

COMUNELLO^K

AUTOMATION

INSTALLATION AND USER'S MANUAL

FORT 400 / 500 / 600 / 700 **1000 / DUAL 1000 / 1500 / ONE**

Electromechanical actuators for
residential and industrial sliding gates



comunello.com

ISTRUZIONI D'USO E DI INSTALLAZIONE
INSTALLATIONS-UND GEBRAUCHSANLEITUNG
INSTRUCIONS D'UTILISATION ET D'INSTALLATION
INSTRUCCIONES DE USO Y DE INSTALACION
ИНСТРУКЦИЯ ПО МОНТАЖУ

CE **MADE
IN
ITALY**

91300226 - Rev. 04 - 18/10/17

FIG. 1

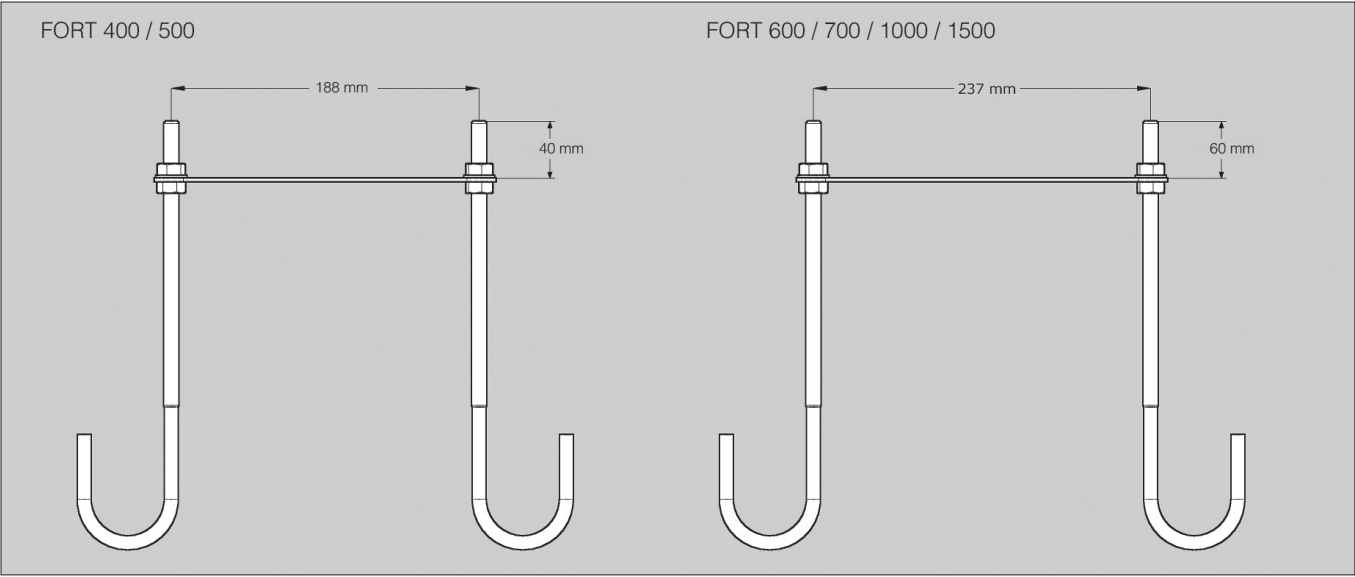


FIG. 2 A

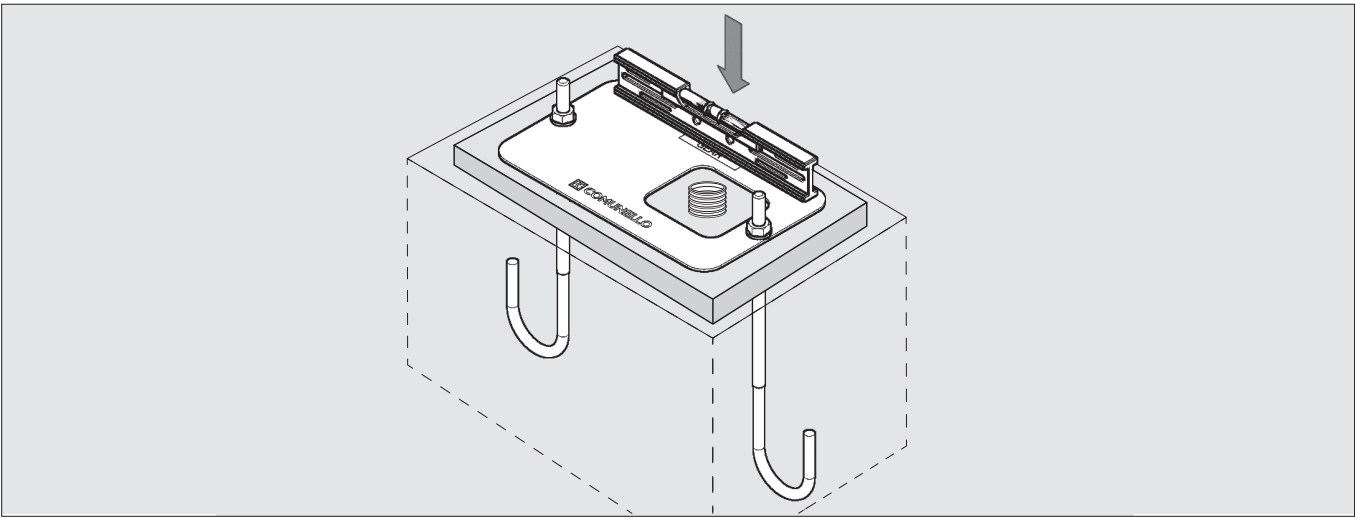


FIG. 2 B

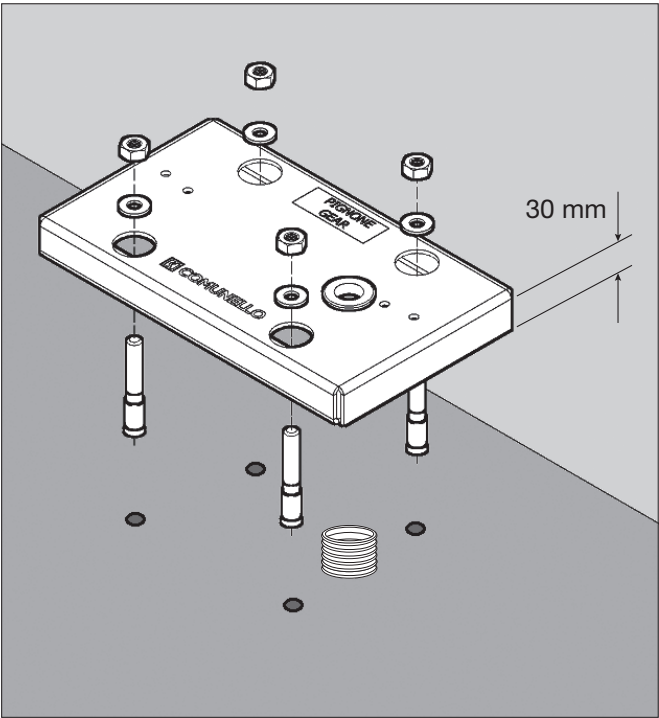


FIG. 3

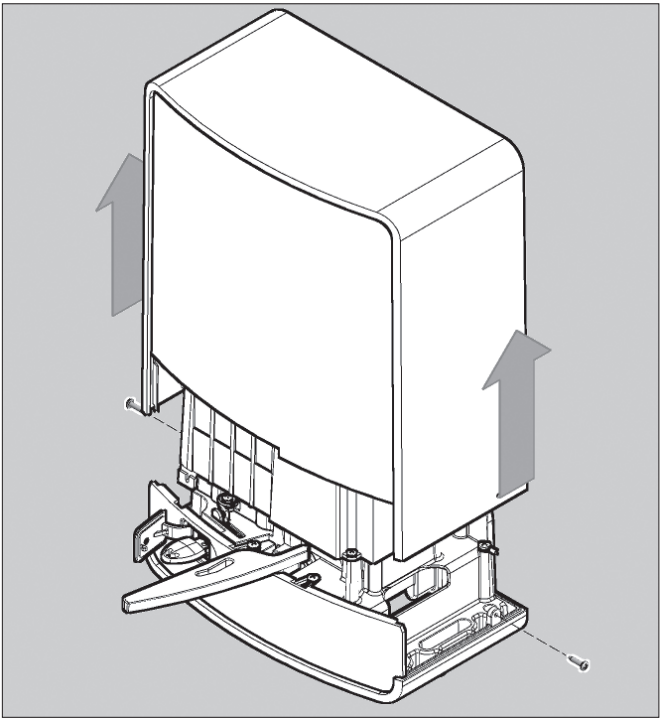


FIG. 4

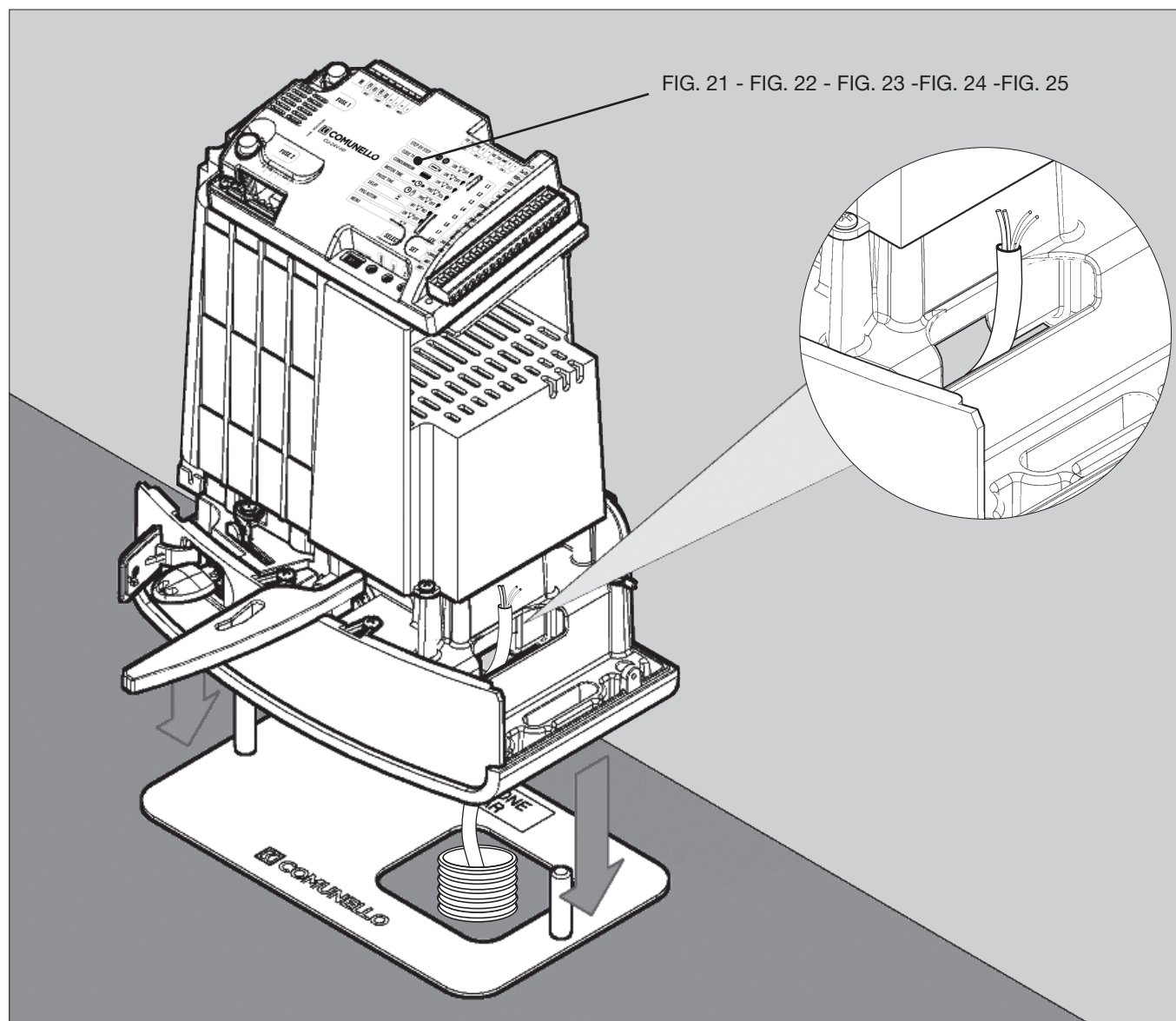


FIG. 5

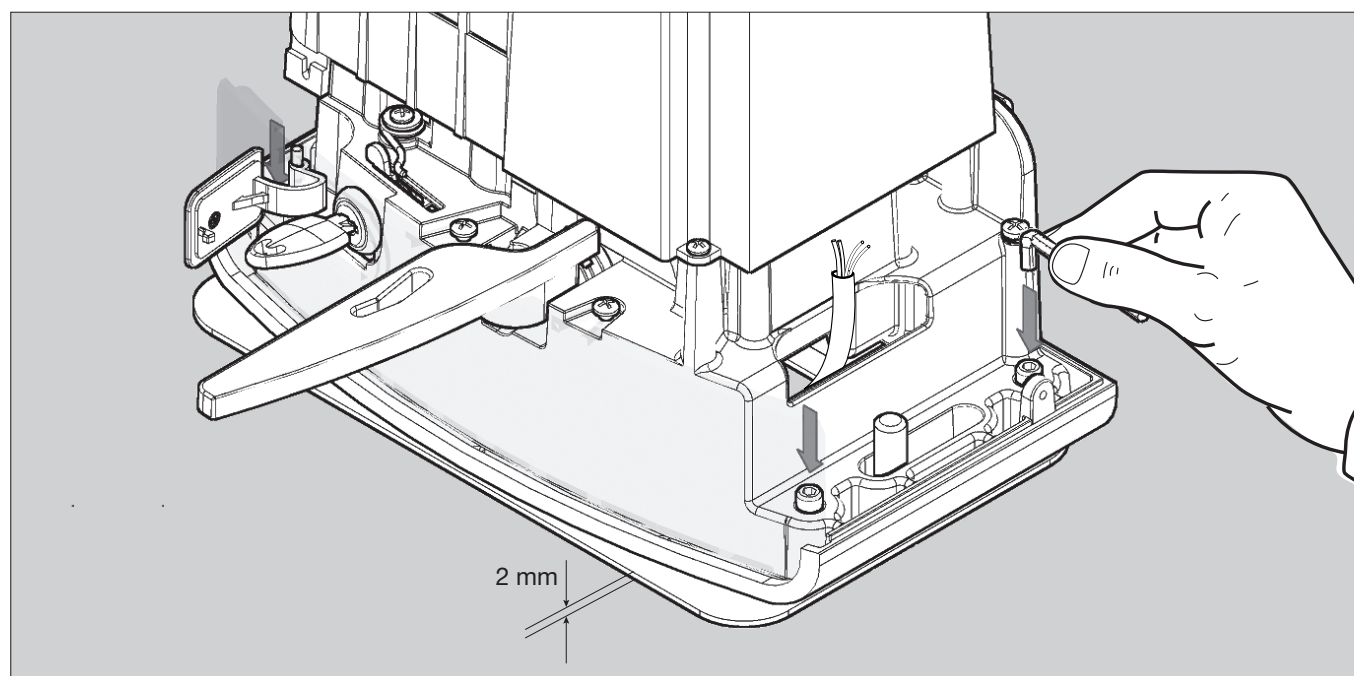


FIG. 6

