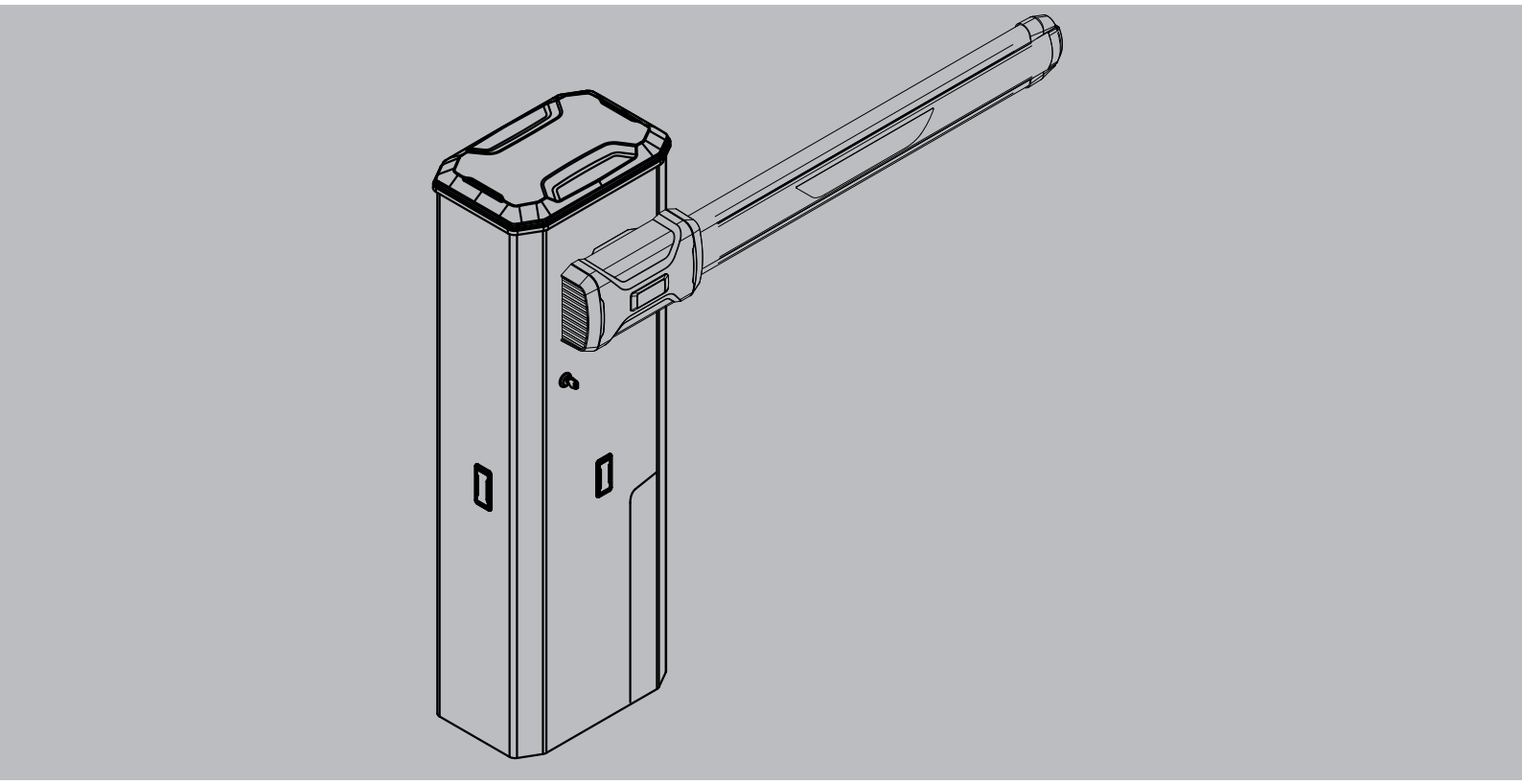
D814436 2FAA0_01 19-02-24

GIOTTO BT B ULTRA 36



INSTALLATION AND USER'S MANUAL

ELECTROMECHANICAL CONTROL DEVICE FOR VEHICULAR BARRIERS

Attenzione! Leggere attentamente le "Avvertenze" all'interno! **Caution!** Read "Warnings" inside carefully! **Attention!** Veuillez lire attentivement les Avertissements qui se trouvent à l'intérieur! **Achtung!** Bitte lesen Sie aufmerksam die „Hinweise" im Inneren! **¡Atención¡** Leer atentamente las "Advertencias" en el interior! **Let op!** Lees de "Waarschuwingen" aan de binnenkant zorgvuldig!

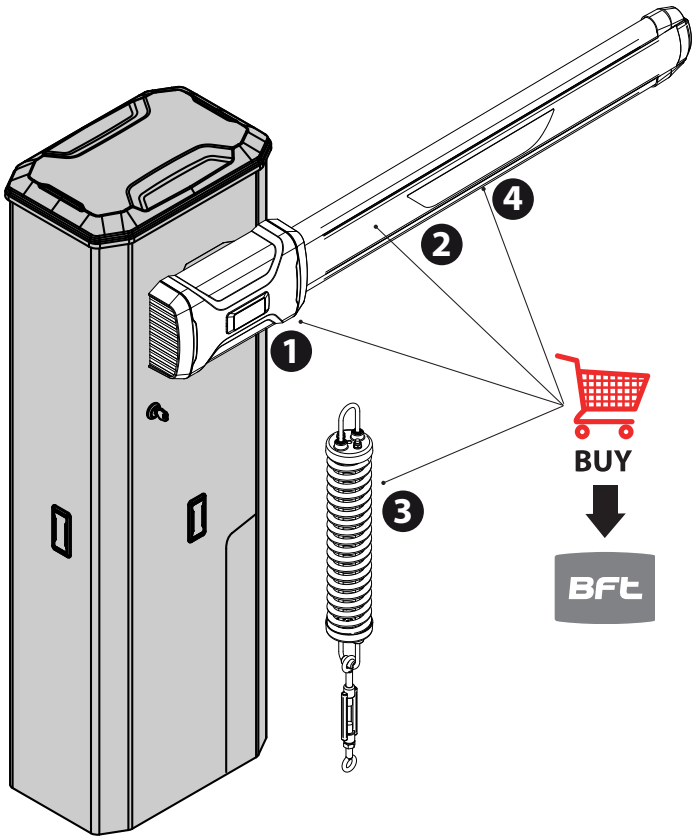
AZIENDA CON SISTEMA DI GESTIONE CERTIFICATO DA DNV GL = ISO 9001 = = ISO 14001 =

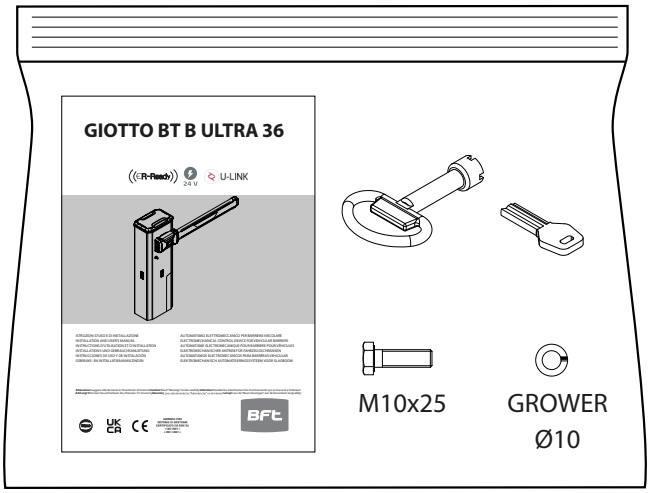
8 027908 799012 >

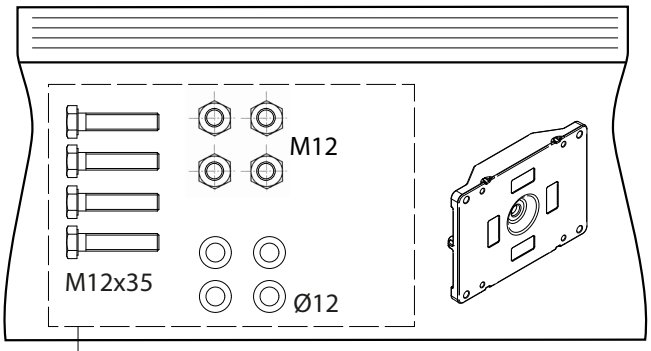
GENERAL OUTLINE
Compact electromechanical barrier suitable for limiting private areas, parkings, access areas for vehicles only. Available for passageways from 2 to 6 metres. Adjustable electronic limit switches, they guarante e correct boom stopping position.
The emergency release device for manual manoeuvre is controlled by a personalised key lock.
The barrier is supplied without a spring. The spring must be purchased separately and can be installed with the opening on the right or left according to need.
The fixing template (on request) makes barrier installation easier. Appropriate fittings make it easy to install accessories.
The **MERAK** control panel is supplied by the manufacturer with standard setting. Any change must be set by means of the incorporated display or by means of the universal programmer.
Fully supports EELINK and U-LINK protocols.
Its main features are:
- Control of 1 low-voltage motor
- Obstacle detection
- Separate inputs for safety devices
- Configurable command inputs
- Built-in radio receiver rolling code with transmitter cloning.

The board has a terminal strip of the removable kind to make maintenance or replacement easier.

KIT COMPOSITION



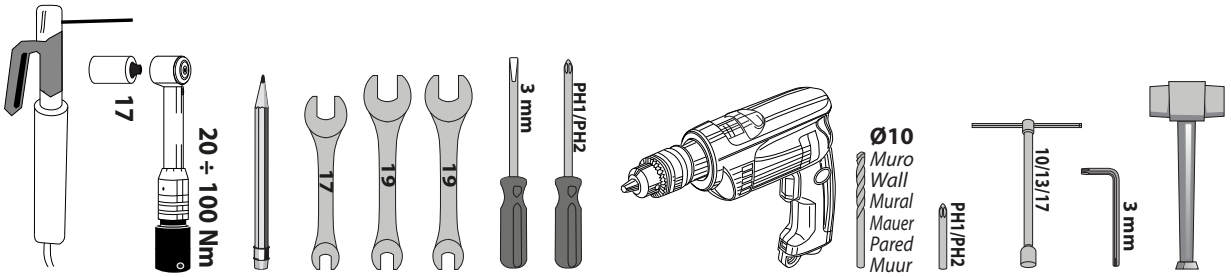




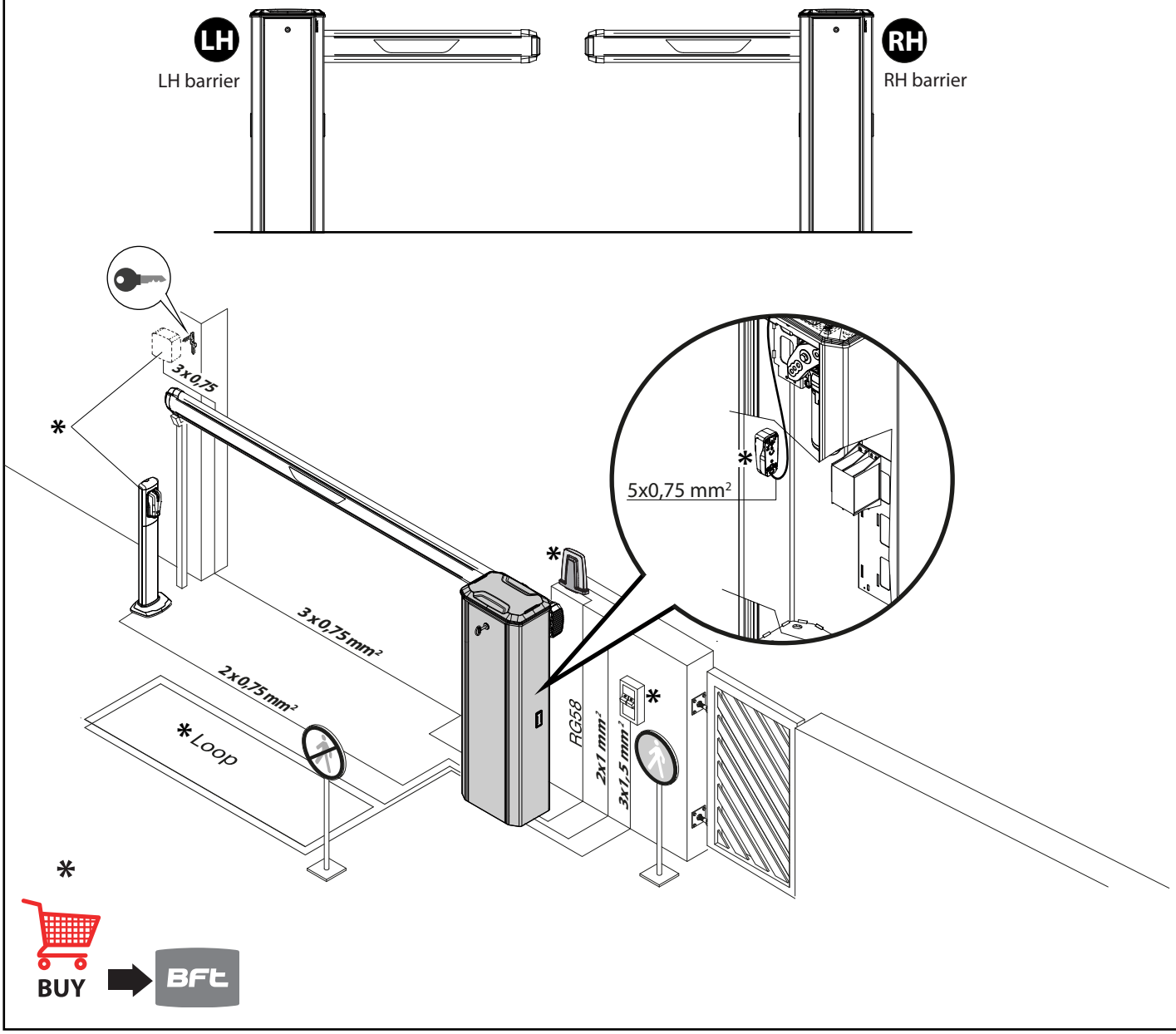
For installation with fixing template (optional)

1	*Boom mounting,*
2	*Boom*
3	*Spring (see "spring configuration"*
4	*Rubber*

EQUIPMENT



A CABLE ARRANGEMENT



ENGLISH

ELECTRICAL INSTALLATION SET-UP

CAUTION: before opening the door, disconnect the power supply and check that the spring is discharged (vertical boom).

