

FW
P4.00



IS88 Rev.14 04/05/2020

CTRL

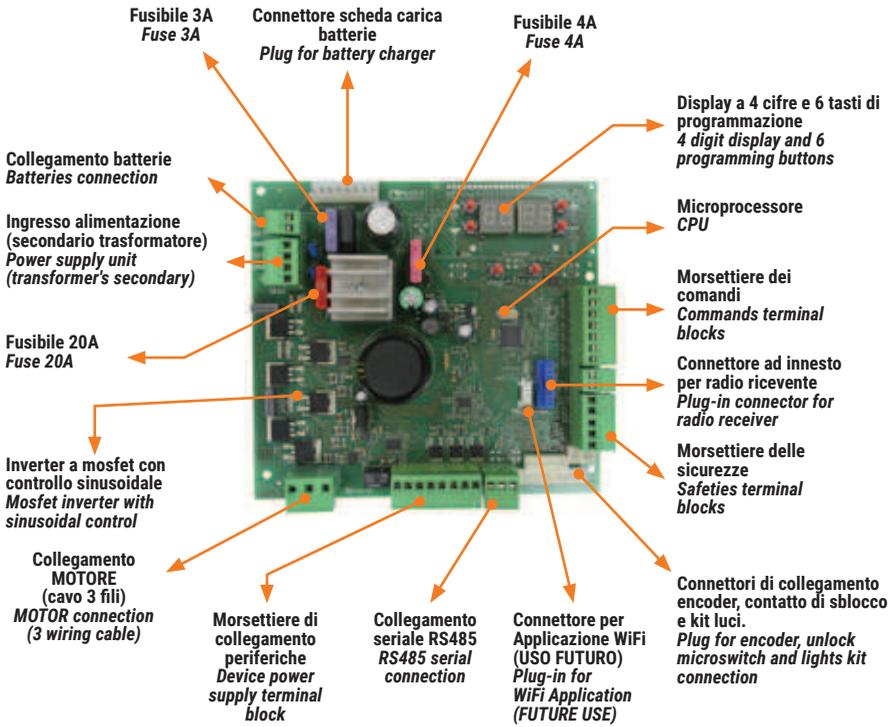
centrale di comando per barriere elettromeccaniche
Istruzioni originali

ROGER
BRUSHLESS

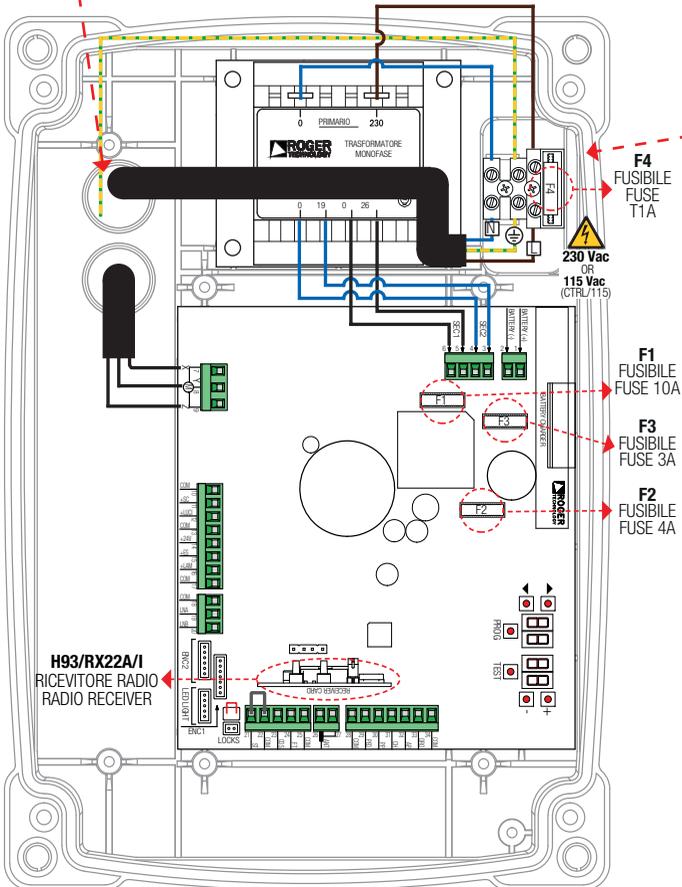
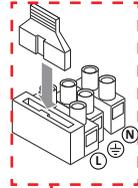
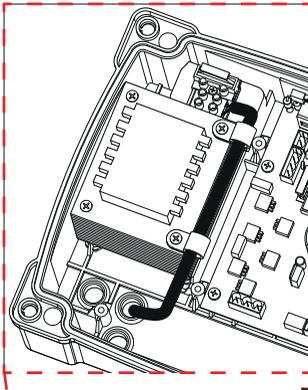


- IT - Istruzioni ed avvertenze per l'installatore
- EN - Instructions and warnings for the installer
- DE - Anweisungen und Hinweise für den Installateur
- FR - Instructions et consignes pour l'installateur
- ES - Instrucciones y advertencias para el instalador
- PT - Instruções e advertências para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

ROGER
TECHNOLOGY®

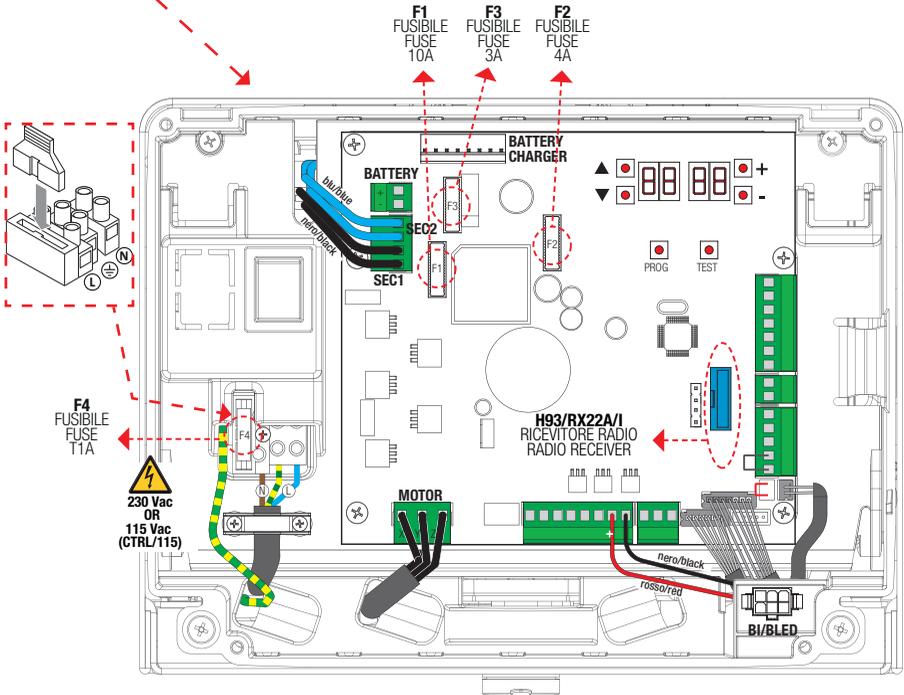
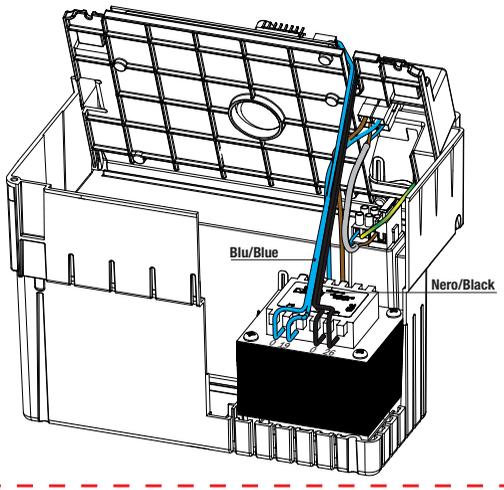


1

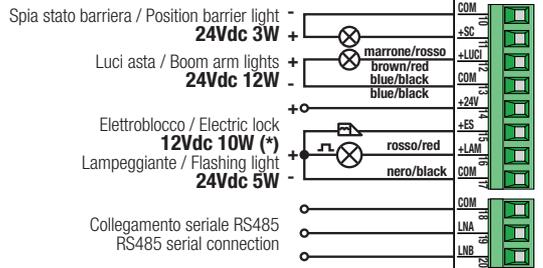
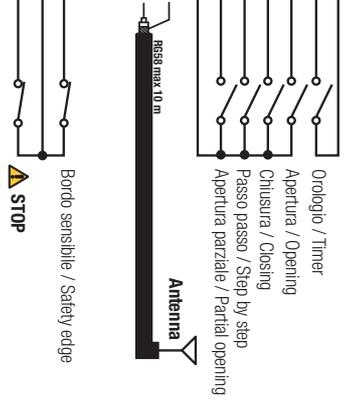
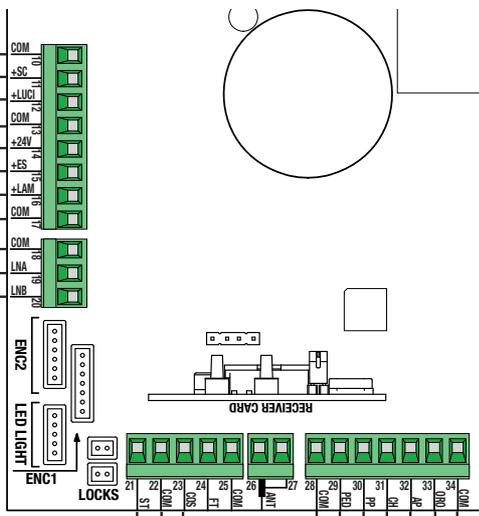
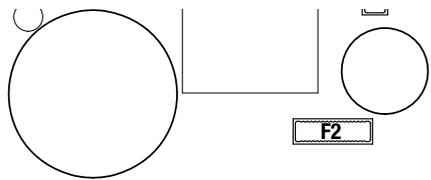
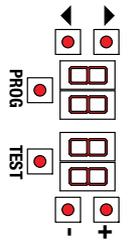


BIONIK

2



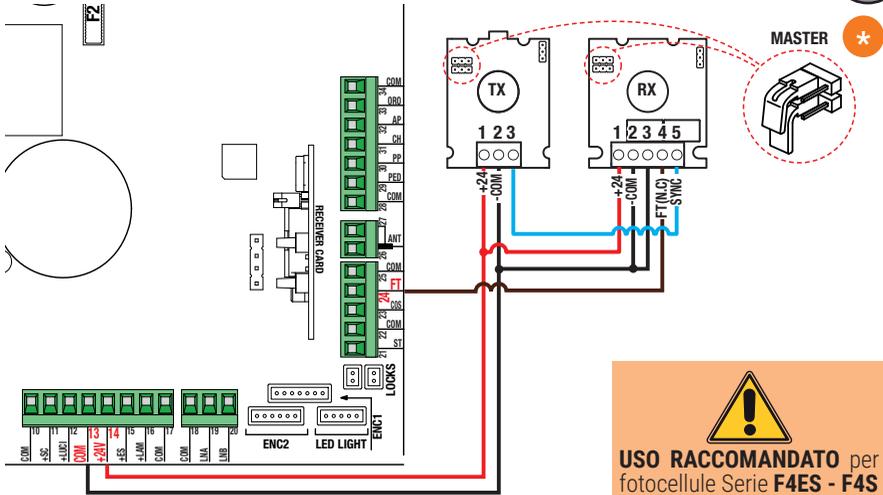
F2



(*) Vmedia=12Vdc; Vmax=40Vdc
 (*) Vaverage=12Vdc; Vmax=40Vdc

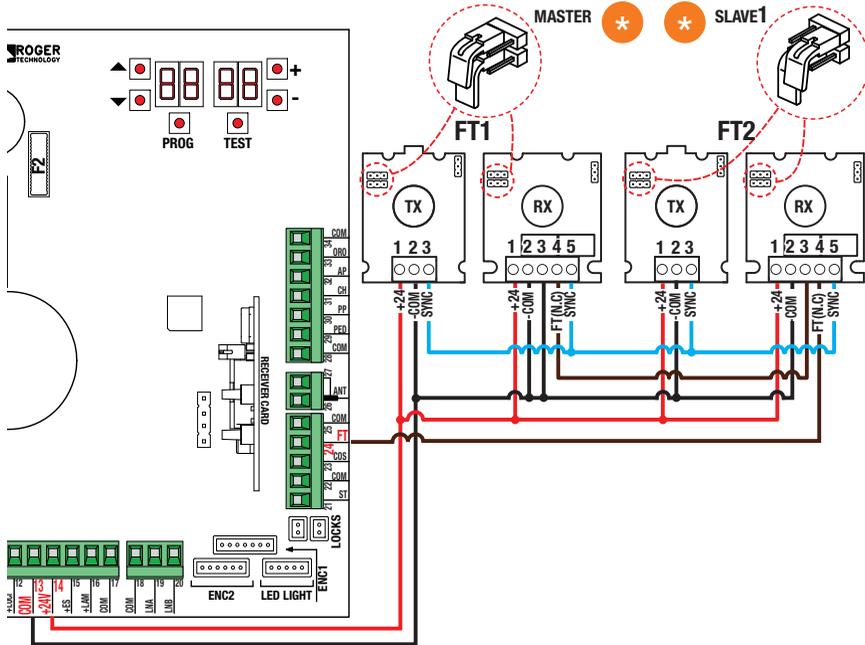
COLLEGAMENTO CON 1 COPPIA FOTOCELLE SINCROZZABILI
CONNECTION WITH 1 PAIR OF SYNCHRONOUS PHOTOCELLS

4



COLLEGAMENTO CON 2 COPPIE FOTOCELLE SINCROZZABILI
CONNECTION WITH 2 PAIRS OF SYNCHRONOUS PHOTOCELLS

RECOMMENDED USE for
Series F4ES - F4S photocells

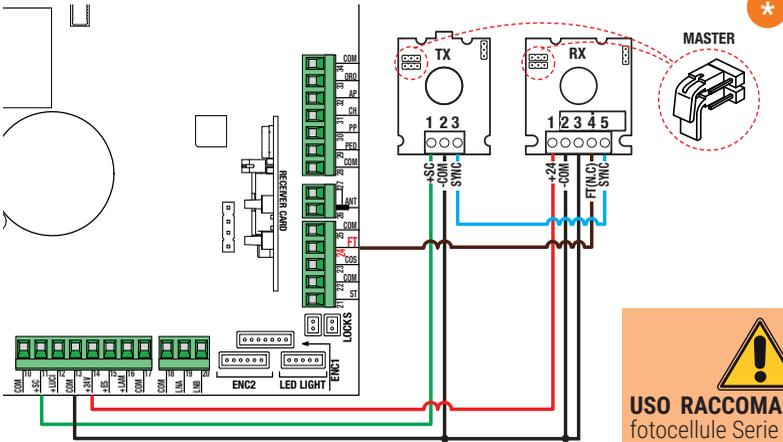


* Per le impostazioni delle fotocelle, consultare il relativo manuale di installazione.
 For photocell settings, refer to the relevant installation manual.

