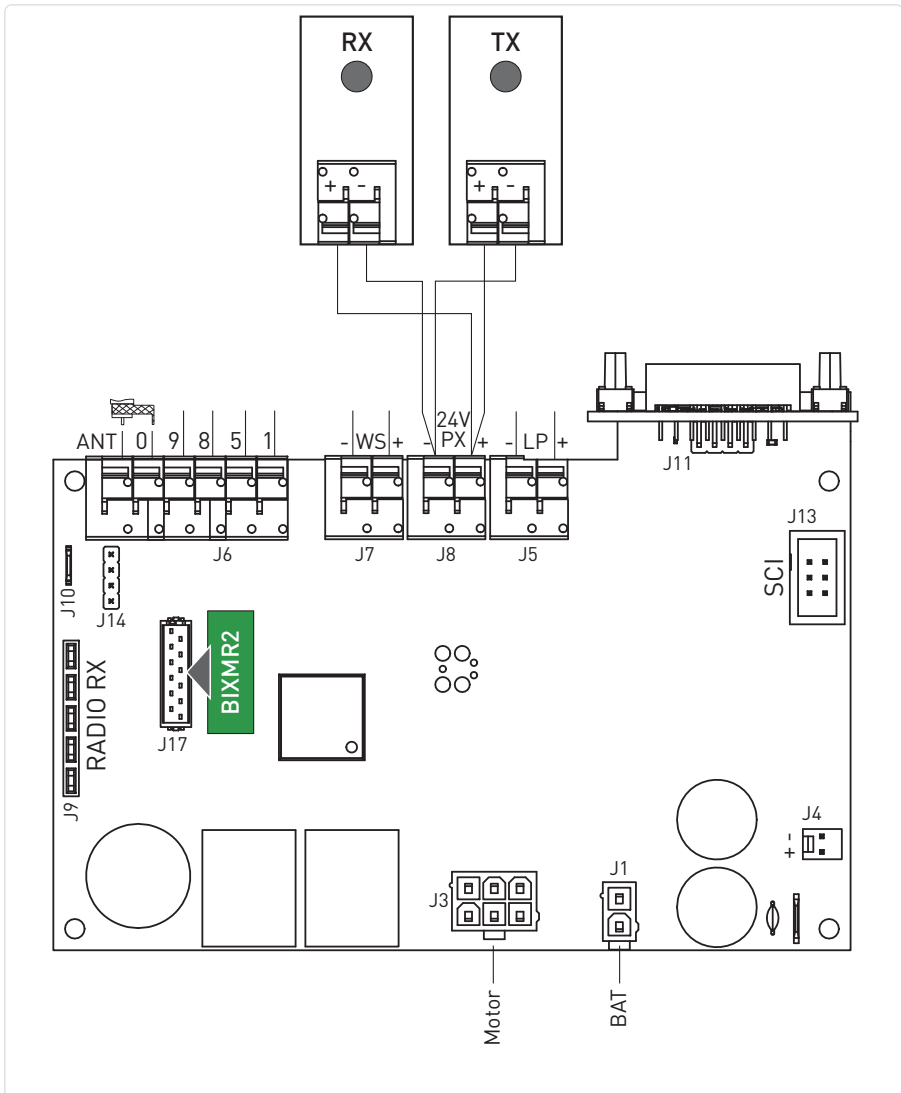For complete instructions see manual:

| LIN2 | AXP2 | LAB4 |

## 12.1.2   Two-wire photocells with Autotest (ref. LIN3)

Photocells (ref. LIN3) can be connected to the LCU60E board as described in the following figure. To activate the photocells, set $I0 \rightarrow J8 \rightarrow P2$.



For complete instructions see manual:

LIN3

IP2433EN

## 12.1.3 Radio system GOPAVR-GOPAVT for safety edges with autotest

Active safety ribs can be connected to the LCU60E board through the GOPAVR-GOPAVT two-way radio trransmission system as described in the figure below.
To use GOPAVR-GOPAVT set up $IO \rightarrow D8 \rightarrow 5W$.
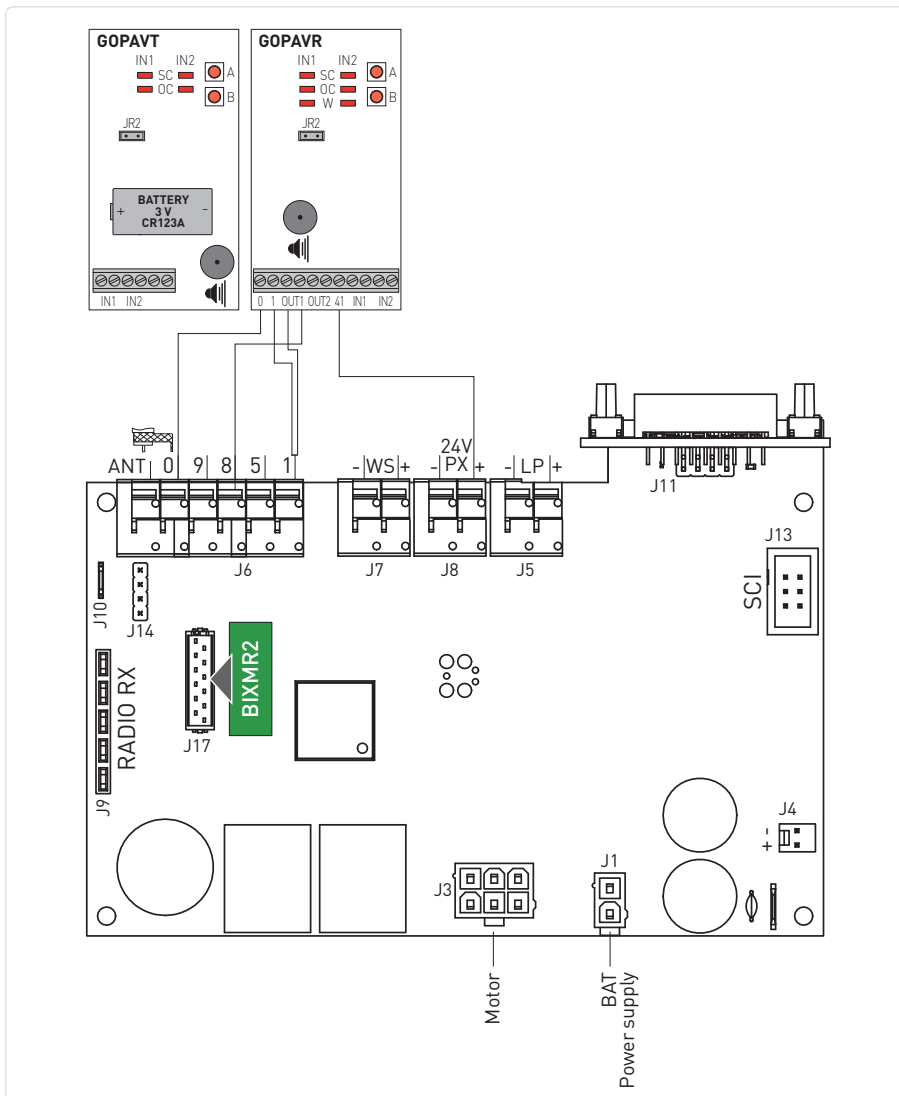


For complete instructions see manual:



GOPAV

## 12.1.4    GOPAVRS + CONT1 radio transmission system with self-test

Active safety ribs can be connected to the LCU60E board by the two-way radio transmission system GOPAVRS engaged in CONT1 as described in the following figure.
To use GOPAVRS + CONT1 set. $IO \rightarrow 08 \rightarrow 54$.



For complete instructions see manual:



CONT1



GOPAV

IP2433EN
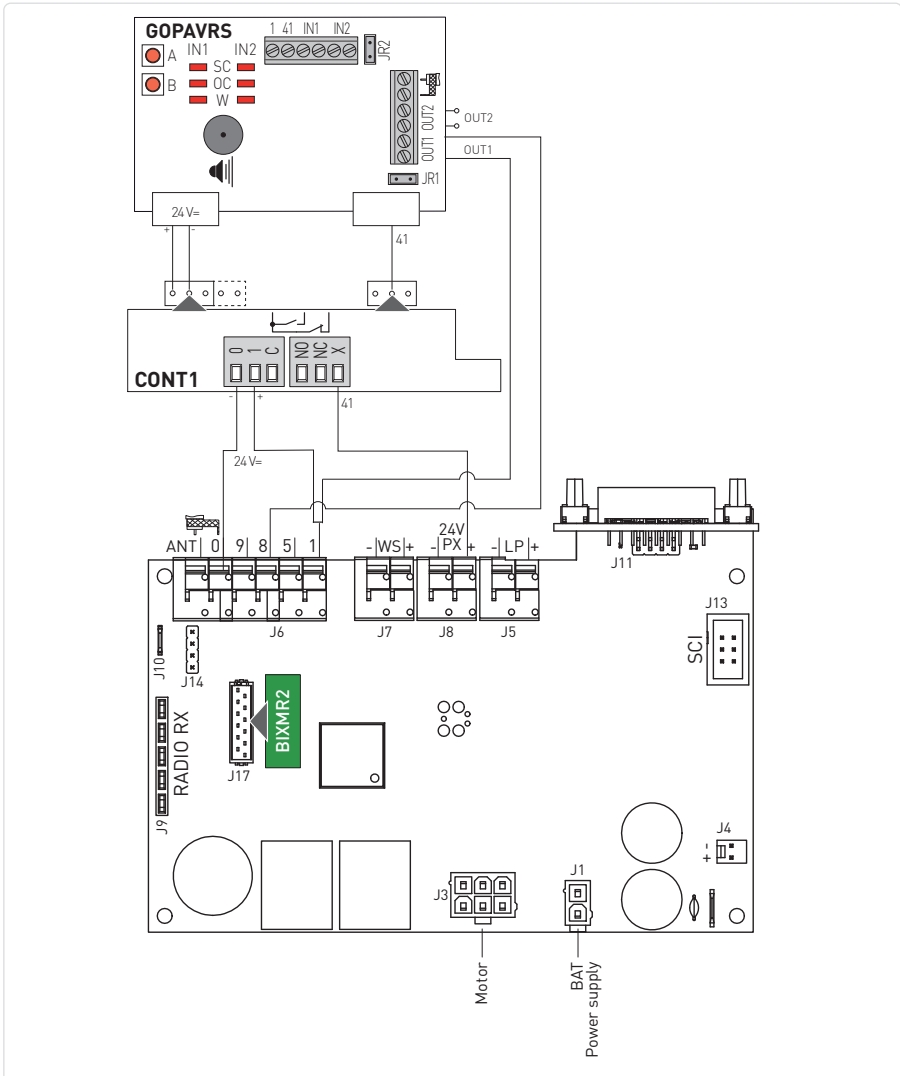
## 12.1.5  GOPAVR-VT radio transmission system + 2-wire photocells with self test

Active safety edges can be connected to the LCU60E board thanks to the GOPAVR-VT two-way radio trransmission system as described in the following figure.

