

IS83 Rev.12 17/02/2020

H70/104AC - H70/105AC

centrale di comando per 1 motore 230 Vac

Istruzioni originali



- IT - Istruzioni ed avvertenze per l'installatore
- EN - Instructions and warnings for the installer
- DE - Anweisungen und Hinweise für den Installateur
- FR - Instructions et consignes pour l'installateur
- ES - Instrucciones y advertencias para el instalador
- PT - Instruções e advertências para o instalador
- NLD - Aanwijzingen en waarschuwingen voor de installateur
- PL - Instrukcja i ostrzeżenia dla instalatora

H70/104AC

Connettori di collegamento encoder, finecorsa e contatto di blocco.
 Plug for encoder, limit switch and safety interlock connection

Display a 4 cifre e 6 tasti di programmazione.
 4 digit display and 6 programming buttons

FW
N6=16



Mostratore dei comandi
 Commands terminal block

Connettore ad innesto per radio ricevente
 Plug-in connector for radio receiver

Mostratore delle sirenze
 Sirenes terminal block

Luce di cortesia e lampoglia
 Courtesy light and flashing light

Alimentazione 230 Vac
 230 Vac power supply

Collegamento motore
 MOTOR connection

Collegamento condensatore motore
 Motor capacitor connection

H70/105AC

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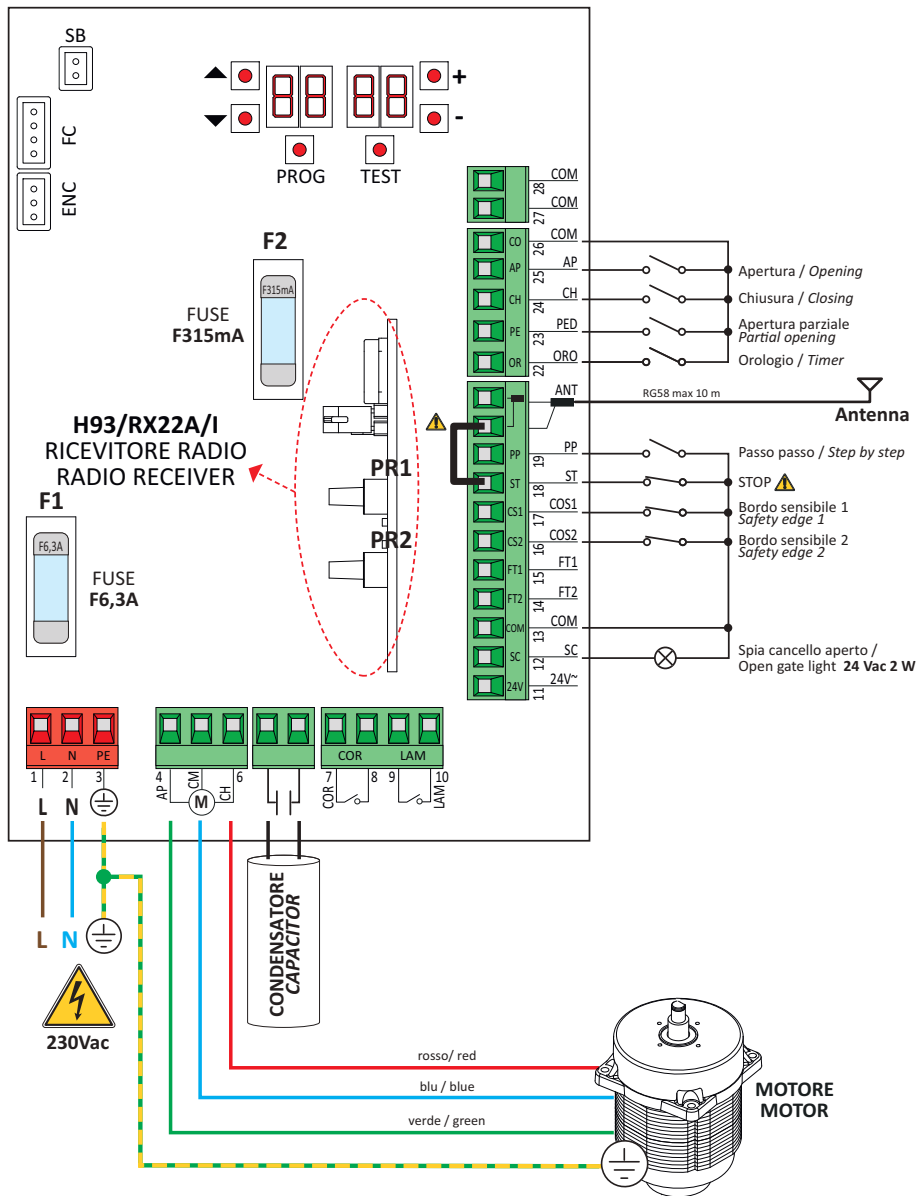
Alimentazione 230 Vac
 230 Vac power supply

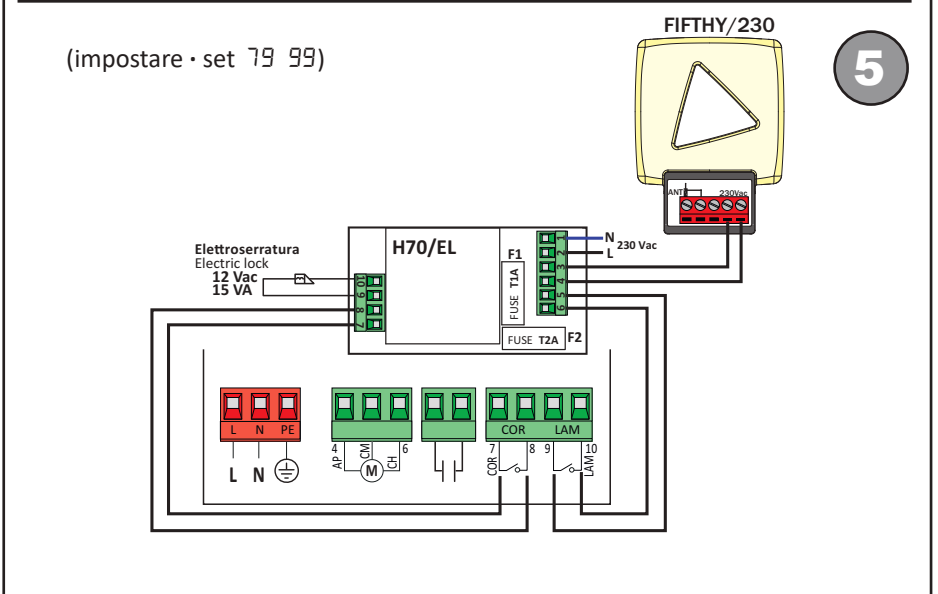
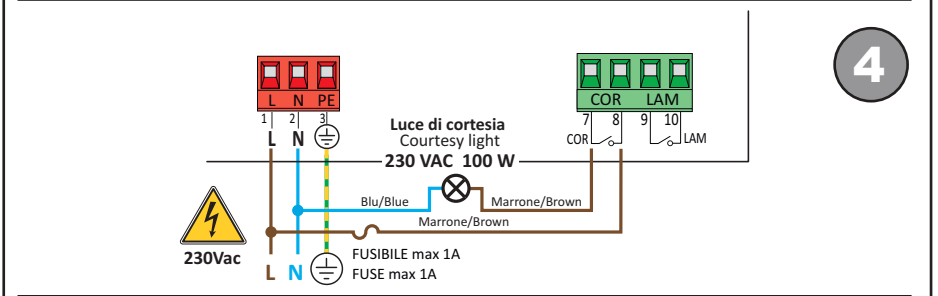
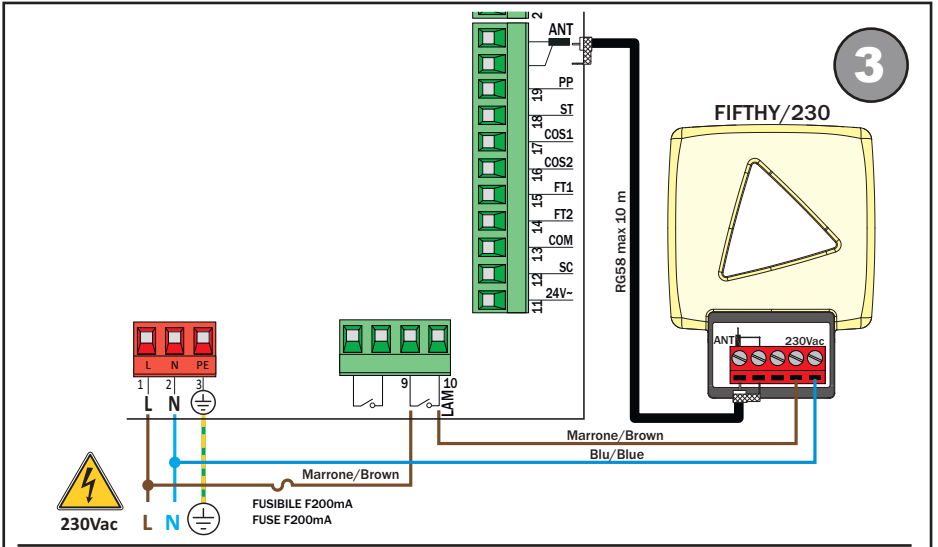
Collegamento motore
 MOTOR connection

Collegamento condensatore motore
 Motor capacitor connection

1

H70/104AC



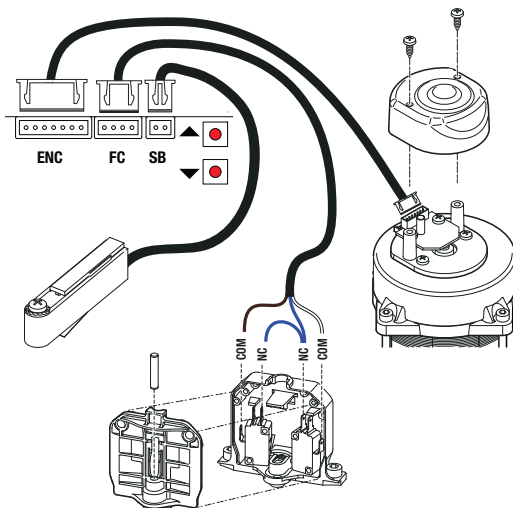


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H70/104AC

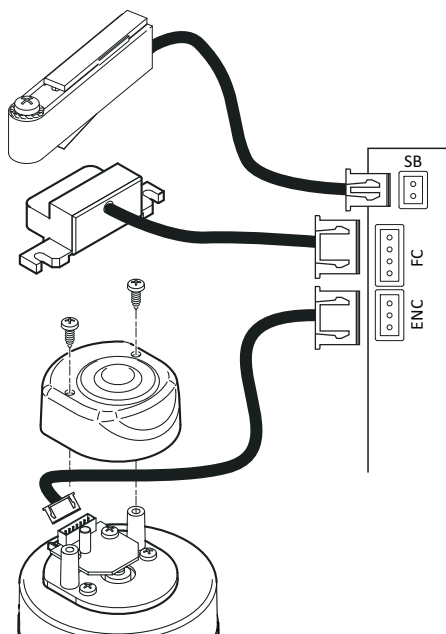
A

Finecorsa meccanico
Meccanic limit switch



B

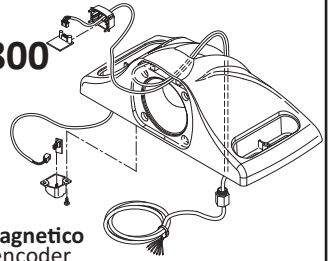
Finecorsa magnetico
Magnetic limit switch



