ROGER TECHNOLOGY SMARTY Series Swing Gates Automations Instruction Manual

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Contents

General safety precautions

 **Failure to respect the information given in this manual may cause personal injury or damage to the device.**

This installation manual is intended for qualified personnel only.
ROGER TECHNOLOGY cannot be held responsible for any damage or injury due to improper use or any use other the intended usage indicated in this manual.
Installation, electrical connections and adjustments must be performed by qualified personnel, in accordance with best practices and in compliance with applicable regulations.

Read the instructions carefully before installing the product. Bad installation could be dangerous.
Before installing the product, make sure it is in perfect condition: if in doubt, do not use the equipment and contact qualified personnel only.
Do not install the product in explosive areas and atmospheres: the presence of inflammable gas or fumes represents a serious safety hazard.

Before installing the motorisation device, make all the necessary structural modifications to create safety clearance and to guard or isolate all the crushing, shearing, trapping and general hazardous areas.
Make sure the existing structure is up to standard in terms of strength and stability.
ROGER TECHNOLOGY is not responsible for failure to observe Good Working Methods when building the frames to be motorised, or for any deformation during use.

The safety devices (photocells, safety edges, emergency stops, etc.) must be installed taking into account: applicable laws and directives, Good Working Methods, installation premises, system operating logic and the forces developed by the motorised door or gate.
The safety devices must protect against crushing, cutting, trapping and general danger areas of the motorised door or gate.

ROGER TECHNOLOGY declines all responsibility if component parts not compatible with safe and correct operation are fitted.

Display the signs required by law to identify hazardous areas.

Each installation must bear a visible indication of the data identifying the motorised door or gate.
An omnipolar disconnection switch with a contact opening distance of at least 3mm must be fitted on the mains supply.
Make sure that upline from the mains power supply there is a residual current circuit breaker that trips at no more than 0.03A and overcurrent cutout upstream of the electrical system in accordance with best practices and in compliance with applicable regulations.

When requested, connect the automation to an effective earthing system ⏚ that complies with current safety standards.

During installation, maintenance and repair operations, cut off the power supply before opening the cover to access the electrical parts.

The electronic parts must be handled using earthed antistatic conductive arms.
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 motorised door or gate, and must provide the user with the operating instructions.

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.

Dispose of and recycle the packing components in accordance with the standards in force.
These instruction must be kept and forwarded to all possible future user of the system.

Declaration of Conformity

I the undersigned, as acting legal representative of the manufacturer:
Roger Technology – Via Botticelli 8, 31021 Bonisiolo di Mogliano V.to (TV) hereby DECLARE that the appliance described hereafter:
Description: Swing gate automation
Model: serie SMARTY

Is conformant with the legal requisites of the following directives:

- Directive 2014/30/EU (EMC Directive) and subsequent amendments;
- Directive 2014/35/EU (Low Voltage Directive) and subsequent amendments;

and that all the standards and/or technical requirements indicated as follows have been applied:
EN 61000-6-3
EN 61000-6-2
EN 60335-1
EN 60335-2-103

Last two figures of year in which marking was applied | 16.

Place: Mogliano V.to Date: 30/04/2016 Signature 

TECHNOLOGY.
This instruction manual and the warnings for the installer are given in printed form and included in the box containing the product.

The digital version of this documentation (in PDF format) and all future revisions are available from the reserved area of our website **www.rogertechnology**. com/B2B, in the section ‘Self Service’.