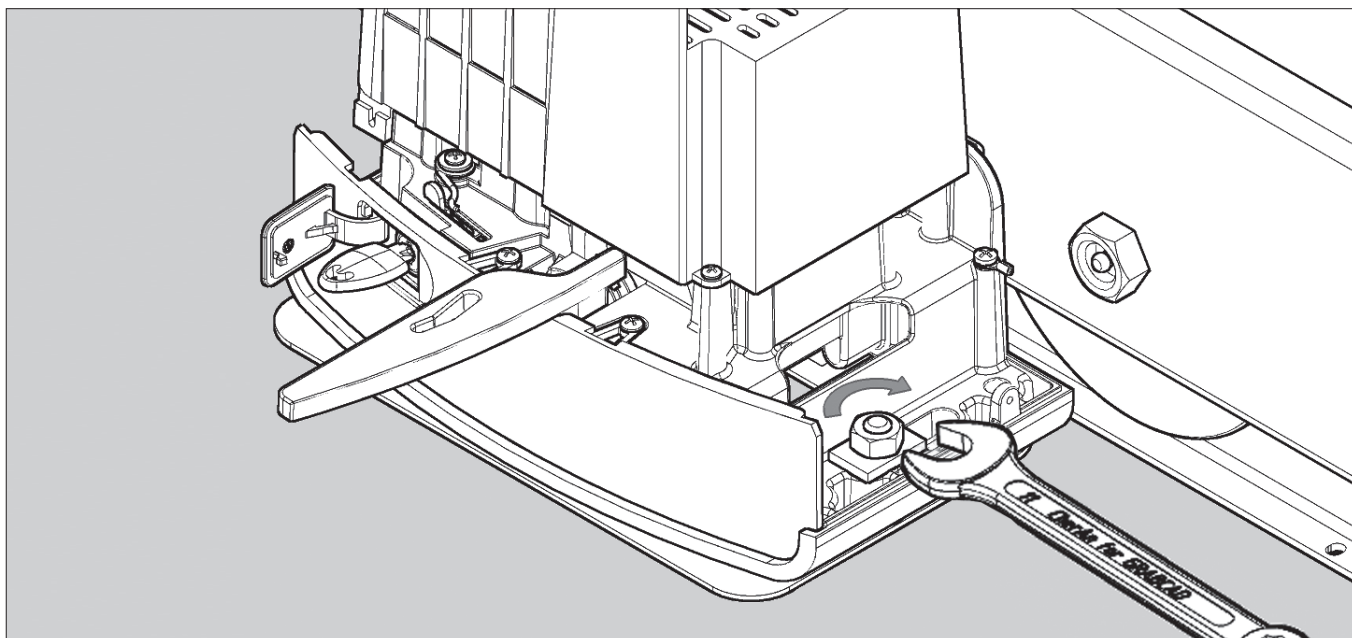


FIG. 7

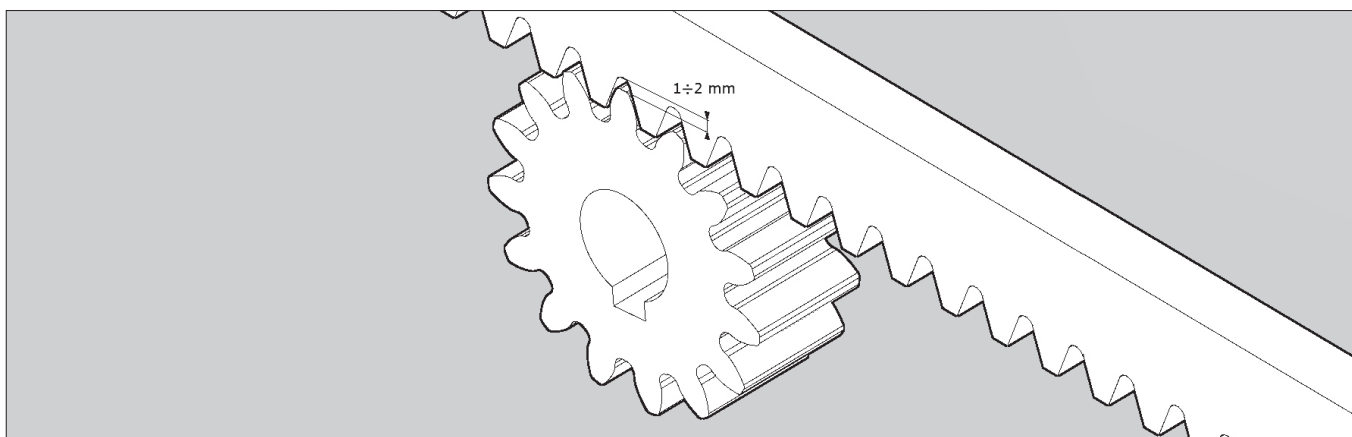


FIG. 8

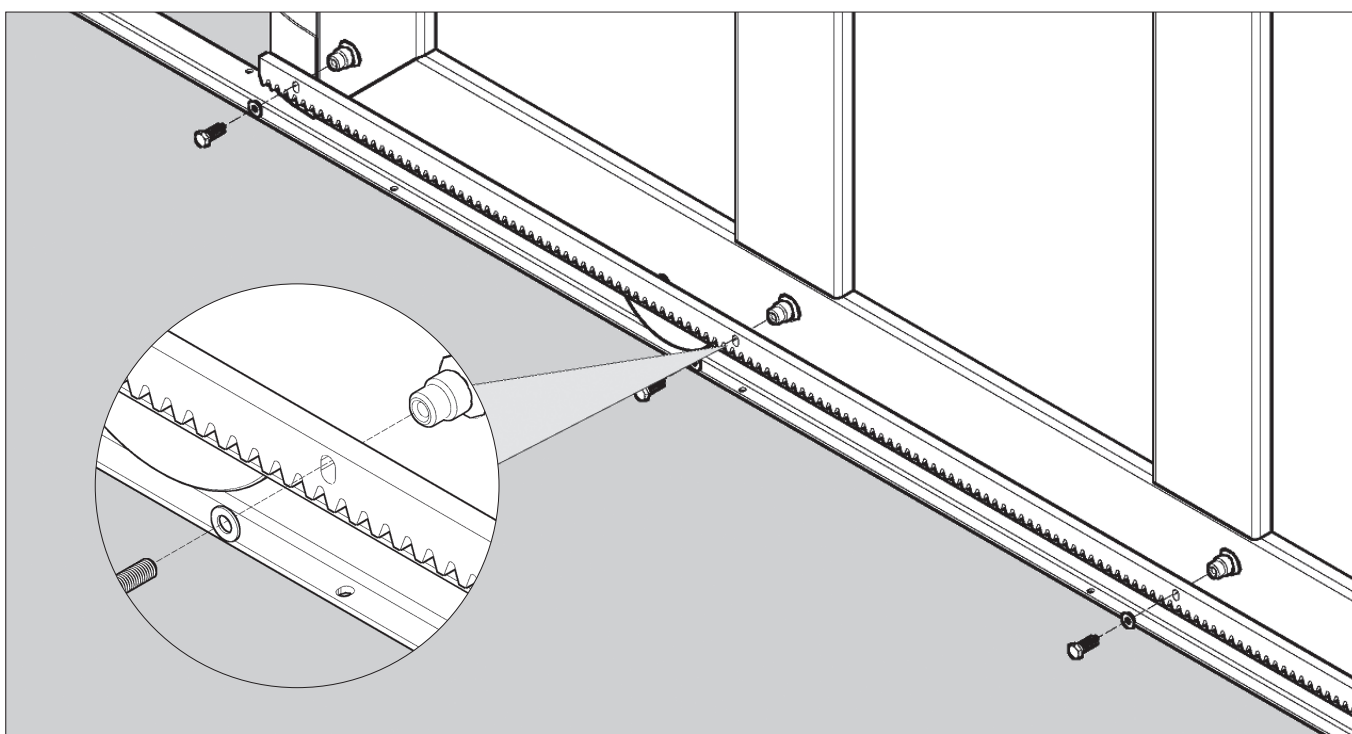


FIG. 9

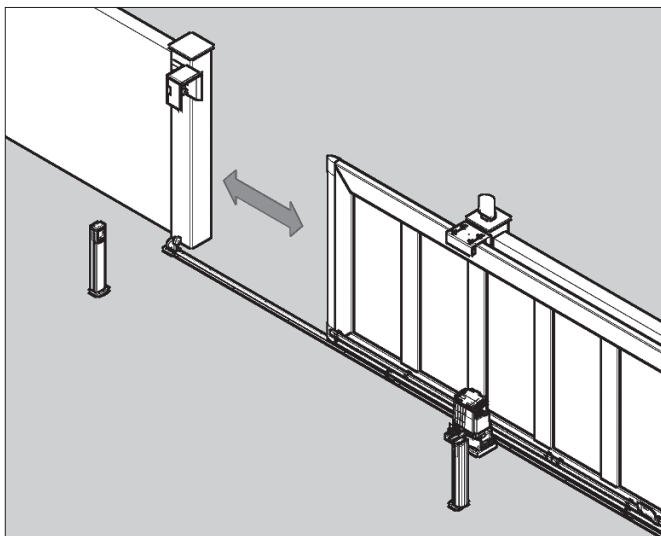


FIG. 10

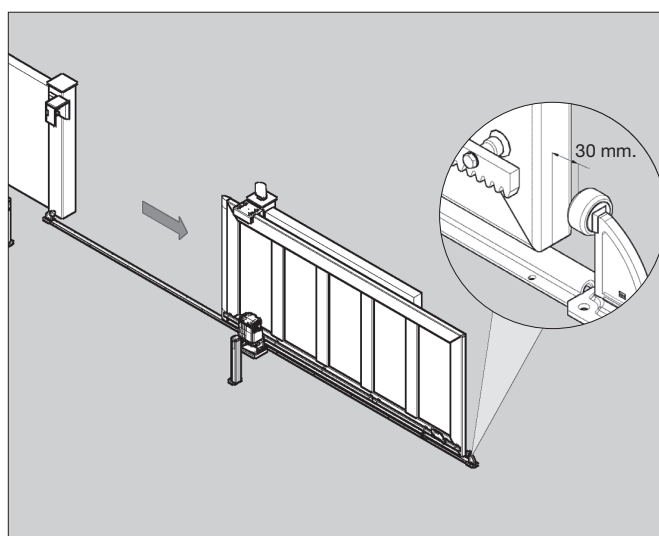


FIG. 11

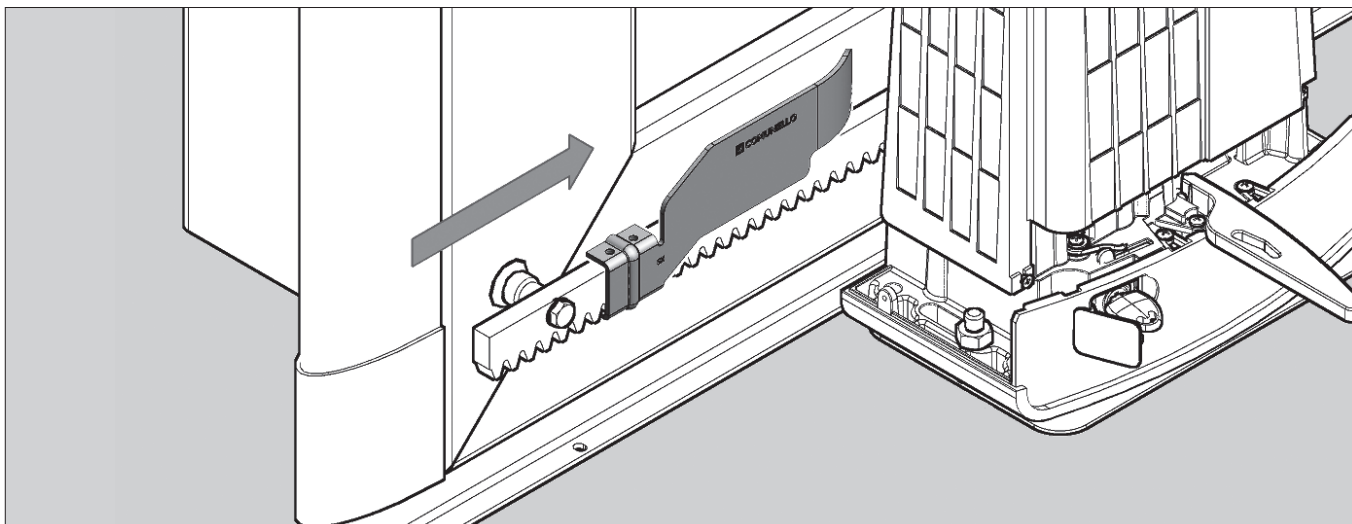


FIG. 12 A

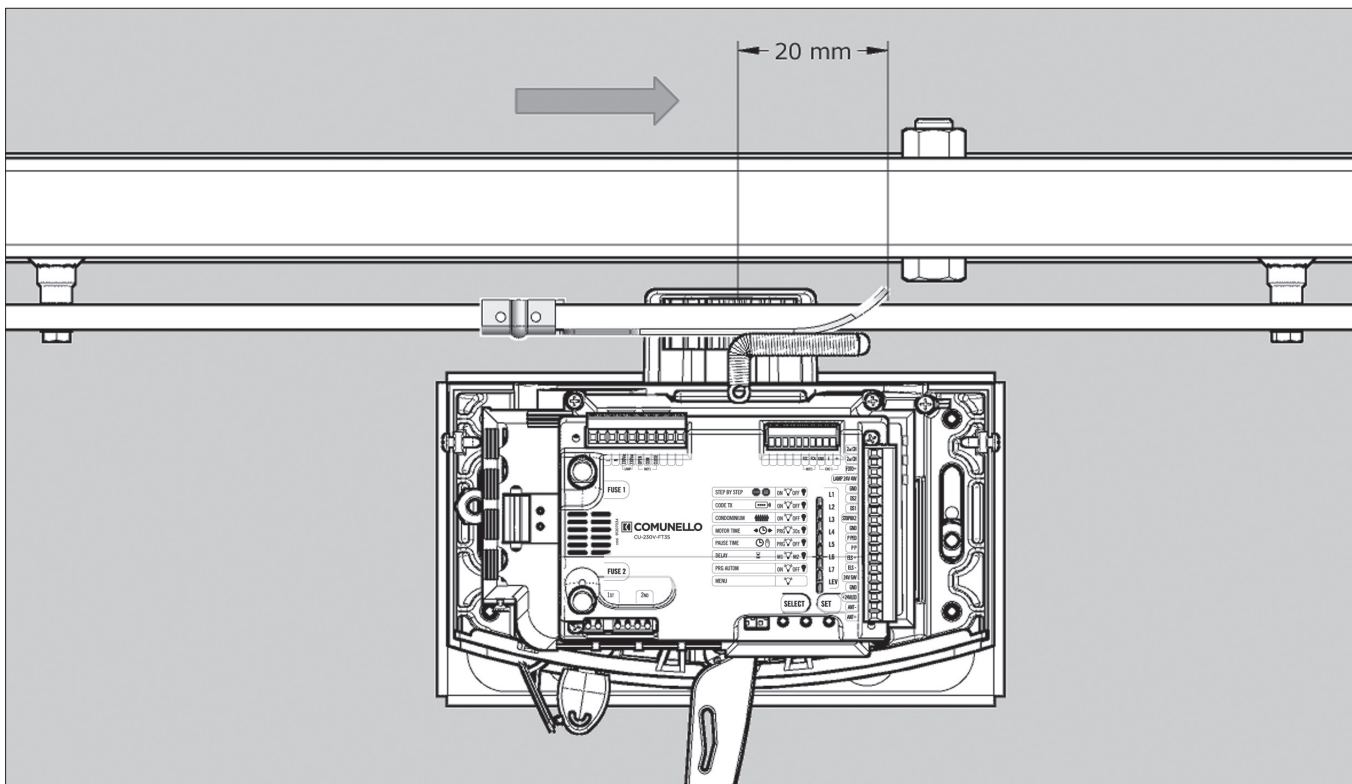


FIG. 12 B