TEST FOTOCELLE · PHOTOCELLS TEST (AB 02)

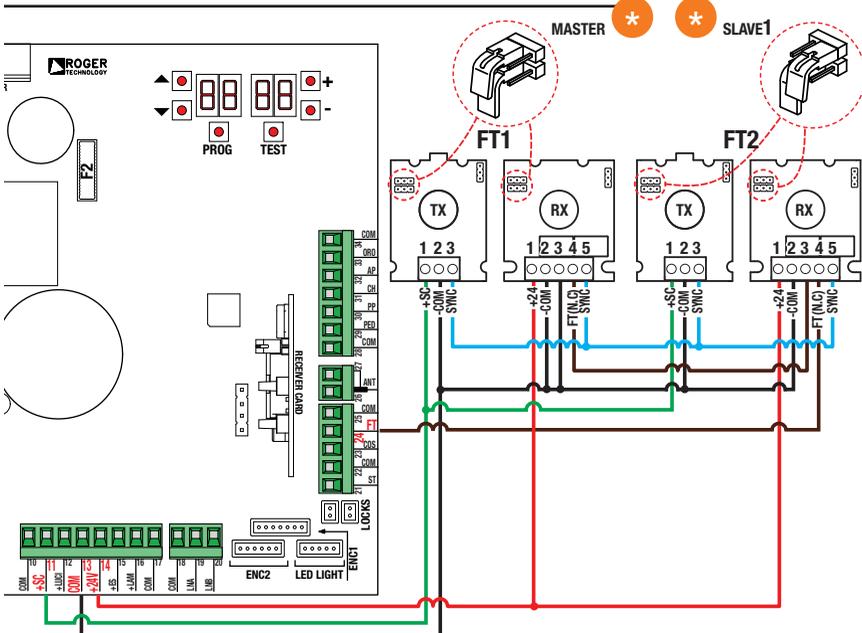
5

COLLEGAMENTO CON 1 COPPIA FOTOCELLE SINCRONIZZABILI CONNECTION WITH 1 PAIR OF SYNCHRONOUS PHOTOCELLS



USO RACCOMANDATO per fotocelle Serie **F4ES - F4S**
RECOMMENDED USE for Series **F4ES - F4S** photocells

COLLEGAMENTO CON 2 COPPIE FOTOCELLE SINCRONIZZABILI CONNECTION WITH 2 PAIRS OF SYNCHRONOUS PHOTOCELLS



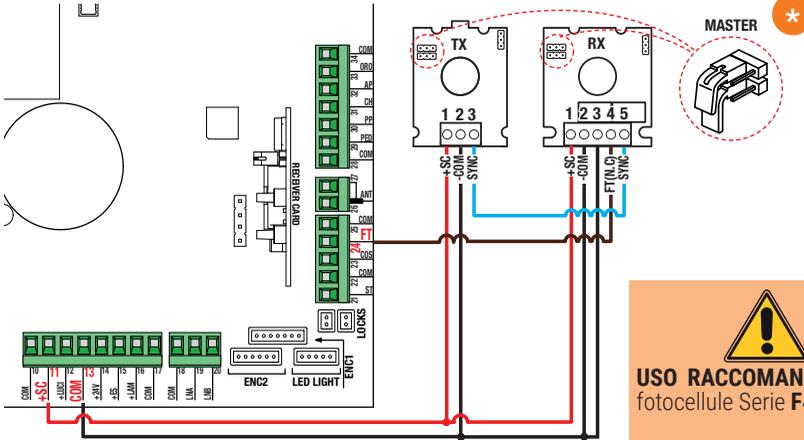
* Per le impostazioni delle fotocelle, consultare il relativo manuale di installazione.
* For photocell settings, refer to the relevant installation manual.

BATTERY SAVING (AB 03)

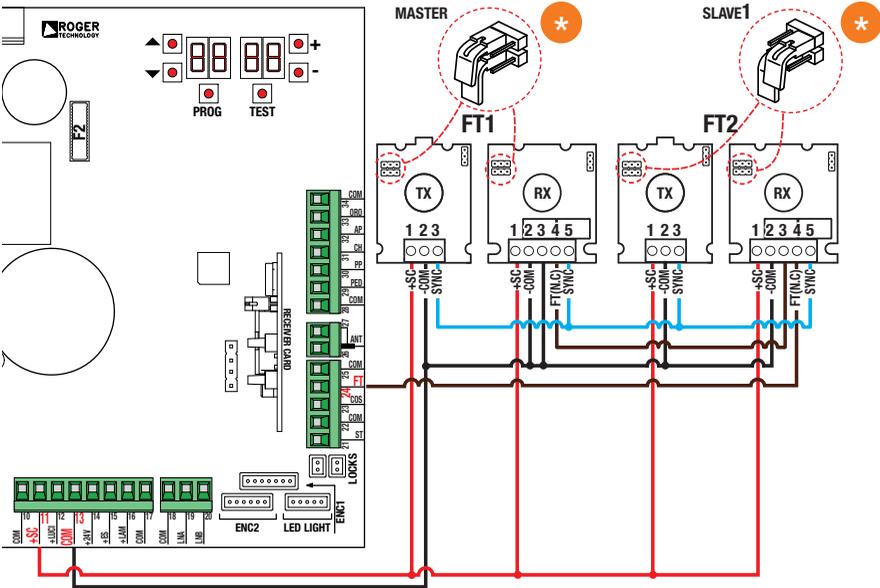
BATTERY SAVING + TEST FOTOCELLULE · PHOTOCELLS TEST (AB 04)

6

COLLEGAMENTO CON 1 COPPIA FOTOCELLULE SINCRONIZZABILI CONNECTION WITH 1 PAIR OF SYNCHRONOUS PHOTOCELLS



COLLEGAMENTO CON 2 COPPIE FOTOCELLULE SINCRONIZZABILI CONNECTION WITH 2 PAIRS OF SYNCHRONOUS PHOTOCELLS

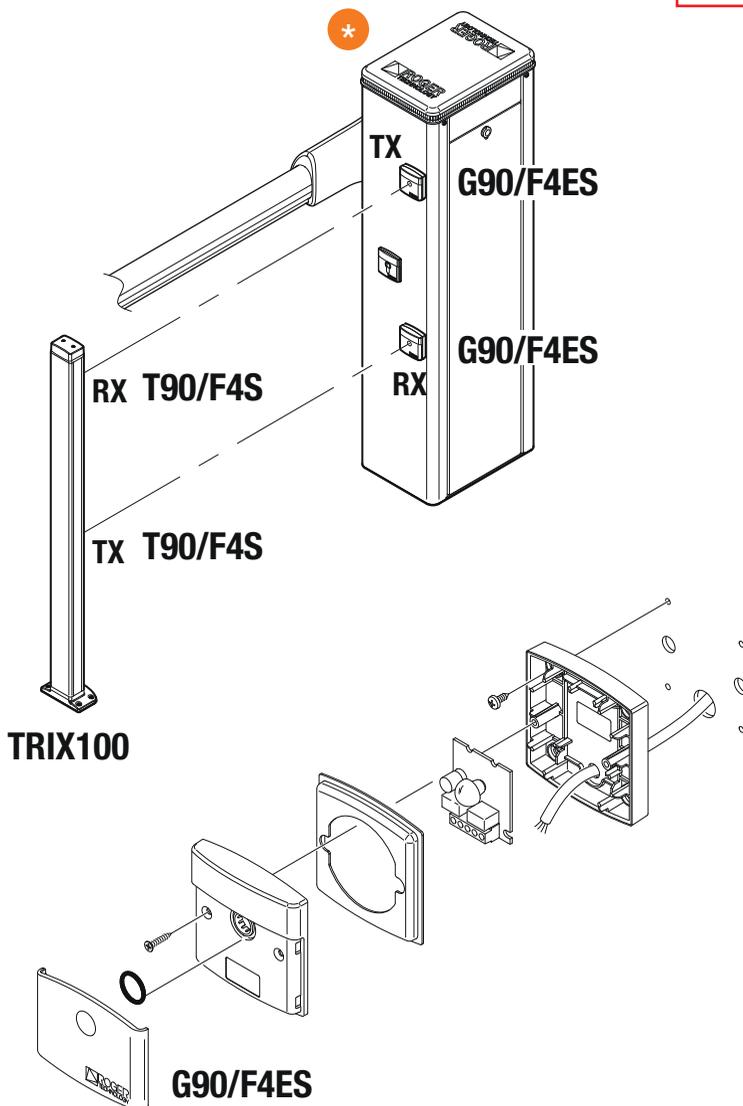


* Per le impostazioni delle fotocellule, consultare il relativo manuale di installazione.
For photocell settings, refer to the relevant installation manual.

7

G90/F4ES

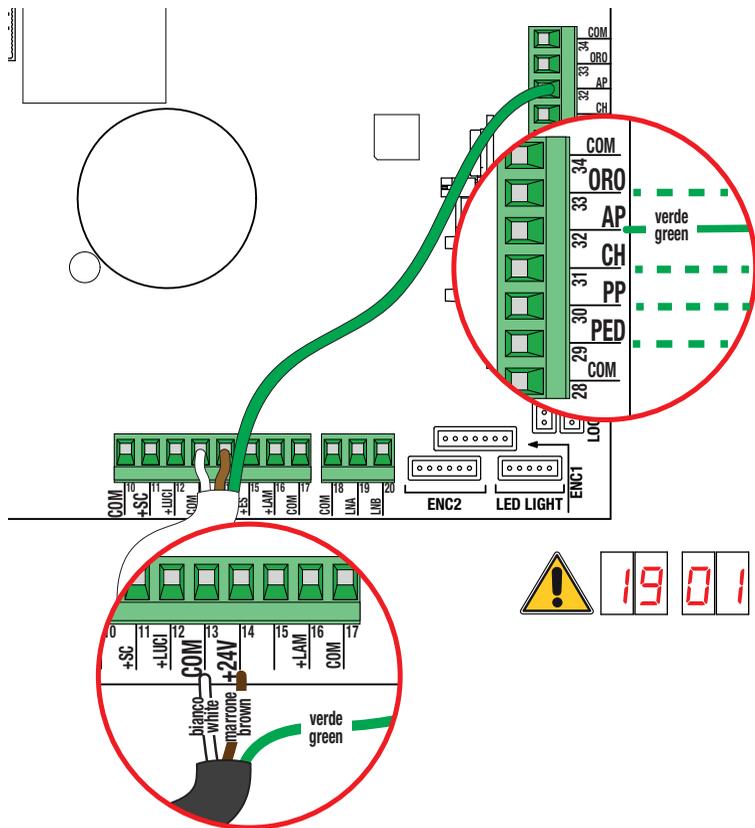
T90/F4S



* L'immagine della barriera ha scopo puramente indicativo.
The image of the barrier is for reference only.

CONNESSIONE CON ACS/BA/60
CONNECTION WITH ACS/BA/60

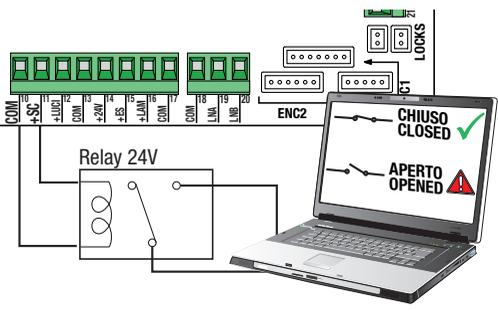
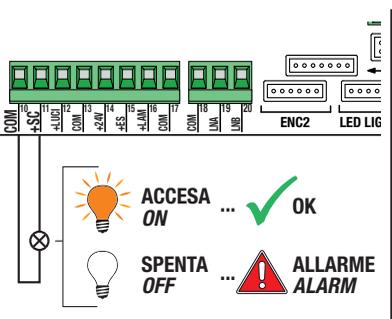
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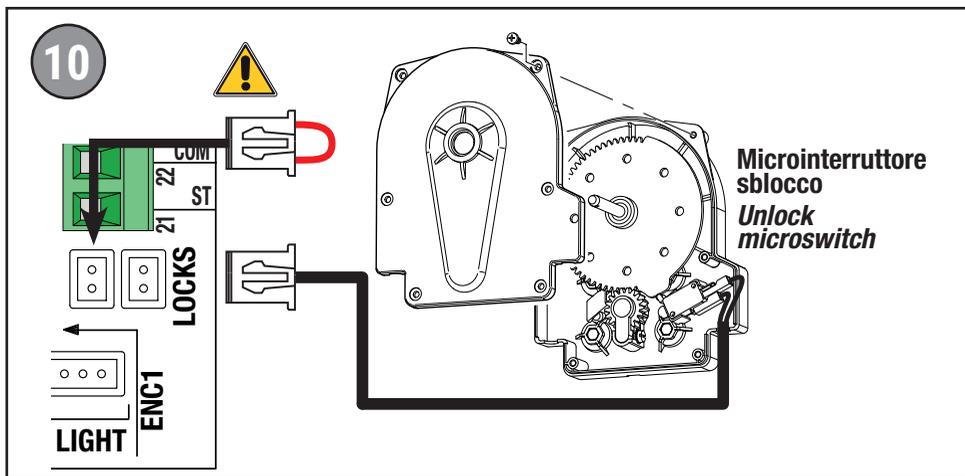


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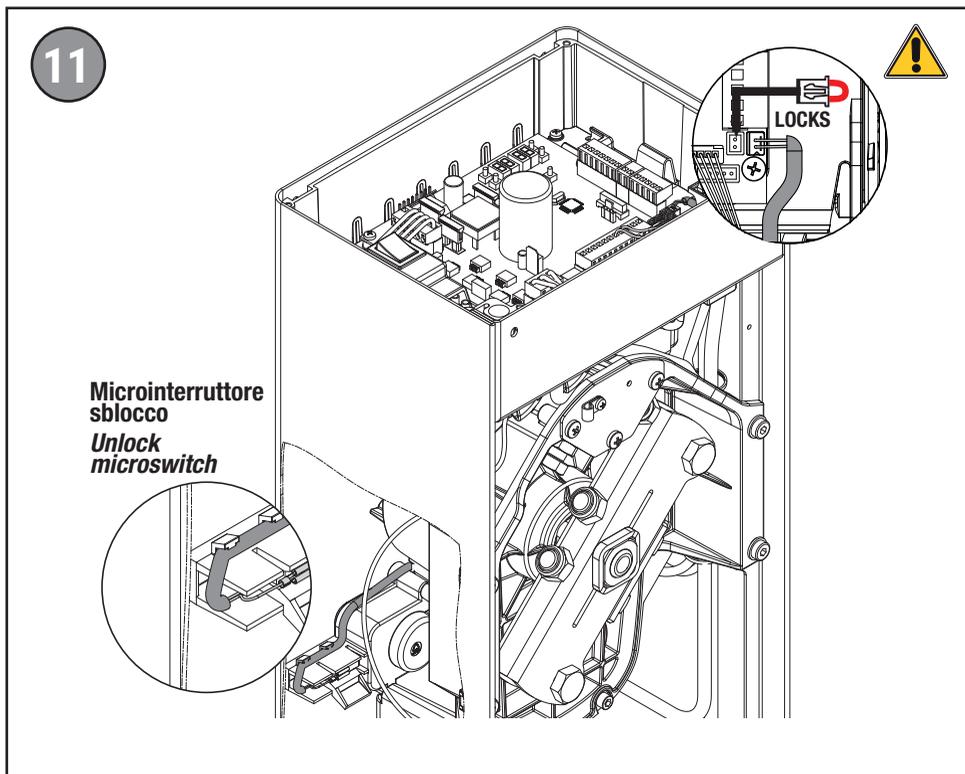


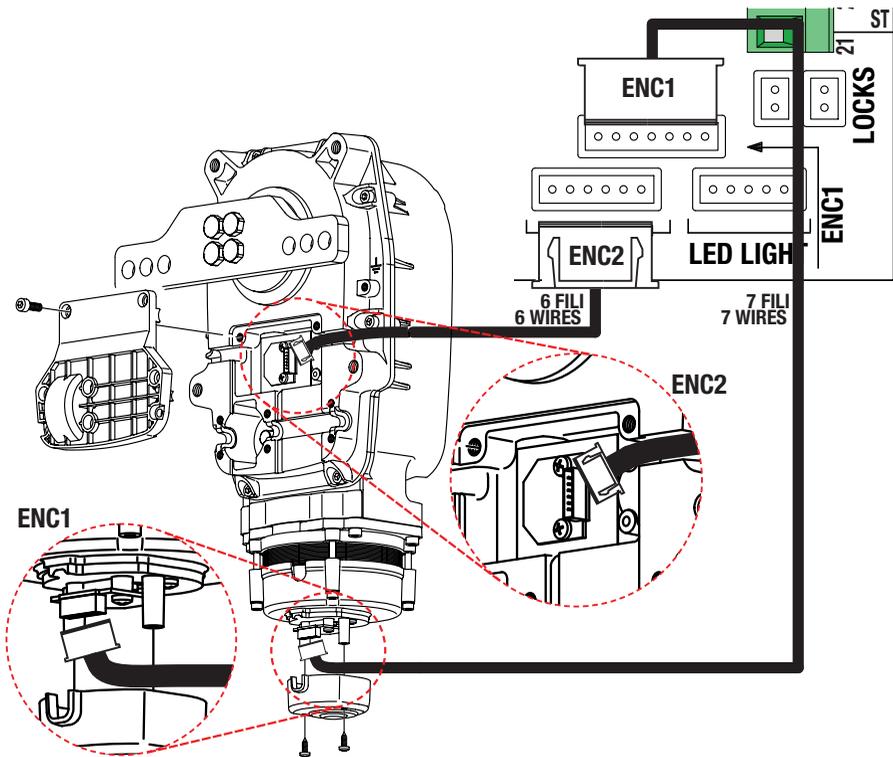
Utilizzo alternativo dell'uscita SC (par.20 diverso da 00).
 Alternative use of SC output (par.20 different from 00).





