FW
P4.35



IS88 Rev.27 12/02/2025

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

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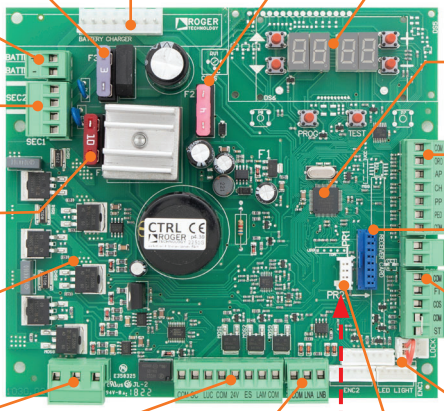
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FW
P4.35



Fusibile 3A
Fuse 3A

Connettore scheda carica batterie
Plug for battery charger

Fusibile 4A
Fuse 4A

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

Collegamento batterie
Batteries connection

Microcontrollore DSP 70 MIPS
DSP CPU 70 MIPS

Ingresso alimentazione (secondario trasformatore)
Power supply unit (transformer's secondary)

Morsettiere dei comandi
Commands terminal blocks

Fusibile 10A
Fuse 10A

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

Inverter a mosfet con controllo sinusoidale
Mosfet inverter with sinusoidal control

Morsettiere delle sicurezze
Safeties terminal blocks

Collegamento MOTORE (cavo 3 fili)
MOTOR connection (3 wiring cable)

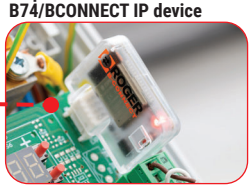
Connettori di collegamento encoder, contatto di sblocco e kit luci
Plug for encoder, unlock microswitch and lights kit connection

Morsettiere di collegamento periferiche
Device power supply terminal block

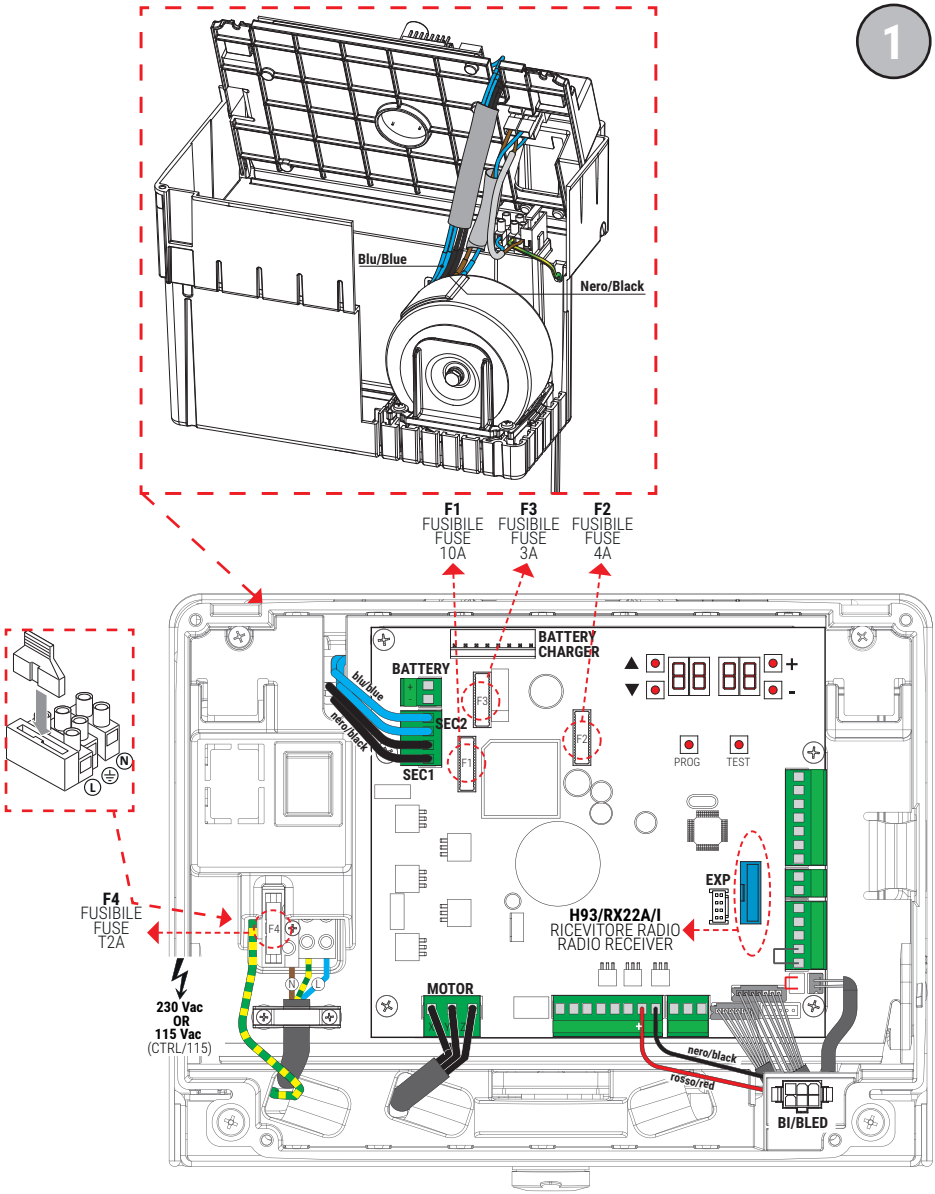
Collegamento seriale RS485
RS485 serial connection

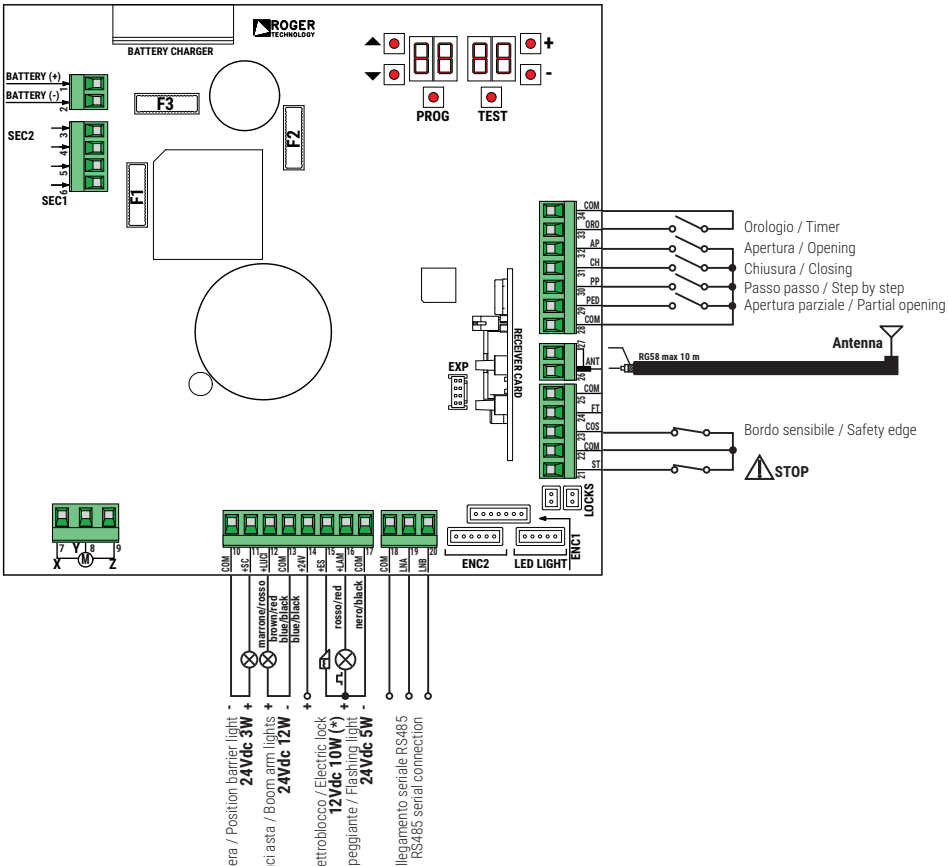
Connettore EXP per B74/BCONNECT
EXP connector for B74/BCONNECT

Dispositivo IP B74/BCONNECT
B74/BCONNECT IP device



1


Blu/Blue
Nero/Black
F1
FUSIBILE
FUSE
10A
F3
FUSIBILE
FUSE
3A
F2
FUSIBILE
FUSE
4A
BATTERY
CHARGER
BATTERY
blu/blue
nero/black
SEC2
SEC1
PROG
TEST
EXP
H93/RX22A/I
RICEVITORE RADIO
RADIO RECEIVER
MOTOR
nero/black
rosso/red
BI/BLED
F4
FUSIBILE
FUSE
T2A
230 Vac
OR
115 Vac
(CTRL/115)

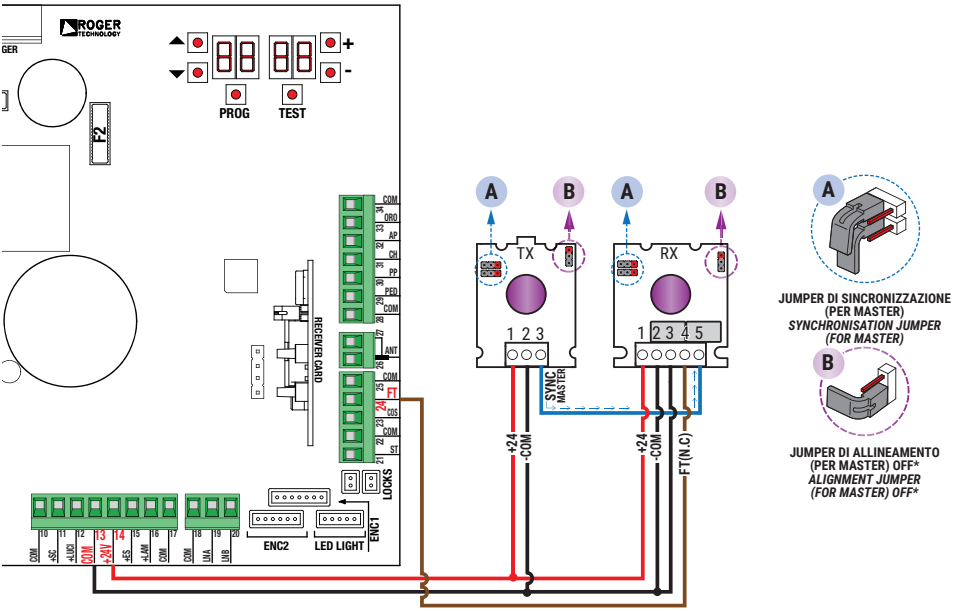


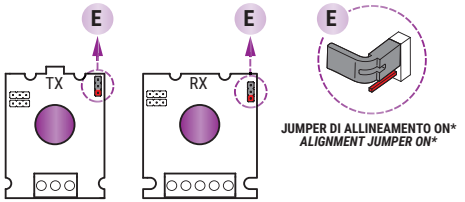
(*) Vmedia=12V⎓; Vmax=40V⎓
(*) Vaverage=12V⎓; Vmax=40V⎓

COLLEGAMENTO CON 1 COPPIA FOTOCELLULE SINCRONIZZATE (MODALITÁ NORMALE, SOLO COPPIA MASTER)
CONNECTION WITH 1 SYNCHRONISED PHOTOCELL PAIR (NORMAL MODE, MASTER PAIR ONLY)

ROSSO = libero da jumper
RED = jumper free

3





*** Per eseguire la modalità in di allineamento ottico (NOTA: consultare le istruzioni delle fotocellule):**
**** To perform optical alignment mode (NOTE: refer to photocell instructions):***

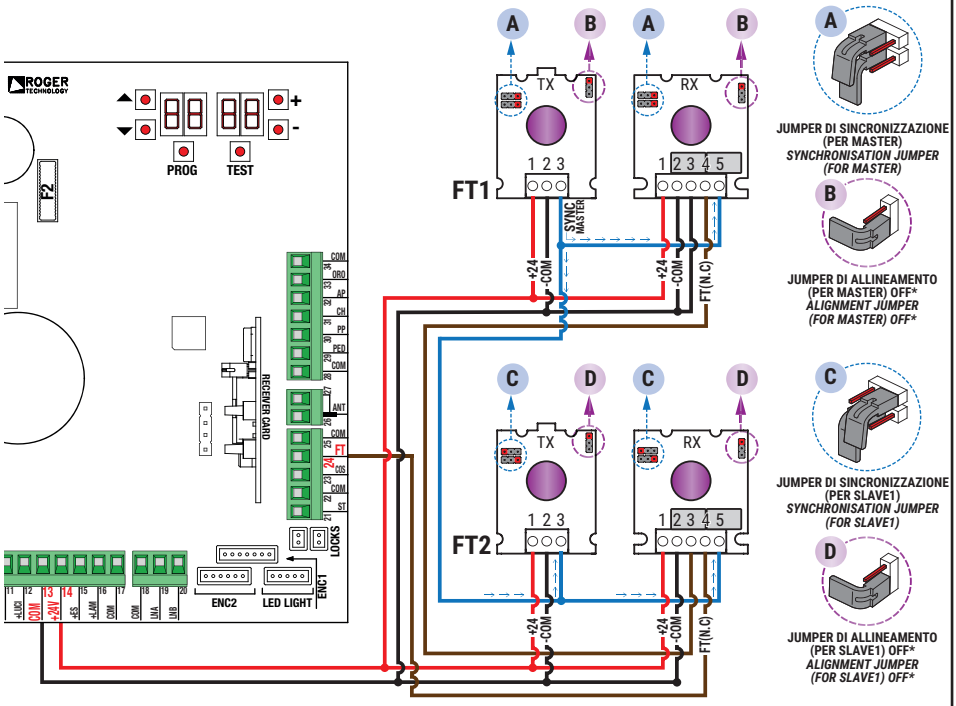
ATTENZIONE! Modificare la posizione dei jumper di sincronizzazione o di allineamento solamente quando le fotocellule sono **NON ALIMENTATE**! La configurazione scelta con i jumper viene memorizzata dalle fotocellule solamente all'accensione delle fotocellule.
Scollegare la morsettiera della centrale che fornisce alimentazione alle fotocellule, oppure togliere completamente la tensione al controller digitale (scollegando, se presenti, anche le batterie di backup) e verificare nella fotocellula TX / RX che il LED rosso di alimentazione sia spento; procedere soltanto ora all'impostazione della configurazione dei jumper.
ATTENTION! Please ensure that the photocell jumpers are only changed with the power to the control panel switched off, including the disconnection of any battery backup. Remove the terminal of the photocell inputs or completely remove the voltage from the digital controller (check that the digital controller is not powered by backup batteries) and check that the TX / RX photocell red power LED is off.