In case you also want to install photocells with self-test, you need to use LIN3 and set $IO \rightarrow D8 \rightarrow P5$.
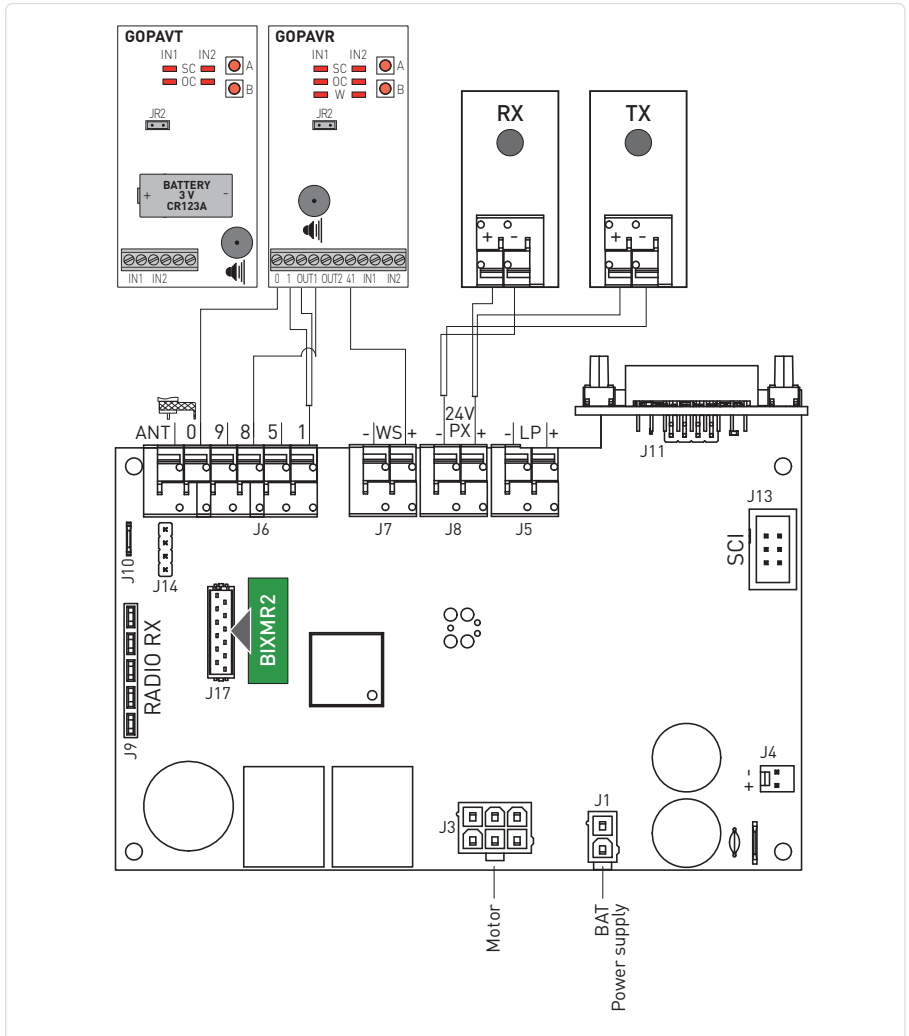


For complete instructions see manual:



CONT1



GOPAV



LIN3

## 12.1.6  Wall Station (ref. WS3)

The Wall Station accessory can be connected to the LCU60E board using the -WS+ terminal.
To activate the Wall Station set $IO \rightarrow WS \rightarrow ON$.
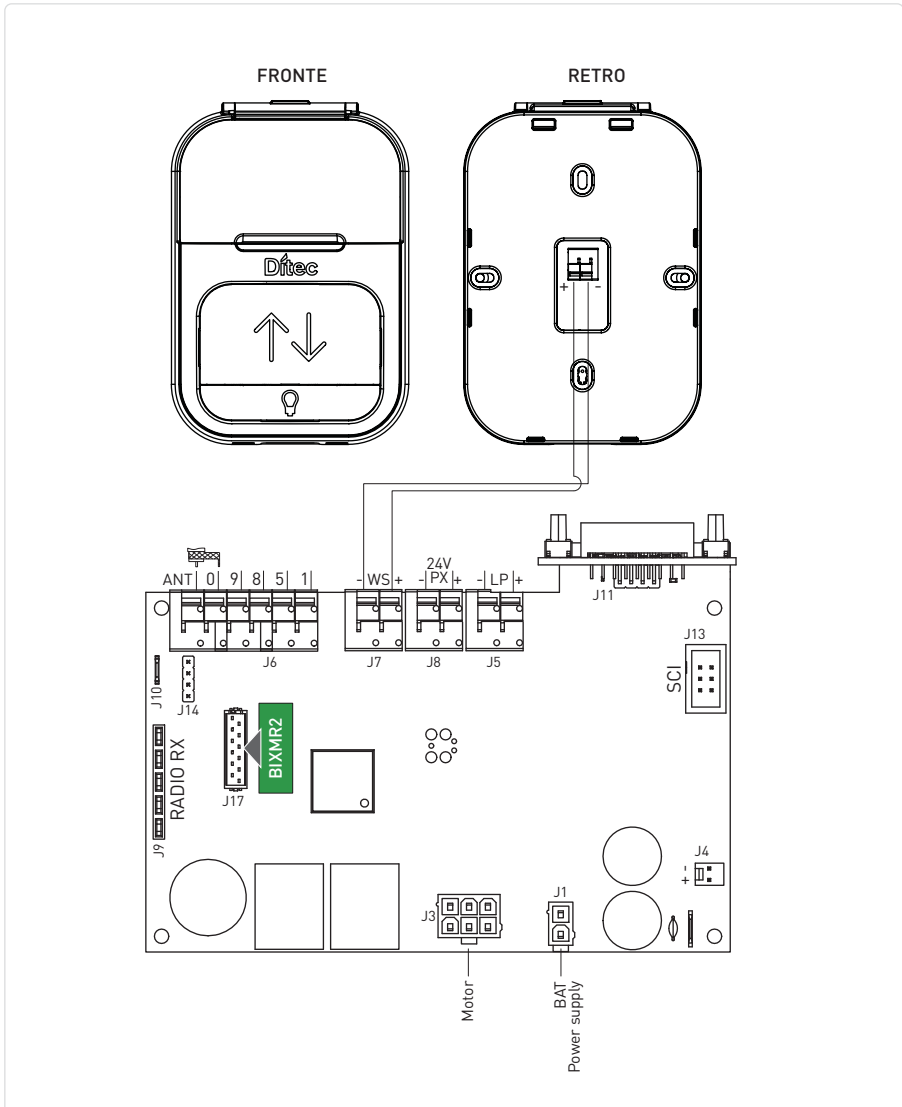


For complete instructions see manual:



WS3

## 12.1.7 Battery (ref. BBK1500X1)

The figure shows the power connections of the LCU60E board. Power supply and 20-cell Ni-MH 1500 mAh battery pack are connected to the LCU60E via the CHARGER board.
When the battery pack is not present, the power supply is directly connected to the LCU60E board.
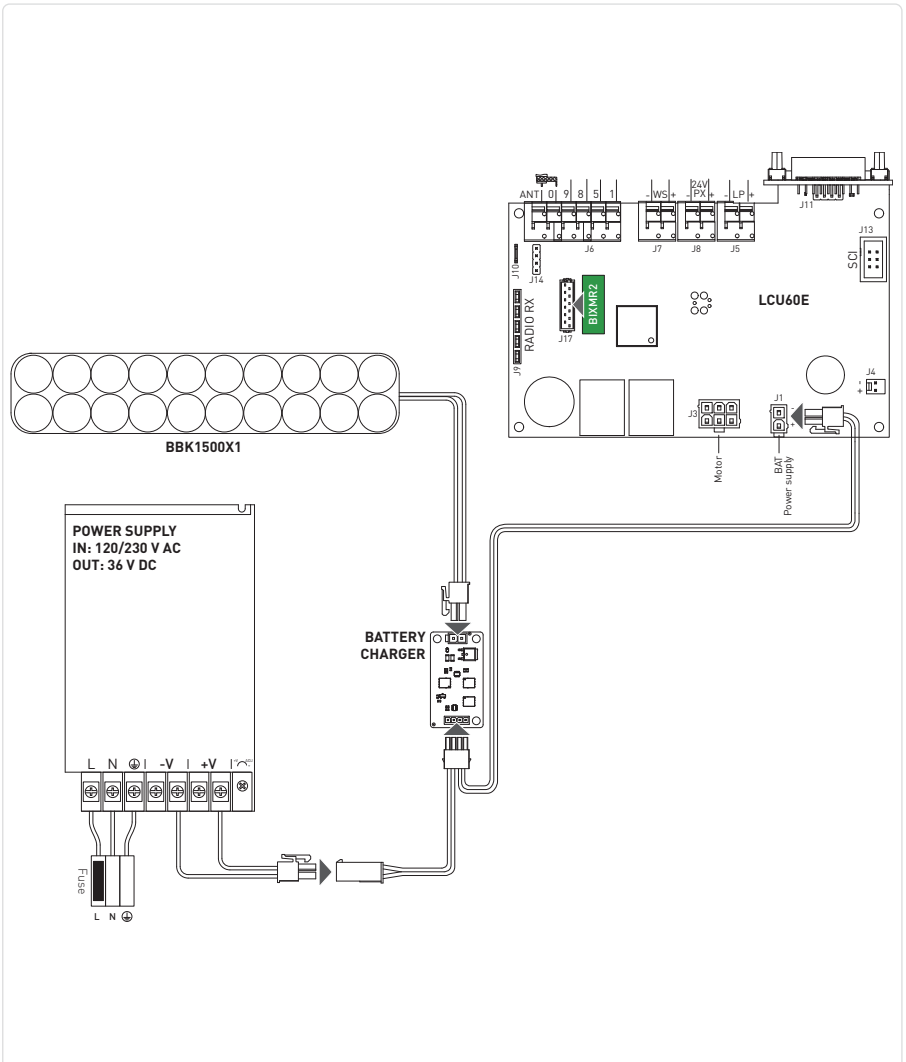