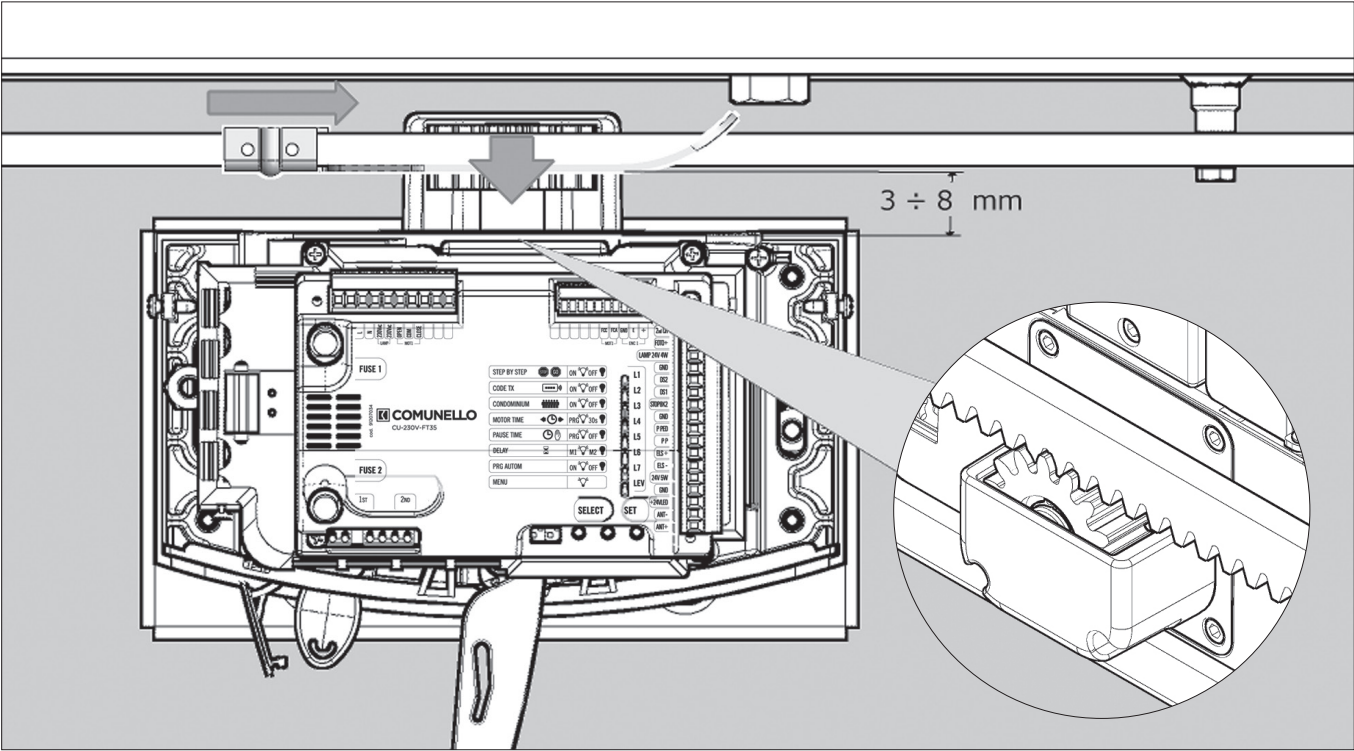


FIG. 13

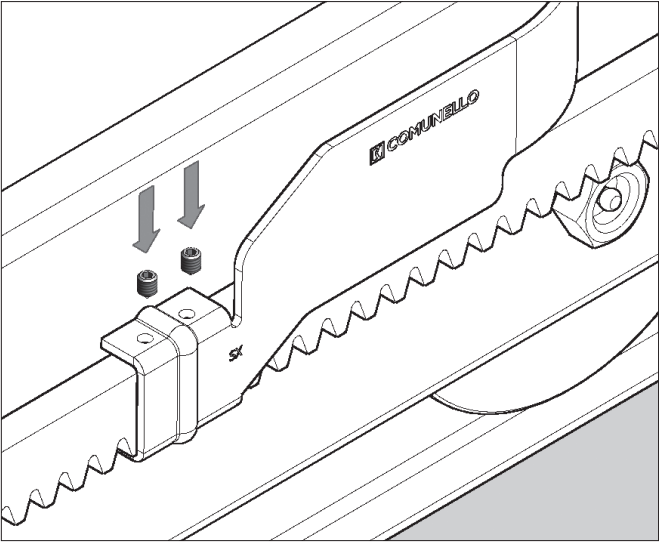


FIG. 14

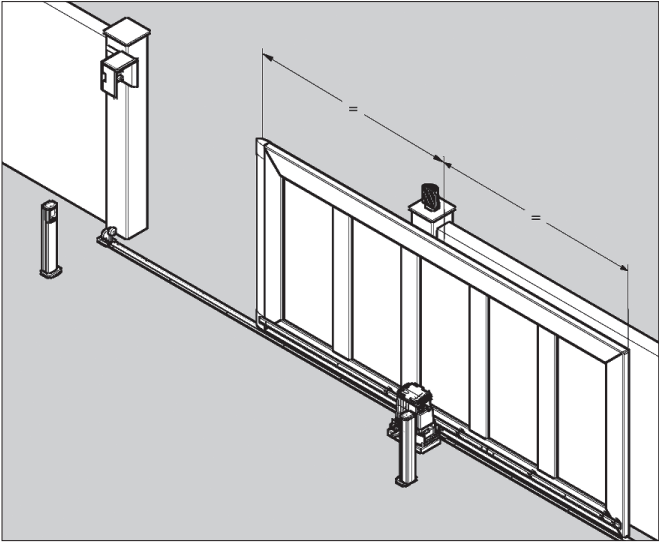


FIG. 15

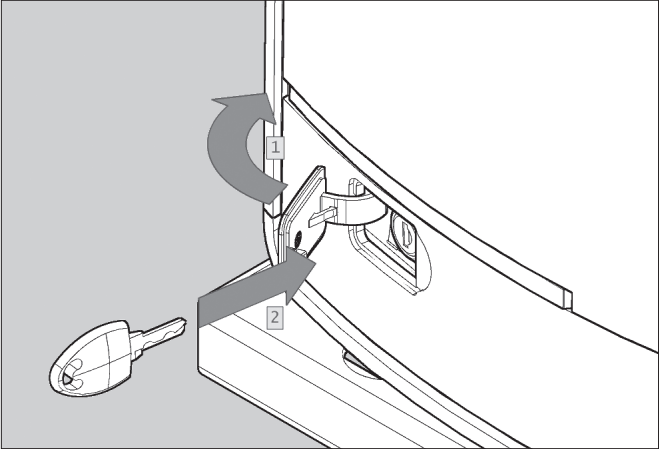


FIG. 16

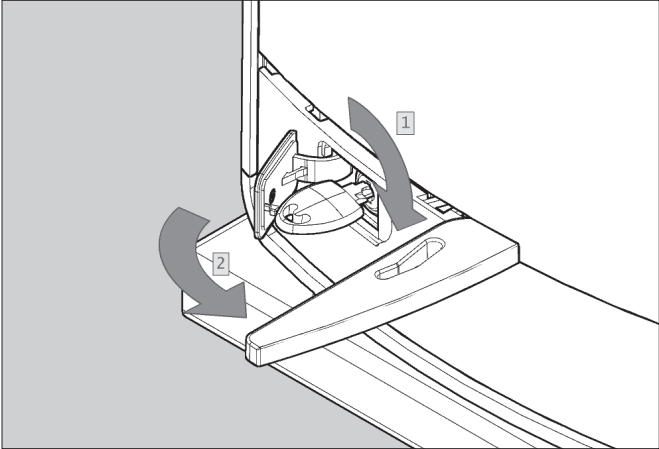


FIG. 17

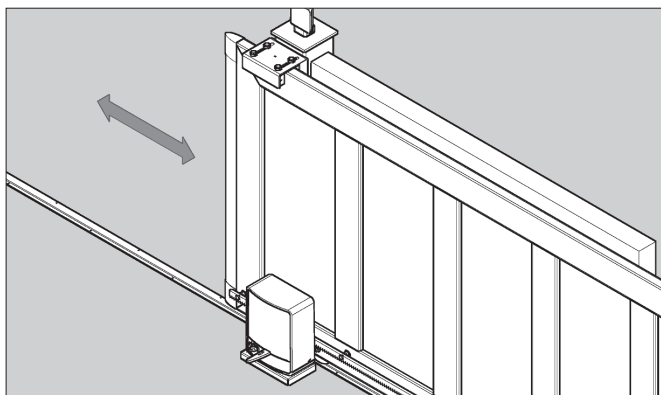


FIG. 18

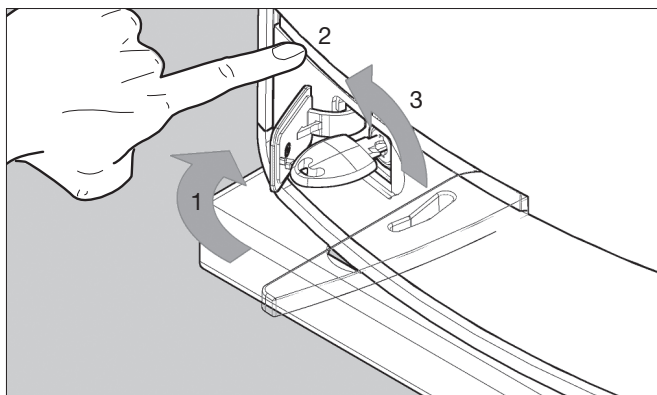


FIG. 19

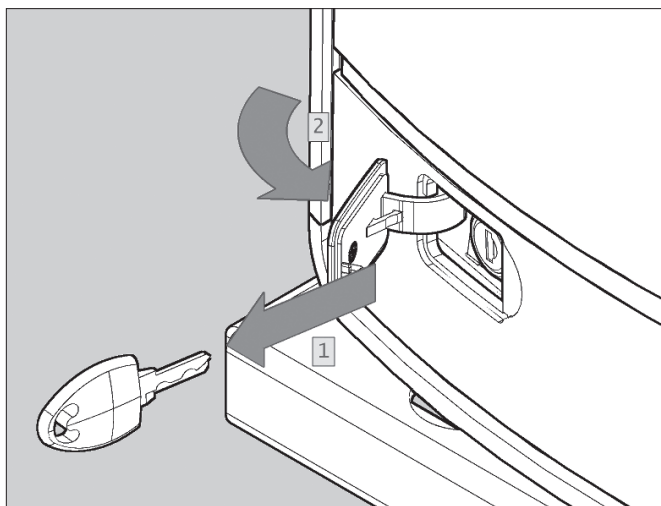