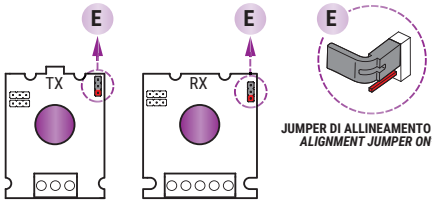
SI RACCOMANDA L' USO DI fotocellule Serie **F4ES - F4S / RECOMMENDED USE for** Series **F4ES - F4S** photocells

COLLEGAMENTO CON 2 COPPIE FOTOCELLULE SINCRONIZZATE (MODALITÁ NORMALE, 1 MASTER E 1 SLAVE)
CONNECTION WITH 2 SYNCHRONISED PHOTOCELL PAIRS (NORMAL MODE, 1 MASTER AND 1 SLAVE)

ROSSO = libero da jumper
RED = jumper free

3





*** Per eseguire la modalità in di allineamento ottico (NOTA: consultare le istruzioni delle fotocellule):**
**** To perform optical alignment mode (NOTE: refer to photocell instructions):***

ATTENZIONE! Modificare la posizione dei jumper di sincronizzazione o di allineamento solamente quando le fotocellule sono **NON ALIMENTATE**! La configurazione scelta con i jumper viene memorizzata dalle fotocellule solamente all'accensione delle fotocellule.
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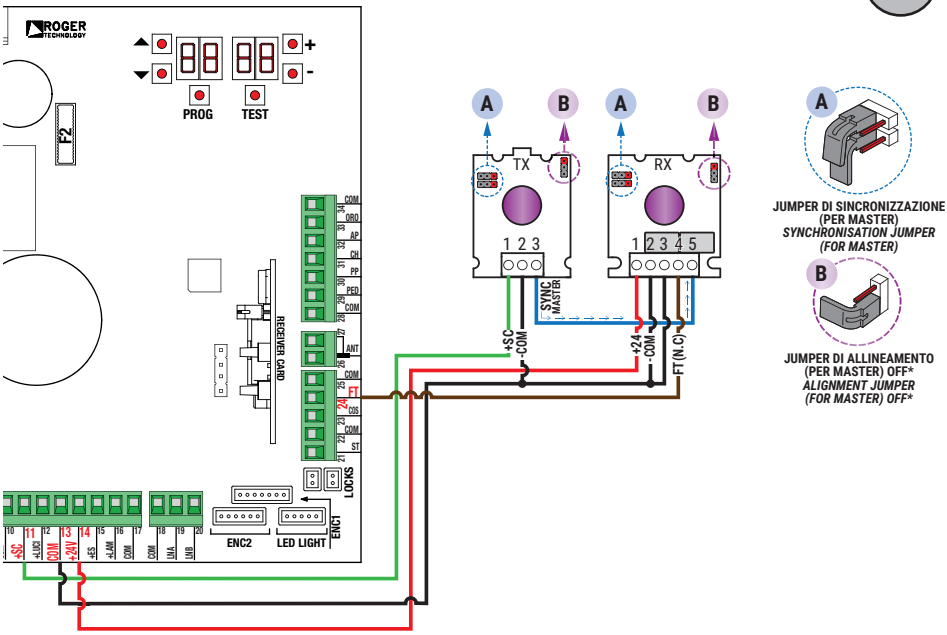
SI RACCOMANDA L' USO DI fotocellule Serie **F4ES - F4S / RECOMMENDED USE for** Series **F4ES - F4S** photocells

TEST FOTOCELLULE · PHOTOCELLS TEST (A8 02)

COLLEGAMENTO CON 1 COPPIA FOTOCELLULE SINCRONIZZATE (MODALITÁ NORMALE, SOLO COPPIA MASTER)
CONNECTION WITH 1 SYNCHRONISED PHOTOCELL PAIR (NORMAL MODE, MASTER PAIR ONLY)

ROSSO = libero da jumper
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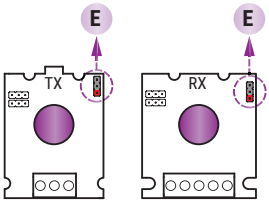
4

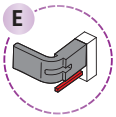


JUMPER DI SINCRONIZZAZIONE (PER MASTER)
SYNCHRONISATION JUMPER (FOR MASTER)

JUMPER DI ALLINEAMENTO (PER MASTER) OFF*
ALIGNMENT JUMPER (FOR MASTER) OFF*

*** Per eseguire la modalità in di allineamento ottico (NOTA: consultare le istruzioni delle fotocellule):**
**** To perform optical alignment mode (NOTE: refer to photocell instructions):***





JUMPER DI ALLINEAMENTO ON*
ALIGNMENT JUMPER ON*

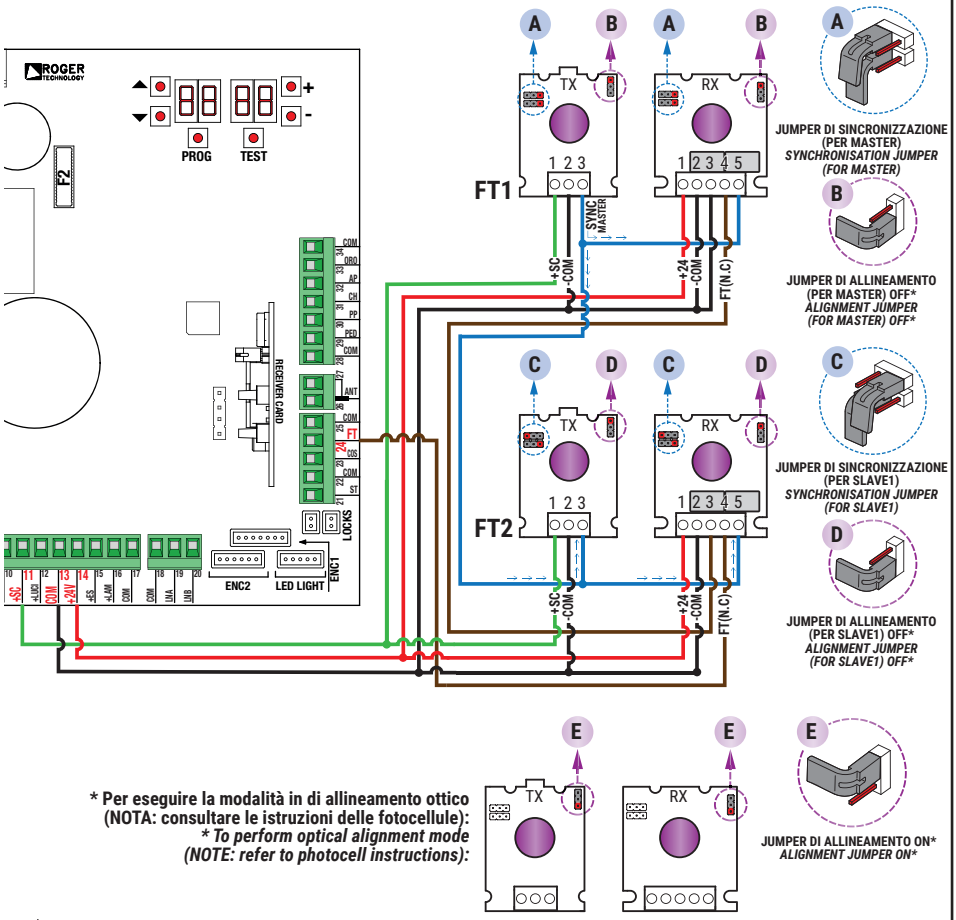
ATTENZIONE! Modificare la posizione dei jumper di sincronizzazione o di allineamento solamente quando le fotocellule sono **NON ALIMENTATE**! La configurazione scelta con i jumper viene memorizzata dalle fotocellule solamente all'accensione delle fotocellule.
Scollegare la morsettiera della centrale che fornisce alimentazione alle fotocellule, oppure togliere completamente la tensione al controller digitale (scollegando, se presenti, anche le batterie di backup) e verificare nella fotocellula TX / RX che il LED rosso di alimentazione sia spento; procedere soltanto ora all'impostazione della configurazione dei jumper.
ATTENTION! Please ensure that the photocell jumpers are only changed with the power to the control panel switched off, including the disconnection of any battery backup. Remove the terminal of the photocell inputs or completely remove the voltage from the digital controller (check that the digital controller is not powered by backup batteries) and check that the TX / RX photocell red power LED is off.

SI RACCOMANDA L' USO DI fotocellule Serie **F4ES - F4S / RECOMMENDED USE for** Series **F4ES - F4S** photocells

COLLEGAMENTO CON 2 COPPIE FOTOCELLULE SINCRONIZZATE (MODALITÁ NORMALE, 1 MASTER E 1 SLAVE)
CONNECTION WITH 2 SYNCHRONISED PHOTOCELL PAIRS (NORMAL MODE, 1 MASTER AND 1 SLAVE)

ROSSO = libero da jumper
RED = jumper free

4



*** Per eseguire la modalità in di allineamento ottico (NOTA: consultare le istruzioni delle fotocellule):**
**** To perform optical alignment mode (NOTE: refer to photocell instructions):***

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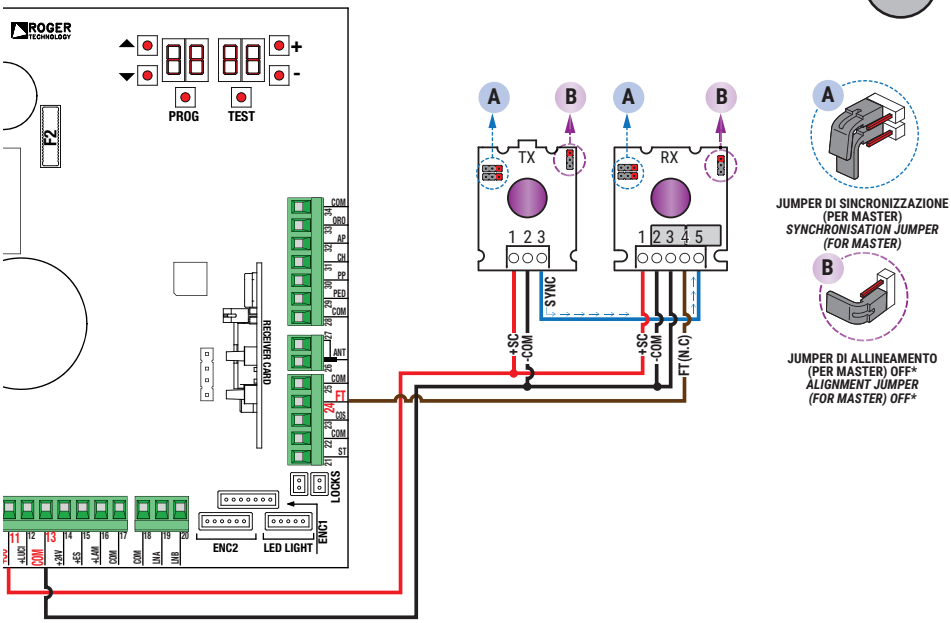
SI RACCOMANDA L' USO DI fotocellule Serie **F4ES - F4S / RECOMMENDED USE for** Series **F4ES - F4S** photocells

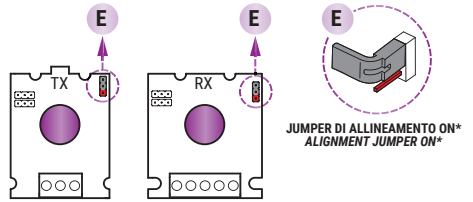
BATTERY SAVING (A8 03)
BATTERY SAVING + TEST FOTOCELLULE · PHOTOCELLS TEST (A8 04)

COLLEGAMENTO CON 1 COPPIA FOTOCELLULE SINCRONIZZATE (MODALITÁ NORMALE, SOLO COPPIA MASTER)
CONNECTION WITH 1 SYNCHRONISED PHOTOCELL PAIR (NORMAL MODE, MASTER PAIR ONLY)

ROSSO = libero da jumper
RED = jumper free

5





*** Per eseguire la modalità in di allineamento ottico (NOTA: consultare le istruzioni delle fotocellule):**
**** To perform optical alignment mode (NOTE: refer to photocell instructions):***

ATTENZIONE! Modificare la posizione dei jumper di sincronizzazione o di allineamento solamente quando le fotocellule sono **NON ALIMENTATE**! La configurazione scelta con i jumper viene memorizzata dalle fotocellule solamente all'accensione delle fotocellule.
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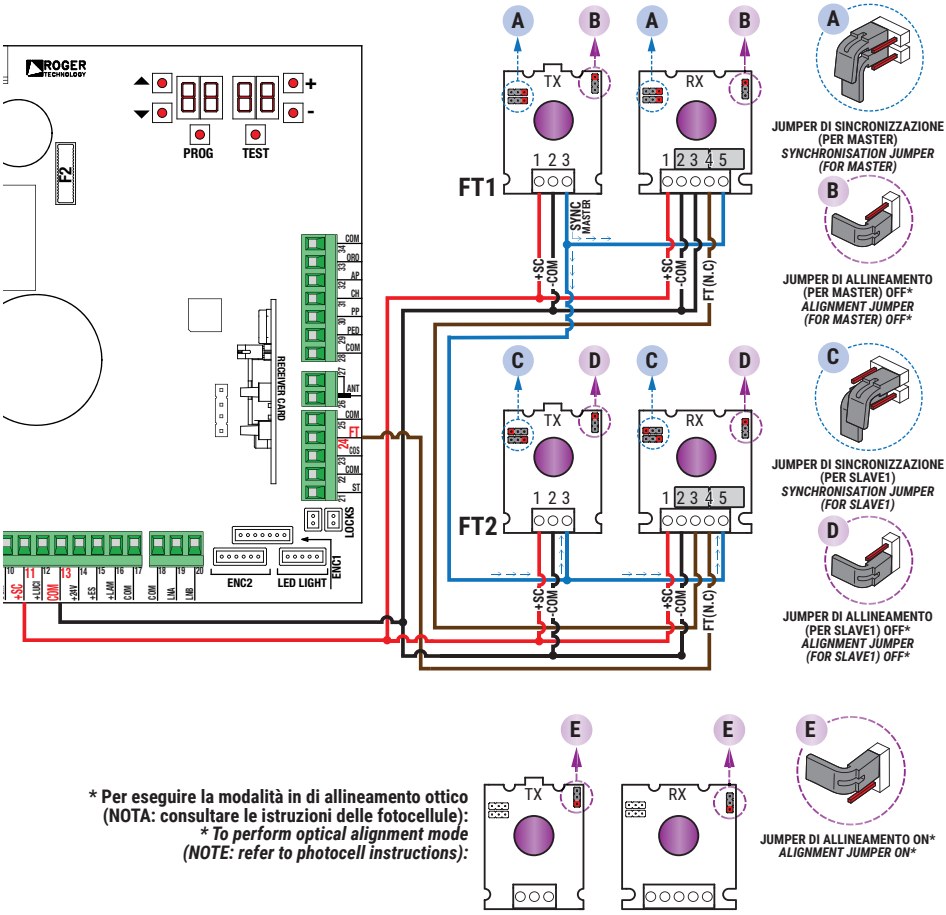
SI RACCOMANDA L' USO DI fotocellule Serie **F4ES - F4S / RECOMMENDED USE for** Series **F4ES - F4S** photocells