For complete instructions see manual:



**BBK1500X1**

# 13. Navigation buttons

| Display controls | |
|---|---|
| **Command** | **Description** |
| ◎ <br> UP | Navigation button UP |
| ◎ <br> DOWN | Navigation button DOWN |
| ◎ <br> ENTER | Menu button / confirm |
| ◎ <br> ESC | Menu button / exit |
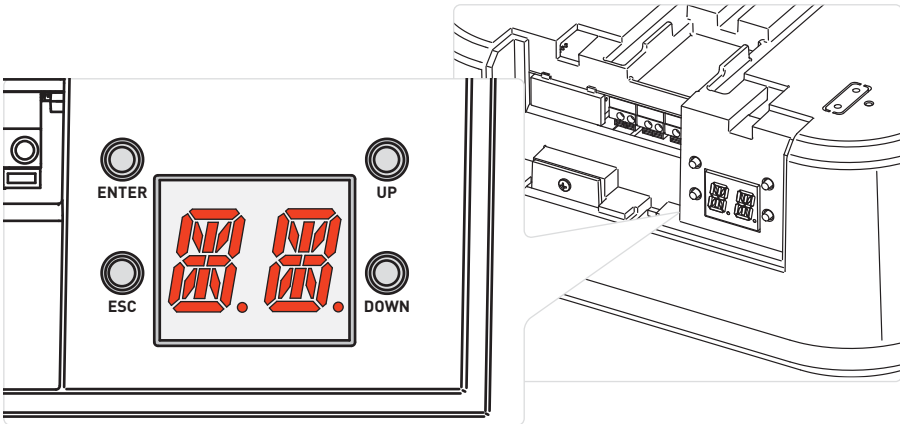
## Status messages:

| STEP | Display | Description |
|------|---------|-------------|
| A | | Door fully OPEN |
| B | | Door between the two end stop positions |
| C | | Door fully CLOSED |

While the door is OPENING, the display visualizes in sequence:

C → B → A

While the door is CLOSING, the display visualizes in sequence:

A → B → C

The procedures and adjustments can only be carried out when the display is in mode:

| | |
|---|---|
| A | |
| B | |
| C | |

# 14. Self-learning of the stroke

⚠️ **WARNING 1**: when a stroke self-learning operation is carried out, be sure that there is no obstacle on the run (e.g., execute a manual open/close operation of the garage door).

⚠️ **ATTENZIONE 2**: In case of alarm or intervention of a protection (in case of photocells installed and configured via parameter `08`) lthe learning procedure will be interrupted and the alarm code will be shown on the display (in case of intervention of a photocell `F8` will be shown). Restart the learning procedure by pressing 🔘 ESC, the system will return to `L4`.

ℹ️ **NOTE 1**: If the procedure is in progress (step `L3` or over) and you want interrupt it, press 🔘 ESC. The motor will stop and the learning restarts from the step `L4`.

ℹ️ **NOTE 2**: in case you want have access to menu to change some parameters value you must exit from learning procedure pressing 🔘 ESC key for few seconds till the display visualizes `--`.
Once the setting is complete, it is possible to return to the self-learning procedure by pressing 🔘 ESC repeatedly until you exit the menu and return to `L4`. If it is not possible to return to `L4`, press the 🔘 ENTER + 🔘 ESC pbuttons simultaneously for about 4 seconds to perform a reset of the learning procedure

## Self-learning procedure

**1. Turn on the power supply and set the open position.**



- The display flashes _C.4_.
- The courtesy light flashes 4 times during operation _C.4_.
- Press and hold the ⊙ button. The door will open.
- Release the button when the required opening position is reached.
- Use the ⊙ and ⊙ buttons to correct the position if necessary.

**2. Press the ⊙ button. Self-learning operation start**



- The automation stores the opening position and begins a closing operation.
- The display flashes (_C.3_).
- Integrated LED light flashes 3 times.
- When the door reaches the closed position, the display flashes (_C.2_). The courtesy light flashes twice.
- The automation opens automatically as far as the open position. The display flashes (_C.1_). The courtesy light flashes once.
- The automation automatically recloses as far as the closed position, the display visualizes _00_ and the door reopens.
- The lamp does not flash.

> ℹ️ If the garage door stops before reaching the closed position, this could be due to an obstacle detected during the learning stroke. Stop the procedure by pressing the ⊙ ESC key to avoid incorrect acquisition. Check for any physical obstacles (also check he sliding friction) and repeat the procedure. If necessary, change the thrust values via parameter _A2_

**3. The self-learning procedure is complete when the door is fully open, and the courtesy light is ON.**

# 15. Memorizing / Deleting remote controls

## 15.1 Memorizing remote controls

Quick memorization:



Memorization from menu:
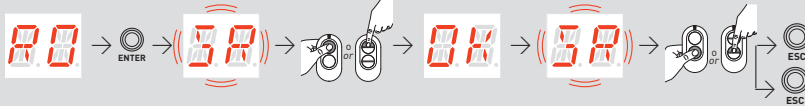


- Quick storage: press the ⓞ and ⓞ buttons simultaneously for about 2 seconds (𝟓𝑨) flashing appears on the display and you can associate the desired buttons.
- Storage from menu: press ⓞ or ⓞ to scroll through menus. Select 𝑨𝟎 , press ⓞ (𝟓𝑨) starts flashing and you can associate the desired buttons.
- Once (𝟓𝑨) is displayed, 𝟎𝑲 starts flashing again and the next button can be associated.
- Press ⓞ to exit.
- Once you finish to associate buttons if you want set a specific function to the buttons you have to go in the menu (𝟓𝑨) and acting on the parameters 𝑪𝟏 , 𝑪𝟐 , 𝑪𝟑 , 𝑪𝟒 otherwise default functions will be associated.

> ℹ️ **NOTE:** if only one button/channel is memorized then the associate function will be automatic set to **OPEN** or **STEP-by-STEP** depending by the value of 𝑨𝟎 → 𝑨𝑴 parameter.

## 15.2 Deleting remote controls

The remote control can be deleted acting on the specific parameter in the menu and follow the instructions:

| Deletion of a single remote control |
|---|
| See the parameter: |
| 𝑨.𝟎 → 𝑬𝑨    see paragraph 17.4 |
| **Deletion of all remote controls** |
| See the parameter: |
| 𝑨.𝟎 → 𝑬𝑨    see paragraph 17.4 |

# 16. Using of the menus

## 16.1 Switching the display ON and OFF

The procedure to switch ON the display is as follows:

MAIN LEVEL

◎ → CHECK START ( 🔲.🔲 , 🔲.🔲 ) → F.0
ENTER

- The display indicates by default the status of the door
- Press the ◎ key
- The display functioning check starts
- The main level menu is displayed

The procedure to switch OFF the display is as follows:

MAIN LEVEL

F.0 → ◎ ESC
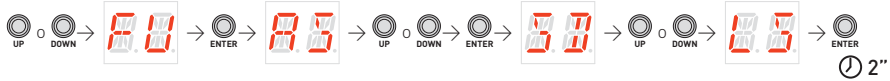
ℹ️ After 60 seconds of inactivity, you exit the configuration menu and the display indicates the status of the door

## 16.2 Navigation keys

VALUE LEVEL    PARAMETER MAIN LEVEL  PRINCIPALE

◎ o ◎ → F.0 → ◎ → A.5 → ◎ o ◎ → ◎ → 5.0 → ◎ o ◎ → 🔲.🔲 → ◎
UP  DOWN        ENTER        UP  DOWN  ENTER        UP  DOWN              ENTER
                                                                          🕐 2"

PARAMETER LEVEL

- Press ◎ or ◎ to scroll through the menus.
  UP    DOWN
- Press ◎ to go in **PARAMETER LEVEL**.
  ENTER
- Press ◎ to exit from a sub-menu.
  ESC

PARAMETER LEVEL

- Press ◎ or ◎ to scroll through the parameters inside the specific sub-menu.
  UP    DOWN
- To set a parameter, select the desired **VALUE** and press ◎ for 2 seconds to save.
  ENTER

## 16.3   Shortcuts

### 16.3.1   Calibration reset

⊚ + ⊚ → (( R.C. )) → (( R.C. )) → [ -- ] → [ X.X ] → [ C.Y ]
  ENTER   ESC

By pressing the ⊚ (ENTER) and ⊚ (ESC) buttons simultaneously, causes the display to flash R.C. , first slowly and then faster. Continue to hold (for about more than 4 seconds) until the system performs a reset and the display shows C.Y (all calibration run values have been cleared). Now you can release the keys, the system is ready to perform a new learning procedure

> **i** **NOTE:** the stored calibration can also be deleted by acting on the appropriate parameter in the RA → RA menu

### 16.3.2   System restart

⊚ + ⊚ → (( R.S. )) → (( R.S. )) → [ -- ] → [ X.X ]
  UP    DOWN

Pressing the ⊚ (UP) and ⊚ (DOWN) keys simultaneously will cause the display to flash R.S. , first slowly and then faster. Continue to hold (for about more than 4 seconds) until the system performs a restart.

> **i** **NOTE:** it is only a system restart, calibration values, parameter setting and transmitters are not deleted.

