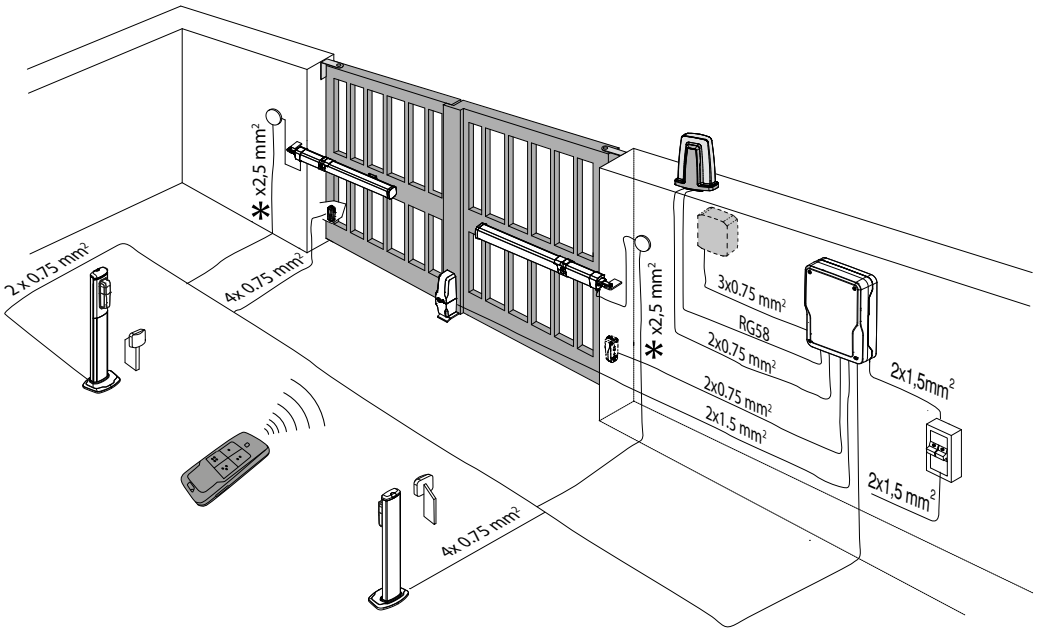
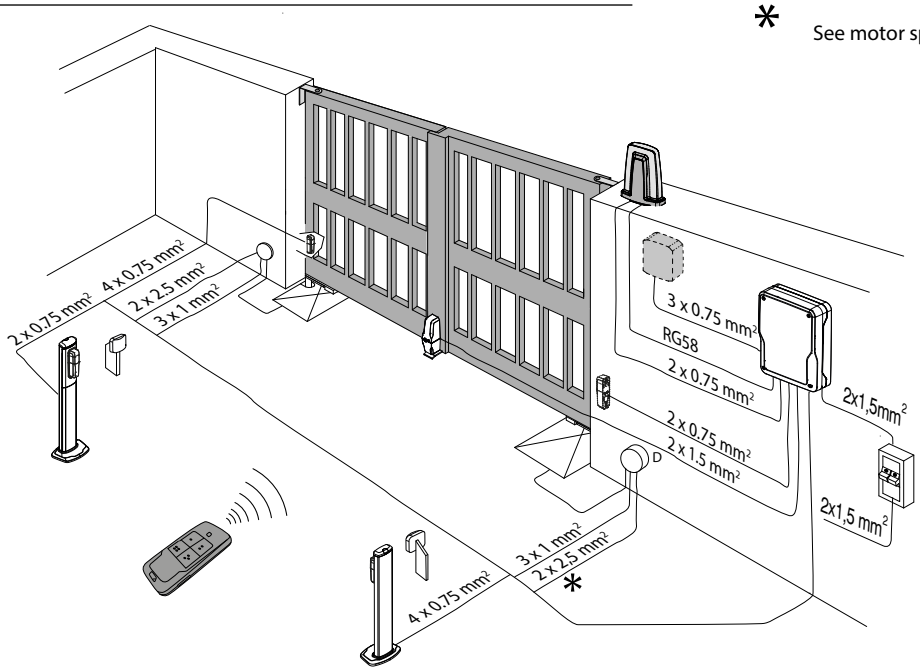
TUBE ARRANGEMENT

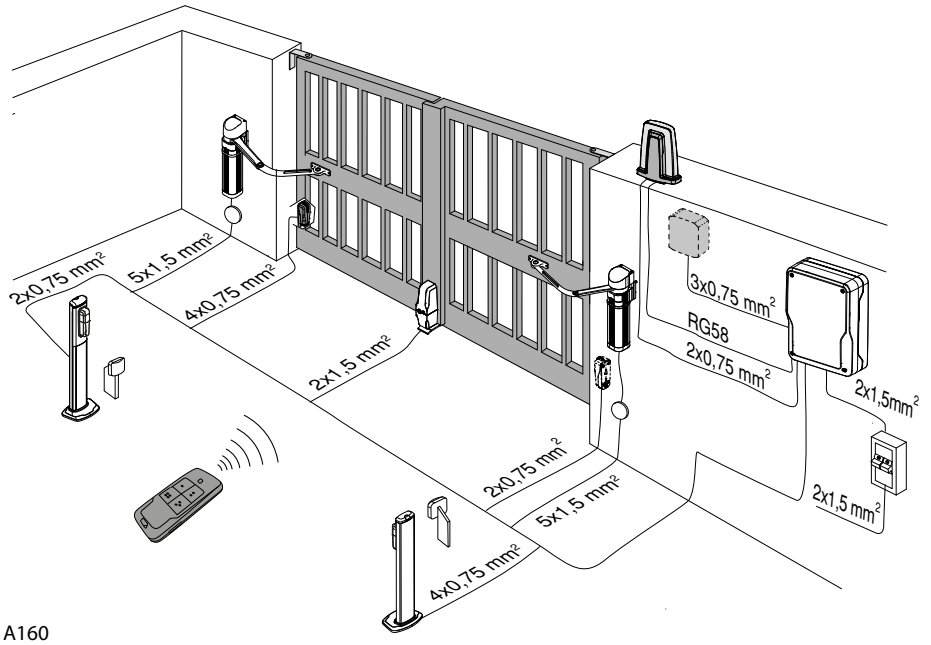
A

D814283 0AR00_06



* See motor specifications





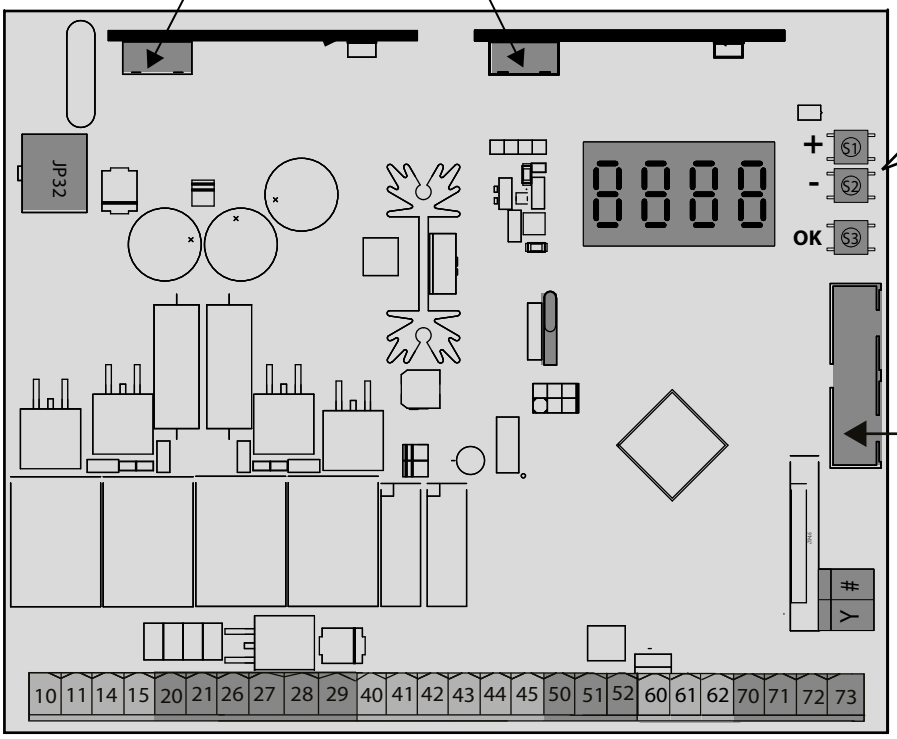
B

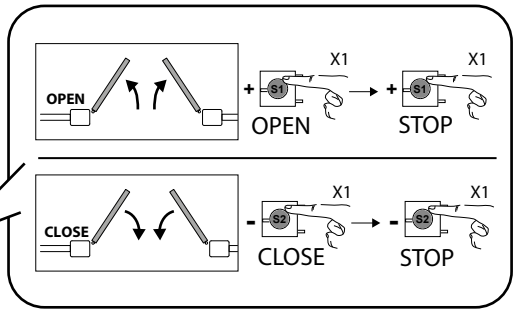
U-LINK → UL InH 1 = 1

U-LINK 2.0 → UL InH 1 = 0

Connector for optional board

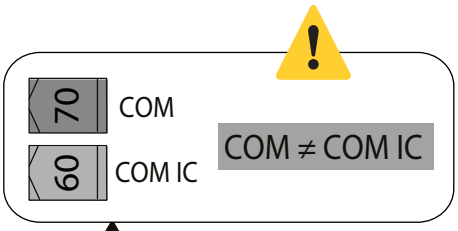
U-LINK 2 | 1 U-LINK 2.0

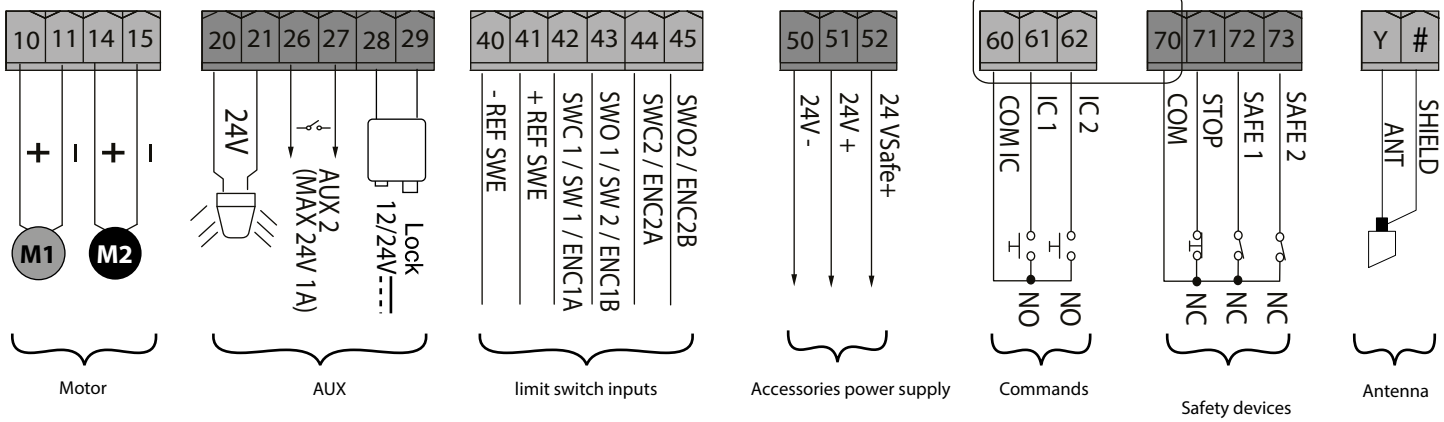




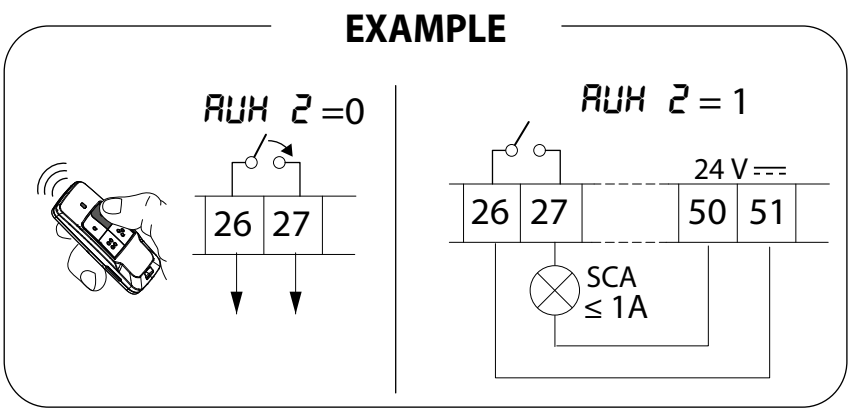
Expansion card connector

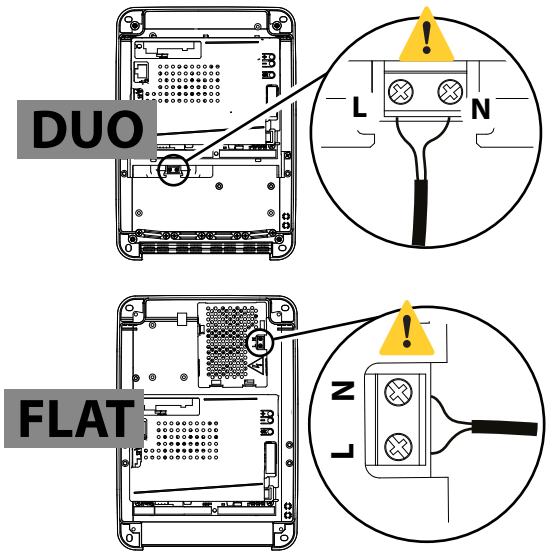
B2





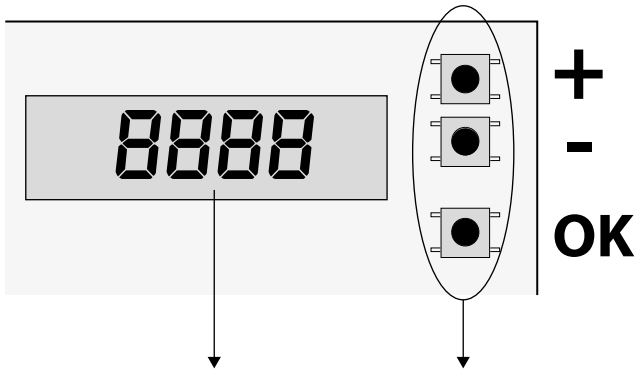
EXAMPLE





DIAGNOSTICS

PAGE 24-53-54



display

Add 1st radio channel

programming keys

OPEN / STOP

+

< 2s — OPEN / STOP - OPEN / STOP - OUVERTURE / ARRÊT
OPEN / STOP - OPEN / STOP - OPEN / STOP

>5s — Aggiungi 1° canale radio - Add 1st radio channel
Ajouter 1er canal radio - 1. Funkkanal hinzufügen
Agregar 1er canal radio - 1e radiokanaal toevoegen

x1 — ↑ navigazione nel menù - scroll through the menu - navigation dans le menu
Navigation im Menü - navegación por el menú - navigatie in het menu