BATTERY SAVING (AB 03)
BATTERY SAVING + TEST FOTOCELLULE · PHOTOCELLS TEST (AB 04)

COLLEGAMENTO CON 2 COPPIE FOTOCELLULE SINCRONIZZATE (MODALITÁ NORMALE, 1 MASTER E 1 SLAVE)
CONNECTION WITH 2 SYNCHRONISED PHOTOCELL PAIRS (NORMAL MODE, 1 MASTER AND 1 SLAVE)

ROSSO = libero da jumper
RED = jumper free

5



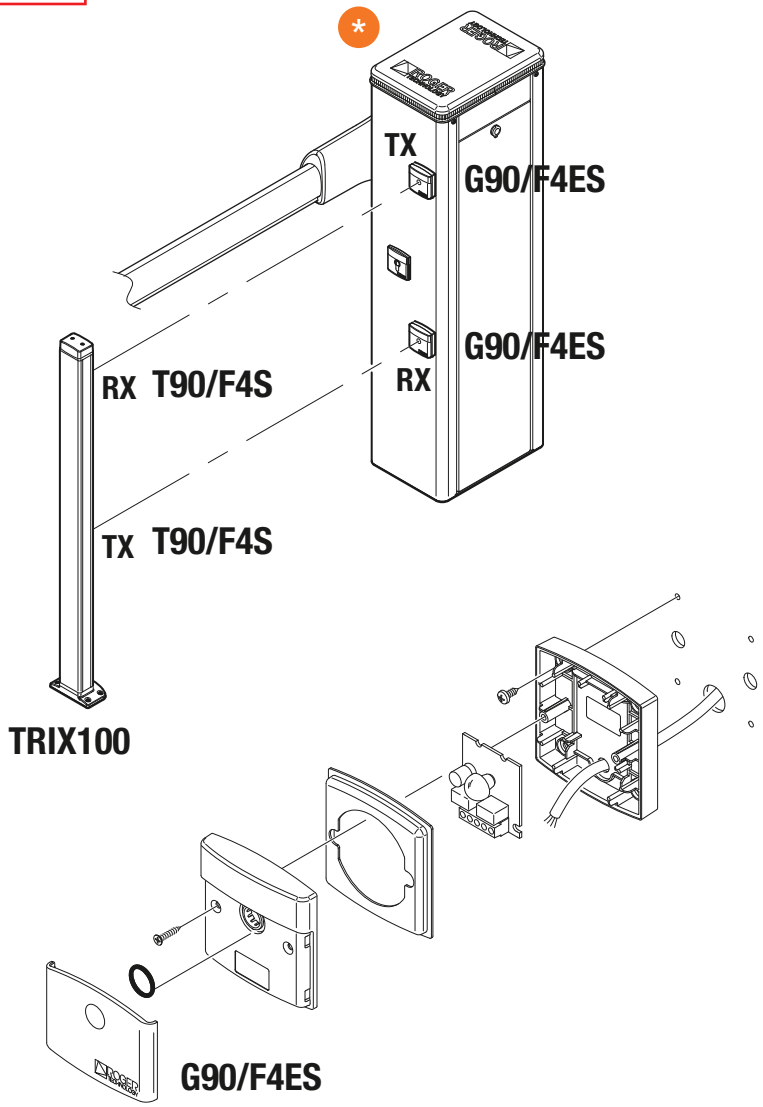
*** Per eseguire la modalità in di allineamento ottico (NOTA: consultare le istruzioni delle fotocellule):**
**** To perform optical alignment mode (NOTE: refer to photocell instructions):***

ATTENZIONE! Modificare la posizione dei jumper di sincronizzazione o di allineamento solamente quando le fotocellule sono **NON ALIMENTATE**! La configurazione scelta con i jumper viene memorizzata dalle fotocellule solamente all'accensione delle fotocellule.
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SI RACCOMANDA L' USO DI fotocellule Serie **F4ES - F4S / RECOMMENDED USE for** Series **F4ES - F4S** photocells

G90/F4ES
T90/F4S

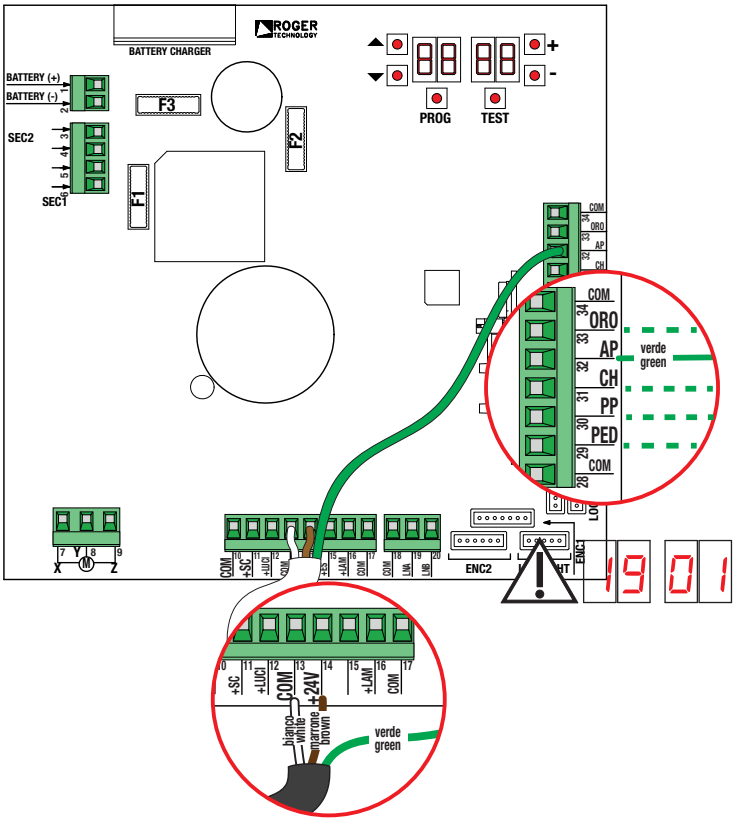
6



* 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

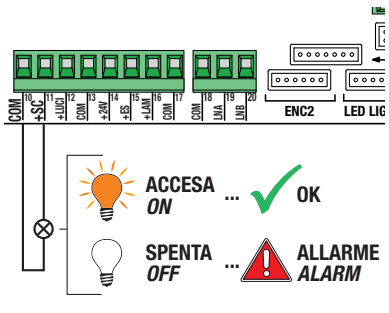
7

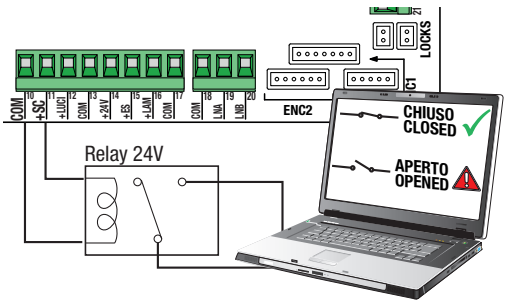




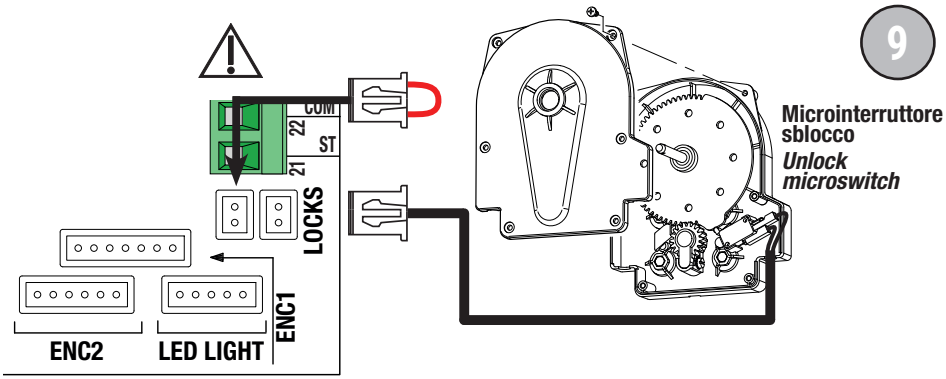
Utilizzo alternativo dell'uscita SC (par.*20* diverso da 00).
Alternative use of SC output (par.20 different from 00).