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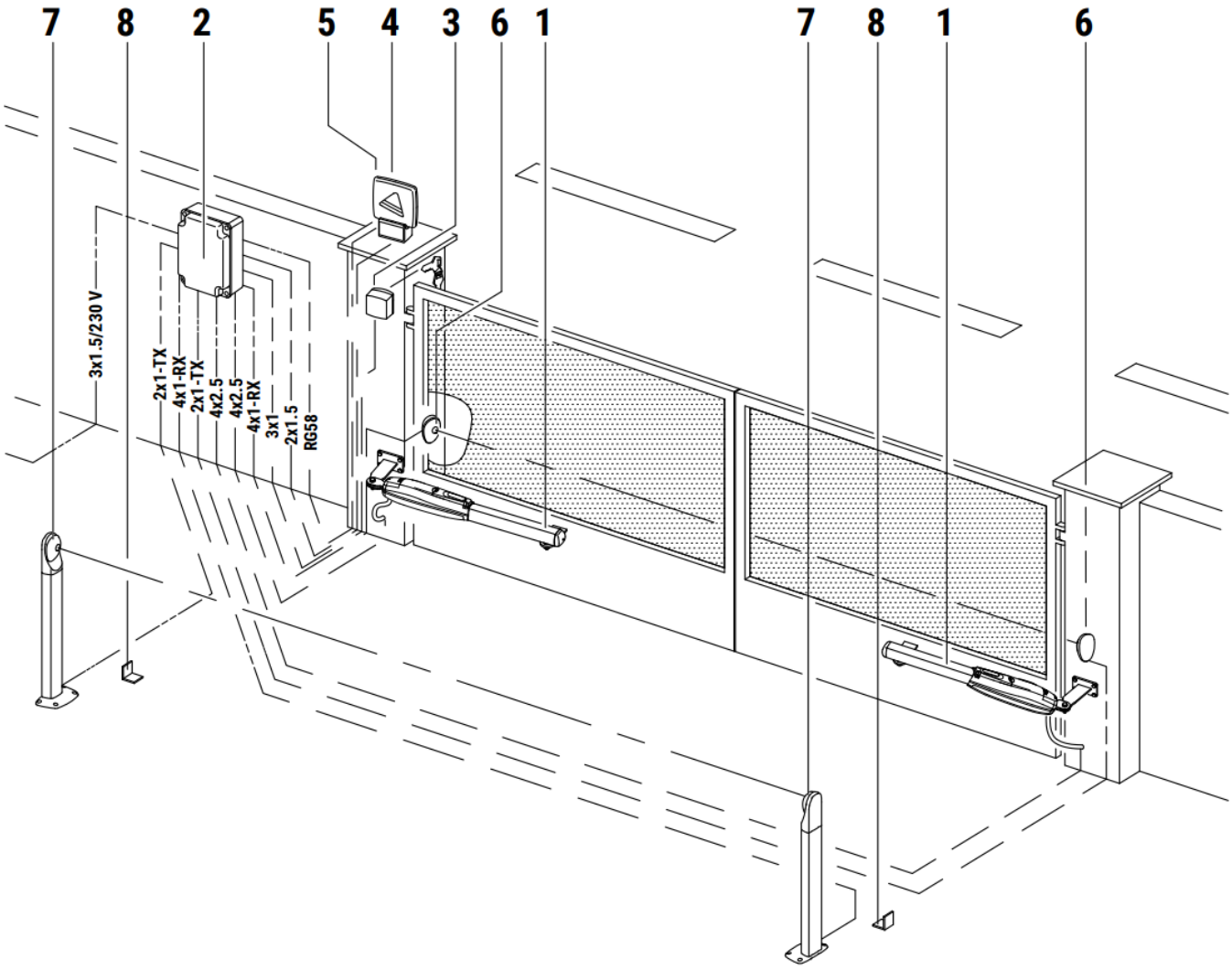
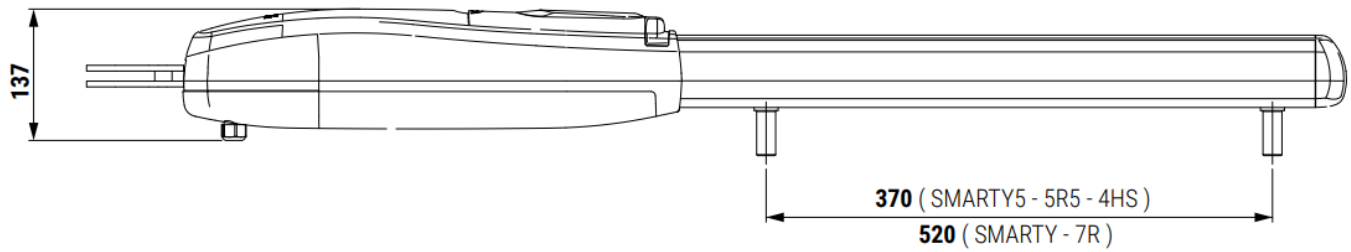
E-mail: **service@rogertechnology.it**
Skype: service_rogertechnology

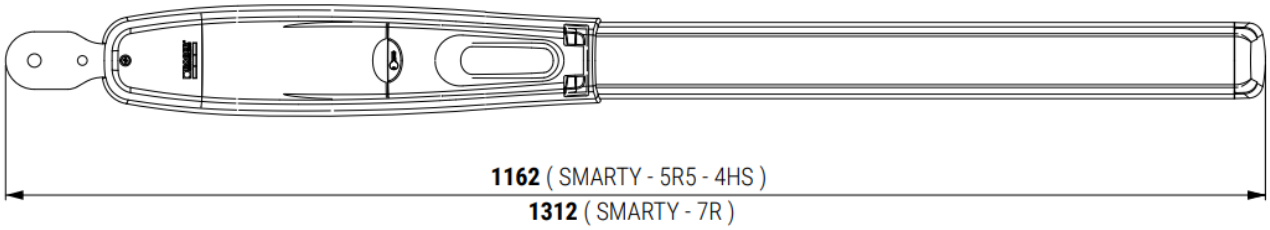
STANDARD INSTALLATION SMARTY RANGE



	DESCRIPTION
1	Automatism SMARTY
2	Control unit
3	Key selector
4	Flashing light
5	Antenna
6	External photocell
7	Internal photocell
8	Gate open mechanical stop

DIMENSIONS





All measurements are expressed in mm unless otherwise indicated.

WARNING

According to the legislation in force and for safety purposes, if the gate length exceeds 2.5 m with normal wings, 2

m with full wings and if its height exceeds 2 m, it is recommended to use an electric lock.

MODELS AND SPECIFICATIONS

SMARTY5	Low voltage irreversible electromechanical gear motor for heavy duty use, configured for use with absolute encoder and ideal for swing leaf gates with leaf lengths up to 5 m.
SMARTY5R5	Low voltage reversible electromechanical gear motor for heavy duty use, configured for use with absolute encoder and ideal for swing leaf gates with leaf lengths up to 5 m.
SMARTY7	Low voltage irreversible electromechanical gear motor for heavy duty use, configured for use with absolute encoder and ideal for swing leaf gates with leaf lengths up to 5 m
SMARTY7R	Low voltage reversible electromechanical gear motor for heavy duty use, configured for use with absolute encoder and ideal for swing leaf gates with leaf lengths up to 7 m.
SMARTY4/HS	Low voltage irreversible electromechanical gear motor High Speed for heavy duty use, configured for use with absolute encoder and ideal for swing leaf gates with leaf lengths up to 4 m.