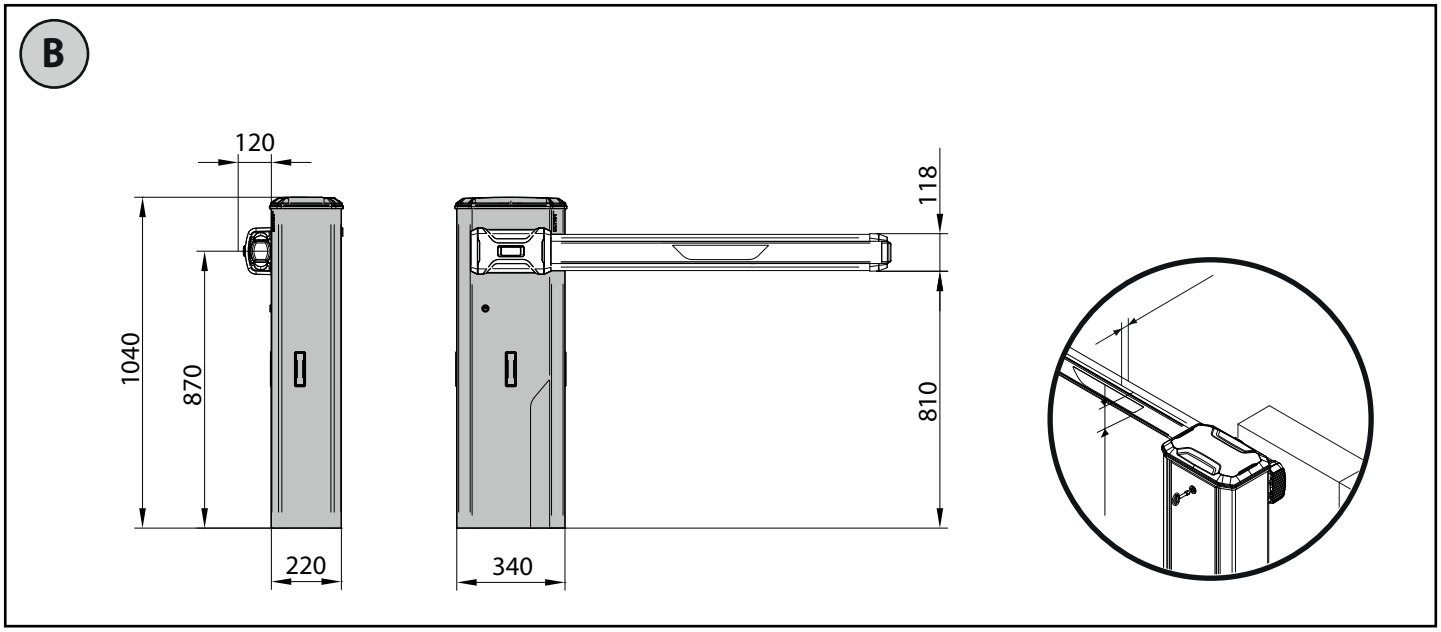
Set up the electrical installation (fig. A) with reference to the current regulations for electrical installations. Keep the mains power supply con-nections definitely separate from the service connections (photocells, electric edges, control devices etc.).

Fig. A shows the number of connections and section for a 100m length of power supply cables; for greater lengths, calculate the section for the true automation load. When the auxiliary connections exceed 50 metre lengths or go through critical disturbance areas, it is recommended to decouple the control and safety devices by means of suitable relays.

WARNINGS - When performing wiring and installation, refer to the standards in force and, whatever the case, apply good practice principles. Wires carrying different voltages must be kept physically separate from each other, or they must be suitably insulated with at least 1mm of additional insulation.

Wires must be secured with additional fastening near the terminals, using devices such as cable clamps. All connecting cables must be kept far enough away from dissipaters.

DIMENSIONS

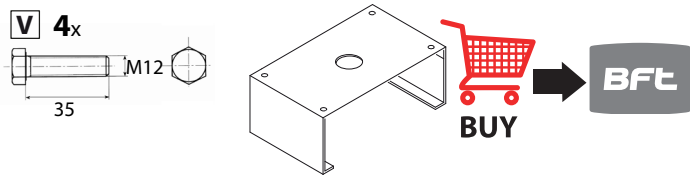


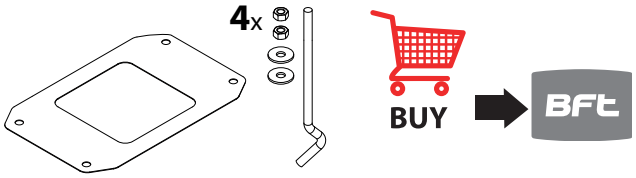
C

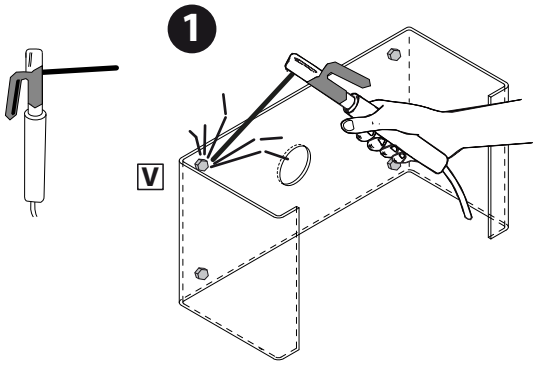
INSTALLATION

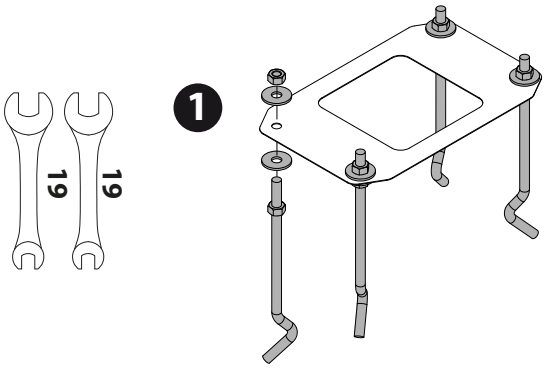
With foundation plate embedded in ground,