-

< 2s — CLOSE / STOP - CLOSE / STOP - FERMETURE / ARRÊT
CLOSE / STOP - CLOSE / STOP - CLOSE / STOP

>5s — Aggiungi 2° canale radio - Add 2nd radio channel
Ajouter 2e canal radio - 2. Funkkanal hinzufügen
Agregar 2º canal radio - 2e radiokanaal toevoegen

x1 — ↓ navigazione nel menù - scroll through the menu - navigation dans le menu
Navigation im Menü - navegación por el menú - navigatie in het menu

OK

>5s — avvio autoset - start autoset - lancement de l'autoset
Autoset-Start - inicio autoset - autoset starten

x1 ENTER — avvio procedura guidata / conferma selezione
start guided procedure / confirm selection
lancement de la procédure guidée / confirmer la sélection
Start des Assistenten / Auswahl bestätigen
inicio del asistente / confirmar selección
wizardprocedure starten / bevestig de selectie

x2 ENTER — ingresso menù avanzato - enter advanced menu
entrée menu avancé - Zugang zum erweiterten Menü
entrada menú avanzado - ingang uitgebreid menu

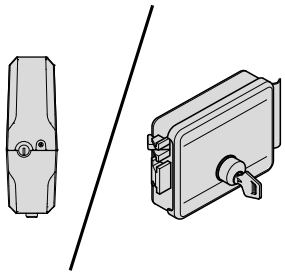
+ **-**

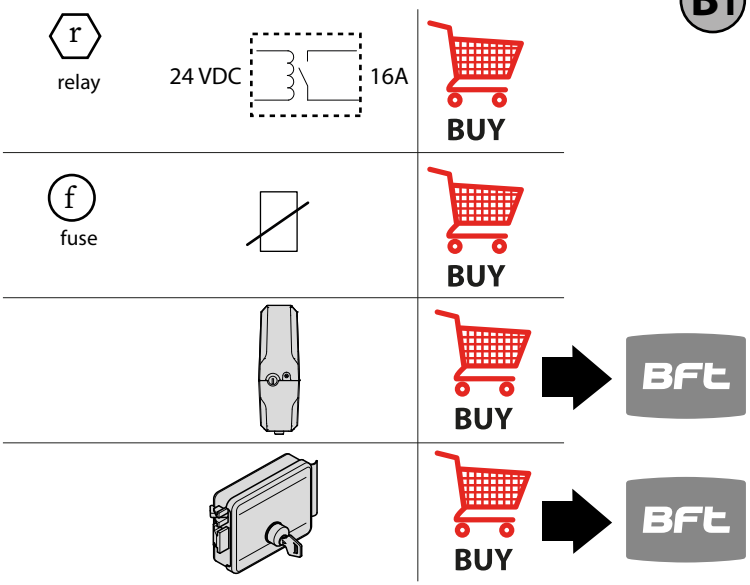
>5s — cancellazione trasmettitori - transmitters cancellation
annulation des émetteurs - löschen der sender
eliminación transmisores - wissen zenders

x1 ESC — uscita menù - exit menu- sortie menu
Menüabbruch - salida menú - uitgang menu

B1

Connection Example

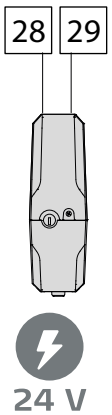




1 EBP BT

24V

SErr = 4



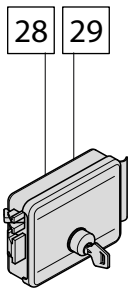
1 ECB

12V

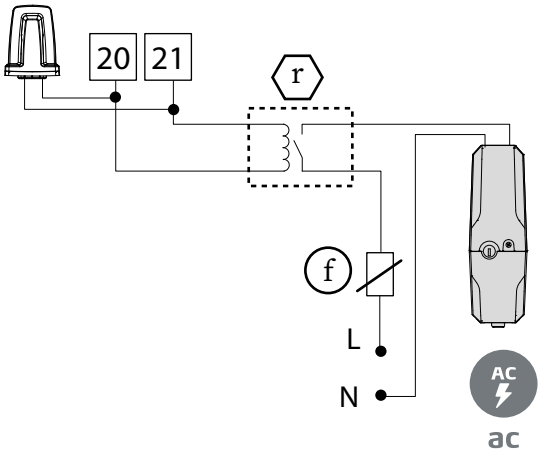
SErr = 0

24V

SErr = 2



1 EBP AC

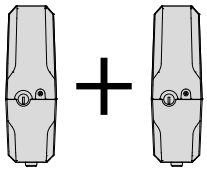


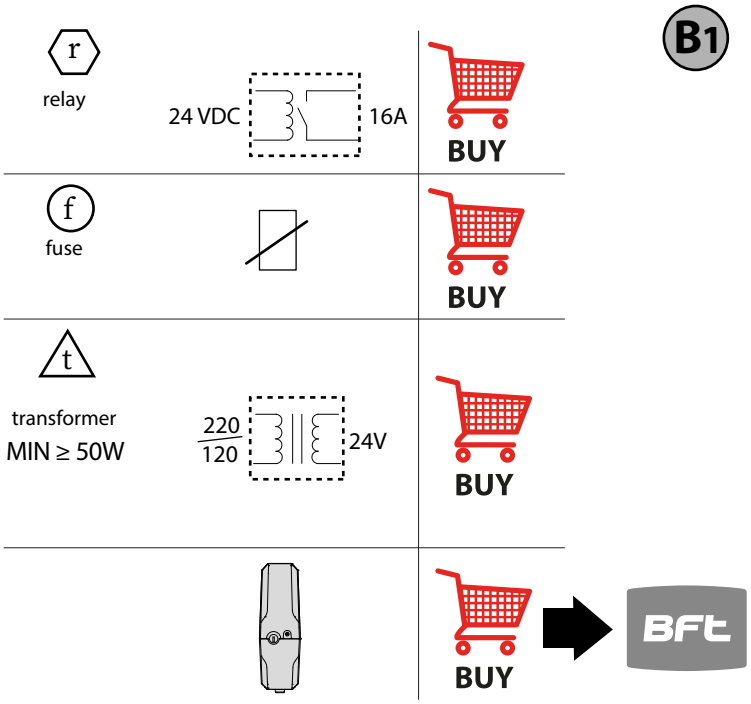
L-N = 220-230 VAC 50/60 Hz → (f) = T 1,6A