NOTE: Even though it is a REVERSIBLE unit, the motor is equipped with a lock release system.

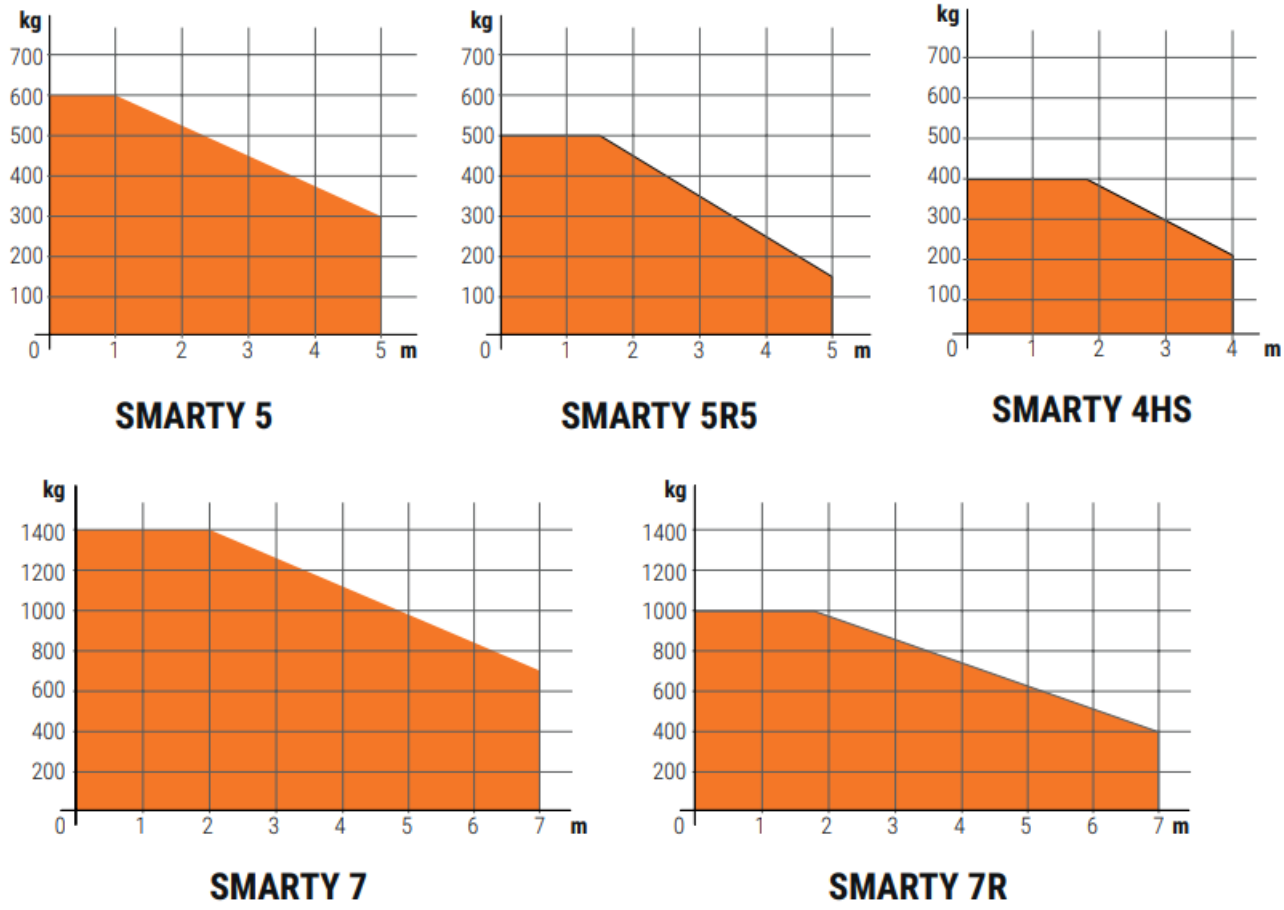
WARNING It is recommended to keep the release handle of the drive unit for swing gates always closed, except in those cases in which it is necessary to release it (mains power loss, malfunction, etc.).

The prolonged opening of the release handle could facilitate the entry of water, rain, insects, and various dirt that could reduce the mechanical and electromechanical efficiency of the drive unit during use over time.