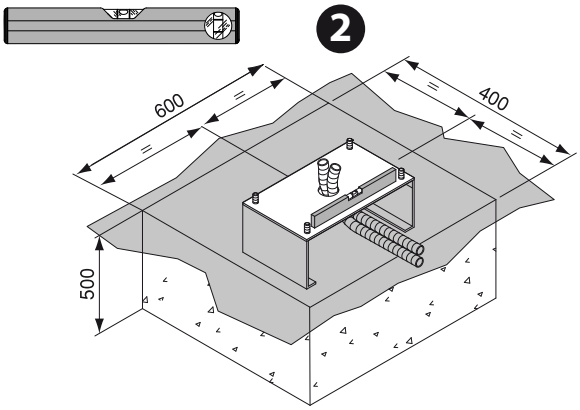
Fixing template

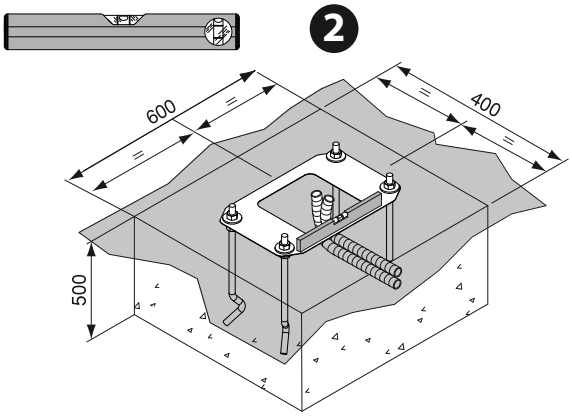


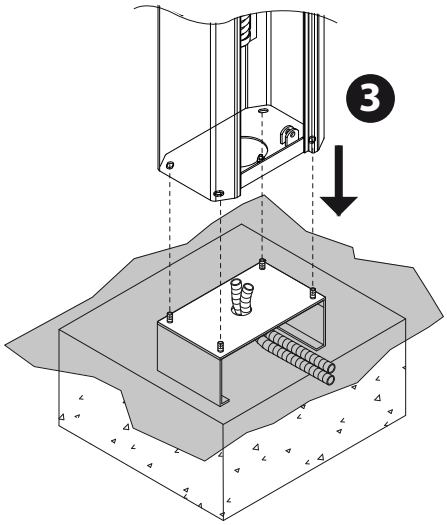


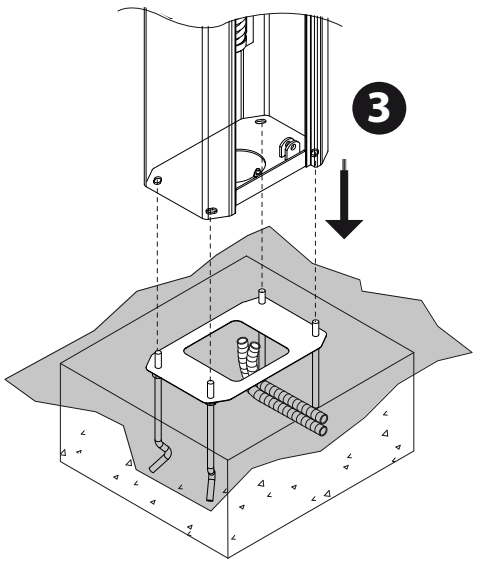




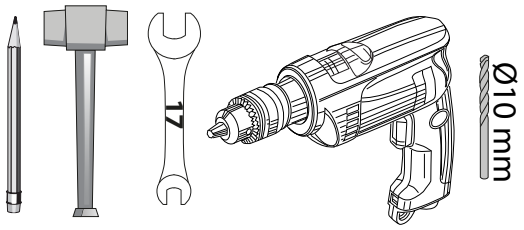


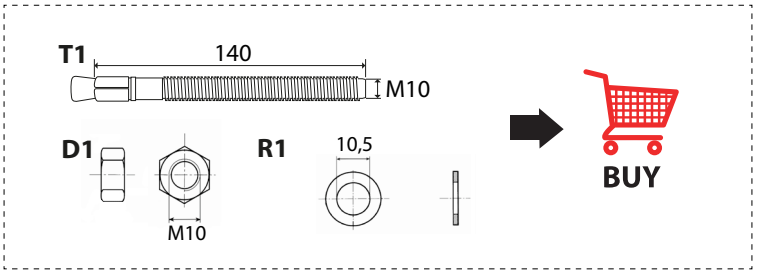


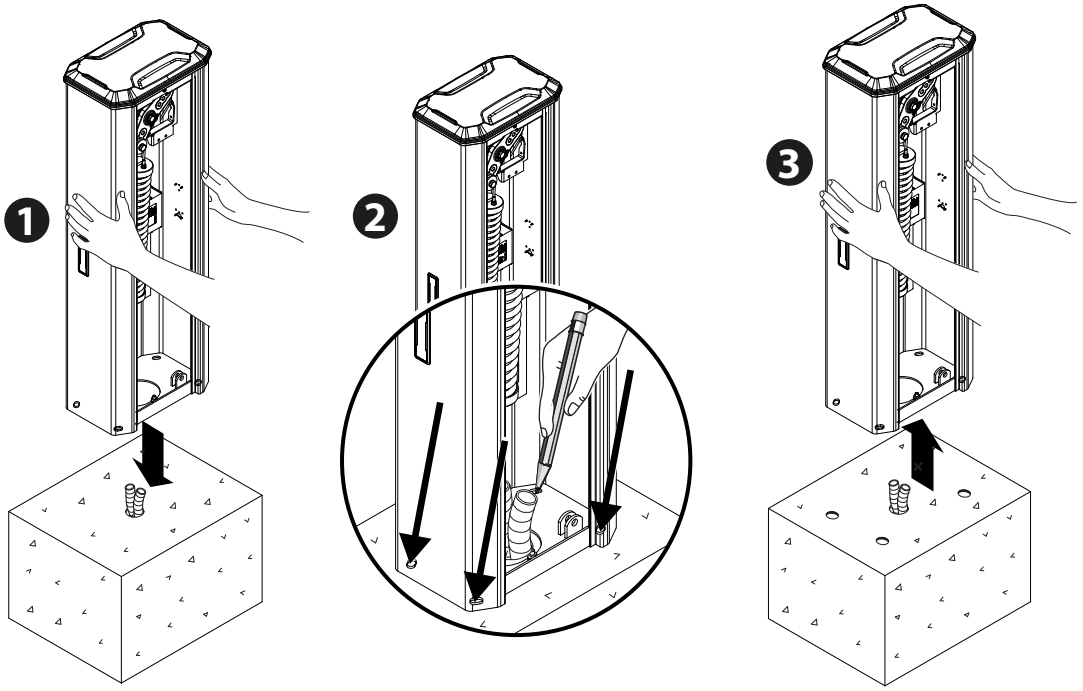


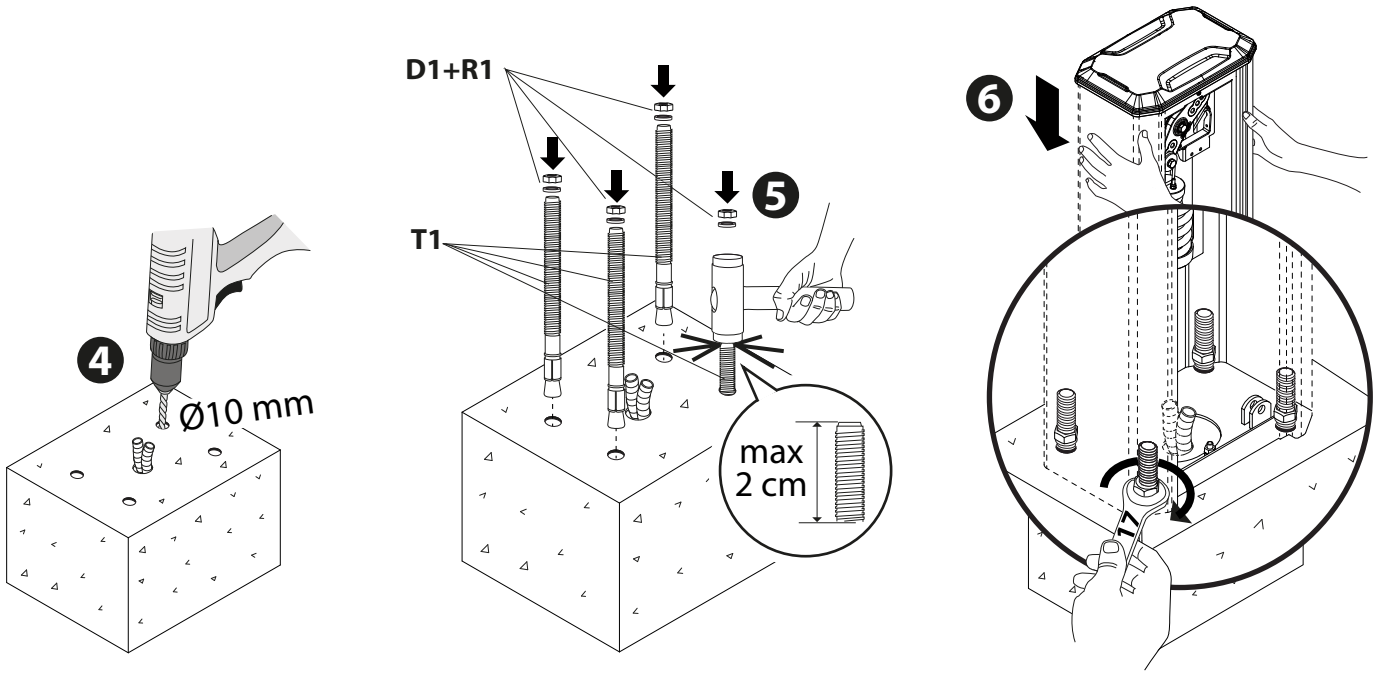


C INSTALLATION With anchor bolts

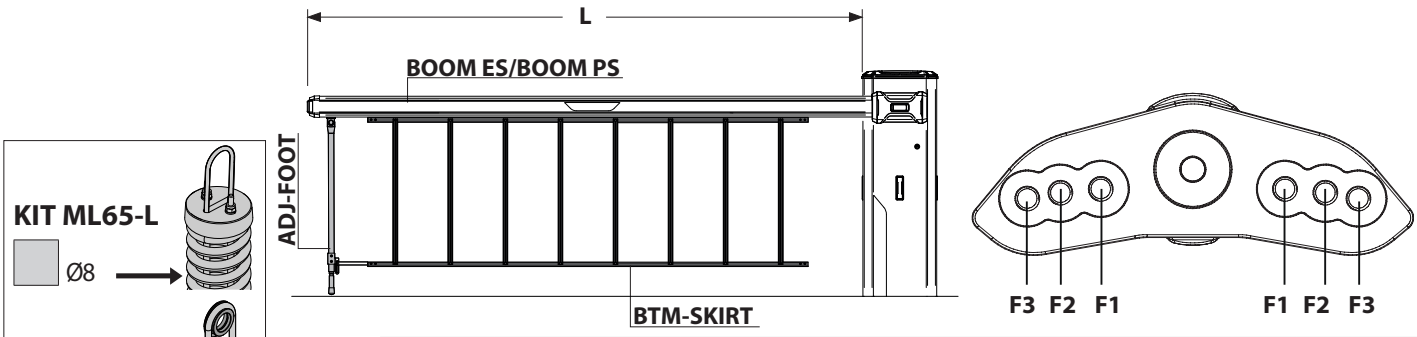






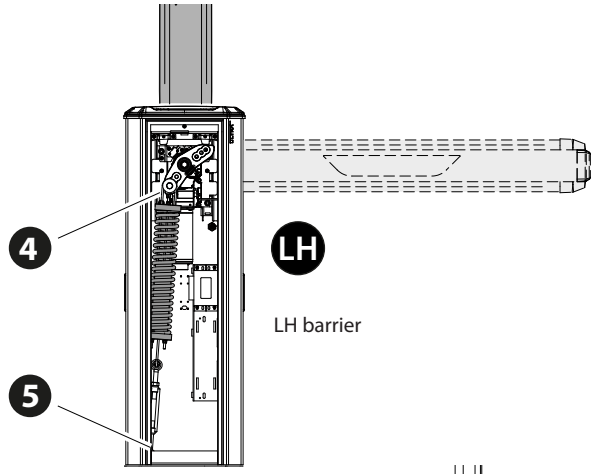


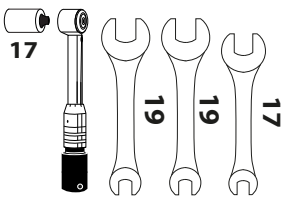
SPRING CONFIGURATION,

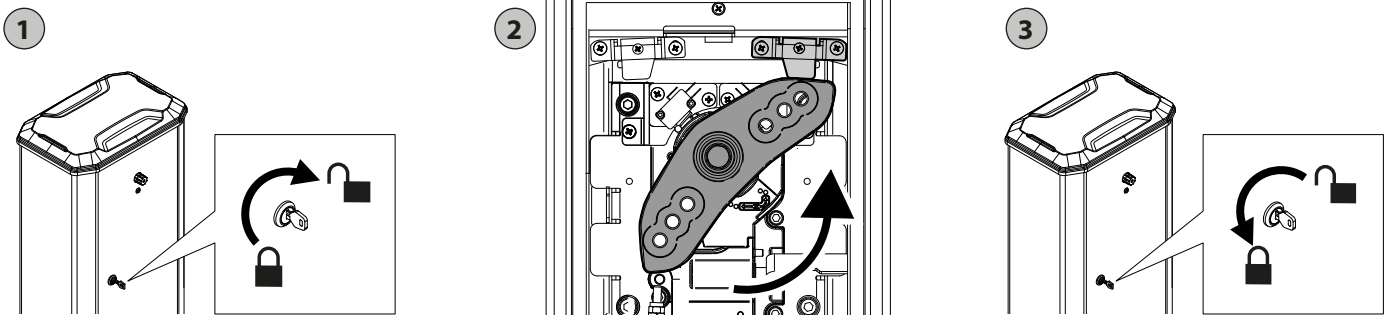


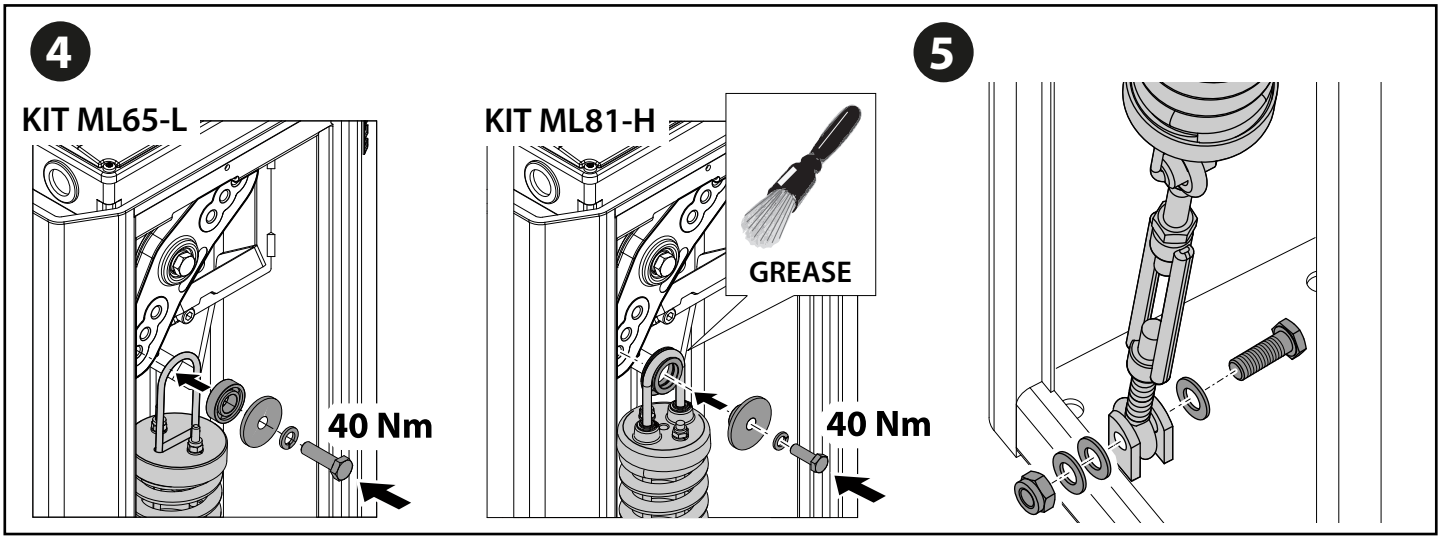
		L (m) LUNGHEZZA BARRA / BOOM LENGTH / LONGUEUR BARRE / STANGENLÄNGE / LONGITUD DE LA BARRA / LENGTE STANG																
		2	2.25	2.5	2.75	3	3.25	3.5	3.75	4	4.25	4.5	4.75	5	5.25	5.5	5.75	6
BOOM ES/ BOOM PS *without lights and rubber*	**Hole**	F1	F1	F1	F1	F1	F2	F2	F2	F2	F3	F3	F3	F2	F2	F2	F2	F2
BOOM ES/ BOOM PS *with lights and rubber*	**Hole**	F1	F1	F1	F2	F2	F2	F3	F3	F3	F2	F2	F2	F2	F2	F3	F3	F3
"BOOM ES/ BOOM PS" + "ADJ -FOOT"	**Hole**					F3	F3	F3	F2	F2	F2	F2	F2	F3	F3	F3		
"BOOM ES/ BOOM PS" + "BTM-SKIRT"	**Hole**			F2	F2	F3	F3	F2	F2	F2	F2	F3	F3	F3				
"BOOM ES/ BOOM PS" + "BTM SKIRT" + "ADJ-FOOT"	**Hole**			F3	F3	F3	F2	F2	F2	F2	F3	F3	F3					

D.1 LEFT SPRING ASSEMBLY

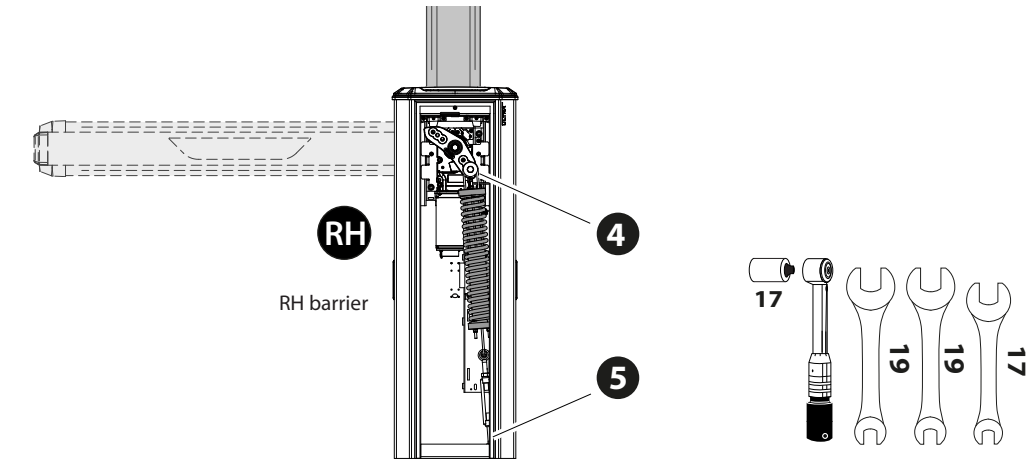


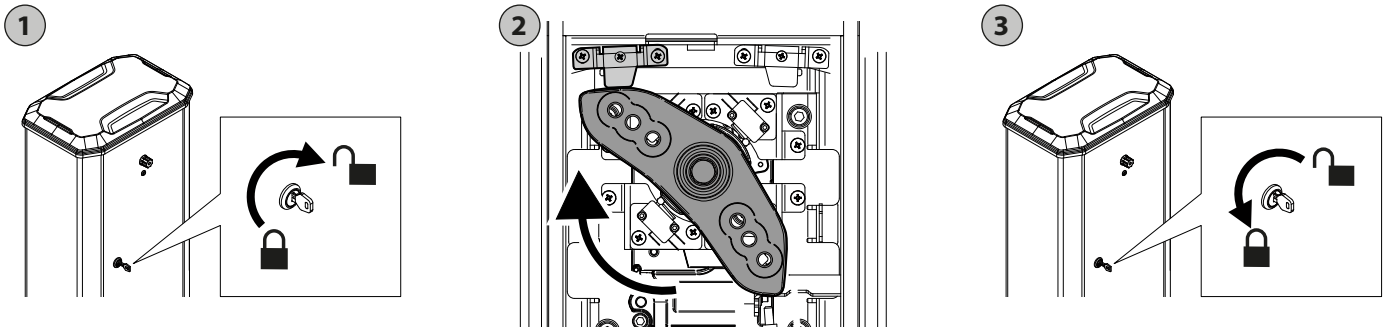


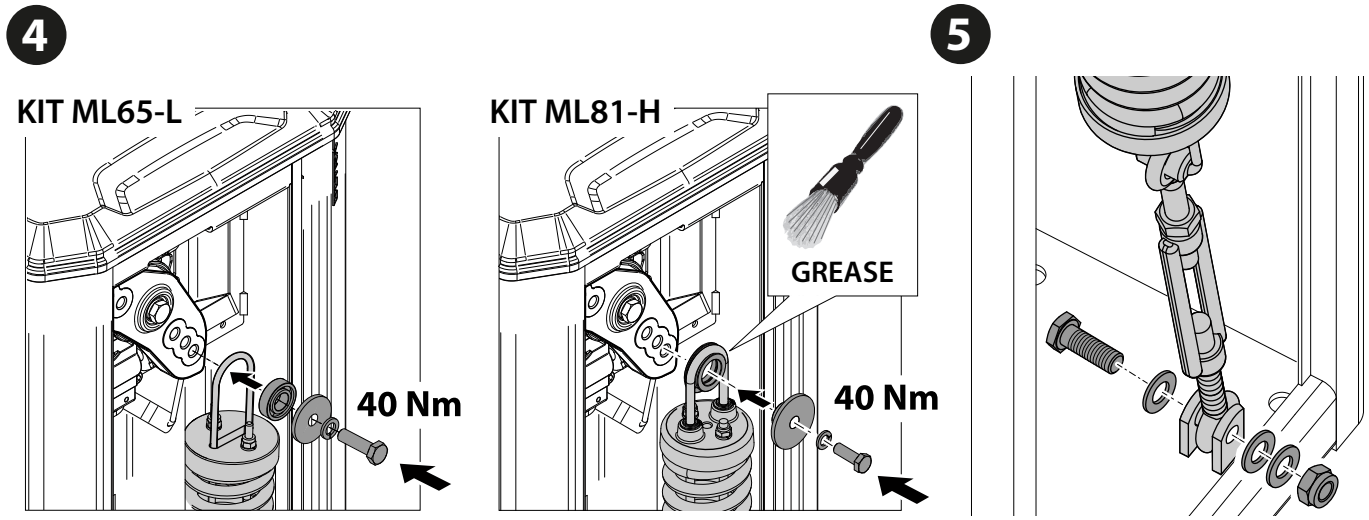




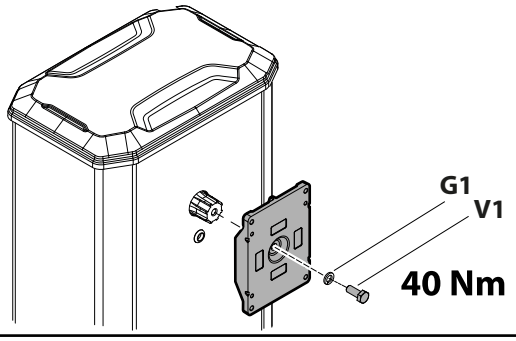
D.2 RIGHT SPRING ASSEMBLY

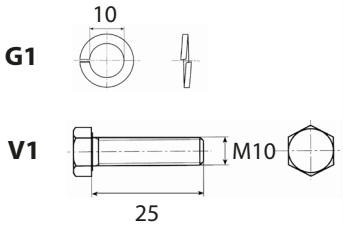




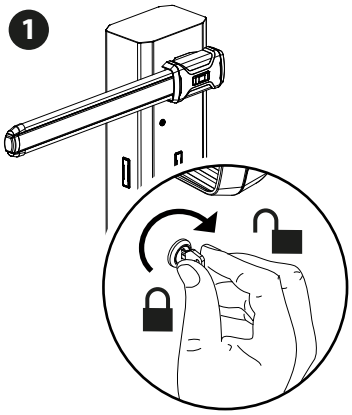


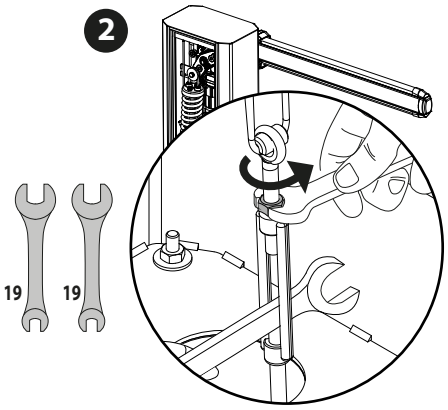
E ROD ASSEMBLY: refer to the OMEGA ES or OMEGA PS GIOTTO ULTRA 36 manual