### 16.3.3   Radio remote control storage via control panel

⊚ + ⊚ → [ S.A ] → (( S.A )) → ...
  ESC  DOWN

If you press the ⊚ (ESC) and ⊚ (DOWN) buttons simultaneously for more than 4 seconds, the display shows S.A , then release the buttons. When the display starts flashing S.A , you can associate the desired buttons.

> **i** **NOTE:** storage of remote controls can also be performed by acting on the appropriate parameter in the menu

### 16.3.4   Wi-fi reset

⊚ + ⊚ → (( R.W. )) → (( R.W. )) → [ R.W ]
  ESC   UP

If you press ⊚ (ESC) and ⊚ (UP) keys simultaneously, the display will flash R.W first slowly, then faster. When the display stops flashing and R.W is fixed, the WiFi device will be reset, release the keys.

# 17. Parameters LCU60E

## 17.1 Main level menu

| Display | Description |
|---|---|
| **F.U.** | **Frequent use**<br>The menu allows to manage the most commonly used parameters to customize the functionalities of the automation |
| **O.M.** | **Operation Mode**<br>The menu allows to manage all the parameters used for operation modes of the automation (type of automation installed, predefined settings, automatic closure, etc.) |
| **R.A.** | **Run Adjustment**<br>The menu allows to adjust all the run parameters (opening/closure speed, slowdown positions, obstacle thrust sensibility etc.) |
| **I.O.** | **Input/Output Configuration**<br>The menu allows to configure the inputs/outputs functionalities of the automation (selection of devices connected to the terminals, photocells, flashing light/electro-lock setting, etc.) |
| **R.O.** | **Radio and Connectivity Operations**<br>The menu is used to manage all parameters for the radio/wireless functions of the control panel |
| **D.F.** | **Diagnostic Functions**<br>The menu allows to manage all other parameters used for additional services (diagnostic counters, FW updating, energy saving, etc.) |

*Complete menu* spans the rows from Operation Mode to Diagnostic Functions.

## 17.2 Frequent use menu map

| MAIN LEVEL | |
|---|---|
| **F.U.** | FU - Frequent Use |

| PARAMETER LEVEL | |
|---|---|
| **A.S.** | AS - Selection of door type |
| **D.M.** | DM - Open direction |
| **E.P.** | EP - Setting encrypted radio transmission protocol (AES 128bit and PROTECTED mode) |
| **S.R.** | SR - Remote control storage |
| **R.M.** | RM - Radio receiver operation |
| **T.5.** | T5 - Terminal 5 operation mode |
| **A.C.** | AC - Automatic closure enabling |
| **T.C.** | TC - Setting of automatic closing time [s] |
| **R.P.** | RP - Adjustment of partial opening measurement [%] |
| **T.P.** | TP - Setting of automatic closing time after partial opening [s] |
| **R.1.** | R1 - Adjustment of thrust on obstacles in the opening |
| **R.2.** | R2 - Adjusting thrust on closing obstacles |
| **V.A.** | VA - Opening speed [cm/s] |
| **V.C.** | VC - Closing speed [cm/s] |
| **R.9.** | R9 - Configuration of input 1-9 |
| **D.8.** | D8 - Selection of device connected to terminals 1-8 |

# 17.3 Complete menu map

| MAIN LEVEL |
| --- |

**OM** - Operation Mode

| PARAMETER LEVEL |
| --- |

AS - Selection of door type

DM - Open direction

AC - Automatic closure enabling

TC - Setting of automatic closing time [s]

RP - Adjustment of partial opening measurement [%]

TP - Setting of automatic closing time after partial opening [s]

PP - Setting of step-by-step sequence

TS - Renewal of automatic closing time after release of safety device [%]

WO - Setting of pre-flashing time on opening [s]

WC - Setting of pre-flashing time on closing [s]

PK - Parking assistance

**RA** - Run Adjustment

| PARAMETER LEVEL |
| --- |

VA - Opening speed [cm/s]

VC - Closing speed [cm/s]

R1 - Adjustment of thrust on obstacles during opening

R2 - Adjustment of thrust on obstacles during closing

OB - Adjustment of deceleration distance during opening [cm]

CB - Adjustment of deceleration distance during closing [cm]

PC - Adjustment of approach speed during opening [cm/s]

DC - Setting of disengagement on stop during closing [mm]

VR - Setting acquisition speed

TA - Adjusting time acceleration in opening

TQ - Adjusting time acceleration in closing

TD - Adjusting deceleration time in opening

TU - Adjusting deceleration time in closing

DC - Setting of disengagement on stop during closure [mm]

ST - Adjusting the inrush time

DT - Adjusting obstacle recognition time

RR - Resetting run calibration values

**IO** - Input/Output Configuration

| PARAMETER LEVEL |
| --- |

R9 - Configuration of input 1-9

T5 - Terminal 5 operation mode

D8 - Selection of device connected to terminals 1-8

LP - Function of output +LP-

LU - Time to turn on the courtesy light [s]

LG - Switch-on time for independently commanded courtesy light [min]

BR - Brightness level of the courtesy light

LR - Electric lock release time [s]

ES - Energy-saving

WS - Setting of Wall Station device

BZ - Buzzer enable/disable

| | RO - Radio and Connectivity Operations |
|---|---|
| | PARAMETER LEVEL |
| | EP - Setting encrypted messages |
| | SR - Remote control storage |
| | RM - Radio receiver operation |
| | TX - Visualization of counter showing remote controls stored |
| | MU - Setting of the maximum number of remote controls that can be stored in the memory |
| | ER - Deletion of a single remote control |
| | EA - Total memory deletion |
| | C1, C2, C3, C4 - Selection of CH1, CH2, CH3, CH4 function of stored remote control |
| | FQ - Radio frequency selection |
| | VL - enable/disable vacation mode |
| | BT – Enabling/disabling Bluetooth® |
| | WF - Setting of WiFi functionality |
| | WQ - Request to restart the connected WiFi device (in particular Apple HomeKit) |
| | MA - Deletion of Mobile App control permissions |

| | DF - Diagnostic Functions |
|---|---|
| | PARAMETER LEVEL |
| | AI - Automation model ID Info |
| | CU - Visualization of the firmware version on the control panel |
| | UP - Firmware update |
| | AL - Alarm counter |
| | UP - Alarm log |
| | AR - Alarm reset |
| | CV - Display of total operations counter |

| | CP - Display of partial operations counter |
|---|---|
| | ZP - Reset of partial operations counter |
| | CA - Setting the maintenance alarm (factory setting - alarm deactivated: 0.0 00. 00) |
| | OA - Selecting maintenance alarm display mode |
| | CH - Display of power supply hour counter |
| | BH - Visualization of counter for power supply hours via battery |
| | SV - Saving user configuration on control panel storage module |
| | RC - Configuration loading |
| | RL - Loading of last configuration set |
| | EU - Erasing of user configurations and last configuration set in the storage module |
| | IM - Motor current visualization |
| | BL - Visualization of Battery voltage level |
| | EL - Efficiency level of the automation |
| | EN - Enable force detection test according EN 13241-1 |
| | UB - Door unbalanced level |
| | RD - Resetting of factory settings |

## 17.4   Frequent use parameters description

**FU - Frequent Use**
The menu allows to manage the most commonly used parameters to customize the functionalities of the automation.

| Parameter | Description | Selections available |
|---|---|---|
| **AS** | **AS - Selection of automation door installed**<br>• **SD**: sectional door<br>• **LS**: side sectional door<br>• **BS**: up-and-over door with soft start<br><br>ℹ️ **NOTE:** NOTE: If the value has been changed, the previously acquired stroke parameters will be deleted and the operator will wait for a new self-learning maneuver. See section 14 | **SD**  **LS**<br>**BS** |

| AS | R1-R2 | VA | OB | TA | TQ | TD | TU |
|---|---|---|---|---|---|---|---|
| SD | 20 | 20 | 20 | 2.0 | 2.0 | 30 | 20 |
| LS | 20 | 20 | 20 | 2.0 | 2.0 | 30 | 20 |
| BS | 30 | 15 | 40 | 2.5 | 2.5 | 60 | 40 |

| | | |
|---|---|---|
| **DM** | **DM - Open direction**<br>• **00**: opening direction with TOP guides and TSRFK retrofit kit<br>• **01**: standard opening direction with AIR guides<br><br>ℹ️ **NOTE:** NOTE: If the value has been changed, the previously acquired stroke parameters will be deleted and the operator will wait for a new self-learning maneuver. See section 14 | **00**  **01** |
| **EP** | **EP - Setting up encrypted radio transmission protocol (AES 128bit and PROTECTED mode)**<br>If the possibility to receive coded messages is enabled, the control panel will be compatible with remote controls of the "CRIPTED or PROTECTED mode" type.<br>• **ON**: enabled<br>• **OF**: disabled | **ON**  **OF** |
| **SR** | **SR - Remote control storage**<br><br>ENTER → **SR** → **OK** → **SR** → ... x2, x3...  ESC<br><br>By pressing ENTER, **SR** starts flashing and it is possible to associate the desired buttons. After **OK** is displayed, **SR** flashes again on the display and it is possible to associate the next button. To exit, press ○ or ○ for 2 seconds and move on to the next item.<br><br>ℹ️ **NOTE:** if the display shows **NO** flashing, the remote control may already be stored. | |
| **RM** | **RM - Radio receiver operation**<br>This is the function associated to radio command when only one channel is stored (independently which one is)<br>• **1-5** - Step-by-step<br>• **1-3** - Opening | **1-5**  **1-3** |
| **T5** | **T5 - Terminal 5 operation mode**<br>This parameter is associated to the functionality of the terminal 1-5<br>• **1-5** - Step-by-step<br>• **1-3** - Opening | **1-5**  **1-3** |
| **AC** | **AC - Automatic closure enabling**<br>• **OF** - Disabled<br>• **ON** - Enabled | **OF**  **ON** |
| **TC** | **TC - Setting of automatic closing time [s]**<br>It is set with different intervals of sensitivity:<br>• **from 0" to 59"** with intervals of 1 second<br>• **from 1'0 to 1'5** with intervals of 10 seconds<br>For each interval, the display visualizes:<br>- 11 → 1 minute and 10 seconds<br>- ...<br>- 15 → 1 minute and 50 seconds<br>• **from 2' to 4'** with intervals of 1 minute | **00** ... **59**<br>**10** ... **15**<br>**20** ... **40**<br>**40** |

