IMPORTANT REMARKS

⚠ **Prior to proceeding with installation, it is essential the instructions be read in full, since they contain important information regarding safety, installation, use and maintenance.**

AUTOMATION MUST BE IMPLEMENTED IN COMPLIANCE WITH THE EUROPEAN REGULATIONS IN FORCE:
EN 60204-1, EN 12445, EN 12453, EN 13241-1, EN 12635

- The installer must provide for a device (es. magnetotermical switch) ensuring the omnipolar sectioning of the equipment from the power supply. The standards require a separation of the contacts of at least 3 mm in each pole (EN 60335-1).
- The plastic case has an IP44 insulation; to connect flexible or rigid pipes, use pipefittings having the same insulation level.
- Installation requires mechanical and electrical skills, therefore it shall be carried out by qualified personnel only, who can issue the Compliance Certificate concerning the whole installation (Machine Directive 2006/42/CEE, Annex IIA).
- Also the automation upstream electric system shall comply with the laws and rules in force and be carried out workmanlike.
- We recommend to make use of an emergency button, to be installed by the automation (connected to the control unit STOP input) so that the gate may be immediately stopped in case of danger.
- For correct installation of the system, we recommend following the instructions issued by UNAC very carefully.
- This instruction manual is only for qualified technicians, who specialize in installations and automations.
- The contents of this instruction manual do not concern the end user.
- Every programming and/or every maintenance service should be done only by qualified technicians.
- Anything not expressly described in these instructions is prohibited; unforeseen uses may be a source of danger to people and property.
- Do not install the product in explosive environments and atmospheres: the presence of inflammable gases or fumes is a serious safety hazard.
- Do not make any modifications to any part of the automation device, or the accessories connected to it, unless described in this manual.
- Any other modifications will void the warranty on the product.
- The installation steps should be conducted so as to avoid rainy weather, which can expose electronic circuits to dangerous water seepage.
- All operations requiring the casing of the device to opened should be performed with the control unit disconnected from the electricity supply and with a warning notice displayed, for example: "CAUTION, MAINTENANCE IN PROGRESS".
- Avoid exposing the device close to sources of heat and flame.
- In the event of interventions on automatic or differential breakers or fuses, it is essential that faults be identified and resolved prior to resetting. In the case of faults that cannot be resolved using the information to be found in this manual, consult the V2 customer assistance service.
- V2 declines all responsibility for failure to comply with good construction practice standards in addition to structural deformation of the gate that might occur during use.
- V2 reserves the right to make modifications to the product without prior warning.
- Installation/maintenance personnel should wear individual protection devices (IPDs), such as overalls, safety helmets, boots and gloves.
- The ambient operating temperature should be that indicated in the technical characteristics table.
- The automation device should be shut down immediately in the event of any anomalous or hazardous situation; the fault or malfunction should be immediately reported to the person responsible.
- All safety and hazard warnings on the machinery and equipment should be complied with.
- Electromechanical actuators for gates are not intended to be used by people (including children) with diminished physical, sensory or mental capacity, or lacking in experience or knowledge, unless they are under supervision or have been instructed in use of the actuator by a person responsible for safety.

V2 has the right to modify the product without previous notice; it also declines any responsibility to damage or injury to people or things caused by improper use or wrong installation.



DISPOSAL OF THE PRODUCT

As for the installation operations, even at the end of this product's life span, the dismantling operations must be carried out by qualified experts.

This product is made up of various types of materials: some can be recycled while others need to be disposed of. Find out about the recycling or disposal systems envisaged by your local regulations for this product category.

Important! – Parts of the product could contain pollutants or hazardous substances which, if released into the environment, could cause harmful effects to the environment itself as well as to human health.

As indicated by the symbol opposite, throwing away this product as domestic waste is strictly forbidden. So dispose of it as differentiated waste, in accordance with your local regulations, or return the product to the retailer when you purchase a new equivalent product.

Important! – the local applicable regulations may envisage heavy sanctions in the event of illegal disposal of this product.