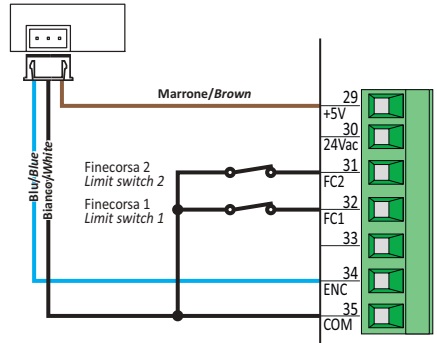
H70/105AC

7

E30/800

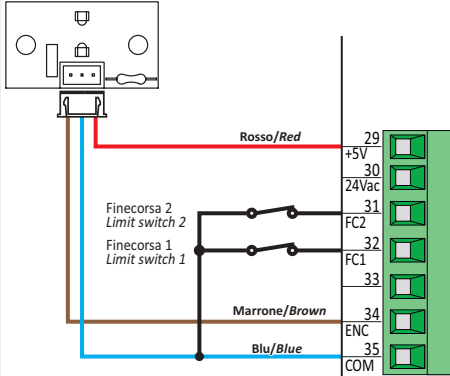


Encoder magnetico Magnetic encoder



(impostare · set 75 02)

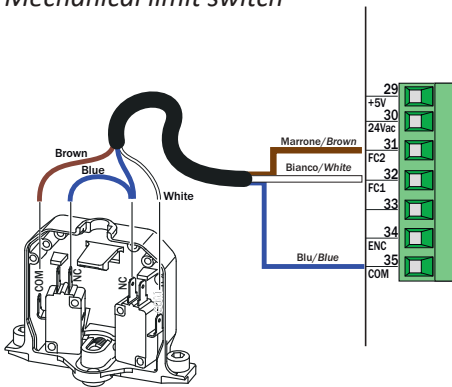
Encoder ottico Optical encoder



(impostare · set 75 01)

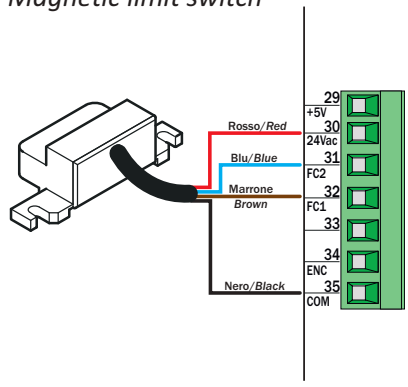
Finecorsa meccanico ROGER TECHNOLOGY

ROGER TECHNOLOGY Mechanical limit switch



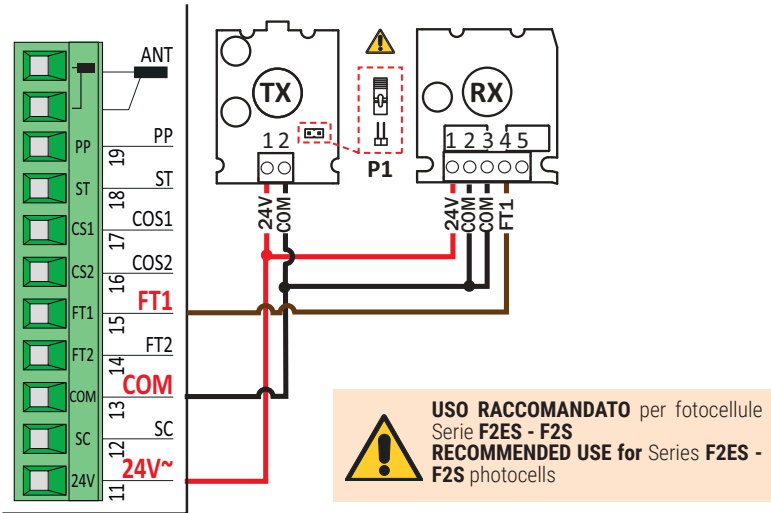
Finecorsa magnetico ROGER TECHNOLOGY

ROGER TECHNOLOGY Magnetic limit switch

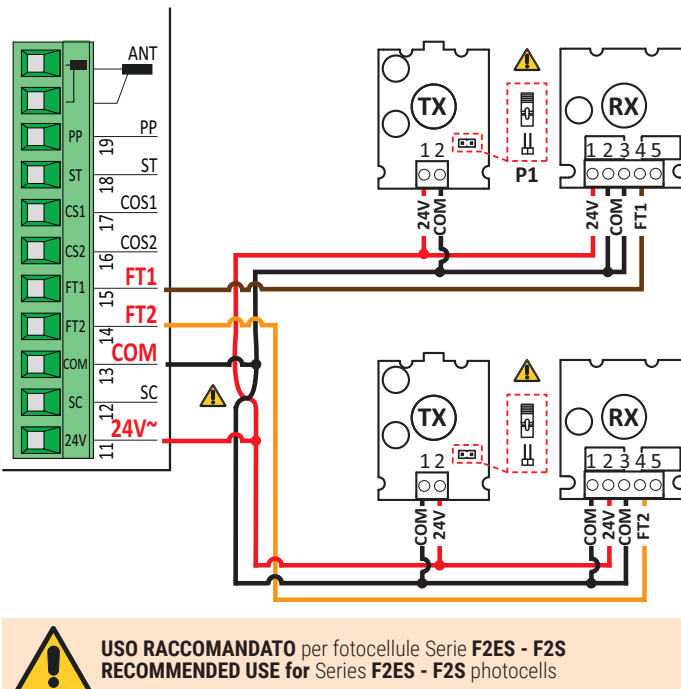


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COLLEGAMENTO CON 1 COPPIA FOTOCELLULE CONNECTION WITH 1 PAIR OF PHOCELLS



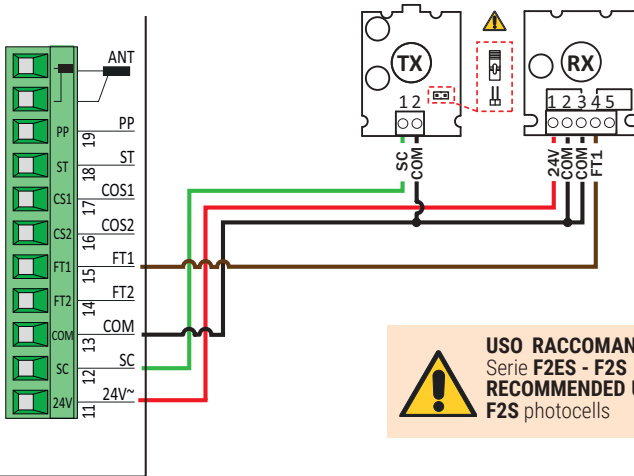
COLLEGAMENTO CON 2 COPPIE FOTOCELLULE CONNECTION WITH 2 PAIRS OF PHOCELLS



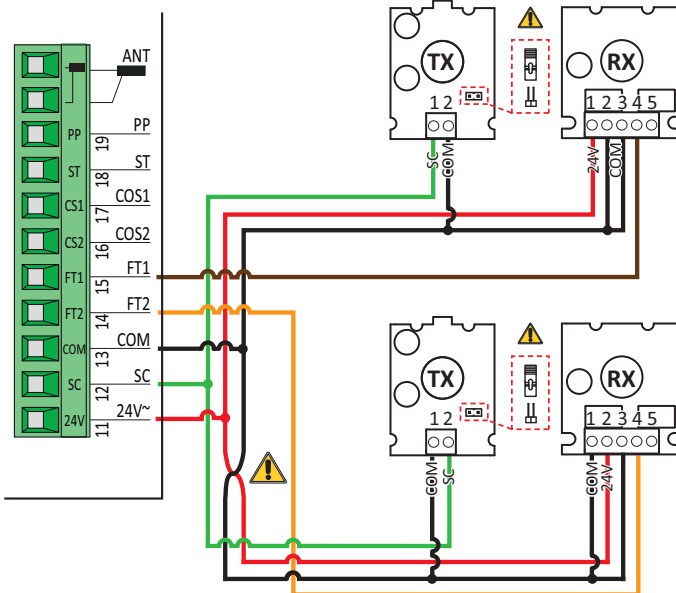
TEST FOTOCELLULE · PHOTOCELLS TEST (impostare / set AB 02)

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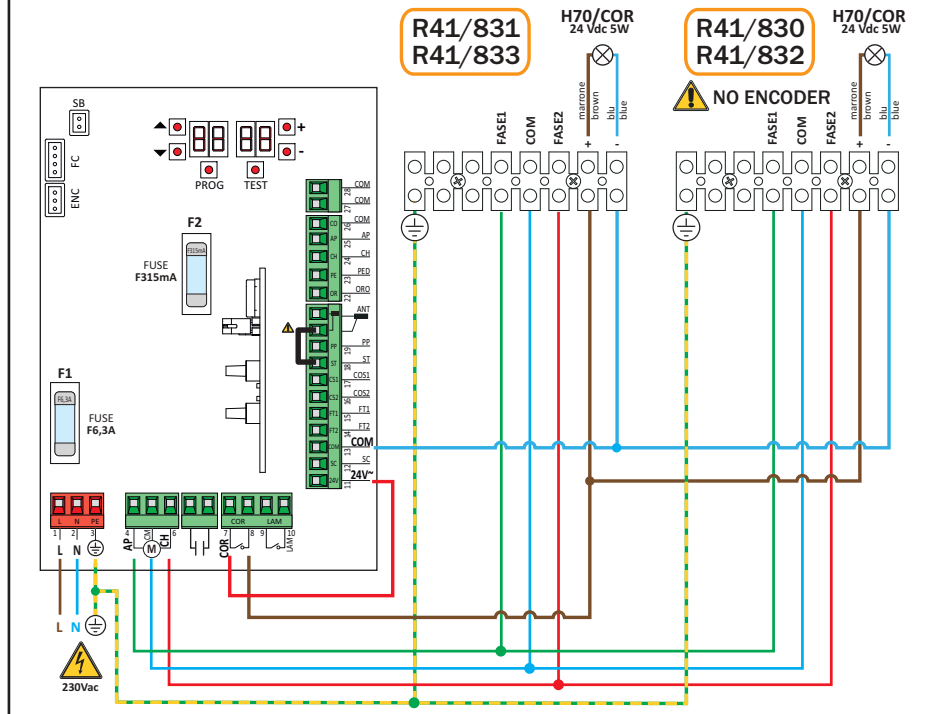
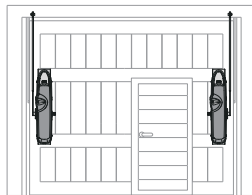
COLLEGAMENTO CON 1 COPPIA FOTOCELLULE CONNECTION WITH 1 PAIR OF PHOTOCELLS



COLLEGAMENTO CON 2 COPPIE FOTOCELLULE CONNECTION WITH 2 PAIR OF PHOTOCELLS



10 H70/104AC



IT IMPORTANTE!

1. Qualora la struttura della porta fosse di materiale leggero (es. alluminio), si consiglia di impostare valori di coppia motore molto bassi.
2. In caso di malfunzionamento o black out, scollegare l'alimentazione di rete e sbloccare ENTRAMBE le automatiz.ioni.