8

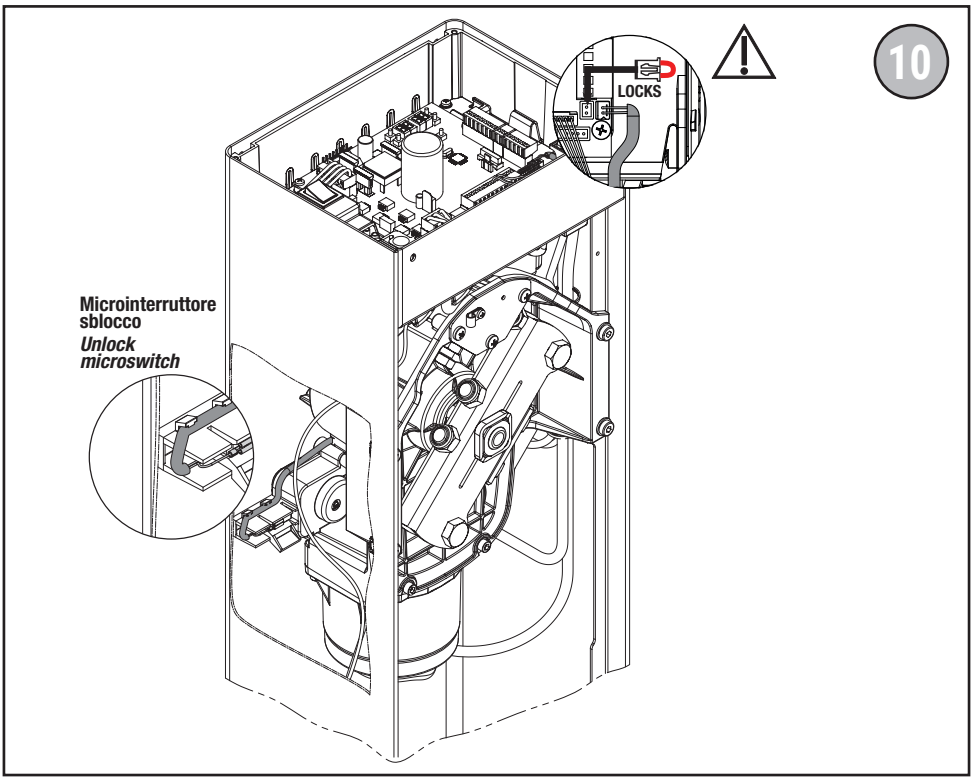




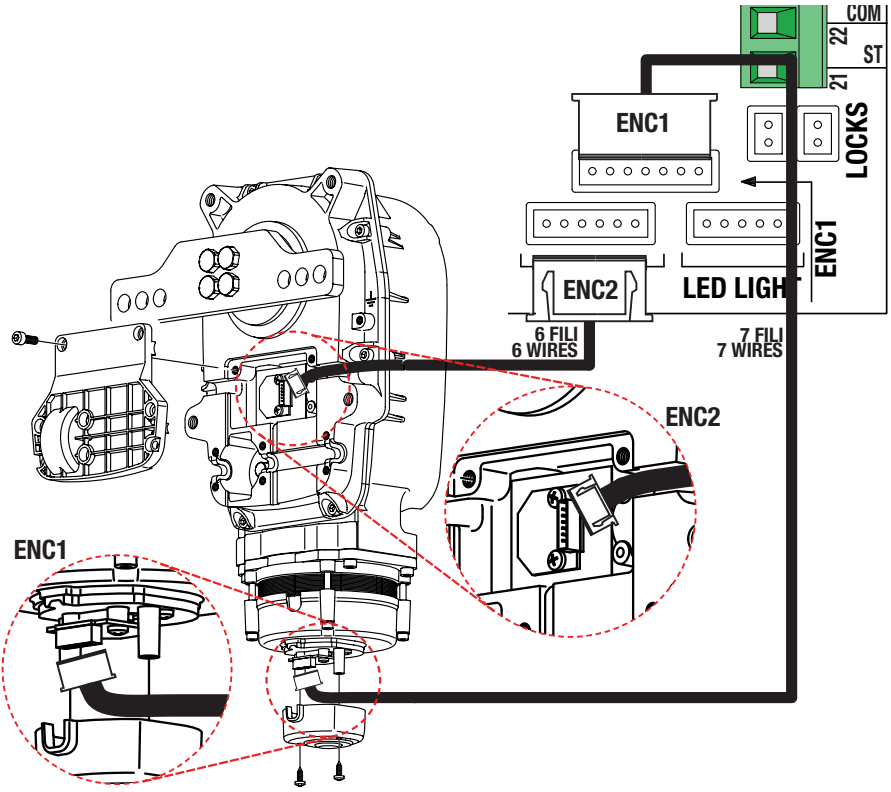
BIONIK4HP • BIONIK6 • BIONIK8



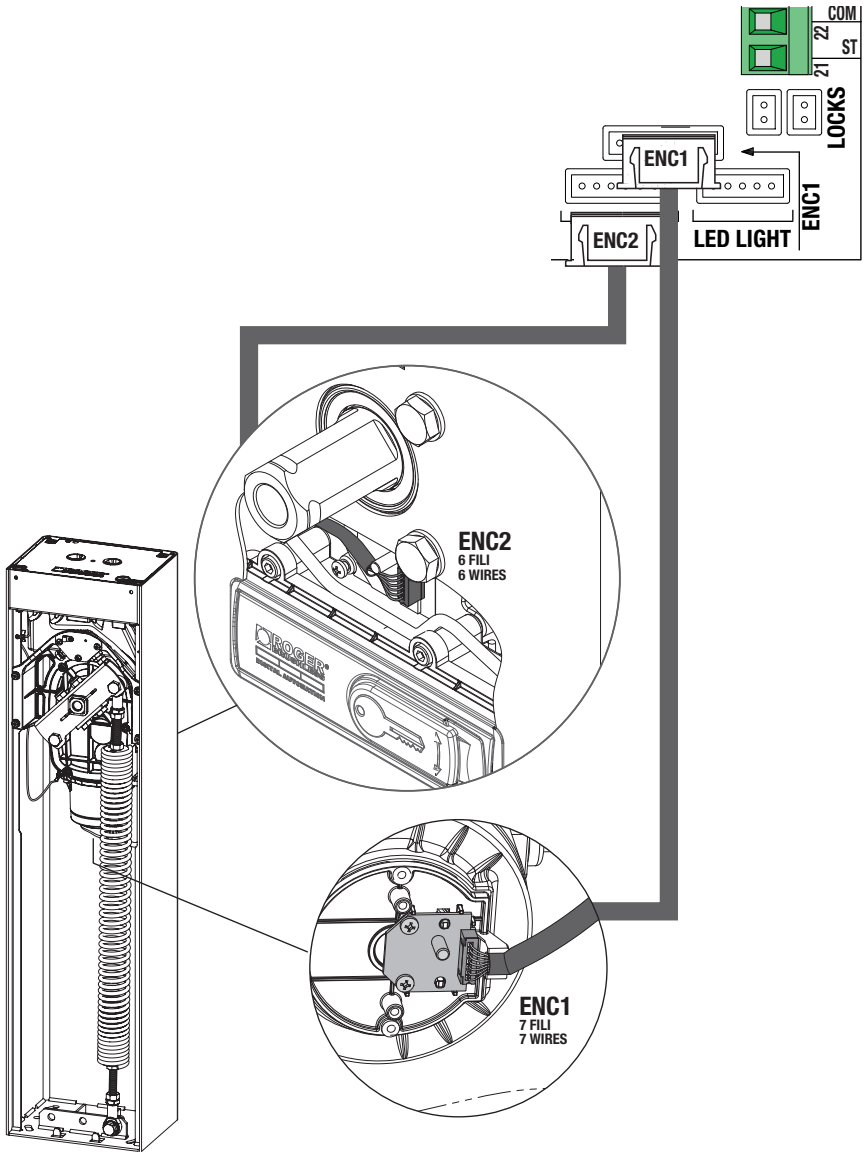
BIONIK4

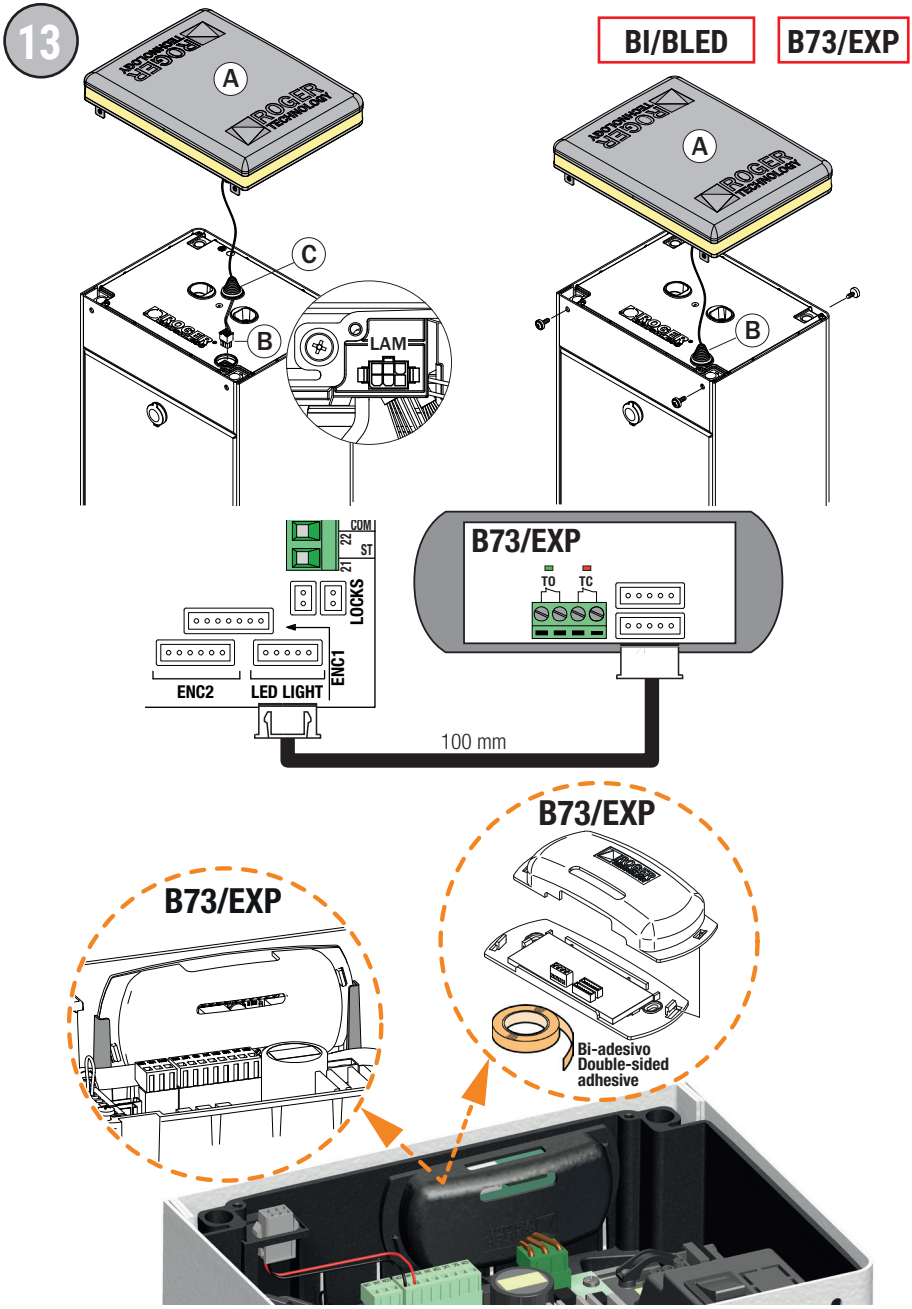


11


COM
22
ST
21
LOCKS
ENC1
ENC1
ENC2
LED LIGHT
6 FILI
6 WIRES
7 FILI
7 WIRES
ENC2
ENC1

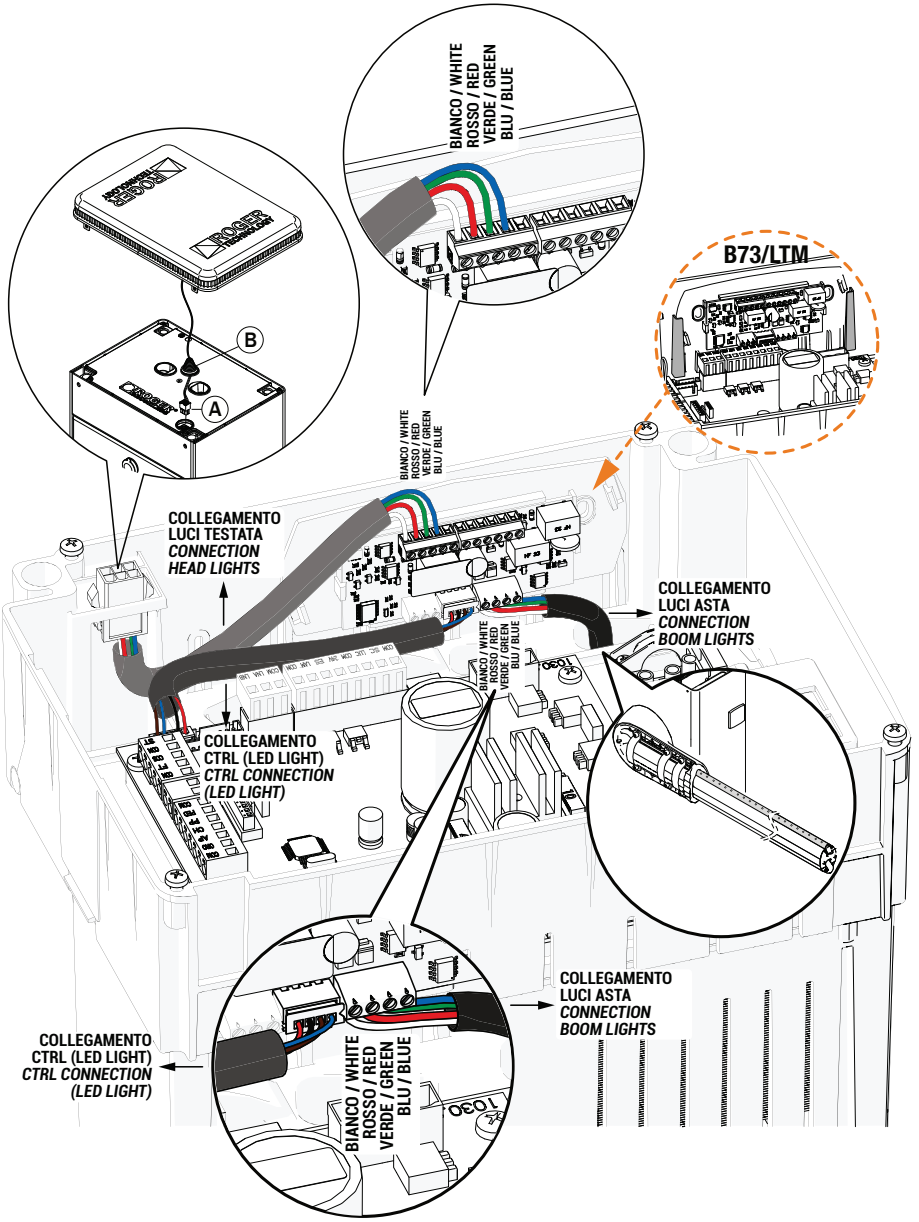
12


COM
22
ST
21
LOCKS
ENC1
ENC1
ENC2
LED LIGHT
ENC2
6 FILI
6 WIRES
ENC1
7 FILI
7 WIRES


13
BI/BLED
B73/EXP
A
B
C
LAM
COM
22
ST
21
LOCKS
ENC2
LED LIGHT
ENC1
B73/EXP
TO
TC
100 mm
B73/EXP
B73/EXP
Bi-adesivo
Double-sided
adhesive

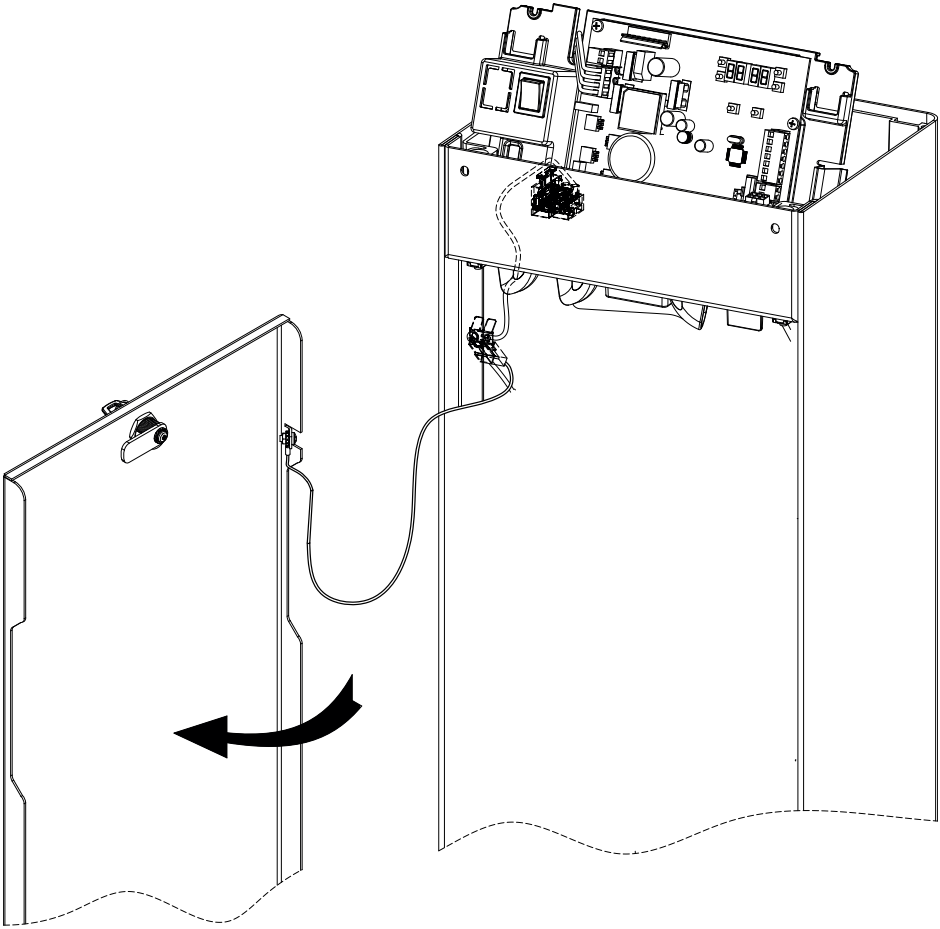
B73/LTM

14

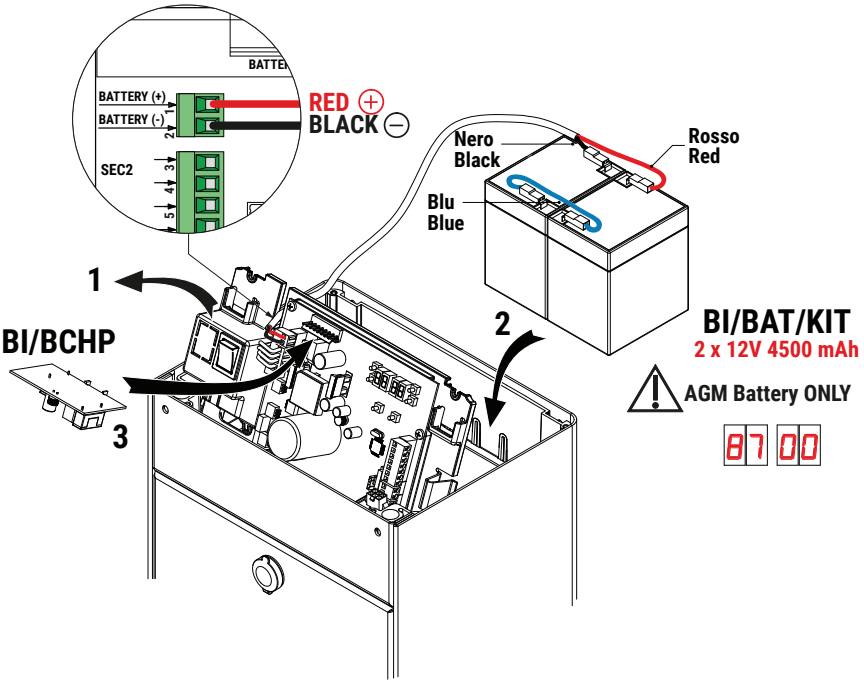

BIANCO / WHITE
ROSSO / RED
VERDE / GREEN
BLU / BLUE
B73/LTM
B
A
COLLEGAMENTO
LUCI TESTATA
CONNECTION
HEAD LIGHTS
COLLEGAMENTO
LUCI ASTA
CONNECTION
BOOM LIGHTS
COLLEGAMENTO
CTRL (LED LIGHT)
CTRL CONNECTION
(LED LIGHT)
COLLEGAMENTO
LUCI ASTA
CONNECTION
BOOM LIGHTS
COLLEGAMENTO
CTRL (LED LIGHT)
CTRL CONNECTION
(LED LIGHT)