TECHICAL DATA

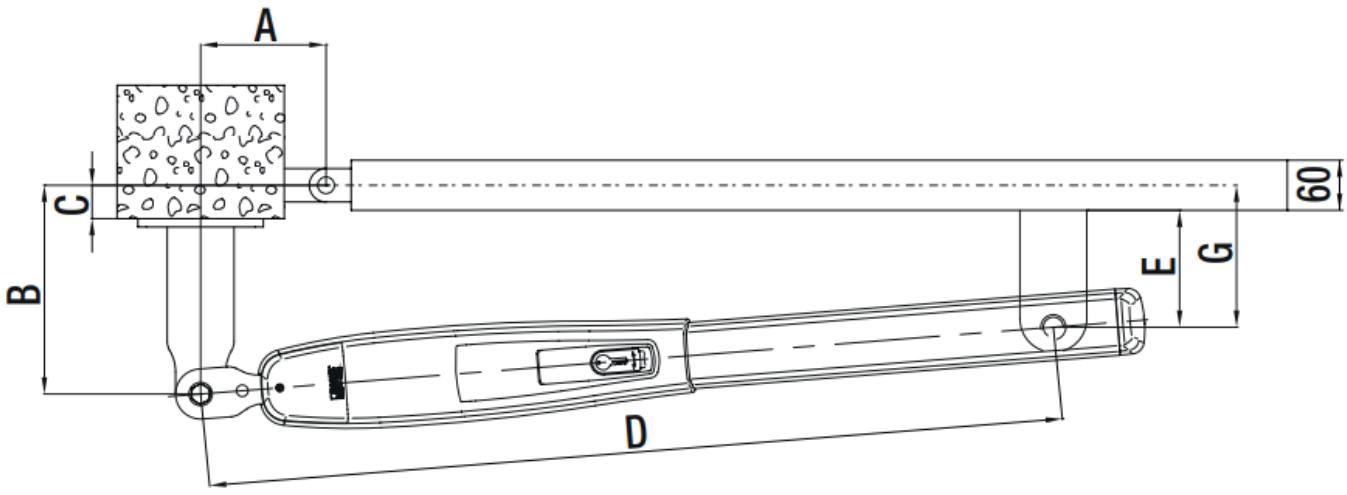
		SMART Y5	**SMART Y5R5**	**SMART Y7**	**SMART Y7R**	**SMARTY 4/HS**
USAGE TYPE		CONDOMINIUM				
MOTOR TYPE		IRREVERSIBLE	REVERSIBLE	IRREVERSIBLE	REVERSIBILE REVERSIBLE REVERSIBEL RÉVERSIBLE REVERSIBLE REVERSÍVEL	IRREVERSIBILE IRREVERSIBLE IRREVERSIBEL IRRÉVERSIBLE IRREVERSIBLE IRREVERSÍVEL
BRUSHLESS MOTOR POWER SUPPLY	**V**	36				
RATED POWER	**W**	200	200	200	200	200
JOGGING		INTENSIVE USE				
WORKING TEMPERATURE	**°C**	-20°C +55°C				
PROTECTION RATING	**IP**	44				
OPERATOR WEIGHT	**kg**	11,7	11,7	12,2	13,2	11,7
90° OPENING TIME	**s**	25 ÷ 40	20 ÷ 40	35 ÷ 50		15 ÷ 25
WORKING SPEED	**cm/s**	1,6 ÷ 1	1,8 ÷ 1,2	1,6 ÷ 1	1,6 ÷ 1	2 ÷ 1
TRUST	**N**	600 ÷ 7000	600 ÷ 6500	600 ÷ 7000	600 ÷ 6500	600 ÷ 4500
TRAVEL	**mm**	max 370		max 520		max 370
24 ORE NON STOP) OPERATING CYCLES PER DAY (OPENING/CLOSING	**n°**	1000				

WORKING DIAGRAM



In case of installation in areas subject to strong gusts of wind, the limits of use may be reduced.

PRELIMINARY CHECKS



SMARTY 5 / SMARTY 5R5 / SMARTY 4HS

(Corsa massima/Max run = 370 mm)

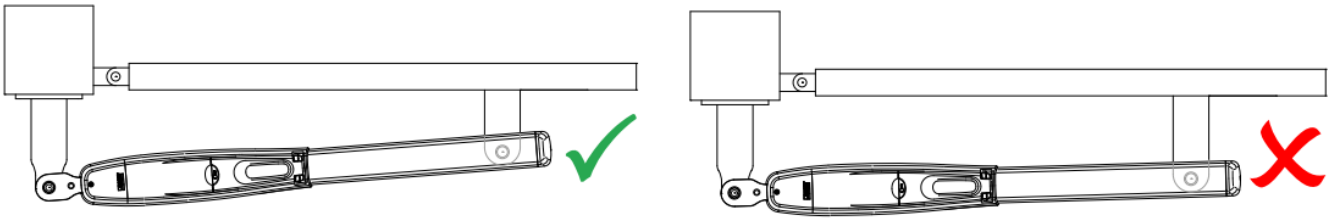
A	B	C (max)	D (max)	E	G	α°
150	150	120	1030	100	130	97°
150	170	120	1030	100	130	96°
150	190	120	1030	100	130	95°
150	200	120	1030	100	130	95°
150	220	120	1030	100	130	90°
170	150	120	1030	100	130	103°
170	170	120	1030	100	130	102°
170	200	120	1030	100	130	90°
185	185	120	1030	100	130	90°
200	160	120	1030	100	130	92°

SMARTY 7 / SMARTY 7R

(Corsa massima/Max run = 520 mm)

A	B	C (max)	D (max)	E	G	α°
200	200	200	1180	140	170	98°
200	230	200	1180	140	170	97°
200	260	200	1180	140	170	96°
200	280	200	1180	140	170	95°
200	300	200	1180	140	170	93°

220	220	200	1180	140	170	102°
220	250	200	1180	140	170	100°
220	280	200	1180	140	170	93°
250	200	200	1180	140	170	106°
250	250	200	1180	140	170	94°



PRELIMINARY CHECKS

- Check that the structure of the gate is sturdy and in good condition.
- Check that the hinges are well greased and that the gate moves throughout its entire travel smoothly without impediment or friction.
- Always install mechanical stops in the gate open and gate closed positions, anchored securely to the ground and with elastic damper elements (e.g. rubber buffer) to attenuate the impact of the gate leaf against the stop.