B1

D814283 0AR00_06

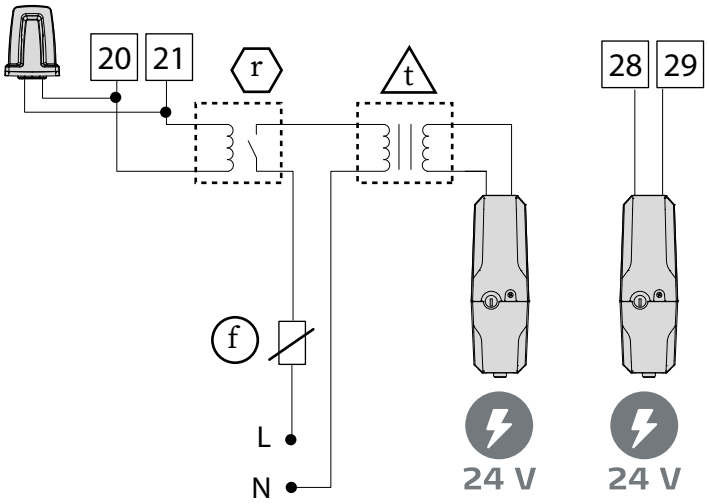
Connection Example





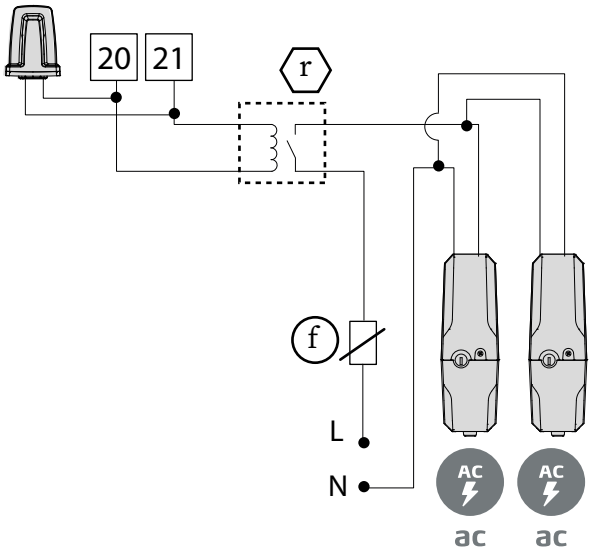
2 EBP BT

SErr = 4



L-N = 220-230 VAC 50/60 Hz → f = T 1,6A

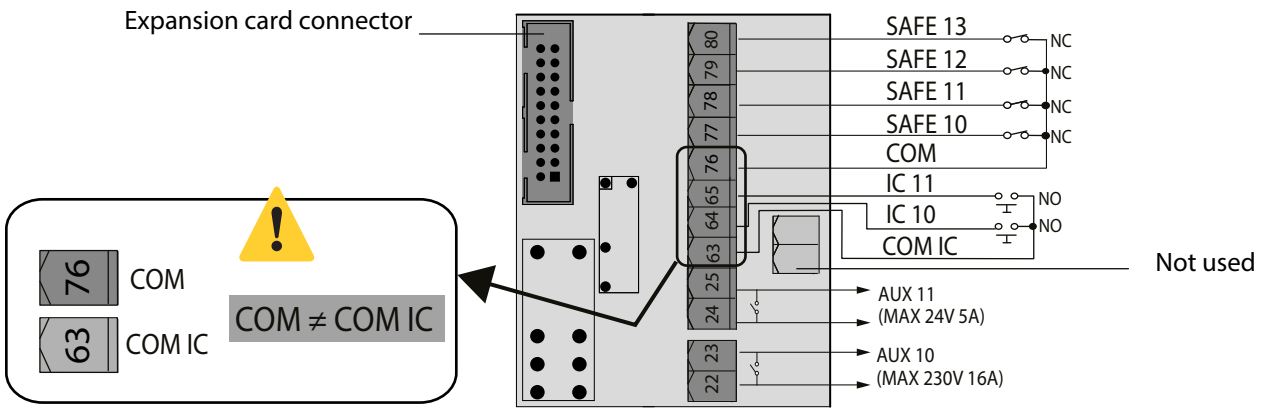
2 EBP AC



L-N = 220-230 VAC 50/60 Hz → f = T 3,15A

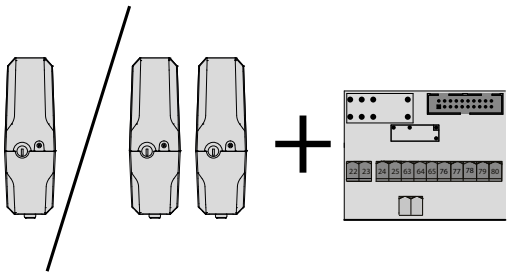
EXPANSION BOARD

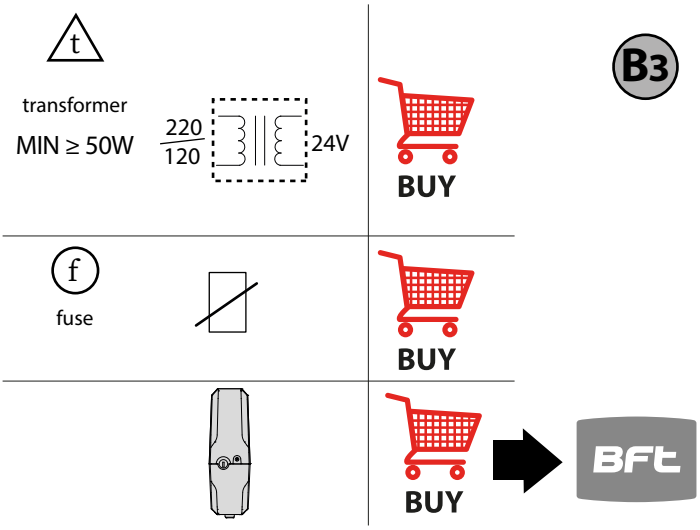
B2



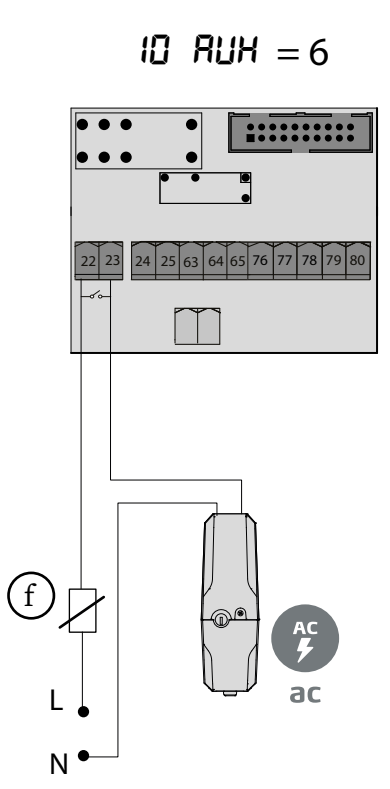
B3

Connection Example



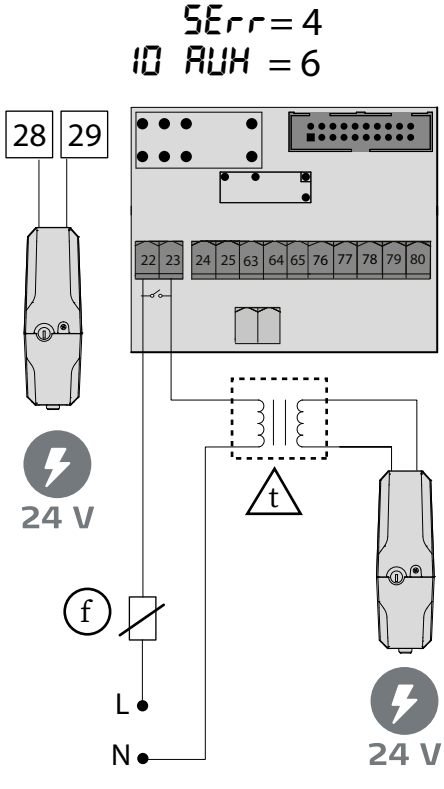


1 EBP AC

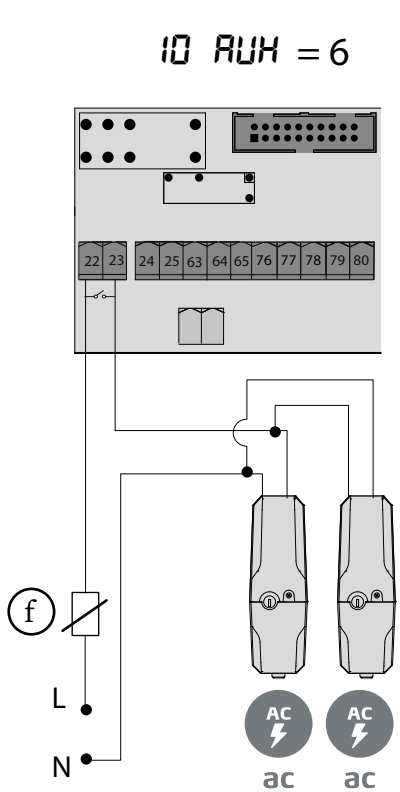


L-N = 220-230 VAC 50/60 Hz → f = T 1,6A

2 EBP BT

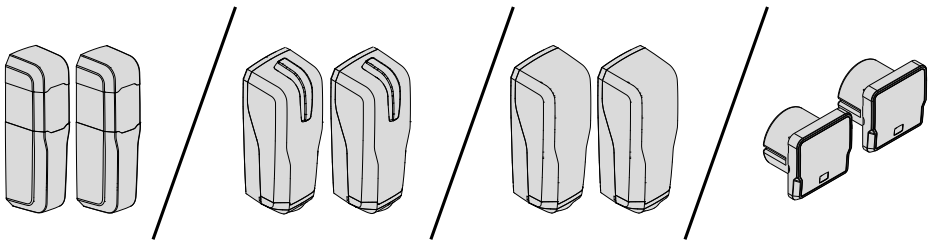


2 EBP AC



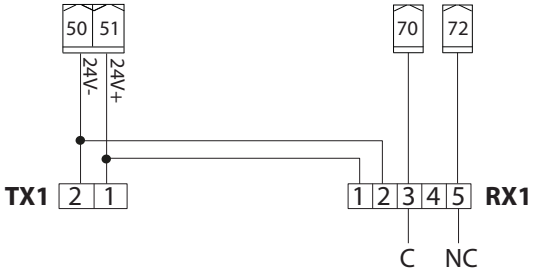
L-N = 220-230 VAC 50/60Hz → f = T 3,15A

SAFE 1 Connection Example



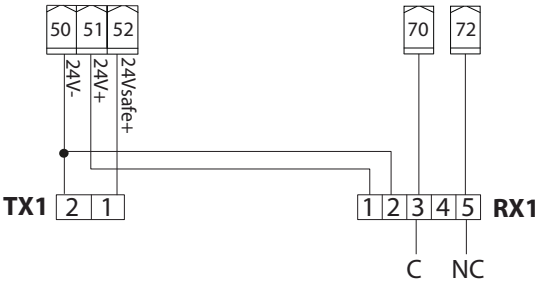
Photocells not checked (Check every 6 months)

C



Photocell checked

D



ENGLISH

IT IS NECESSARY TO FOLLOW THIS SEQUENCE OF ADJUSTMENTS:

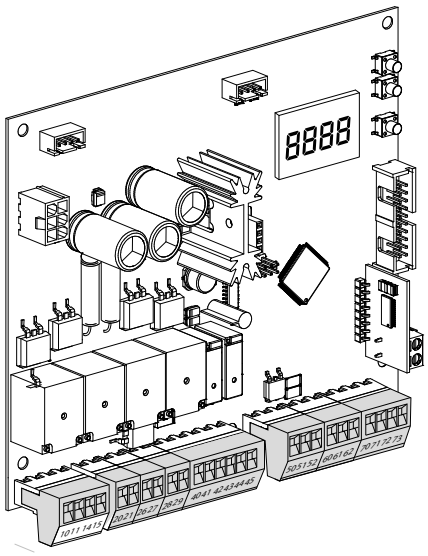
1 - Adjusting the limit switches
2 - Autoset
3 - Programming remote controls
4 - Setting of parameters/logic, where necessary

After each adjustment of the end stop position a new autoset is required.
After each modification of the motor type, a new autoset must be carried out

If the simplified menu is used:
- In GIUNO ULTRA BT A 20 - GIUNO ULTRA BT A 50 - E5 BT A18 - E5 BT A12 motors: phase 1 (end stop adjustment) is included in the simplified menu.
- In other motors: phase 1 (end stop adjustment) must be carried out before activating the simplified menu

MOTOR COMPATIBILITY

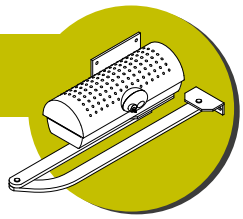
THALIA BT A80/ BT A160

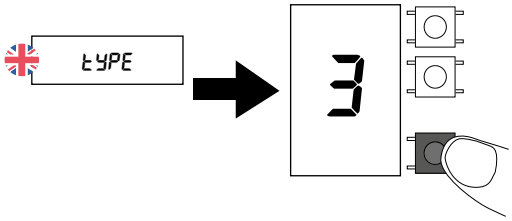


ELI 250 BT	✗	
LUX BT	✗	
LUX G BT	✗	
IGEA BT	✓	> 01/03/2022 *
SUB BT	✓	
PHOBOS BT A 25/40	✓	
PHOBOS BT B 25/40	✓	
PHOBOS N BT	✓	
KUSTOS BT A 25/40	✓	
KUSTOS BT B 25/40	✓	
GIUNO ULTRA BT A 20	✓	
GIUNO ULTRA BT A 50	✓	
VIRGO SMART BT A	✓	
E5 BT A18	✓	
E5 BT A12	✓	
ELI BT A40 + FCE	✓	> 01/04/2022 *
ELI BT A40	✓	> 01/04/2022 *
ELI BT A35 V + FCE	✓	> 01/04/2022 *
ELI BT A 35 V	✓	> 01/04/2022
PHOBOS VELOCE BT B35	✓	

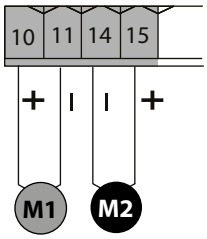
*engine only compatible if produced after this date

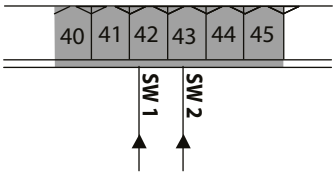
IGEA BT

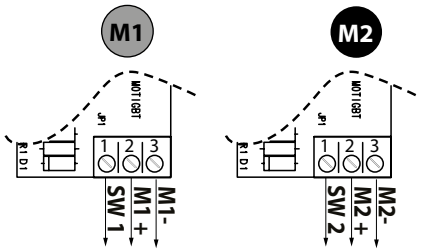




Valid for motors produced > 01/03/2022

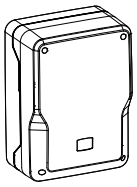


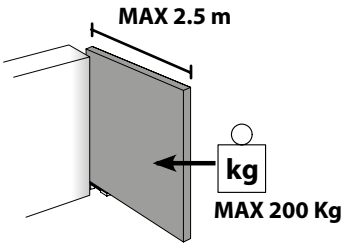




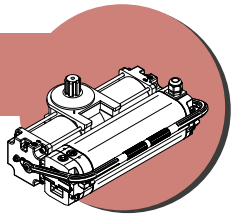
	IGEA BT
Maximum power	70W
Maximum cycle	continuous cycle

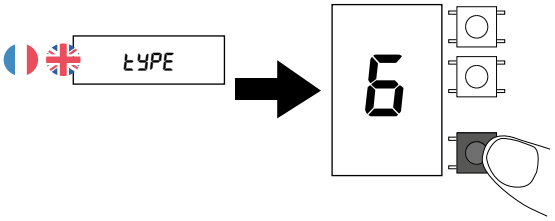
THALIA BT A80

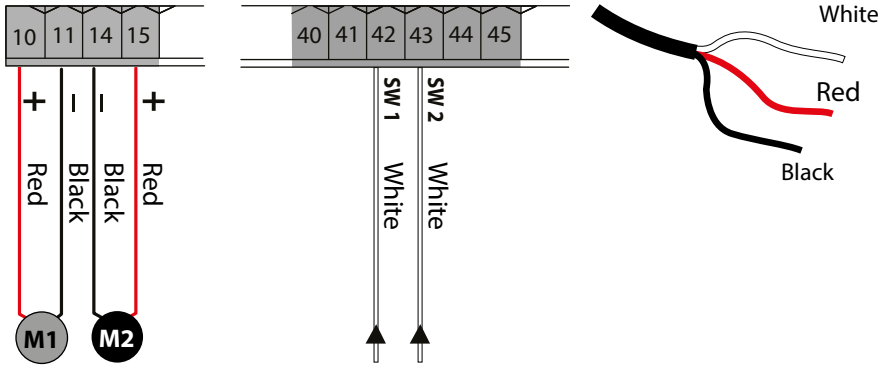




SUB BT



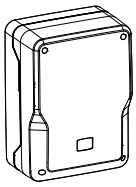


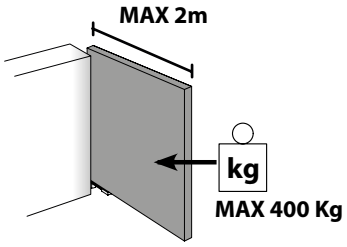


	SUB BT
Maximum power	90W
Maximum cycle	40 cycles/h

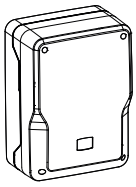
RECOMMENDED

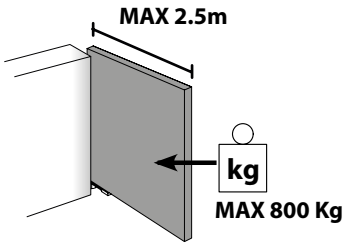
THALIA BT A80



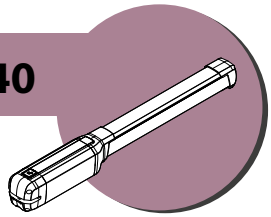


THALIA BT A160

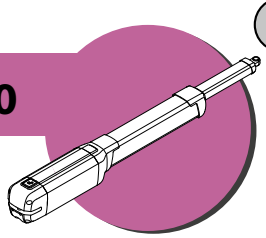




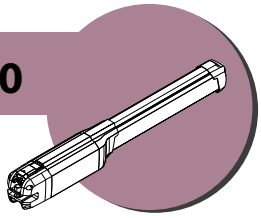
PHOBOS BT A 25/40



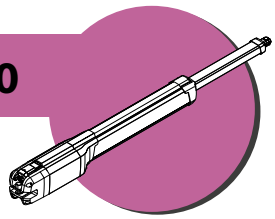
KUSTOS BT A 25/40



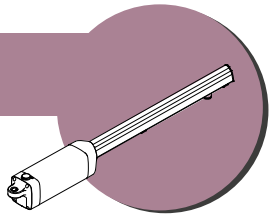
PHOBOS BT B 25/40

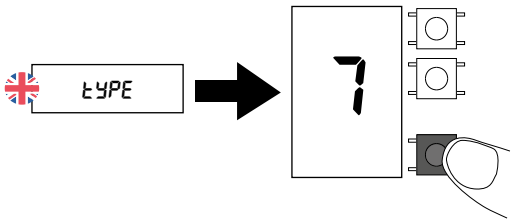


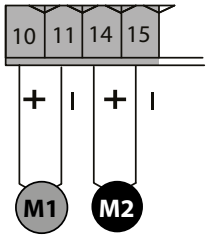
KUSTOS BT B 25/40

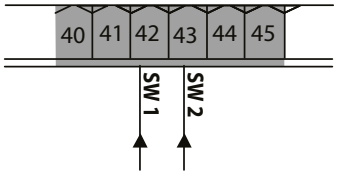


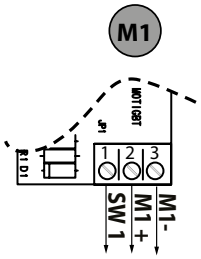
PHOBOS N BT

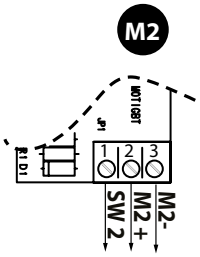










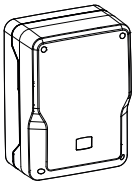


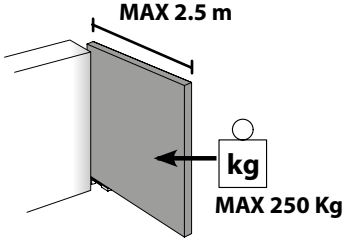
	PHOBOS N BT - PHOBOS BT A - PHOBOS BT B KUSTOS BT A - KUSTOS BT B
Maximum power	**40W**
Maximum cycle	30 cycles/h