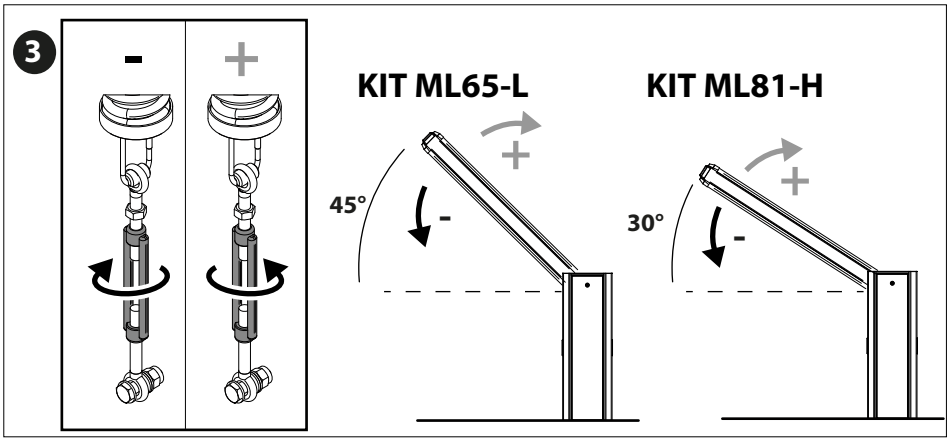


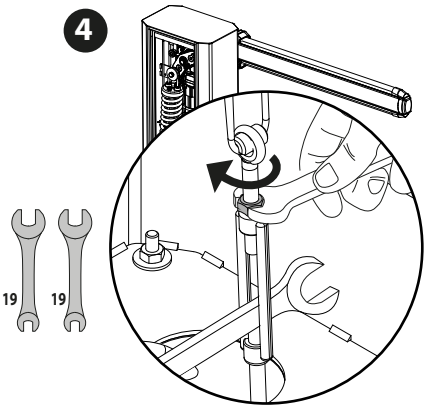


F BOOM BALANCING



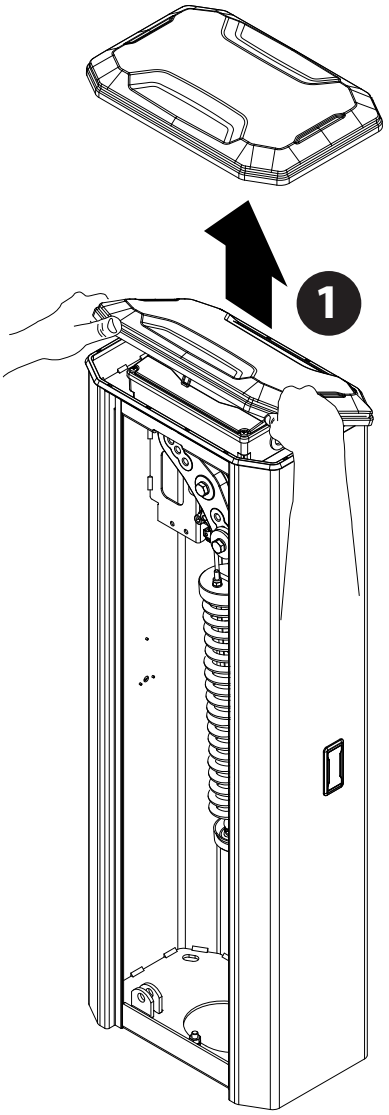


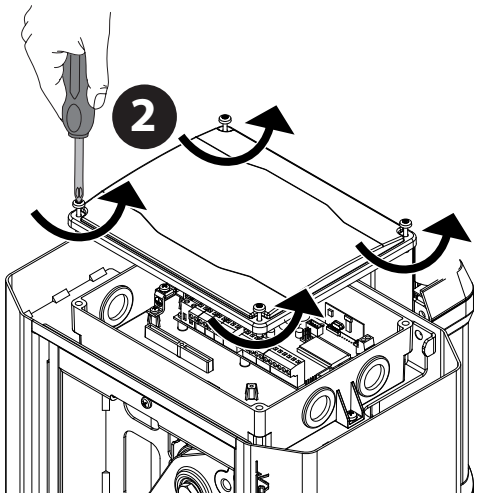




Recommended speeds for various boom lengths					
Boom length (m)	2	3	4	5	6
Open/close time (s)	2,2	2,2	2,8	3,4	4
Parameter MOTOR TYPE	20-45	20-45	20-45	45-60	45-60
Max. SPEED parameter	75	75	50	47	45
Parameter DECELERATION DISTANCE	55	55	55	55	55
Parameter ACCELERATION	4	3	2	1	1

G CONTROL UNIT CONNECTIONS





For connections refer to the I paragraph

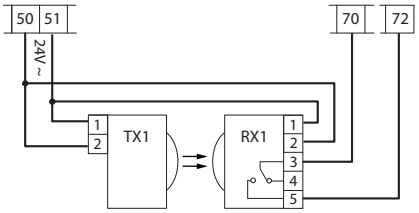
H

Photocells not checked (Check every 6 months)

Photocell checked

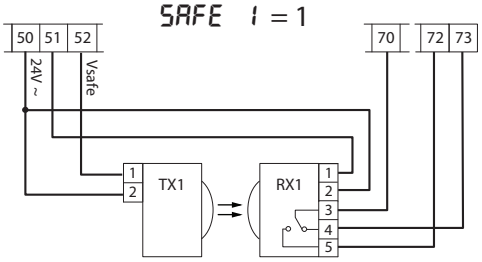
1

SAFE 1 = 0



2

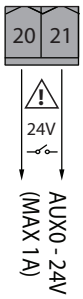
SAFE 1 = 1



3

AUX 0 = 6

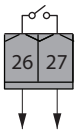
AUX 0 = 0
AUX 0 = 1
AUX 0 = 2
AUX 0 = 3
AUX 0 = 4
AUX 0 = 5
AUX 0 = 7
AUX 0 = 8
AUX 0 = 9
AUX 0 = 10
AUX 0 = 12
AUX 0 = 13
AUX 0 = 14

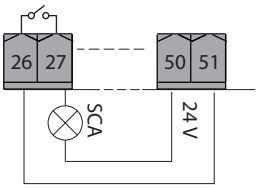


4

AUX 3 = 1

AUX 3 = 0
AUX 3 = 2
AUX 3 = 3
AUX 3 = 4
AUX 3 = 5
AUX 3 = 6
AUX 3 = 7
AUX 3 = 8
AUX 3 = 9
AUX 3 = 10
AUX 3 = 12
AUX 3 = 13
AUX 3 = 14

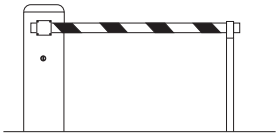


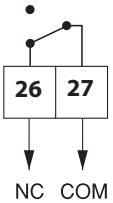


Connection To Car-park Management System

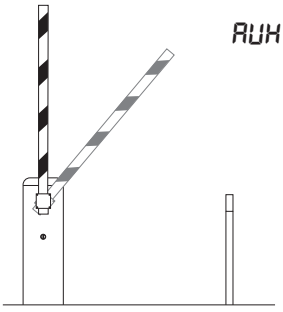
5

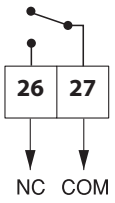
AUX 3 = 12





AUX 3 = 12

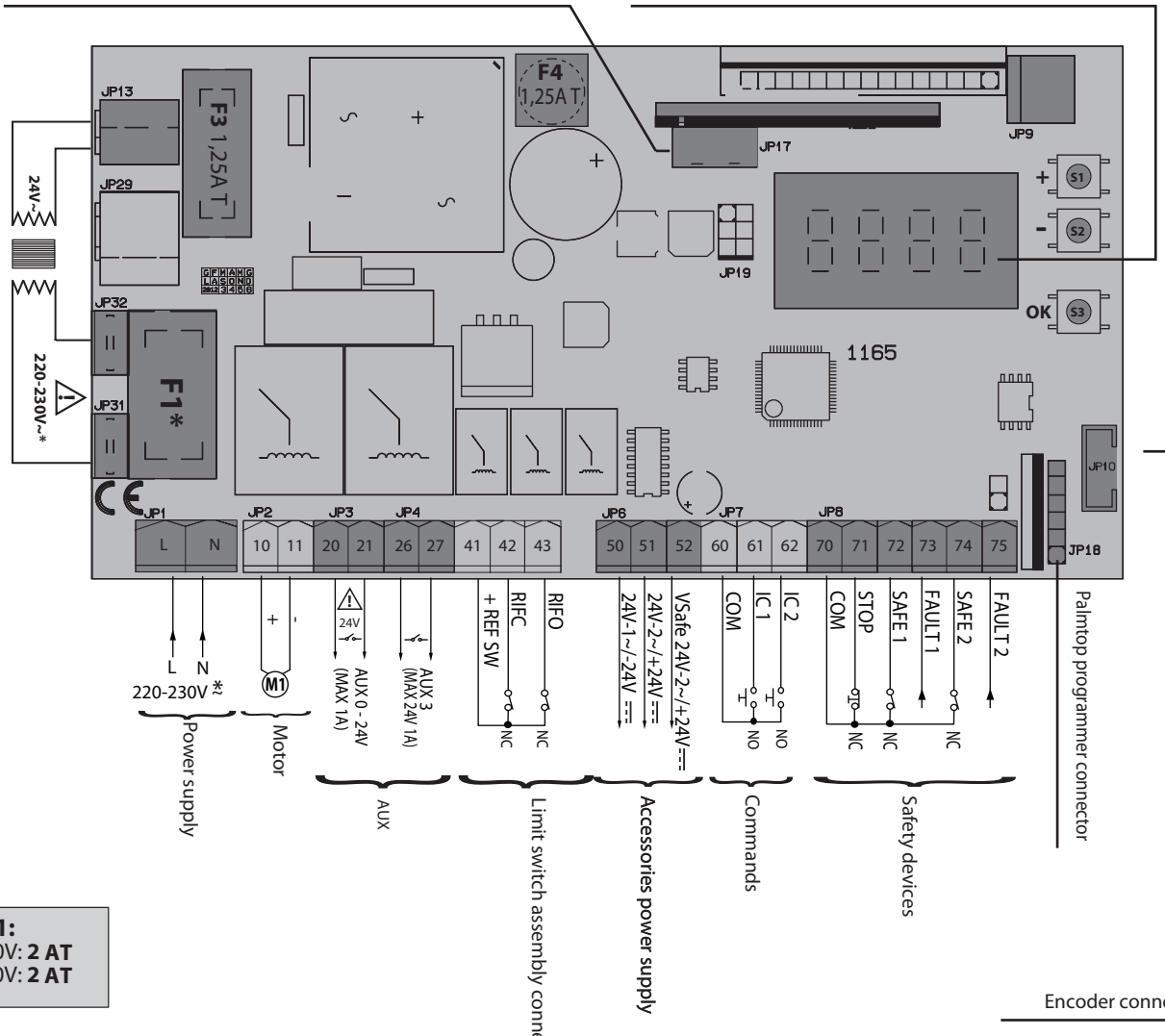




I TERMINAL BOARD WIRING

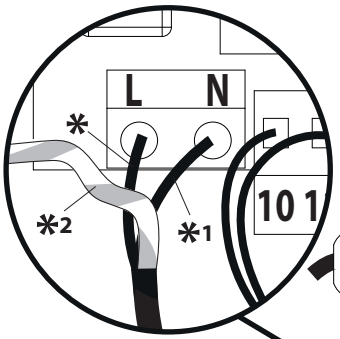
Optional board connector

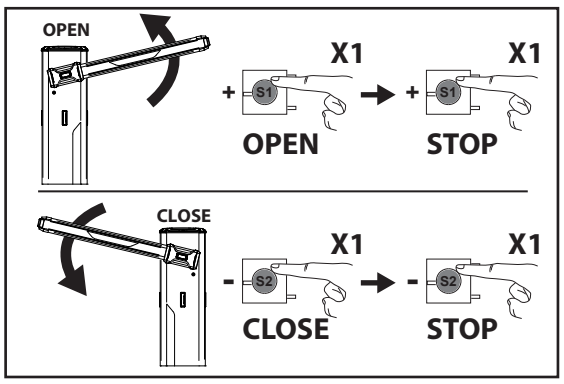
Display plus programming keys

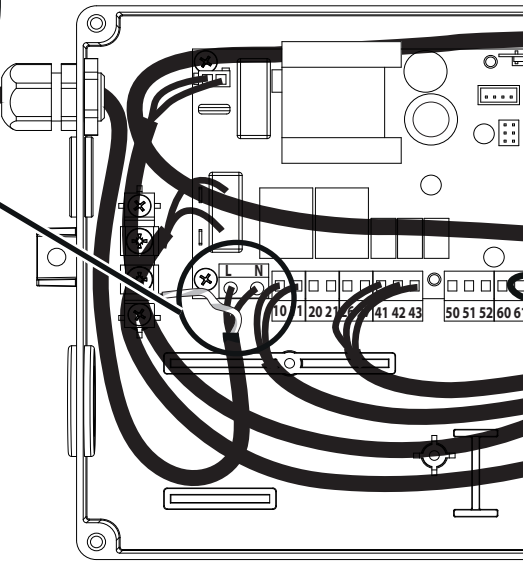


***F1:**
230V: **2 AT**
120V: **2 AT**

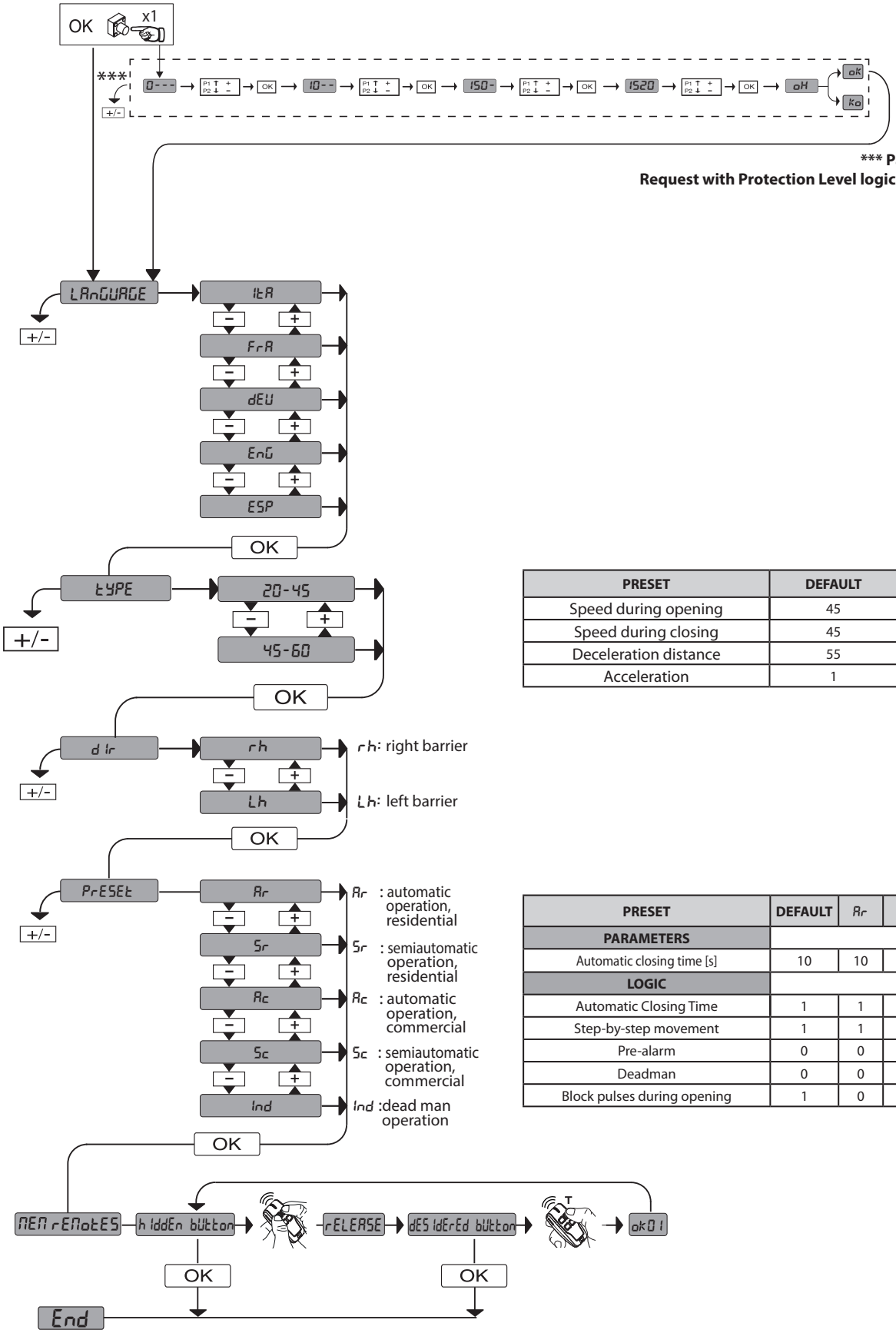
* (L)	*1 (N)	*2
Brown	Blue	Yellow/ Green