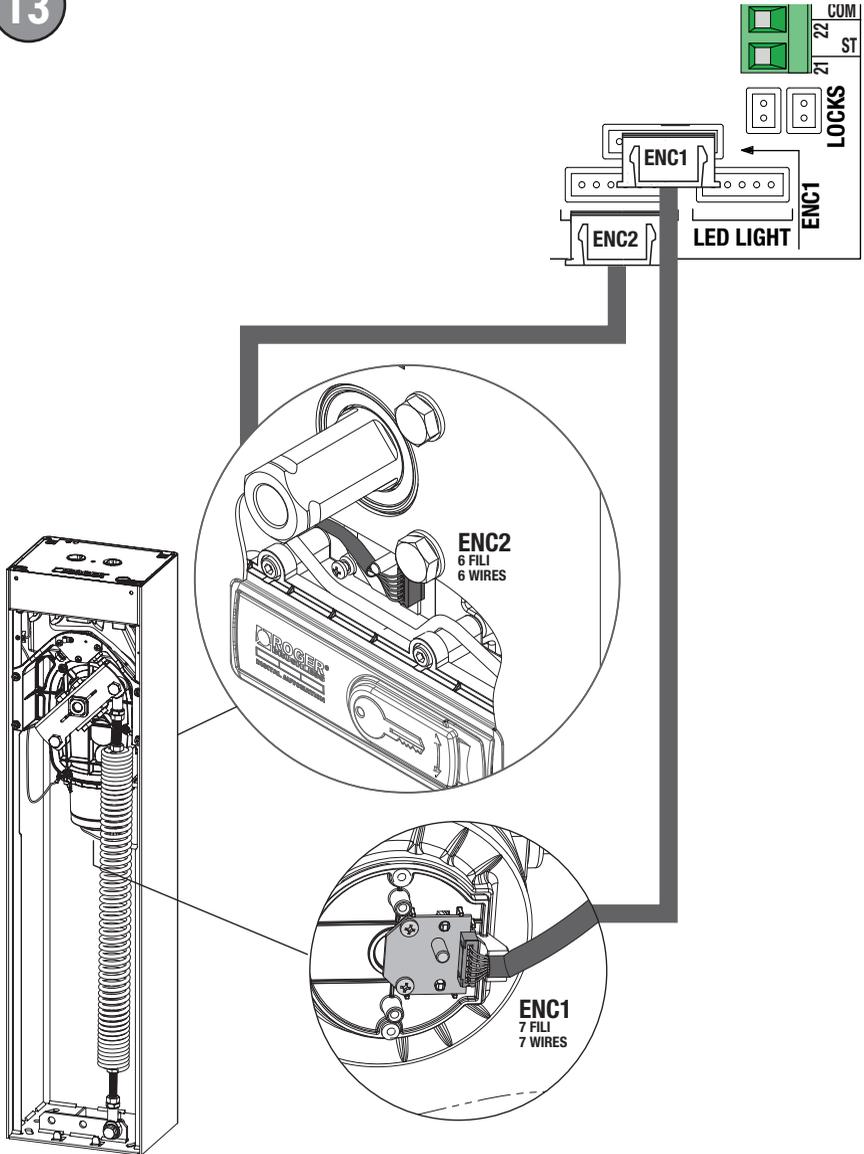
BIONIK4





BIONIK4

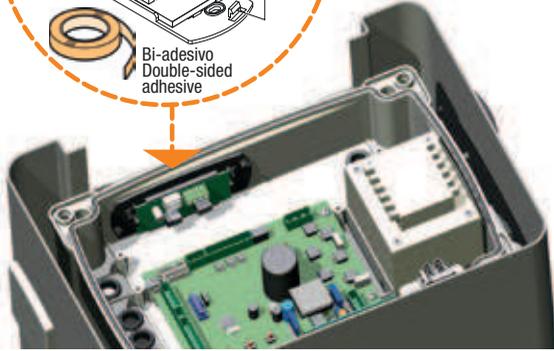
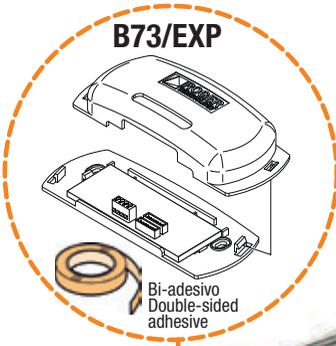
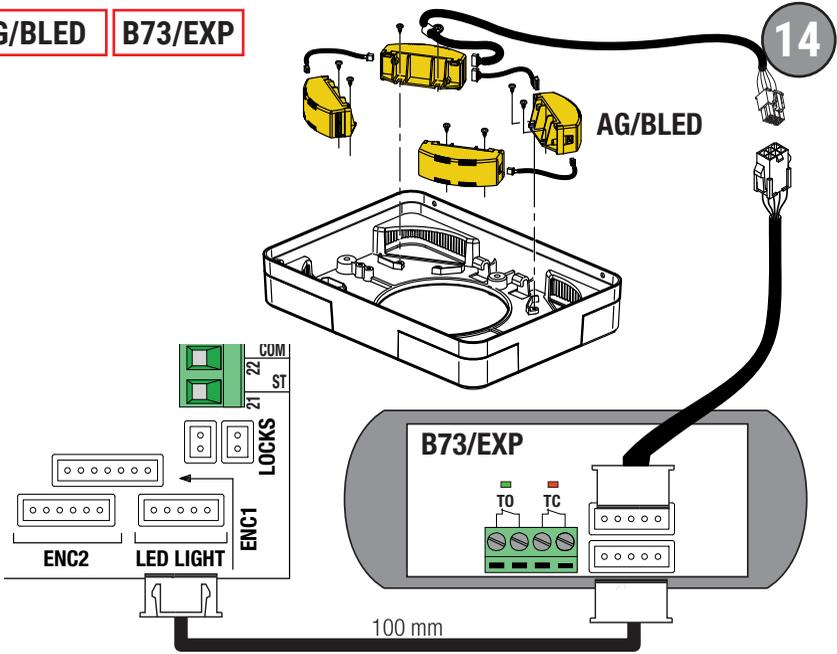
13



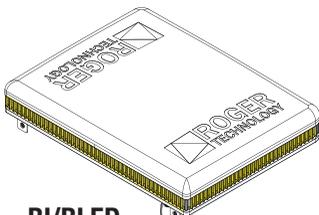
AGILIK • KB

AG/BLED

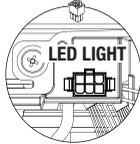
B73/EXP



15

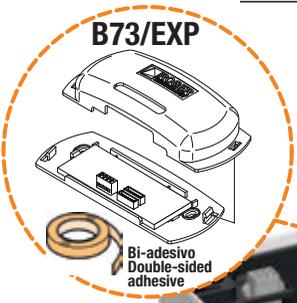
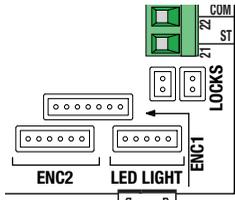
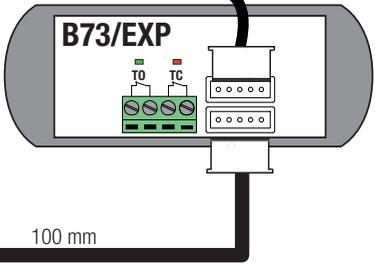
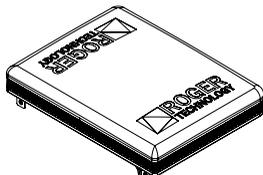


**BI/BLED
BI/BLED6
BI/BLED8**

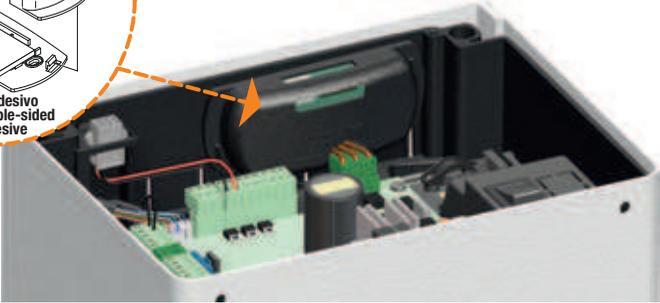


BI/BLED

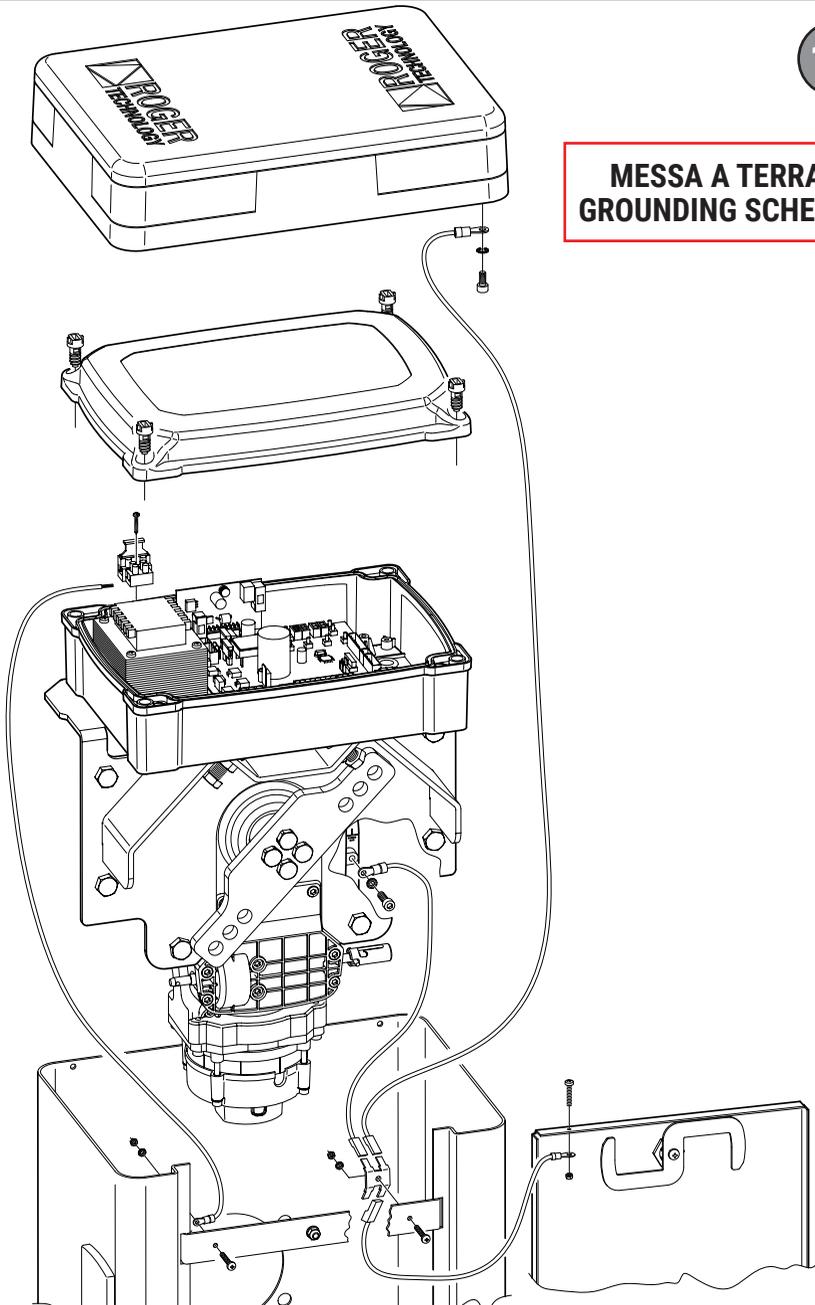
B73/EXP



**Bi-adhesive
Double-sided
adhesive**

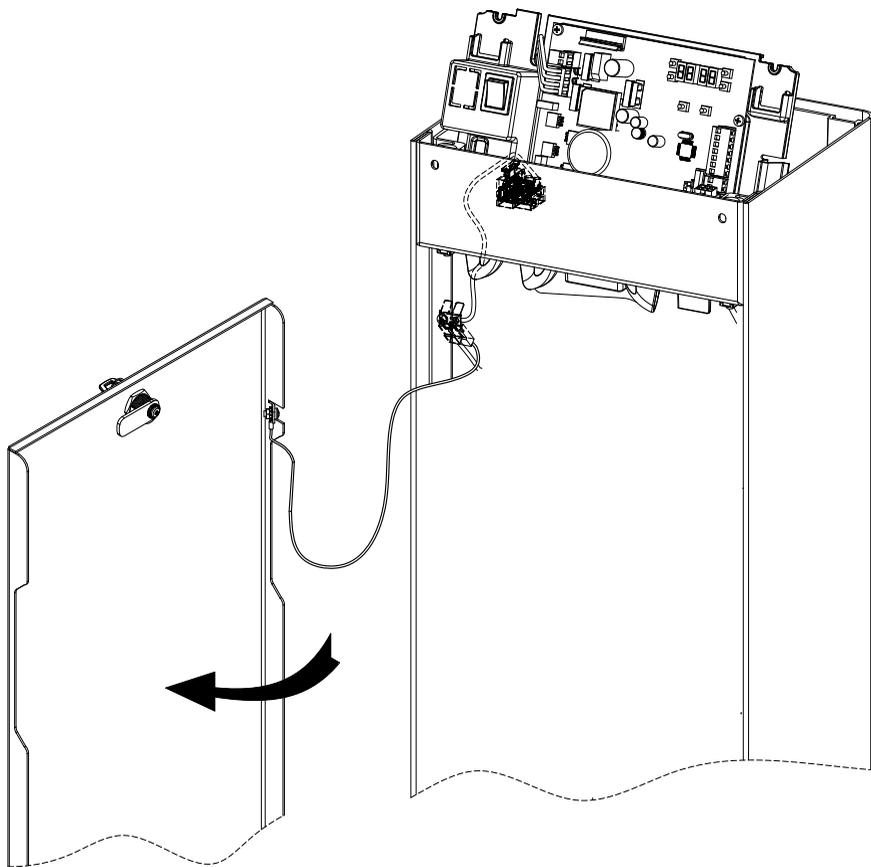


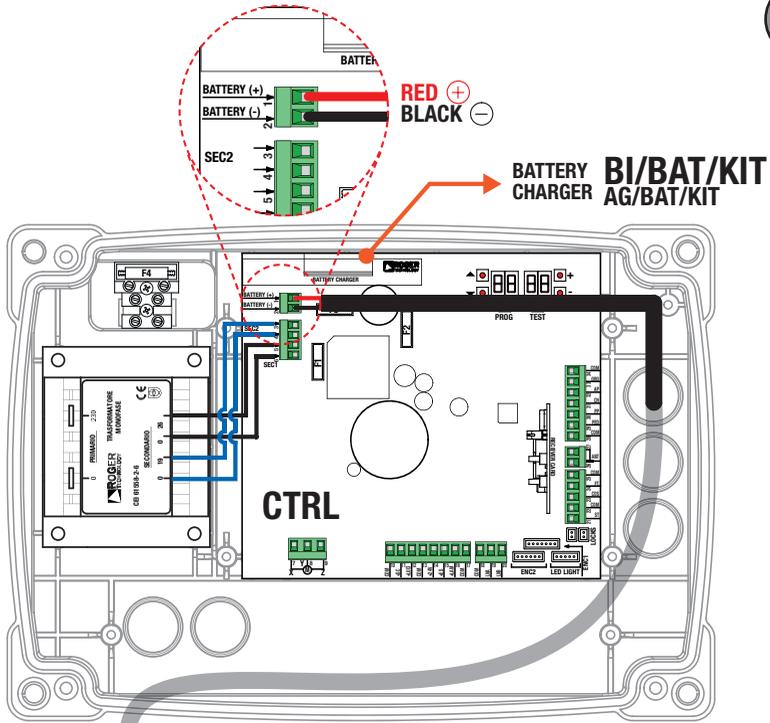
**MESSA A TERRA
GROUNDING SCHEME**



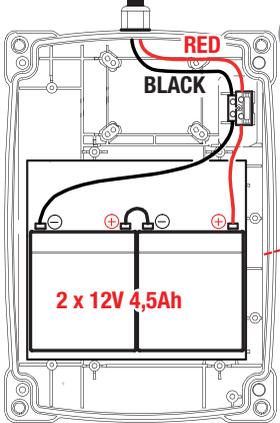
17

**MESSA A TERRA
GROUNDING SCHEME**





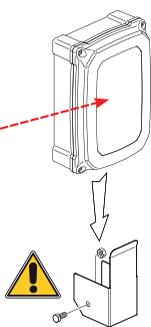
BATTERY CHARGER **BI/BAT/KIT**
AG/BAT/KIT