PRELIMINARY CHECKS AND IDENTIFICATION OF THE TYPE TO BE USED

It should be remembered that the device does not compensate for defects caused by improper installation, or poor maintenance, thus, prior to proceeding with installation, ensure that the structure is suitable and meets current standards and, if necessary, perform any structural modifications aimed at the implementation of safety gaps and the protection or segregation of all crushing, shearing and transit zones, and verify that:

- Your gate is equipped with a central latch.
- The gate has no friction points, either during closing or opening.
- The gate is well balanced, i.e. there is no tendency to move spontaneously when stopped in any position.
- The position identified for fixing the motor reducer allows easy and safe manual manoeuvring, compatible with the size of the motor reducer itself.
- The support on which the automation device will be fixed is solid and durable.
- The mains power supply to which the automation device is connected has a dedicated safety earthing system and differential breaker with tripping current less than or equal to 30 mA (the breaker gap distance should be greater than or equal to 3 mm).

Warning: The minimum safety level depends on the type of use; please refer to the following outline:

	CLOSURE USE TYPE		
TYPE OF ACTIVATION COMMANDS	**GROUP 1** Informed people (use in private area)	**GROUP 2** Informed people (use in public area)	**GROUP 3** Informed people (unlimited use)
Man-present command	A	B	Not possible
Remote control and closure in view (e.g. infrared)	C or E	C or E	C and D or E
Remote control and closure not in view (e.g. radio)	C or E	C and D or E	C and D or E
Automatic control (e.g. timed closure control)	C and D or E	C and D or E	C and D or E

GROUP 1 - Only a limited number of people are authorised for use, and closure is not in a public area. Examples of this type are gates inside business premises, where the sole users are employees, or a part of them who have been suitably informed.

GROUP 2 - Only a limited number of people are authorised for use, but in this case, closure is in a public area. An example of this may be a company gate that accesses onto a public street, and which is only used by employees.

GROUP 3 - Anyone can use the automated closure, which is thus located on public land. For example the access gate to a supermarket or an office, or a hospital.

PROTECTION A - Closure is activated by means of a control button with the person present, i.e. with maintained action.

PROTECTION B - With the person present, closure is activated by a command controlled by means of a key-switch or the like, in order to prevent use by unauthorised persons.

PROTECTION C - Restricts the force of the leaf of the door or gate. I.e., in the case of the gate striking an obstacle, the impact force must fall within a curve established by the regulations.

PROTECTION D - Devices, such as photocells, capable of detecting the presence of people or obstacles. They may be active on just one side or on both sides of the door or gate.

PROTECTION E - Sensitive devices, such as footboards or immaterial barriers, capable of detecting the presence of a person, and installed in such a way that the latter cannot be struck in any way by a moving leaf or panel. These devices should be active within the entire “danger zone” of the gate. The Machinery Directive defines “Danger Zone” as any zone surrounding and/or near machinery where the presence of an exposed person constitutes a risk to the health and safety of that person.

The risk analysis should take into consideration all danger zones for the automation device, which should be appropriately protected and marked.

In a clearly visible area, apply a sign with information identifying the motorised door or gate.

The installer should provide the user with all the information relating to automatic operation, emergency opening and maintenance of the motorised door or gate.

EU DECLARATION OF CONFORMITY AND DECLARATION OF INCORPORATION OF PARTLY COMPLETED MACHINE

Declaration in accordance with Directives: 2014/35/UE (LVD); 2014/30/UE (EMC); 2006/42/CE (MD) ANNEX II, PART B

The manufacturer (*) V2 S.p.A., headquarters in Corso Principi di Piemonte 65, 12035, Racconigi (CN), Italy

Under its sole responsibility hereby declares that:
the partly completed machinery model(s):
AR MEDIUM 3000 24
AR MEDIUM 3000 230
AR MEDIUM 3000 120