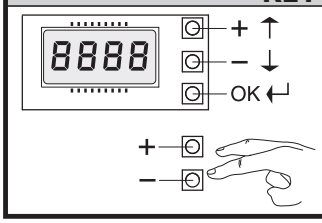
SIMPLIFIED MENU (FIG .1)



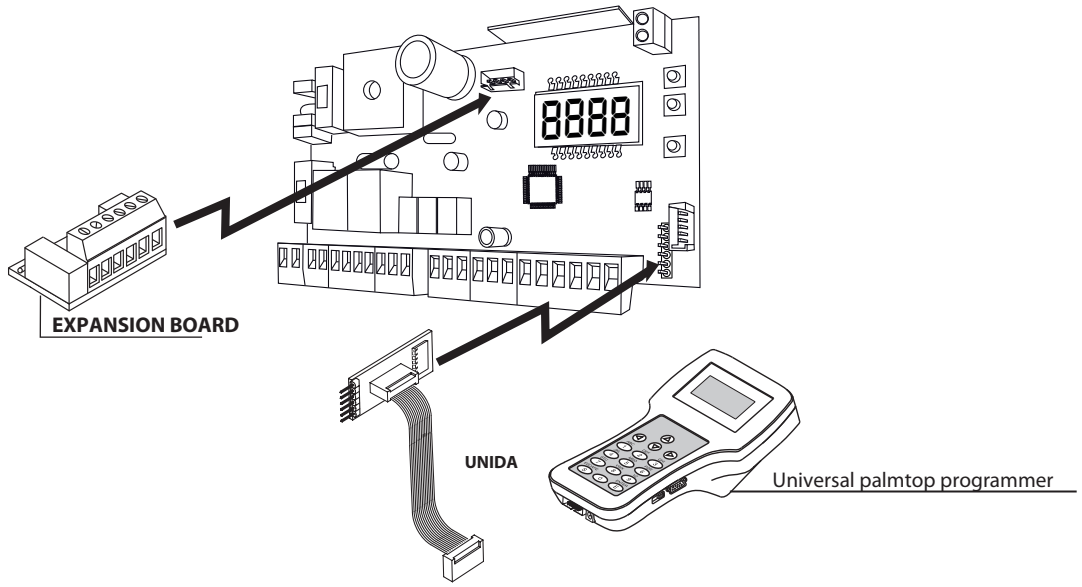
PRESET	DEFAULT	20-45	45-60
Speed during opening	45	75	45
Speed during closing	45	75	45
Deceleration distance	55	55	55
Acceleration	1	3	1

PRESET	DEFAULT	Ar	Sr	Ac	Sc	Ind
PARAMETERS						
Automatic closing time [s]	10	10	10	5	5	5
LOGIC						
Automatic Closing Time	1	1	0	1	0	0
Step-by-step movement	1	1	0	1	0	0
Pre-alarm	0	0	0	1	1	0
Deadman	0	0	0	0	0	1
Block pulses during opening	1	0	0	1	1	0

KEY



K

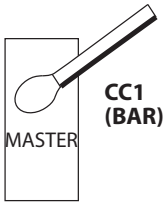


L

AddrESS:**0**

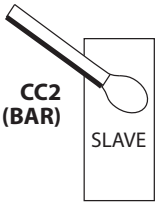
AdrESSE:**0**
d IrEcc ion:**0**

Modo SEr IALE:**3**
SEr IAL ModE:**3**
ModE SEr IE:**3**
SEr IELLEr ModU5:**3**
Modo SEr IA:**3**



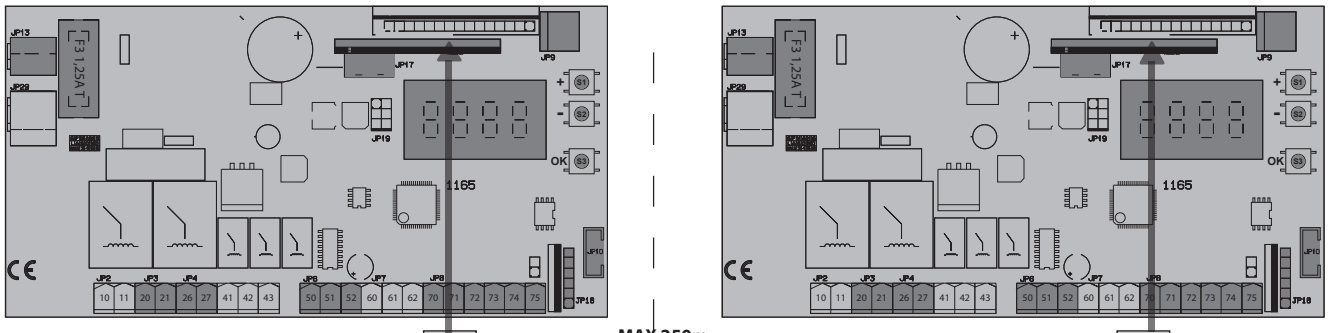
CC1 (BAR)

CC2 (BAR)



AddrESS:**0**

SEr IAL ModE:**2**
ModE SEr IE:**2**
SEr IELLEr M odU5:**2**

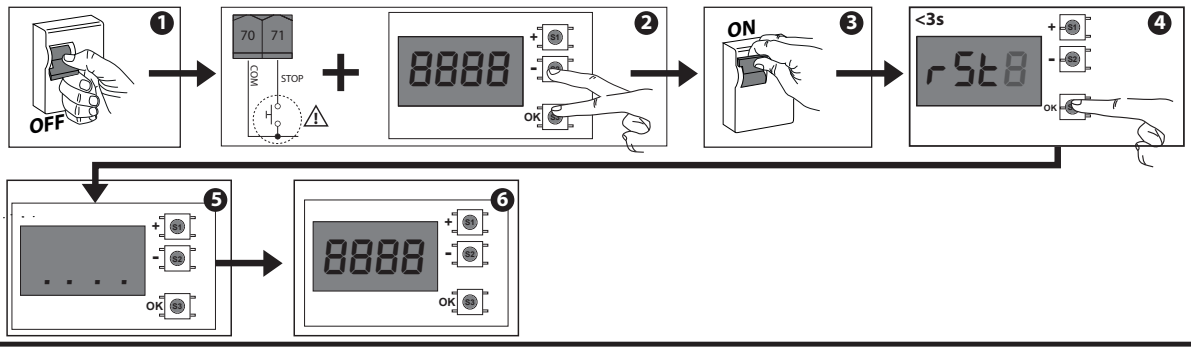


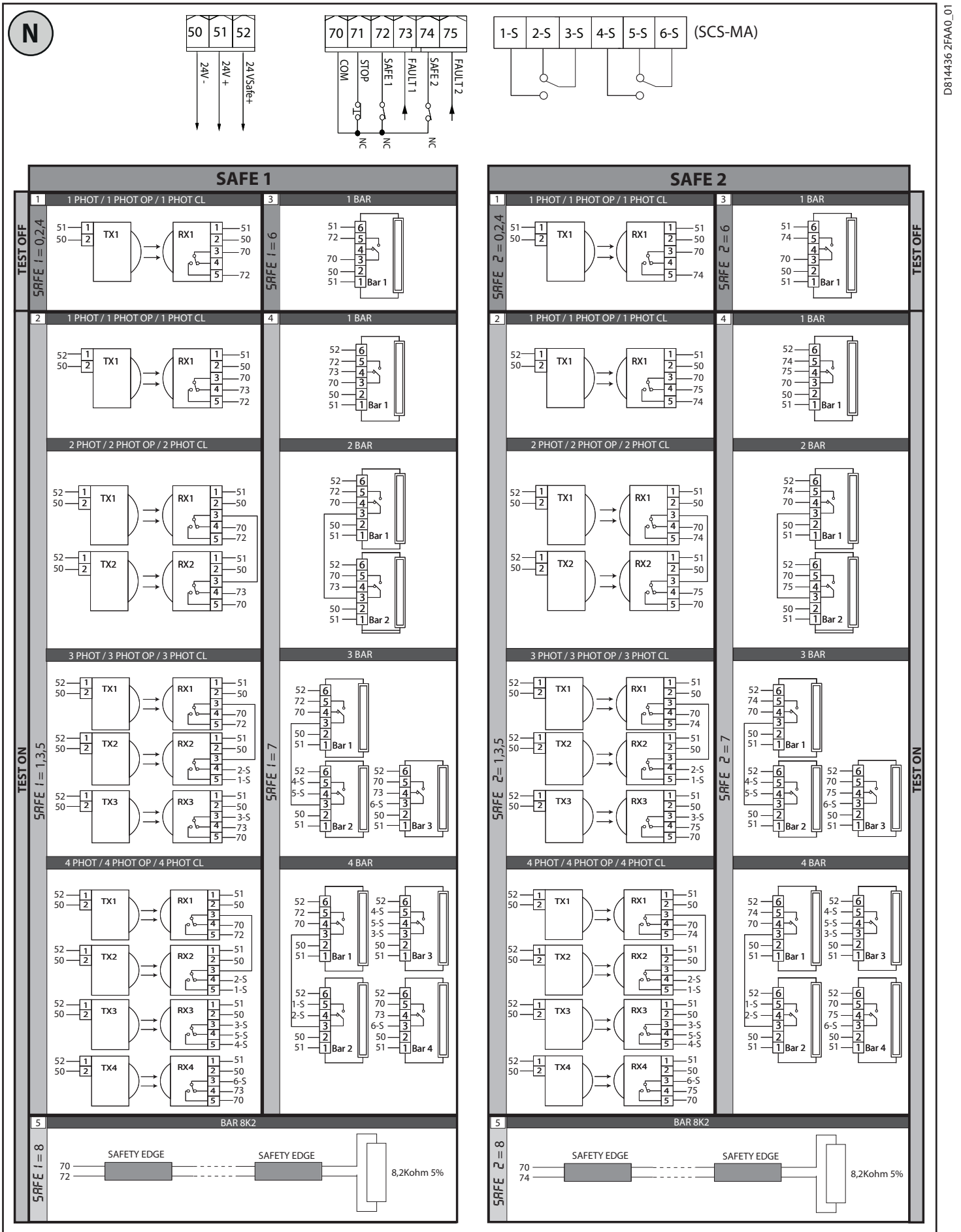
SAFE 1 = 1
SAFE 2 = 7 (≥6)

SAFE 2 SLAVE = SAFE 2 MASTER

TO CONNECT SEVERAL PHOTOCELLS, REFER TO FIG. P -

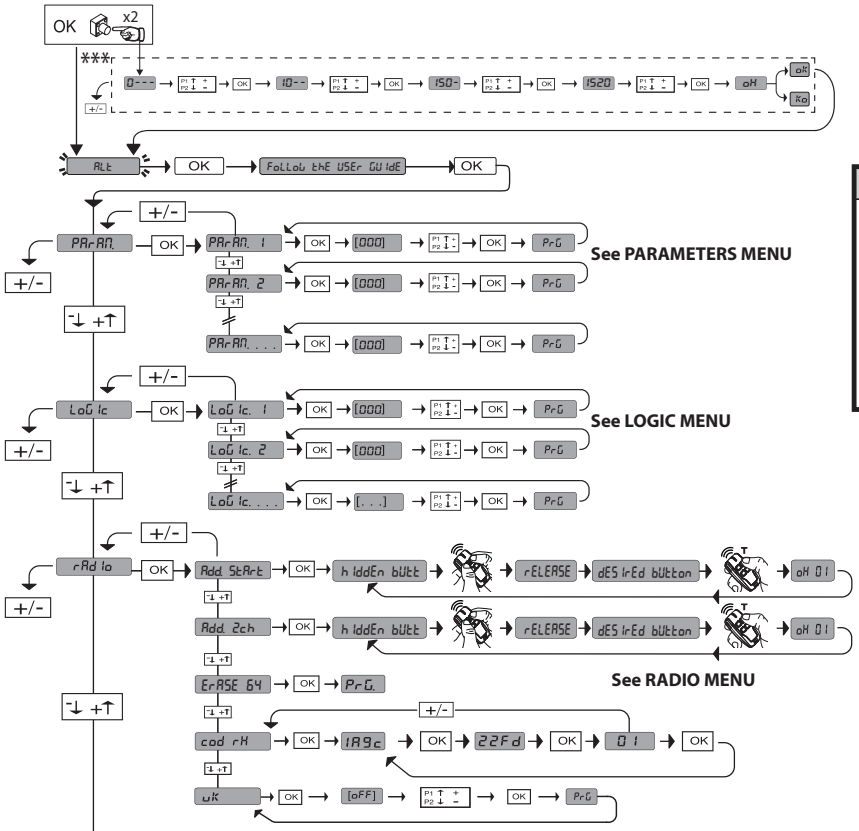
M



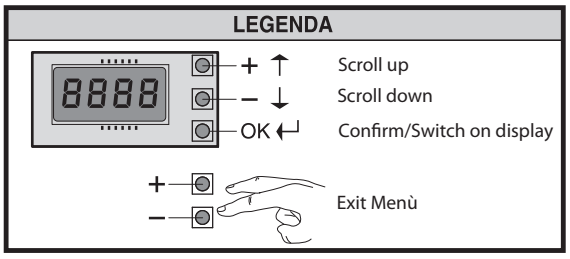


Maximum number of tested devices: 6 (but no more than 4 per type),

ACCESS MENUS Fig. 2



***** Password entry.**
Request with Protection Level logic set to 1, 2, 3, 4



Diagnostics code	DESCRIPTION	NOTES
StrE	START E external start input activated	
Str I	START I internal start input activated	
oPEn	OPEN input activated	
cLS	CLOSE input activated	
t IME	TIMER input activated	
StoP	STOP input activated	
Phot	Activation of PHOT photocell input or, if configured as verified photocell, Activation of the associated FAULT input	
PhoP	Activation of PHOT OP opening photocell input or, if configured as active verified photocell only when opening, Activation of the associated FAULT input	
PhcL	Activation of PHOT CL closing photocell input or, if configured as active verified photocell only when closing, Activation of the associated FAULT input	
bAr	Activation of BAR safety edge input or, if configured as verified safety edge, Activation of the associated FAULT input	
bAr 2	Activation of BAR safety edge input on slave motor (opposing door connection) or, if configured as verified safety edge, Activation of the associated FAULT input	
Suc	SWC motor closing limit switch input activated	
Suo	SWO motor opening limit switch input activated	
rEFo	Enabling input reference opening	
rEFc	Enabling input reference closing	
Er01	Photocell test failed	Check photocell connection and/or logic settings
Er02	Safety edge test failed	Check safety edge connection and/or logic settings
Er03	Opening photocell test failed	Check photocell connection and/or parameter/logic setting
Er04	Closing photocell test failed	Check photocell connection and/or parameter/logic setting
Er05	Safety edge test on slave motor failed (opposite leaves connection)	Check safety edge connection and/or parameter/ logic settings
Er06	8k2 safety edge test failed	Check safety edge connection and/or parameter/ logic settings
Er IH*	Board hardware test error	-Check connections to motor -Hardware problems with board (contact technical assistance)
Er2H**	Encoder error	Check the cable, the encoder card and the motor direction (if necessary) and reset the card
Er3H*	Reverse due to obstacle - Amperostop	Check for obstacles in path
Er4H*	Thermal cutout	Allow automated device to cool
Er5H*	Communication error with remote devices	Check connection with serial-connected accessory devices and/or expansion boards
Er70, Er71 Er74, Er75	Internal system supervision control error.	Try switching the board off and back on again. If the problem persists, contact the technical assistance department.
Er72	Consistency error of the control unit's parameters (Logics and Parameters)	Pressing OK the detected settings are confirmed. The board will keep on working with the detected settings. ⚠ The board settings must be checked (Parameters and Logics)
Er73	D-track parameter error	Pressing OK, the board will keep on working with D-track as a default. ⚠An autoset is required
ErFH*	limit switch error	Check limit switch connections
ErF3	Error in setting the SAFE inputs	Check if the SAFE inputs are correctly set; during the operation of opposed barriers, SAFE2 must be set up as safety edge. Fig. L

* H = 0,1,…,9,A,B,C,D,E,F

1) TECHNICAL SPECIFICATIONS

BARRIER		
Power supply	110-120V~ 50/60Hz 220-230V~ 50/60 Hz(*)	
Motor voltage	24V⎓	
Power absorbed	300W	
Internal lubrication	permanent grease	
Max torque	280-290 Nm	
Impact reaction	Electronic torque limiter	
Minimum opening time	2,2s	
Boom length	from 2 to 6 metres	
Manual mechanical release	customised key	
Type of boom	BOOM ES, BOOM PS	
Limit devices	electromechanical	
Maximum usage cycle	3-metre bar	5000 operations / 24h
	6-metre bar	2000 operations / 24h
Buffer batteries (optional extras)	Two 12V 1.2Ah batteries	
Environmental conditions	from -20°C to +55°C	
Degree of protection	IP 54	
Noise level	<70dBA	
Weight (without boom)	41 Kg	
Dimensions	see fig. B	
CONTROL UNIT		
Mains/low voltage insulation	> 2MOhm 500V⎓	
Dielectric strength	mains/low voltage 3750V~ for 1 minute	
Thermal overload protection	Software	
Supply to accessories	24V~ (demand max. 0,5A) 24V~ safe	
AUX 0	NO 24V ~powered contact (max.1A)	
AUX 3	N.O. Contact (24V~ /1A max)	
Barrie-open warning light	24V~3W max	
Blinker	24V~25W max	
Fuses	see Fig. I	
N° of combinations	4 billion	
Built-in Rolling-Code radio-receiver	frequency 433.92MHz	
Max. n° of remotes that can be memorized	63	
Setting of parameters and options	Universal handheld programmer/ LCD display	

(*)= special power supply voltages on request.