A

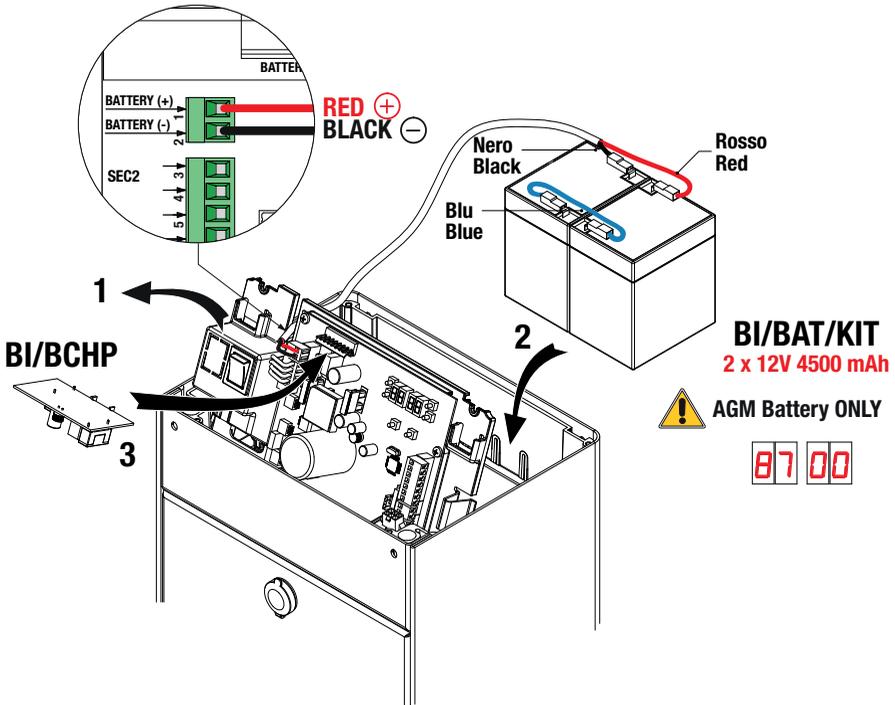
F3 FUSE
T10A
5x20

87 00



⚠️ AGM Battery ONLY

19



SELEZIONE POSIZIONE DI INSTALLAZIONE BARRIERA - PAR. 71 SELECTION OF THE BARRIER INSTALLATION POSITION - PAR. 71

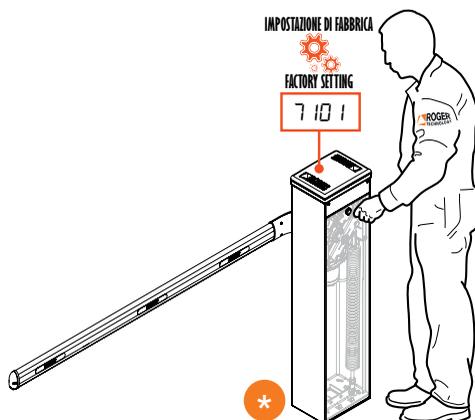
21

ATTENZIONE: POSIZIONARSI SEMPRE DI FRONTE ALL' ARMADIO DELLA BARRIERA DAL LATO DELLA PORTA DI ISPEZIONE
ATTENTION: STAY ALWAYS IN FRONT OF THE BARRIER CABINET FROM THE SIDE OF THE INSPECTION DOOR

PARAMETRIZZAZIONE DELLA POSIZIONE DELL' INSTALLAZIONE DELLA BARRIERA CON POSIZIONAMENTO DELL' ARMADIO A SINISTRA E VARCO PASSAGGIO DELL' ASTA A DESTRA
PARAMETERIZATION OF THE INSTALLATION POSITION OF THE BARRIER WITH POSITIONING OF THE CABINET ON THE LEFT AND PASSAGE OF THE BOOM ARM ON THE RIGHT



PARAMETRIZZAZIONE DELLA POSIZIONE DELL' INSTALLAZIONE DELLA BARRIERA CON POSIZIONAMENTO DELL' ARMADIO A DESTRA E VARCO PASSAGGIO DELL' ASTA A SINISTRA
PARAMETERIZATION OF THE INSTALLATION POSITION OF THE BARRIER WITH POSITIONING OF THE CABINET ON THE RIGHT AND PASSAGE OF THE BOOM ARM ON THE LEFT



* L'immagine della barriera ha scopo puramente indicativo.
* The image of the barrier is for reference only.

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 **CTRL** digital control unit is compliant with the provisions established by Community directives:

- 2014/35/EU LVD Standard
- 2014/30/EU EMC Standard
- 2014/53/EU RED Standard
- 2011/65/CE RoHS Standard

Place: Mogliano V.to
Date: 14/01/2014

Signature



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 **CTRL** controller is a unit for the sensed control of the ROGER brushless motor powering an electromechanical barrier. The **CTRL** uses two magnetic encoders, with one monitoring the motor and another monitoring the position of the boom, even when it is moved manually.

 **Ensure that the parameter A1 is set correctly. If this parameter is not set correctly, the automation system may not function properly.**

Two opposing barriers may be connected with a RS485 serial communication cable. This capability is only available with firmware version 1.3 (nB 13) or later.
We recommend using only ROGER TECHNOLOGY accessories and control and safety devices. Specifically, we recommend installing **F4ES** or **F4S** series photocells.

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.

 For further information, refer to the installation manual of the BIONIK4, BIONIK4HP, BIONIK6, BIONIK8 automation system

4 Updates of version P4.00



1. Added a selection to par. 20.
2. Added a selection to par. 85 and 87.
3. Improved phototest management.
4. Improved management of guaranteed closure.
5. Expanded the memory from 64k to 256k of FLASH in view of future developments.

5 Technical characteristics of product

	AG/004 AG/006 KB/004 KB/006 BI/004HP BI/006 BI/008	BI/004	AG/004/115 AG/006/115 KB/004/115 KB/006/115 BI/004HP/115 BI/006/115 BI/008/115	BI/004/115
MAINS POWER VOLTAGE	230 V \sim \pm 10% 50Hz		115V \sim \pm 10% 60Hz	
MAXIMUM MAINS POWER ABSORPTION	240 W			
FUSES	F1 = 10A (ATO257) motor power circuit protection F2 = 4A (ATO257) electric lock protection F3 = 3A (ATO257) accessories power supply protection F4 = T1A (5x20 mm) primary transformer coil protection			
NUMBER OF CONNECTABLE MOTORS	1			
MOTOR POWER SUPPLY	36 V \sim			
MOTOR TYPE	sinusoidal drive brushless (ROGER BRUSHLESS)			
MOTOR CONTROL TYPE	"sensored", with field oriented control (FOC)			
MAXIMUM MOTOR POWER	220 W			
MAXIMUM POWER, EXTERNAL FLASHING LIGHT	5 W 24 V ---			
MAXIMUM POWER, BARRIER LIGHTS	12 W 24 V ---			
MAXIMUM POWER, ELECTRIC LOCK	10W 12V --- (impulse activation, 1.5 seconds) * 5W 12V --- (normally powered electric lock) *			
MAXIMUM POWER, INDICATOR LAMP	3 W 24 V ---			
ACCESSORY OUTPUT POWER	10 W 24 V ---			
OPERATING TEMPERATURE	-20°C \sim +55°C			
SOUND PRESSURE DURING USE	<70 dB(A)			
PRODUCT DIMENSIONS	Dimensions in mm.: 166x150x48 Weight: 0.254 Kg			
	B73/EXP			
RELAY CONTACT NC	2x 30 V --- 1A (potential free contact, resistive load)			

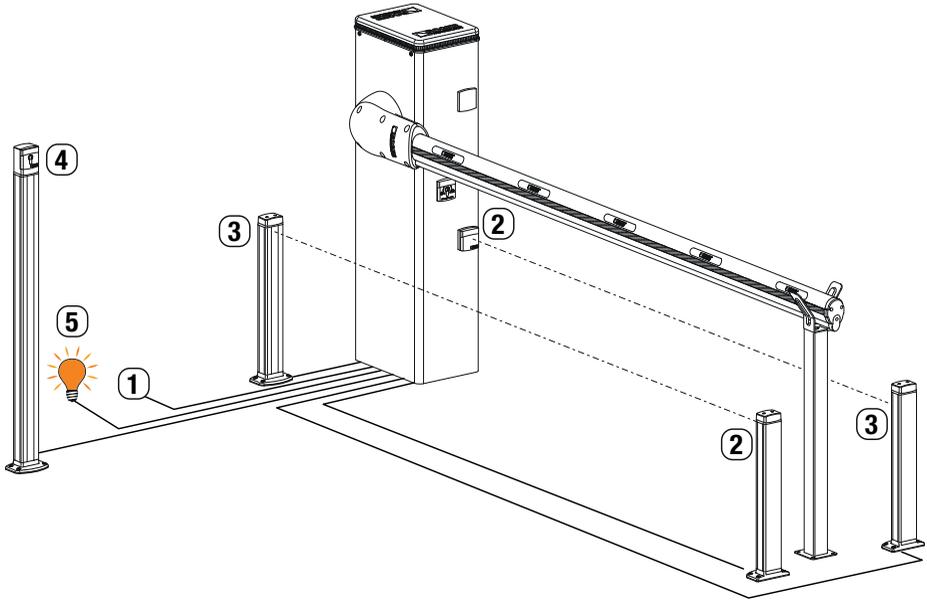
(*) The electric lock output provides a voltage of 36Vdc nominal (max 40Vdc) modulated to 30% (30% ON, 70% OFF). The device to be connected must therefore be able to withstand a maximum voltage of 40Vdc.

6 Description of connections

To access the control unit, remove the barrier head.

Figure 1-2-3 shows connection diagrams.

6.1 Typical installation



		Recommended cable
1	Power supply	H07RN-F 3x1,5 mm ² double insulated cable
2	Photocell - Receiver F4ES/F4S	Cable 5x0,5 mm ² (max 20 m)
3	Photocell - Transmitter F4ES/F4S	Cable 3x0,5 mm ² (max 20 m)
4	Key selector R85/60	Cable 3x0,5 mm ² (max 20 m)
	Keypad H85/TTD - H85/TDS (connecting to H85/DEC - H85/DEC2)	Cable 2x0,5 mm ² (max 30 m)
	H85/DEC - H85/DEC2 (connecting to control unit)	Cable 4x0,5 mm ² (max 20 m) The number of conductors increases when using more than one output contact on H85/DEC - H85/DEC2
5	Barrier open indicator Power supply 24V DC 3W max	Cable 2x0,5 mm ² (max 10 m)

i SUGGESTIONS: with existing installations, we recommend checking the cross section of the cables and that the cables themselves are in good condition.

6.2 Electrical connections

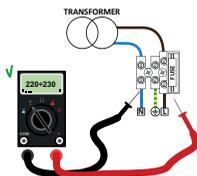
A switch or an omnipolar cut-off switch with a contact opening of at least 3 mm must be installed on the mains power line; put the cut-off switch in OFF position and disconnect any buffer batteries before performing any cleaning or maintenance operations.

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.

For power supply, use a H07RN-F 3G1.5 type electric cable and connect it to the terminals L (brown), N (blue), \oplus (yellow/green), located inside the control panel box.

Strip the insulation from the ends of the power cable wires which will be connected to the terminal (see ref. D, fig. 3-4), and secure the cable with the cable retainer.

Measure the voltage on the primary mains power connection with a tester.



For the Brushless automation system to function correctly, the mains power voltage must be:

- 230Vac $\pm 10\%$ for the CTRL control unit.
- 115Vac $\pm 10\%$ for the CTRL/115 control unit.

If the detected value does not comply with the above specified values or is not stable, the automation system may NOT operate efficiently.

i Connections to the electrical distribution network and to any other low-voltage conductors in the external section to the electrical panel must be on an independent path and separate from the connections to the command and safety devices (SELV = Safety Extra Low Voltage).

Make sure that the mains power conductors and the accessory wires (24 V) are separated.

The cables must be double insulated, strip them near the relevant connection terminals and lock them with clamps [B] (not supplied).

	DESCRIPTION
	<p>Connection to mains power, 230 Vac $\pm 10\%$ (115 Vac $\pm 10\%$ 60 Hz).</p> <ul style="list-style-type: none"> - 230 Vac $\pm 10\%$ for CTRL control panel. - 115 Vac $\pm 10\%$ for CTRL/115 control panel. <p>Fuse 5x20 T1A. Fuse 5x20 T2A (mains power 115 Vac).</p>
	<p>Secondary transformer input for 26 V AC motor power (SEC1) and for 19 V power to logical control and peripheral devices (SEC2).</p> <p>N.B.: Ready wired in factory by ROGER TECHNOLOGY.</p>
	<p>Connection to ROGER brushless motor.</p> <p>N.B.: Ready wired in factory by ROGER TECHNOLOGY.</p> <p>Warning! If the motor wires become disconnected from the terminal board, after reconnecting correctly, the travel must be acquired again as described in chapter 11.</p>
	<p>Connection to the battery BI/BAT/KIT (see fig. 18-19).</p> <p>i See instructions for B71/BCHP or BI/BCHP for further information.</p>

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 and 73.

For installations with two opposed barriers, connections for command signals and accessories must be made on the MASTER controller. The sensing edge and, if used, the STOP command signal must be connected to the SLAVE controller.

KEY:

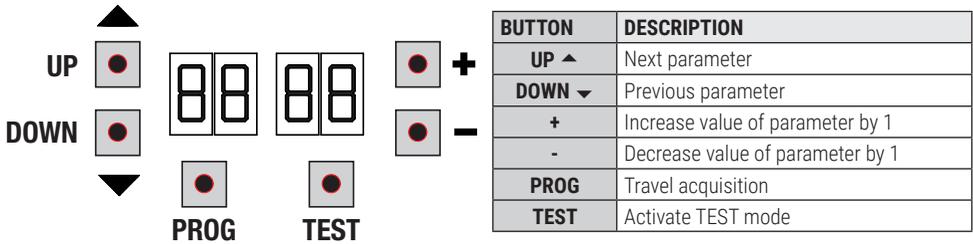
N.A. (Normally Open) .
N.C. (Normally Closed).