RECOMMENDED

PHOBOS/KUSTOS 25

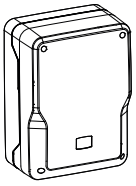
THALIA BT A80

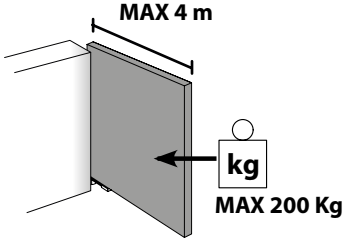




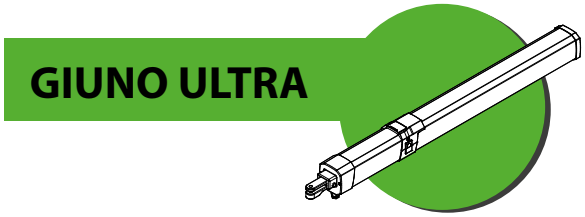
PHOBOS/KUSTOS 40

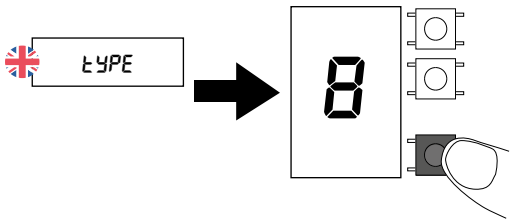
THALIA BT A80

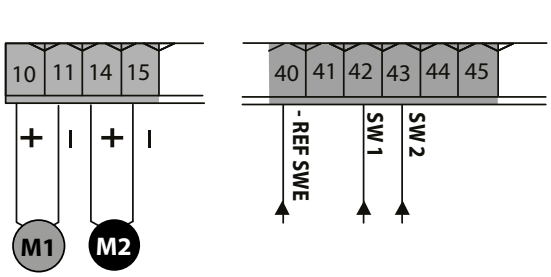


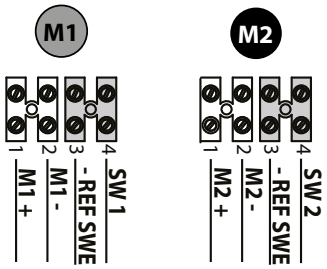


GIUNO ULTRA







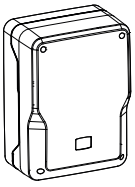


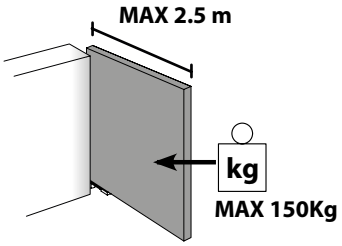
	GIUNO ULTRA BT A 20 GIUNO ULTRA BT A 50
Maximum power	90W
Maximum cycle	30 cycles/h

RECOMMENDED

GIUNO ULTRA BT A 20

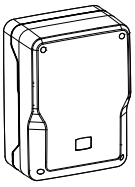
THALIA BT A80

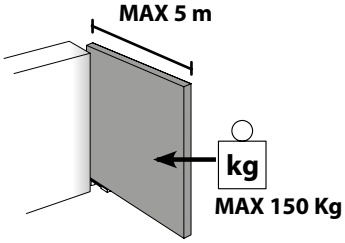




GIUNO ULTRA BT A 50

THALIA BT A80

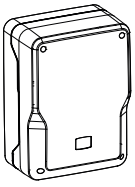


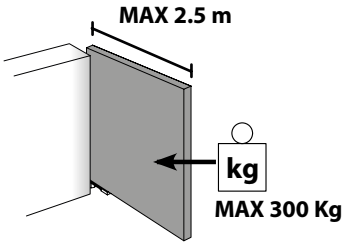


RECOMMENDED

GIUNO ULTRA BT A 20

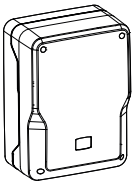
THALIA BT A160

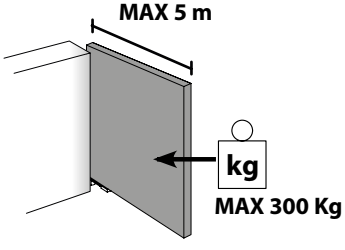




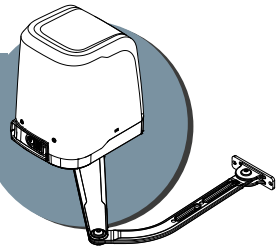
GIUNO ULTRA BT A 50

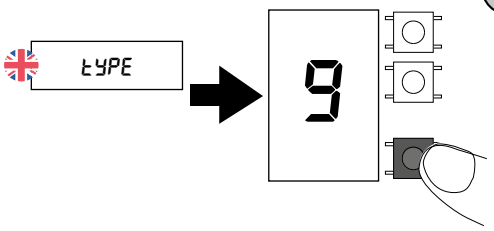
THALIA BT A160

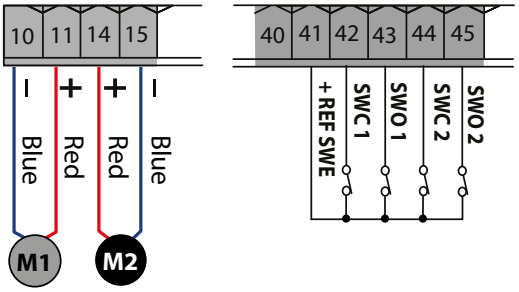




VIRGO SMART BT A SLAVE

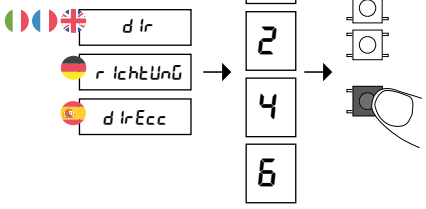


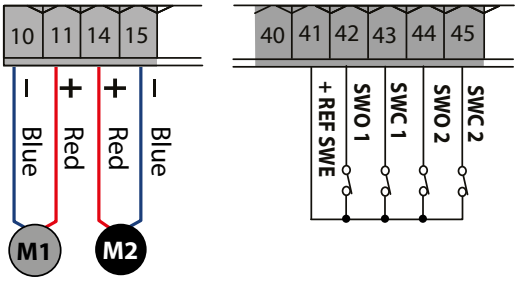




INSTALLATION ALTERNATIVE

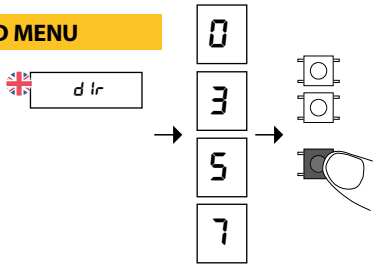
SIMPLIFIED MENU



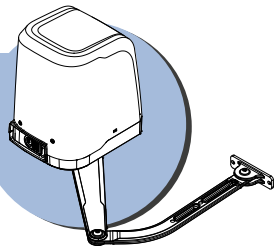


INSTALLATION ALTERNATIVE

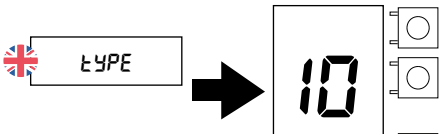
SIMPLIFIED MENU

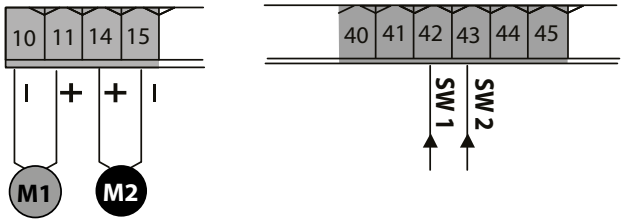


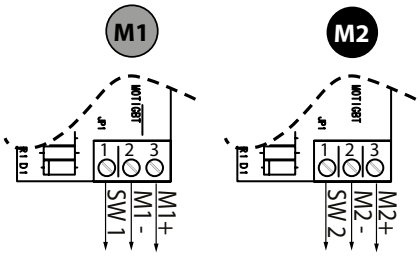
VIRGO SMART BT A SLAVE



With 1 wire limit switch



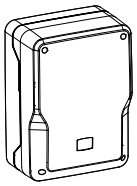


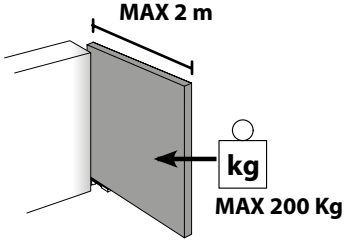


	VIRGO SMART BT A
Maximum power 110W	
Maximum cycle	30 cycles/h

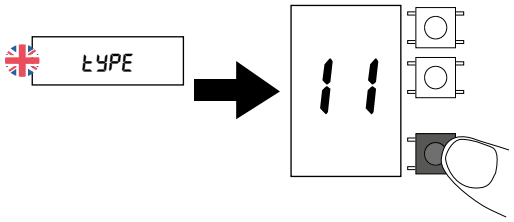
RECOMMENDED

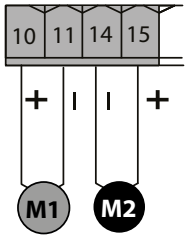
THALIA BT A80

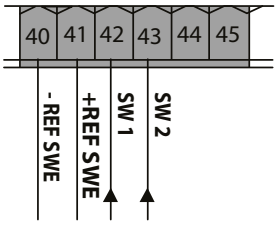


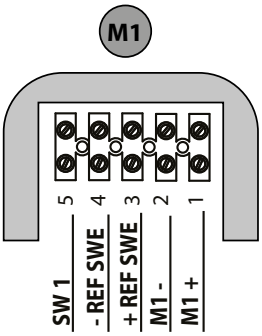


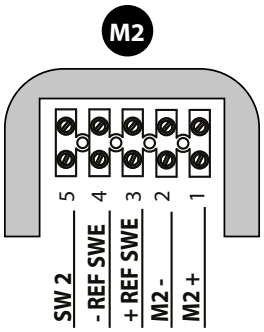
E5 BT A18







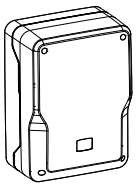


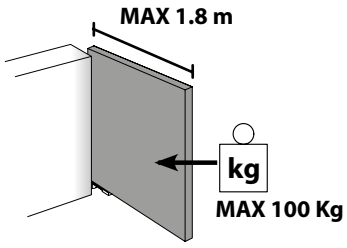


	E5 BT A18
Maximum power **100W**	
Maximum cable length	**30m**
Maximum cycle	20 cycles/h

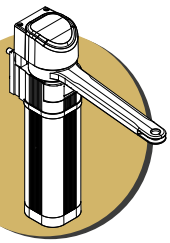
RECOMMENDED

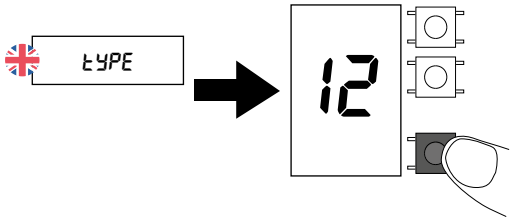
THALIA BT A80

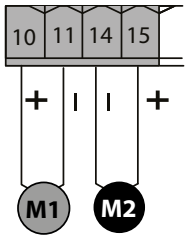


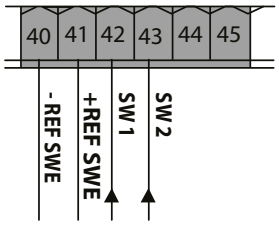


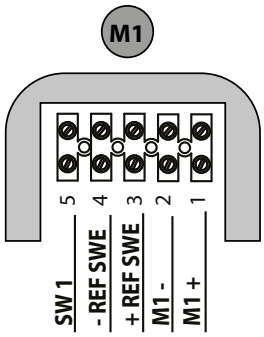
E5 BT A12

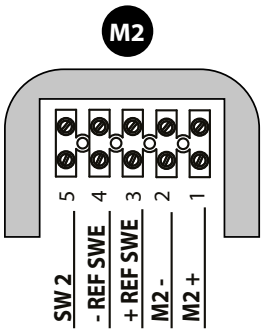






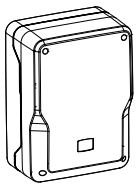


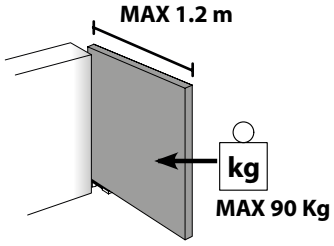




	E5 BT A12
Maximum power -	**100W**
Maximum cable length	**30m**
Maximum cycle	100 cycles/h

THALIA BT A80





ON pedestrian gates, adjust the speed so as to limit the energy of the leaf within a maximum value of 1.69 Joule (as required by the EN16005 regulation).
Use the table to determine the minimum closing times between 90°and 10°.