Depending on the model installed, on the available space and any obstacles existing in the installation site, and on the required angle of aperture, install the rear bracket on the pillar and the check that the installation measurements indicated in the table are correct.
The measurements [A] and [B] must always be compatible with the maximum effective travel of the piston.
If the sum of the values [A]+[B] is greater than the maximum travel, shorten the rear bracket to reduce measurement [B]
N.B: for the gate to operate smoothly and correctly, the measurements [A] and [B] must always be approximately 20-30 mm greater than measurement [G].
The measurement [G] indicated in the table was calculated considering a gate leaf thickness of 60 mm.

- The end of the piston rod must meet the gate leaf.
- When opening the wing manually, check that the piston does not collide with the wing or the pillar.

BRACKETS FASTENING

FASTENING BRACKETS

1. Fasten the rear bracket in a perfectly level position and in accordance with the installation measurements indicated in paragraph 6.
    - For masonry/cement pillars, use the specific masonry brackets with suitable anchor bolts and screws.
    - With steel pillars, weld the bracket in place.
2. With the gate completely closed, fit the front bracket to obtain the installation measurements [D] and [E], and fasten in a perfectly level position to the gate leaf as shown in the figure.

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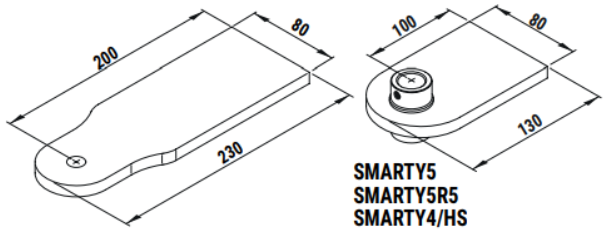

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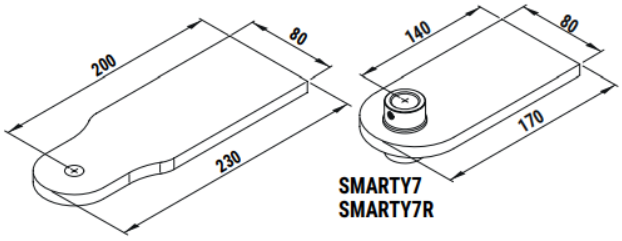
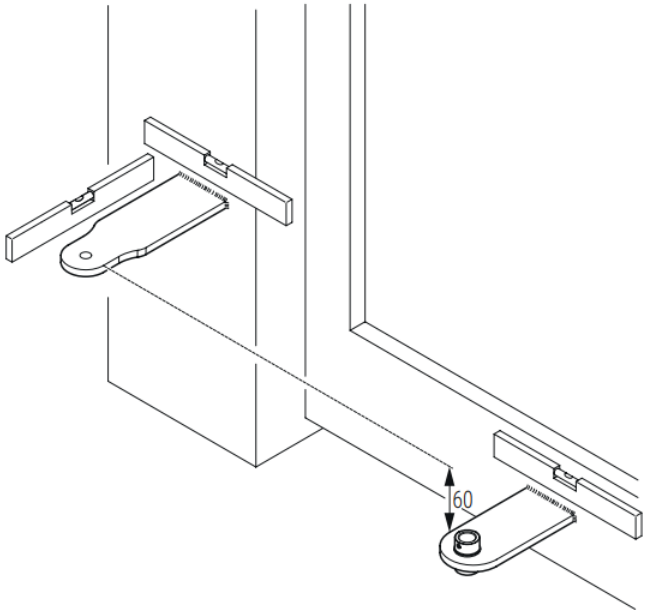
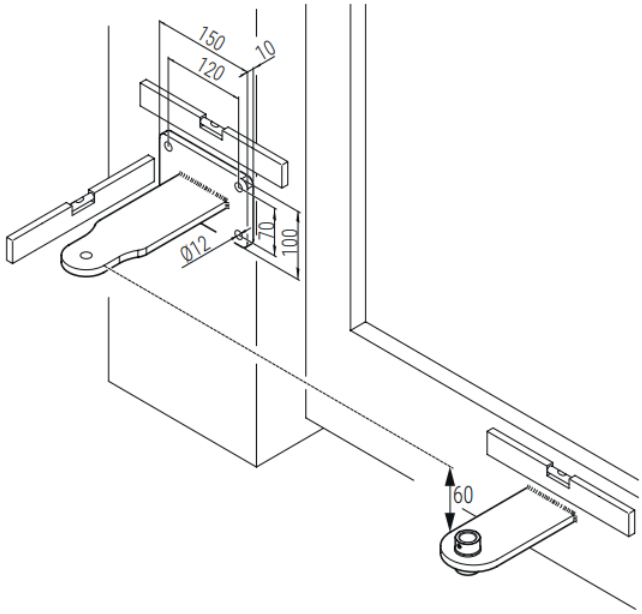