Description: electromechanical actuator for gates

- is intended to be installed on gates, to create a machine according to the provisions of the Directive 2006/42/EC. The machinery must not be put into service until the final machinery into which it has to be incorporated has been declared in conformity with the provisions of the Directive 2006/42/EC and 89/106/CE.
- is compliant with the applicable essential safety requirements of the following Directives:
  Machinery Directive 2006/42/EC (annex I, chapter 1)
  Low Voltage Directive 2014/35/EU
  Electromagnetic Compatibility Directive 2014/30/EU
  Directive RoHS3 2015/863/EU

The relevant technical documentation is available at the national authorities' request after justifiable request to:
V2 S.p.A., Corso Principi di Piemonte 65, 12035, Racconigi (CN), Italia

The person empowered to draw up the declaration and to provide the technical documentation:

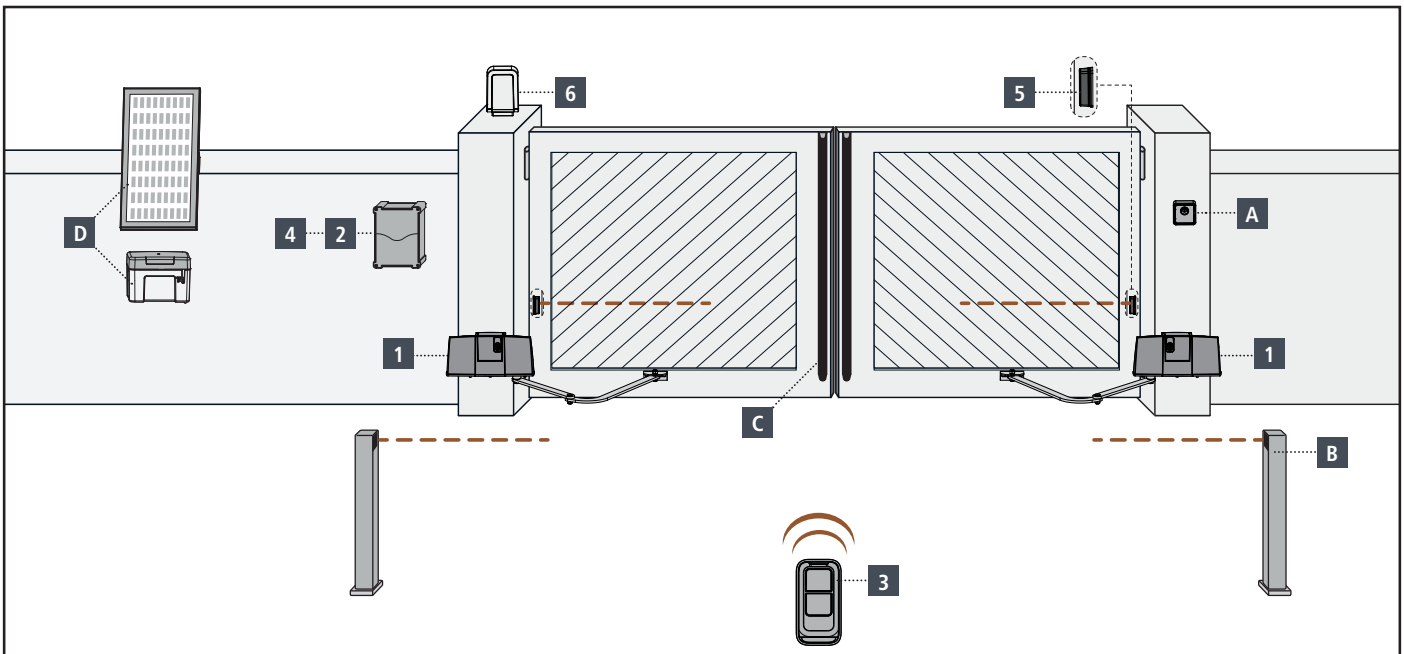
Roberto Rossi
Legal representative of V2 S.p.A.
Racconigi, il 01/03/2024