EN IMPORTANT!

1. If the structure of the door is made of light material (eg aluminum), it is advisable to set very low motor torque values.
2. In case of malfunction or blackout, disconnect the mains power supply and release BOTH the automatizations.

DE WICHTIG!

1. Wenn die Struktur der Tür aus leichtem Material (z. B. Aluminium) besteht, empfiehlt es sich, sehr niedrige Motordrehmomentwerte einzustellen.
2. Im Falle einer Fehlfunktion oder eines Stromausfalls, trennen Sie die Stromversorgung und lassen Sie BEIDE Automaten los.

FR IMPORTANT!

1. Si la structure de la porte est en matériau léger (par exemple en aluminium), il est conseillé de définir des valeurs de couple moteur très faibles.
2. En cas de dysfonctionnement ou de panne de courant, débranchez l'alimentation secteur et relâchez les deux automatismes.

ES IMPORTANTE!

1. Si la estructura de la puerta está hecha de material liviano (por ejemplo, aluminio), es recomendable establecer valores de par de motor muy bajos.
2. En caso de mal funcionamiento o apagón, desconecte la fuente de alimentación de la red y suelte AMBAS las automatizaciones.

PT IMPORTANTE!

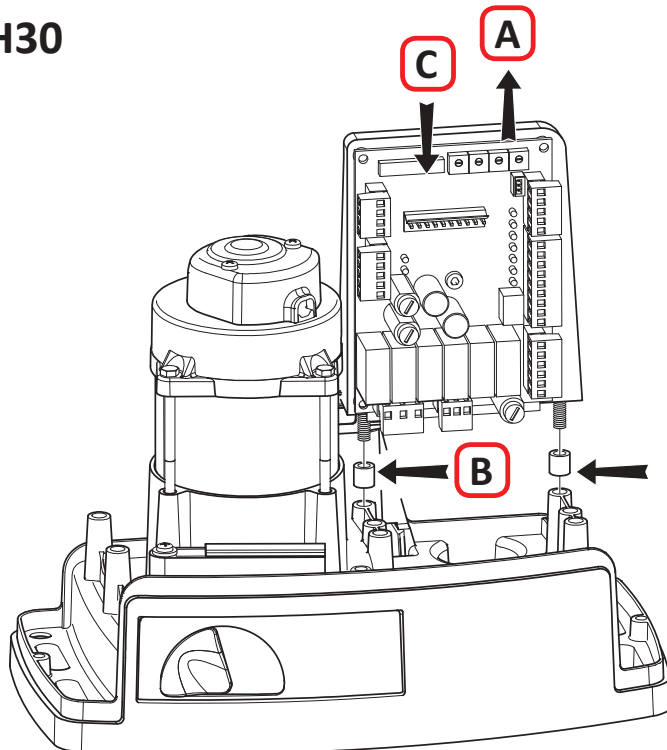
1. Se a estrutura da porta for feita de material leve (por exemplo, alumínio), é aconselhável definir valores de torque do motor muito baixos.
2. Em caso de mau funcionamento ou falta de energia, desconecte a fonte de energia e libere AMBAS as automatizações.

Sostituzione centrale di comando H70/101AC - H70/103AC con centrale di comando H70/104AC - H70/105AC.

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Substitution of H70/101AC - H70/103AC control panel with H70/104AC - H70/105AC control panel.

Serie H30



- IT** [A] Rimuovere la centrale H70/101AC o H70/103AC.
[B] Inserire i due distanziali, presenti nella confezione, tra la struttura principale del motoriduttore ed il supporto elettronica.
[C] Installare la nuova centrale H70/104AC o H70/105AC.

- EN** [A] Remove the H70/101AC or H70/103AC control unit.
[B] Fit the two spacers included in the pack between the main structure of the gear motor and the electronic circuit board mount.
[C] Install the new H70/104AC or H70/105AC control unit.

- DE** [A] Das Steuergerät H70/101AC oder H70/103AC entfernen.
[B] Die zwei in der Verpackung enthaltenen Distanzstücke zwischen die Hauptstruktur des Getriebemotors und die Halterung der Elektronik einfügen.
[C] Das neue Steuergerät H70/104AC oder H70/105AC installieren.

- FR** [A] Retirer la centrale H70/101AC ou H70/103AC.
[B] Introduire les deux entretoises présentes dans l'emballage, entre la structure principale du motoréducteur et le support d'électronique.
[C] Installer la nouvelle centrale H70/104AC ou H70/105AC.

- ES** [A] Quite la central H70/101AC o H70/103AC.
[B] Introduzca los dos separadores, que se encuentran en el paquete, entre la estructura principal del motorreductor y el soporte electrónico.
[C] Instale la nueva central H70/104AC o H70/105AC.

- PT** [A] Retire a unidade de controlo H70/101AC o H70/103AC.
[B] Insira os dois espaçadores, que estão presentes no pacote, entre a estrutura principal do moto-reductor e o suporte eletrónico.
[C] Instale a nova unidade de controlo H70/104AC ou H70/105AC.

1 General safety precautions



WARNING: IMPORTANT SAFETY INSTRUCTIONS THESE INSTRUCTIONS MUST BE FOLLOWED TO GUARANTEE THE SAFETY OF THE PERSONS PRESERVE THESE INSTRUCTIONS

This installation manual is intended for qualified personnel only.



Failure to observe the information included in this manual may result in personal injury or damage to the equipment.

ROGER TECHNOLOGY cannot be held responsible for any damage or injury due to improper use or any use other than the intended usage indicated in this manual.

The 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.

Incorrect installation may pose risks.

Before installing the product, make sure it is in perfect condition: In case of doubts, do not use the product and refer exclusively to professionally qualified personnel.

Do not install the product in explosive environment and atmosphere: inflammable gas or vapours constitute serious danger for safety.

Before installing the motor, make all structural modifications related to the safety precautions and to the protection or segregation of areas involving crushing, shearing, dragging risks or any other risks.

WARNING: check that the existing structure fulfils the required resistance and stability specifications.

ROGER TECHNOLOGY is not liable for failure to observe the good practices in the construction of fixtures to be motorised or for deformations that may occur during use.

The safety devices (photocells, sensing edges, emergency stops, etc.) must be installed taking into consideration the following: the regulations and directives in force, the good practices criteria, the installation environment, the operating logic of the system and the forces generated by the motorised door or gate.

The safety devices must protect any areas where there is crushing, shearing, dragging or any other danger in general generated by the motorised door or gate; the installer is advised to check that the moving wings do not have sharp edges or anything that may pose shearing and/or dragging risks.

If it is deemed necessary based on the risk analysis, install sensing edges on the mobile part.

It should be noted that, as provided by the UNI EN 12635 standard, all requirements of the EN 12604 and EN 12453 standards must be fulfilled and,

if necessary, also checked.

The European standards EN 12453 and EN 12445 define the minimum safety requirements for the operation of automatic doors and gates. In particular, these standards require the use of force limiting and safety devices (sensing ground plates, photocell barriers, hold-to-run operation, etc.) intended to detect persons or objects in the operating area and prevent collisions in all circumstances.

The installer is required to measure impact forces and select on the control unit the appropriate speed and torque values to ensure that the door or gate remains within the limits defined by the standards EN 12453 and EN 12445. ROGER TECHNOLOGY cannot be held responsible for any damage or injury caused by the installation of incompatible components which compromise the safety and correct operation of the device.

If the hold-to-run function is active, the installer will have the obligation to check the maximum stop distance or the alternative use of the rubber deformable edge, the closing speed or the gate and in general all aspects indicated by the applicable regulations. Moreover, please note that if the command means is fixed, it must be located in a position guaranteeing the automation system control and operation and the command type and the use type must comply with the UNI EN 12453 standard, prospectus 1 (with the following restrictions: type A or B command or type 1 or 2 use).

In case of hold-to-run operation, remove any potential persons away from the range of action of the automation system's moving parts; the direct commands must be installed at a minimum height of 1.5 m and must not be accessible to the public; moreover, unless the device is key operated, they must be located with a direct view to the motorised part and far from the moving parts.

Apply the signs indicated by the regulations in force for the identification of the dangerous areas.

Each installed device must have a visible indication of the motorised door or gate identification data, in accordance with the EN 13241-1:2001 standard or subsequent revisions



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; put the cut-off switch in OFF position and disconnect any buffer batteries before performing any cleaning or maintenance operations.

Ensure that an adequate residual current circuit breaker with a 0.03 A threshold and a suitable overcurrent cut-out are installed upstream 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.

The electronic parts must be handled using anti-static conductive wrist straps with grounding wire.

Only use original spare parts when repairing or replacing products.

The installer must provide the user with complete instruction for using the

motorised door or gate in automatic, manual and emergency modes, and must hand the operating instructions to the user of the installation upon completion.

Keep away from hinges and moving parts.

Keep out of the area of action of the motorised door or gate while it is moving.

Never try to stop the motorised door or gate while it is moving as this may be dangerous.

The motorised door or gate may be used by children aged 8 and above, by persons with diminished physical, sensory or mental capacity and by persons without the necessary experience and knowledge provided that they are supervised or have received adequate instruction on using the device safely and to ensure that they understand the dangers involved in its operation.

Children must be supervised at all times to ensure that they do not play with the device and that they keep out of the area of action of the motorised door or gate.

Keep remote controls and any other control devices out of the reach of children to prevent the risk of the motorised door or gate being operated unintentionally.

Failure to observe these instructions may lead to danger.

Any repair or technical interventions must be performed by qualified personnel.

The cleaning and maintenance operations must be performed exclusively by qualified personnel.

In the event of a fault or malfunction of the product, turn the main power switch off and have the installation serviced by qualified personnel and refrain from attempting to repair or perform any direct intervention yourself. 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 packaging items according to the provisions of the laws in force.

These instructions must be kept and must be made available to any other persons authorised to use the installation.

Declaration CE of Conformity

The undersigned Dino Florian, legal representative of **Roger Technology - Via Botticelli 8, 31021 Mogliano V.to (TV)** DECLARES that the **H70/104AC - H70/105AC** digital control unit is compliant with the provisions established by Community directives:

- 2006/95/EC
- 2004/108/CE
- 2011/65/CE











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 **CE 13**.

2 Symbols

The symbols and their meaning in the manual or on the product label are indicated below.

	Generic danger. Important safety information. Indicates operations and situations in which the personnel involved must pay close attention.
	Dangerous voltage risk. Indicates operations and situations in which the personnel involved must pay close attention to dangerous voltages.
	Hot surfaces risk. Indicates danger due to hot surfaces or which anyway have high temperatures (risk of burns)
	Useful information Indicates useful information for the installation.
	Refer to the Installation and use instructions. Indicates the obligation to refer to the manual or original document, which must be available for future use and must not be damaged in any way.
	Protective earth connection point.
	Indicates the admissible temperature range.
	Alternating current (AC)
	Direct current (DC)
	Symbol for the product disposal according to the WEEE directive, see chapter 22.


3 Product description

The **H70/104AC** control unit is intended to control sliding gate automation systems and overhead doors with 1 asynchronous single phase 230Vac (or 115 Vac, in case of **H70/104AC/115** version) ROGER motor.