PILASTRI IN FERRO - IRON PILLAR



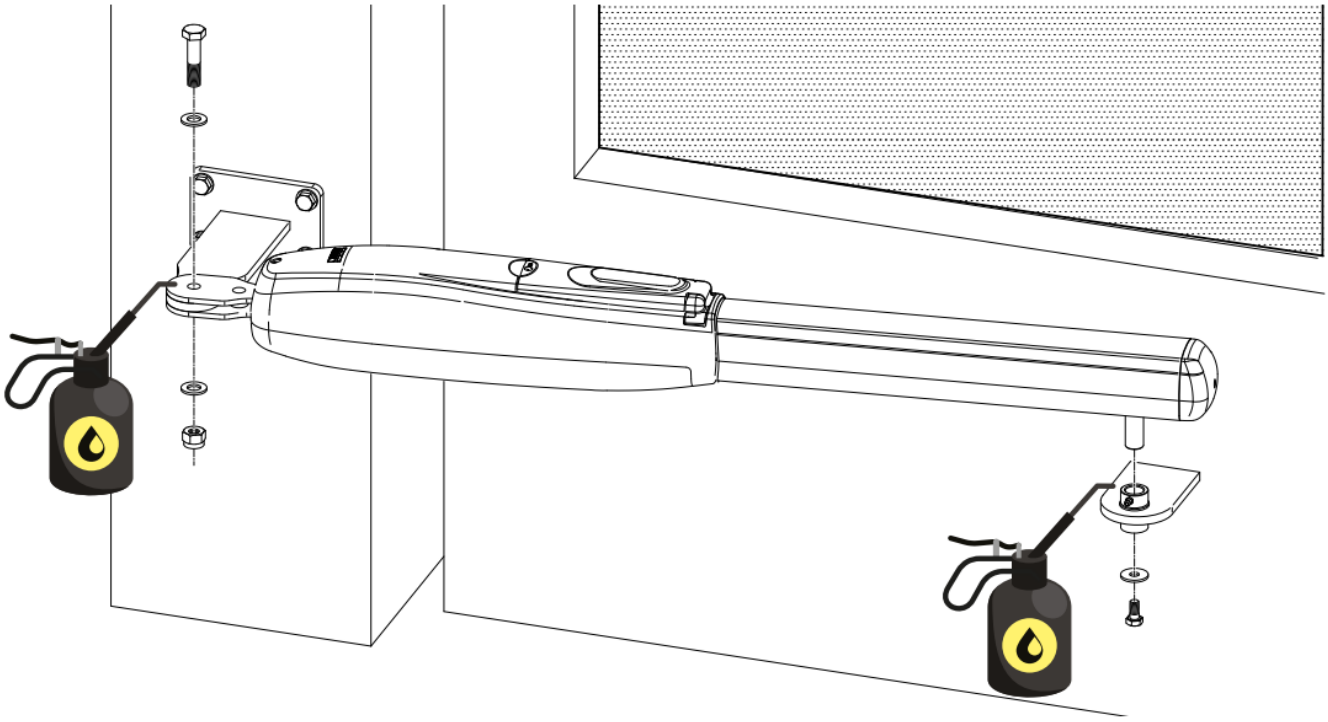
PILASTRI IN CALCESTRUZZO - CONCRETE PILLAR