TECHNICAL DATA

		AR MEDIUM 3000 24	AR MEDIUM 3000 120	AR MEDIUM 3000 230
Max. leaf lenght	m	3 x 500 Kg 2,5 x 600 Kg 2 x 800 Kg	3 x 500 Kg 2,5 x 600 Kg 2 x 800 Kg	3 x 500 Kg 2,5 x 600 Kg 2 x 800 Kg
Power supply	Vac / Hz	24 Vdc	120 / 60	230 / 50
Idling current	A	1,5	3,8	1,8
Full load current	A	7,5	4,5	2,5
Maximum electrical power	W	-	575	575
Capacitor	µF	-	30	8
Speed	Rpm	1,4	1,9	1,6
Torque	N m	320	340	340
Working temperature	°C	-30 ÷ +60	-30 ÷ +60	-30 ÷ +60
Thermal protection	°C	140	140	140
Working cycle	cycles/hour	100	29	29
Motor weight	Kg	14,6	14,6	14,6

INSTALLATION LAYOUT



COMPONENTS

1. Motor
2. Control unit
3. Transmitter
4. Receiving module
5. Photocells
6. Flashing light

ADDITIONAL ACCESSORIES

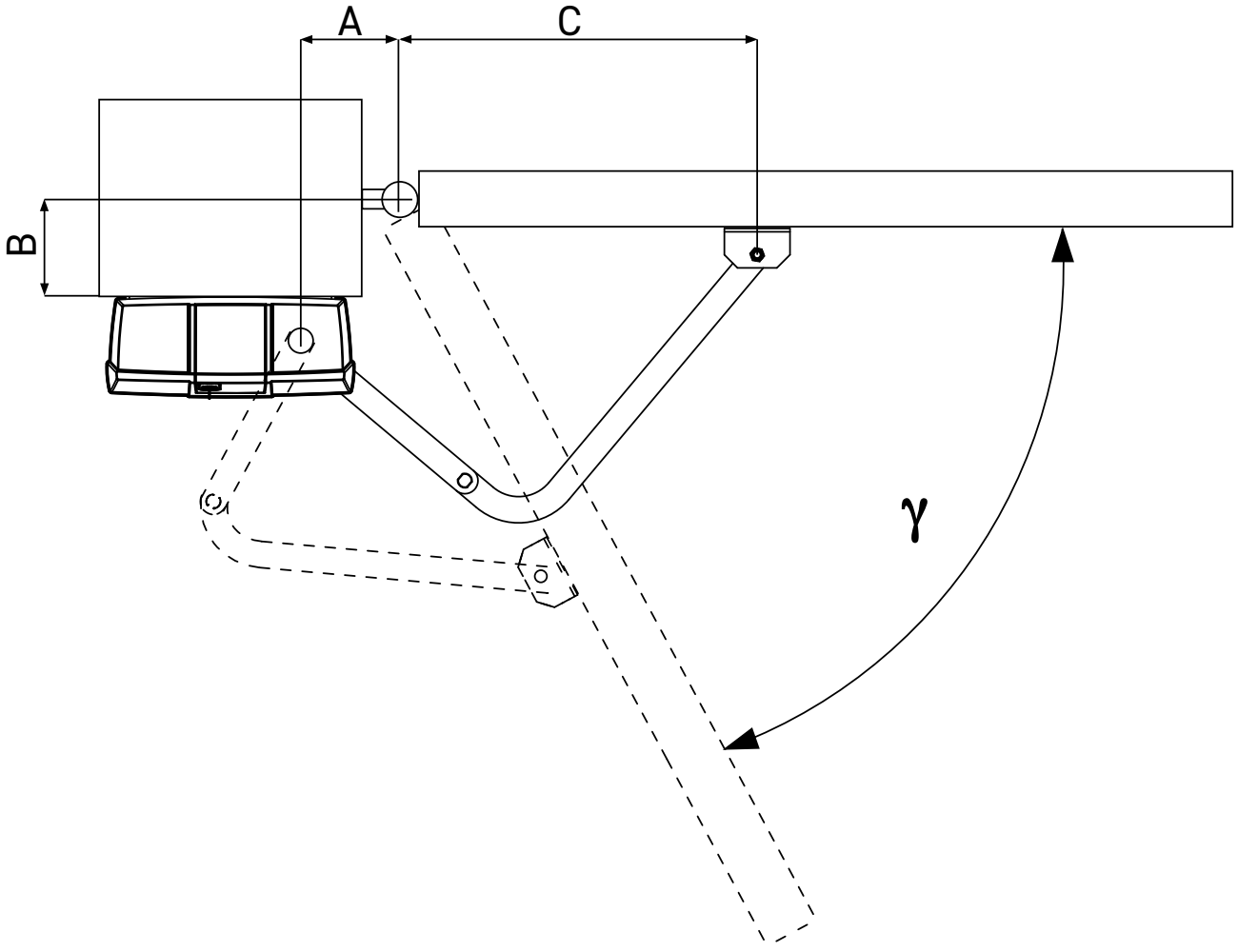
- A Key switch
- B Pillar photocells
- C Safety edges
- D Solar power system (only for 24V motors)