2) ELECTRICAL INSTALLATION SET-UP

WARNING: before opening the door, the spring must be unloaded (vertical boom). Set up the electrical installation (fig. A) with reference to the current regulations for electrical installations. Keep the mains power supply con-nections definitely separate from the service connections (photocells, electric edges, control devices etc.).
Fig. A shows the number of connections and section for a 100m length of power supply cables; for greater lengths, calculate the section for the true automation load. When the auxiliary connections exceed 50 metre lengths or go through critical disturbance areas, it is recommended to decouple the control and safety devices by means of suitable relays.
WARNINGS - When performing wiring and installation, refer to the standards in force and, whatever the case, apply good practice principles. Wires carrying different voltages must be kept physically separate from each other, or they must be suitably insulated with at least 1mm of additional insulation.
Wires must be secured with additional fastening near the terminals, using devices such as cable clamps. All connecting cables must be kept far enough away from dissipaters.

3) CONNECTION (Fig. I)

Once suitable electric cables have been run through the raceways and the automated device's various components have been fastened at the predetermined points, the next step is to connect them as directed and illustrated in the diagrams contained in the relevant instruction manuals. Connect the live, neutral and earth wire (compulsory). The mains cable must be clamped in the relevant cable gland, and the accessories' wires in the cable gland, while the earth wire with the yellow/green-coloured sheath must be connected in the relevant terminal.

WARNING: The electrical connections must be carried out workmanlike by qualified experienced personnel, in conformity with all the current standards and with the use of appropriate materials.
Lay out the electrical installation with reference to the current electrical standards.
Keep the mains supply connections clearly separated from the service connections.
In the initial section of the electrical installation, fit a circuit breaker with a contact opening distance equal to or greater than 3,5 mm, provided with magnetothermal protection and a differential switch having adequate capacity for the appliance consumption. For the wiring, only use cables conforming to the harmonised or national standards, having a cross section corresponding to the initial protection, the appliance consumption and the installation conditions, for example a 3x1.5 sq mm (H 05 VV-F) cable.

	Terminal	Definition	Description
Power supply	L	LINE	Single-phase power supply 220-230V ~50/60 Hz*
	N	NEUTRAL	
	JP31	TRANSF PRIM	Transformer primary winding connection, 220-230V ~.
	JP32		
	JP13	TRANSF SEC	Board power supply: 24V~ Transformer secondary winding
Motor	10	MOT +	Connection motor
	11	MOT -	
Aux	20	AUX 0 - 24V POWERED CONTACT (N.O.) (MAX. 1A)	AUX 0 configurable output - Default setting FLASHING LIGHT. 2ND RADIO CHANNEL/ SCA GATE OPEN LIGHT/ COURTESY LIGHT command/ ZONE LIGHT command/ STAIR LIGHT/ GATE OPEN ALARM/ FLASHING LIGHT/ SOLENOID LATCH/ MAGNETIC LOCK/ MAINTENANCE/ FLASHING LIGHT AND MAINTENANCE/ BARRIER STATUS OUTPUT/LIGHTS ON BAR. Refer to "AUX output configuration" table.
	21		
	26	AUX 3 - FREE CONTACT (N.O.) (Max. 24V 1A)	AUX 3 configurable output - Default setting 2ND RADIO CHANNEL Output. 2ND RADIO CHANNEL/ SCA GATE OPEN LIGHT/ COURTESY LIGHT command/ ZONE LIGHT command/ STAIR LIGHT/ GATE OPEN ALARM/ FLASHING LIGHT/ SOLENOID LATCH/ MAGNETIC LOCK/ MAINTENANCE/ FLASHING LIGHT AND MAINTENANCE/ BARRIER STATUS OUTPUT/LIGHTS ON BAR. Refer to "AUX output configuration" table.
	27		
Limit switches	41	+ REF RIF	Common references
	42	RIFC	Reference closing RIFC (N.C.)
	43	RIFO	Reference opening RIFO (N.C.)
Accessories power supply	50	24V-1~/-24V⎓	Accessory power supply output. The accessory power supply is in A.C. (~) when the board is powered via the mains voltage, and D.C. (⎓) during battery operation.
	51	24V-2~/+24V⎓	
	52	VSAFE 24V-2~/+24V⎓	Power supply output for checked safety devices (photocell transmitter and safety edge transmitter). Output only active during the operation cycle. The supply to the checked device is via terminals 50-52.
Commands	60	Common	IC 1 and IC 2 inputs common
	61	IC 1	Configurable command input 1 (N.O.) - Default OPEN. START E / START I / OPEN / CLOSE / TIMER / OPEN Refer to the "Command input configuration" table.
	62	IC 2	Configurable command input 2 (N.O.) - Default CLOSE. START E / START I / OPEN / CLOSE / TIMER / OPEN Refer to the "Command input configuration" table.

	Terminal	Definition	Description
Safety devices	70	Common	STOP, SAFE 1 and SAFE 2 inputs common
	71	STOP	The command stops movement. (N.C.) If not used, leave jumper inserted.
	72	SAFE 1	Configurable safety input 1 (N.C.) - Default PHOT. PHOT / PHOT TEST / PHOT OP / PHOT OP TEST / PHOT CL / PHOT CL TEST / BAR / BAR TEST / BAR 8K2 Refer to the "Safety input configuration" table.
	73	FAULT 1	Test input for safety devices connected to SAFE 1.
	74	SAFE 2	Configurable safety input 2 (N.C.) - Default BAR. PHOT / PHOT TEST / PHOT OP / PHOT OP TEST / PHOT CL / PHOT CL TEST / BAR / BAR TEST / BAR 8K2 Refer to the "Safety input configuration" table.
	75	FAULT 2	Test input for safety devices connected to SAFE 2.
Antenna	Y	ANTENNA	Antenna input. Use an antenna tuned to 433MHz. Use RG58 coax cable to connect the Antenna and Receiver. Metal bodies close to the antenna can interfere with radio reception. If the transmitter's range is limited, move the antenna to a more suitable position.
	#	SHIELD	

AUX output configuration
Aux logic= 0 - 2ND RADIO CHANNEL output. Contact stays closed for 1s when 2nd radio channel is activated.
Aux logic= 1 - SCA GATE OPEN LIGHToutput. Contact stays closed during opening and with leaf open, intermittent during closing, open with leaf closed.
Aux logic= 2 - COURTESY LIGHT command output. Contact stays on for 90 seconds after the last operation.
Aux logic= 3 - ZONE LIGHT command output. Contact stays closed for the full duration of operation.
Aux logic= 4 - STAIR LIGHT output. Contact stays closed for 1 second at start of operation.
aUX Logic= 5 - OPEN GATE ALARM output. The contact remains closed if the door stays open for longer than the "ALArM t IME" parameter. O for Obstacle detected
Aux logic= 6 - FLASHING LIGHT output. Contact stays closed while leaves are operating.
Aux logic= 7 - SOLENOID LATCH output. Contact stays closed for 2 seconds each time gate is opened.
Aux logic= 8 - MAGNETIC LOCK output. Contact stays closed while gate is closed.
Aux logic= 9 - MAINTENANCE output. Contact stays closed once the value set for the Maintenance parameter is reached, to report that maintenance is required.
Aux logic= 10 - FLASHING LIGHT AND MAINTENANCE output. Contact stays closed while leaves are operating. If the value set for the Maintenance parameter is reached, once the gate has finished moving and the leaf is closed, the contact closes for 10 sec. and opens for 5 sec. 4 times to report that maintenance is required.
Aux Logic= 11- Not available
Aux Logic= 12 - CLOSED BARRIER STATUS output The contact is open when the barrier is completely closed, the contact is closed in all other conditions.
Aux logic= 13 - Lights on bar - open green, moving red flashing, closed red steady.
Aux logic= 14 - Lights on bar - open green, moving red flashing, closed red flashing.
Aux Logic= 16 - OPEN BARRIER STATUS output The contact is open when the barrier is fully open, the contact is closed in all other conditions. **Logic active from SW version 1.18 and later.**

Command input configuration
IC logic= 0 - Input configured as Start E. Operation according to StEP-bY-StEP Mou. logic. External start for traffic light control.
IC logic= 1 - Input configured as Start I. Operation according to StEP-bY-StEP Mou. logic. Internal start for traffic light control.
IC logic= 2 - Input configured as Open. The command causes the leaves to open. If the input stays closed, the leaves stay open until the contact is opened. When the contact is open, the automated device closes following the TCA time, where activated.
IC logic= 3 - Input configured as Closed. The command causes the leaves to close.
IC logic= 4 - Not available
IC logic= 5 - Input configured as Timer. Operation same as open except closing is guaranteed even after a mains power outage.

Safety input configuration
SAFE logic= 0 - Input configured as Phot (photocell) non tested . (fig.N, ref.1). Enables connection of devices not equipped with supplementary test contacts. When beam is broken, photocells are active during both opening and closing. When beam is broken during closing, movement is reversed only once the photocell is cleared. If not used, leave jumper inserted.
SAFE logic= 1 - Input configured as Phot test (tested photocell). (fig.N, ref.2). Switches photocell testing on at start of operation. When beam is broken, photocells are active during both opening and closing. When beam is broken during closing, movement is reversed only once the photocell is cleared.
SAFE logic= 2 - Input configured as Phot op (photocell active during opening only) non tested . (fig.N, ref.1). Enables connection of devices not equipped with supplementary test contacts. In the event beam is broken, photocell operation is disabled during closing. During opening, stops motion for as long as the photocell beam stays broken. If not used, leave jumper inserted.
SAFE logic= 3 - Input configured as Phot op test (tested photocell active during opening only (fig.N, ref.2). Switches photocell testing on at start of operation. In the event beam is broken, photocell operation is disabled during closing. During opening, stops motion for as long as the photocell beam stays broken.
SAFE logic= 4 - Input configured as Phot cl (photocell active during closing only) non tested . (fig.N, ref.1). Enables connection of devices not equipped with supplementary test contacts. In the event beam is broken, photocell operation is disabled during opening. During closing, movement is reversed immediately. If not used, leave jumper inserted.
SAFE logic= 5 - Input configured as Phot cl test (tested photocell active during closing only (fig.N ref.2). Switches photocell testing on at start of operation. In the event beam is broken, photocell operation is disabled during opening. During closing, movement is reversed immediately.
SAFE logic= 6 - Input configured as Bar (safety edge) non tested . (fig.N, ref.3). Enables connection of devices not equipped with supplementary test contacts. The command reverses movement for 2 sec.. If not used, leave jumper inserted.
SAFE logic= 7 - Input configured as Bar (tested safety edge (fig.N, ref.4). Switches safety edge testing on at start of operation. The command reverses movement for 2 sec.
SAFE logic= 8 - Input configured as Bar 8k2 (fig.N, ref.5). Input for resistive edge 8K2. The command reverses movement for 2 sec.
SAFE logic = 21 - Input configured as LOOP (N.C.). With barrier closed and opening: no effect. With barrier open: it activates a closure when the contact closes. With barrier closing: it stops the movement and activates a closure when the contact closes. **Logic active from SW version 1.18 and later.**

*** (If "D" type devices are installed (as defined by EN12453), connect in unverified mode, foresee mandatory maintenance at least every six months.**

4) LIMIT SWITCH SETTING

WARNING: before opening the door, the spring must be unloaded (vertical boom). The barrier is provided with programmable electronic limit switches and mechanical stop devices. There must be a rotation margin (about 1°) on closing and opening between the electrical limit switches and mechanical stop devices (Fig. J1). The adjustment is carried out as follows:

The end-of-stroke opening and closing positions must be set by modifying the parameters of the control panel for Opening value Calibration and Closing value Calibration: if the value is increased, the end-of-stroke positions move towards the opening direction. The extent of the movement depends on the effective boom length: in the case of a 6-m boom, a unit change (1.0) entails a movement of about 4,4 cm which, proportionally, becomes about 5,8 cm for an 8-m boom.

The effective closing value also depends, in part, on the manoeuvring speed. It is therefore convenient to proceed to end-of-stroke calibration only after having set the other opening parameters.

To evaluate correctly the values set, you are advised to carry out a few complete consecutive manoeuvres.

4.1) POSITIONS OF THE LIMIT SWITCH SCREWS (Fig. J2)

5) SAFETY DEVICES

Note: only use receiving safety devices with free changeover contact.

5.1) TESTED DEVICES Fig. N

5.2) CONNECTION OF 1 PAIR OF NON-CHECKED PHOTOCELLS FIG. H1

5.3) CONNECTION OF 1 PAIR OF CHECKED PHOTOCELLS FIG. H2

6) ACCESS TO THE SIMPLIFIED MENU: FIG.1

6.1) CALLING UP MENUS: FIG. 2

6.2) PARAMETERS MENU (PArAM) (PARAMETERS TABLE "A")

6.3) LOGIC MENU (Lo6 Ic) (LOGIC TABLE "B")

6.4) RADIO MENU (rAd Io) (RADIO TABLE "C")

- **IMPORTANT NOTE: THE FIRST TRANSMITTER MEMORIZED MUST BE IDENTIFIED BY ATTACHING THE KEY LABEL (MASTER).**

In the event of manual programming, the first transmitter assigns the RECEIVER'S KEY CODE: this code is required to subsequently clone the radio transmitters.
The Clonix built-in on-board receiver also has a number of important advanced features:

- Cloning of master transmitter (rolling code or fixed code).
- Cloning to replace transmitters already entered in receiver.
- Transmitter database management.
- Receiver community management.

To use these advanced features, refer to the universal handheld programmer's instructions and to the general receiver programming guide.