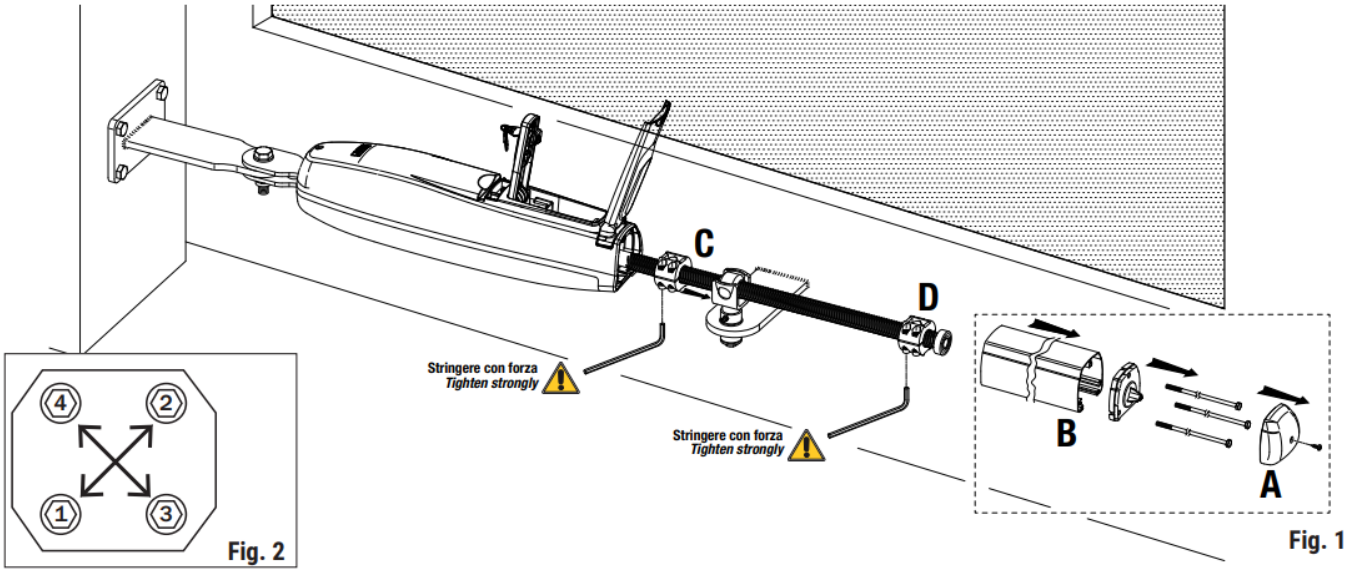
INSTALLATION DRIVE UNIT

INSTALLATION

- The SMARTY piston may be installed on the right or left hand side.
- Fasten the piston to the rear bracket and to the front bracket, lubricating the pivot points.
- Move the gate manually and check that it moves smoothly throughout its entire travel without impediment or friction.



MECHANICAL STOPS ADJUSTMENT



Use the internal mechanical stops in the piston as asupplementary safety measure in addition to the mechanical stops of the gate.

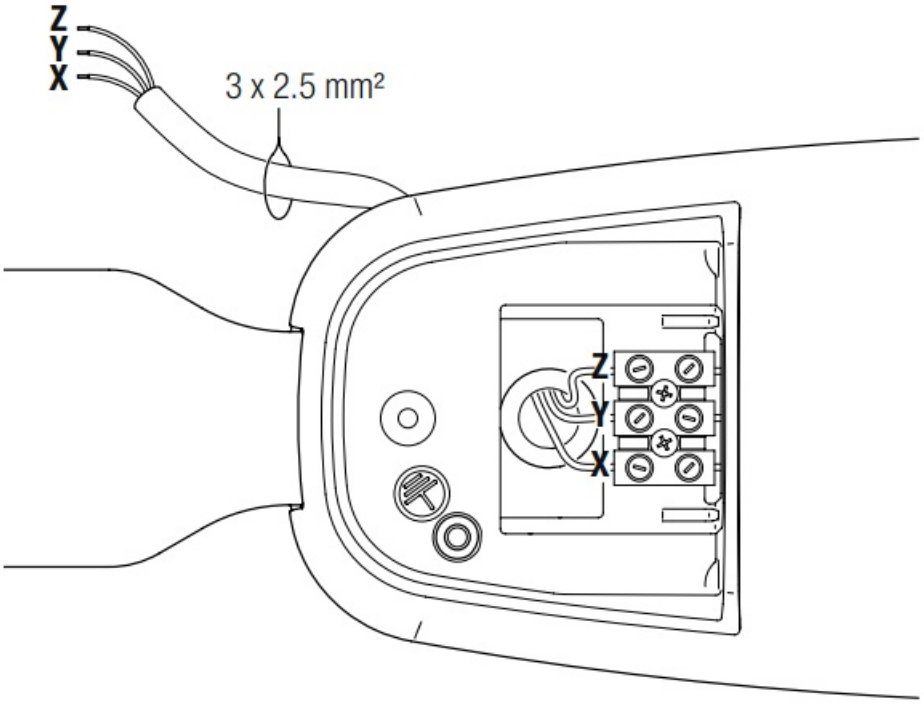
WARNING: the mechanical stops have become loose inside the piston.
Even if not used, they must always be securely fastened.
Mechanical stops in the gate open and gate closed positions must always be used.

Adjust the mechanical stops from underneath, or:

- Remove the cap [A] and remove the drive screw cover [B].
- Move the gate into the fully open position and adjust the gate open mechanical stop [C], tightening the screws as shown in fig. 2.

- Perform the same procedure in the gate closed position to adjust the gate closed mechanical stop [D].

ELECTRICAL CONNECTIONS



A switch or an omnipolar cut-off switch with a contact opening of at least 3 mm must be installed on the mains power line.
Ensure that an adequate residual current circuit breaker with a threshold of 0.03 A and a suitable over-current cut-out are installed ahead of the electrical installation in accordance with best practices and in compliance with applicable legislation.

When requested, connect the automation to an effective earthing system that complies with current safety standards.

1. Connect the 3×2.5 mm2 power cable to the control unit.
2. To start the **SMARTY** device, it **IS NOT NECESSARY** to perform the earthing connection.

The accessory connections and the **SMARTY** gear motor tests are illustrated in the installation manual of the **EDGE1** control unit.