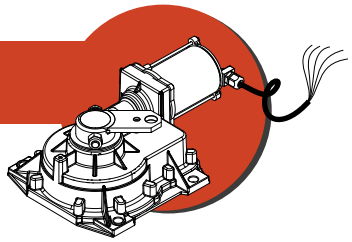
Table with the leaf manoeuvre minimum times

Leaf width (mm)	Leaf weight (kg)				
	50	60	70	80	90
750 mm	3,0 s	3,0 s	3,0 s	3,0 s	3,5 s
850 mm	3,0 s	3,0 s	3,5 s	3,5 s	4,0 s
1000 mm	3,5 s	3,5 s	4,0 s	4,0 s	4,5 s
1200 mm	4,0 s	4,5 s	4,5 s	5,0 s	5,5 s

IMPORTANT: Low-energy operation is not considered a proper safety measure if the leaf is used by elderly, invalid, disabled people.
In this case, provide additional safety measures, according to the provisions of the legislation in force and your local on-site risk assessment.

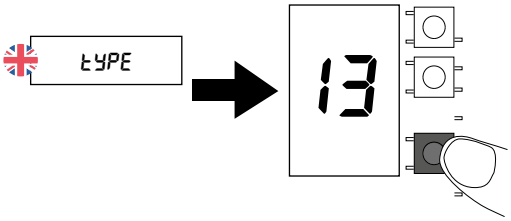
E

ELI BT A40 + FCE

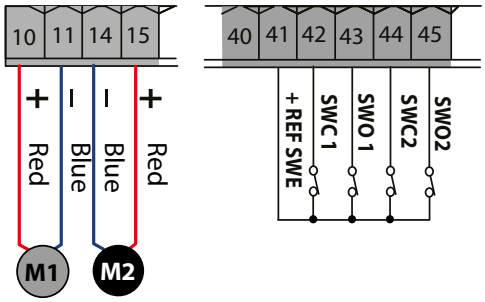


Only with limit switch kit

BUY

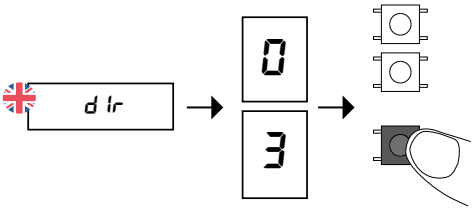


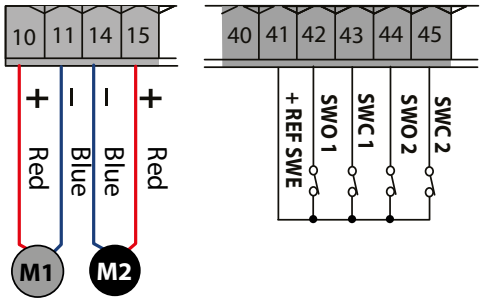
Valid for motors produced > 01/04/2022



INSTALLATION ALTERNATIVE

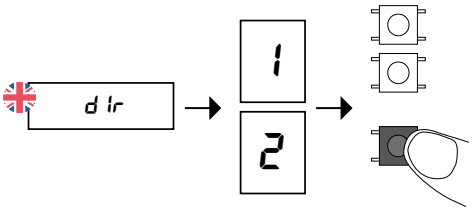
SIMPLIFIED MENU





INSTALLATION ALTERNATIVE

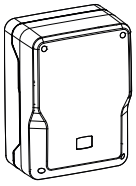
SIMPLIFIED MENU

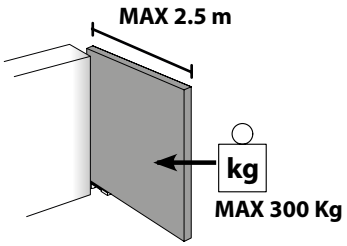


	ELI BT A40 + FCE
Maximum power	180W
Maximum cycle	continuous cycle

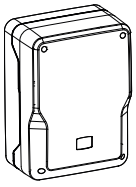
RECOMMENDED

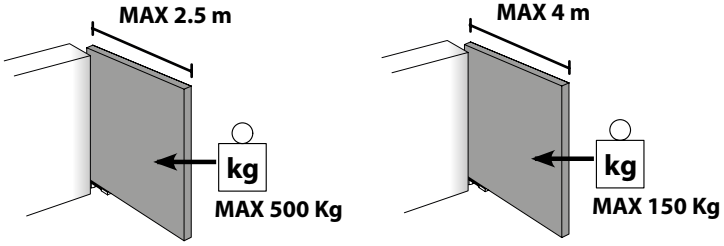
THALIA BT A80



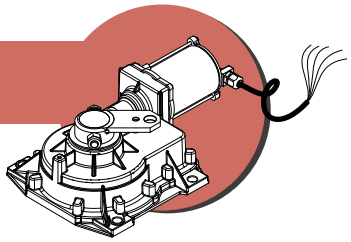


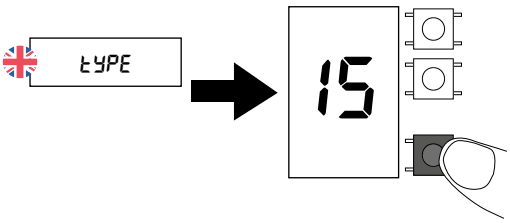
THALIA BT A160



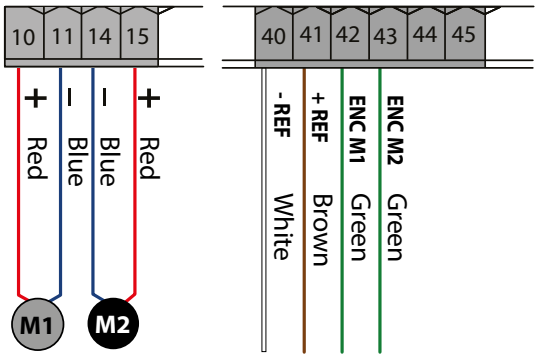


ELI BT A40





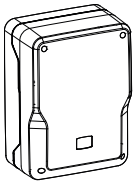
Valid for motors produced > 01/04/2022

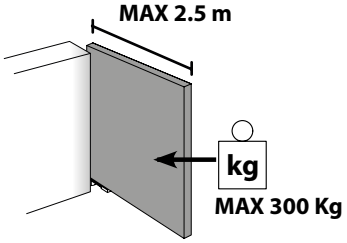


	ELI BT A40
Maximum power	180W
Maximum cycle	continuous cycle

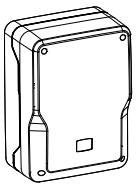
RECOMMENDED

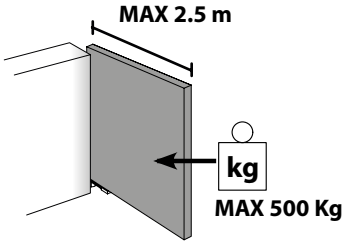
THALIA BT A80

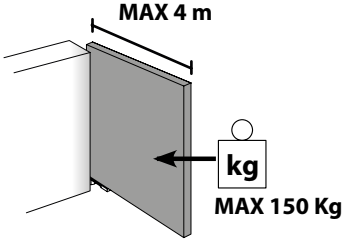




THALIA BT A160

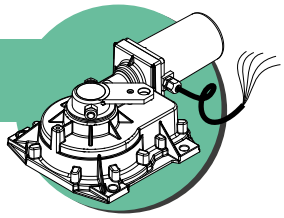






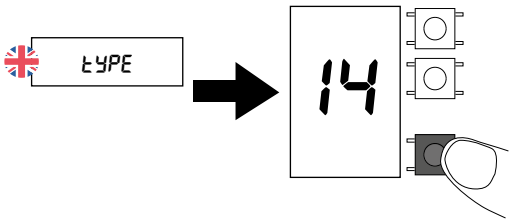
E

ELI BT A35 V + FCE

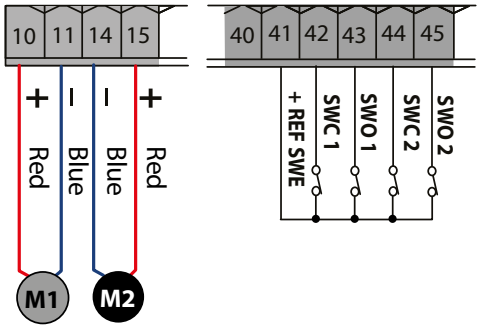


Only with limit switch kit

BUY

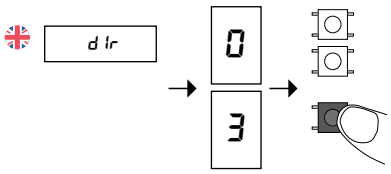


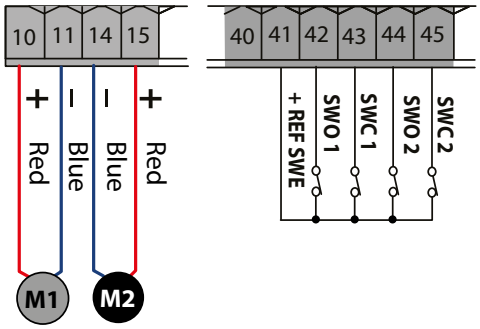
Valid for motors produced > 01/04/2022



INSTALLATION ALTERNATIVE