MESSA A TERRA
GROUNDING SCHEME

15

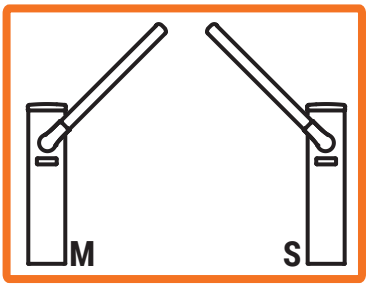


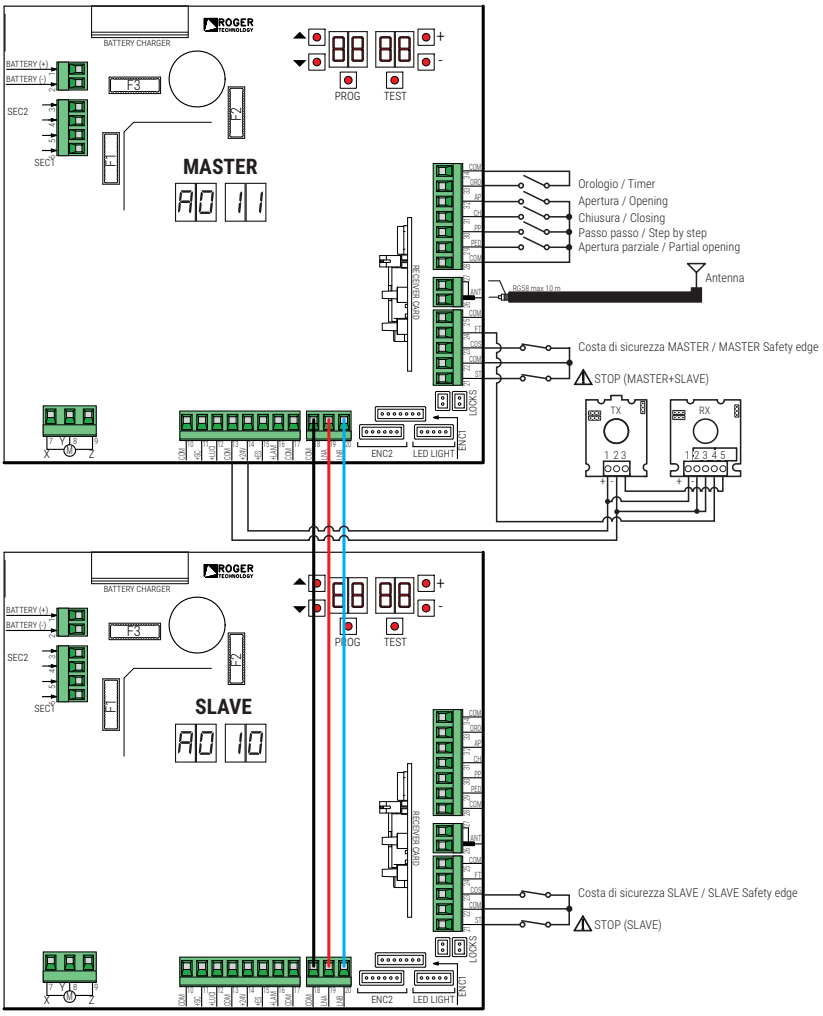
16


BATTERY (+)
BATTERY (-)
SEC2
RED
BLACK
Nero
Black
Rosso
Red
Blu
Blue
1
2
3
BI/BCHP
BI/BAT/KIT
2 x 12V 4500 mAh
AGM Battery ONLY

COLLEGAMENTO BARRIERA IN MASTER/SLAVE VIA BUS
MASTER/SLAVE BARRIER CONNECTION VIA BUS

17





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

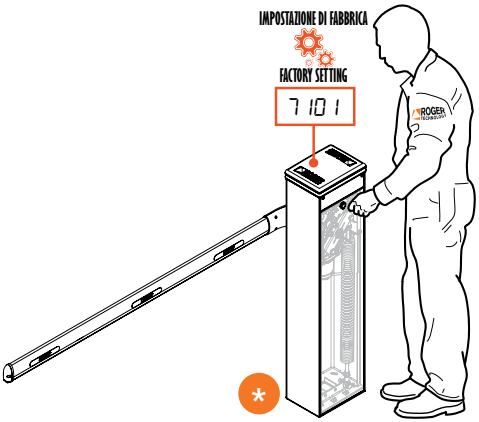
18

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.

DEFINIZIONE DI "TIPO" DI FUNZIONAMENTO LUCI TESTATA
DEFINITION 'TYPE' OF HEAD LIGHT FUNCTION

19

LED ROSSO FISSO
FIXED RED LED

LED VERDE FISSO
FIXED GREEN LED

LED ROSSO LAMPEGGIANTE (lampeggio continuo)
RED LED FLASHING (continuous flashing)

LED VERDE LAMPEGGIANTE (lampeggio continuo)
GREEN LED FLASHING (continuous flashing)

LED ROSSO DI PRESENZA (lampeggio discontinuo)
RED PRESENCE LED (discontinuous flashing)

LED VERDE DI PRESENZA (lampeggio discontinuo)
GREEN PRESENCE LED (discontinuous flashing)

TIPO / *TYPE* "A"



TIPO / *TYPE* "B"



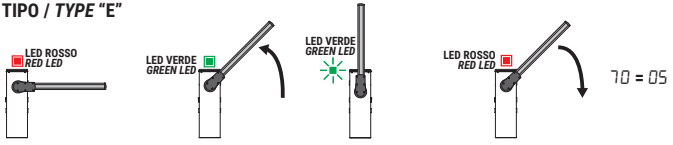
TIPO / *TYPE* "C"



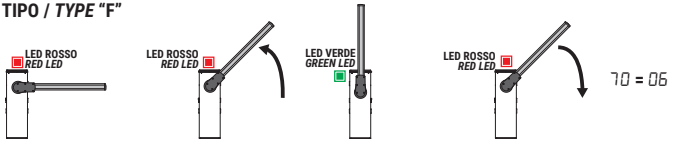
TIPO / *TYPE* "D"



TIPO / *TYPE* "E"



TIPO / *TYPE* "F"



DEFINIZIONE DI "TIPO" DI FUNZIONAMENTO LUCI ASTA
DEFINITION 'TYPE' OF BOOM LIGHT FUNCTION

20

LED ROSSO FISSO
FIXED RED LED

LED VERDE FISSO
FIXED GREEN LED

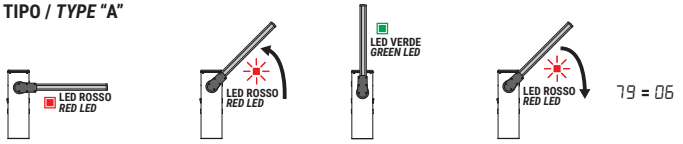
LED ROSSO LAMPEGGIANTE (lampeggio continuo)
RED LED FLASHING (continuous flashing)

LED VERDE LAMPEGGIANTE (lampeggio continuo)
GREEN LED FLASHING (continuous flashing)

LED ROSSO DI PRESENZA (lampeggio discontinuo)
RED PRESENCE LED (discontinuous flashing)

LED VERDE DI PRESENZA (lampeggio discontinuo)
GREEN PRESENCE LED (discontinuous flashing)

TIPO / *TYPE* "A"



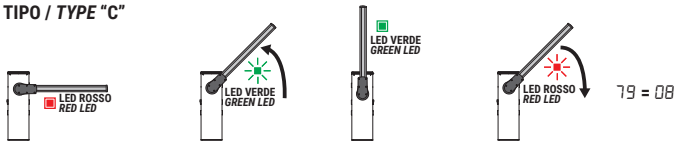
79 = 06

TIPO / *TYPE* "B"



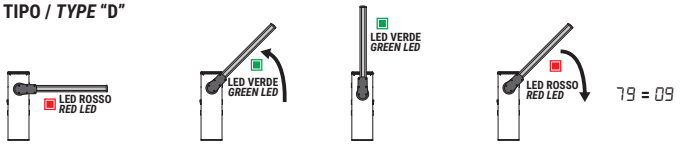
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TIPO / *TYPE* "C"



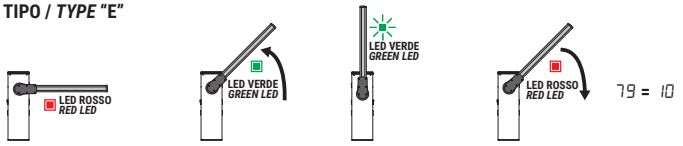
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TIPO / *TYPE* "D"



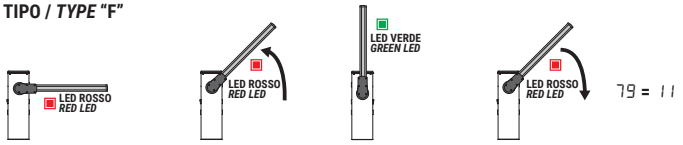
79 = 09

TIPO / *TYPE* "E"



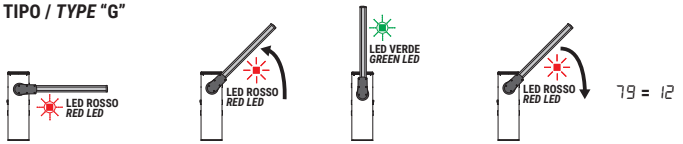
79 = 10

TIPO / *TYPE* "F"



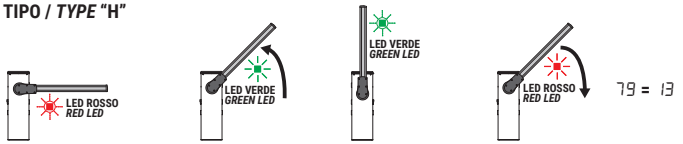
79 = 11

TIPO / *TYPE* "G"



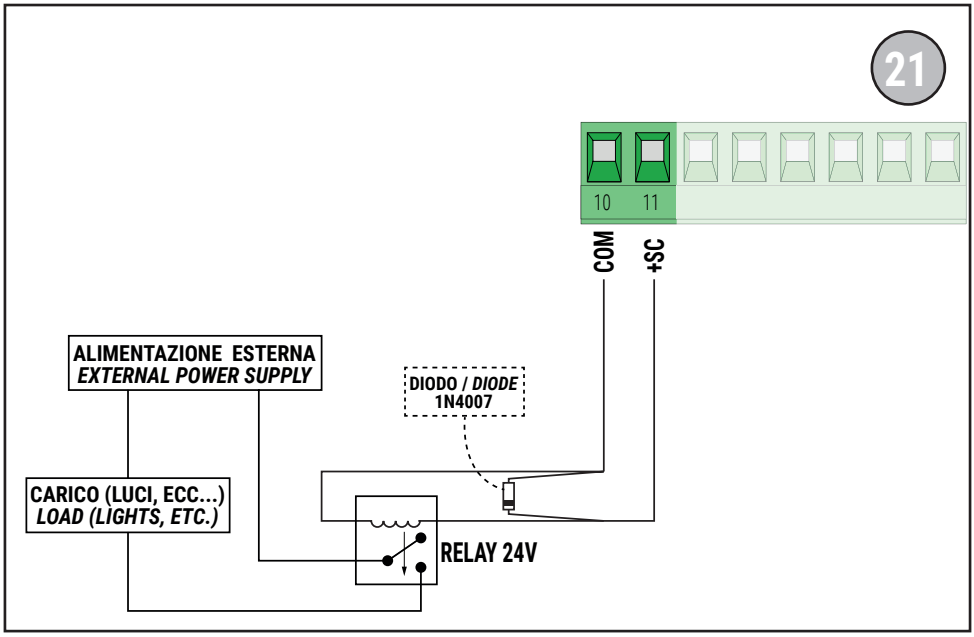
79 = 12

TIPO / *TYPE* "H"



79 = 13

COLLEGAMENTO DI RELAY ESTERNO ALL' USCITA SC
CONNECTION OF EXTERNAL RELAY TO SC OUTPUT



1 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.
	**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.

2 Product description

The **CTRL** controller is a unit for the sensored 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 (n6 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

3 Updates of version P4.35

1. Added the management of the IP device B74/BCONNECT controllable via browser device Roger BCONNECT, for the complete management via IP, through the connection on WiFi network, of the CTRL control panels. The connection is possible near the installation of the automation with access point functionality directly provided by B74/BCONNECT (point to point connection) or through the registration and activation to the cloud Roger Technology with the possibility to manage all the functions of the central unit remotely via web browser.
2. Possibility of FW update of the central unit in point-to-point mode (on the installation site), or via browser (remotely via cloud or from another device connected to the same network).
3. Added "remote assistance" mode and automation management with "emergency functionality" enabled and managed by web browser.
4. Added management of the B73/LTM device to drive RGB boom lights and RGB head lights, with new parameters I8, 70, 72, 74, 75 and new values for parameters I0 and 79.

4 Technical characteristics of product

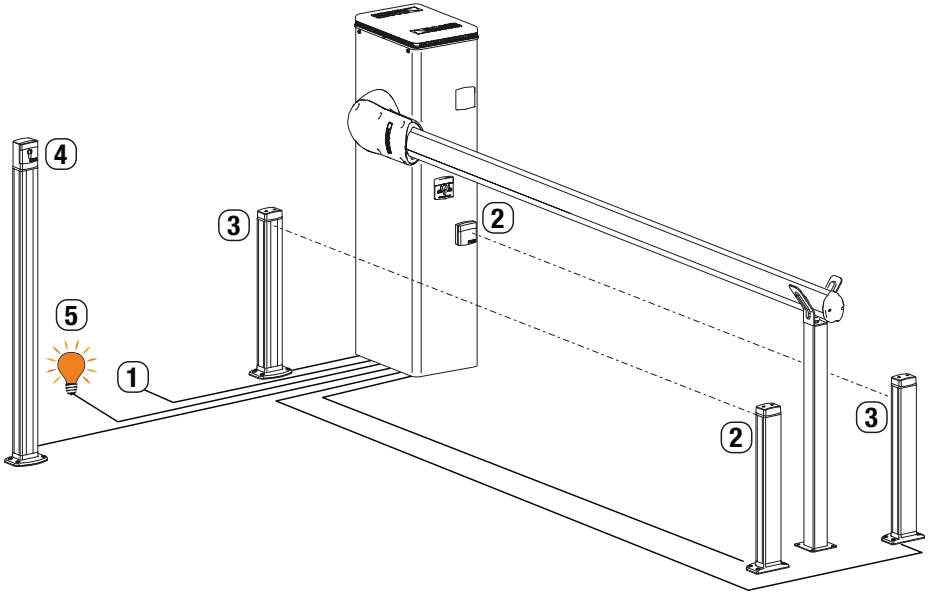
	BI/004HP BI/006 BI/008	BI/004	BI/004HP/115 BI/006/115 BI/008/115	BI/004/115
MAINS POWER VOLTAGE	230 V~ ± 10% 50Hz		115V~ ± 10% 60Hz	
MAXIMUM MAINS POWER ABSORPTION	240 W			
FUSES	**F1** = 10A (ATO257) motor power circuit protection **F2** = 4A (ATO257) electric lock protection **F3** = 3A (ATO257) accessories power supply protection **F4** = T2A (5x20 mm) primary transformer coil protection			
NUMBER OF CONNECTABLE MOTORS	1			
MOTOR POWER SUPPLY	36 V~			
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 +55°C			
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 36V⎓ nominal (max 40V⎓) modulated to 30% (30% ON, 70% OFF). The device to be connected must therefore be able to withstand a maximum voltage of 40V⎓.