CONTACT	DESCRIPTION
11(+SC) 10(COM) 	Barrier open/closed indicator lamp, 24 V DC 3 W. The function of the indicator lamp is determined by parameter AB.
11(+SC) 13(COM)	Photocell test function and/r battery saving mode connection (fig. 5-6). The power feed for the photocell transmitters (TX) may be connected to terminal 11(SC) . Set the parameter AB 02 to enable the test function. Each time a command is received, the controller unit switches the photocells off and on to check that the contact changes state correctly. Power feeds for all external devices (excluding the external radio receiver) may be connected to reduce battery consumption (if batteries are used). Set AB 03 or AB 04 . In the case of installations with two opposed barriers, the functions are not available for the SLAVE barrier. WARNING! If contact 11(SC) is used for the photocell test function or battery saving function, a barrier open indicator lamp CANNOT BE connected.
11(+SC) 13(COM)	Indicator lamp connection for signalling the ACS/BA/60 detachable boom system sensor anomaly or for signalling battery supply anomaly (battery exhausted). (Fig. 9) The voltage level of the battery can be set via parameter B5 . By connecting a RELAY to the SC output, an error alert signal contact can be achieved at an external control system (fig. 9). NOTE: in MASTER - SLAVE systems, connect the external control system to the SC output of the MASTER control unit (if par. 20 = 01, 02, 03), the SC output of the SLAVE is of type "ON = bar open; OFF = bar closed". If par. 20 = 04 , the SC output of the SLAVE control unit provides instead an alarm signal relative to the SLAVE barrier.
12(+LIGHTS) 13(COM) 	Input for connecting ALED series signal lights on boom (optional). 24 V DC 12W max (fig. 3).
14(+24V) 13(COM)	Power feed for external devices, max. 10W. See technical specifications.
15(+ES) 17(COM) 	Input for connecting electric lock, 12 Vdc max. 15 W or 5W for electroblock power supply (fig. 3). The function of the electric lock is determined by parameter 29 . Vmedia=12Vdc, Vmax=40Vdc; see table "PRODUCT TECHNICAL FEATURES" on page 62
16(+LAM) 17(COM) 	Connection for flashing light (24 V DC - max. 5 W). The settings for the pre-manoeuve flashing warning signal may be selected with parameter A5 , while the flashing mode is set with parameter 7B .
18 (COM) - 19 (LNA) - 20(LNB) 	RS485 serial communication cable connection (3x0.5 mm ² - max. length 30 m) for installation of two MASTER / SLAVE opposing barriers (from firmware version n5 13 or later). Connections. <ul style="list-style-type: none"> Connect the COM-LNA-LNB terminals of the MASTER barrier to the relative terminals of the SLAVE barrier. The MASTER barrier is the barrier which opens (completely) when the partial open command (PED) is received. Set parameter AD 11 for the MASTER barrier and parameter AD 10 for the SLAVE barrier. After having modified the settings of parameter AD shut off power and power up again. All command signals, the photocells and the main STOP command must be connected to the MASTER barrier. The sensing edges and the ACS/BA/60 BreakAway devices must be connected to the corresponding barriers. An auxiliary STOP command signal may also be connected to the SLAVE barrier. If not used, jumper terminals 21(ST)-22(COM) on the SLAVE controller. All parameters except for AD, 19 and 73 must be set on the MASTER controller. The travel acquisition procedure must be performed for both barriers, after setting the parameters as required and in accordance with the type of installation. Alarm messages are viewable on the displays of the respective controllers.

CONTACT	DESCRIPTION
18 (COM) - 19 (LNA) - 20 (LNB) 	<p>Function. Serial communication enables synchronised operation of the two barriers. The obstacle detection system immediately reverses the direction of the boom which detected the obstacle, while the other boom reverses after a fixed delay.</p> <p>If the MASTER barrier is completely open or completely closed and the SLAVE barrier is in an intermediate position, the MASTER barrier sends a re-alignment command to the SLAVE barrier, with a 5 second pre-manoeuvre flashing warning signal.</p> <p>Conversely, if the MASTER barrier is in an intermediate position, after 5 seconds of pre-flashing it re-aligns with the SLAVE barrier. The alignment function is disabled if the "operator present" function A7 Q1 is enabled.</p>
21 (ST) 22 (COM) 	<p>STOP command input (NC). The current manoeuvre is arrested if the safety contact opens.</p> <p>N.B.: the controller is supplied with this contact already jumpered by ROGER TECHNOLOGY. In the case of installations with two opposed barriers, if the STOP command signal is given for the MASTER barrier, both barriers stop. If the STOP command signal is given for the SLAVE barrier, only the SLAVE barrier stops.</p>
23 (COS) 22 (COM) 	<p>Input (NC or 8.2 kOhm) for connecting sensing edge COS. Movement is reversed (open) if the sensing edge is activated during closure.</p> <p>If the sensing edge is not installed, jumper the terminals 23 (COS) - 22 (COM) or set parameter 73 QQ. In the case of installations with two opposed barriers, the sensing edge (if installed) must be connected to and configured for both the MASTER barrier and the SLAVE barrier.</p>
24 (FT) 13 (COM) 	<p>Input (NC) for connecting photocell FT (fig. 4-5-6). The photocells are configured by default with the following settings:</p> <ul style="list-style-type: none"> - 50 00 . Photocell triggers only during barrier closure. Photocell is ignored during barrier opening manoeuvre. - 51 02 . Movement is reversed if the photocell is triggered during barrier closure. - 52 01 . The barrier opens when an open command is received if the photocell FT is obstructed. <p>If the photocells are not installed, jumper the terminals 24 (FT) - 25 (COM) or set the parameters 50 QQ and 51 QQ. WARNING! Use G90/F4ES or T90/F4S photocells.</p> <p>In the case of installations with two opposed barriers, the photocells must be connected to and configured for the MASTER barrier only. In the case of installations with parking mode, the input FT may be used to receive a closing command from a magnetic loop (NC) (see chapter 14).</p>
27 26 (ANT) 	<p>Antenna connector for slot-in radio receiver board. Use RG58 if an external antenna is used - maximum recommended length: 10 m.</p> <p>N.B.: do not make joints in cable.</p>
29 (PED) 28 (COM) 	<p>Partial open command input (NO). The barrier is always opened completely when the contact is closed.</p> <p>In the case of installations with two opposed barriers, the command PED only opens the MASTER barrier when both barriers are completely closed.</p> <p>In the case of installations with "Directional" parking mode (parameter B3 Q2 or B3 Q3), the input PED may be used to receive a closing command from a magnetic loop (NC) (see chapter 14).</p>
29 (PED) 28 (COM) 	<p>The command input (N.C.) available for the connection of the sensor of the ACS/BA/60 detachable barrier boom coupling system (fig. 8) When the ACS/BA/60 detachable boom safety system intervenes, the contact switches from N.C. to N.O. Enable the contact via parameter 19 Q4.</p>
30 (PP) 28 (COM) 	<p>Step mode command input (NO). The function of this command is determined by parameter A4.</p>
30 (PP) 28 (COM) 	<p>The command input (N.C.) available for the connection of the sensor of the ACS/BA/60 detachable barrier boom coupling system (fig. 8) When the ACS/BA/60 detachable boom safety system intervenes, the contact switches from N.C. to N.O. Enable the contact via parameter 19 Q3.</p>
31 (CH) 28 (COM) 	<p>Close command input (NO).</p>
31 (CH) 28 (COM) 	<p>The command input (N.C.) available for the connection of the sensor of the ACS/BA/60 detachable barrier boom coupling system (fig. 8) When the ACS/BA/60 detachable boom safety system intervenes, the contact switches from N.C. to N.O. Enable the contact via parameter 19 Q2.</p>

CONTACT	DESCRIPTION
32(AP) 28(COM) 	Open command input (NO).
32(AP) 28(COM) 	The command input (N.C.) available for the connection of the sensor of the ACS/BA/60 detachable barrier boom coupling system (fig. 8) When the ACS/BA/60 detachable boom safety system intervenes, the contact switches from N.C. to N.O. Enable the contact via parameter 19 01 .
33(ORO) 34(COM) 	Clock timer contact input (N.O.). When the clock function is active, the barrier opens and remains open. At the end of the programmed time set with the external device (clock) the barrier closes. The function of this command is determined by parameter BQ .
33(ORO) 34(COM) 	The command input (N.C.) available for the connection of the sensor of the ACS/BA/60 detachable barrier boom coupling system (fig. 8) When the ACS/BA/60 detachable boom safety system intervenes, the contact switches from N.C. to N.O. Enable the contact via parameter 19 05 . For systems composed of two MASTER and SLAVE opposing barriers, connect the detachable boom coupling system sensor of the SLAVE barrier STRICTLY to the ORO input of the SLAVE control unit.
ENC1	7-way connector for connecting to encoder installed on motor (see fig. 12-13). WARNING! Always disconnect from electrical power before disconnecting or connecting the encoder cable.
ENC2	6-way connector for connecting to encoder installed on one side of motor (see fig. 12-13). WARNING! Always disconnect from electrical power before disconnecting or connecting the encoder cable.
LED LIGHT	Connector for the (OPTIONAL) B73/EXP signal device connection and flashing lights installed on the top cover (see fig. 14-15).
LOCKS	Connectors for connecting lock device microswitch and safety stop microswitch on barrier inspection hatch (connection not supplied by ROGER TECHNOLOGY) (see fig. 10-11). Jumper the other connector if only one connector is connected.
RECEIVER CARD	Connector for slot-in radio receiver board. The controller has two radio remote control functions by default: – PR1 - step mode command (modifiable with parameter 76). – PR2 - close command (modifiable with parameter 77).
B71/BCHP BI/BCHP BATTERY CHARGER BI/BAT/KIT BATTERY KIT 2x12 Vdc 4.5 Ah (AGM type ONLY)	Connector for slot-in battery charger board. In the event of a mains power loss, the controller unit is powered by the batteries. When battery power is used, the message BAtE is shown on the display and the flashing light flashes briefly at intervals until mains power is restored or until the battery voltage drops below the minimum permissible limit. In this case, BtLQ (Battery Low) is shown on the display and the controller unit accepts no commands. If mains power is lost while the boom is moving, the boom stops and then automatically resumes the interrupted manoeuvre after 2 seconds. By setting parameter B5 to a value different than 00 , the battery management is enabled. With parameter B5 the battery operation limitation type is enabled when the voltage drops under a certain threshold. Parameter B5 is not available for SLAVE automation systems. WARNING! the batteries must always be connected to the electronic controller unit in order to charge. Periodically (at least every 6 months), check that the batteries are in good working order. For more information, refer to the installation manual for the B71/BCHP or BI/BCHP battery charger.

8 Function buttons and display



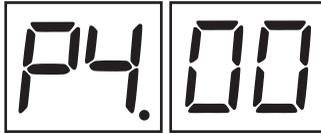
- Press the UP ▲ and/or DOWN ▼ buttons to view the parameter you intend to modify.
- Use the + and - buttons to modify the value of the parameter. The value starts to flash.
- Press and hold the + or - button to scroll quickly through values, to modify the parameter more quickly.
- To save the new value, 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.

Version installed P4.00.



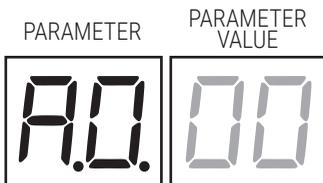
Immediately afterwards, the displays enter the commands and safety device status mode. See chapter 10.

Now set up the installation by configuring the parameters as needed.

For installations with two opposing barriers, settings must be made from the MASTER controller. Only the parameters *P0* and *T3* may be modified from the SLAVE controller.

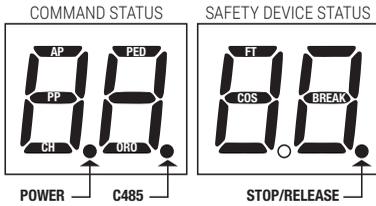
10 Display function modes

10.1 Parameter display mode



See chapter 12 for detailed descriptions of parameters.

10.2 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 FT = photocells, COS = sensing edge, BREAK= BreakAway system **ACS/BA/60** magnetic sensor or STOP/RELEASE position) 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.

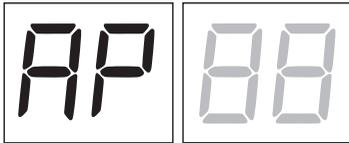
10.3 TEST mode

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 barrier system at rest. If the barrier is moving, pressing TEST stops the barrier. Pressing the button again enables TEST mode.

The flashing light and the barrier open indicator lamp illuminate for one second.

N.B.: For installations with two opposing barriers, if the TEST button is pressed for the SLAVE barrier, the MASTER barrier continues to function normally.

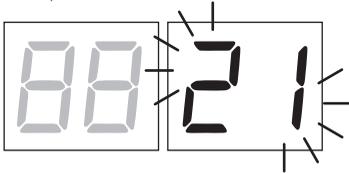


The command signal status is shown on the left hand side of the display for 5 seconds, ONLY when the respective command signal is active (AP, CH, PP, PE, OR).

For example, if the 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.

Example: STOP contact in alarm state.



00	No safety device in alarm state or barrier waiting for command.
21	STOP contact (N.C.) open. Jumper the STOP contact. Release handle or lock open. Barrier inspection hatch open.
23	Sensing edge contact COS (N.C.) is open. Check connection. If sensing edge is not installed, disable with 7300.
24	Photocell contact FT (N.C.) is open (message shown on MASTER controller displayed). Check connection. If photocell is not installed, disable with 5000.
br	Shatter-proof system enabled, or not connected or incorrectly connected.
r5 (rS)	STOP contact active for MASTER barrier (message shown on SLAVE controller displayed).

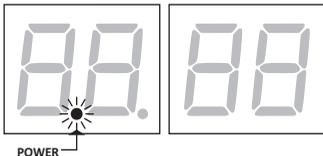
N.B.: If one or more contacts are open, the barrier will neither open nor close.

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.

10.4 Standby mode



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

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

11 Travel acquisition

i For the system to function correctly, the barrier travel must be acquired by the controller.

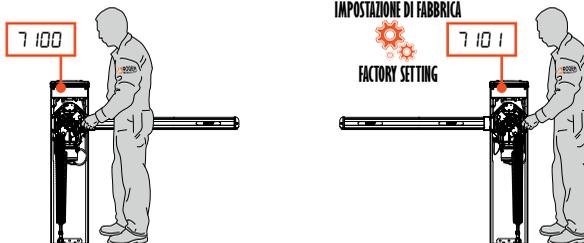
11.1 Before starting:

IMPORTANT: Select the length of the boom with the parameter R 1.

! It is very important that this parameter is selected correctly. An incorrect setting may cause severe damage or injury.

SELECTION	MODEL	BOOM
R 1 00	AG/004 KB/004 BI/004HP	up to 3 m
R 1 01	AG/004 KB/004 BI/004HP	from 3 m to 4,5 m
R 1 02	AG/006 KB/006 BI/006	from 4,5 to 6 m
R 1 03	BI/004	up to 3 m
R 1 04	BI/004	from 3 m to 4 m
R 1 05	BI/008	up to 8 m

1. Select the position of the barrier in relation to the gate, using parameter 7 1. The factory setting of the parameter is with the barrier installed on the right (7 10 1) and the boom opening/closure gate on the left (seen from the inspection hatch side).



! If the installation position is changed from the right to the left, the position of the spring(s) must also be changed.



For the correct installation, refer to the barrier installation manual.

i IMPORTANT! Lubricate the pivot points with lithium based grease (EP LITIO)

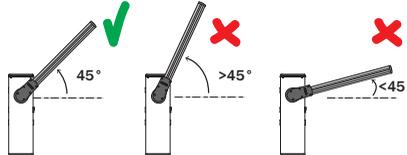
2. Check that the "operator present" function is not enabled (R7 00).



3. Check the spring balance setting and the mechanical stop settings.



For further information, refer to the installation manual of the barrier.



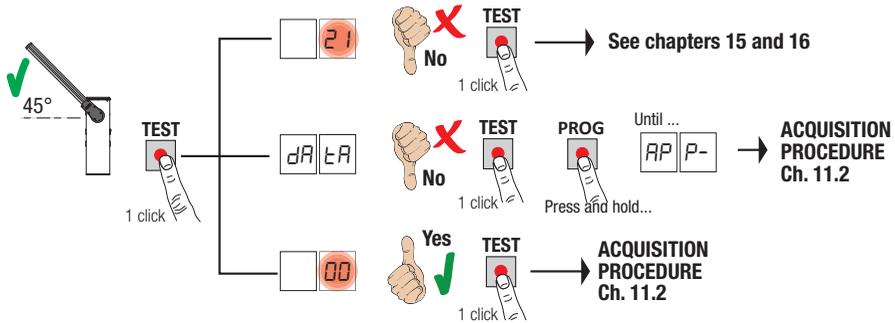
i IMPORTANT! Lubricate the pivot points with lithium based grease (EP LITIO)

4. For installations with opposed barriers, connect the command signals and safety devices to the MASTER controller. See chapter 7 for further information on installation (see fig. 20).