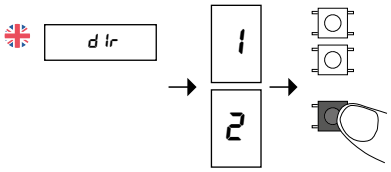
SIMPLIFIED MENU





INSTALLATION ALTERNATIVE

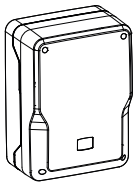
SIMPLIFIED MENU

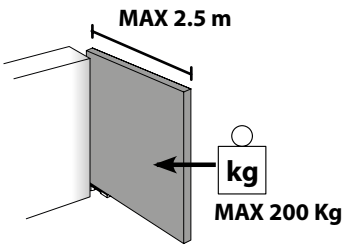


	ELI BT A35 V + FCE
Maximum power	100W
Maximum cycle	50 cycles/h

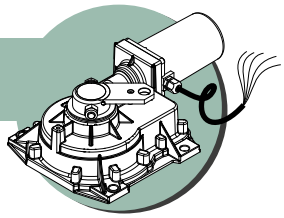
RECOMMENDED

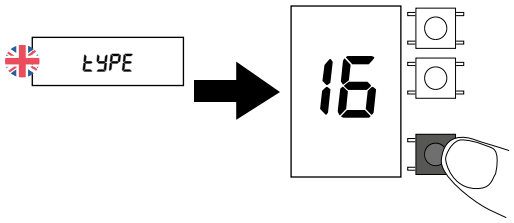
THALIA BT A80



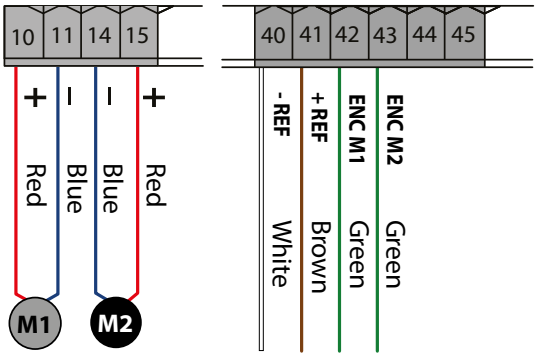


ELI BT A35 V





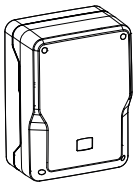
Valid for motors produced > 01/04/2022

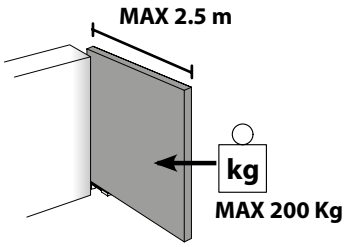


	ELI BT A35 V
Maximum power	100W
Maximum cycle	50 cycles/h

RECOMMENDED

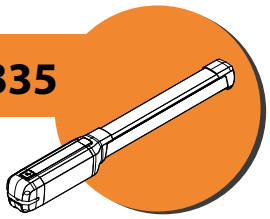
THALIA BT A80

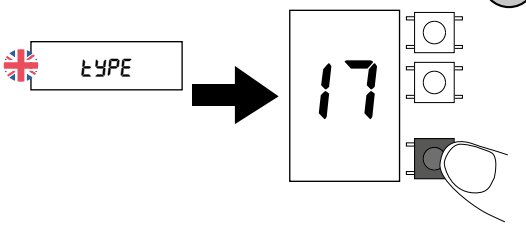


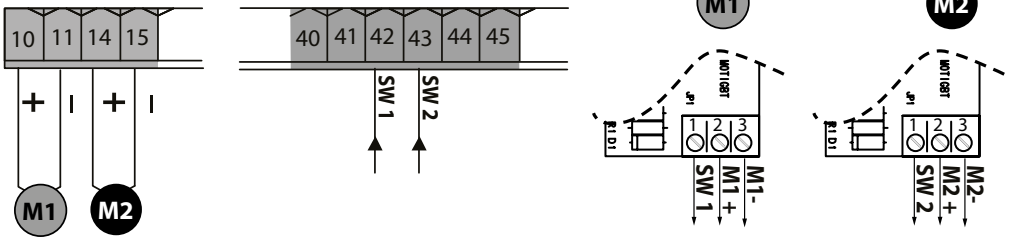


E

PHOBOS VELOCE BT B35



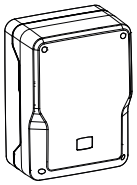


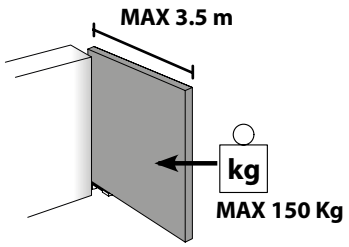


	PHOBOS VELOCE BT B35
Maximum power	**60W**
Maximum cycle	25 cycles/h

RECOMMENDED

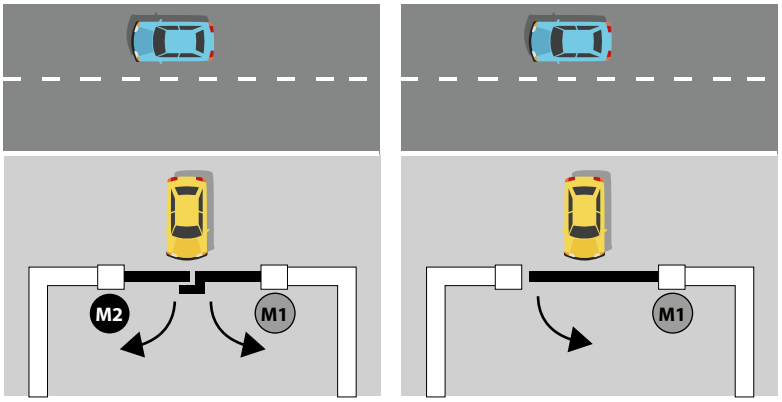
THALIA BT A80





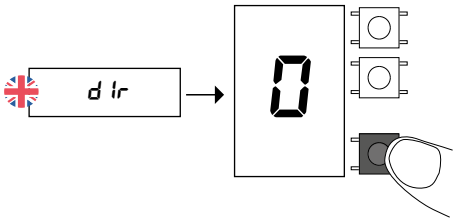
INSTALLATION ALTERNATIVES

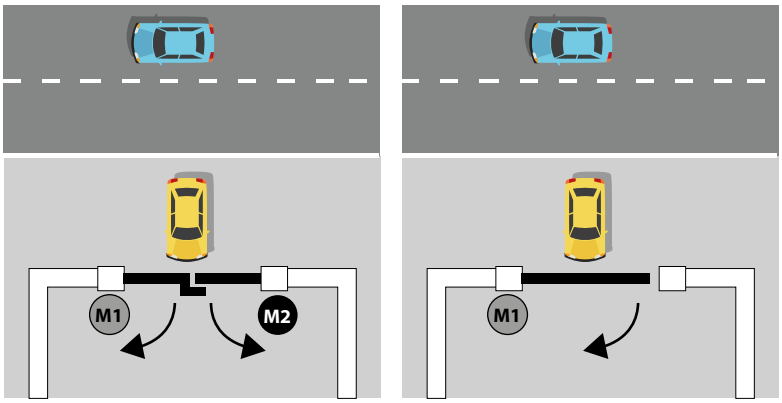
SIMPLIFIED MENU



E0

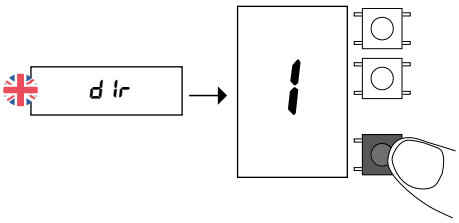
SIMPLIFIED MENU

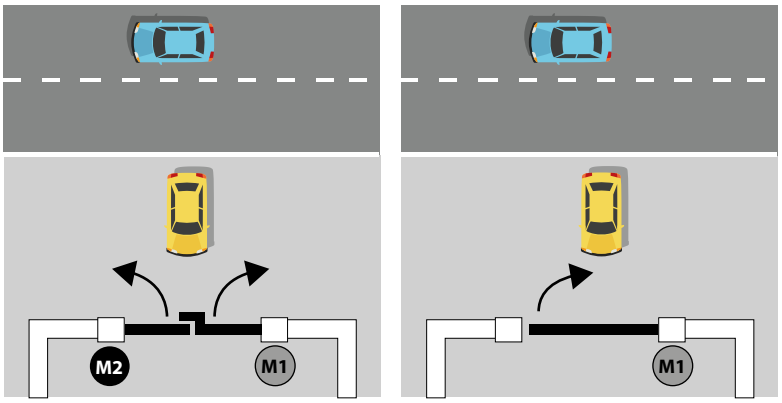




E1

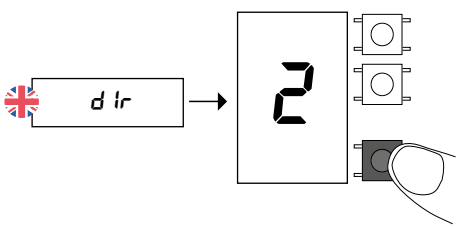
SIMPLIFIED MENU

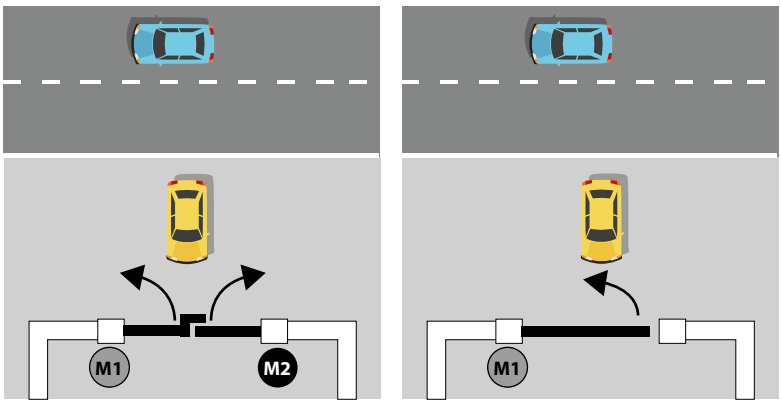




E2

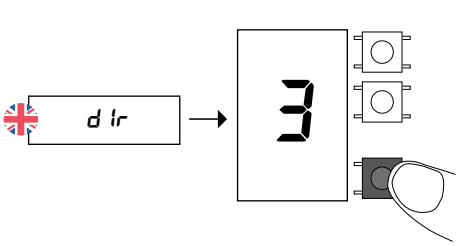
SIMPLIFIED MENU





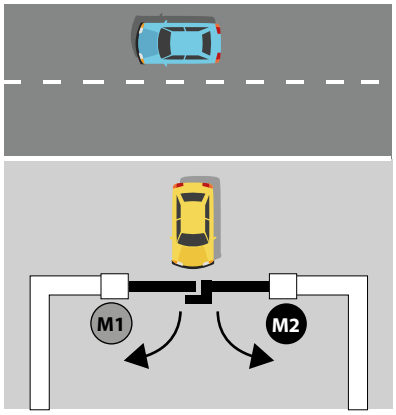
E3

SIMPLIFIED MENU

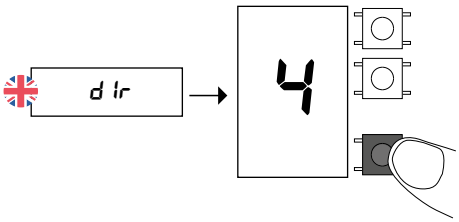


ONLY MOTORS WITH BUILT-IN SWITCHBOARD

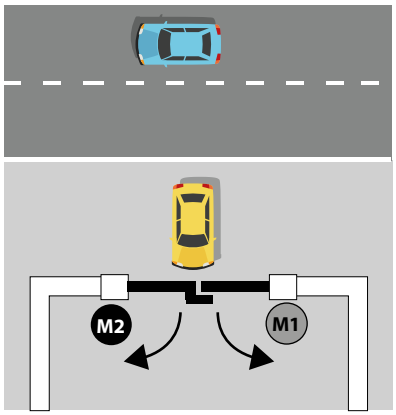
E4



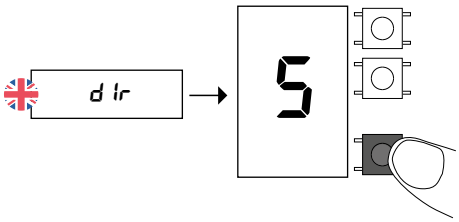
SIMPLIFIED MENU



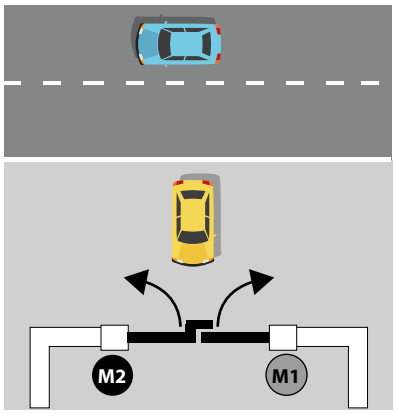
E5



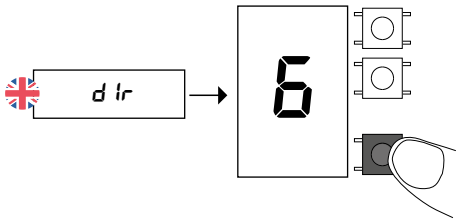
SIMPLIFIED MENU



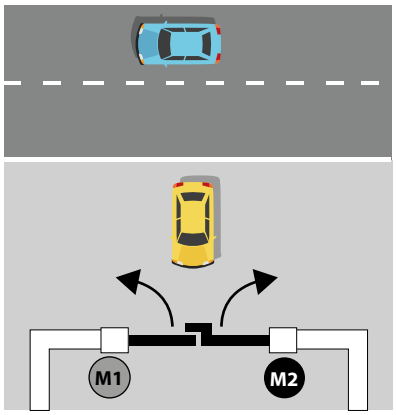
E6



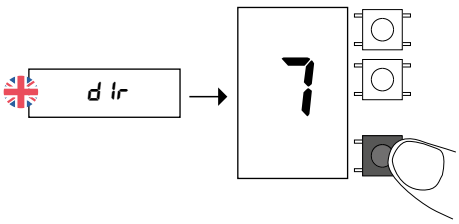
SIMPLIFIED MENU



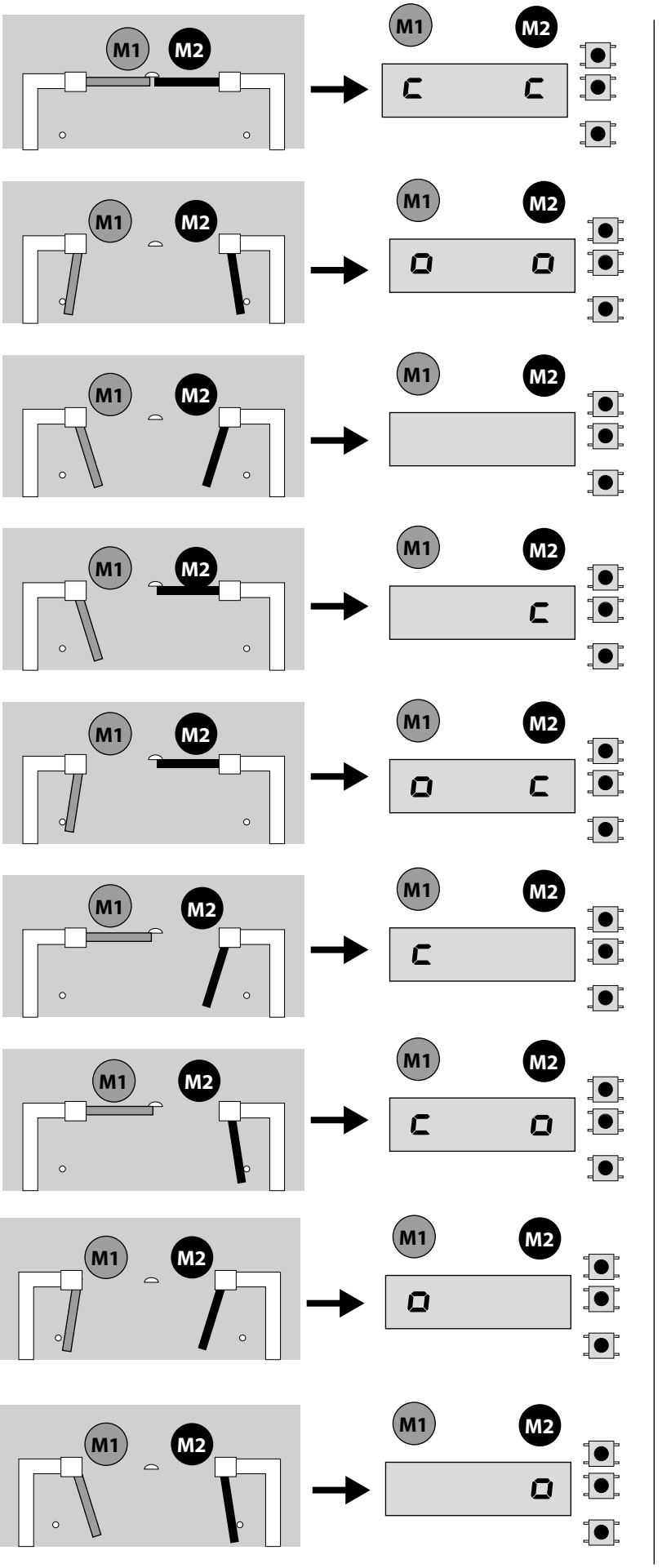
E7



SIMPLIFIED MENU



DIAGNOSTICS



SAFE1 - SAFE2

F

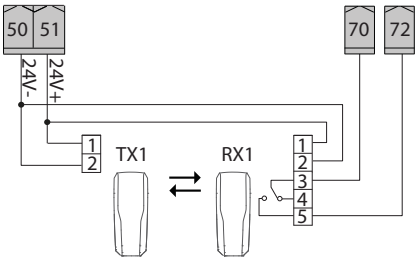
TEST ON Photocell checked

TEST OFF Photocells not checked (Check every 6 months)