LENGTH OF THE CABLE	< 10 metres	from 10 to 20 metres	from 20 to 30 metres
Power supply (230V)	3G x 1,5 mm^2	3G x 1,5 mm^2	3G x 2,5 mm^2
24V motor power supply	2G x 1,5 mm^2	2G x 1,5 mm^2	2G x 2,5 mm^2
24V motor power supply	2G x 1,5 mm^2	2G x 1,5 mm^2	2G x 2,5 mm^2
Photocells (TX)	2 x 0,5 mm^2	2 x 0,5 mm^2	2 x 0,5 mm^2
Photocells (RX)	4 x 0,5 mm^2	4 x 0,5 mm^2	4 x 0,5 mm^2
Key switch	2 x 0,5 mm^2	2 x 0,5 mm^2	2 x 0,5 mm^2
Safety edges	2 x 0,5 mm^2	2 x 0,5 mm^2	2 x 0,5 mm^2
Flashing light	2 x 1,5 mm^2	2 x 1,5 mm^2	2 x 1,5 mm^2
Antenna (integrated into the flashing light)	RG174	RG174	RG174
ECO-LOGIC (accumulator unit)	2 x 1,5 mm^2	-	-
ECO-LOGIC (solar panel)	2 x 1 mm^2	-	-

INSTALLATION MEASURES

To carry out a proper installation of the operator parts as well as to ensure the best automation performance, the measurement levels shown in the following table shall be complied with. Change the gate structure to adapt it to one of the cases in the table, if necessary.

γ	B [mm]	A [mm]	C [mm]
90°	20 ÷ 40	140	650
	50 ÷ 80	140	650
	90 ÷ 140	150	650
	150 ÷ 160	160	650
	170 ÷ 180	180	650
	180 ÷ 220	180	650
	220 ÷ 250	180	600
	250 ÷ 320	200	600
100°	20 ÷ 60	170	650
	70 ÷ 110	180	650
	110 ÷ 150	190	650
	150 ÷ 200	200	650
110	20 ÷ 50	180	650
	50 ÷ 100	200	650
	110 ÷ 130	210	650



ACTUATOR FASTENING

As soon as the measures selected from the table, which is on the previous page, have been marked on piers, proceed with the following operations, considering figure 1 as a reference:

- Fasten the anchor plate **A** to the pier by making use of proper screws and blocks.
- Enter the ratiomotor into the anchor plate and fasten it by means of screws **B**, washers **C** and nuts **D** supplied (the shaft must be turned downwards).
- Assembly the articulated arm and the relevant bracket as shown in the figure.
- Fit the articulated arm into the shaft and fasten the screw **E**.
- Release the ratiomotor (see paragraph EMERGENCY LOCK RELEASE).
- Mark the front bracket fastening points on the door according to the previous established levels.
- Separate the front bracket F from the articulated arm.
- Fasten the bracket on the door by means of screws or directly weld it in case the material it is made of allows it.
- Link the clamp **F** to the pivoted arm.
- Make several manual attempts in order to open and close the doors by checking that no unwanted friction occurs.
- Proceed with ELECTRICAL CONNECTIONS and ADJUSTMENT OF STOP ENDS.
- Insert the cap **G**, the plug **H**, the unclamping handle **I** and fix the two screws.