FIG. 20

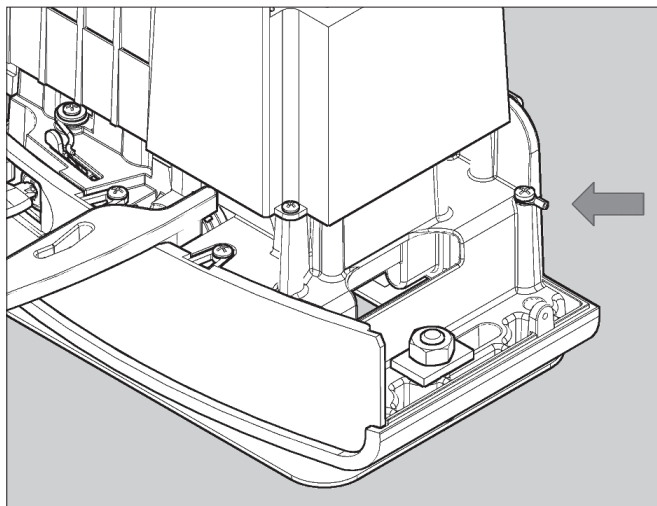


FIG. 21

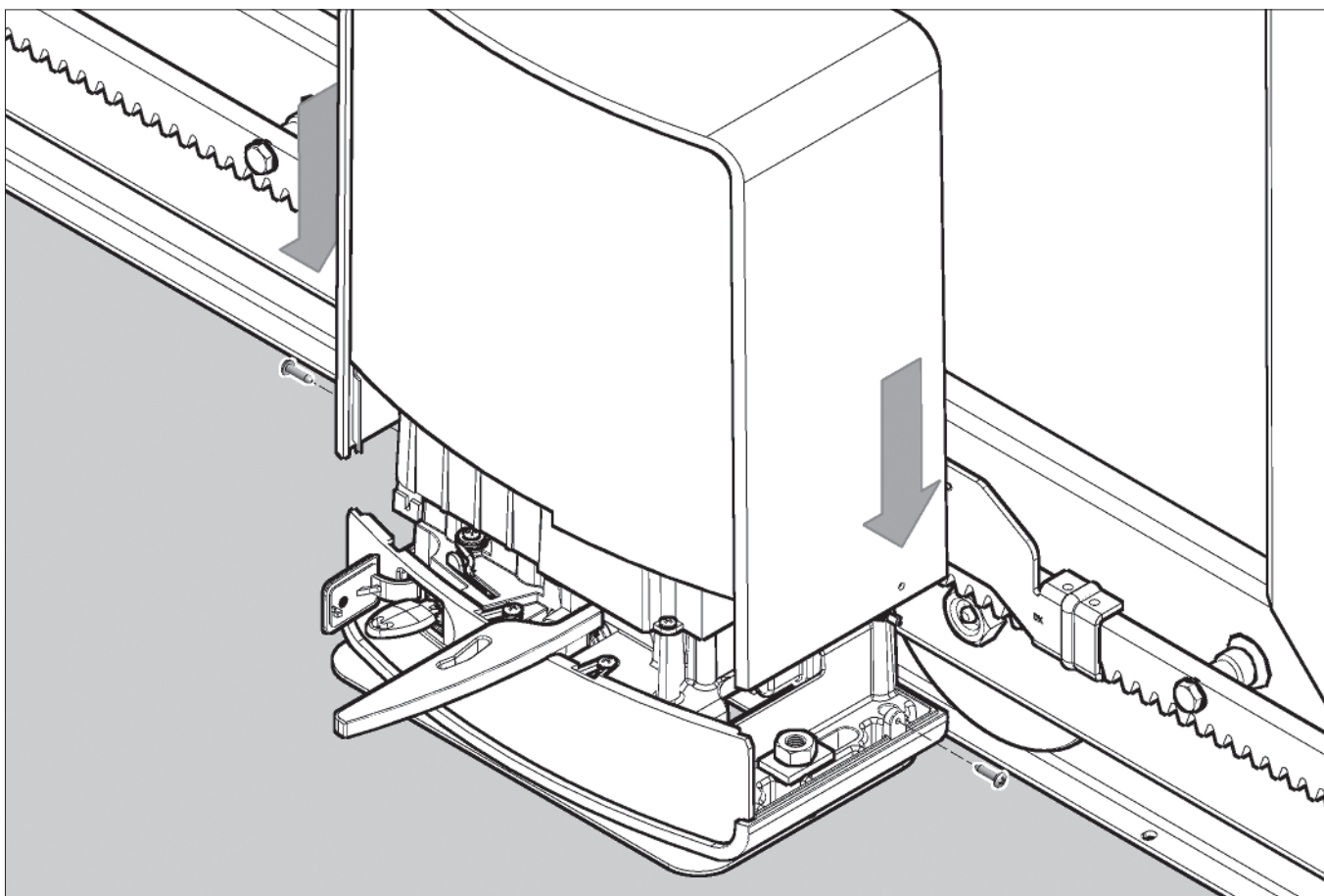
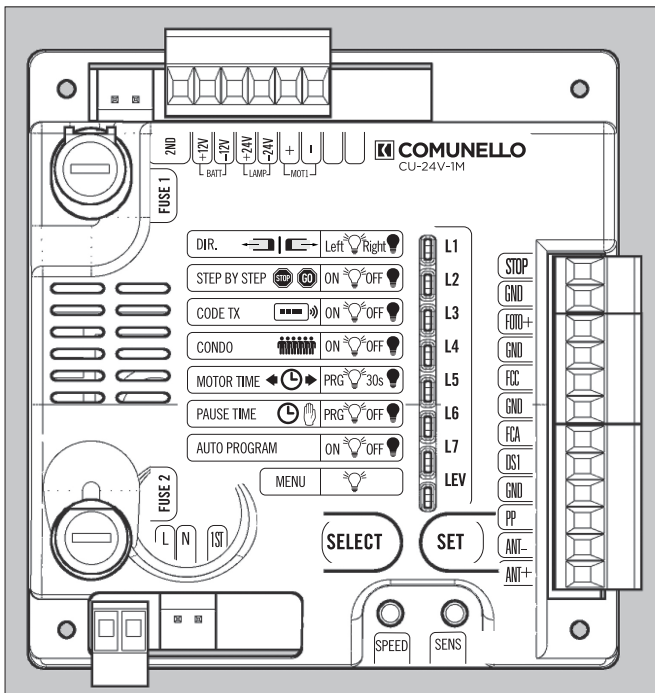
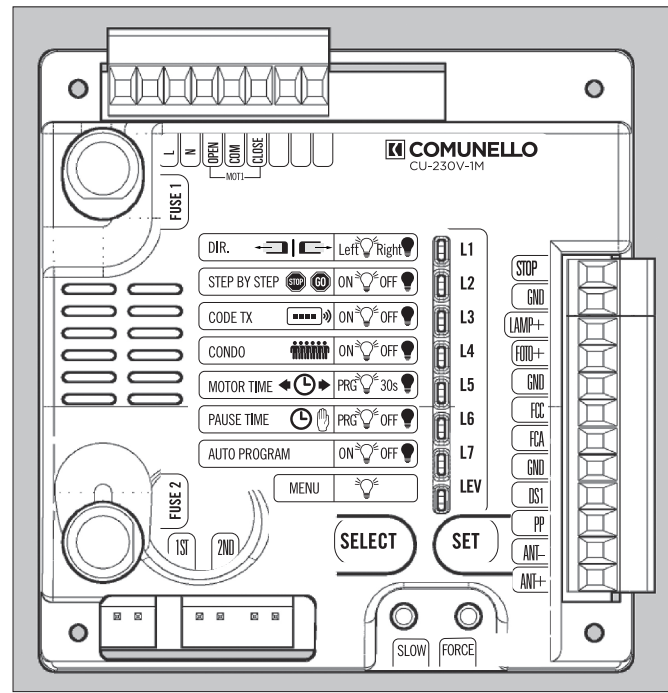


FIG. 22



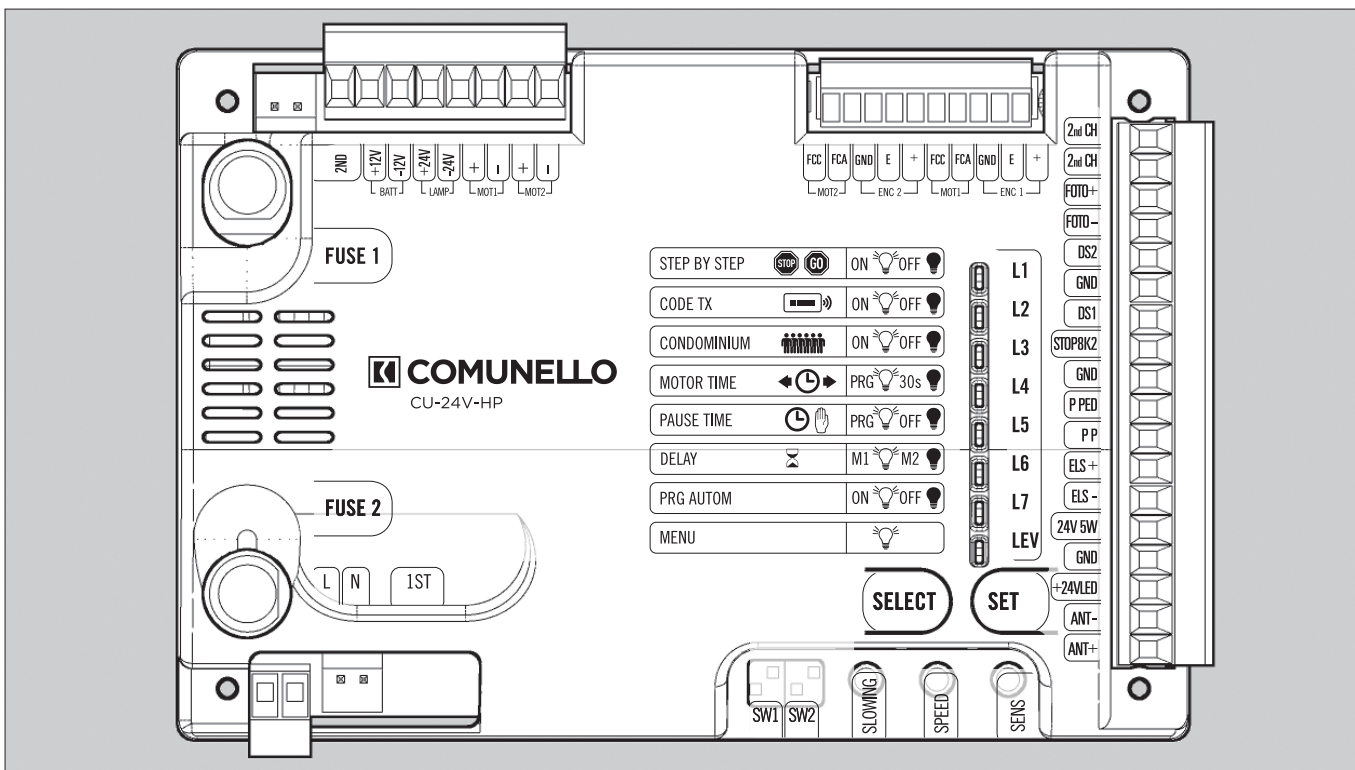
FT400-24V-B - FORT 400 24V NERO
 FT400-24V-W - FORT 400 24V BIANCO
 FT600-24V-B - FORT 600 24V NERO
 FT600-24V-W - FORT 600 24V BIANCO