SAFE1

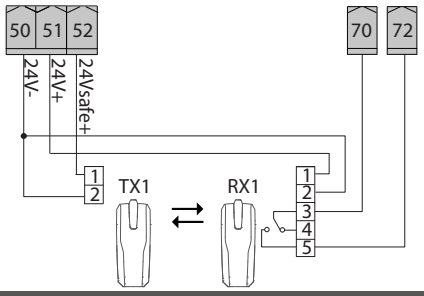
1 — TEST OFF — SAFE1= 0,2,4

(1PHOT / 1 PHOT OP/ 1 PHOT CL)



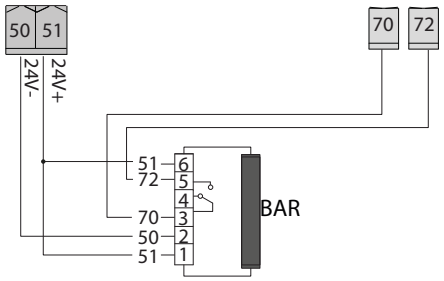
2 — TEST ON — SAFE1= 1,3,5

(1 PHOT / 1 PHOT OP/ 1 PHOT CL)



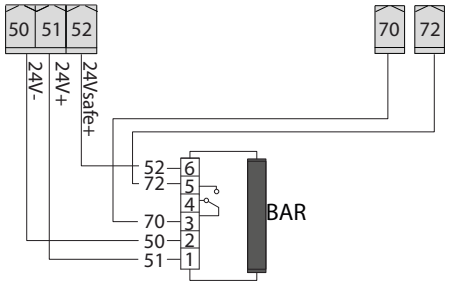
3 — TEST OFF — SAFE1= 6,9,12

(1 BAR / 1 BAR OP/ 1 BAR CL)



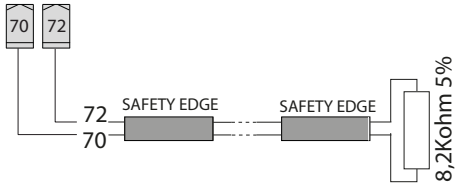
4 — TEST ON — SAFE1= 7,10,13

(1 BAR / 1 BAR OP/ 1 BAR CL)



5 — TEST ON — SAFE1= 8,11,14

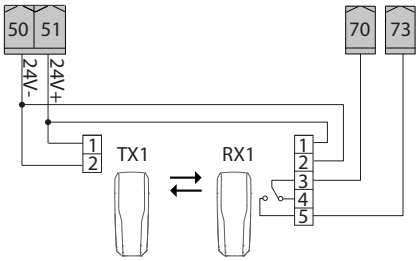
(BAR 8K2/ BAR 8K2 OP/ BAR 8K2 CL)



SAFE2

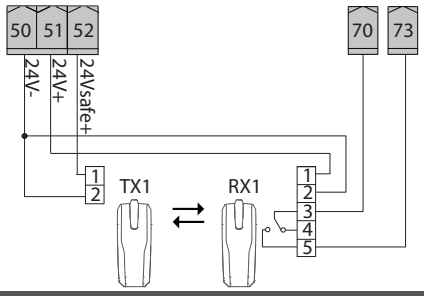
1 — TEST OFF — SAFE2= 0,2,4

(1PHOT / 1 PHOT OP/ 1 PHOT CL)



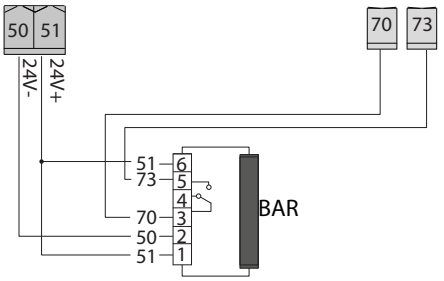
2 — TEST ON — SAFE2= 1,3,5

(1 PHOT / 1 PHOT OP/ 1 PHOT CL)



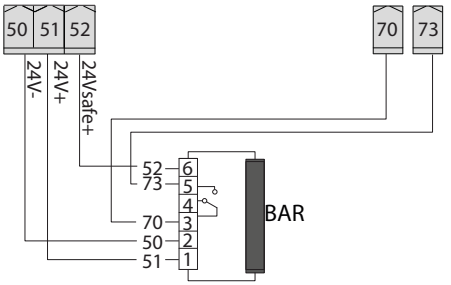
3 — TEST OFF — SAFE2= 6,9,12

(1 BAR / 1 BAR OP/ 1 BAR CL)



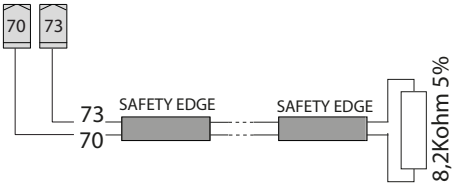
4 — TEST ON — SAFE2= 7,10,13

(1 BAR / 1 BAR OP/ 1 BAR CL)



5 — TEST ON — SAFE1= 8,11,14

(BAR 8K2/ BAR 8K2 OP/ BAR 8K2 CL)



SAFE10 - SAFE11

ONLY WITH AN EXPANSION CARD

F

D814283 0AR00_06

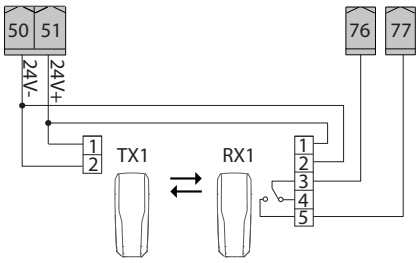
TEST ON Photocell checked

TEST OFF Photocells not checked (Check every 6 months)

SAFE10

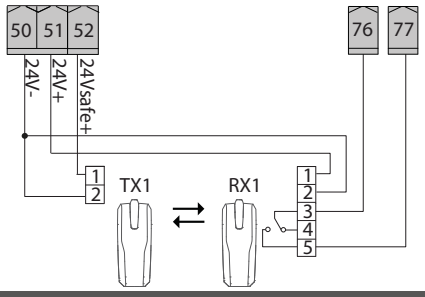
1 — TEST OFF — SAFE10= 0,2,4

(1PHOT / 1 PHOT OP/ 1 PHOT CL)



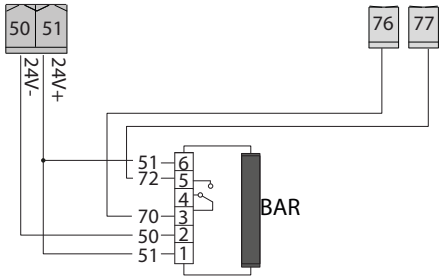
2 — TEST ON — SAFE10= 1,3,5

(1 PHOT / 1 PHOT OP/ 1 PHOT CL)



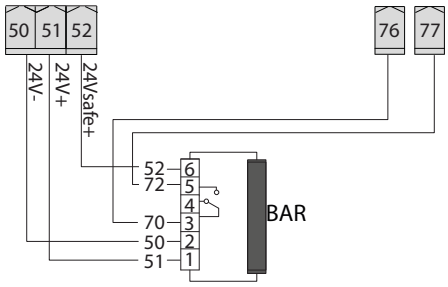
3 — TEST OFF — SAFE10= 6,9,12

(1 BAR / 1 BAR OP/ 1 BAR CL)



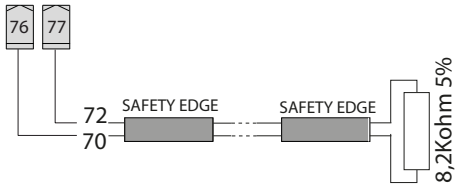
4 — TEST ON — SAFE10= 7,10,13

(1 BAR / 1 BAR OP/ 1 BAR CL)



5 — TEST ON — SAFE10= 8,11,14

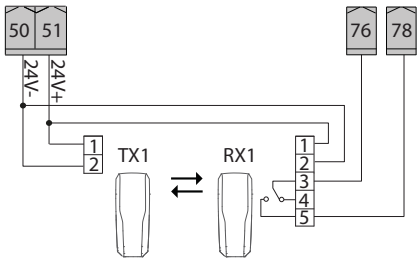
(BAR 8K2/ BAR 8K2 OP/ BAR 8K2 CL)



SAFE11

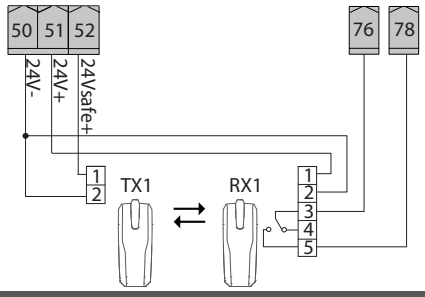
1 — TEST OFF — SAFE11= 0,2,4

(1PHOT / 1 PHOT OP/ 1 PHOT CL)



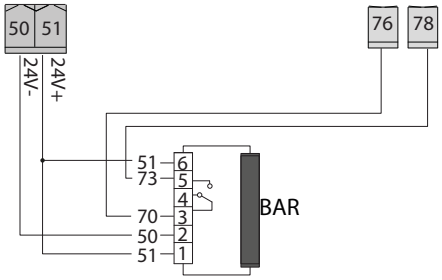
2 — TEST ON — SAFE11= 1,3,5

(1 PHOT / 1 PHOT OP/ 1 PHOT CL)



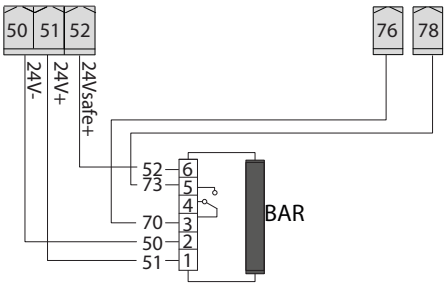
3 — TEST OFF — SAFE11= 6,9,12

(1 BAR / 1 BAR OP/ 1 BAR CL)



4 — TEST ON — SAFE11= 7,10,13

(1 BAR / 1 BAR OP/ 1 BAR CL)



5 — TEST ON — SAFE11= 8,11,14

SAFE12 - SAFE13

ONLY WITH AN EXPANSION CARD

F

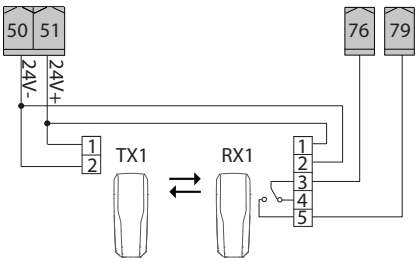
TEST ON Photocell checked

TEST OFF Photocells not checked (Check every 6 months)

SAFE12

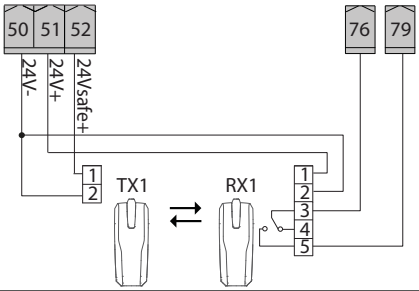
1 — TEST OFF — SAFE12= 0,2,4

(1PHOT / 1 PHOT OP/ 1 PHOT CL)



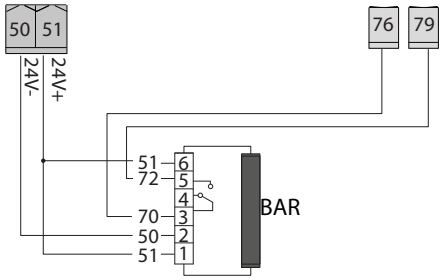
2 — TEST ON — SAFE12= 1,3,5

(1 PHOT / 1 PHOT OP/ 1 PHOT CL)



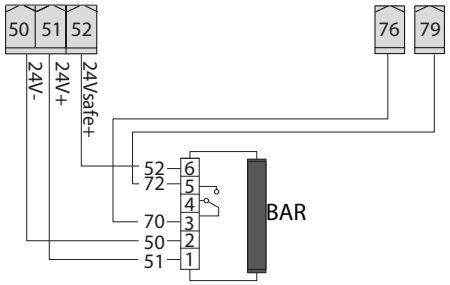
3 — TEST OFF — SAFE12= 6,9,12

(1 BAR / 1 BAR OP/ 1 BAR CL)