⚠ **WARNING: For the left actuator install the motor as shown in fig.2 and repeat the above operations.**

FIG. 1

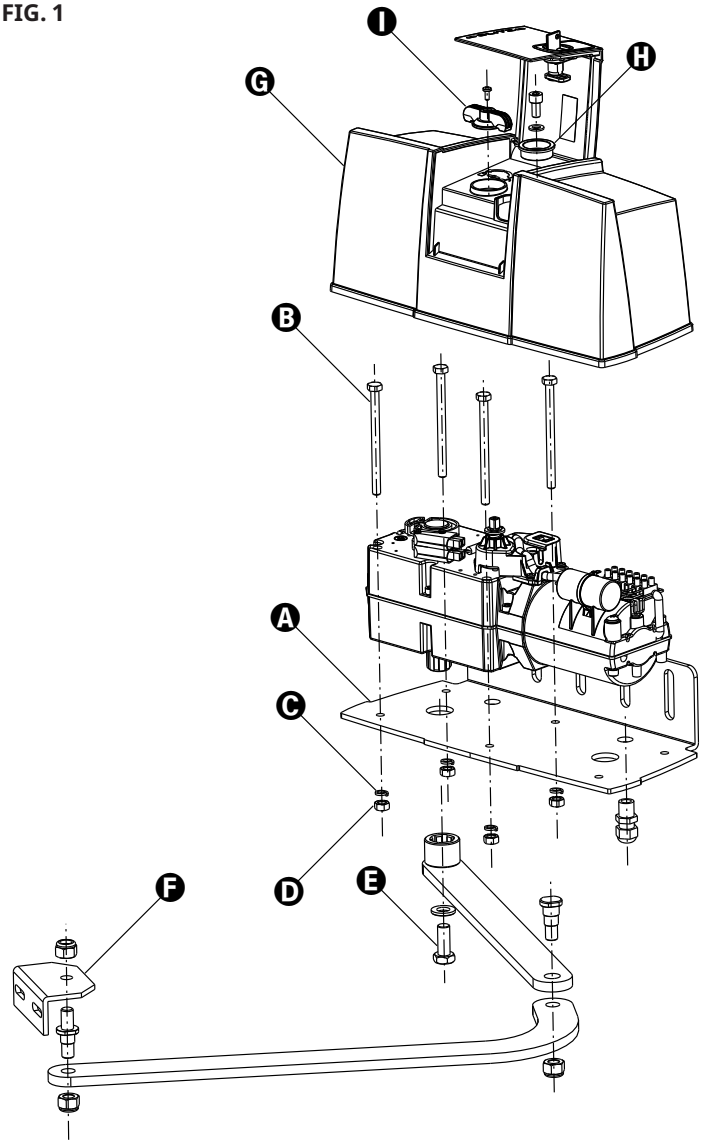
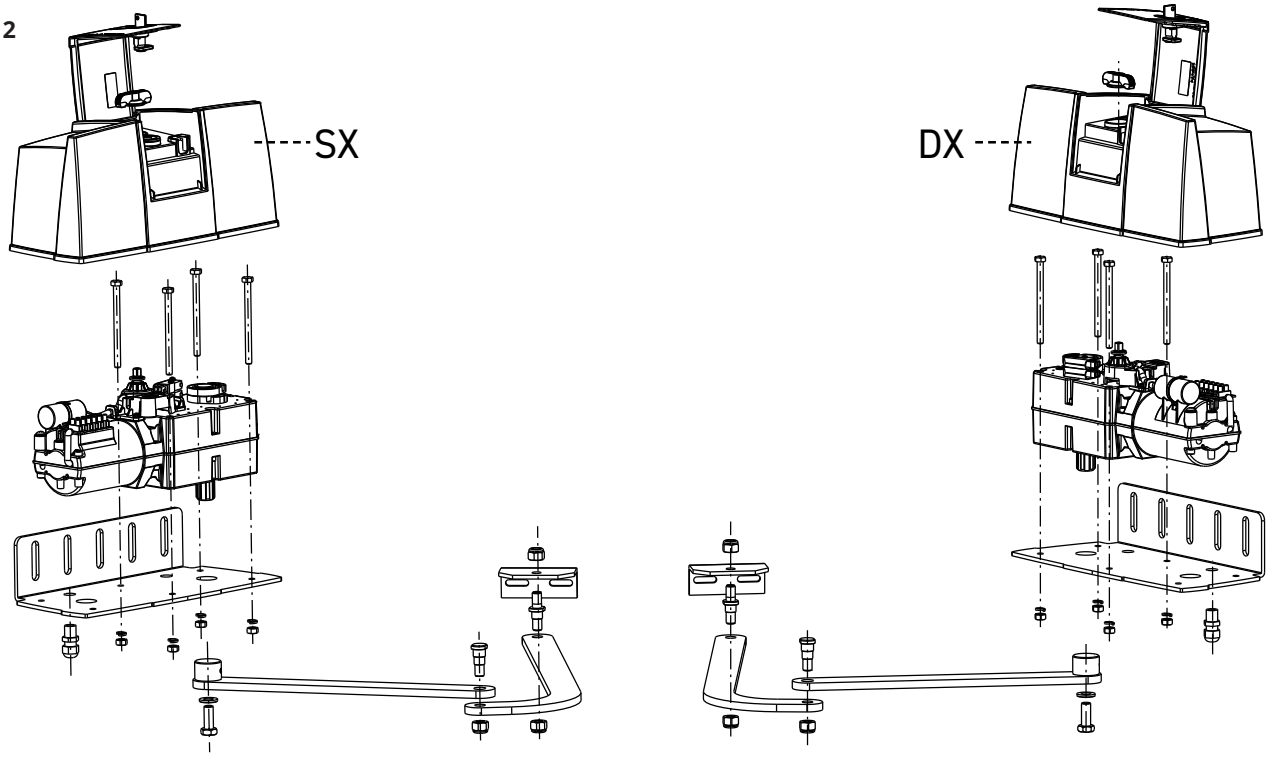