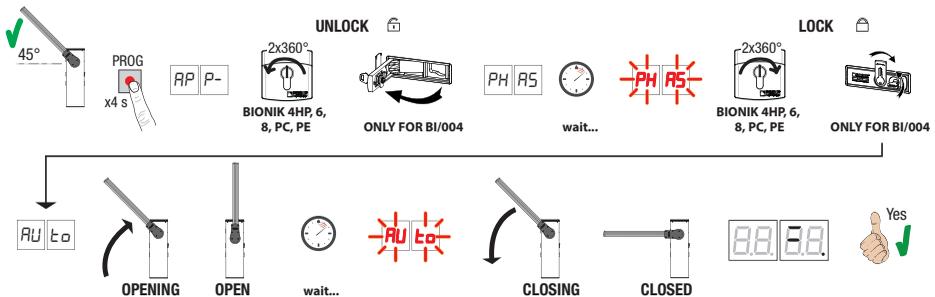
5. If the ACS/BA/60 detachable boom coupling system is not installed, the parameter i9 must be set to 00.

6. Move the barrier boom into the completely CLOSED position.

7. Press TEST (see TEST mode in paragraph 10.3) and check the command signal and safety device states. If the safety devices are not installed, jumper the contact or disable safety device function from the relative parameter (50, 51 and 73).



11.2 STANDARD (STAND ALONE) acquisition procedure:



• Press and hold PROG for 4 seconds. AP P- is shown on the display.

- Unlock the barrier.
 - AGILIK-KB-BIONIK4HP-BIONIK6-BIONIK8.** Turn the key anticlockwise by two full turns.
 - BIONIK4.** Open the release cover.
 - The barrier goes to 45° degree.
 - After a few seconds, the message *PH RS* is shown on the display. The controller unit launches a calibration procedure. The operating parameters of the motor are determined during calibration.
 - If the motor calibration procedure is successful, the message *PH RS* flashes on the display.
 - To lock the barrier again
 - AGILIK-KB-BIONIK4HP-BIONIK6-BIONIK8.** Turn the key clockwise by two full turns.
 - BIONIK4.** Close the release cover and turn the key.
 - The acquisition procedure now starts. The message *RUŁ* is shown on the display and the barrier starts opening at low speed.
 - Once the barrier open mechanical stop is reached, the barrier stops briefly. The message *RUŁ* flashes on the display.
 - The barrier closes until it reaches the barrier closed mechanical stop.
- 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:

- *PH*: calibration procedure failed.
- *AP P.E.*: acquisition error.

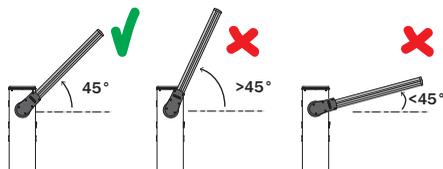
i For more information, see chapter 16 “Alarms and faults”.

11.3 MASTER/SLAVE acquisition procedure:

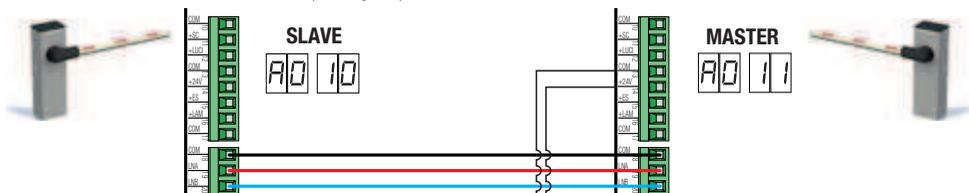
1. Check the spring balance setting and the mechanical stop settings.



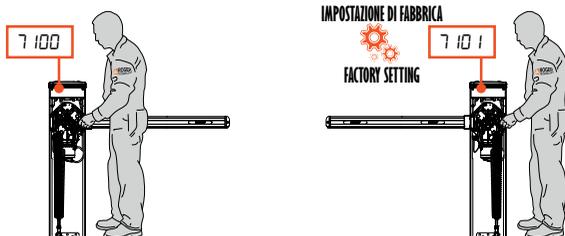
For further information, refer to the installation manual of the barrier.



2. With both control units not powered (and with battery disconnected, if present), make the bus connections on the MASTER and SLAVE control units (see fig. 20).



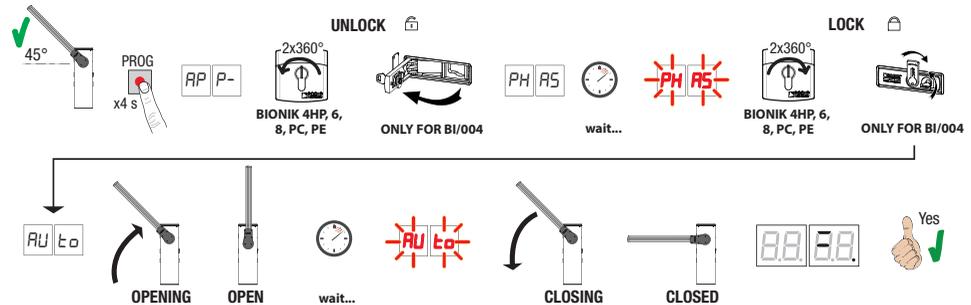
3. Enable RS485 serial communication (**MASTER**): *AD I1*
4. Enable RS485 serial communication (**SLAVE**): *AD IO*
5. Select the position of the barrier in relation to the gate, using parameter *71*. The factory setting of the parameter is with the barrier installed on the right (*7101*) and the boom opening/closure gate on the left (seen from the inspection hatch side). The position of the SLAVE barrier is automatically set to complementary.





If the installation position is changed from the right to the left, the position of the spring(s) must also be changed.

6. MASTER acquisition procedure:



- Press and hold PROG for 4 seconds. *AP P-* is shown on the display.
- Unlock the barrier.

AGILIK-KB-BIONIK4HP-BIONIK6-BIONIK8. Turn the key anticlockwise by two full turns.
BIONIK4. Open the release cover.

- The barrier goes to 45° degree.
- After a few seconds, the message *PH RS* is shown on the display. The controller unit launches a calibration procedure. The operating parameters of the motor are determined during calibration.
- If the motor calibration procedure is successful, the message *PH RS* flashes on the display.
- To lock the barrier again

AGILIK-KB-BIONIK4HP-BIONIK6-BIONIK8. Turn the key clockwise by two full turns.
BIONIK4. Close the release cover and turn the key.

- The acquisition procedure now starts. The message *RU L0* is shown on the display and the barrier starts opening at low speed.
 - Once the barrier open mechanical stop is reached, the barrier stops briefly. The message *RU L0* flashes on the display.
 - The barrier closes until it reaches the barrier closed mechanical stop.
- If the acquisition procedure is completed successfully, the display enters the command and safety device state display mode.

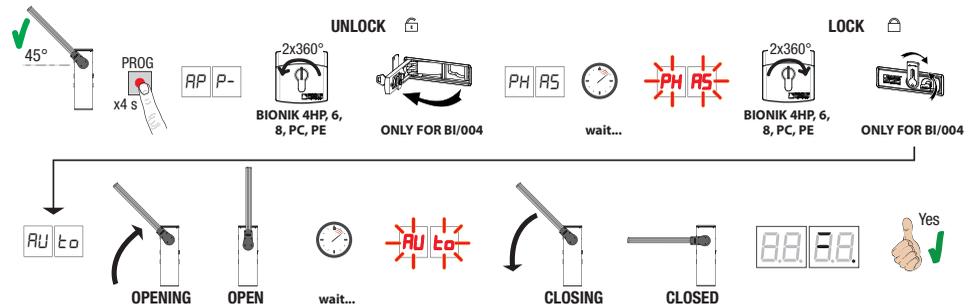
If the following error messages are shown on the display, repeat the acquisition procedure:

- *PH*: calibration procedure failed.
- *AP P.E*: acquisition error.



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

7. SLAVE acquisition procedure:



- Press and hold PROG for 4 seconds. *AP P-* is shown on the display.
- Unlock the barrier.

AGILIK-KB-BIONIK4HP-BIONIK6-BIONIK8. Turn the key anticlockwise by two full turns.
BIONIK4. Open the release cover.

- The barrier goes to 45° degree.
- After a few seconds, the message *PH RS* is shown on the display. The controller unit launches a calibration procedure. The operating parameters of the motor are determined during calibration.

- If the motor calibration procedure is successful, the message *PH R5* flashes on the display.
 - To lock the barrier again
AGILIK-KB-BIONIK4HP-BIONIK6-BIONIK8. Turn the key clockwise by two full turns.
BIONIK4. Close the release cover and turn the key.
 - The acquisition procedure now starts. The message *RUE* is shown on the display and the barrier starts opening at low speed.
 - Once the barrier open mechanical stop is reached, the barrier stops briefly. The message *RUE* flashes on the display.
 - The barrier closes until it reaches the barrier closed mechanical stop.
- 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:

- *n* *PH*: calibration procedure failed.
- *RP P.E*: acquisition error.



For more information, see chapter 16 "Alarms and faults".



The correct self-learning procedure of the barrier in STANDARD and MASTER/SLAVE mode requires that the first operation of the barrier is always from 45° towards opening. In case the first operation is from 45° towards closing, check again the correct position of the barrier opening and then set again the value of parameter 7 I.



For connection and wiring operation consider:

- **Wiring mains power cable to the MASTER barrier**
- **RS485 bus connection wiring: check the correspondence of the cables that must connect the LNA MASTER terminal with the LNA SLAVE terminal, similarly for the LNB MASTER and SLAVE terminals**
- **Always check that the ST (STOP) and COM inputs are jumpered (if no STOP button is installed, N.C. contact)**
- **the parameters concerning the functionality of the central unit are managed exclusively by the MASTER central unit which automatically passes them to the SLAVE central unit. Only parameters *R0*, *19*, *3 I* and *7 B* must be set on the SLAVE control unit**

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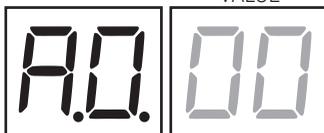
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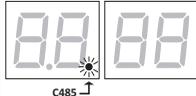
13 Parameters menu

PARAMETER

PARAMETER
VALUE



A0 00	Enable RS485 serial communication (MASTER-SLAVE) Enabling serial communication permits the synchronised control of two opposing automation systems. Example: a command signal received by MASTER automation system also opens the SLAVE automation system.
00	Disabled.
10	SLAVE automation system.
11	MASTER automation system. When the MASTER automation is enabled, the message <i>SrCH</i> illuminates on the display for a few seconds. If the SLAVE automation system is detected correctly, C485 illuminates.



A1 02	Barrier model and the length of the boom selection		WARNING! An incorrect setting may cause severe damage or injury.										
			Use the standard parameter values indicated in the table in relation to the boom length selected.										
			Parameter										
			11	12	31	33	34	40	41	43	44	65	
00	AG/004 KB/004 BI/004HP	boom up to 3 m	STANDARD VALUE	08	06	07	05	07	07	07	10	10	04
01	AG/004 KB/004 BI/004HP	boom from 3 m to 4.5 m		09	09	08	06	08	06	05	10	10	06
02	AG/006 KB/006 BI/006	boom from 4.5 m to 6 m		10	10	09	10	10	04	04	15	30	08
03	BI/004	boom up to 3 m		08	06	07	05	07	07	07	10	10	04
04	BI/004	boom from 3 m or 4 m		09	09	08	06	08	06	05	10	10	06
05	BI/008	boom up to 8 m		10	10	09	10	10	04	04	15	30	08

A2 00	Automatic closing after time pause (from barrier completely open position) N.B.: This parameter is not visible for the SLAVE barrier, and if the value of parameter B3 = 0 1, 02 or 03.
00	Disabled.
01-15	From 1 a 15 automatic closure attempts after activation of photocells. Once the number of attempts set is reached, the barrier remains open.
99	The barrier tries to close indefinitely.

A3 00	Automatic closing after mains power outage N.B.: This parameter is not visible for the SLAVE barrier.
00	Disabled. The barrier does NOT close automatically when mains power is restored.
01	Enabled. If the barrier is NOT completely open, when mains power is restored, the barrier closes after a 5 second pre-manoeuve warning signalled with the flashing light (independently of the value set with parameter A5).

R4 00 Step mode control function selection (PP)	
00	Open-stop-close-stop-open-stop-close...
01	Condominium function: the barrier opens and closes after the set automatic closing time. The automatic closing timer restarts if a new step mode command is received with the boom in the completely open position. Step mode commands are ignored while the barrier is opening. This allows the boom to open completely and prevents unintentional closing. If automatic closing is disabled (R2 00), the condominium function automatically attempts a closing manoeuvre R2 01
02	Condominium function: the barrier 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 barrier is opening. This allows the boom to open completely and prevents unintentional closing. If automatic closing is disabled (R2 00), the condominium function automatically attempts a closing manoeuvre R2 01
03	Open-close-open-close.
04	Open-close-stop-open.
R5 00 Pre-manoeuve flashing warning	
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.
R6 00 Condominium function for partial open command (PED)	
00	Disabled. The barrier opens partially in step mode: open-stop-close-stop-open...
01	Enabled. Partial open commands (PED) are ignored during barrier opening.
R7 00 Enable "operator present" function N.B.: this parameter is not visible if the value of parameter B3 = 01, 02 or 03.	
00	Disabled.
01	Enabled. The open (AP) or close (CH) button must be pressed continuously to operate the barrier. The boom stops when the button is released.
R8 00 Barrier open/photocell test function and battery saving mode indicator lamp N.B.: This parameter is not visible for the SLAVE barrier, (which has a non-modifiable setting of 00) or if the parameter 20 is other than 00.	
00	The indicator is off when the barrier is closed, and steadily lit during manoeuvres and when the barrier is open.
01	The indicator flashes slowly during opening manoeuvres, and is lit steadily when the barrier is completely open. Flashing rapidly during closing manoeuvres. If the barrier is stopped in an intermediate position, the lamp extinguishes twice every 15 s.
02	Set to 02 if the output SC is used for the photocell test. See fig. 5.
03	Set to 03 if the output SC is used for the "battery saving" function. See fig. 6. When the barrier is completely open or closed, the controller unit deactivates any accessories connected to terminal SC to reduce battery consumption. N.B.: setting not available for installations with two opposing barriers. This value is not visible if the value of parameter B3 = 01, 02, 03 or A0 = 10, 11.
04	Set to 04 if the output SC is used for the "battery saving" function and photocell test function. See fig. 6. N.B.: setting not available for installations with two opposing barriers. This value is not visible if the value of parameter B3 = 01, 02 or 03 or A0 = 10, 11.
10 00 Enable the B73/EXP signal device to indicate barrier completely open/closed positions (NC potential free contact)	
00	Disabled.
01	Enabled. When the boom is completely open, contact TO (NC) opens and the green LED illuminates on the B73/EXP board. When the boom is completely closed, contact TC (NC) opens and the red LED illuminates on the B73/EXP board.
11 10 Setting deceleration during opening	

12 10	Setting deceleration during closure
0 1- 10	01= barrier decelerates near stop ... 10= barrier decelerates long before reaching the stop. N.B.: Available values may be limited by the setting for parameter <i>R 1</i> .
19 00	"BreakAway" ACS/BA/60 shatter-proof system enabling (fig. 8)
	Connect the shatter-proof system sensor to one of the control inputs on the control unit. When the shatter-proof system is triggered, the signal switches from N.C. to N.O. For systems composed of opposing MASTER and SLAVE barriers, disconnect the sensor in the SLAVE barrier STRICTLY on the ORO input of the SLAVE control unit and set the parameter <i>19 05</i> .
00	If NOT connected, all control inputs will have standard function.
01	Connected on AP input
02	Connected on CH input
03	Connected on PP input
04	Connected on PED input
05	Connected on ORO input. (For SLAVE barrier: use ONLY for this setting).
20 00	SC output operating mode (fig. 9)
	By connecting a Relay to the SC output, an error alert contact can be achieved at an external control system. For systems composed of opposing MASTER and SLAVE barriers, perform the connections on the MASTER control unit. For values 00, 0 1, 02, 03 the SC output on the SLAVE control unit has standard function set via parameter <i>AB00</i> : the indicator is off when the barrier is closed, and steadily lit during manoeuvres and when the barrier is open. For the value 04, the SC output of the SLAVE provides the alarm status of the SLAVE.
00	STANDARD operation managed by parameter <i>AB</i>
01	With the indicator lamp connected to the SC output and if lit, it indicates that the shatter-proof system sensor ACS/BA/60 is in stand-by. Indicator light off due to an anomaly: sensor alarm.
02	With the indicator lamp connected to the SC output and if lit, it indicates that the barrier is powered by the mains source or by a charged battery. Indicator light off due to an anomaly: the battery is exhausted (voltage level set via parameter <i>B5</i>).
03	With the indicator lamp connected to the SC output and if lit, it indicates that none of the abnormal situations 1 or 2 occurred. With the indicator lamp off it indicates that at least one of the abnormal situations 1 or 2 has occurred.
04	With the indicator lamp connected to the SC output and if lit, it indicates that the barrier is working. With the indicator lamp off, it indicates that the barrier is blocked for an alarm or for operation STOP/BLOCK/SENSOR ACS/BA/60 or for the activation of an alarm or for "bE L D" signalling on the display. NOTE: in case of MASTER/SLAVE operation both barriers have signalling independent
21 30	Setting automatic closing time
	The timer starts from the barrier open state and continues for the set time. Once the set time is reached, the barrier 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 00	Enabling of management for opening with automatic re-closure exclusion
	If enabled, the exclusion of automatic re-closure only applies for the command selected via the parameter. For example: if you set <i>220 1</i> , automatic re-closure is excluded following an AP command, but it is activated following a PP or PED command. NOTE: The command has open-stop-close or close-stop-open sequence activation function. NOTE: The parameter is not visible if par. <i>R0</i> or <i>B3</i> is different than 00
00	Disabled.
0 1	An AP (open) command activates the opening manoeuvre. With the barrier fully open, automatic re-closure is excluded. Another AP (open) command activates the closure manoeuvre.
02	A PP (step mode) command activates the opening manoeuvre. With the barrier fully open, automatic re-closure is excluded. Another PP (step mode) command activates the closure manoeuvre.
03	A PED (partial opening) command activates the partial opening manoeuvre. Automatic re-closure is excluded. Another PED (partial opening) command activates the closure manoeuvre.
29 00	Enable electric block
00	Disabled.