5 Description of connections

To access the control unit. remove the barrier head.
Figure 1-2 shows connection diagrams.

5.1 Typical installation

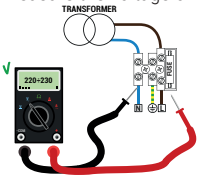


		Recommended cable
1	Power supply	H07RN-F 3x1,5 mm² double insulated cable
2	Photocell - Receiver **F4ES/F4S**	Cable 5x0,5 mm² (max 20 m)
3	Photocell - Transmitter **F4ES/F4S**	Cable 3x0,5 mm² (max 20 m)
4	Key selector **R85/60**	Cable 3x0,5 mm² (max 20 m)
	Keypad **H85/TTD - H85/TDS** (connecting to **H85/DEC - H85/DEC2**)	Cable 2x0,5 mm² (max 30 m)
	H85/DEC - H85/DEC2 (connecting to control unit)	Cable 4x0,5 mm² (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⎓ 3W max	Cable 2x0,5 mm² (max 10 m)

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

5.2 Electrical connections

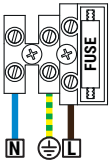
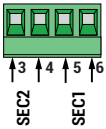
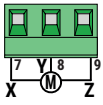
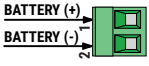
A switch or an omnipolar cut-off switch with a contact opening of at least 3 mm must be installed on the mains power line; put the cut-off switch in OFF position and disconnect any buffer batteries before performing any cleaning or maintenance operations.
Ensure that an adequate residual current circuit 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), ⏚ (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:
- 230V~ ±10% for the CTRL control unit.
- 115V~ ±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.

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
	Connection to mains power. - 230 V~ ± 10% for CTRL control panel - 115 V~ ± 10% for CTRL/115 control panel Fuse 5x20 T2A
	Secondary transformer input for 26 V~ motor power (SEC1) and for 19 V power to logical control and peripheral devices (SEC2). **N.B.**: Ready wired in factory by ROGER TECHNOLOGY.
	Connection to ROGER brushless motor. **N.B.**: Ready wired in factory by ROGER TECHNOLOGY. **Warning!** If the motor wires become disconnected from the terminal board, after reconnecting correctly, the travel must be acquired again as described in chapter 10.
	Connection to the battery **BI/BAT/KIT** (see fig. 16). **See instructions for B71/BCHP or BI/BCHP for further information.**

6 Commands and accessories

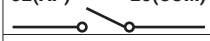
If not installed, safety devices with NC contacts must be jumpered at the COM terminals, or disabled by modifying the parameters 50, 51 and 73.
For installations with two opposed barriers, connections for command signals and accessories must be made on the MASTER controller. The sensing edge and, if used, the STOP command signal must be connected to the SLAVE controller.

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

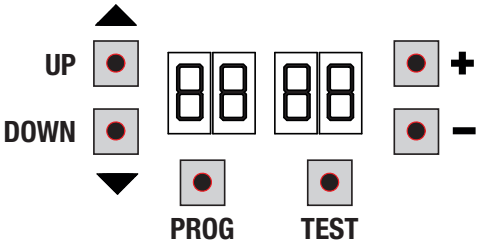
CONTACT	DESCRIPTION
11(+SC) 10(COM)	Barrier open/closed indicator lamp, 24V⎓ 3 W. The function of the indicator lamp is determined by parameter A8.
11(+SC) 13(COM)	Photocell test function and/r battery saving mode connection (fig. 4-5). The power feed for the photocell transmitters (TX) may be connected to terminal **11(SC)**. Set the parameter A8 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 A8 03 or A8 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. 8) The voltage level of the battery can be set via parameter 85.
	By connecting a RELAY to the SC output, an error alert signal contact can be achieved at an external control system (fig. 8). **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). 24V⎓ 12W max (fig. 2).
14(+24V) 13(COM)	Power feed for external devices, max. 10W. See technical specifications.
15(+ES) 17(COM)	Input for connecting electric lock, 12V⎓ max. 15 W or 5W for electroblock power supply (fig. 2). The function of the electric lock is determined by parameter 29. Vmedia=12V⎓, Vmax=40V⎓; see table "PRODUCT TECHNICAL FEATURES"
16(+LAM) 17(COM)	Connection for flashing light (24V⎓ - max. 5 W). The settings for the pre-manoeuvre flashing warning signal may be selected with parameter A5 , while the flashing mode is set with parameter 78.
18(COM)-19(LNA)-20(LNB) 	RS485 serial communication cable connection (3x0.5 mm² - max. length 30 m) for installation of two MASTER / SLAVE opposing barriers (from firmware version 6.13 or later). **Connections.** • 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 A0 11 for the MASTER barrier and parameter A0 10 for the SLAVE barrier. • After having modified the settings of parameter A0 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 A0, 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.

EN

CONTACT	DESCRIPTION
18(COM)-19(LNA)-20(LNB) 	**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. 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. 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 01 is enabled.
21(ST) 22(COM)	STOP command input (NC). The current manoeuvre is arrested if the safety contact opens. **N.B.:** the controller is supplied with this contact already jumpered by ROGER TECHNOLOGY. 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.
23(COS) 22(COM)	Input (NC or 8.2 kOhm) for connecting sensing edge **COS**. Movement is reversed (open) if the sensing edge is activated during closure. If the sensing edge is not installed, jumper the terminals **23(COS)-22(COM)** or set parameter 73 00. 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.
24(FT) 13(COM)	Input (NC) for connecting photocell **FT** (fig. 3-4-5). The photocells are configured by default with the following settings: – 5000. Photocell triggers only during barrier closure. Photocell is ignored during barrier opening manoeuvre. – 5102. Movement is reversed if the photocell is triggered during barrier closure. – 5201. The barrier opens when an open command is received if the photocell FT is obstructed. If the photocells are not installed, jumper the terminals **24(FT)** - **13(COM)** or set the parameters 5000 and 5100. **WARNING!** Use **G90/F4ES** or **T90/F4S** photocells. 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 13).
27 26(ANT) 	Antenna connector for slot-in radio receiver board. Use RG58 if an external antenna is used - maximum recommended length: 10 m. **N.B.**: do not make joints in cable.
29(PED) 28(COM)	Partial open command input (NO). The barrier is always opened completely when the contact is closed. In the case of installations with two opposed barriers, the command PED only opens the MASTER barrier when both barriers are completely closed. In the case of installations with "Directional" parking mode (parameter 8302 or 8303), the input PED may be used to receive a closing command from a magnetic loop (NC) (see chapter 13).
29(PED) 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. 7) When the **ACS/BA/60** detachable boom safety system intervenes, the contact switches from N.C. to N.O. Enable the contact via parameter 1904.
30(PP) 28(COM)	Step mode command input (NO). The function of this command is determined by parameter A4.
30(PP) 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. 7) When the **ACS/BA/60** detachable boom safety system intervenes, the contact switches from N.C. to N.O. Enable the contact via parameter 1903.
31(CH) 28(COM)	Close command input (NO).

CONTACT	DESCRIPTION
31(CH) 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. 7) 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 02*.
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. 7) 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 (NO). 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 *80*.
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. 11-12). **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. 11-12). **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. 13) or the B73/LTM device and RGB lights for rod and header (see fig. 14).
LOCKS	(see fig. 7) Connectors for connecting lock device microswitch and safety stop microswitch on barrier inspection hatch (connection not supplied by ROGER TECHNOLOGY). 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** 2x12V⎓ 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 *bAtt* 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, *bt LO* (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 *85* to a value different than *00*, the battery management is enabled. With parameter *86* the battery operation limitation type is enabled when the voltage drops under a certain threshold. Parameter *86* 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.
EXP	Connector for B74/BCONNECT WiFi IP device. This IP device allows, using any internet browser, the complete management of the control panel both in proximity (point-to-point connection) and via cloud (remote connection).

7 Function buttons and display

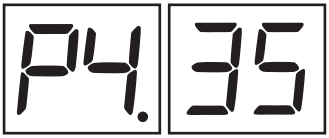


BUTTON	DESCRIPTION
UP ▲	Next parameter
DOWN ▼	Previous parameter
+	Increase value of parameter by 1
-	Decrease value of parameter by 1
PROG	Travel acquisition
TEST	Activate TEST mode

- 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.

8 Switching on or commissioning

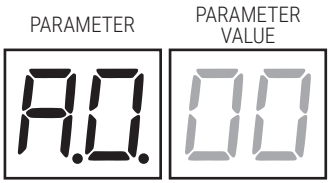
Power the control unit.
The firmware version of the control unit is displayed briefly.
Version installed P4.35.



Immediately afterwards, the displays enters 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 A0 and 73 may be modified from the SLAVE controller.

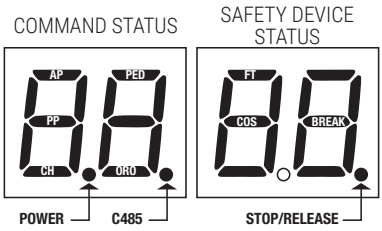
9 Display function modes

9.1 Parameter display mode



See chapter 12 for detailed descriptions of parameters.

9.2 Command and safety device status display mode

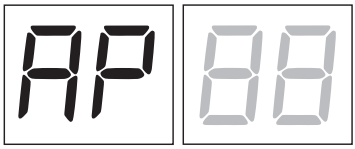


COMMAND STATUS:
The command status indicators on the display (segments AP = open, PP = step mode, CH = close, PED = partial opening, ORO=clock) are normally off. They illuminate when a command is received (e.g.: when a step mode command is received, the segment PP illuminates).

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.

9.3 TEST mode

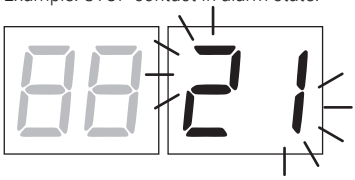
The TEST mode is used to test activation of the commands and safety devices with visual confirmation.
To activate the mode, press the TEST button with the automatic barrier system at rest. If the barrier is moving, pressing TEST stops the barrier. Pressing the button again enables TEST mode.
The flashing 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.

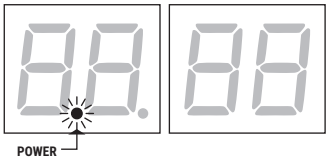
Example: STOP contact in alarm state.



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 73 00.
24	Photocell contact FT (N.C.) is open (message shown on MASTER controller displayed). Check connection. If photocell is not installed, disable with 50 00.
br	Shatter-proof system enabled, or not connected or incorrectly connected.
rS (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.

9.4 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.

10 Travel acquisition

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

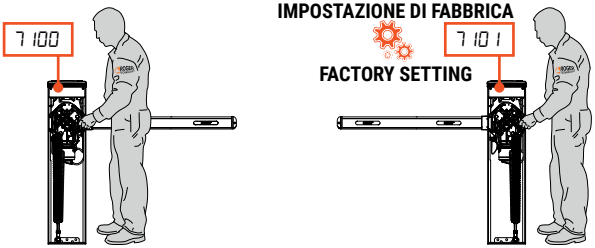
10.1 Before starting:

IMPORTANT: Select the length of the boom with the parameter A1.

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

SELECTION	MODEL		BOOM
A1 00	**BI/004HP**		up to 3 m
A1 01	**BI/004HP**		from 3 m to 4,5 m
A1 02	**BI/006**		from 4,5 to 6 m
A1 03	**BI/004**		up to 3 m
A1 04	**BI/004**		from 3 m to 4 m
A1 05	**BI/008**		up to 8 m

1. 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).



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.

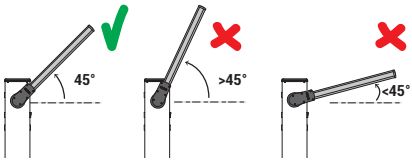
IMPORTANT! Lubricate the pivot points with lithium based grease (RS/GR2/100)

2. Check that the "operator present" function is not enabled (A7 00).



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

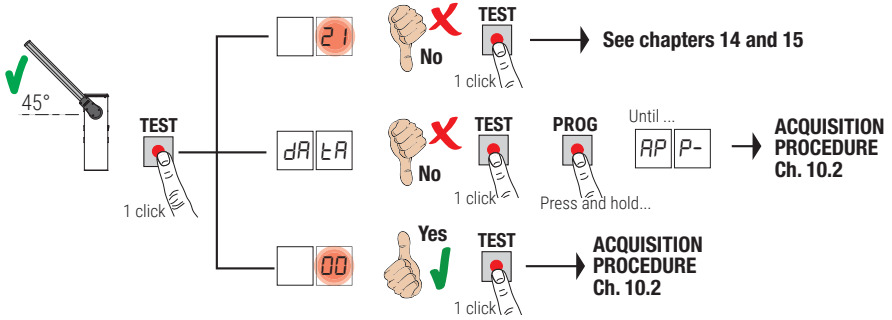
For further information, refer to the installation manual of the barrier.



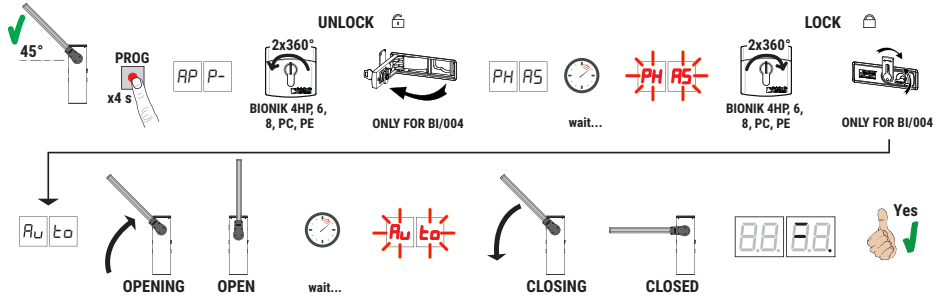
4. For installations with opposed barriers, connect the command signals and safety devices to the MASTER controller. See chapter 9 for further information on installation (see fig. 17).
5. If the **ACS/BA/60** detachable boom coupling system is not installed, the parameter 19 must be set to 00.