FIG. 23



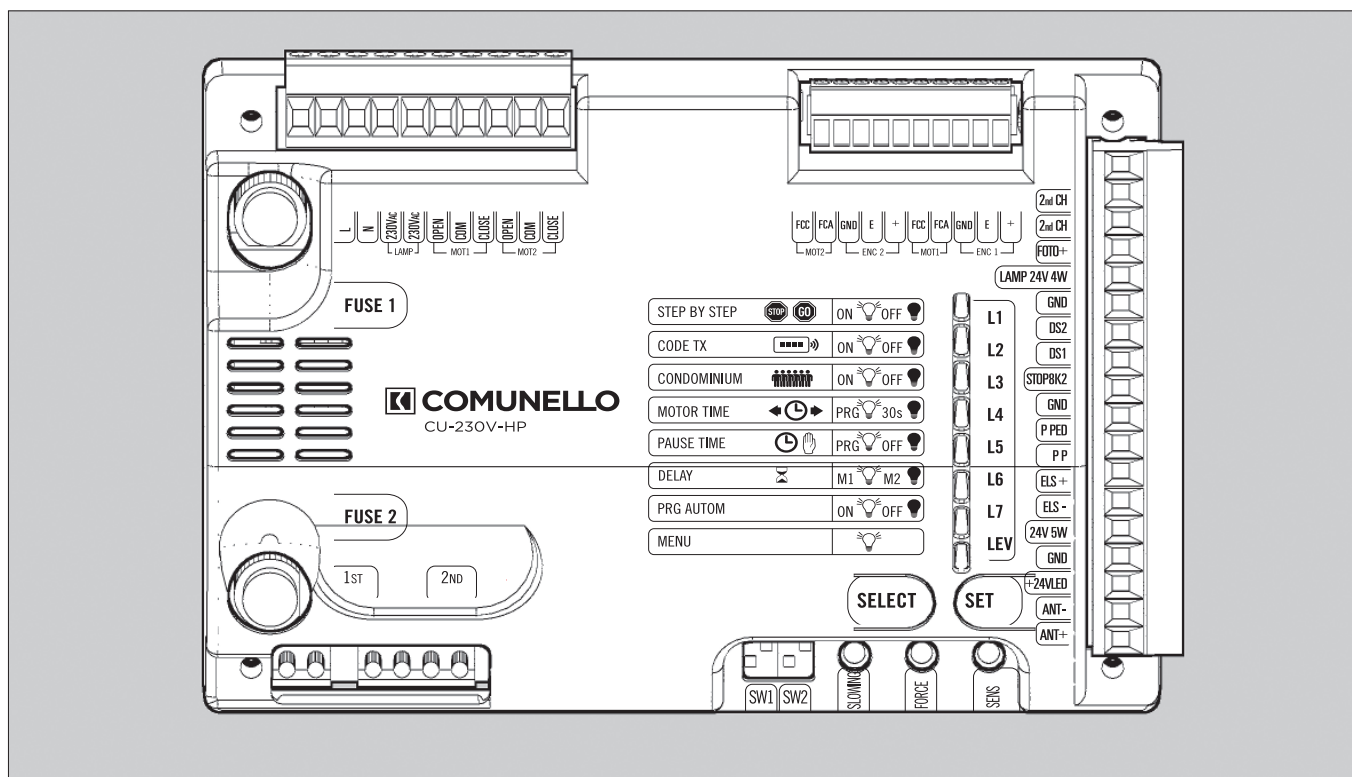
FT500-230V-B - FORT 500 230V NERO
 FT500-230V-W - FORT 500 230V BIANCO
 FT700-230V-B - FORT 700 230V NERO
 FT700-230V-W - FORT 700 230V BIANCO
 FT1000-230V-B - FORT 1000 230V NERO
 FT1000-230V-W - FORT 1000 230V BIANCO

FIG. 24



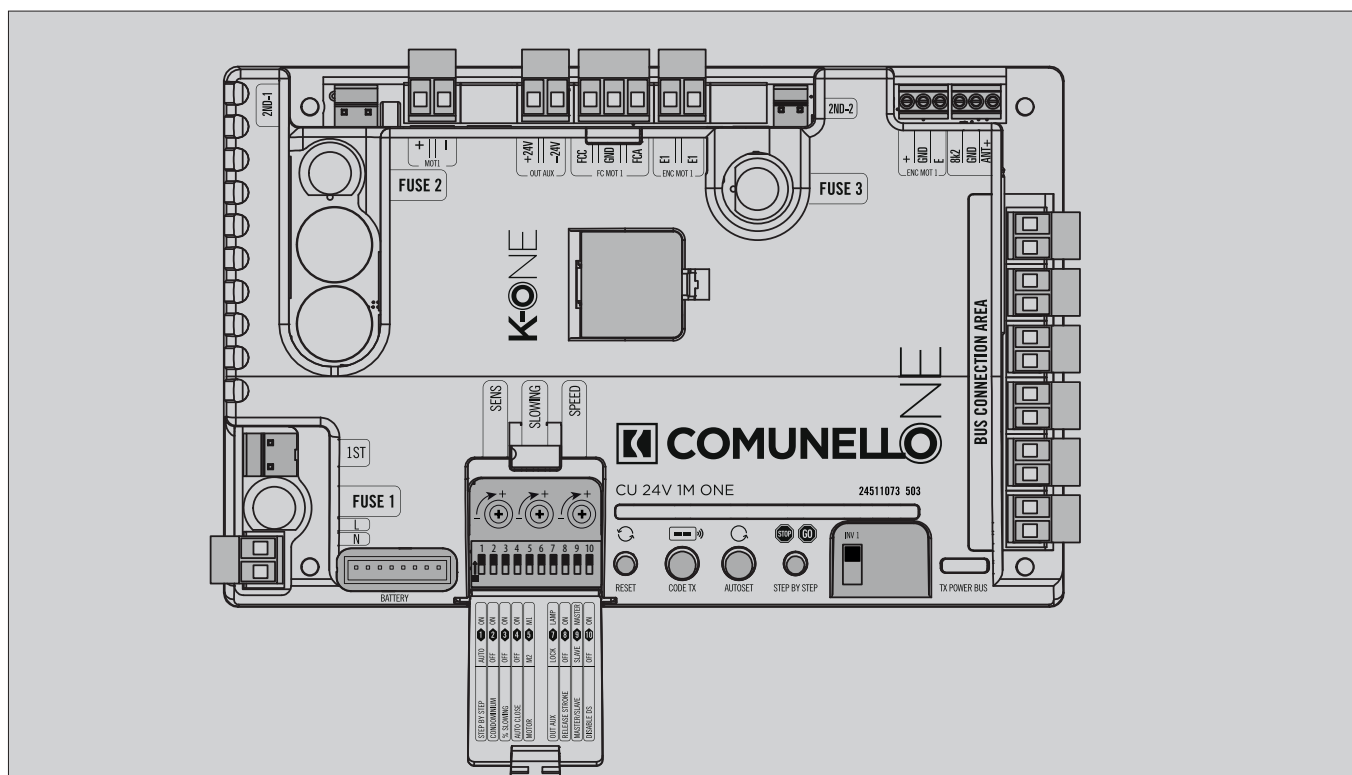
FT1000-24V-B - FORT 1000 24V NERO
 FT1000-24V-W - FORT 1000 24V BIANCO
 FT1000-24V-MG-B - FORT 1000 24V NERO
 FT1000-24V-MG-W - FORT 1000 24V BIANCO

FIG. 25



FT1000-230V-MG-B - FORT 1000 230V NERO
 FT1000-230V-MG-W - FORT 1000 230V BIANCO
 FT1500-230V-MG-B - FORT 1500 230V NERO
 FT1500-230V-MG-W - FORT 1500 230V BIANCO