The **H70/105AC** control unit is intended to control sliding gate automation systems with 1 asynchronous single phase 230Vac (or 115 Vac, in case of **H70/105AC/115** version) motor.

ROGER TECHNOLOGY cannot be held responsible for any damage or injury due to improper use or any use other than the intended usage indicated in this manual.


We recommend using only ROGER TECHNOLOGY accessories and control and safety devices. Specifically, we recommend installing **F2ES** or **F2S** series photocells.

 For further information, refer to the installation manual of the automation system.

4 Updates of version N6=16

- Removing the simplified parameter mode
- Parameter 30 set by default to 1 (instead of 00)
- Improved password protection management
- Improved slowdown management with E30/800 motor (with magnetic encoder)
- The fuse in fig. 3 to protect FIFTHY/230 must be F200mA

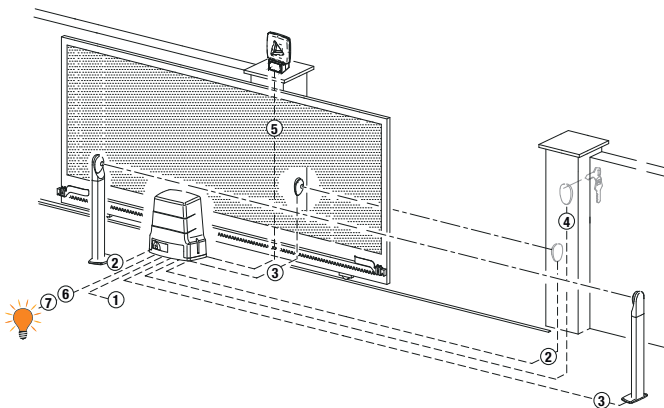
5 Technical characteristics of product

	H70/104AC - 105AC/BOX	H70/104AC/115 - H70/105AC/115
MAINS POWER VOLTAGE	230 Vac ± 10% 50 Hz	115 Vac ± 10% 60 Hz
MAXIMUM MAINS POWER ABSORPTION	650 W	
FUSES	F1 = F6,3A 250 V (5x20) motor power circuit protection F2 = F315mA 250 V (5x20) accessories power supply protection	
CONNECTABLE MOTORS	1	
MOTOR POWER SUPPLY	230 Vac	115 Vac
MOTOR TYPE	single-phase asynchronous	
MOTOR CONTROL TYPE	triac phase control	
MAXIMUM POWER FOR 1 MOTOR	600 W	
MAXIMUM POWER, FLASHING LIGHT	40 W 230 Vac - 25 W 24 Vac/dc (potential free contact)	
MAXIMUM POWER COURTESY LIGHT	100 W 230 Vac - 25 W 24 Vac/dc (potential free contact)	
GATE OPEN LIGHT POWER	2 W (24 Vac)	
MAXIMUM ACCESSORY CURRENT ABSORPTION	6 W (24 Vac) 300 mA	
OPERATING TEMPERATURE		
DEGREE OF PROTECTION	IP00 IP54 (H70/105AC/BOX)	IP00 IP54 (H70/105AC/115/BOX)
PRODUCT DIMENSION	mm 98x141x40 Weight: 0,48 kg (H70/105AC/BOX 255x200x99)	

6 Description of connections

Figures show connection diagrams.

6.1 Typical installation








It is the installer's responsibility to verify the adequacy of the cables in relation to the devices used in the installation and their technical characteristics.

CONNECTING CONTROL UNIT TO MAINS ELECTRICITY		
1	Power supply 230 Vac $\pm 10\%$ (115 Vac $\pm 10\%$ H70/104AC/115-H70/105AC/115)	3x1,5 mm ² (max 15 m) 3x2,5 mm ² (max 30 m)
CONNECTING CONTROL PANEL TO ACCESSORIES		
2	Photocells - Receiver F2ES/F2S	4x0,5 mm ² (max 20 m)
3	Photocells - Transmitter F2ES/F2S	2x0,5 mm ² (max 20 m)
4	Key selector R85/60	3x0,5 mm ² (max 20 m)
	Keypad H85/TDS - H85/TTD (connecting to H85/DEC - H85/DEC2)	2x0,5 mm ² (max 30 m)
	H85/DEC - H85/DEC2 (connecting to control unit)	4x0,5 mm ² (max 20 m) The number of conductors increases when using more than one output contact on H85/DEC - H85/DEC2
CONNECTING CONTROL PANEL TO FLASHING LIGHT		
5	LED Flashing light R92/LED230 - FIFTHY/230 Power supply 230 Vac by LED (40 W max)	2x1 mm ² (max 10 m)
CONNECTING CONTROL PANEL TO GATE OPEN INDICATOR		
6	Power supply 24 Vdc (2 W max)	2x0,5 mm ² (max 20 m)
CONNECTING CONTROL PANEL TO COURTESY LIGHT		
7	Power supply 230 Vac (100 W max)	2x1 mm ² (max 20 m)
CONNECTING CONTROL PANEL H70/105AC/BOX TO MOTORS		
	Motor	4x1,5 mm ² (max 20 m)
	Limit switches H70/105AC/BOX	4x0,5 mm ² (max 20 m)

6.2 Electrical connections

	DESCRIPTION
	Mains power supply 230 Vac $\pm 10\%$ 50 Hz connection. (H70/104AC-105AC/115V/BOX : 115 Vac $\pm 10\%$ 60Hz).
AP-CM-CH 	For H70/104AC: ROGER MOTOR connection. N.B.: Ready wired in factory by ROGER TECHNOLOGY (H70/104AC only). H70/105AC ONLY. The gate open stop limit switch may be connected to terminals AP-CM and the gate closed stop limit switch may be connected to terminals CH-CM . When a limit switch is activated, power is cut to the motor opening/closing the gate.
	Condenser connection (see technical specifications given in the instructions for the motor).

7 Commands and Accessories











⚠ If not installed, safety devices with NC contacts must be jumpered at the COM terminals, or disabled by modifying the parameters 50, 51, 53, 54, 73 and 74.






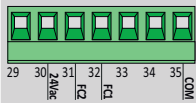

N.B.: limit switches not used with **H70/105AC** board must be disabled by parameter 72.

KEY:

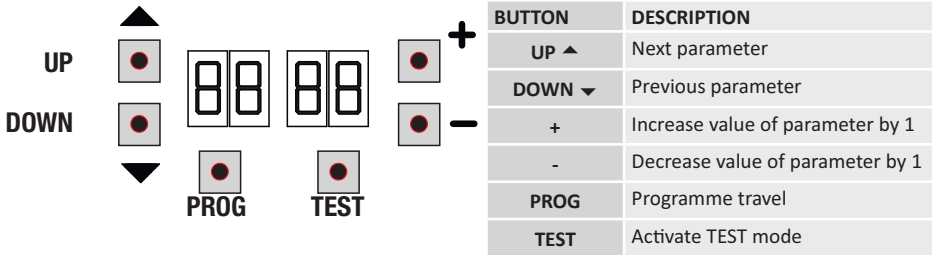
N.A. (Normally Open).

N.C. (Normally Closed).

CONTACT	DESCRIPTION
7(COR) 	8 Connection for external power supply for courtesy light 230 Vac 100 W (fig. 4).
7(COR) 	8 Connection for external power supply for electric lock (potential free contact) 12 Vac max 15VA (fig. 5).
9  10(LAM)	Connection for external power supply for flashing light (potential free contact) 230 Vac 40 W (fig. 3-5). The settings for the pre-manoeuve flashing warning signal may be selected with parameter 85, while the flashing mode is set with parameter 78.
11(24V~) 13(COM)	Power feed for external devices 6 W.
12(SC)  13(COM)	Connection for gate open indicator lamp 24 Vdc 2 W (see fig. 1-2) The function of the indicator lamp is determined by parameter 8B.
12(SC) 13(COM)	Photocell test connection (see fig. 9). feed for the photocell transmitters (TX) may be connected to this. Set the parameter 8B 02 to enable the test function. Each time a command is received, the control unit switches the photocells off and on to check that the contact changes state correctly.
14(FT2)  13(COM)	Input (N.C.) for connecting photocells FT2 (fig. 8). The photocells FT2 are configured by default with the following settings: <ul style="list-style-type: none"> - 53 03 . During gate opening, the gate stops as long as the photocell is obstructed. The gate resumed opening when the photocell is cleared. - 54 02 . Movement is reversed if the photocell FT2 is triggered during gate closure. - 55 00 . If the photocell is obstructed, the gate cannot open. If the photocells are not installed, jumper the terminals 14(FT2) - 13(COM) or set the parameters 53 00 and 54 00.
15(FT1)  13(COM)	Input (N.C.) for connecting photocells FT1 (fig. 8). The photocells FT1 are configured by default with the following settings: <ul style="list-style-type: none"> - 50 00 . Photocell triggers only during gate closure. Photocell is ignored during gate opening. - 51 02 . Movement is reversed if the photocell FT1 is triggered during gate closure. - 52 00 . If the photocell is obstructed, the gate cannot open. If the photocells are not installed, jumper the terminals 15(FT1) - 13(COM) or set the parameters 50 00 and 51 00.
16(COS2)  13(COM)	Input (NC or 8 kOhm) for connecting sensing edge COS2 (fig. 1-2). The sensing edge is configured by default with the following settings: <ul style="list-style-type: none"> - 74 00 . The sensing edge COS2 (NC contact) is disabled. If the sensing edge is not installed, jumper the terminals 16(COS2) - 13(COM) or set the parameter 74 00.
17(COS1)  13(COM)	Input (NC or 8 kOhm) for connecting sensing edge COS1 (fig. 1-2). The sensing edge is configured by default with the following settings: <ul style="list-style-type: none"> - 73 00 . The sensing edge COS1 (NC contact) is disabled. If the sensing edge is not installed, jumper the terminals 17(COS1) - 13(COM) or set the parameter 73 00.
18(ST) 	STOP command input (NC). The current manoeuvre is arrested if the safety contact opens. N.B.: the controller is supplied with this contact already jumpered by ROGER TECHNOLOGY.
19(PP) 	Step by step mode command input (N.O.). The function of the control is determined by parameter 84.

CONTACT		DESCRIPTION
20	 21(ANT)	Antenna connector for slot-in radio receiver board. Use RG58 if an external antenna is used; maximum recommended length: 10 m. N.B.: do not make joints in cable.
22(ORO)	 26(COM)	Clock timer contact input (N.O.). When the clock function is active, the gate opens and remains open. At the end of the programmed time set with the external device (clock), the gate closes.
23(PED)	 26(COM)	Partial open control signal input (N.O.). Set by default to 30% of completely open position.
24(CH)	 26(COM)	Close command input (N.O.).
25(AP)	 26(COM)	Open control signal input (N.O.).
H70/104AC	SB	Connector (N.C.) for connecting release contact. If the motor release handle is opened, the gate stops and no command signals are accepted. Once the release handle is closed again, if the gate is in an intermediate position, the controller unit initiates the position recovery procedure (see chapter 18). N.B.: Ready wired in factory by ROGER TECHNOLOGY.
	FC	Connector (N.C. contacts) for connecting mechanical limit switch (see figure 6 - detail A) or magnetic limit switch (see figure 6 - detail B). The gate stops when the limit switch is activated. N.B.: Ready wired in factory by ROGER TECHNOLOGY.
	ENC	Connector for connecting to encoder installed on motor. WARNING! Always disconnect from electrical power before disconnecting or connecting the encoder cable. N.B.: Ready wired in factory by ROGER TECHNOLOGY.
H70/105AC		Inputs (N.C.) for connecting closed and open limit switches (fig. 7). Use a 4x0.5 mm ² cable to connect the limit switch to the control unit. The gate stops when the limit switch is activated. The terminal 24 V AC input may only be used to power ROGER TECHNOLOGY magnetic limit switches. The ROGER TECHNOLOGY magnetic limit switch is equipped with a plug-in connector. If used with the H70/105AC control unit, cut off the connector and connect the wires as shown in fig. 7. N.B.: if the limit switches are not installed or not used, DO NOT jumper contacts FC1-COM e FC2-COM , but disable them by par. 72. The limit switch function depends on the setting for parameter 71.
		Input for connecting ROGER TECHNOLOGY ENCODER (fig. 6). The optical encoder is enabled by default (75 0 1). WARNING! Always disconnect from electrical power before disconnecting or connecting the encoder cable.
RECEIVER CARD		Connector for plug-in radio receiver board. The control unit has two radio remote control functions by default: – PR1 - step mode command (modifiable with parameter 75). – PR2 - partial opening command (modifiable with parameter 77).