01	Normally not powered. The electric lock is powered for 1,5 s at the start of the opening manoeuvre to allow the barrier to open.
02	Magnetic "ventouse" electric lock normally powered when the barrier is completely closed. Not powered when the barrier is moving or completely open
3109	Obstacle detection function setting (crush prevention) The barrier reopens if the obstacle detection system is activated during a closing manoeuvre. During opening manoeuvres, the barrier is reversed by the obstacle detection system only if the obstacle is detected within the first 60° of the manoeuvre. The maximum number of automatic closing attempts is set by parameter 49. N.B.: Available values may be limited by the setting for parameter A1.
01-09	01= minimum activation time (maximum sensitivity)... 09= maximum activation time (minimum sensitivity).
10	The barrier remains stationary against the obstacle for a maximum time of 5 s before reversing.
3310	Setting opening start acceleration
3410	Setting closure start acceleration
01-10	01= the barrier accelerates rapidly at start of manoeuvre ... 10= the barrier accelerates slowly and progressively at start of manoeuvre. N.B.: Available values may be limited by the setting for parameter A1.
4004	Setting opening speed (%)
4104	Setting closure speed (%)
01-10	01= 10% minimum speed ... 10= 100% maximum speed. N.B.: Available values may be limited by the setting for parameter A1.
4201	Approach speed setting This parameter sets the motor speed when approaching the barrier open/closed stop.
01-10	01= 10 motor revolutions per minute (RPM) ... 10= 100 motor revolutions per minute (RPM).
4315	Opening approach distance setting
4430	Closing approach distance setting
05-30	from 0,5 to 3 of turns performed by the motor at speed set with parameter 42. N.B.: Available values may be limited by the setting for parameter A1.
4901	Number of automatic closure attempts after activation of sensing edge or obstacle detection (crush protection)
00	No automatic closure attempts.
01-03	From 1 to 3 automatic closure attempts. Automatic closure is only performed if the barrier is completely open. Set a value equal to or lower than the value set for parameter A2.
5000	Photocell mode for barrier opening (FT) N.B.: this parameter is not visible if the value of parameter B3 = 01, 02 or 03.
00	DISABLED. Photocell is not active or not installed.
01	STOP. The barrier stops and remains stationary until the next command is received.
02	IMMEDIATE REVERSE. The barrier reverses immediately if the photocell is activated during opening manoeuvre.
03	TEMPORARY STOP. The barrier stops and remains stationary as long as the photocell is obstructed. The barrier resumes opening when the photocell is cleared.
04	DELAYED REVERSE. The barrier stops if the photocell is obstructed. The barrier closes when the photocell is cleared.
5102	Photocell mode for barrier closure (FT) N.B.: this parameter is not visible if the value of parameter B3 = 01, 02 or 03.
00	DISABLED. Photocell is not active or not installed.
01	STOP. The barrier stops and remains stationary until the next command is received.
02	IMMEDIATE REVERSE. The barrier reverses immediately if the photocell is activated during closing manoeuvre.

03	TEMPORARY STOP. The barrier stops and remains stationary as long as the photocell is obstructed. The barrier resumes closing when the photocell is cleared.
04	DELAYED REVERSE. The barrier stops if the photocell is obstructed. The barrier opens when the photocell is cleared.

52 01	Photocell (FT) mode with barrier closed N.B.: this parameter is not visible if the value of parameter B3 = 0 1, 02 or 03 or if AB = 0 1, 02, 03 or 04 .
00	If the photocell is obstructed, the barrier cannot open.
01	The barrier opens when an open command is received, even if the photocell is obstructed.
02	The photocell sends the barrier open command when obstructed.

56 00	Enable close command 6 s after activation of photocell (FT) N.B.: This parameter is not visible if AB 03 or AB 04 is set, and if value of parameter B3 = 0 1, 02 or 03 .
00	Disabled.
01	Enabled. When the photocell barrier FT is crossed, a close command is sent 6 seconds later.

65 08	Motor stop distance setting The motor brake function is activated each time a stop is requested by a user command or by activation of the photocells. Set a value that will prevent collision with objects or persons due to the inertia of the boom.
01-10	01= rapid braking/smaller stopping distance ... 10= gentle braking (soft-stop)/greater stopping distance (NOTE: recommended setting for bars longer than 4 m). N.B.: Available values may be limited by the setting for parameter A 1 .

71 01	Installation position of barrier relative to gateway (seen from interior side) For installations with two opposed barriers, this setting must be made for the MASTER barrier. The SLAVE barrier recognises its position automatically. N.B.: every time the installation position is changed by altering parameter 7 1 , the display shows a position data request message dRtR . Press the PROG key until APP- appears on the display, then repeat the acquisition procedure (see fig. 21 and chapter 11.2).
00	Barrier installed on the left, viewed from the inspection cover side. With passage opening on the right.
01	Barrier installed on the right, viewed from the inspection cover side. With passage opening on the left.

73 00	Sensing edge COS configuration
00	Sensing edge NOT INSTALLED.
01	NC contact (normally closed). The barrier reverses only when closing.
02	Contact with 8k2 resistor. The barrier reverses only when closing.

76 00	Radio channel 1 configuration (PR1)
77 03	Radio channel 2 configuration (PR2)
00	STEP MODE.
01	PARTIAL OPENING.
02	OPENING.
03	CLOSING.
04	STOP.
07	STEP MODE with confirmation for safety ⁽¹⁾ .
08	PARTIAL OPENING with confirmation for safety ⁽¹⁾ .
09	OPEN with confirmation for safety ⁽¹⁾ .
10	CLOSE with confirmation for safety ⁽¹⁾ .

⁽¹⁾ To prevent barrier manoeuvres caused by accidentally pressing a remote control button, confirmation is required to enable the command. Example: parameters **76 07** e **77 01** set:
 • Pressing the CHA button on the remote control selects the step mode function, which must be confirmed within 2 seconds by pressing CHB on the remote control. Press CHB to activate partial opening.

78 02	Flashing light / upper cover lights frequency configuration
00	The frequency is set electronically from the flashing light unit.

01	Slow flash. The light flashes at a lower frequency when the boom is near the mechanical stops.
02	Light flashes slowly when barrier opens, rapidly when barrier closes. The light flashes at a lower frequency when the boom is near the mechanical stops.
79 00	Operating mode of signal lights on boom N.B.: to reduce power consumption, the controller automatically sets this par. to 04 during battery powered operation.
00	Disabled. Lights always off.
01	Lights always on.
02	Lights on with boom stationary, flashing when boom is moving.
03	Short flash with boom stationary, flashing normally when boom is moving.
04	Short flash with boom closed, flashing normally when boom is moving, off when boom is open.
80 00	Clock contact configuration When the clock function is active, the barrier opens and remains open. At the end of the programmed time set with the external device (clock), the barrier closes.
00	When the clock function is active, the barrier opens and remains open. Any command signal received is ignored.
01	When the clock function is active, the barrier opens and remains open. Any command signal received is accepted. When the barrier returns to the completely open position, the clock function is reactivated.
81 00	Enable safeguarded barrier closure Enabling this parameter ensures that the barrier is not left open due to incorrect and/or accidental commands. This function is NOT enabled if: <ul style="list-style-type: none"> • the barrier receives a STOP command; • the sensing edge is activated; • the number of closure attempts set by parameter A2 has been reached.
00	Disabled. Parameter B2 is not visible.
01	Enabled. If the barrier is closed as a result of a step mode command, after a period of time set with parameter B2 , the control unit signals a 5 second warning with the flashing light (regardless of the parameter A5), and then the barrier closes.
82 03	Safeguarded closure activation time setting N.B.: this parameter is not visible if the value of parameter B 1 = 00 .
02-90	Wait time settable from 2 to 90 s.
92-99	Wait time settable from 2 to 9 min.
83 00	Parking access mode selection N.B.: If enabled with values 01, 02 or 03, photocell activation during a closing manoeuvre will always trigger a reopening manoeuvre unless parameter B4 01 is set. Parameters A2, A7, S0, S 1, S2 and S6 are not visible. With B3 = 01, 02, 03 the barrier re-closes after a pause time set at parameter 2 1 (if 2 1 is set to a value different from 00).
	For more information, see chapter 14 "Examples of applications in parking access mode".
00	Disabled. Parameter B4 is not visible.
01	Bi-directional mode with immediate closure. When entering and leaving the parking area, the barrier is opened with an AP open command. Once the vehicle has crossed the barrier and released contact FT (NC) (e.g. from magnetic loop), the barrier closes immediately. When parameter 2 1=00 , the barrier open and remains open until the vehicle has completed the passage. If the vehicle moves back, the barrier remains open. NOTE: it is possible to add further 5 s delay before closing, setting A5 99 .
02	Directional mode 1. When entering the parking area, the barrier is opened with an AP open command. Once the vehicle has crossed the barrier and released contacts FT (NC) and PED (NO), the barrier closes. When leaving the parking area, the barrier is opened by a PED command received from the magnetic loop. Once the vehicle has crossed the barrier and released contact FT (NC), the barrier closes. When parameter 2 1=00 , the barrier open and remains open until the vehicle has completed the passage. If the vehicle moves back, the barrier remains open. NOTE: it is possible to add further 5 s delay before closing, setting A5 99 .

Directional mode 2.
 When entering, the barrier is opened with an **AP** open command, and closes after the automatic closing time set with parameter **2 1**.
03 NOTE: in order to have the automatic closing set parameter **2 1** different to **00**.
 When leaving the parking area, the barrier is opened by a **PED** command received from the magnetic loop. Once the vehicle has crossed the barrier and released contact **FT** (NC), the barrier closes.
NOTE: it is possible to add further 5 s delay before closing, setting **A5 99**.

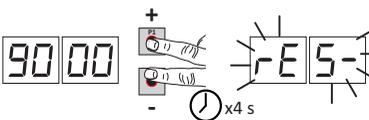
84 00 Enable close command after activation of photocell (FT)
N.B.: this parameter is not visible if **B3 00**.
00 Disabled.
0 1 Enabled. The barrier stops if the photocell is activated during closing manoeuvre. The barrier resumes closing when the photocell is cleared.

8500 Selection of the battery operation management
 Setting a value different than **00** a battery voltage level check is activated. The desired operation type can be selected via parameter **B6** and an error alert can be activated through the SC output via parameter **20**.
00 The control unit always accepts commands until the battery is completely exhausted.
0 1 The command becomes active when the battery voltage drops to the minimum threshold (22Vdc for battery 2x12Vdc)
02 The command becomes active when the battery voltage drops to the medium threshold (23Vdc for battery 2x12Vdc)
03 The command becomes active when the battery voltage drops to the maximum threshold (24Vdc for battery 2x12Vdc)

8600 Selecting the battery operation limitations
N.B.: the parameter is visible only if par. **B5** is different than **00**
00 There is no limitation for the commands when the battery voltage drops under the selected threshold. An error alert may be activated via the SC output (if parameters **B5** and **20** are adequately set).
0 1 When the battery voltage drops under the threshold selected with par. **B5**, the control unit accepts only opening commands and does not perform closing.
02 When the battery voltage drops under the threshold selected with par. **B5**, after a 5 s pre-flashing, the control unit automatically opens the barrier's boom and accepts only a closing command.
03 It accepts only closing commands even if the ORO input is active and if the parameter is **B0 0 1**.
04 When the battery voltage drops to the threshold selected with par. **B5** the control unit, after a prelamp of 5s, automatically closes the gate and accepts only one opening command.

8700 Selection of the battery type and consumption reduction
NOTE: An INCORRECT setting of this parameter, when there is no mains voltage, blocks the functions and the display shows the message **bEtLD** (if set to **02** or **03** and the battery is 2x12Vdc) or an error alert **b mod**.
00 Battery 24Vdc (2x12V) with B71/BCHP. Acceleration/deceleration/speed reduction enabled, to increase the battery life.
0 1 Battery 24Vdc (2x12V) with B71/BCHP. No performance reduction, maximum battery consumption.
02 Battery 36Vdc (3x12V) with external charger. Acceleration/deceleration/speed reduction enabled, to increase the battery life. - DO NOT SELECT. FUTURE USE -
03 Battery 36Vdc (3x12V) with external charger. No performance reduction, maximum battery consumption. - DO NOT SELECT. FUTURE USE -

90 00 Restoring factory default values
NOTE This procedure is only possible if NO data protection password is set.
N.B.: This parameter is not visible for the SLAVE barrier.



Warning! Restoring default settings cancels all settings made previously except for parameters **7 1**: after restore, check that all parameters are suitable for the installation. The default factory settings may also be restored using the **+** (PLUS) and/or **-** (MINUS) buttons as follows:

- Turn off the power.
- Press and hold the **+** (PLUS) and **-** (MINUS) buttons until the unit switches on.
- The message **rES-** flashes on the display after 4 s.
- The default factory settings have now been restored.

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	Serial number
$n4$ 89	
$n5$ 01	
$n6$ 23	FW version
$n7$ 45	RS485 serial communication version

Example: 01 23 45 67 89 01 23 45

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.	
$a0$ 01	Manoeuvres performed Example: 01 23 45 x100 = 1,234,500 manoeuvres
$a0$ 23	
$a1$ 45	

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.	
$h0$ 01	Manoeuvre hours Example: 01 23 = 123 hours
$h1$ 23	

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.	
$d0$ 01	Days with unit switched on Example: 01 23 = 123 days
$d1$ 23	

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 barrier automation system.</u> WARNING: Contact the Technical Support Service if you lose your password. N.B.: This parameter is not visible for the SLAVE barrier.	
$P1$ 00 $P2$ 00 $P3$ 00 $P4$ 00	<p>Password activation procedure:</p> <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 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 ($CP=01$). <p>Temporary unlock procedure:</p> <ul style="list-style-type: none"> • Enter the password. • Check that $CP=00$. <p>Password cancellation procedure:</p> <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 parameter CP. • Press and hold the + and - buttons for 4 seconds. • The display flashes to confirm that the password has been cancelled (the values $P1$ 00, $P2$ 00, $P3$ 00 and $P4$ 00 and indicate that no password is set). • Switch the control unit off and on again ($CP=00$).