FIG. 26



FT400-ONE-24V-FM-B
 FT600-ONE-24V-FM-B
 FT1000-ONE-24V-FM-B

FIG. 27

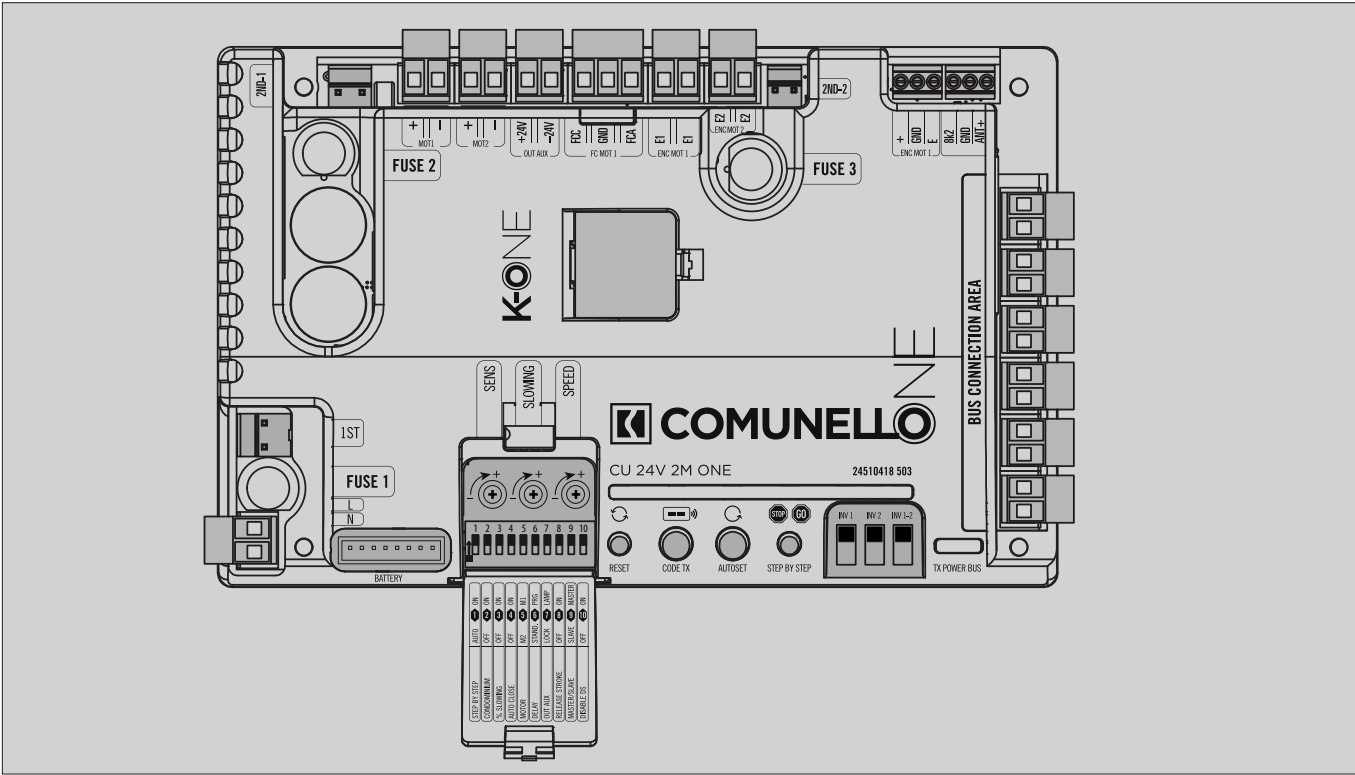
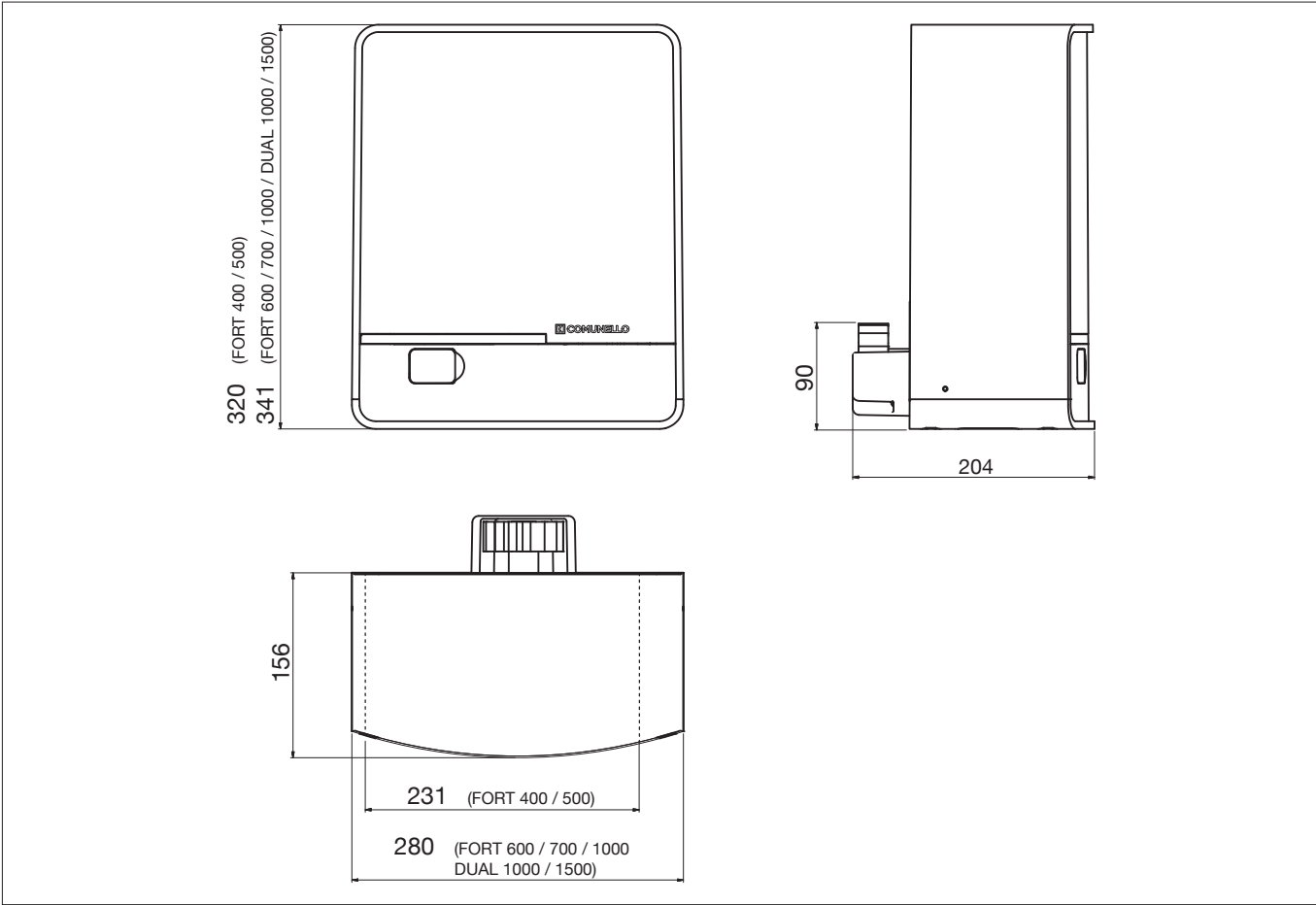


FIG. 28



INSTALLATION AND USER'S MANUAL

FORT 400/500/600/700/1000/DUAL 1000/1500/ONE

EC DECLARATION OF CONFORMITY:

The undersigned **Mr. Luca Comunello**, representing the following manufacturer,

Fratelli COMUNELLO Spa
Via Cassola 64, 36027 Rosà (VI) – Italy

DECLARES that the equipment described below:

Description: **Electromechanical gate opener**
Model: **FORT 400 / 500 / 600 / 700 / 1000 / DUAL 1000 / 1500 / ONE**

Is in compliance with the provisions set down in the following directives:

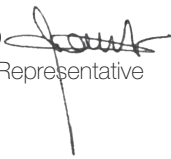
- 2014/30/EU (EMCD Directive)
- 2006/42/CE (MD Directive)
- 2014/53/EU (RED Directive)
- 2011/65/EU (RoHS Directive)

and that all the rules and/or technical specifications shown below have been applied:

EN61000-6-2:2005 + EN61000-6-3:2007
EN62233:2008 + EN50366:2003
EN301489-3
EN60335-2-103:2015 + EN60335-1:2012
and the following amendments.

Rosà (VI) – Italia
13-06-2017

and he also declares that it is not allowed to commission the device until the machinery where it will be incorporated or whose it will become a component will have been identified and will have been declared in compliance with the conditions of the 2006/42 EC Directive and with the national legislation that transpose it.

LUCA COMUNELLO 
Fratelli Comunello Legal Representative

CONTENTS

1	GENERAL PRESCRIPTIONS
1.1	Safety prescriptions
1.2	Installation prescriptions
1.3	Operating prescriptions
2	MODELS AND PRODUCTS DESCRIPTION
2.1	Description
2.2	Typical installation
3	PRODUCT TECHNICAL SPECIFICATIONS
4	INSTALLATION
4.1	Preliminary checks
4.2	Operating limits
4.3	Preparatory work for installation
4.4	Installing the FORT operator
4.4.1	Installation
4.4.2	Installation of limit stops and switches
4.4.3	Operator manual release
5	PREPARATION FOR ELECTRICAL CONNECTIONS
6	TESTING
7	PRODUCT MAINTENANCE
8	SPARE PARTS
9	DISPOSAL OF THE PRODUCT
10	WARRANTY

1 PRESCRIPTIONS**1.1 SAFETY PRESCRIPTIONS**

This installation manual is addressed exclusively to professionally skilled personnel. Read all the instructions carefully before starting the installation procedures. Any operations that are not expressly set down in these instructions are to be considered prohibited; improper use may result in damage to the product and place persons and property at risk. The manufacturer declines all liability for failure to observe best practices in gate construction and for any possible deformation that may occur during use of the product. Store this manual in a safe place for future reference. The design and construction of the devices of which model FORT is composed and this manual are in full compliance with statutory legislation. In consideration of potential hazards that may arise during the installation and use of FORT, the installation procedures must be carried out in full compliance with the applicable laws, standards and regulations; namely:

1.2 INSTALLATION PRESCRIPTIONS

- Before starting the installation procedures make sure you have any additional devices and materials that may be required to complete the automation system with FORT in consideration of the specific application.
- The automation system must not be used until the gate has been made safe
- Dispose of packaging materials in compliance with local regulations.

1.3 OPERATING PRESCRIPTIONS

- No modifications can be made to any part of the product unless specified in this manual. Unauthorized modification of the product is likely to lead to malfunctions. The manufacturer declines all liability for damage caused by unauthorized modifications.
- The parts of the automation system must never be immersed in water or other liquids. During the installation procedures ensure that no liquids penetrate inside the control unit or other open devices.
- If liquids penetrate any parts of the automation system disconnect the electrical power supply immediately and consult the technical service; the use of FORT in such conditions may give rise to potentially hazardous situations.
- Keep all parts of FORT away from heat sources and open flames; exposure to heat or flames may damage the devices and cause faults, fire, or hazardous situations.
- When the equipment remains unused for a long time, remove the optional battery and store it in a dry place to avoid the risk of leakage of harmful substances.
- Connect the control unit exclusively to an electrical power supply line equipped with an efficient protective earth conductor.
- Any operations that require the housing of FORT to be opened must be performed with the control unit and the electrical power supply disconnected; if the disconnect device is not clearly visible from where you are working, attach a warning notice to the effect: "WARNING - MAINTENANCE IN PROGRESS".
- In the case of tripping of circuit breakers or blowing of fuses, find the fault and remedy it before resetting the circuit breaker or changing the fuse.
- If the fault cannot be remedied using the information given in this manual, consult technical service.
- The device can't be used by children younger than 8 years of age and by people with reduced physical, sensory or mental capabilities, or without experience or the required knowledge if not under surveillance or after having received instructions about the safe use of the device and the inherent risks in it. Children should not play with the device. Cleaning and maintenance should not be carried out by children without surveillance.