6.5) DEFAULT MENU (dEFAULt)
Restores the controller's DEFAULT factory settings.
6.6) LANGUAGE MENU (LAnGUAGE)
Used to set the programmer's language on the display.

6.7) STATISTICS MENU (StAt)
Used to view the version of the board, the total number of operations (in hundreds), the number of transmitters memorized and the last 30 errors (the first 2 digits indicate the position, the last 2 give the error code). Error 01 is the most recent.
6.8) PASSWORD MENU (PASSword)
Used to set a password for the board's wireless programming via the U-link network. With "PROTECTION LEVEL" logic set to 1,2,3,4, the password is required to access the programming menus. After 10 consecutive failed attempts to log in, you will need to wait 3 minutes before trying again. During this time, whenever an attempt is made to log in, the display will read "BLOC". The default password is 1234.

7) CONNECTION WITH EXPANSION BOARDS AND UNIVERSAL HANDHELD PROGRAMMER VERSION> V1.40 (Fig. K) Refer to specific manual.

WARNING! Incorrect settings can result in damage to property and injury to people and animals.

8) U-LINK OPTIONAL MODULES
Refer to the U-link instructions for the modules.

9) Opposite Barriers (Fig. L)
Refer to the U-link instructions for the modules.
NOTE: On the board set as the Slave, the Safety Edge input (Safety Edge/ Test Safety Edge/ 8k2 Safety Edge) should only be set to SAFE2.

10) RESTORING FACTORY SETTINGS (Fig.M)
WARNING: this operation will restore the control unit's factory settings and all transmitters stored in its memory will be deleted.
WARNING! Incorrect settings can result in damage to property and injury to people and animals.
- Cut off power to the board (Fig.M ref.1)
- Open the Stop input and press the - and OK keys together (Fig.M ref.2)
- Switch on the board's power (Fig.M ref.3)
- The display will read RST; confirm within 3 sec. by pressing the OK key (Fig.O ref.4)
- Wait for the procedure to finish (Fig.M ref.5)
- Procedure finished (Fig.M ref.6)

11) PARKING MANAGEMENT SYSTEM CONNECTION
The board has an output for the control of the barrier status configured this way (Fig. H5).
The logic must be set to AUX3/AUX0=12.
closed contact between terminals **26-27** with the barrier **lowered**
open contact between terminals **26-27** with the barrier **not lowered.**

12) EMERGENCY RELEASE (Fig. E)
WARNING! When an actuator without bar needs to be released, ensure that the balancing spring is not compressed (bar in the opening position).

12.1) LOCAL COMMANDS Fig.I
While the display is off, pressing the + key commands the gate to Open and pressing the - key commands it to Close. Pressing either key again while the automated device is moving commands the gate to STOP.

TABLE "A" - PARAMETERS MENU - (PArAM)

Parameter	min.	max.	Default	Personal	Definition	Description
tcA	**0**	**180**	10		**Automatic closing time [s]**	Waiting time before automatic closing.
trFLGhtcLrt	**1**	**180**	40		**Time-to-clear traffic light zone [s]**	Time-to-clear for the zone run through by traffic controlled by the traffic light.
ALArM t IME	**0**	**240**	30		**Alarm time** [s]	If an obstacle is sensed or the photocells are engaged for longer than the set time, the AUX contact configured as OPEN GATE ALARM output closes. The contact is then opened by the Stop command or by the closing limit switch.
oPEn.cAL Ib. (Special par. 1)***	**0**	**100**	60		**Opening value calibration**	Opening value calibration [%] Set the reference value from 0,0 to 100,0 for the required opening position (see Paragraph Limit Switch Setting).
cLoS.cAL Ib. (Special par. 6)***	**0**	**100**	45		**Closing value calibration**	Closing value calibration [%] Set the reference value from 0,0 to 100,0 for the required closing position (see Paragraph Limit Switch Setting).
AccEL. (Special par. 6)***	**1**	**5**	1		**Acceleration**	Acceleration [%] Set the acceleration to be applied at the beginning of each movement (****)
d ISt.dEcEL	**45**	**99**	55		**Deceleration distance [%]**	Deceleration distance (switch from running speed to slow-down speed) for motor(s) both during opening and during closing, given as a percentage of total travel (****).
oP.ForcE	**40**	**99**	75		**Leaf force during opening [%]**	Force exerted by the barrier while opening. **WARNING: It affects impact force directly: make sure that current safety requirements are met with the set value (*). Install anti-crush safety devices where necessary (**).**
cLS.ForcE	**40**	**99**	75		**Leaf force during closing [%]**	Force exerted by the barrier while closing. **WARNING: It affects impact force directly: make sure that current safety requirements are met with the set value (*). Install anti-crush safety devices where necessary (**).**

Parameter	min.	max.	Default	Personal	Definition	Description
oP. SPEEd	**20**	**80**	45		**Speed during opening**	Running speed during opening [%] Sets the running speed that the barrier must reach during opening, as a percentage of the maximum speed the actuator can reach (****).
cL SPEEd	**20**	**80**	45		**Speed during closing**	Running speed during closing [%] Sets the running speed that the barrier must reach during closing, as a percentage of the maximum speed the actuator can reach (****).
nR IntEnAncE	**0**	**250**	0		**Programming number of operations for maintenance threshold [in hundreds]**	Allows you to set a number of operations after which the need for maintenance will be reported on the AUX output configured as Maintenance or Flashing Light and Maintenance .

(*) In the European Union, apply standard EN 12453 for force limitations, and standard EN 12445 for measuring method.
(**) Impact forces can be reduced by using deformable edges.
(***)Reference for universal handheld programmer.
(****) Modifying the "motor type" logic involves automatic modification of this channel.

TABLE "B" - LOGIC - (LoG Ic)

<table>
<tr><th>Logic</th><th>Definition</th><th>Default</th><th></th><th>Cross out setting used</th><th>Optional extras</th></tr>
<tr><td>Motor tYPE</td><td>Spring type or bar length</td><td>1</td><td></td><td>0</td><td>Short bars 20-45, generally standard spring</td></tr>
<tr><td></td><td></td><td></td><td></td><td>1</td><td>Long bars 45-60, generally XL spring</td></tr>
<tr><td>tcA</td><td>Automatic Closing Time</td><td>1</td><td></td><td>0</td><td>Logic not enabled</td></tr>
<tr><td></td><td></td><td></td><td></td><td>1</td><td>Switches automatic closing on</td></tr>
<tr><td>FASt cLS.</td><td>Fast closing</td><td>0</td><td></td><td>0</td><td>Logic not enabled</td></tr>
<tr><td></td><td></td><td></td><td></td><td>1</td><td>Closes 1 second after the photocells are cleared before waiting for the set TCA to elapse.</td></tr>
<tr><td>StEP-by-StEP MouEnnt</td><td>Step-by-step movement</td><td>1</td><td></td><td>0</td><td>Inputs configured as Start E, Start I, Ped operate with 4-step logic.</td></tr>
<tr><td></td><td></td><td></td><td></td><td>1</td><td>Inputs configured as Start E, Start I, Ped operate with 3-step logic. Pulse during closing reverses movement.</td></tr>
<tr><td></td><td></td><td></td><td></td><td>2</td><td>Inputs configured as Start E, Start I, Ped operate with 2-step logic. Movement reverses with each pulse.</td></tr>
<tr><td>PrE-ALArn</td><td>Pre-alarm</td><td>0</td><td></td><td>0</td><td>The flashing light comes on at the same time as the motor(s) start.</td></tr>
<tr><td></td><td></td><td></td><td></td><td>1</td><td>The flashing light comes on approx. 3 seconds before the motor(s) start.</td></tr>
<tr><td>hoLd-to-rUn</td><td>Deadman</td><td>0</td><td></td><td>0</td><td>Pulse operation.</td></tr>
<tr><td></td><td></td><td></td><td></td><td>1</td><td>Deadman mode.
Input 61 is configured as OPEN UP.
Input 62 is configured as CLOSE UP.
Operation continues as long as the OPEN UP or CLOSE UP keys are held down.
WARNING: safety devices are not enabled.</td></tr>
<tr><td></td><td></td><td></td><td></td><td>2</td><td>Emergency Deadman mode. Usually pulse operation.
If the board fails the safety device tests (photocell or safety edge, Er0x) 3 times in a row, Deadman mode is enabled which will stay active for 1 minute after the OPEN UP - CLOSE UP keys are released.
Input 61 is configured as OPEN UP.
Input 62 is configured as CLOSE UP.
WARNING: with the device set to Emergency Deadman mode, safety devices are not enabled.</td></tr>
<tr><td>ibL oPEn</td><td>Block pulses during opening</td><td>1</td><td></td><td>0</td><td>Pulse from inputs configured as Start E, Start I has effect during opening.</td></tr>
<tr><td></td><td></td><td></td><td></td><td>1</td><td>Pulse from inputs configured as Start E, Start I has no effect during opening.</td></tr>
<tr><td>* ibL tcA</td><td>Block pulses during TCA</td><td>0</td><td></td><td>0</td><td>Pulse from inputs configured as Start E, Start I has effect during TCA pause.</td></tr>
<tr><td></td><td></td><td></td><td></td><td>1</td><td>Pulse from inputs configured as Start E, Start I has no effect during TCA pause.</td></tr>
<tr><td>ibL cLoSE</td><td>Block pulses during closing</td><td>0</td><td></td><td>0</td><td>Pulse from inputs configured as Start E, Start I has effect during closing.</td></tr>
<tr><td></td><td></td><td></td><td></td><td>1</td><td>Pulse from inputs configured as Start E, Start I has no effect during closing.</td></tr>
<tr><td>oPEn in othEr dirEct.</td><td>Open in other direction</td><td>0</td><td></td><td>0</td><td>Standard operating mode (left barrier).</td></tr>
<tr><td></td><td></td><td></td><td></td><td>1</td><td>Opens in other direction to standard operating mode (right barrier).</td></tr>
<tr><td>SAFE 1</td><td>Configuration of safety input SAFE 1. 72</td><td>4</td><td></td><td>0</td><td>Input configured as Phot (photocell).</td></tr>
<tr><td></td><td></td><td></td><td></td><td>1</td><td>Input configured as Phot test (tested photocell).</td></tr>
<tr><td></td><td></td><td></td><td></td><td>2</td><td>Input configured as Phot op (photocell active during opening only).</td></tr>
<tr><td></td><td></td><td></td><td></td><td>3</td><td>Input configured as Phot op test (tested photocell active during opening only).</td></tr>
<tr><td>SAFE 2</td><td>Configuration of safety input SAFE 2. 74</td><td>6</td><td></td><td>4</td><td>Input configured as Phot cl (photocell active during closing only).</td></tr>
<tr><td></td><td></td><td></td><td></td><td>5</td><td>Input configured as Phot cl test (tested photocell active during closing only).</td></tr>
<tr><td></td><td></td><td></td><td></td><td>6</td><td>Input configured as Bar, safety edge.</td></tr>
<tr><td></td><td></td><td></td><td></td><td>7</td><td>Input configured as Bar, tested safety edge.</td></tr>
<tr><td></td><td></td><td></td><td></td><td>8</td><td>Input configured as Bar 8k2.</td></tr>
<tr><td></td><td></td><td></td><td></td><td>21</td><td>Input configured as LOOP (only on SAFE 1)
Logic active from SW version 1.18 and later.</td></tr>
</table>

step-by-step mov.

	2 STEP	3 STEP	4 STEP
CLOSED	OPENS	OPENS	OPENS
DURING CLOSING			STOPS
OPEN	CLOSES	CLOSES	CLOSES
DURING OPENING		STOP + TCA	STOP + TCA
AFTER STOP	OPENS	OPENS	OPENS

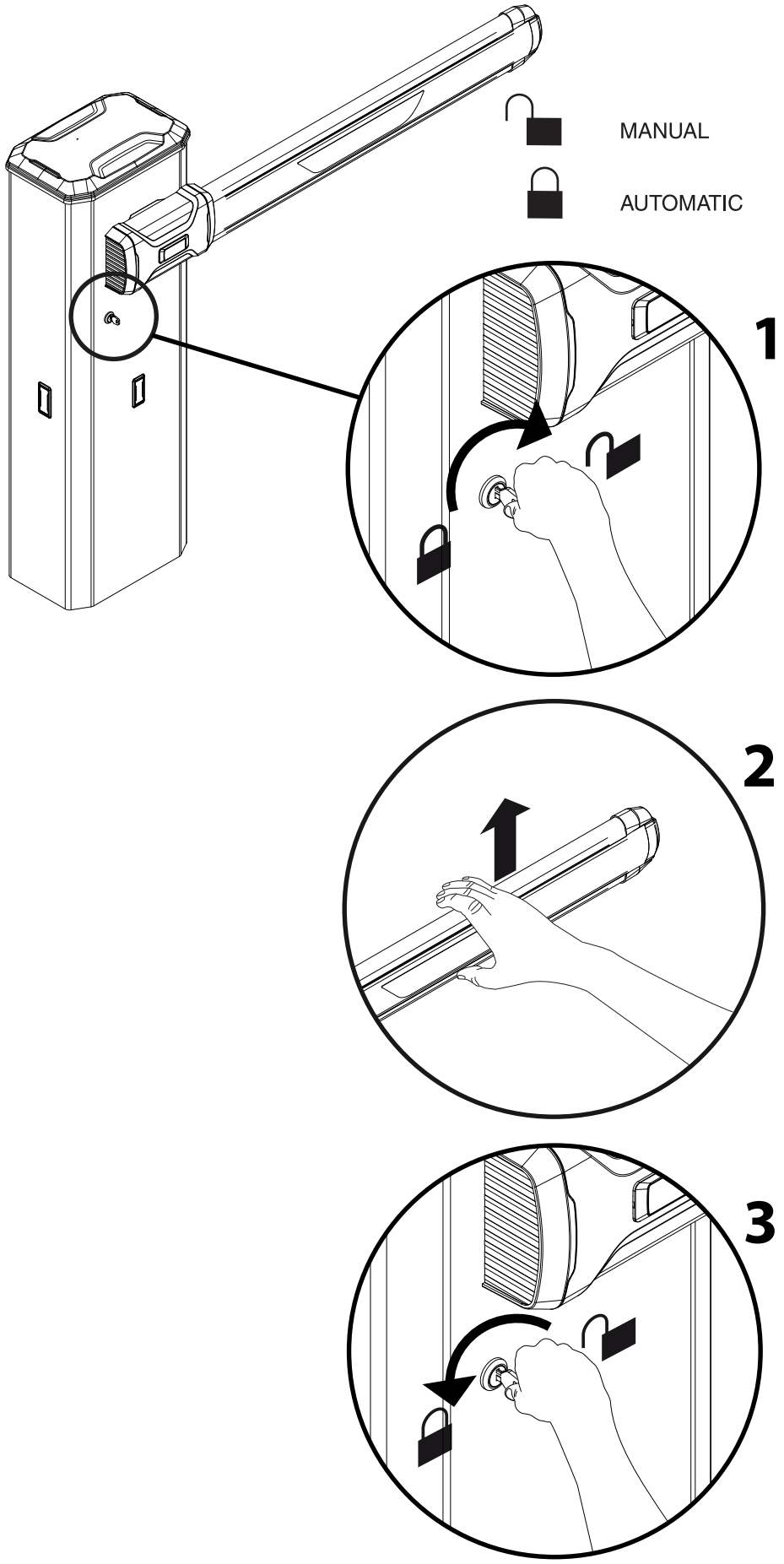
Logic	Definition	Default		Cross out setting used	Optional extras
Ic 1	**Configuration of command input IC 1. 61**	2		0	Input configured as Start E.
				1	Input configured as Start I.
				2	Input configured as Open.
				3	Input configured as Close.
Ic 2	**Configuration of command input IC 2. 62**	3		4	Input configured as Ped.
				5	Input configured as Timer.
AUX 0	**Configuration of AUX 0 output. 20-21**	6		0	Output configured as 2nd Radio Channel.
				1	Output configured as SCA (gate open light).
				2	Output configured as Courtesy Light command.
				3	Output configured as Zone Light command.
				4	Output configured as Stair Light
				5	Output configured as Alarm
				6	Output configured as Flashing light
AUX 3	**Configuration of AUX 3 output. 26-37**	1		7	Output configured as Latch
				8	Output configured as Magnetic lock
				9	Output configured as Maintenance
				10	Output configured as Flashing Light and Maintenance.
				11	Not available
				12	Output configured as Closed barrier status
				13	Lights on bar - open green, moving red flashing, closed red steady.
				14	Lights on bar - open green, moving red flashing, closed red flashing.
				16	Output configured as Open barrier status **Logic active from SW version 1.18 and later.**
FIXEd codE	**Fixed code**	0		0	Receiver is configured for operation in rolling-code mode. Fixed-Code Clones are not accepted.
				1	Receiver is configured for operation in fixed-code mode. Fixed-Code Clones are accepted.
ProtEct Ion LEvEL	**Setting the protection level**	0		0	A - The password is not required to access the programming menus B - Enables wireless memorizing of transmitters. Operations in this mode are carried out near the control panel and do not require access: - Press in sequence the hidden key and normal key (T1-T2-T3-T4) of a transmitter that has already been memorized in standard mode via the radio menu. - Press within 10 sec. the hidden key and normal key (T1-T2-T3-T4) of a transmitter to be memorized. The receiver exits programming mode after 10 sec.: you can use this time to enter other new transmitters by repeating the previous step. C - Enables wireless automatic addition of clones. Enables clones generated with the universal programmer and programmed Replays to be added to the receiver's memory. D - Enables wireless automatic addition of replays. Enables programmed Replays to be added to the receiver's memory. E - The board's parameters can be edited via the U-link network
				1	A - You are prompted to enter the password to access the programming menus The default password is 1234. No change in behaviour of functions B - C - D - E from 0 logic setting
				2	A - You are prompted to enter the password to access the programming menus The default password is 1234. B - Wireless memorizing of transmitters is disabled. C - Wireless automatic addition of clones is disabled. No change in behaviour of functions D - E from 0 logic setting
				3	A - You are prompted to enter the password to access the programming menus The default password is 1234. B - Wireless memorizing of transmitters is disabled. D - Wireless automatic addition of Replays is disabled. No change in behaviour of functions C - E from 0 logic setting
				4	A - You are prompted to enter the password to access the programming menus The default password is 1234. B - Wireless memorizing of transmitters is disabled. C - Wireless automatic addition of clones is disabled. D - Wireless automatic addition of Replays is disabled. E - The option of editing the board's parameters via the U-link network is disabled. Transmitters are memorized only using the relevant Radio menu. IMPORTANT: This high level of security stops unwanted clones from gaining access and also stops radio interference, if any.
SEr IAL nodE	**Serial mode** (Identifies how board is configured in a BFT network connection).	0		0	Standard SLAVE: board receives and communicates commands/diagnostics/etc.
				1	Standard MASTER: board sends activation commands (START, OPEN, CLOSE, PED, STOP) to other boards.
				2	SLAVE opposite leaves in local network : the control unit is the slave in an opposite leaves network with no smart module (fig.L)
				3	MASTER opposite leaves in local network: the control unit is the master in an opposite leaves network with no smart module (fig.L)
AddrESS	**Address**	0		[____]	Identifies board address from 0 to 119 in a local BFT network connection. (see U-LINK OPTIONAL MODULES section)