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| | | | |
|---|---|---|---|
| **C3** | **R.P.** | **RP - Adjustment of partial opening measurement [%]**<br>This parameter adjusts the percentage of partial opening in relation to the total opening of the automation.<br>• **from 5% to 99 %** with intervals of 1 % | **05** ... **99** |
| | **T.P.** | **TP - Setting of automatic closing time after partial opening [s]**<br>It is set with different intervals of sensitivity:<br>• **from 0" to 59"** with intervals of 1 second<br>• **from 1'0 to 1'5** with intervals of 10 seconds<br>For each interval, the display visualizes:<br>- **11** → 1 minute and 10 seconds<br>- ...<br>- **15** → 1 minute and 50 seconds<br>• **from 2' to 4'** with intervals of 1 minute | **00** ... **59**<br>**10** ... **15**<br>**20** ... **40**<br>10 |
| | **R.1.** | **R1 - Adjustment of thrust on obstacles and motor current during opening [%]**<br>When the thrust exceeds the threshold, the system detects an obstacle and the movement is stopped.<br>**00 -** Minimum thrust (minimum current delta for obstacle detection)<br>**99 -** Maximum thrust (maximum current delta for obstacle detection)<br>The threshold is calculated dynamically like a delta on the motor current measured during the opening stroke. | **00** ... **99**<br>20 |
| | **R.2.** | **R2 - Adjustment of thrust on obstacles and motor current during closing [%]**<br>When the thrust exceeds the threshold, the system detects an obstacle, and the movement is inverted. It has divided in two ranges with a different sensibility to give maximum flexibility according to needs:<br>**from 00 to 40** – Soft thrust<br>**from 41 to 99** – Strong thrust<br>The threshold is calculated dynamically like a delta on the motor current measured during the closing stroke.<br>⚠️ **WARNING:** The default value ensures the closing thrust force values return within the limits established by Standard EN12453. Set different values to have stronger thrust force but in this case be aware that it is not guaranteed the fulfilment of limits by Standard EN12453. This operation must be carried out by qualified personnel. | **00** ... **99**<br>20 |
| **C3** | **V.A.** | **VA - Opening speed [cm/s]**<br>• **from 8 to 22 cm/s** with intervals of 1 cm/s | **08** ... **22**<br>(default value. Depends on AS setting) |
| | **V.C.** | **VC - Closing speed [cm/s]**<br>• **from 8 to 22 cm/s** with intervals of 1 cm/s<br>⚠️ **WARNING:** the default value ensures the closing thrust force values return within the limits established by Standard EN12453. In case a higher closing speed is set it is not guaranteed the fulfillment of limits by Standard EN12453. | **08** ... **22**<br>10 |
| | **R.9.** | **R9 - Configuration of input 1-9**<br>• **NO**: disabled.<br>• **9P**: open state of the input triggers permanent stop (default).<br>• **9T**: open state of the input triggers temporary stop. Once contact closes, automatic closure time (if enabled) is activated. | NO  9P<br>9T |
| | **D.8.** | **D8 - Selection of the device connected to terminals 1-8**<br>• **NO** - None<br>• **PH** - LIN2 photocells<br>• **SP41** - Photocells with safety test<br>• **SE** - Safety edge<br>• **S41** - Safety edge with safety test<br>• **P2** – LIN3 photocells with auto test<br>• **PE** – Safety edge + LIN3 photocells (self-test)<br>• **PS** – Safety edge with safety test + LIN3 photocells with self test | NO  PH<br>PH  SE<br>S41  P2<br>PE  PS |

## 17.5 Complete menu - parameters description

**OM - Operation Mode**

The menu allows to manage all the parameters used for operation modes of the automation (type of automation installed, predefined settings, automatic closure, etc.)

| Parameter | Description | Selections available |
|---|---|---|
| **AS** | **AS - Selection of automation door installed** <br> • **SD**: sectional door <br> • **LS**: side sectional door <br> • **BS**: up-and-over door with soft start <br><br> **i** **NOTE:** NOTE: If the value has been changed, the previously acquired stroke parameters will be deleted and the operator will wait for a new self-learning maneuver. See section 14 | **SD** **LS** **BS** |

| AS | R1-R2 | VA | OB | TA | TQ | TD | TU |
|---|---|---|---|---|---|---|---|
| SD | 20 | 20 | 20 | 2.0 | 2.0 | 30 | 20 |
| LS | 20 | 20 | 20 | 2.0 | 2.0 | 30 | 20 |
| TD | 30 | 15 | 40 | 2.5 | 2.5 | 60 | 40 |

| Parameter | Description | Selections available |
|---|---|---|
| **DM** | **DM - Open direction** <br> • **00**: opening direction with TOP track system and TSRFK retrofit kit <br> • **01**: standard opening direction with AIR track system <br><br> **i** **NOTE:** NOTE: If the value has been changed, the previously acquired stroke parameters will be deleted and the operator will wait for a new self-learning maneuver. See section 14 | **00** **01** |
| **AC** | **AC - Automatic closure enabling** <br> • **OF** - Disabled <br> • **ON** - Enabled | **OF** **ON** |
| **TC** | **TC - Setting of automatic closing time [s]** <br> It is set with different intervals of sensitivity. <br> • **from 0" to 59"** with intervals of 1 second <br> • **from 1'0 to 1'5** with intervals of 10 seconds <br> For each interval, the display visualizes: <br> - *10* → 1 minute and 10 seconds <br> - ... <br> - *15* → 1 minute and 50 seconds <br> • **from 2' to 4'** with intervals of 1 minute | **00** ... **59** <br> **10** ... **15** <br> **2'0** ... **4'0** <br> **P0** |
| **RP** | **RP - Adjustment of partial opening measurement [%]** <br> This parameter adjusts the percentage of partial opening in relation to the total opening of the automation. <br> • **from 5% to 99 %** with intervals of 1 % | **05** ... **99** |
| **TP** | **TP - Setting of automatic closing time after partial opening [s]** <br> It is set with different intervals of sensitivity. <br> • **from 0" to 59"** with intervals of 1 second <br> • **from 1'0 to 1'5** with intervals of 10 seconds <br> For each interval, the display visualizes: <br> - *10* → 1 minute and 10 seconds <br> - ... <br> - *15* → 1 minute and 50 seconds <br> • **from 2' to 4'** with intervals of 1 minute | **00** ... **59** <br> **10** ... **2'0** <br> **2'0** ... **4'0** <br> **P0** |
| **PP** | **PP - Setting of step-by-step sequence** <br> • **00** - Opening-Stop-Closing-Opening <br> • **01** - Opening-Stop-Closing-Stop-Opening | **00** **01** |

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| | | | | |
|---|---|---|---|---|
| **OM** | | **TS** | **TS - Setting of renewal of automatic closing time after photocells safety device release [%]**<br>• **from 0 to 99%** with intervals of 1%.<br>The count begins with the door fully open, (and the closing operation is performed even with automatic closure (**AC**) disabled.<br>⚠️ **WARNING:** automatic closure is not disabled on the third consecutive direction reversal.<br>E.g.:<br>• **AC** = 1'<br>• **TS** = 50%<br>• Renewal of automatic closing time= 30" | **00** ... **99** |

**WO - Setting of pre-flashing time on opening [s]**
Adjustment of the lead time for the switch-on of the flashing light and courtesy light, in relation to the start of the opening operation from a voluntary command.
• **from 0" to 5"** with intervals of 1 second
**00** ... **05**

**WC - Setting of pre-flashing time on closing [s]**
Adjustment of the lead time for the switch-on of the flashing light and courtesy light in relation to the start of the closing operation from a voluntary command.
• **from 0" to 5"** with intervals of 1 second
**00** ... **05**

**PK - Parking assistance (only with photocells installed)**
Once the door has opened and the car has passed through, the courtesy light flashes quickly 3 times when the photocells are disengaged to indicate that the door can be closed because the car is no longer in the passage opening.
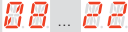• **ON** – Enabled
• **OF** – Disabled
ℹ️ **NOTE:** it is recommended to install internal photocells
**ON** **OF**

## RA - Run Adjustment

The menu allows to adjust all the run parameters (opening/closure speed, slowdown positions, obstacle thrust sensibility etc.)

| Parameter | Description | Selections available |
|---|---|---|
| **VA** | **VA - Opening speed [cm/s]**<br>• **from 8 to 22 cm/s** with intervals of 1 cm/s | 08 … 22<br>(default value. Depends on AS setting) |
| **VC** | **VC - Closing speed [cm/s]**<br>• **from 8 to 22 cm/s** with intervals of 1 cm/s<br>⚠️ **WARNING:** the default value ensures the closing thrust force values return within the limits established by Standard EN12453. In case a higher closing speed is set it is not guaranteed the fulfilment of limits by Standard EN12453. | 08 … 22<br>10 |
| **R1** | **R1 - Adjustment of thrust on obstacles and motor current during opening [%]**<br>When the thrust exceeds the threshold, the system detects an obstacle and the movement is stopped.<br>**00 -** Minimum thrust (minimum current delta for obstacle detection)<br>**99 -** Maximum thrust (maximum current delta for obstacle detection)<br>The threshold is calculated dynamically like a delta on the motor current measured during the opening stroke. | 00 … 99<br>20 |
| **R2** | **R2 - Adjustment of thrust on obstacles and motor current during closing [%]**<br>When the thrust exceeds the threshold, the system detects an obstacle, and the movement is inverted. It has divided in two ranges with a different sensibility to give maximum flexibility according to needs:<br>**from 00 to 40** – Soft thrust<br>**from 41 to 99** – Strong thrust<br>The threshold is calculated dynamically like a delta on the motor current measured during the closing stroke.<br>⚠️ **WARNING:** The default value ensures the closing thrust force values return within the limits established by Standard EN12453. Set different values to have stronger thrust force but in this case be aware that it is not guaranteed the fulfilment of limits by Standard EN12453. This operation must be carried out by qualified personnel. | 00 … 99<br>20 |
| **OB** | **OB - Adjustment of deceleration distance during opening [cm]**<br>Indicates the deceleration distance before reaching the maximum open position.<br>• **from 10 to 60 cm** with intervals of 1 cm | 10 … 60<br>(default value. Depends on AS setting) |
| **PO** | **PO - Adjustment of approach speed in opening [cm/s].**<br>It indicates the speed from the end of the deceleration ramp to the end of the opening stroke<br>• **from 5 to 15 cm/s** with intervals of 1 cm/s | 05 … 15<br>07 |
| **CB** | **CB - Adjustment of deceleration distance during closing [cm]**<br>Indicates the deceleration distance before reaching the closing position.<br>• **from 20 to 60 cm** with intervals of 1 cm | 20 … 60<br>40 |
| **PC** | **PC - Adjustment of approach speed during closing [cm/s]**<br>• **from 5 to 15 cm/s** with intervals of 1 cm/s<br>⚠️ **WARNING:** the default value ensures the closing thrust force values return within the limits established by Standard EN12453. In case a higher closing speed is set it is not guaranteed the fulfilment of limits by Standard EN12453. | 05 … 15<br>07 |
| **VR** | **VR - Setting of acquisition speed [cm/s]**<br>• **from 5 to 15 cm/s** with intervals of 1 cm/s | 05 … 15<br>06 |