8 Function buttons and display



- Press the UP ▲ and/or DOWN ▼ buttons to view the parameter you intend to modify.
- Use the + and - buttons to modify the value of the parameter. The value starts to flash.
- Press and hold the + or - button to scroll quickly through values, to modify the parameter more quickly.
- To save the new value, wait a few seconds or move onto another parameter with the UP ▲ or DOWN ▼ button. The display flashes rapidly to indicate that the new value has been saved.
- Parameters can only be modified while the motor is not running. Parameters can be viewed at any time.

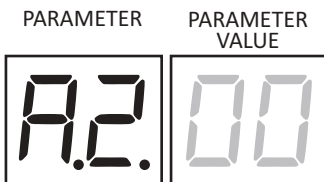
9 Switching on or commissioning

Power the control unit.

The firmware version of the control unit is displayed briefly. See chapter 7.

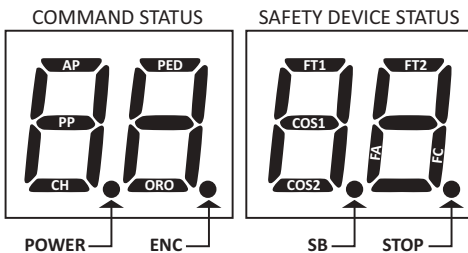
10 Display function mode

• Parameter display mode



See chapter 13 for detailed descriptions of parameters.

• Command and safety device status display mode



COMMAND STATUS:

The command status indicators on the display (segments AP = open, PP = step mode, CH = close, PED = partial opening, ORO = clock) are normally off. They illuminate when a command is received (e.g.: when a step mode command is received, the segment PP illuminates).

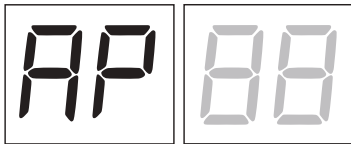
SAFETY DEVICE STATUS:

The safety device status indicators on the display (segments FT1/FT2=photocells, COS1/COS2 = sensing edge FA= gate open limit switches, FC=gate

close limit switches, ENC= Encoder, SB= Release system (for H70/104AC) are normally on. If an indicator is off, the relative device is in alarm state or is not connected. The an indicator is flashing, the relative device has been disabled with a specific parameter.

• TEST mode

The TEST mode is used to test activation of the commands and safety devices with visual confirmation. To activate the mode, press the TEST button with the automatic gate system at rest. If the gate is moving, pressing TEST stops the gate. Pressing the button again enables TEST mode. If the flashing light and the gate open indicator lamp illuminate for one second each time a control is used or a safety device is activated.

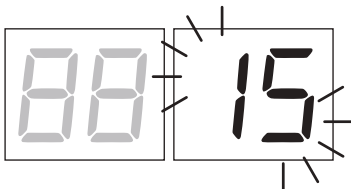


The command signal status is shown on the left hand side of the display for 5 seconds, ONLY when the respective command signal is active (AP, CH, PP, PE, OR). For example, if the gate open command is activated, the letters AP appear on the display.

The status of the safety devices/inputs is shown on the right hand side of the display. The number of the terminal relative to the safety device in alarm state flashes.

When the gate is completely open or completely closed, *FR* or *FC* is shown on the display to indicate that the gate has reached the gate open limit switch *FR* or gate closed limit switch *FC*.

Example: STOP contact in alarm state.



00	No safety device in alarm state, and no limit switch activated
5b (Sb)	Release handle or lock open.
18	STOP
17	Sensing edge COS1
16	Sensing edge COS2
15	Photocell FT1
14	Photocell FT2
FE	More than 3 limit switches activated
FR	Gate completely open / Gate open limit switch activated
FC	Gate completely closed / Gate closed limit switch activated

NOTA: If one or more contacts are open, the gate will not open or close. This does not apply for the limit switch signal state, however, which is shown on the display but does not prevent normal operation of the gate.

If more than one safety device is in alarm state, once the problem relative to the first device is resolved, the alarm for the next device is displayed. Any further alarm states are also displayed with the same logic.

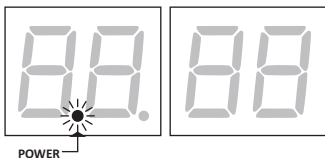
Press the TEST button again to exit test mode.

After 10 seconds with no user input, the display returns to command and safety device state display mode.

• Standby mode

This mode is activated after 30 minutes with no user input. The POWER LED flashes slowly.

Press UP ▲, DOWN ▼, +, = to reactivate the control unit.



11 Travel acquisition

For the system to function correctly, the gate travel must be acquired by the control.

Before starting:

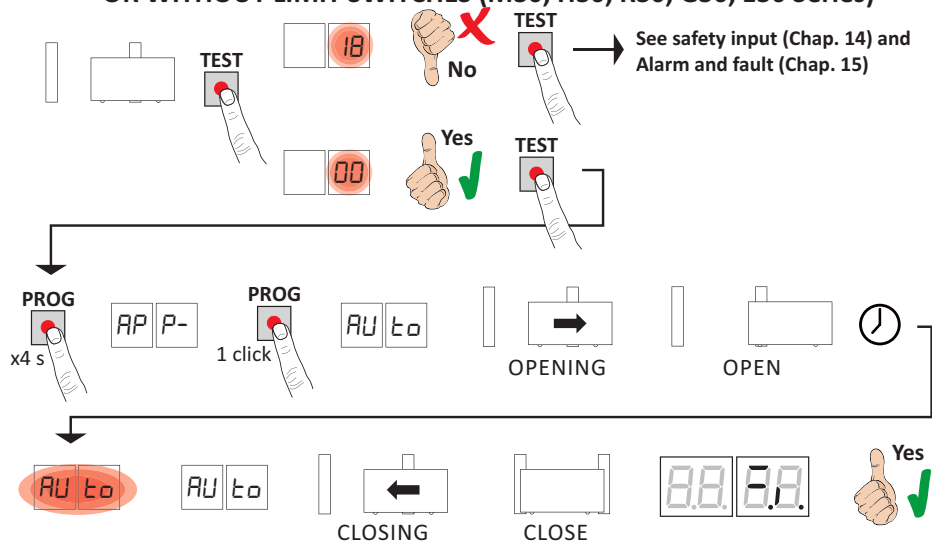
1. **Select the position of the motor relative to the gate with the parameter 71. The default setting for this parameter is with the motor installed on the right hand side of the gate (seen from interior side).**
2. Check that the operator present function is not enabled (A7 00).
3. Install mechanical stops in both the open and closed positions.
4. Move the gate into an intermediate position.
5. Press **TEST** (see TEST mode in chapter 10) and check the command signal and safety device states. If any safety devices are not installed, jumper the relative contact or disable the device from the relative parameter (50, 51, 53, 54, 73 and 74).
6. Select the appropriate self-acquisition procedure for your installation:

A SELF-ACQUISITION PROCEDURE WITH ENCODER ENABLED, WITH OR WITHOUT LIMIT SWITCHES (see paragraph 8.1).

B SELF-ACQUISITION PROCEDURE WITH LIMIT SWITCHES, WITHOUT ENCODER (see paragraph 8.2).

C SELF-ACQUISITION PROCEDURE WITHOUT LIMIT SWITCHES AND WITHOUT ENCODER (see paragraph 8.3).

11.1 SELF-ACQUISITION PROCEDURE WITH ENCODER ENABLED, WITH OR WITHOUT LIMIT SWITCHES (M30, H30, R30, G30, E30 Series) A



- Keep away from the photocell beam, to prevent interrupting the procedure.
- Press and hold **PROG** for 4 seconds, **AP P-** is shown on the display.
- Press **PROG** again. **AU t0** is shown on the display.
- The gate starts an opening manoeuvre at the speed selected in par. 4 1.
- Once open mechanical stop is reached or the relative limit switch is activated, the gate stops briefly.
- The message **AU t0** flashes on the display for 2 s.

- When the message *Aut* stops flashing and is steadily lit on the display, the gate closes until the closed mechanical stop or the relative limit switch is reached.
- If the acquisition procedure is completed successfully, the display enters the command and safety device state display mode.

If the following error messages are shown on the display, repeat the acquisition procedure:

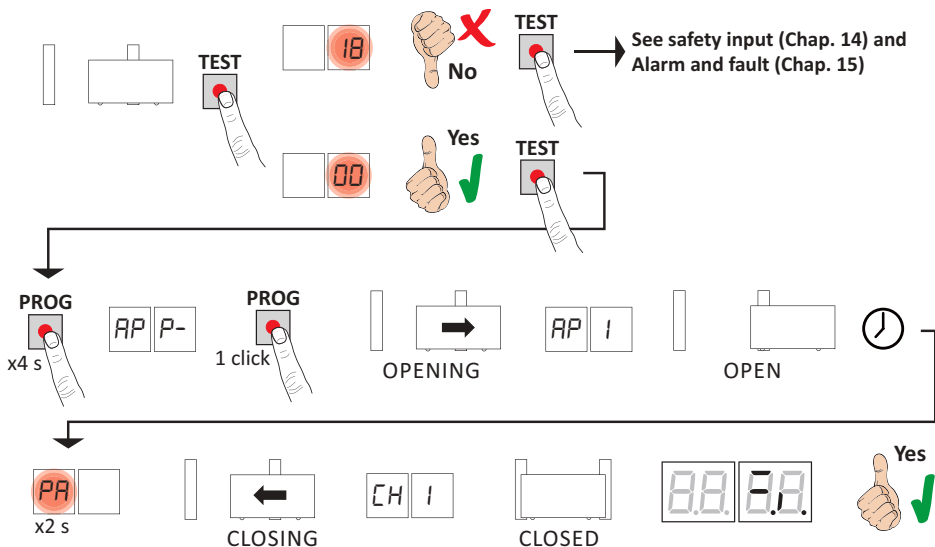
- *AP PE*: acquisition error. Press the TEST button to clear the error, and check the safety device in alarm state.

i For more information, see chapter 16 “Alarms and faults”.

11.2 SELF-ACQUISITION PROCEDURE WITH LIMIT SWITCHES, WITHOUT ENCODER (R30/1209 - G30/2205 Series)



WARNING: Before starting the self-acquisition procedure, set parameters *l1* - Deceleration space setting.