ABSOLUTE MAGNETIC ENCODER

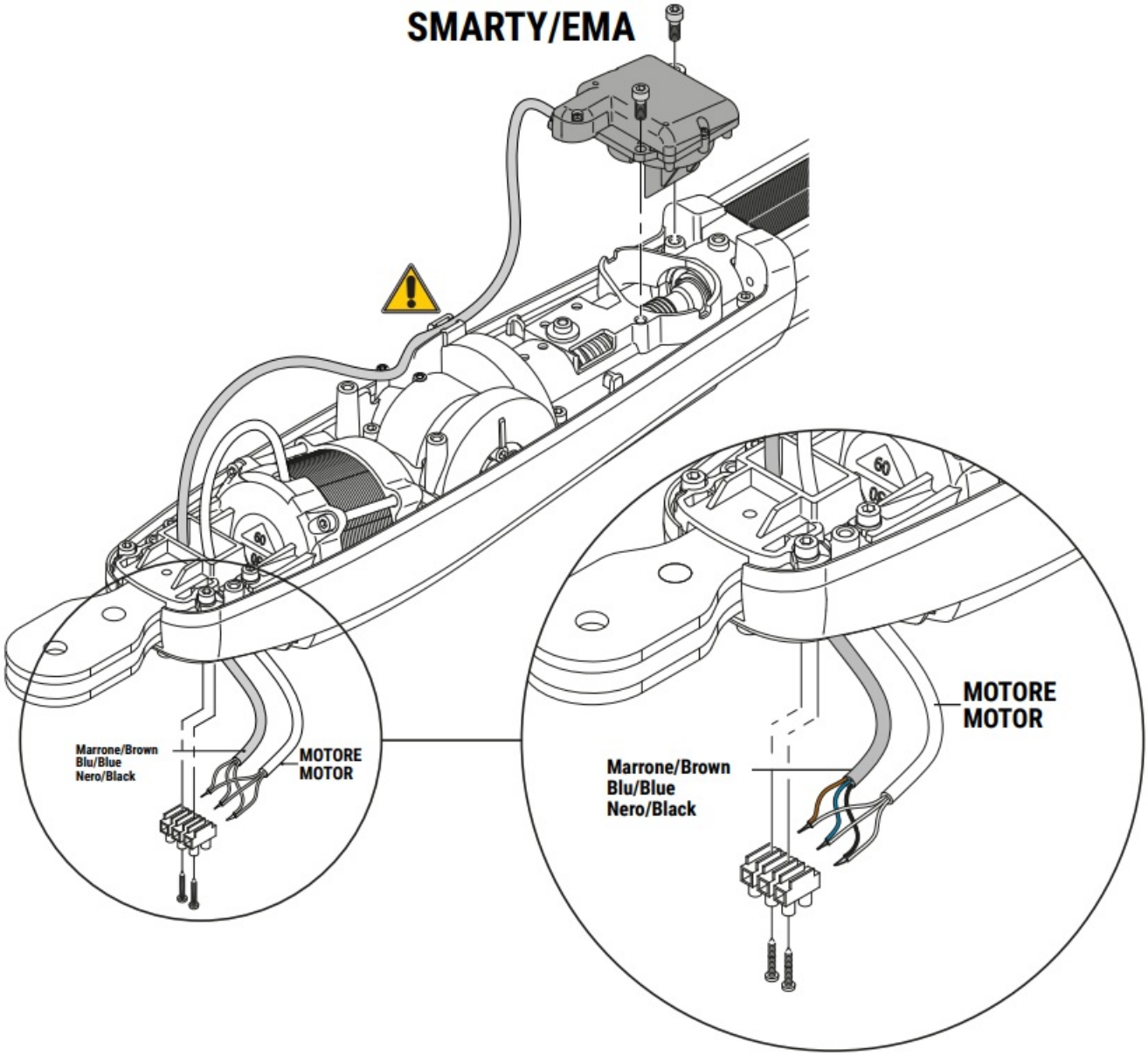
The encoder determines the precise position of the gate, and allows the controller to reacquire the position of the gate leaf immediately when the first command is received following a power failure or after the gate is unlocked.

For **SMARTY REVERSIBLE:** the encoder is already installed in the factory by **ROGER TECHNOLOGY.**

For SMARTY IRREVERSIBLE:

- Fasten the encoder to the motor as indicated in the figure.
- Route the cable as shown and secure it with the cable retainer.

- Connect the encoder in parallel with the motor phases.
- Enable the encoder with the parameter **7101** and perform the travel acquisition procedure (see control unit installation manual).



PERIODICAL MAINTENANCE

NOTE: Only use original spare parts when repairing or replacing products.
The installer must provide the user with complete instructions for using the motorised door or gate in automatic, manual and emergency modes, and must deliver the operating instructions to the user of the installation upon completion. The installer must compile the maintenance log book, in which all scheduled and unscheduled maintenance operations performed must be indicated. The installation must be subject to regular maintenance. We recommend servicing at least once every 6 months.

Disconnect from mains electricity and from battery power (if applicable) to avoid the risk of accident or injury.

- Disconnect the system from mains electricity and unlock the gate.
- Check all parts for wear and deterioration. In particular, check all structural parts for wear and corrosion. Replace any parts that are not in an adequate condition to ensure continued correct operation.
- Check the condition and tightness of all fastener screws.

- Clean and lubricate the pivot pins, the gate hinges and the coupling screw.
- Manually check that the gate slides smoothly and without impediment.
- Check that the manual lock release system works.

Reconnect the mains power.

- Check that the safety devices and all the control functions work correctly.
- Check that the obstacle detection function works correctly.
- Check that the force limiting function prevents potentially dangerous situations in compliance with the standard EN 12445.

CUSTOMER SERVICE

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Documents / Resources

	ROGER TECHNOLOGY SMARTY Series Swing Gates Automations [pdf] Instruction Manual SMARTY Series, Swing Gates Automations, SMARTY Series Swing Gates Automations, Gates Automations, Automations

References

- Roger Technology - Automazioni in movimento
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