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|---|---|---|---|
| | | **TA - Adjustment of acceleration time during opening [s]**<br>Regulates the slope of the acceleration ramp during opening<br>• **from 0.5 to 9.9 s** with intervals of 0.1 s | **1.0** ... **9.9**<br>(default value. Depends on AS setting) |
| | | **TQ - Adjustment of acceleration time during closure [s]**<br>Regulates the slope of the acceleration ramp during closing<br>• **from 0.5 to 9.9 s** with intervals of 0.1 s | **1.0** ... **9.9**<br>(default value. Depends on AS setting) |
| | | **TD - Adjustment of deceleration time during opening [%]**<br>Regulates the slope of the deceleration ramp during opening.<br>• **from 10 to 99 %** with intervals of 1 % | **1.0** ... **9.9**<br>(default value. Depends on AS setting) |
| | | **TU - Adjustment of deceleration time during closure [%]**<br>Regulates the slope of the deceleration ramp during closing.<br>• **from 10 to 99 %** with intervals of 1 % | **1.0** ... **9.9**<br>(default value. Depends on AS setting) |
| | | **DC - Setting of disengagement on stop during closure [mm]**<br>Regulates the distance of the disengagement on the mechanical closing stop.<br>• **00** – Disabled<br>• **from 1 to 15 mm** with intervals of 1 mm | **00** ... **30**<br>_10_ |
| | | **ST - Adjusting the inrush time [s]**<br>• **from 0.5 to 3.0 s** with intervals of 1% | **0.5** ... **3.0**<br>_15_ |
| | | **DT - Adjustment of obstacle recognition time [s/100]**<br>• **from 10 to 60 s/100** with intervals of 1 s/100<br><br>ℹ️ **NOTE:** the parameter is adjusted in hundredths of a second<br><br>⚠️ **WARNING:** The default value ensures that the values of the closing thrust force return within the limits set by Standard EN12453. In case a higher value is set, compliance with the limits from the EN12453 Standard is not guaranteed. | **0.5** ... **3.0**<br>_15_ |
| | | **RR - Resetting run calibration values**<br>It permits to perform a new learning procedure. | |

## IO - Input/Output Configuration
The menu allows to configure the inputs/outputs functionalities of the automation.

| Parameter | Description | Selections available |
|---|---|---|
| **R9** | **R9 - Configuration of input 1-9**<br>• **NO**: disabled.<br>• **9P**: open state of the input triggers permanent stop (default).<br>• **9T**: open state of the input triggers temporary stop. Once contact closes, automatic closure time (if enabled) is activated. | NO  9P<br>9T |
| **T5** | **T5 - Terminal 5 operation mode**<br>• **1-5** - Step-by-step<br>• **1-3** - Opening | 1-5  1-3 |
| **8** | **8 - Selection of the device connected to terminals 1-8**<br>• **NO** - None<br>• **PH** - LIN2 photocells<br>• **SP41** - Photocells with safety test<br>• **SE** - Safety edge<br>• **S41** - Safety edge with safety test<br>• **P2** – LIN3 photocells with auto test<br>• **PE** – Safety edge + LIN3 photocells (self-test)<br>• **PS** – Safety edge with safety test + LIN3 photocells with self test | NO  PH<br>P41  SE<br>S41  P2<br>PE  PS |
| **LP** | **LP - Output function +LP-**<br>• **01** - Electric lock (activated for a time defined by parameter _LR_)<br>• **03** - ON-OFF flashing light without oscillator (active when the motor is in action)<br>• **04** - ON-OFF flashing LED without oscillator (active when the motor is in action)<br>• **05** - ON for flashing LED with internal oscillator<br>• **08** - Closed automation (activated with door fully closed)<br>• **09** - Automation open (activated with door fully open)<br>• **13** - Maintenance alarm<br>• **14** - Signal for batteries almost discharged<br>• **ON** - Output always on | 01  03<br>04  05<br>08  09<br>13  14<br>ON |
| **LU** | **LU - Courtesy light supplementary time setting [s].**<br>It is set with different sensitivity ranges.<br>• **NO** - Disabled<br>• **from 01" to 59"** with intervals of 1 second<br>• **from 1' to 2'** with intervals of 10 seconds<br>• **from 2' to 4'** with intervals of 1 minute<br>• **ON - Permanently activated** (deactivated by remote control or Wall Station)<br><br>ℹ **NOTE:** The courtesy light comes on at the beginning of each operation and stays on at the end of the operation for the additional time selected. | NO<br>01 ... 59<br>10 ... 20<br>20 ... 40<br>ON |
| **LG** | **LG - Switch-on time for independently commanded courtesy light [min]**<br>• **NO** - Disabled<br>• **from 1' to 90'** with intervals of 1 minute<br>• **ON** - Switched on and off with remote control or Wall-Station<br><br>ℹ **NOTE:** the switching on of the light does not depend on the start of an operation but can be commanded separately using the remote-control. | NO<br>10 ... 90<br>ON |

| | | | | |
|---|---|---|---|---|
| | | **BR - Brightness level of the courtesy light**<br>• **LO** - Low brightness<br>• **MI** - Middle brightness<br>• **HI** - High brightness | `LO` `MI`<br>`HI` | |
| `IO` | `CF` | **LR - Electric lock release time [s]**<br>If enabled, this indicates the electric lock activation time at the start of every opening operation with the automation closed.<br>• **from 0.2 to 3.0 s** with intervals of 0.1 s | `0.2` `3.0`<br>`0.5` | |
| | | **ES - Energy-saving**<br>• **ON** - Enabled (the red point on the right of the display flashes every 5 s).<br>• **OF** - Disabled<br>Energy-saving mode is activated after 5 minutes with the door closed, or when the door is idle and automatic closing is not enabled<br><br>ℹ **NOTE:** the automation resumes its normal operation when a command is received on the radio board or following a terminals 1-5. | `ON` `OF` | |
| | | **WS - Setting of Wall-Station device**<br>It is used to enable or disable the Wall-Station device.<br>• **OF** - Wall-Station device is disabled<br>• **ON** - Wall-Station device is enabled<br><br>⚠ **WARNING:** the enabling of the Wall Station device will increase the power consumption; in this case be aware that it is not guaranteed the fulfilment of limits for standby consumption. | `ON` `OF` | |
| | | **BZ - Buzzer enable/disable**<br>• **ON** - Enabled<br>• **OF** - Disabled | `ON` `OF` | |

## RO - Radio and Connectivity Operations

The menu is used to manage all parameters for the radio/wireless functions of the control panel

| Parameter | Description | Selections available |
|---|---|---|
| **EP** | **EP - Setting up encrypted radio transmission messages (AES 128bit mode and protected mode)** <br> If the possibility to receive coded messages is enabled, the control panel will be compatible with remote controls of the "ENCRYPTED" type. | **ON** **OF** |
| **SR** | **SR - Remote control storage** <br><br>  <br><br> By pressing ⊚ENTER, (*SR*) starts flashing and it is possible to associate the desired buttons. <br> After *OK* is displayed, (*SR*) flashes again on the display and it is possible to associate the next button. To exit, press ⊚ESC or ⊚ENTER for 2 seconds and move on to the next item. <br><br> **ℹ NOTE:** if the display shows (*NO*) flashing, the remote control may already be memorized. | |
| **RM** | **RM - Radio receiver operation** <br> • **1-5** - Step-by-step <br> • **1-3** - Opening <br><br> **ℹ NOTE:** this is the function associated to radio command when only one channel is stored (independently which one is). | **1-5** **1-3** |
| **TX** | **TX - Visualization of counter showing remote control stored** <br><br> ⊚ENTER → **00.** → **16** → 16 remote controls (example) | |
| **MU** | **MU - Setting of the maximum number of remote controls that can be stored in the memory** <br> You can store a maximum of 100 or 200 remote control codes. <br><br> ⊚ENTER → **10** o **20** → ⊚ENTER → **10** o(**20**)→⊚ENTER → **OK** <br> ⏱2" ⏱2" <br><br> • **20** - 200 remote controls that can be stored <br> • **10** - 100 remote controls that can be stored <br><br> **⚠ WARNING:** selecting *MU* → *20* (200 remote controls), the configurations *01* and *02* saved with the *DF* → *SV* command will be lost. This also applies for the last configuration reloaded with *RL*. In addition, new configurations cannot be saved on *01* and *02*. | **10** **20** |
| **ER** | **ER - Deletion of a single remote control** <br><br> ⊚ENTER → **ER** → <br> ⏱2" | |

**EA - Total memory deletion**

⊚ENTER → (( *E A* )) → ⊚ENTER → *O K*

🕐 2"  🕐 2" **x2**

It requires double confirm.
Press ⊚ENTER for 2 seconds, release and press again for other 2 seconds.