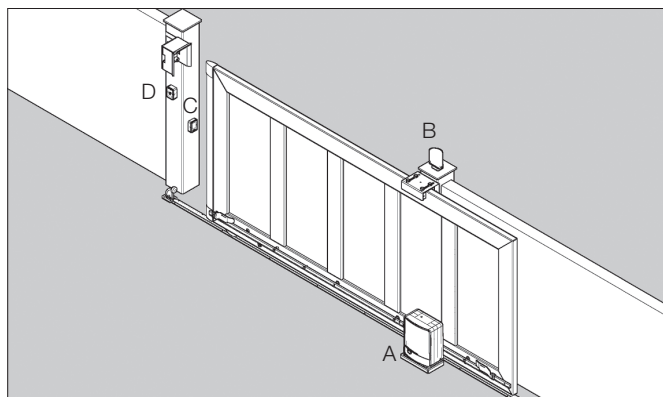
- Children can't play with the commands of the automatism. Remote controls should be kept out of reach of children. It is suggested to periodically examine the installation in order to verify the presence of possible damages to the cables, springs and mechanical parts. Automation should not be used if it is necessary a repair intervention.

2 MODELS AND PRODUCTS DESCRIPTION

2.1 DESCRIPTION

FORT is an electromechanical operator for residential and industrial sliding gates, with built-in control unit that allows the gate to be operated from a pushbutton, radio control and, whenever necessary, manually using the specific release key supplied. This model is supplied in the version FORT 400-500-600-700-1000-1500 for gates up to 400 kg - 500 kg - 600 kg - 700kg - 1000 kg - 1500 kg respectively.

2.2 TYPICAL INSTALLATION



KEY

- A OPERATOR WITH BUILT-IN CONTROL UNIT
B FLASHING LIGHT
C PHOTOCELLS
D KEY SELECTOR SWITCH

3 TECHNICAL SPECIFICATIONS

	FORT 400	FORT 500	FORT 600	FORT 700	FORT 1000	FORT DUAL 1000	FORT 1500
Power supply	230 V~ 50 Hz						
Operator power supply	24 V=== ONE 24V===	230 V~	24 V=== ONE 24V===	230 V~	24 V=== ONE 24V===	230 V~	230 V~
Power consumption	70 W	280 W	110 W	300 W	150 W	340 W	460 W
Nominal current input	3,0 A	1,2 A	5,0 A	1,3 A	6,2 A	1,5 A	2,0 A
Maximum thrust	350 N	450 N	550 N	600 N	900 N		1400 N
Duty cycle	Intensive	30%	Intensive	30%	Intensive	30%	30%
Protection rating	IP 24 D						
Insulation class	II	I	II	I	II	I	I
Working temperature	from -20°C to + 50°C						
Max weight of gate	400 Kg	500 Kg	600 Kg	700 Kg	1000 Kg	1000 Kg	1500 Kg
Rack module	M4						
Maximum speed	0,12 m/s	0,17 m/s					
Weight	8,9 Kg	9,9 Kg	10,6 Kg	12 Kg	12 Kg	12,4 Kg	12,6 Kg

4 INSTALLATION

4.1 PRELIMINARY CHECKS

For correct operation of the automation system, make sure:

- All the accessories are suitably sized.
- During manual operation the gate is not subject to swaying or bending.
- The gate is equipped with mechanical limit stops capable of arresting its closing and opening movements.
- The sliding gate does not move autonomously, when released in any position.
- There are no points of friction throughout the entire opening or closing travel of the gate.

4.2 APPLICATION LIMITS

Before installing the operator, make sure its specifications are within the application limits in the chapter "Product technical specifications". The gate must never exceed the maximum weight permitted for the chosen operator.

4.3 PREPARATORY WORK FOR INSTALLATION

Installing the operator:

- Assemble the counterplate with the anchor bolts, leaving 30 mm of threaded shank exposed (FIG. 1).
- Embed the counterplate in the cement, creating a step of 20 mm (FIG. 2A) and making sure it is perfectly level (FIG. 2A).
- In the case of an existing cement footing, use the lifting plate as shown in FIG. 2B.

4.4 INSTALLING THE FORT OPERATOR

4.4.1 INSTALLATION:

- Release the operator as described in heading 4.4.3.
- Remove the operator cover by undoing the 2 lateral screws located under the release lever (FIG. 3).
- Place the operator on the counterplate, routing the power, control and accessories cables through the cable inlet hole (FIG. 4).
- Before locking the operator to the counterplate with the supplied nuts, make any necessary adjustments by means of the 4 screws at the 4 corners (FIG. 5).
- Secure the operator (FIG. 6).
- Mesh the rack with the pinion, leaving 1 to 2 mm backlash between the teeth. This backlash must remain constant over the entire length of the rack (FIG. 7).
- Fix / weld the rack to the gate (FIG. 8).
- Perform a few manual gate opening and closing cycles to ensure the rack-pinion mesh has the same backlash over the full travel distance and that there are no points of abnormal friction that could overload the operator (FIG. 9).

4.4.2 INSTALLATION OF LIMIT STOPS AND SWITCHES

MECHANICAL LEVER-TYPE LIMIT STOP

- Bring the gate to its open position manually, stopping at a distance of 3 cm from the mechanical limit stop (FIG. 10).
- Slide the limit stop bracket along the rack until causing the limit stop to trip. (FIG. 11).
- From this position move the bracket forward by 2 cm (FIG. 12A).
- Fix the bracket to the rack with the dedicated screws (FIG. 13).
- Perform the same operation for the closing limit stop.

ELECTRONIC LIMIT SWITCH

- Bring the gate to its open position manually, stopping at a distance of 3 cm from the mechanical limit stop (FIG. 10).
- Slide the limit stop bracket along the rack until reaching the mid-point of the limit switch. (FIG. 12B).
- Keep a distance of 3 to 8 mm between bracket and limit switch (FIG. 12B).
- Fix the bracket to the rack with the dedicated screws (FIG. 13).
- Perform the same operation for the closing limit switch.
- Position the gate centrally (FIG. 14) and restore motorized control as described in heading 4.4.3.

4.4.3 MANUAL RELEASE

Perform the manual release procedure when the gate is to be opened manually. Activation of the release system may result in uncontrolled movements of the gate in the presence of imbalance or mechanical faults.

- Open the front hatch and insert the supplied key (FIG. 15).
- Turn the key clockwise through 90°. Grasp the release lever and pull it counter-clockwise (FIG. 16) as far as it will go. This action serves to disengage the pinion thereby allowing the gate to be opened manually.
- Do not push the gate leaf with force but rather accompany it through its full travel distance. (FIG. 17).

- The key cannot be removed from the lock until the release lever is returned to its initial position.
- To resume motorized control of the gate bring the release lever to its initial locked position (FIG. 18), then remove the key and stow it in a safe place that is known only to persons authorized to use the gate. (FIG. 19).

5 PREPARATION FOR ELECTRICAL CONNECTIONS

WARNING! To connect to the network, use a multipolar cable provided by regulations by the book's unit.

- Perform the manual release as illustrated in heading 4.4.3.
- Remove the operator cover by undoing the 2 lateral screws and the front screw located under the release lever (FIG. 3).
- Remove the cover upward (FIG. 3).
- Connect the yellow/green wire (earth) to the terminal eye already present alongside the cable inlet hole (FIG. 20) (for models of class I).
- Route the wires to the electronic board located at the top of the operator.
- Make the connections as illustrated in the control unit manual.
- Refit the operator cover (FIG. 21).

6 TESTING

Each part of the automation system, e.g. safety edges, photocells, emergency stop, etc. must be tested; follow the procedures shown in the instruction manuals supplied with the devices in question. Perform the following sequence of operations for testing of FORT:

- Check that all the prescriptions in this manual have been followed scrupulously, with special attention to the matters set down in chapter 1 "General Prescriptions";
- Using the supplied control or stopping devices (key selector switch, control pushbuttons or radio controls), perform gate opening, closing and stopping tests and make sure the gate responds correctly to the various commands.
- Check operation of all the system's safety devices (photocells, safety edges, emergency stop, etc.) one by one.

7 PRODUCT MAINTENANCE

Maintenance must be carried out at regular intervals by qualified personnel in compliance with the provisions of statutory legislation and the regulations in force. FORT must be serviced at least once every 6 months or after 10,000 operating cycles since the last service.

- Disconnect the operator from all power supplies.
- Check all the moving parts and replace any worn parts.
- Check all parts of the automation system for signs of deterioration.

8 SPARE PARTS

Spare parts can be purchased by contacting the technical service.

9 DISPOSAL

At the end of its useful life the automation system must be dismantled by qualified personnel and the materials must be recycled or disposed of in compliance with the local legislation in force.

10 WARRANTY

Fratelli Comunello SpA provides a warranty for 24 months for the correct functioning of the actuators from the date of manufacture, provided that the performance specifications indicated in the product instruction manuals are respected. Free of charge repair and replacement of components that are found to be faulty according to the indisputable judgment of the company's technical staff shall be guaranteed at the sole discretion of Fratelli Comunello Spa, and so excluding any claim for damages made by others. Warranty material shall be returned to Fratelli Comunello S.p.a. headquarters carriage paid and will then be shipped to the customer carriage unpaid. The material found to be faulty and returned to Fratelli Comunello S.p.a. shall remain property of the Seller. Any cost resulting from any work needed to repair the defect or to replace the material shall be charged to the Buyer. No compensation shall be allowed for the period of device inactivity. Work under warranty does not prolong the warranty period. The defect of the product shall be reported by the Buyer within 8 (eight) days from its discovery or

from the date of delivery of the goods, under penalty of invalidation of the warranty. Such claim shall be noted in writing.

Warranty does not cover:

Any product defect or damage that may have been incurred during transport; any defect or damage arising from any fault and/or from neglect, inadequacy and misuse of the electrical wiring in the Buyer's property; any defect or damage caused by any repairs carried out by non authorised personnel or by incorrect use/installation (with reference to this, system maintenance is recommended every 6 months) or if not original spare parts are used; any defect caused by chemicals or atmospheric conditions. The warranty does not cover any cost neither for consumable materials nor for alleged defects or convenient surveys.

Product Features Fratelli Comunello SpA products are subjected to continue changes and improvements; their technical features and image may therefore change without previous notice.

Competent court

Since the contract of sale is conrmed by an Order Conrmation drawn up in Rosà, any such dispute shall be settled by the laws of Italy and by the court of Vicenza (VI).