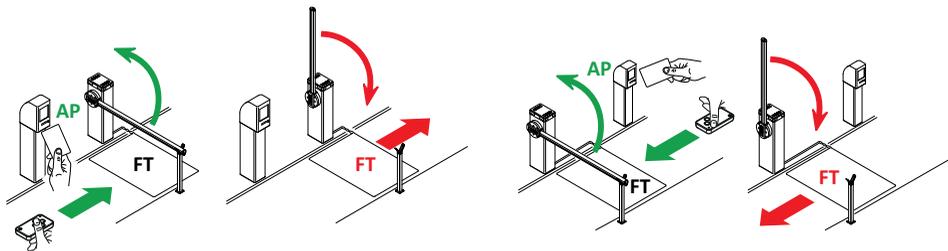
CP 00	Password change protection
00	Protection deactivated.
01	Protection activated.

14 Examples of applications in parking access mode

The **CTRL** controller manages the system in parking access mode. The function is enabled through the parameter **B3** and ONLY the **AP** and/or **PED** command inputs at the terminal board must be used. **N.B.:** the input **FT** cannot be disabled in the following operating situations. If the contact (NC) is opened during a closing manoeuvre, the barrier reopens and remains open until the contact is closed again.

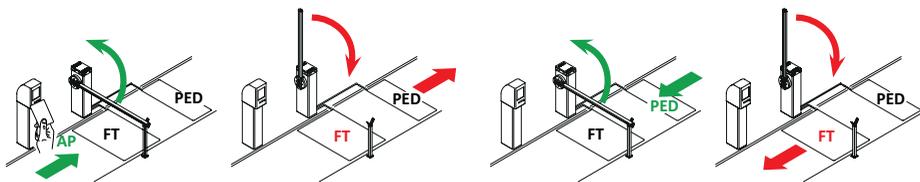
• Bi-directional mode with immediate closure (B3 01)

When entering and leaving the parking area, the barrier is opened with an **AP** open command (terminal block or radio command). Once the vehicle has crossed the barrier and released contact **FT** (NC) (e.g. from magnetic loop), the barrier closes immediately. When parameter **21=00**, the barrier open and remains open until the vehicle has completed the passage. If the vehicle moves back, the barrier remains open. If parameter **21** has a value different from **00**, the barrier re-closes after an automatic re-closure set time. **NOTE:** it is possible to add further 5 s delay before closing, setting **A5 99**.



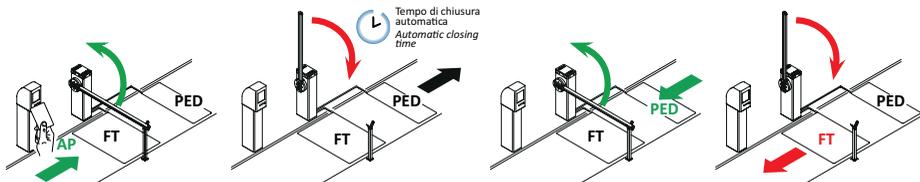
• Directional mode 1 (B3 02)

When entering the parking area, the barrier is opened with an **AP** open command (terminal block). Once the vehicle has crossed the barrier and released contacts **FT** (NC) and **PED** (NO), the barrier closes. When leaving the parking area, the barrier is opened by a **PED** command received from the magnetic loop. Once the vehicle has crossed the barrier and released contact **FT** (NC), the barrier closes. When parameter **21=00**, the barrier open and remains open until the vehicle has completed the passage. If the vehicle moves back, the barrier remains open. If parameter **21** has a value different from **00**, the barrier re-closes after an automatic re-closure set time. **NOTE:** it is possible to add further 5 s delay before closing, setting **A5 99**.



• Directional mode 2 (B3 03)

When entering, the barrier is opened with an **AP** open command (terminal block), and closes after the automatic closing time set with parameter **21**. **NOTE:** in order to have the automatic closing set parameter **21** different to **00**. When leaving the parking area, the barrier is opened by a **PED** (NO) command received from the magnetic loop. Once the vehicle has crossed the barrier and released contact **FT** (NC), the barrier closes. **NOTE:** it is possible to add further 5 s delay before closing, setting **A5 99**.



15 Safety input and command status (TEST mode)

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

DISPLAY	POSSIBLE CAUSE	ACTION BY SOFTWARE	PHYSICAL CORRECTIVE ACTION
88 r5(rS)	MASTER barrier not moving. STOP contact of MASTER barrier open (message visible for SLAVE barrier).	-	Check STOP button/contact on MASTER controller. Install a STOP button (NC) or jumper the ST contact with the COM contact of the MASTER controller.
88 br	Detachable boom support system enabled or not connected or incorrect connection.	Check the settings of parameter 19.	Check the correct system connection to the control unit.
88 2 1	Safety STOP contact open.	-	Check the STOP button/contact. Install a STOP button (NC) or jumper the ST contact with the COM contact.
	Release device open.	-	AGILIK-KB-BI/004HP-BI/006-BI/008 Lock by turning the key two complete turns clockwise. Check that the microswitch contact is connected correctly. BIONIK4 Close the release lock cover and turn the key. Check that the microswitch contact is connected correctly.
	Barrier inspection hatch open.	-	Close the barrier inspection hatch. Check connection to microswitch.
88 23	Sensing edge COS not connected or incorrectly connected.	Set the parameter 73 00 if not used or to disable.	If not used jumper contact COS with contact COM.
88 24	Photocell FT not connected or incorrectly connected.	Set parameters 50 00 and 51 00 if not used or to disable.	If not used jumper contact FT with contact COM. Check connection referring to relative connection diagram (figures 4-5).
PP 00	If occurs with no voluntary command, the contact may be faulty or one of the buttons may be incorrectly connected.	-	Check PP - COM contacts and connections to button.
CH 00		-	Check CH - COM contacts and connections to buttons.
AP 00		-	Check AP - COM contacts and connections to button.
PE 00		-	Check PED - COM contacts and connections to button.
OR 00		-	Check contacts ORO - COM. Do not jumper this contact if not used.

N.B: press TEST to exit TEST mode.

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

16 Alarms and faults

PROBLEM	ALARM SIGNAL	POSSIBLE CAUSE	CORRECTIVE ACTION
The barrier 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 and refitting fuses.
	FUSE	Fuse F1 blown or damaged. This message is not visible if controller is in battery power mode.	Replace fuse. Always disconnect from mains power before removing and refitting fuses.
	OV St	Input mains power voltage fault. Controller initialisation failed.	Disconnect from mains power, wait 10 seconds then reconnect to the mains and switch on. We recommend replacing the control unit if the problem persists.
	Pr Ot	Overcurrent detected in inverter.	Press the TEST button twice or perform 3 command requests in succession.
	SEC0	Incorrect connection between SEC1 and SEC2 of the transformer.	Swap the connection between SEC1 and SEC2.
	dRA tA	Travel data acquisition error.	Check that the spring is balanced correctly with the barrier unlocked. Press TEST and check if any safety devices are in alarm state. Repeat acquisition procedure.
		Calibration procedure failed (PHAS).	Allow the indicated calibration times to elapse during self-acquisition. Before re-closing the release lock cover, ensure that on the display will flash PHAS . Repeat acquisition procedure.
		Automation system position selection modification message with parameter 7 l .	 <p>Motors for barriers are factory configured for right hand opening barriers 7 l D l (position of barrier relative to passage seen from inspection hatch side). If the position is changed and message dRA tA is displayed:</p> <ul style="list-style-type: none"> • Move the boom 45° degree. • Adjust the spring position correctly for the required opening direction. • Press and hold PROG until dRA tA disappears and APP- appears on the display. <p>Repeat acquisition procedure.</p>
	mot	Motor not connected.	Check the motor cable.
	brEA	BreakAway system alarm.	<ul style="list-style-type: none"> • Check the setting of par. 19. • Check the correct ACS/BA/60 system connection to the control unit. • Re-engage the boom. • Consider replacing the boom if it is damaged.
	Example: 21EE 33EE	Configuration parameter error.	Set configuration value correctly and save.

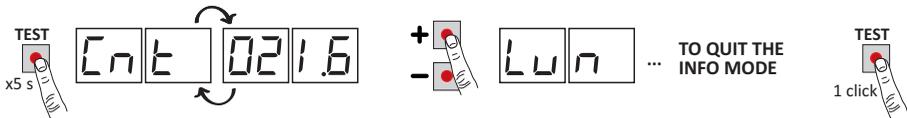
...Continued

PROBLEM	ALARM SIGNAL	POSSIBLE CAUSE	CORRECTIVE ACTION
The barrier does not open or close.	STOP flashing	Release device open.	AGILIK-KB-BI/004HP-BI/006-BI/008 : Lock by turning the key two complete turns clockwise. BIONIK4 : Close the release lock cover and turn the key.
		Open barrier inspection hatch (if the emergency stop micro-switch is installed).	Close the inspection hatch correctly and check the micro-switch connection.
		LOCKS connectors incorrectly connected.	Check the connector connections. Jumper one of the two LOCKS connectors.
		STOP button/contact active for more than 5 s.	Check connections to STOP button.
		For MASTER-SLAVE systems, the ACS/BA/60 BreakAway system is active on the MASTER barrier.	Check the BreakAway system and if the alarm event is solved, re-engage the ACS/BA/60 system.
	EnE1	Encoder 1 not connected.	Check connection to encoder. Replacing the encoder is recommended if the problem persists.
	EnE2	Encoder 2 not connected.	Check connection to encoder. Replacing the encoder is recommended if the problem persists.
	EnE3	Severe encoder 1 malfunction.	Press TEST button. If the error code is displayed again, switch off the controller unit, wait 5 seconds and switch on again. Replace the encoder if the problem persists.
	EnE4	Severe encoder 2 malfunction.	Press TEST button. If the error code is displayed again, switch off the controller unit, wait 5 seconds and switch on again. Replace the encoder if the problem persists.
	EnE5 (EnE5)	Encoder 1 malfunction.	Press TEST button or perform 3 command requests in succession. Replace the encoder if the problem persists.
		Operation in battery mode.	Batteries almost flat.
	EnE6	Encoder 2 malfunction.	Press TEST button or perform 3 command requests in succession. Replace the encoder if the problem persists.
		Operation in battery mode.	Batteries almost flat.
	EnE7	Encoder 1 calculation error.	Repeat acquisition procedure.
	EnE8	Encoder 2 calculation error.	Repeat acquisition procedure.
	tENP	Inverter overheat protection triggered.	Function is restored automatically within 2 minutes.
	btLO (btLO)	Flat batteries.	Wait for mains power to be restored.
	COM1	No RS485 serial communication between MASTER barrier and SLAVE barrier.	Check connection to terminals COM-LNA-LNB.
			Check settings of parameter RD . Check that battery kit is installed on both MASTER and SLAVE barriers.
	COM2	Serial communication interference: two MASTER controllers detected.	Check settings of parameter RD .
	COM3	Parameter configuration transfer error between MASTER and SLAVE.	Check connection to terminals COM-LNA-LNB.
	COM4	Controller unit models not compatible.	Check installation and replace one or both controller units.
	COM5 (COM5)	Incompatibility between firmware versions of controller units.	Check parameter n7 . Both controllers must have the same firmware version. Contact the technical assistance.

PROBLEM	ALARM SIGNAL	POSSIBLE CAUSE	CORRECTIVE ACTION
Acquisition procedure does not complete correctly.	<i>n0 PH</i>	Motor calibration failed.	Repeat acquisition procedure. If the problem persists, check the cable connecting encoder 1 to the motor.
			Check that the motor turns without impediment. Contact technical support in case of any problems.
	<i>RP PE</i>	TEST button pressed accidentally.	Repeat acquisition procedure.
		Safety devices in alarm state.	Check connections of safety devices.
		Excessive voltage drop.	Repeat acquisition procedure; check mains voltage.
Barrier does not perform desired manoeuvre.	-	Incorrect setting of parameter 7 I.	Select the correct installation position with parameter 7 I. Repeat acquisition procedure.
The barrier opens/closes for a short distance and then stops.		Incorrect setting of parameter A I.	Check type of boom and set parameter A I correctly. Repeat acquisition procedure.
		Incorrect values for installation type.	Set values of parameters 33, 34, 40 and 4 I correctly for installation type.
		Incorrect spring setting.	See the barrier instructions for spring balancing.
	<i>b7od</i>	Battery operation management (par. B5 different than 00) not detected.	Change the value of the parameter B7.
The remote control has limited range and does not work with the automation moving.	-	Radio signals are impeded by metal structures and reinforced concrete walls.	Install the antenna.
	-	Flat batteries.	Replace the radio control batteries.
The flashing light is not working.	-	Bulb / LED blown or flashing light wires disconnected.	Check LED circuit and/or connector wires.
Barrier open indicator lamp does not work.	-	Bulb blown or wires disconnected.	Check the bulb and/or wires.

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 Procedural verifications - INFO Mode



INFO mode may be used to view certain parameters measured by the **CTRL** controller. Press and hold the TEST button for 5 seconds from the “View command signals and safety devices” mode with the motor stationary. The controller displays the following parameters in sequence:

Parameter	Function
<i>P4.00</i>	View for 3 s the firmware version of the control unit.
<i>Ctrl</i>	View barrier position (ENCODER data) at time of test, in motor revolutions. (example: <i>02 1.6</i> = barrier installed on the right; <i>-2 1.6</i> = barrier installed on the left).
<i>Lun</i>	View total length of programmed travel, in motor revolutions (e.g.: <i>037.8</i> = 37.8 motor revolutions).
<i>rPM</i>	View motor speed, in revolutions per minute (rPM).
<i>AMP</i>	View current absorption of motor, in Amperes (e.g.: <i>0 16.5</i> = 16.5 A). If the motor is stationary, the current absorption value is 0.
<i>bUS</i>	System OK indicator. To check for overloading (e.g.: too many utilities connected to 24 V output) or if the mains voltage is too low, compare the parameters read with values indicated as follows with the motor stationary: mains voltage = 230 V AC (nominal), <i>bUS= 28.5</i> mains voltage = 207 V AC (-10%), <i>bUS= 25.5</i> mains voltage = 253 V AC (+10%), <i>bUS= 3 1.6</i>
<i>tin</i>	Indicates time taken by motor to detect an obstacle, as set with parameter $\exists t$, in seconds. E.g. <i>1.000</i> = 1 s / <i>0.120</i> = 0.12 s (120 ms). Ensure that the manoeuvre time is more than 0.3 s.
<i>MSrA</i>	Displays a number which indicates the status of the control unit (INTERNAL USE - ROGER TECHNICAL ASSISTANCE)
<i>rSrA</i>	Displays a number which indicates the status of the SLAVE control unit (INTERNAL USE - ROGER TECHNICAL ASSISTANCE) and visible only on the MASTER control unit; on the SLAVE control unit, ---- is always displayed.
<i>ErrL</i>	Number of RS485 communication errors (it gets reset by pressing “arrow down” ▼): this could highlight problems at board circuit level.
<i>ErrC</i>	Number of communication protocol errors (it gets reset by pressing “arrow down” ▼). It can highlight: • problems at connection cable level LNA/LNB/COM (reduced section, excessive length, closeness to cables with switching loads) • difficulties in communicating with the SLAVE control unit.
<i>OC</i>	Indicates the state of the automation system (open/closed). <i>OC OP</i> automation system opening (motor active). <i>OC CL</i> automation system closing (motor active). <i>OP -0</i> automation system completely open (motor not actives). <i>OP -C</i> automation system completely closed (motor not actives).
<i>OE</i>	Indicates activation of the obstacle detection system. <i>OE _ 1</i> obstacle detection activated.
<i>UF</i>	<i>UF _ U</i> mains voltage too low or overload. <i>UF _ H</i> motors overcurrent. <i>UF _ 5</i> malfunction detected, reduce acceleration and speed settings, and check spring setting.

- Use the + / - buttons to scroll through the parameters. When the last parameter in the sequence is reached, press the - button to return through the previous parameters.
- In INFO mode, the automation system may be activated to test operation in real time.
- Press and hold the TEST button for a few seconds to exit INFO mode.