**C1, C2, C3, C4 - Selection of CH1, CH2, CH3, CH4 function of stored remote control**
- **NO** - No setting selected
- **1-3** - Opening command
- **1-4** - Closing command
- **1-5** - Step-by-step command
- **P3** - Partial opening command
- **LG** - Command to switch the courtesy light on/off
- **1-9** - STOP command

| | |
|---|---|
| *NO* | *1-3* |
| *1-4* | *1-5* |
| *P3* | *LG* |
| *1-9* | |

If even just one (any) CH key of the remote control is stored, the opening or stepby- step command is implemented.

ℹ️ **NOTE:** the 1-3 (opening) and 1-5 (step-by-step) options are available as alternatives, and depend on the selection of RM.

If 2-4 CH keys of a single remote control are stored, the functions matched in the factory with the CH keys are as follows:
- **CH1** = opening/step-by-step command
- **CH2** = partial opening command
- **CH3** =courtesy light on/off command
- **CH4** = STOP command

**FQ - Radio frequency selection**
The visible parameters depend by the Remote Connectivity Board (RCB) plugged in (J9 connector).
- **NO** - None RCB plugged in
- **43** - Radio 433MHz (RCB50E or RCB100E plugged in)
- **86** - Radio 868MHz (RCB50E or RCB100E plugged in)

| | |
|---|---|
| *NO* | *43* |
| *86* | |

**VL - Enable/disable vacation mode.**
Radio commands transmitted by radio frequency devices (radio controls and digital radio keypad) are disabled.
- **ON** - Holiday mode enabled: locks all remote control devices (radio frequency).
- **OF** – Holiday mode disabled: unlocks all remote control devices (radio frequency).

ℹ️ **NOTE:** If enabled, the display indicates *VL* whenever a radio command is received

| | |
|---|---|
| *ON* | *OF* |

**BT – Enable/disable Bluetooth®**
- **ON** – Enabled
- **OF** - Disabled

| | |
|---|---|
| *ON* | *OF* |

**WF - Setting of WiFi functionality (future use)**
It is used to enable or disable the WiFi functionality .
- **ON** - WiFi is enabled
- **OF** - WiFi is disabled

⚠️ **WARNING:** enabling WiFi will increase the standby power consumption of the product

| | |
|---|---|
| *ON* | *OF* |

**WR - Request to restart the connected WiFi device (future use)**

⊚ENTER → *O K*

🕐 2"

ℹ️ **NOTE:** the item is present only if a WiFi device is connected.

**MA - Deletion of mobile App control permissions (future use)**

## Diagnostic Functions

The menu allows to manage all other parameters used for additional services (diagnostic counters, FW updating, energy saving, etc.).

| Parameter | Description |
|---|---|
| **AI** | **AI - Automation model ID Info**<br>It is read only parameter used by Ditec Service, it gives just info about the automation model identification number. |
| **CU** | **CU - Visualization of the firmware version on the control panel**<br> → Release 1.1 (example) |
| **UP** | **UP - Firmware update**<br>Activates the card bootloader in order to update the firmware. Contact after-sales service for more information<br> |
| **AL** | **AL - Alarm counter**<br>Used to view, in sequence, the counters of alarms that have been triggered at least once (alarm code + number of times triggered).<br>With DOWN and UP buttons, you can scroll through all the counters and see all the alarms recorded.. |
| **AH** | **AH - Alarm log**<br>Used to view, in sequence, alarms that have been triggered (maximum 20).<br>With DOWN and UP buttons, you can scroll through the entire alarm log.<br>The display shows the alarm number and code, alternated.<br>The highest number corresponds to the most recent alarm and the lowest number (0) corresponds to the oldest alarm. |
| **AR** | **AR - Alarm reset**<br>Resets all the alarms in the memory (counters and log).<br><br>ⓘ **NOTE:** when the installation has been completed, you are advised to delete the alarms in order to facilitate future checks. |
| **CV** | **CV - Display of total manoeuvres counter**<br> →182 manoeuvres (example) |
| **CP** | **CP - Display of partial manoeuvres counter**<br> →716 manoeuvres (example) |
| **ZP** | **ZP - Reset of partial manoeuvres counter**<br><br>For correct functioning, you are advised to reset the partial manoeuvres counter:<br>• after maintenance work;<br>• after setting the maintenance alarm interval. |

**CA - Setting the maintenance alarm (factory setting - alarm deactivated: 0.0 00. 00)**
You can set the required number of manoeuvres (regarding the partial manoeuvres counter) for signaling the maintenance alarm.

⚠️ **WARNING:** when the set number of operations is reached, the alarm message appears on the display.

**OA - Selecting maintenance alarm display mode**
- **00** - Visualization on display (alarm message)
- **01** - Visualization on flashing light (with the automation idle, 4 flashes are made and then repeated every hour) and on display (alarm message).

**CH - Display of power supply hour counter**

CH → ENTER → 0.0 → 02. → 15 → 215 manoeuvres (example)

**BH - Visualization of counter for power supply hours via battery**

BH → ENTER → 0.0 → 02. → 15 → 215 manoeuvres (example)

**SV - Saving user configuration on control panel storage module**

ENTER → 01 → UP ; DOWN → 02 → ENTER → OK
(esempio)  ⏱ 2"

⚠️ **WARNING:** if the display visualizes flashing, the memory module may not be installed.

**RC - Configuration loading**

ENTER → 01 → UP ; DOWN → 02 → ENTER → OK
(esempio)  ⏱ 2"

It's possible to load the user configurations previously stored 01 and 02 on the memory module of the control panel.

**RL - Loading of last configuration set**

ENTER → RL → ((OK))
⏱ 2"

The control panel automatically saves the last configuration set, and keeps it memorized in the storage module. In the event of a fault or the replacement of the control panel, the last configuration of the automation can be restored by inserting the storage module and loading the last configuration set.

**EU - Erasing of user configurations and last configuration set in the storage module**

ENTER → ((EU)) → ENTER → OK
⏱ 2"   ⏱ 2"

**IM - Motor current visualization**

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**BL - Visualization of Battery voltage level**
The parameter shows the battery voltage level:
- **Lo** - Automation stopped. Battery voltage level is low (≤ 22 V)
- **22** - Battery voltage level ≥ 22 V and < 23 V
- **23** - Battery voltage level ≥ 23 V and < 24 V
- **24** - Battery voltage level ≥ 24 V and < 25 V
- **25** - Battery voltage level ≥ 25 V and < 26 V
- **26** - Battery voltage level ≥ 26 V and < 27 V
- **27** - Battery voltage level ≥ 27 V and < 28 V
- **28** - Battery voltage level ≥ 28 V

**NOTE:** the parameter is visible in the menu if the main power supply is missing and the battery kit is connected. In battery mode, when there is no power supply, the automation speed is reduced to a maximum of 15 cm/s

**EL - Efficiency level of the automation**
- This value can be used to evaluate the mechanical quality of the gate and to understand a suitable automation choice. In case of values lower than 90%, mechanical maintenance is recommended to restore efficiency or adoption of an automation with higher performance (e.g. motor with higher power).
- During normal use, this parameter monitors the efficiency of the automation, updating its degradation status in real time:
- **90-99%** High efficiency level, automation in excellent condition.
- **50%-89%** Medium efficiency level, performance starts to degrade.
- **10%-49%** Low efficiency level, performance is degraded, and maintenance required.

**EN - Enable force detection test according EN 13241-1**

When enabled, the detection of consecutive obstacle is disabled to permit the execution of the force detection test according EN 13241-1.

**WARNING:** the activation of test mode has a timeout, after 60 minutes the test mode will be automatically disabled for safety reason.
**This operation must be carried out by qualified personnel.**

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| | | **UB - Door unbalanced level** | |
|---|---|---|---|

**UB - Door unbalanced level**

It shows the level of the displacement.

• **from -99 to 99** with intervals of 1 unit.
• **Negative values**
  Right dot on the display is switched on: indicate an unbalanced during the closing maneuver (i.e. more power is requested during the closing).
• **Positive values**
  No dots switched on: indicate an unbalanced during the opening maneuver (i.e. more power is requested during the opening).
• **Acceptable door displacement**
  from `15` to `15`
  Example:
• from `50` to `26` → Door slightly unbalanced in closing
• from `75` to `51` → Door unbalanced in closing
• from `99` to `76` → Door very unbalanced in closing
• from `26` to `50` → Door slightly unbalanced in opening
• from `51` to `75` → Door unbalanced in opening
• from `76` to `99` → Door very unbalanced in opening

⚠️ **WARNING:** in case of unbalanced door, verify if there are some obstruction or damage along the rail, otherwise the spring requires a new calibration.
**This action must be performed by qualified personnel.**

`99` ... `99`

**RD - Resetting of factory settings**

`RD` ⊙ ENTER 2" → (`RD`) → ⊙ ENTER 2" → `OK`

# 18. Alarms and faults

**NOTE:** the visualization of alarms and faults is possible with any visualization selection. The signaling of alarm messages takes priority over all other displays.

| Type of Alarm | Display | Description | Operation |
|---|---|---|---|
| Mechanical alarm | M0 | M0 - Automation is not properly selected | Replace the control panel |
| | M3 | M3 - Automation blocked | Check the mechanical parts |
| | M4 | M4 - Motor short circuit | Check connection of motor |
| | M8 | M8 - Stroke too long | Check the rack / chain belt |
| | M9 | M9 - Stroke too short | Manually check that the gate moves freely |
| | Mb | MB - Absence of motor during a manoeuvre | Check connection of motor |
| | MI | MI - Detection of third consecutive obstacle | Check for the presence of permanent obstacles along the stroke of the automation. Switch off and switch on again the system to reset the alarm. If the alarm persists call assistance service |
| | Od | OD- Obstacle during opening | Check for the presence of obstacles along the automation stroke |
| | OE | OE - Obstacle during closing | Check for the presence of obstacles along the automation stroke |
| | OF | OF - Automation blocked on opening | Check the mechanical parts and make sure there are no obstacles along the automation stroke |
| | OG | OG - Automation blocked on closing | Check the mechanical parts and make sure there are no obstacles along the automation stroke |
| Service alarm | Hd | HD - Power supply voltage is too high. The system stops the motor to hold the door and avoid a falling during the closing | Check the spring and the mechanical, the door could be not more balanced |
| Internal control | V0 | V0 - Request for maintenance intervention | Proceed with the scheduled maintenance intervention |