Logic	Definition	Default		Cross out setting used	Optional extras
EXP I1	**Configuration of EXPI1 input on input-output expansion board. 1-2**	1		0	Input configured as Start E command.
				1	Input configured as Start I command.
				2	Input configured as Open command.
				3	Input configured as Close command.
				4	Input configured as Timer command
				5	Input configured as Timer command.
				6	Input configured as Timer Pedestrian command
				7	Input configured as Phot (photocell) safety.
				8	Input configured as Phot op safety (photocell active during opening only).
				9	Input configured as Phot cl safety (photocell active during closing only).
				10	Input configured as Bar safety (safety edge).
				11	Input configured as Phot test safety (tested photocell). Input 3 (EXPI2) on input/output expansion board is switched automatically to safety device test input, EXPFAULT1.
				12	Input configured as Phot op test safety (tested photocell active during opening only). Input 3 (EXPI2) on input/output expansion board is switched automatically to safety device test input, EXPFAULT1.
				13	Input configured as Phot cl test safety (tested photocell active during closing only). Input 3 (EXPI2) on input/output expansion board is switched automatically to safety device test input, EXPFAULT1.
				14	Input configured as Bar safety (tested safety edge). Input 3 (EXPI2) on input/output expansion board is switched automatically to safety device test input, EXPFAULT1.
EXP I2	**Configuration of EXPI2 input on input-output expansion board. 1-3**	0		0	Input configured as Start E command.
				1	Input configured as Start I command.
				2	Input configured as Open command.
				3	Input configured as Close command.
				4	Input configured as Timer command
				5	Input configured as Timer command.
				6	Input configured as Timer Pedestrian command
				7	Input configured as Phot (photocell) safety.
				8	Input configured as Phot op safety (photocell active during opening only).
				9	Input configured as Phot cl safety (photocell active during closing only).
				10	Input configured as Bar safety (safety edge).
EXPo1	**Configuration of EXPO2 output on input-output expansion board 4-5**	11		0	Output configured as 2nd Radio Channel.
				1	Output configured as SCA (gate open light).
				2	Output configured as Courtesy Light command.
				3	Output configured as Zone Light command.
				4	Output configured as Stair Light.
				5	Output configured as Alarm.
EXPo2	**Configuration of EXPO2 output on input-output expansion board 6-7**	11		6	Output configured as Flashing light.
				7	Output configured as Latch.
				8	Output configured as Magnetic lock.
				9	Output configured as Maintenance.
				10	Output configured as Flashing Light and Maintenance.
				11	Output configured as Traffic Light control with TLB board.
				12	output configured as barrier status
trAFF ic L IGht PrEFLASh inG	**Traffic light pre-flashing**	0		0	Pre-flashing switched off.
				1	Red lights flash, for 3 seconds, at start of operation.
trAFF ic L IGht rEd LAMP ALWAYS on	**Steadily lit red light**	0		0	Red lights off when gate closed.
				1	Red lights on when gate closed.
rEuErS.obSt	**Reversing obstacle**	2		2	After detecting an obstacle during closure, it re-opens completely. After detecting an obstacle during opening, the manoeuvre gets interrupted and blocks the automation.
				3	After detecting an obstacle during opening, the manoeuvre gets interrupted and blocks the automation. After detecting an obstacle during closure, the manoeuvre gets interrupted and blocks the automation. **Logic active from SW version 1.18 and later.**

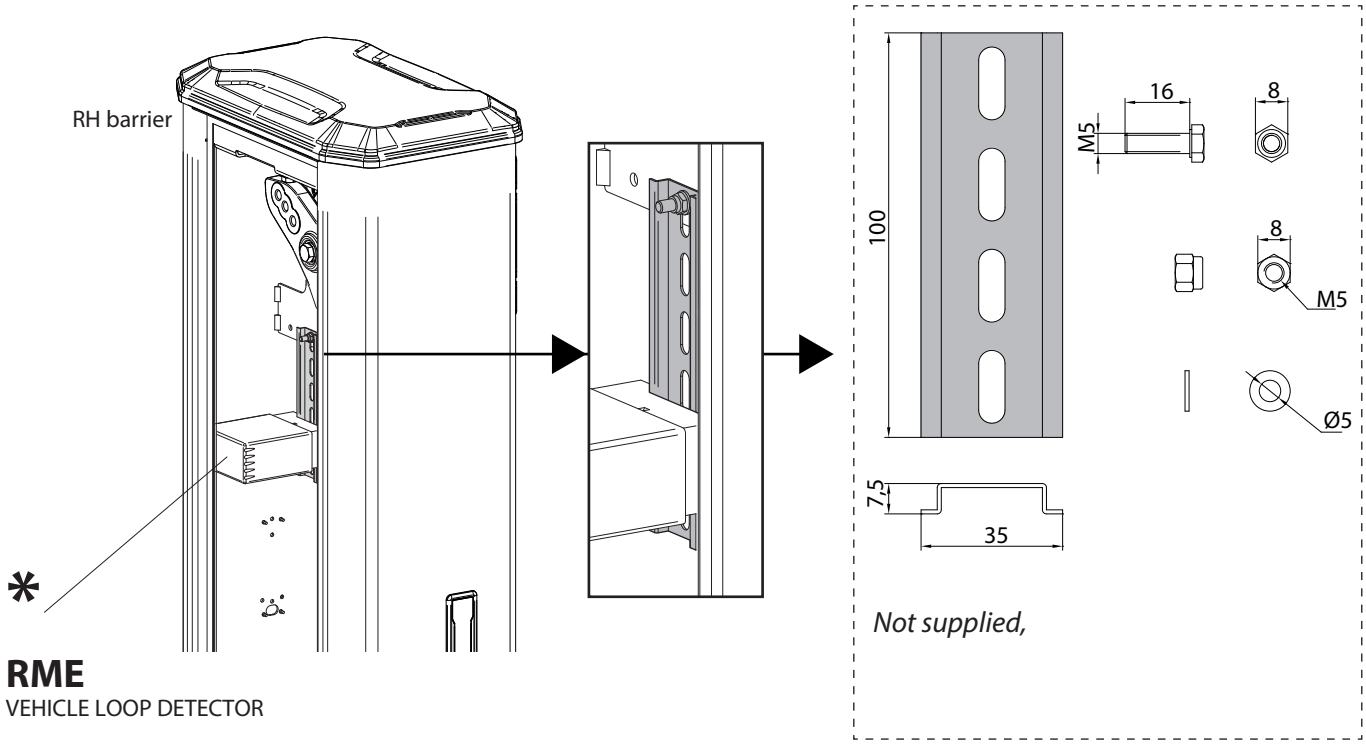
TABLE "C" – RADIO MENU (rAd Io)

Logic	Description
Add StArt	**Add Start Key** associates the desired key with the Start command
Add 2ch	**Add 2ch Key** associates the desired key with the 2nd radio channel command.
ErASE 64	**Erase List** ⚠ **WARNING!** Erases all memorized transmitters from the receiver's memory.
cod rH	**Read receiver code** Displays receiver code required for cloning transmitters.
uK	**ON =** Enables remote programming of cards via a previously memorized W LINK transmitter. It remains enabled for 3 minutes from the time the W LINK transmitter is last pressed. **OFF=** W LINK programming disabled.

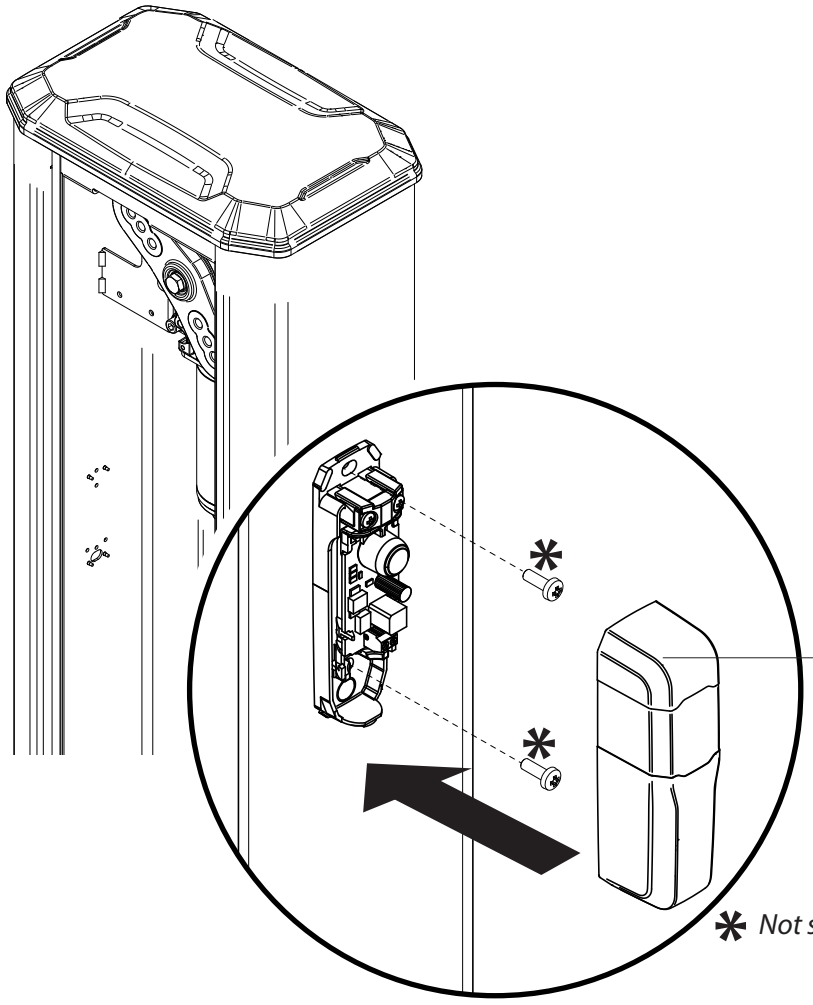
O USER'S MANUAL: MANUAL OPERATION



D814436 2FAA0_01



RME
VEHICLE LOOP DETECTOR



COMPACTA A20-180
PHOTOCELL

MAINTENANCE LOG

Installation data

Installer	
Customer	
Serial number	

Data installazione	
Activation date	
Location	

Maintenance date

Nr.	Date	Intervention description	Signature	
1			Tecnico / Technician / Technicien Techniker / Técnico / Monteur	Cliente / Customer / Client Kunde/ Cliente / Klant
2			Tecnico / Technician / Technicien Techniker / Técnico / Monteur	Cliente / Customer / Client Kunde/ Cliente / Klant
3			Tecnico / Technician / Technicien Techniker / Técnico / Monteur	Cliente / Customer / Client Kunde/ Cliente / Klant
4			Tecnico / Technician / Technicien Techniker / Técnico / Monteur	Cliente / Customer / Client Kunde/ Cliente / Klant
5			Tecnico / Technician / Technicien Techniker / Técnico / Monteur	Cliente / Customer / Client Kunde/ Cliente / Klant
6			Tecnico / Technician / Technicien Techniker / Técnico / Monteur	Cliente / Customer / Client Kunde/ Cliente / Klant
7			Tecnico / Technician / Technicien Techniker / Técnico / Monteur	Cliente / Customer / Client Kunde/ Cliente / Klant
8			Tecnico / Technician / Technicien Techniker / Técnico / Monteur	Cliente / Customer / Client Kunde/ Cliente / Klant
9			Tecnico / Technician / Technicien Techniker / Técnico / Monteur	Cliente / Customer / Client Kunde/ Cliente / Klant
10			Tecnico / Technician / Technicien Techniker / Técnico / Monteur	Cliente / Customer / Client Kunde/ Cliente / Klant
11			Tecnico / Technician / Technicien Techniker / Técnico / Monteur	Cliente / Customer / Client Kunde/ Cliente / Klant
12			Tecnico / Technician / Technicien Techniker / Técnico / Monteur	Cliente / Customer / Client Kunde/ Cliente / Klant
13			Tecnico / Technician / Technicien Techniker / Técnico / Monteur	Cliente / Customer / Client Kunde/ Cliente / Klant
14			Tecnico / Technician / Technicien Techniker / Técnico / Monteur	Cliente / Customer / Client Kunde/ Cliente / Klant

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