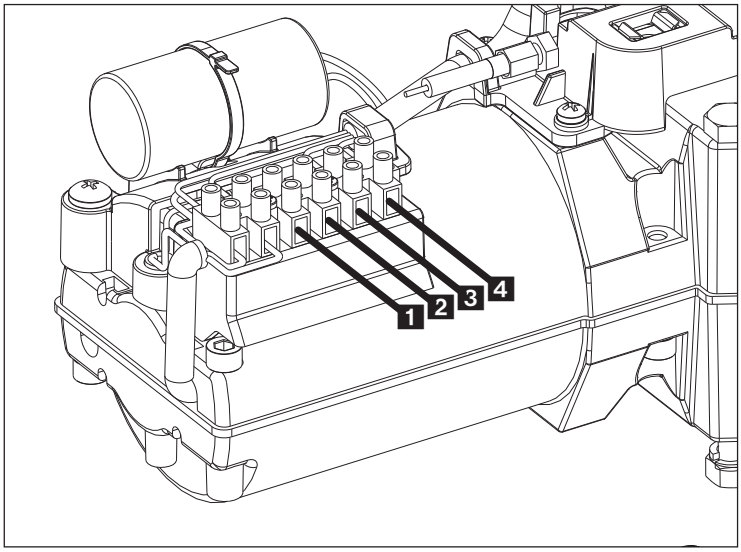
FIG. 2



ELECTRICAL CONNECTIONS

AR MEDIUM 3000 230 / AR MEDIUM 3000 120

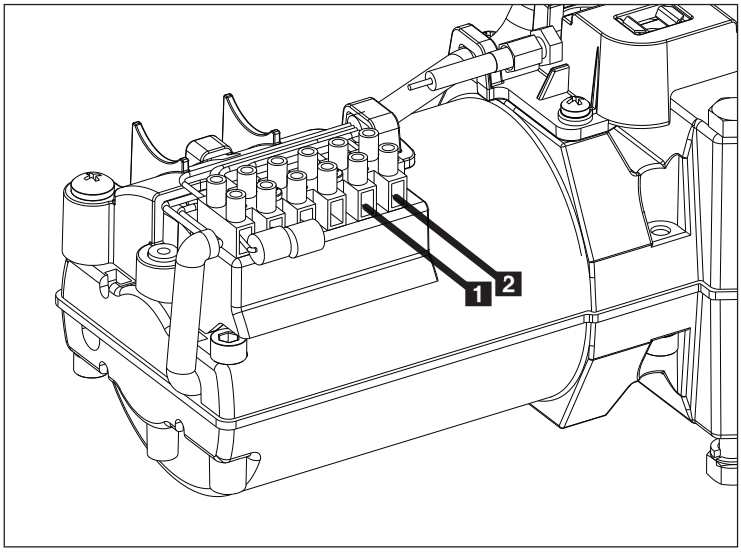
RIF.	Left MOTOR (SX)	Right MOTOR (DX)
1	GND	GND
2	COMMON	COMMON
3	OPENING	CLOSING
4	CLOSING	OPENING



⚠ **WARNING: always remember to connect the earth according to current standards (EN 60335-1, EN 60204-1).**

AR MEDIUM 3000 24

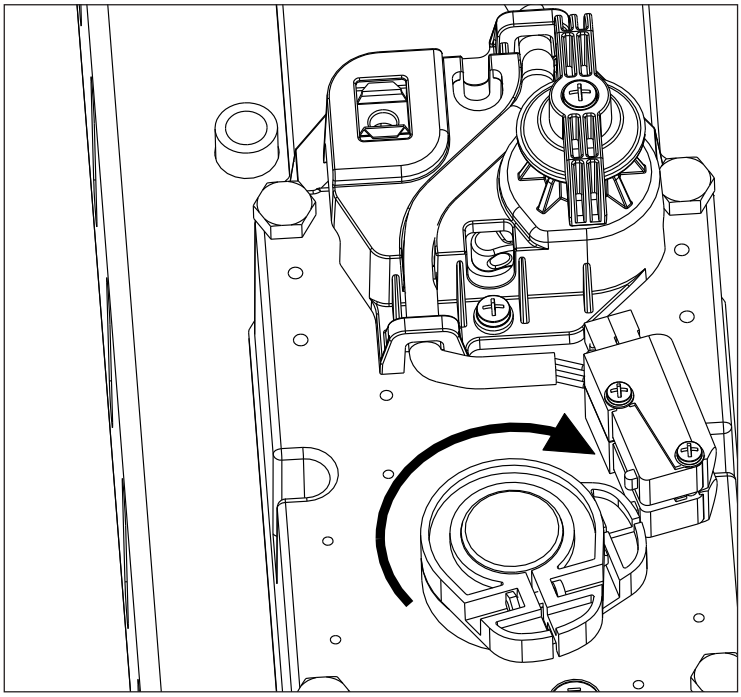
RIF.	Left MOTOR (SX)	Right MOTOR (DX)
1	OPENING	CLOSING
2	CLOSING	OPENING



ADJUSTMENT OF STOP ENDS

Opening stop end: release the actuator and put the door into
its opening position. Adjust the cam (LOWER for the RIGHT motor and UPPER for the LEFT motor) until the microswitch is entered (see figure). Then fasten the cam by closing the screw.

Closing stop end: release the actuator and put the door into its
closing position. Adjust the cam (UPPER for the RIGHT motor and
LOWER for the LEFT motor) until the microswitch is entered. Then fasten the cam by closing the screw.



EMERGENCY RELEASE

In case of a blackout, the gate can be operated directly from the motor. Insert the key supplied in the lock, perform 1/2 of a turn.
Open the door and turn the release lever to position 2. Turn again the release lever to position 1, close the door, turn the key and then close the plastic guard in order to restore the automation.