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

7. Press TEST (see TEST mode in paragraph 9.2) 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).



10.2 STANDARD (STAND ALONE) acquisition procedure:



- Press and hold PROG for 4 seconds. AP P- is shown on the display.
- Unlock the barrier.
  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 A5 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 A5 flashes on the display.
- To lock the barrier again

  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 AUto 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 AUto 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:

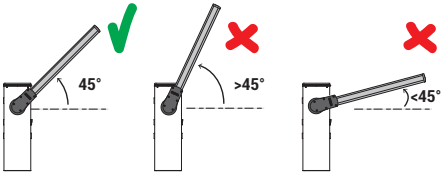
- no PH: calibration procedure failed.
- AP P.E: acquisition error.

For more information, see chapter 15 "Alarms and faults".

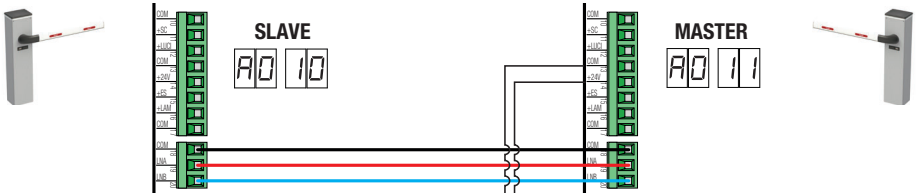
10.3 MASTER/SLAVE acquisition procedure:

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

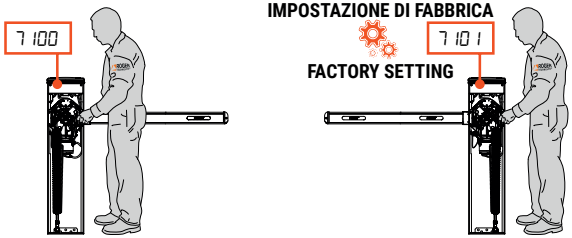
For further information, refer to the installation manual of the barrier.



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).

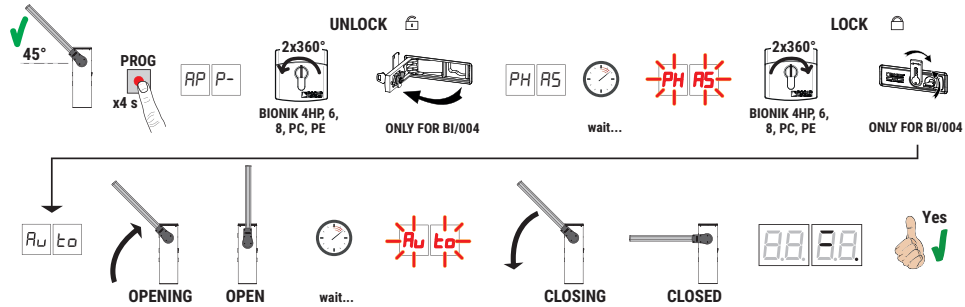


3. Enable RS485 serial communication **(MASTER)**: A0 11
4. Enable RS485 serial communication **(SLAVE)**: A0 10
5. Select the position of the barrier in relation to the gate, using parameter 71. The factory setting of the parameter is with the barrier installed on the right (7 10 1) and the boom opening/closure 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:



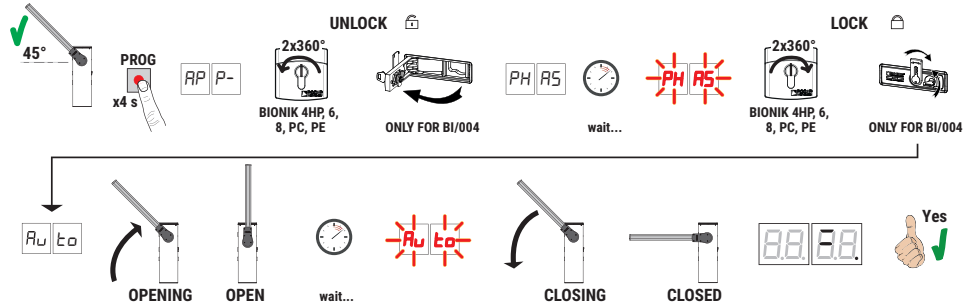
- Press and hold PROG for 4 seconds. *AP P-* is shown on the display.
- Unlock the barrier.
  BIONIK4HP-BIONIK6-BIONIK8. Turn the key anticlockwise by two full turns.
  BIONIK4. Open the release cover.
- The barrier goes to 45° degree.
- After a few seconds, the message *PH A5* is shown on the display. 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 A5* flashes on the display.
- To lock the barrier again
  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 *Auto* 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 *Auto* 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:
- *no PH*: calibration procedure failed.
- *AP P.E*: acquisition error.

For more information, see chapter 15 “Alarms and faults”.

7. SLAVE acquisition procedure:



- Press and hold PROG for 4 seconds. *AP P-* is shown on the display.
- Unlock the barrier.
  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 A5* 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 A5 flashes on the display.
- To lock the barrier again

  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 Auto 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 Auto 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:
- no PH: calibration procedure failed.
- AP P.E: acquisition error.

For more information, see chapter 15 “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 71.

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 A0, 19, 31 and 73 must be set on the SLAVE control unit

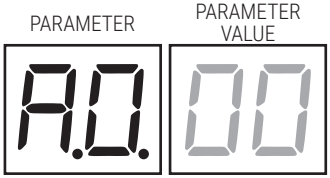
ATTENTION: If the acquisition procedure was successful **BUT** the fully open and/or closed position of the boom must be changed by adjusting the mechanical stops differently **REPEAT THE LEARNING PROCEDURE.**

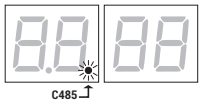
11 Index of parameters

PARAM.	FACTORY DEFAULT	DESCRIPTION	PAGE
A0	00	Enable RS485 serial communication (MASTER-SLAVE)	77
A1	02	Barrier model and the length of the boom selection	77
A2	00	Automatic closing after time pause (from barrier completely open position)	77
A3	00	Automatic closing after mains power outage	77
A4	00	Step mode control function selection (PP)	77
A5	00	Pre-manoeuvre flashing warning	78
A6	00	Condominium function for partial open command (PED)	78
A7	00	Enable "operator present" function	78
A8	00	Barrier open/photocell test function and battery saving mode indicator lamp	78
10	00	Enable the **B73/EXP** signal device to indicate barrier completely open/closed positions; **B73/LTM** device enabling for boom and RGB head lights	78
11	10	Setting deceleration during opening	79
12	10	Setting deceleration during closure	79
18	00	RGB boom light signalling selection when unlocked and fully open	79
19	00	"BreakAway" **ACS/BA/60** detachable boom coupling system enabling	79
20	00	SC output operating mode	79
21	30	Setting automatic closing time	79
22	00	Enabling of management for opening with automatic re-closure exclusion	79
29	00	Enable electric lock	80
31	09	Obstacle detection time setting (crush prevention)	80
33	10	Setting opening start acceleration	80
34	10	Setting closure start acceleration	80
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12 Parameters menu



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 SrCH 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	**BI/004HP**	boom up to 3 m	**STANDARD VALUE**	08	06	07	05	07	07	07	10	10	04
01	**BI/004HP**	boom from 3 m to 4.5 m		09	09	08	06	08	06	05	10	10	06
02	**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 = 01, 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-manoeuvre warning signalled with the flashing light (independently of the value set with parameter A5).

A4 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 (A2 00), the condominium function automatically attempts a closing manoeuvre A2 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 (A2 00), the condominium function automatically attempts a closing manoeuvre A2 01.
03	Open-close-open-close.
04	Open-close-stop-open.

A5 00	**Pre-manoeuvre 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.

A6 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.

A7 00	**Enable "operator present" function** **N.B.:** this parameter is not visible if the value of parameter 83 = 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.

A8 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. 4.
03	Set to 03 if the output **SC** is used for the "battery saving" function. See fig. 5. 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 83 = 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. 5. **N.B.:** setting not available for installations with two opposing barriers. This value is not visible if the value of parameter 83 = 01, 02 or 03 or A0= 10, 11.

10 00	**Enabling of signalling arrangement B73/EXP for fully open/closed barrier signalling (pure N.C. contact) and B73/LTM for RGB boom light management**
00	Disabled (no accessory device to control).
01	B73/EXP enabled. With the boom fully open, the **TO** contact (N.C.) opens and the green LED on the **B73/EXP** board lights up. With the boom fully closed, the **TC** contact (N.C.) opens and the red LED on the **B73/EXP** board lights up.
02	B73/LTM: head light R/G, boom light R (ALED/4C - ALED/6C - ALED/8C - ALED/12C).
03	B73/LTM: White head light (BI/BLED), RGB boom lights.
04	B73/LTM: R/G head light, RGB boom lights.
05	B73/LTM: head light controlled by IN_SEL(*) input, R (ALED/4C - ALED/6C - ALED/8C - ALED/12C) boom lights.
06	B73/LTM: head light controlled by IN_SEL(*) input, RGB boom lights.
07	B73/LTM: open IN_SEL input, managed by the twilight sensor, keeps the head and boom lights off during the day
08	B73/LTM: open IN_SEL input, managed by the twilight sensor, keeps the boom lights off during the day
09	B73/LTM: open IN_SEL input, managed by the twilight sensor, keeps the head lights off during the day

(*) closed contact: green head light; open contact: red head light

11 10	**Setting deceleration during opening**
12 10	**Setting deceleration during closure**
01- 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 A1.

18 00	**Boom RGB light error alert selection when unlocked and fully open** If the boom is unlocked for maintenance, it is possible to highlight that the automation system is not operational. **NOTE:** the parameter is only visible if the RGB boom light management has been selected at parameters 10, 70, 72, 74, 75, 79
00	RGB standard management
01	Boom lights switched off
02	Green boom lights, presence flashing
03	Green boom lights, switched on

19 00	**"BreakAway" ACS/BA/60 shatter-proof system enabling (fig. 7)** 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 19 05.
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. 8)** 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, 01, 02, 03 the SC output on the SLAVE control unit has standard function set via parameter A800: 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 A8
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 85).
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 "bEL0" signalling on the display. NOTE: in case of MASTER/SLAVE operation both barriers have signaling 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 2201, 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. A0 or 83 is different than 00

00	Disabled.
01	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.
03	Magnetic "ventouse" type electroblock with demagnetizer **B72/DGS** **NOTE:** In the case of **MASTER/SLAVE** installation, in order to use the selection par. 29 = 03 it is necessary that both control units have firmware P4.10 (or later).

31 09	**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.

33 10	**Setting opening start acceleration**
34 10	**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.

40 04	**Setting opening speed (%)**
41 04	**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.

42 01	**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).

43 15	**Opening approach distance setting**
44 30	**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.

49 01	**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.

50 00	**Photocell mode for barrier opening (FT)** **N.B.:** this parameter is not visible if the value of parameter 83 = 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 83 = 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.

5201	**Photocell (FT) mode with barrier closed** **N.B.:** this parameter is not visible if the value of parameter 83 = 01, 02 or 03 or if A8 = 01, 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.

5600	**Enable close command 6 s after activation of photocell (FT)** **N.B.:** This parameter is not visible if A8 03 or A8 04 is set, and if value of parameter 83 = 01, 02 or 03.
00	Disabled.
01	Enabled. When the photocell barrier FT is crossed, a close command is sent 6 seconds later.

6508	**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 A1.

7000	**Mode of operation of the LED headlight** (see type descriptions, figure 18)
00	White head light, flashing function (controlled by parameter 78)
01	B73/LTM: Header light management type "A"
02	B73/LTM: Header light management type "B"
03	B73/LTM: Header light management type "C"
04	B73/LTM: Header light management type "D"
05	B73/LTM: Header light management type "E"
06	B73/LTM: Header light management type "F"

7101	**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 71, the display shows a position data request message dAtA. Press the **PROG** key until APP- appears on the display, then repeat the acquisition procedure (see fig. 18 and chapter 10.2).
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.

7200	**Enabling colour transition on arrival full opening** **NOTE:** By setting a value other than 00, only for type 'A'/'B'/'F'/'G' modes of RGB boom lights.
00	No colour transition when the boom reaches full opening.
01-05	Transition from flashing red to flashing orange when the boom reaches 65°-70°-75°-80°-85° of opening (01: 65°, 02: 70°, 03: 75°, 04: 80°, 05: 85°)

EN

06- 10	Transition from flashing red to flashing green when the boom reaches 65°-70°-75°-80°-85° of opening (06: 65°, 07: 70°, 08: 75°, 09: 80°, 10: 85°)

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.

74 00	**Selection of the RGB light standby waiting time (fully closed)**
00	Stand-by not powered
01-20	Waiting time to activate stand-by (only when fully closed): 30", 60", 90", 2 minutes, ..., 10 minutes (01: 30", 02: 60", 03: 90", 04: 2 min, 05: 2 min ½, 06: 3 min, 07: 3 min ½, 08: 4 min, 09: 4 min ½, ...)

75 00	**Defines the colour of the boom lights in stand-by mode** By setting a number other than 00 the lights make repeated short flashes with selected colour
00	Colour transition in sequence, 01 to 09, with automatic brightness fade
01	Blue colour
02	Yellow colour
03	Pink colour
04	Light blue colour
05	Fuchsia colour
06	White colour
07	Orange colour
08	Light violet colour
09	Red colour

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 boom always off.
01	Lights boom always on.
02	Lights boom 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.
05	Short flash with boom closed, flashing normally when boom is moving, fixed when boom is open.
06	B73/LTM: boom light management type 'A' (see type description, figure 20)
07	B73/LTM: boom light management type 'B' (see type description, figure 20)
08	B73/LTM: boom light management type 'C' (see type description, figure 20)
09	B73/LTM: boom light management type 'D' (see type description, figure 20)
10	B73/LTM: boom light management type 'E' (see type description, figure 20)
11	B73/LTM: boom light management type 'F' (see type description, figure 20)
12	B73/LTM: boom light management type 'G' (see type description, figure 20)
13	B73/LTM: boom light management type 'H' (see type description, figure 20)

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: • 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 82 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 82, 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 81 = 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 84 01 is set. Parameters A2, A7, 50, 51, 52 and 56 are not visible. With 83 = 01, 02, 03 the barrier re-closes after a pause time set at parameter 21 (if 21 is set to a value different from 00). **For more information, see chapter 13 "Examples of applications in parking access mode".**
00	Disabled. Parameter 84 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 21=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 21=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.

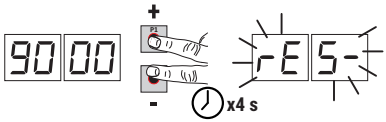
03	***Directional mode 2.*** When entering, the barrier is opened with an **AP** open command, and closes after the automatic closing time set with parameter *21*. **NOTE**: in order to have the automatic closing set parameter *21* different to *00*. When leaving the parking area, the barrier is opened by a **PED** 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 *AS 99*.

84 00	**Enable close command after activation of photocell (FT)** **N.B.**: this parameter is not visible if *83 00*.
00	Disabled.
01	Enabled. The barrier stops if the photocell is activated during closing manoeuvre. The barrier resumes closing when the photocell is cleared.