- Keep away from the photocell beam, to prevent interrupting the procedure.
- Press and hold **PROG** for 4 seconds. *AP P-* is shown on the display.
- Press **PROG** again.
- The gate starts an opening manoeuvre at the speed selected in par. *4 I*. *AP I* is shown on the display.
- Once the relative limit switch is activated, the gate stops briefly.
- *PA* flashes on the display for 2 seconds.
- After this 2 second interval, gate closes automatically. The message *CH I* appears on the display.
- The self-acquisition procedure concludes when gate reaches the closed limit switch.
- If the acquisition procedure is completed successfully, the display enters the command and safety device state display mode.

If the following error messages are shown on the display, repeat the acquisition procedure:

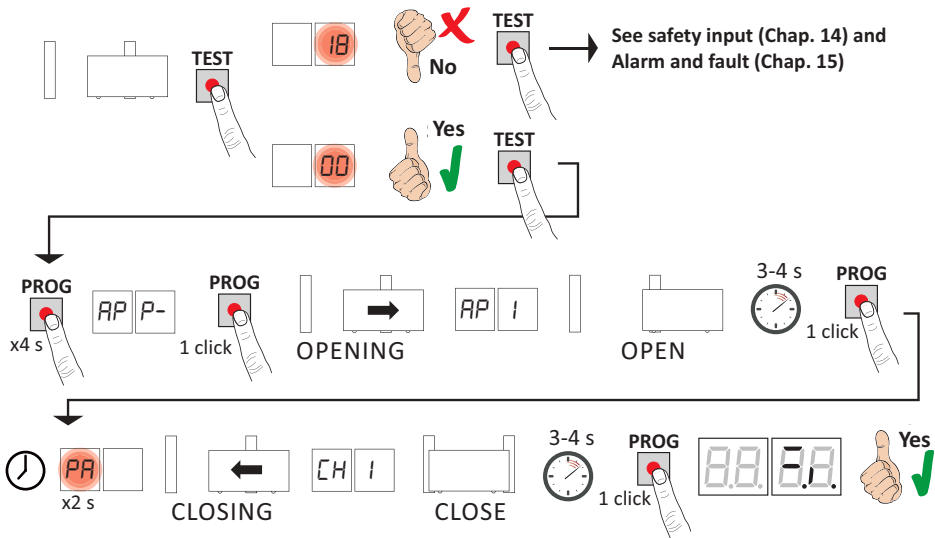
- *AP PE*: acquisition error. Press the TEST button to clear the error, and check the safety device in alarm state.

i For more information, see chapter 16 “Alarms and faults”.

11.3 SELF-ACQUISITION PROCEDURE WITHOUT MECHANICAL OR MAGNETIC LIMIT SWITCHES AND WITHOUT ENCODER



WARNING: Before starting the self-acquisition procedure, set parameters *l1* - Deceleration space setting.



- Keep away from the photocell beam, to prevent interrupting the procedure.
- Press and hold **PROG** for 4 seconds. *AP P-* is shown on the display.
- Press **PROG** again.
- The gate starts an opening manoeuvre at the speed selected in par. 4. *AP I* is shown on the display.
- When the gate reaches the open position mechanical stop, wait 3-4 seconds then press **PROG**. *PA* flashes on the display for 2 seconds.
- After this 2 second interval, gate closes automatically. The message *CH I* appears on the display.
- When gate reaches the closing mechanical stop, wait 3-4 seconds then press **PROG**.
- If the acquisition procedure is completed successfully, the display enters the command and safety device state display mode.

If the following error messages are shown on the display, repeat the acquisition procedure:

- *AP PE*: acquisition error. Press the TEST button to clear the error, and check the safety device in alarm state.

i For more information, see chapter 16 “Alarms and faults”.

12 Index of parameters

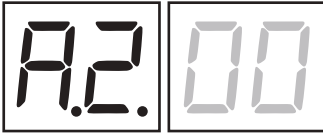
PARAM.	FACTORY DEFAULT	DESCRIPTION	PAGE
A2	00	Automatic close after pause time (from gate completely open)	57
A3	00	Automatic gate closing after mains power outage (black-out)	57
A4	00	Selecting step mode control function (PP)	57
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34	03	Set initial acceleration when opening/closing (soft-start)	59
35	08	Set torque after activation of sensing edge or obstacle detection system	59
36	03	Set initial maximum torque boost time	59
37	00	Set open/closed stop approach distance	59
38	00	Enable lock release reverse impulse	60
41	01	Set deceleration during opening/closure	60
42	60	Set obstacle detection sensitivity during manoeuvres	60
43	10	Set obstacle detection sensitivity during deceleration	60
49	00	Number of automatic closure attempts after activation of sensing edge or obstacle detection (crush protection)	60
50	00	Setting photocell mode during gate opening (FT1)	60
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52	01	Photocell (FT1) mode with gate closed	61
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56	00	Enable close command 6 s after activation of photocell (FT1-FT2)	61
60	01	Enable braking at open and closed mechanical stop/limit switch	61

PARAM.	FACTORY DEFAULT	DESCRIPTION	PAGE
61	01	Enable braking after activation of photocells	61
62	01	Enable braking after STOP command	61
63	01	Enable braking after open → close / close → open inversion	62
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73	00	Configuring sensing edge COS1	62
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76	00	Configuring radio channel 1 (PR1)	62
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h0	01	View manoeuvre hour counter	64
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P1	00	Password	64
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P3	00		64
P4	00		64
CP	00	Password change protection	64

13 Parameter menu

PARAMETER

PARAMETER
VALUE



A2 00	Automatic closure after pause time (from gate completely open)
00	Disabled.
01-15	From 1 to 15 of gate closure attempts after photocell is triggered. Once the number of attempts set is reached, the gate remains open.
99	The gate tries to close indefinitely.
A3 00	Automatic gate closing after mains power outage
00	Disabled. The gate does not close automatically when mains power is restored.
01	Enabled. If the gate is NOT completely open, when mains power is restored, the gate closes after a 5 second warning signalled with the flashing light (independently of the value set with the parameter A5). The gate closes in "position recovery" mode (see chapter 17).
A4 00	Selecting step mode control function (PP)
00	Open-stop-close-stop-open-stop-close...
01	Condominium function: the gate opens and closes after the set automatic closing time. The automatic closing timer restarts if a new step mode command is received. Step mode commands are ignored while the gate is opening. This allows the gate to open completely and prevents the gate from closing when not required. If automatic closing is disabled (A2 00), the condominium function automatically attempts a closing manoeuvre A2 01.
02	Condominium function: the gate opens and closes after the set automatic closing time. The automatic closing timer does NOT restart if a new step mode command is received. Step mode commands are ignored while the gate is opening. This allows the gate to open completely and prevents the gate from closing when not required. If automatic closing is disabled (A2 00), the condominium function automatically attempts a closing manoeuvre A2 01.
03	Open-close-open-close.
04	Open-close-stop-open.
A5 00	Pre-flashing
00	Disabled. The flashing light is activated during opening and closing manoeuvres.
01-10	Flashing warning signal for 1 to 10 seconds prior to every manoeuvre.
99	5 second flashing warning signal prior to closing manoeuvre.
A6 00	Condominium function for partial open command (PED)
00	Disabled. The gate opens partially in step mode: open-stop-close-stop-open...
01	Enabled. Partial commands are ignored during gate opening.
A7 00	Enabling operator present function.
00	Disabled.

01	Enabled. The open (AP) or close (CH) button must be pressed continuously to operate the gate. The gate stops when the button is released.
88 00	Gate open indicator / photocell test function
00	The indicator is off when the gate is closed, and steadily lit during manoeuvres and when the gate is open.
01	The indicator flashes slowly during opening manoeuvres, and is lit steadily when the gate is completely open. It flashes quickly during closing manoeuvres. If the gate is stopped in an intermediate position, the lamp extinguishes twice every 15 seconds.
02	Set 02 if the output SC is used for the photocell test. See fig. 9.
11 15	Set motor deceleration space (%) N.B.: if no encoder is installed, repeat the travel acquisition procedure after any change made to this parameter.
01-30	From 1% to 30% of the total gate travel.
13 10	Gate fully open/closed position control setting The value selected must ensure that the gate is opened/closed correctly when it reaches the respective mechanical stop. Warning! Excessively low values cause the gate to reverse when it reaches the gate open/closed stop. N.B.: parameter visible only with encoder enabled (75 01 or 75 02) and if limit switches are not installed (72 00 or 72 02).
01-40	Motor revolutions.
15 30	Partial opening adjustment (%) N.B.: This parameter is set to 30% of total gate travel by default.
15-99	From 1% to 99% of total gate travel.
16 00	Setting additional time after direction inversion, with no encoder N.B.: parameter visible only if encoder is disabled 75 00. In the event of photocell activation or a reverse command during an opening or closing manoeuvre, the gate reverses for the elapsed manoeuvre time plus an additional time to allow the manoeuvre to be completed.
00	3 s.
01	6 s. Recommended setting for installations with hydraulic motors.
21 30	Setting automatic closing time The timer starts from the gate open state and continues for the set time. Once the set time is reached, the gate closes automatically. The timer count restarts if a photocell is triggered.
00-90	Pause time settable from 00 to 90 s.
92-99	Pause time settable from 2 to 9 min.
22 20	Set manoeuvre time N.B.: parameter visible only if encoder is disabled 75 00. Warning! Modifying this parameter influences the deceleration setting (parameter 11).
00-99	Manoeuvre time settable from 00 to 99 s.
24 00	Enable double manoeuvre time Enabling this parameter is recommended for installations with particularly long operating times. N.B.: parameter visible only if encoder is disabled 75 00.
00	Disabled.
01	Enabled.

27 02	Setting reverse time after activation of sensing edge or obstacle detection (crush prevention). This sets the reverse manoeuvre time after activation of the sensing edge or the obstacle detection system.
00-60	From 0 to 60 s.
28 00	Set electric lock activation lead time Sets the electric lock activation time before any manoeuvre. N.B.: parameter visible only if electric lock is enabled 79 99.
00-02	From 0 to 2 s.
29 00	Enable electric lock Sets duration of electric lock activation time. N.B.: parameter visible only if electric lock is enabled 79 99.
00	Disabled.
0 1-06	Enabled, with time from 1 to 6 s. This parameter must be set to a value higher than parameter 38 (if enabled).
30 01	Enable anti-disturbance filter for power
00	Disabled.
0 1	Enabled. It enables a supplementary digital filter function to improve the operation of the control unit in the event of power supply disturbance and optimise motor control.
31 05	Set motor torque during open/close manoeuvre This parameter must always be equal to or less than the value set for parameter 33.
0 1-08	1 = minimum motor torque ... 8 = maximum motor torque.
32 06	Set motor torque during deceleration
0 1-08	1 = minimum motor torque ... 8 = maximum motor torque.
33 08	Set motor torque boost at start of manoeuvre
0 1-08	1 = minimum motor torque ... 8 = maximum motor torque.
34 03	Set initial acceleration when opening/closing (soft-start)
00	Disabled.
0 1-02	Enabled. The gate accelerates slowly and progressively at the start of the manoeuvre.
03-04	Enabled. The gate accelerates even more slowly and progressively at the start of the manoeuvre. N.B.: values available only if encoder is enabled (75 01 / 75 02). Setting a value of 04 is not recommended for heavy gates.
35 08	Set motor torque after activation of sensing edge or encoder.
00	Disabled. Torque applied is the value set for parameter 31.
0 1-08	1 = minimum motor torque ... 8 = maximum motor torque.
36 03	Enable maximum torque boost at start of manoeuvre If this parameter is enabled, each time the motor starts the maximum boost torque is applied for a settable period of time to allow the gate to start moving.
00-20	From 0 to 20 s.
37 00	Set open/closed stop approach distance
00	Disabled.