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| | | | |
|---|---|---|---|
| Internal control | `I.7.` | I7 - Internal parameter error - value outside limits | Reset. If the problem persists, replace the control panel |
| Panel alarm | `I.8.` | I8 - Program sequence error | Reset. If the problem persists, replace the control panel |
| | `I.A.` | IA - Internal parameter error (EEPROM/FLASH) | Reset. If the problem persists, replace the control panel |
| | `I.B.` | IB - Internal parameter error (RAM) | Reset. If the problem persists, replace the control panel |
| | `I.C.` | IC Operation time-out error (>5 min or >7 min in learning mode) | Manually check that the gate moves freely. If the problem persists, replace the control panel. |
| | `I.E.` | IE - Power supply circuit fault | Reset. If the problem persists, replace the control panel |
| | `I.M.` | IM - MOSFET alarm Motor in short circuit or always ON | Reset. If the problem persists, replace the control panel |
| | `I.N.` | IN - Interrupted motor power circuit (motor MOSFET open or always OFF) | Reset. If the problem persists, replace the control panel |
| | `I.R.` | IR - Motor relay error | Reset. If the problem persists, replace the control panel |
| | `I.S.` | IS - Error on motor current read circuit test | Reset. If the problem persists, replace the control panel |
| | `I.H.` | TH - Intervention of high temperature safety device | Do not carry out any operations. If the problem persists, contact Technical Service |
| | `V.H.` | VH - Automation blocked due to high temperature | Do not carry out any operations. If the problem persists, contact Technical Service |
| | `X.X.` | XX - Firmware reset | |
| | `W.D.` | WD - Firmware reset not commanded | |
| | `E.N.` | EN - Error on the encoder during a manoeuvre | Check connection of motor |

| | | | |
|---|---|---|---|
| Radio operations alarm | R.3 | R3 - Storage module not detected | Insert a storage module |
| | R.4 | R4 - Storage module not compatible with the control panel | Insert a compatible storage module |
| | R.5 | R5 - No serial communication with the storage module | Replace the storage module |
| Power supply alarm | P.0 | P0 - No mains voltage | Check the control panel is powered correctly. Check the line fuse. Check the mains power supply |
| | P.1 | P1 - Microswitch voltage too low | Check the control panel is powered correctly |
| Battery alarm | B0 | B0 - Battery almost flat | Check battery voltage. Replace battery |
| Accessory alarm | A.7 | A7 - Incorrect connection of terminal 9 to terminal 1 | Check that terminal 1 and 9 are correctly connected |
| | A.9 | A9 - Overload on output +LP- | Check the device connected to output +LP- is working properly |
| | A.B | AB - Courtesy Light short circuit | Check the connection. If the error persists replace the courtesy light |
| | A.P. | AP - Photocell short circuit or wires inverted | Check the connection |
| | P.F. | PF - Photocell test failed | Check the connection. If the error persists replace the photocell |
| | A.W | AW - Wall station short circuit or wires inverted | Check the connection |

# 19. Maintenance

**Six-monthly maintenance activities**

- Check the emergency release is working properly.
- Check the safety devices (if installed) are working properly.
- Check the obstacle detection function is working properly.
- Check the stability of the automation

Disconnect the power supply, 230 V~:
- Lubrication of mechanical parts must be performed with door down.
- Make sure that cable and spring breakage device is in perfect working order.
- Check lift-cable wear.
- Make sure that the cables run smoothly in the drums.
- Periodically grease the hinges, ball-bearings, wheel pins, and torsional springs.
- Check for any obstacles that may hinder the wheels from properly running in the guides.
- To check the correct balancing of the sectional automation.
- Make sure that the overhead sliding structure is firmly fastened to the ceiling and perfectly free from any defects, bending or buckling.
- Make sure that there are no loose bolts or screws.
- Absolutely avoid making any changes to the hoisting and/or sliding system.

Connect the power supply (230 V~) and check that:
- Limit switches are working properly.
- All control and safety functions are in good working order.

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# 20. Installation of accessories

## 20.1 Installation of the adapter AIRSB for up-and-over doors

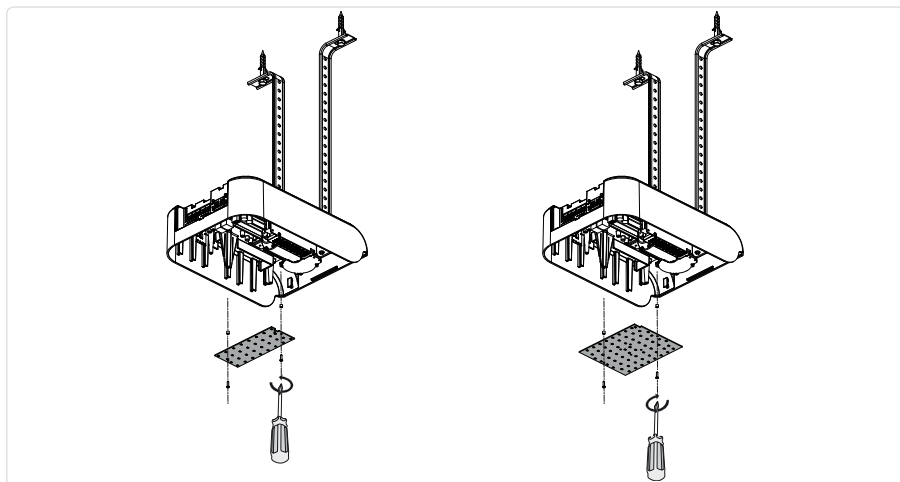In applications for up-and-over doors, you must use the AIRSB adapter.
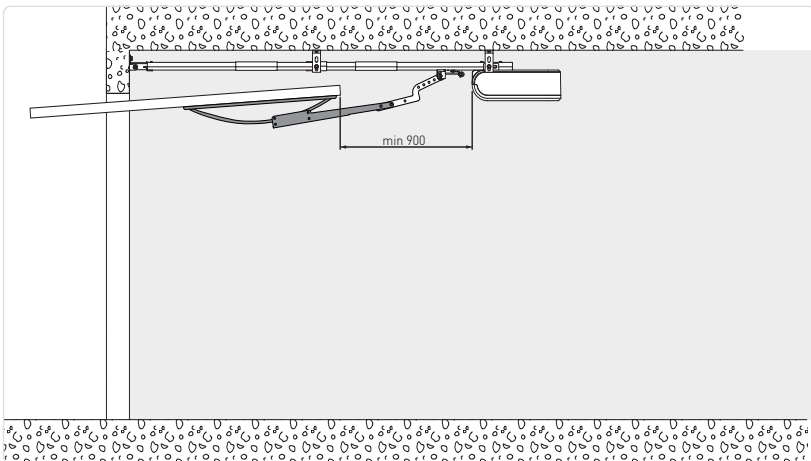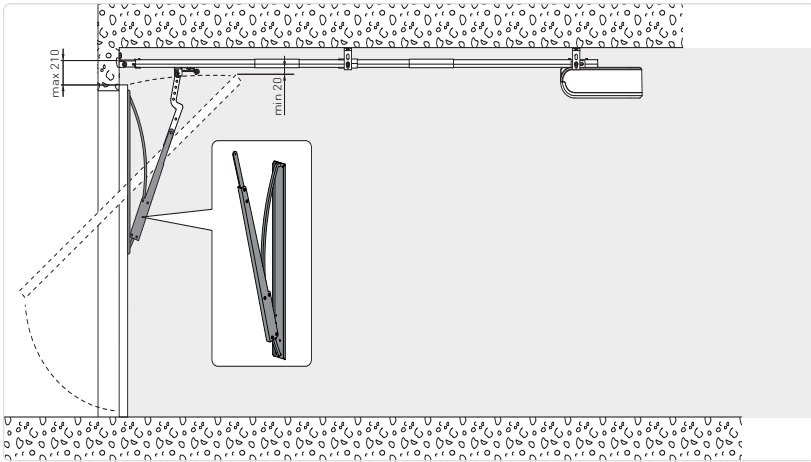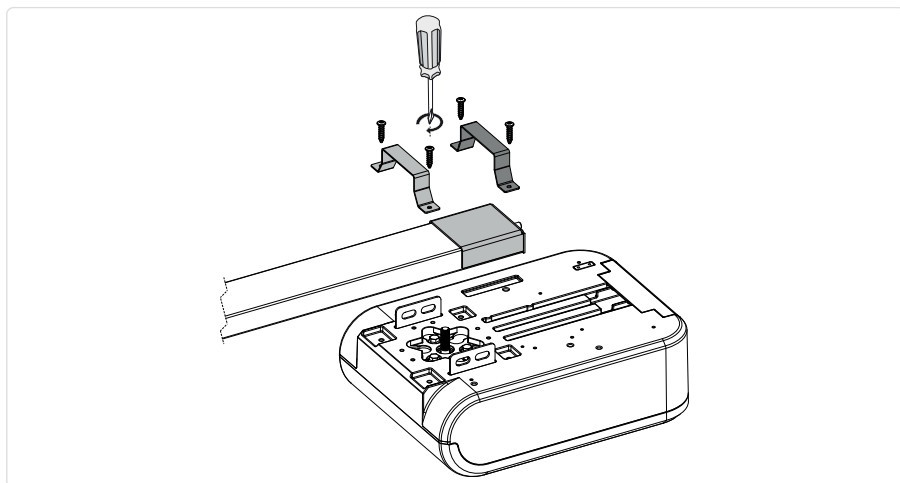




For complete instructions see manual:



**AIRSB**

## 20.2 Installation of the high-brightness LED light 3500 lms (ref. LEDLGT4K35)



## 20.3 Installation of AIR motor on rail TOP803T3 - TOP803T4 (ref. TSRFK)



For complete instructions see manual:



LEDLGT4K35



TSRFK