85 00	**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 *86* 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.
01	The command becomes active when the battery voltage drops to the minimum threshold (22V⎓ for battery 2x12V⎓).
02	The command becomes active when the battery voltage drops to the medium threshold (23V⎓ for battery 2x12V⎓).
03	The command becomes active when the battery voltage drops to the maximum threshold (24V⎓ for battery 2x12V⎓).

86 00	**Selecting the battery operation limitations** **N.B.:** the parameter is visible only if par. *85* 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 *85* and *20* are adequately set).
01	When the battery voltage drops under the threshold selected with par. *85*, the control unit accepts only opening commands and does not perform closing.
02	When the battery voltage drops under the threshold selected with par. *85*, 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 *80 01*.
04	When the battery voltage drops to the threshold selected with par. *85* the control unit, after a prelamping of 5s, automatically closes the gate and accepts only one opening command.

87 00	**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 *bELO* (if set to *02* or *03* and the battery is 2x12V⎓) or an error alert *bMod*.
00	Battery 24V⎓ (2x12V⎓) with B71/BCHP. Acceleration/deceleration/speed reduction enabled, to increase the battery life.
01	Battery 24V⎓ (2x12V⎓) with B71/BCHP. No performance reduction, maximum battery consumption.
02	Battery 36V⎓ (3x12V⎓) with external charger. Acceleration/deceleration/speed reduction enabled, to increase the battery life. - DO NOT SELECT. FUTURE USE -
03	Battery 36V⎓ (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 is NO data protection password is set. **NOTE:** This parameter is not visible for the SLAVE barrier.
	 Warning! Restoring default settings cancels all settings made previously except for parameter *A0*, *A1*, *71*: after restore, check that all parameters are suitable for the installation. • Press and hold the PLUS **+** and MINUS **-** button until the unit switches on. • The display flashes after 4 s *rES-*. • The default factory settings have now been restored. **Note:** it is possible to reset the parameters in a second way: when the control unit is switched on, before the firmware version appears on the display, press and hold down the ▲ (UP ARROW) and ▼ (DOWN ARROW) buttons for 4s.

	Identification number The identification number consists of the values of the parameters from n0 to n6. **N.B.**: The values shown in the table are indicative only.	
n0 01	**HW version**	Example: 01 23 45 67 89 01 23 45
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**	

	View manoeuvre counter The number consists of the values of the parameters from oN to o 1 multiplied by 100. **N.B.**: The values shown in the table are indicative only.
oN 01	**Manoeuvres performed** Example: 01 23 45 x100 = 1,234,500 manoeuvres
o0 23	
o1 45	

	View manoeuvre hour counter The number consists of the values of the parameters from h0 to h 1. **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 d 1. **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. Only a single password is used to control access to the barrier automation system. **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	**Password activation procedure:** • Enter the desired values for parameters P 1, 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). **Temporary unlock procedure:** • Enter the password. • Check that CP=00. **Password cancellation procedure:** • Enter the password (CP=00). • Save the values P 1, 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 P 100, 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.

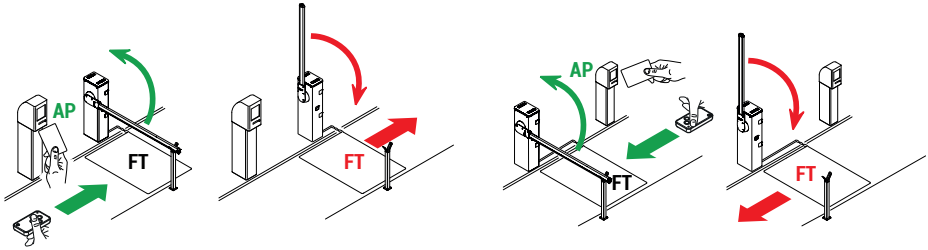
13 Examples of applications in parking access mode

The **CTRL** controller manages the system in parking access mode.
The function is enabled through the parameter 83 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.

EN

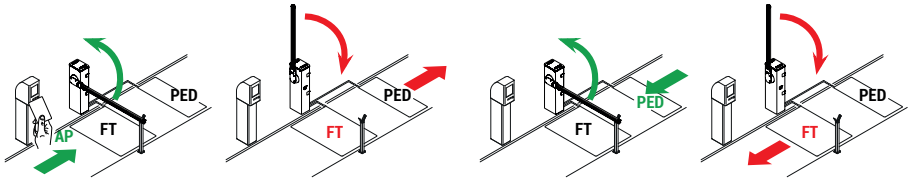
- **Bi-directional mode with immediate closure** (83 01)

When entering and leaving the parking area, the barrier is opened with an **AP** open command (terminal block).
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 85 99.



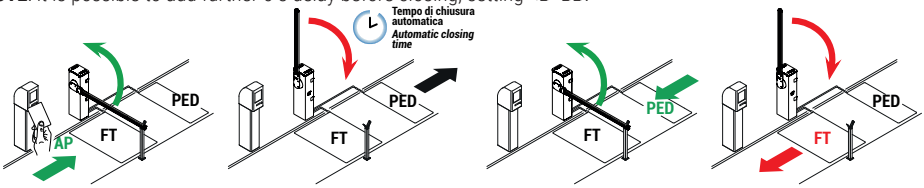
- **Directional mode 1** (83 02)

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 85 99.



- **Directional mode 2** (83 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 85 99.



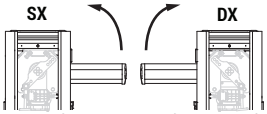
14 Safety input and command status (TEST mode)

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

DISPLAY	POSSIBLE CAUSE	ACTION BY SOFTWARE	PHYSICAL CORRECTIVE ACTION
88 rS(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 21	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.	-	**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	If occurs with no command, the contact may be faulty or the timer may be incorrectly connected.	-	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.

15 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.
	OF 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.
	SECO	Incorrect connection between SEC1 and SEC2 of the transformer.	Swap the connection between SEC1 and SEC2.
	dA 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 71.	 Motors for barriers are factory configured for right hand opening barriers 7101 (position of barrier relative to passage seen from inspection hatch side). If the position is changed and message dAtA is displayed: • Move the boom 45° degree. • Adjust the spring position correctly for the required opening direction. • Press and hold **PROG** until dAtA disappears and APP- appears on the display. Repeat acquisition procedure.
	Not	Motor not connected.	Check the motor cable.
	brEA	BreakAway system alarm.	• 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.

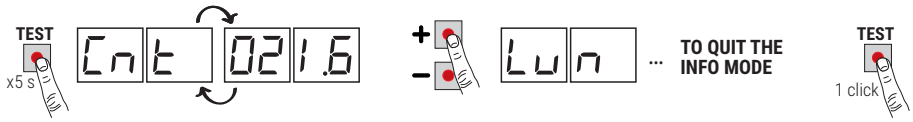
PROBLEM	ALARM SIGNAL	POSSIBLE CAUSE	CORRECTIVE ACTION
The barrier does not open or close.	StoP **flashing**	Release device open.	**BI/004HP-BI/006-BI/008**: Lock by turning the key two complete turns clockwise.
			BIONIK4: Close the release lock cover and turn the key.
		Open barrier inspection hatch (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.
	tEMP	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 A0.
			Check that battery kit is installed on both MASTER and SLAVE barriers.
	COM2	Serial communication interference: two MASTER controllers detected.	Check settings of parameter A0.
	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.

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PROBLEM	ALARM SIGNAL	POSSIBLE CAUSE	CORRECTIVE ACTION
Acquisition procedure does not complete correctly.	no PH	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.
			Check that the mains voltage is correct and that the mains cable section is adequate.
	AP PE	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 71.	Select the correct installation position with parameter 71. Repeat acquisition procedure.
The barrier opens/ closes for a short distance and then stops.		Incorrect setting of parameter A1.	Check type of boom and set parameter A1 correctly. Repeat acquisition procedure.
		Incorrect values for installation type.	Set values of parameters 33, 34, 40 and 41 correctly for installation type.
		Incorrect spring setting.	See the barrier instructions for spring balancing.
	bMod	Battery operation management (par. 85 different than 00) not detected.	Change the value of the parameter 87.
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.

16 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
P4.35	View for 3 s the firmware version of the control unit.
CnE	View barrier position (ENCODER data) at time of test, in motor revolutions. (example: 02 1.6 = barrier installed on the right; -2 1.6 = barrier installed on the left).
Lun	View total length of programmed travel, in motor revolutions (e.g.: 037.8 = 37.8 motor revolutions).
rPM	View motor speed, in revolutions per minute (rPM).
AMP	View current absorption of motor, in Amperes (e.g.: 0 16.5 = 16.5 A). If the motor is stationary, the current absorption value is 0.
bUS	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~ (nominal), bUS= 37.6 mains voltage = 207 V~ (-10%), bUS= 33.6 mains voltage = 253 V~ (+10%), bUS= 4 1.6
tIn	Indicates time taken by motor to detect an obstacle, as set with parameter 3 1, in seconds. E.g. 1.000 = 1 s / 0. 120 = 0.12 s (120 ms). Ensure that the manoeuvre time is more than 0.3 s.
MStA	Displays a number which indicates the status of the control unit (INTERNAL USE - ROGER TECHNICAL ASSISTANCE)
rStA	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.
ErrL	Number of RS485 communication errors (it gets reset by pressing "arrow down" ▼): this could highlight problems at board circuit level.
ErrC	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.
OC	Indicates the state of the automation system (open/closed). OC OP automation system opening (motor active). OC CL automation system closing (motor active). OC -O automation system completely open (motor not actives). OC -C automation system completely closed (motor not actives).
Ot	Indicates activation of the obstacle detection system. Ot _1 obstacle detection activated.
UF	UF U_ mains voltage too low or overload. UF _H motors overcurrent. UF _5 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.

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16.1 B74/BCONNECT mode

By inserting **B74/BCONNECT** in the **EXP** connector, all the functions are managed through internet browser and devices such as smartphones, tablets, PCs, exploiting WiFi communication, tablet, PC, all the functionalities of the central unit are managed, using the WiFi communication.

For further information consult the installation manual of the connection module B74/BCONNECT connection module.

Remote assistance" mode
Allows access and therefore the management of all the data of the control unit only in cloud mode and therefore with remote management.
When remote assistance is enabled, the message **ASCC** (assistance connect controlled) appears on the display.
By pressing the **TEST** button this message disappears for 10 seconds, and it is possible to access the parameters and other functions of the display.
After 30 minutes the display goes into stand-by, if the display is awakened by pressing a key the flashing ASCC reappears.

"Emergency operation" mode
This mode is used to exclude motor and safety alarms (e.g. photocells and sensitive edges), allowing the automation to open and close at low speed and with the operator present, with movement of the boom only in the presence of a persistent command (when the command is released, the boom stop).
Emergency operation is indicated by activation of the flashing light at a higher frequency.
Two types of "emergency" mode are possible: residential or condominium.
1) **residential** (flashing **L-ES** display indication): the PP command (from the terminal board or radio control) is initially managed as an opening command; only when complete opening has been reached will activation of the command send it to closing. Only when complete closure has been achieved will the command be able to open again.
2) **condominium** (flashing **L-EM** display indication): the PP command is initially managed as an opening command, but once it has been fully opened the boom no longer close.
In this mode the display stand-by is not activated, always indicating the mode in progress.
By pressing the **TEST** button this message disappears for 10 seconds, and it is possible to access the parameters and other functions of the display.

ASCC	"Remote assistance" mode enabled
L-ES	"Residential emergency operation" mode enabled
L-EM	"Condominium emergency operation" mode enabled

17 Mechanical release

In the event of a fault or mains power loss, the barrier may be released and opened manually.

For further information, refer to the locking/release operation in the manual of the BIONIK4, BIONIK4HP, BIONIK6, BIONIK8 automation system.

If the barrier is unlocked while the controller is powered, the message StoP flashes on the display until the barrier is locked again.
The flashing light and the signal lights (if installed) illuminate if the boom is moved manually.
If a "ventouse" electric lock is installed, unlocking the barrier cuts off the power supply, making it possible to move the boom manually.
The barrier resumes normal operation once the release system is locked again.

18 Initial testing

The testing must be performed by qualified technical personnel.
The installer is required to measure impact forces and select on the control unit the appropriate speed and torque values to ensure that the motorised door or gate remains within the limits defined by the standards EN 12453 and EN 12445.

Make sure that the provisions in Chapter 1 "GENERIC WARNINGS are observed.

- Turn on the power supply.
- Perform travel acquisition.
- Set acceleration, speed and deceleration values. Check that the values are correct for the installation type. The boom must approach the mechanical stop at low speed, and then press gently against the stop to hold the boom in the closed position. Setting a value between 01 and 03 for parameter 42 ensures that the boom approaches and

arrests against the stops slowly without vibration. For booms up to 4 m in length, values between 05 and 08 are recommended for parameters 43 and 44. For longer booms, set a higher value.
NOTE: for BIONIK8 barriers, pay special attention when setting parameter 44. Avoid excessive oscillation upon reaching the end stop when closing.ì

- Check that all connected controls are working correctly.
- Check that the release device functions correctly. The message StOP must flash on the display.
- Check if the impact forces are compliant with the EN 12453 and EN 12445 standards.
- Check that the safety devices are activated correctly.
- If installed, check the correct operation of the BreakAway **ACS/BA/60 - ACS/BA/68** detachable boom coupling system.
- If the battery kit is installed, disconnect from mains and check that the batteries are working.
- Disconnect from mains power and disconnect the batteries (if used), then reconnect. With the barrier stopped in an intermediate position, check that the manoeuvre is performed correctly.
- Check that the mechanical stops are set correctly. Repeat the travel acquisition procedure after each adjustment.
- In the case of installations with two opposed barriers, request a manoeuvre and check that both barriers function correctly.
- If a "ventouse" electric lock is used, check that when the boom is completely closed the lock activates and the boom cannot be lifted from the fixed end rest with integrated magnet.

19 Start-up

The installer is required to draw up and preserve the technical file of the system for at least 10 years, which must contain the wiring diagram, the drawing and the photo of the system, the risk analysis and the solutions adopted, the manufacturer's declaration of conformity for all connected devices, the instructions manual of each device and / or accessory and the system's maintenance plan.
Apply a plate indicating the automation system data on the motorised door or gate, the name of the person in charge of the start-up, the serial number and the year of construction, as well as the CE mark.
Apply a plate and / or label with the indications for the operations required to manually unlock the system.
Draw up and provide the end user with the declaration of conformity, instructions and warnings for use and the maintenance plan.
Make sure that the end user has understood the correct automatic, manual or emergency operation of the system.
Inform the end user about the dangers and risks that may be present.

UE Declaration of Conformity (DoC)

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 Direttiva LVD
– 2014/30/EU Direttiva EMC
– 2011/65/CE Direttiva RoHS

and that all the standards and/or technical requirements indicated as follows have been applied:
EN 61000-6-3:2007/A1:2011
EN 61000-6-2:2005
EN 60335-1: 2012 + A11:2014

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