	<p>01 = 0.5 m long gate leaf; 02 = 1 m long gate leaf; 03 = 1.5 m long gate leaf; 04 = 2 m long gate leaf; 05 = gate leaf \geq 2.5 m in length.</p> <p>If this function is enabled, the torque applied is reduced during the final part of the gate travel to reduce gate vibration when it reaches the stop. On installations with an electric lock, the torque applied is increased during the final part of the closing travel to ensure that the lock latches correctly. On installations with no electric lock, the torque applied is reduced during the final part of the gate travel to reduce gate vibration. N.B.: parameter visible only if encoder is enabled 75 01.</p>
38 00	Enable electric lock release reverse impulse
00	Disabled.
01-04	<p>Enabled. At the start of each opening manoeuvre, the control unit applies a brief closing force (settable from 1 to 4 s) to release the electric lock. Enabling the electric lock release reverse impulse function automatically enables parameters 28 01 (electric lock lead time = 1 s) and 29 03 (electric lock activation time = 3 s).</p>
41 01	Set deceleration during opening/closure
00	Disabled.
01	Medium deceleration. N.B.: maximum settable value for 6 pole motors.
02	Maximum deceleration. IMPORTANT: DO NOT USE 6 pole motors.
42 60	Set obstacle detection sensitivity during manoeuvres
	<p>The gate reverses immediately when an obstacle is detected during an opening or closing manoeuvre. N.B: set a value below 60 for 6 pole motors.</p>
43 10	Set obstacle detection sensitivity during deceleration
	<p>The gate reverses immediately when an obstacle is detected during opening or closing deceleration. N.B: set a value below 60 for 6 pole motors.</p>
01-99	<p>From 1% to 99%. 01 = minimum sensitivity ... 99 = maximum sensitivity.</p>
49 00	Setting number of automatic closure attempts after activation of sensing edge or obstacle detection (crush protection)
00	No automatic closure attempts.
01-03	<p>From 1 to 3 automatic closure attempts. We recommend setting a value equal to or lower than the value set for parameter A2. Automatic closure is only performed if the gate is completely open.</p>
50 00	Setting photocell mode during gate opening (FT1)
00	DISABLED. Photocell is not active or not installed.
01	STOP. The gate stops and remains stationary until the next command is received.
02	IMMEDIATE REVERSE. The gate reverses immediately if the photocell is activated during gate opening.
03	TEMPORARY STOP. The gate stops as long as the photocell is obstructed. The gate resumed opening when the photocell is cleared.
04	DELAYED REVERSE. The gate stops if the photocell is obstructed. The gate closes when the photocell is cleared.
51 02	Setting photocell mode during gate closing (FT1)
00	DISABLED. Photocell is not active or not installed.
01	STOP. The gate stops and remains stationary until the next command is received.
02	IMMEDIATE REVERSE. The gate reverses immediately if the photocell is activated during gate closure.

03	TEMPORARY STOP. The gate stops as long as the photocell is obstructed. The gate resumed closing when the photocell is cleared.
04	DELAYED REVERSE. The gate stops if the photocell is obstructed. The gate opens when the photocell is cleared.

52 01 Photocell (FT1) mode with gate closed

00	If the photocell is obstructed, the gate cannot open.
01	The gate opens when an open command is received, even if the photocell is obstructed.
02	The photocell sends the gate open command when obstructed.

53 00 Setting photocell mode during gate opening (FT2)

00	DISABLED. Photocell is not active or not installed.
01	STOP. The gate stops and remains stationary until the next command is received.
02	IMMEDIATE REVERSE. The gate reverses immediately if the photocell is activated during gate opening.
03	TEMPORARY STOP. The gate stops as long as the photocell is obstructed. The gate resumed opening when the photocell is cleared.
04	DELAYED REVERSE. The gate stops if the photocell is obstructed. The gate closes when the photocell is cleared.

54 00 Setting photocell mode during gate closing (FT2)

00	DISABLED. Photocell is not active or not installed.
01	STOP. The gate stops and remains stationary until the next command is received.
02	IMMEDIATE REVERSE. The gate reverses immediately if the photocell is activated during gate closure.
03	TEMPORARY STOP. The gate stops as long as the photocell is obstructed. The gate resumed closing when the photocell is cleared.
04	DELAYED REVERSE. The gate stops if the photocell is obstructed. The gate opens when the photocell is cleared.

55 01 Photocell (FT2) mode with gate closed

00	If the photocell is obstructed, the gate cannot open.
01	The gate opens when an open command is received, even if the photocell is obstructed.
02	The photocell sends the gate open command when obstructed.

56 00 Enable close command 6 s after activation of photocell (FT1-FT2)
N.B.: This parameter is not visible if *AB 03* or *AB 04* is set.

00	Disabled.
01	Enabled. When the photocell gate FT1 is crossed, a close command is sent 6 seconds later.
02	Enabled. When the photocell gate FT2 is crossed, a close command is sent 6 seconds later.

60 01 Enable braking at open and closed mechanical stop or limit switch

00	Disabled.
01	Enabled. The gate brakes at the end of the manoeuvre against the mechanical open and/or closed stop.

61 01 Enable braking after activation of photocells

00	Disabled.
01	Enabled. The gate brakes when the photocells are activated.

62 01 Enable braking after STOP command

00	Disabled.
01	Enabled. The gate brakes when the control unit receives a STOP command.
63 01	Enable braking after open → close / close → open inversion
00	Disabled.
01	Enabled. The gate brakes before inverting direction when the control unit receives a close command while the gate is opening, or an open command while the gate is closing.
64 05	Set braking time WARNING: check carefully that the chosen value is appropriate to the model of motor used.
01-20	Settable from 1 to 20 tenths of a second.
65 08	Set braking force WARNING: preferably set low values to ensure that the gate stops correctly.
04-08	4 = minimum force ... 8 = maximum force.
71 01	Selecting installation position of motor relative to gate (seen from interior side)
00	Motor installed on left.
01	Motor installed on right.
72 01	Enable limit switches N.B.: if this parameter is modified, disconnect from 230 V AC mains power, wait for the display to turn off then reconnect to mains power. Repeat acquisition procedure.
00	No limit switch installed.
01	Gate open and close limit switches installed.
02	Gate open limit switches installed.
73 00	Configuring sensing edge COS1
00	Sensing edge NOT INSTALLED.
01	NC contact (normally closed). The gate reverses only when opening.
02	Contact with 8k2 resistor. The gate reverses only when opening.
03	NC contact (normally closed). The gate always reverses.
04	Contact with 8k2 resistor. The gate always reverses.
74 00	Configuring sensing edge COS2
00	Sensing edge NOT INSTALLED.
01	NC contact (normally closed). The gate reverses only when closing.
02	Contact with 8k2 resistor. The gate reverses only when closing.
03	NC contact (normally closed). The gate always reverses.
04	Contact with 8k2 resistor. The gate always reverses.
75 01	Configure encoder N.B.: if no encoder is installed, time based control is used. if this parameter is modified, disconnect from 230 V AC mains power, wait for the display to turn off then reconnect to mains power. Repeat acquisition procedure.
00	No encoder installed.
01	Optical encoders installed (8 pulses/revolution).
02	Magnetic encoders installed (1 pulse/revolution). Only the E30 series uses magnetic encoders.
76 00	Configuring radio channel 1 (PR1)

77 01 Configuring radio channel 2 (PR2)	
00	STEP MODE.
01	PARTIAL OPENING
02	OPENING
03	CLOSING.
04	STOP.
05	Courtesy light. The output COR is managed from the remote control. The light remains lit as long as the remote control is active. The parameter 79 is ignored.
06	Courtesy light ON-OFF (PP). The output COR is managed from the remote control. The remote control turns the courtesy light on and off. The parameter 79 is ignored.
07	FLASHING LIGHT. The FLASHING LIGHT output is managed from the remote control. The light remains lit as long as the remote control is active. The parameter 7B is ignored.
08	FLASHING LIGHT ON-OFF. The FLASHING LIGHT output is managed from the remote control. The remote control turns the courtesy light on and off. The parameter 7B is ignored.

78 00 Configuring flashing light frequency	
00	The frequency is set electronically from the flashing light unit.
01	Slow flash.
02	Light flashes slowly when gate opens, rapidly when gate closes.

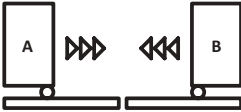
79 02 Selecting courtesy light mode	
00	Disabled.
01	PULSE. The courtesy light illuminates briefly at the start of each manoeuvre.
02	ACTIVE. The light remains lit for the entire duration of the manoeuvre.
03-90	From 3 to 90 s. The light remains lit for the time period set after the manoeuvre is completed.
92-98	From 2 to 8 minutes. The light remains lit for the time period set after the manoeuvre is completed.
99	ELECTRIC LOCK. Enables output COR for use with electric lock (fig. 5)

80 00 Clock contact configuration	
When the clock function is active, the gate opens and remains open. At the end of the programmed time set with the external device (clock), the gate closes.	
00	When the clock function is active, the gate opens and remains open. Any command signal received is ignored.
01	When the clock function is active, the gate opens and remains open. Any command signal received is accepted. When the gate returns to the completely open position, the clock function is reactivated.

Identification number		
The identification number consists of the values of the parameters from n0 to n5. N.B.: The values shown in the table are indicative only.		
n0 01	HW version.	
n1 23	Year of manufacture.	
n2 45	Week of manufacture.	
n3 67	Example: 01 23 45 67 89 01 23	
n4 89		Serial number.
n5 01		
n6 23		FW version.

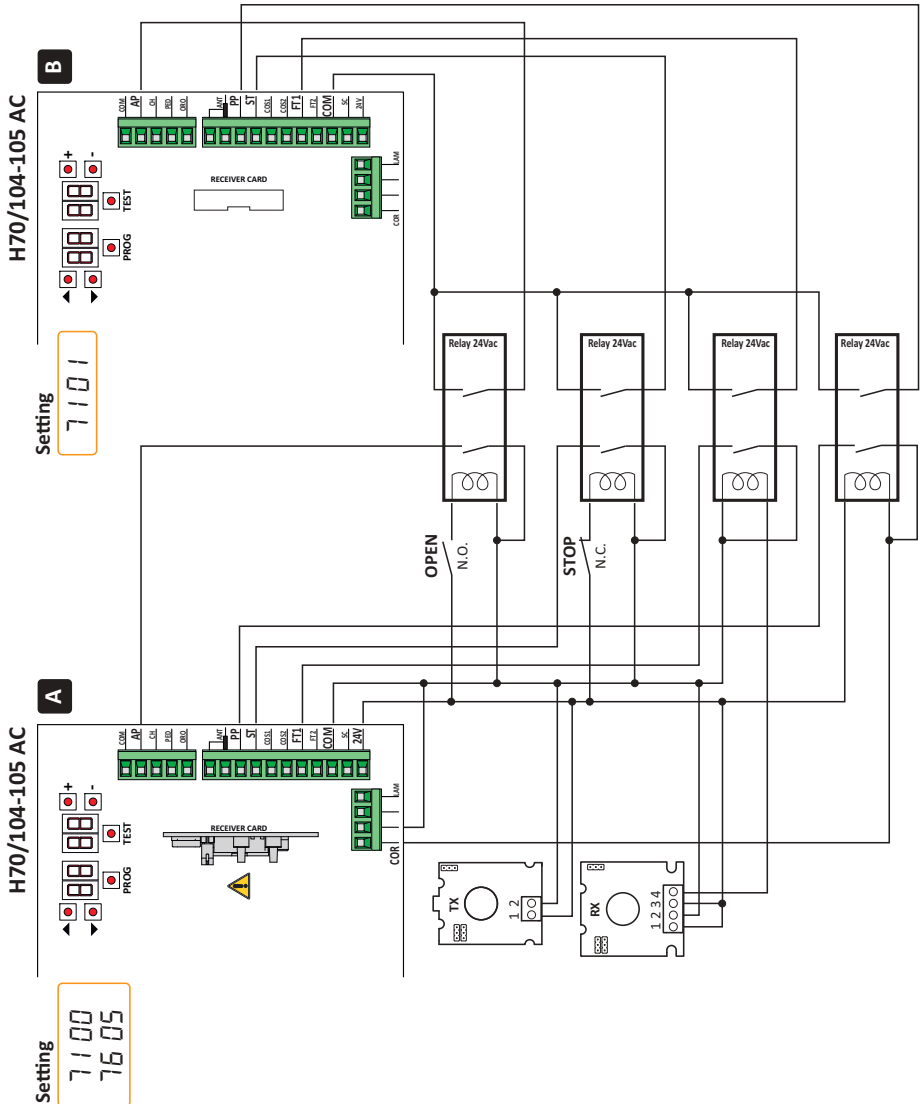
	View manoeuvre counter The number consists of the values of the parameters from $a0$ to $a1$ multiplied by 100. N.B.: The values shown in the table are indicative only.
$a001$	Manoeuvres performed.
$a123$	Example: $0123 \times 100 = 12.300$ manoeuvres.
	View manoeuvre hour counter The number consists of the values of the parameters from $h0$ to $h1$. N.B.: The values shown in the table are indicative only.
$h001$	Manoeuvre hours.
$h123$	Example: $0123 = 123$ hours.
	View control unit days on counter The number consists of the values of the parameters from $d0$ to $d1$. N.B.: The values shown in the table are indicative only.
$d001$	Days with unit switched on.
$d123$	Example: $0123 = 123$ days.
	Password Setting a password prevents unauthorised persons from accessing the settings. With password protection active ($CP=01$), parameters may be viewed, but the values CANNOT be modified. <u>Only a single password is used to control access to the gate automation system.</u> WARNING: Contact the Technical Support Service if you lose your password.
$P100$ $P200$ $P300$ $P400$	Password activation procedure: <ul style="list-style-type: none"> • Enter the desired values for parameters $P1$, $P2$, $P3$ and $P4$. • Use the UP ▲ and/or DOWN ▼ buttons to view the parameter CP. • Press and hold the + and - buttons for 4 seconds. • The display flashes to confirm that the password has been saved. • Switch the control unit off and on again. Check that password protection is activated ($CP=01$). Temporary unlock procedure: <ul style="list-style-type: none"> • Enter the password. • Check that $CP=00$. Password cancellation procedure: <ul style="list-style-type: none"> • Enter the password ($CP=00$). • Save the values $P1$, $P2$, $P3$, $P4 = 00$ • Use the UP ▲ and/or DOWN ▼ buttons to view the parameter CP. • Press and hold the + and - buttons for 4 seconds. • The display flashes to confirm that the password has been cancelled (the values $P100$, $P200$, $P300$ and $P400$ indicate that no password is set). • Switch the control unit off and on again ($CP=00$).
$CP00$	Changing password
00	Protection deactivated.
01	Protection activated.

14 Example installation with two opposing automation systems



Two opposing sliding gate automation system may be connected to a single H70/104AC-H70/105AC control unit. Connect the control units together using third party 24 Vac relays (not supplied by ROGER), as indicated in the figure.

A single radio board, installed in one of the two control units (A or B) may be used. Use the output COR to manage radio control signals. Set the parameter 76 to 05.



15 Safety input and command status (TEST mode)

With no currently active commands, press the TEST button and check the following:

DISPLAY	POSSIBLE CAUSE	ACTION BY SOFTWARE	PHYSICAL CORRECTIVE ACTION
88 5b(Sb)	The release handle is open.	-	Close the release handle and turn the key to the close position. Check that the release contact is connected correctly.
88 18	The safety STOP contact is open.	-	Install a STOP button (NC) or jumper the ST contact with the COM contact.
88 17	Sensing edge COS1 not connected or incorrectly connected.	Set the parameter 73 00 if not used or to disable	Jumper contact COS1 with contact COM , if not used or to disable
88 16	Sensing edge COS2 not connected or incorrectly connected.	Set the parameter 74 00 if not used or to disable	Jumper contact COS2 with contact COM , if not used or to disable
88 15	Photocell FT1 not connected or incorrectly connected.	Set the parameter 50 00 e 51 00 if not used or to disable	Jumper contact FT1 with contact COM , if not used or to disable. Check connection referring to relative connection diagram (fig. 8).
88 14	Photocell FT2 not connected or incorrectly connected.	Set the parameter 53 00 e 54 00 if not used or to disable	Jumper contact FT2 with contact COM , if not used or to disable. Check connection referring to relative connection diagram (fig. 8).
88 FE	Both limit switches in open contact state or not connected.	-	Check connection of limit switches.
88 FA	Gate is at gate closed limit switch.	If the limit switch state indicated is incorrect, check the setting of parameter 7 l.	-
	Gate open limit switch absent or not connected.	-	Check connection of limit switches.
88 FC	Gate is at gate closed limit switch.	If the limit switch state indicated is incorrect, check the setting of parameter 7 l.	-
	Gate closed limit switch absent or not connected.	-	Check connection of limit switches.
PP 00	If occurs with no voluntary command, the contact (N.O.) may be faulty or one of the buttons may be incorrectly connected.	-	Check PP - COM contacts and connections to buttons.
CH 00		-	Check CH - COM contacts and connections to buttons.
AP 00		-	Check AP - COM contacts and connections to buttons.
PE 00		-	Check PED - COM contacts and connections to buttons.
Or 00	If occurs with no voluntary command, the contact (N.O.) may be faulty or the timer may be incorrectly connected.	-	Check ORO - COM contacts. Contact must not be jumpered if not used.

N.B.: Press TEST button to exit from the TEST Mode.

We recommend troubleshooting safety device and input status errors with “corrective action by software” only.

16 Alarms and faults

PROBLEM	ALARM	POSSIBLE CAUSE	ACTION
The gate does not open or close.	POWER LED off	No power.	Check power cable.
	POWER LED off	Fuses blown.	Replace fuse. Always disconnect from mains power before removing fuses.
	Example: 15 EE 21 EE 24 AC flashing AP PE	Configuration parameter error.	Set configuration value correctly and save.
Acquisition procedure does not complete correctly.		Fuse F2 disconnected or damaged. Accessories are not powered.	Refit fuse F2 correctly or replace.
		TEST button pressed accidentally. Safety devices in alarm state.	Repeat acquisition procedure. Press the TEST button and check the safety device/s in alarm state and the connections of the safety devices.
Remote control has limited range and does not work while automated gate is moving.	-	The radio transmission is impeded by metal structures and reinforced concrete walls.	Install the antenna outside.
	-	Flat batteries.	Replace the transmitter batteries.
The flashing light is not working.	-	Bulb / LED blown or flashing light wires disconnected.	Check LED circuit and/or connector wires.
Gate open indicator lamp does not work.	-	Bulb blown or wires disconnected.	Check the bulb and/or wires.
Gate does not perform desired manoeuvre.	-	Motor leads crossed.	Swap two wires on terminal X-Y-Z or Z-Y-X.

N.B.: Press the TEST button to temporarily cancel the alarm.

The next time a command is received, the alarm reappears on the display if the problem has not been resolved.

17 Mechanical release (H70/104AC only)

In the event of power failure, the gate may be unlocked by following the instructions given in the use and maintenance manual of the automation system. On receiving the first command signal after mains power is restored, the control unit starts an opening manoeuvre in position recovery mode (see chapter 18). Position recovery is performed immediately when the limit switches (if installed) are activated.

18 Position recovery mode

When it receives the first command signal after a power failure, after unlocking the motor or after an obstacle is detected in the same position three consecutive times (with encoders enabled), the control unit starts a manoeuvre in position recovery mode.

If encoder is installed the manoeuvre in position recovery mode happens at low speed; otherwise the manoeuvre happens at normal speed. The flashing light flashes with a different duty cycle than normal (3 s on, 1.5 s off).

The control unit recovers the installation data during this procedure.

Warning! Do not use any controls until the gate has completed the opening and closing manoeuvre.

Position recovery is performed immediately when the limit switches (if installed) are activated.

19 Initial testing

- Turn on the power supply.
- Check that all connected controls are working correctly.
- Check travel and deceleration.
- Check that the impact force is correct, in compliance with EN 12453 and EN12445.
- Check that the safety devices are activated correctly
- Disconnect from mains power then reconnect. Check that the position recovery procedure is completed

correctly.

- Check the limit switch settings (if installed).
- Check that the release system works correctly (**H70/104AC only**).

20 Maintenance

Perform scheduled maintenance every 6 months.

Check cleanliness and function.

If the unit contains dirt, moisture, insects or other foreign matter, disconnect from mains power and clean the board and the housing.

Repeat the initial installation test procedure after cleaning.

If any corrosion is found on the printed circuit board, evaluate if it is necessary to replace the board itself.

21 Disposal



The product may only be uninstalled by qualified technical personnel, following suitable procedures for removing the product correctly and safely. This product consists of numerous different materials. Some of these materials may be recycled, while others must be disposed of correctly at the specific recycling or waste management facilities indicated by local legislation applicable for this category of product.

Do not dispose of this product as domestic refuse. Observe local legislation for differentiated refuse collection, or hand the product over to the vendor when purchasing an equivalent new product.

Local legislation may envisage severe fines for the incorrect disposal of this product.

Warning! Some parts of this product may contain substances that are harmful to the environment or dangerous and which may cause damage to the environment or health risks if disposed of incorrectly.

22 Additional information and contact details

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ROGER TECHNOLOGY CUSTOMER SERVICE:

business hours: Monday to Friday
08:00 to 12:00 - 13:30 to 17:30

Telephone no: +39 041 5937023

E-mail: service@rogertechnology.it

Skype: [service_rogertechnology](https://www.skype.com/people/service_rogertechnology)

To request support for any problems or for any other queries regarding the automation system, please compile the online form "REPAIRS" in the 'Self Service' area of our website www.rogertechnology.com/B2B.



ROGER TECHNOLOGY
Via S. Botticelli 8 • 31021 Bonisiolo di Mogliano Veneto (TV) • ITALIA
P.IVA 01612340263 • Tel. +39 041.5937023 • Fax. +39 041.5937024
info@rogertechnology.com • www.rogertechnology.com