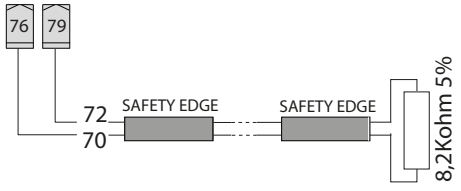
4 — TEST ON — SAFE12= 7,10,13

(1 BAR / 1 BAR OP/ 1 BAR CL)



5 — TEST ON — SAFE12= 8,11,14

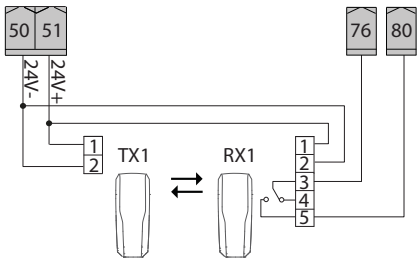
(BAR 8K2/ BAR 8K2 OP/ BAR 8K2 CL)



SAFE13

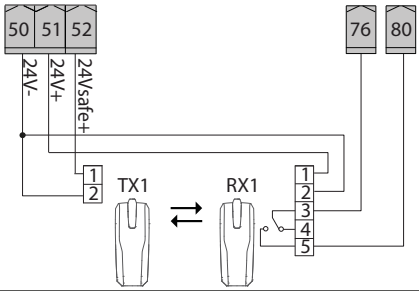
1 — TEST OFF — SAFE13= 0,2,4

(1PHOT / 1 PHOT OP/ 1 PHOT CL)



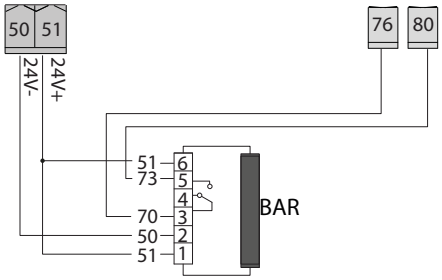
2 — TEST ON — SAFE13= 1,3,5

(1 PHOT / 1 PHOT OP/ 1 PHOT CL)



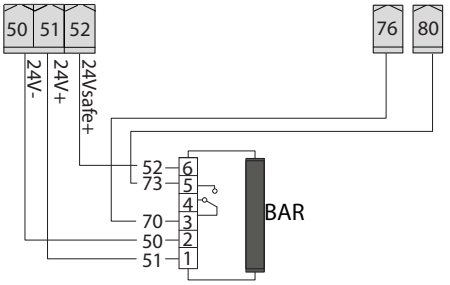
3 — TEST OFF — SAFE13= 6,9,12

(1 BAR / 1 BAR OP/ 1 BAR CL)



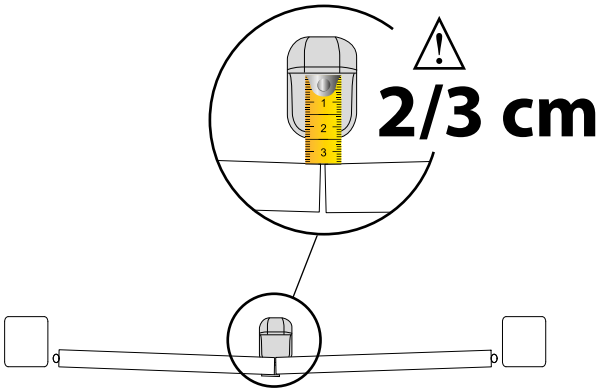
4 — TEST ON — SAFE13= 7,10,13

(1 BAR / 1 BAR OP/ 1 BAR CL)



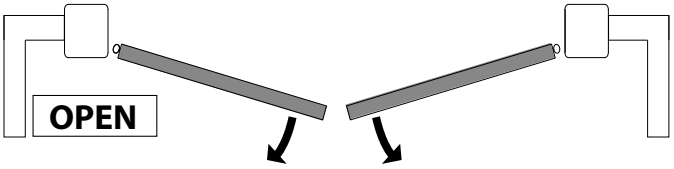
5 — TEST ON — SAFE13= 8,11,14

(BAR 8K2/ BAR 8K2 OP/ BAR 8K2 CL)

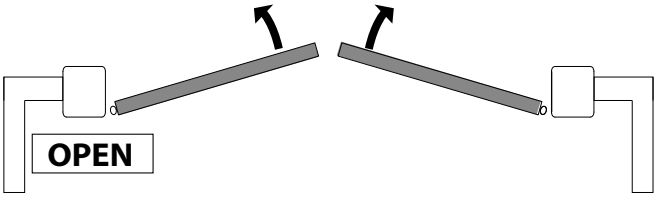


A

B

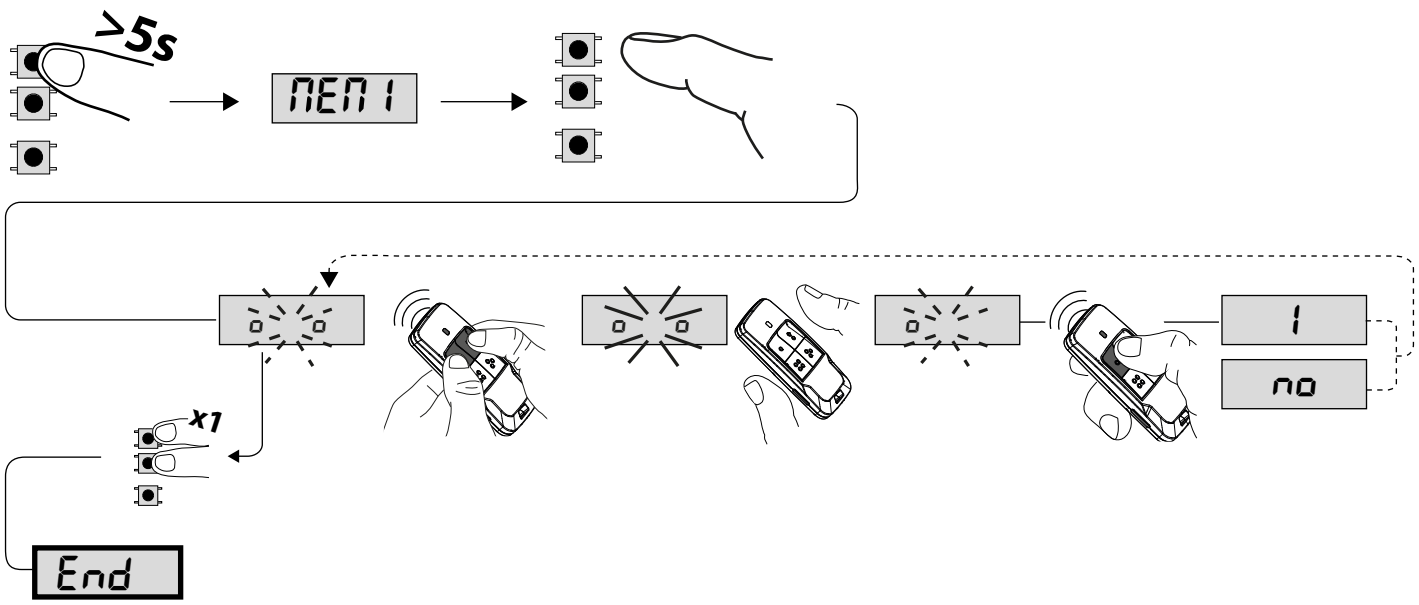


C

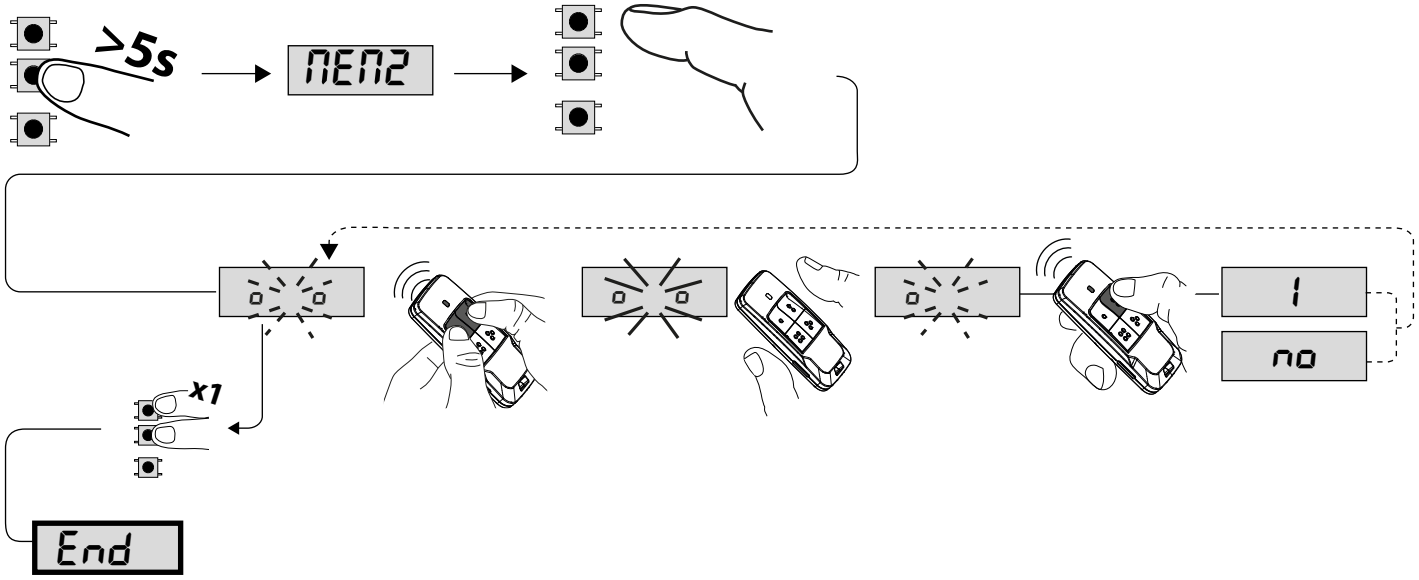


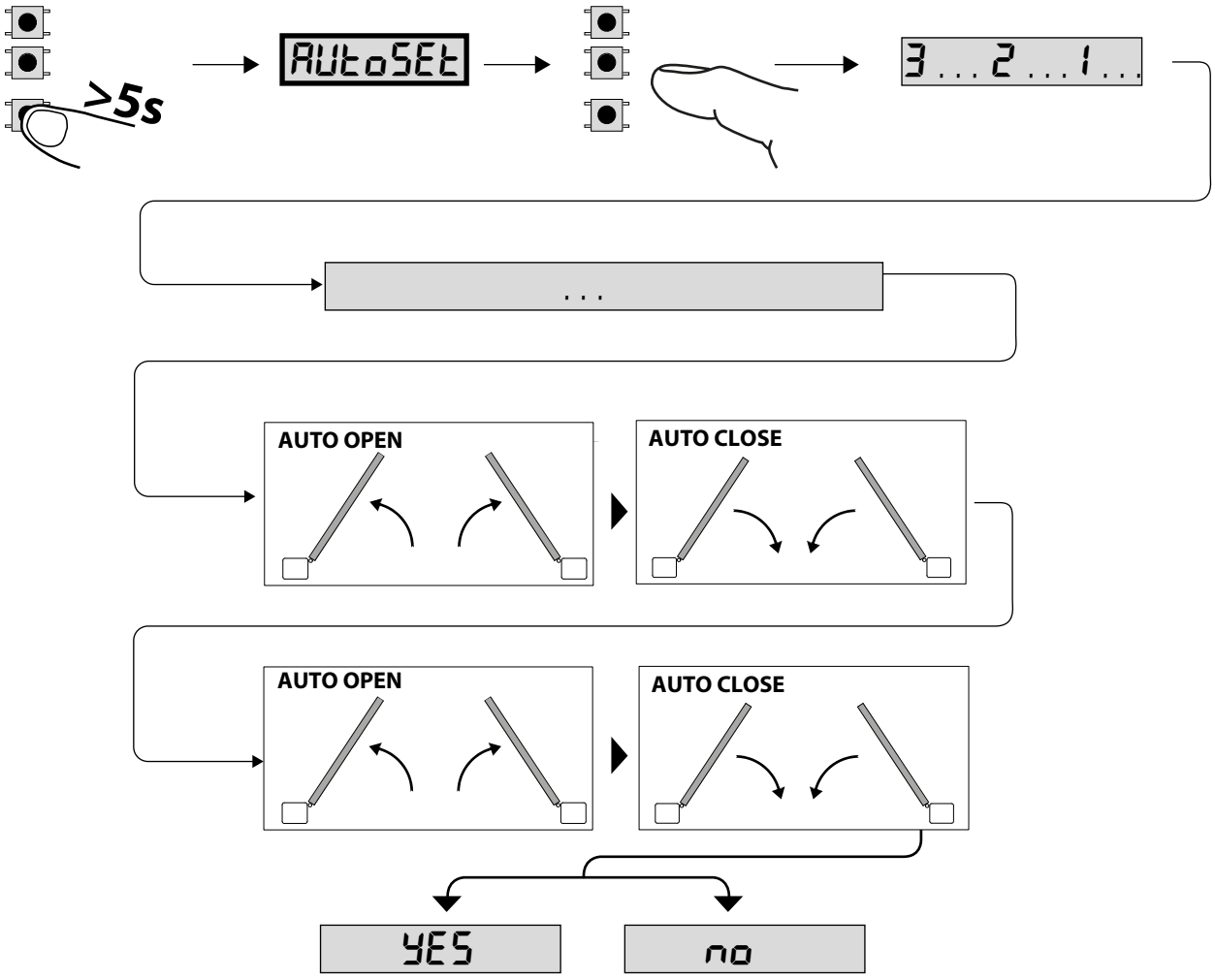
D

START



2 CH RADIO

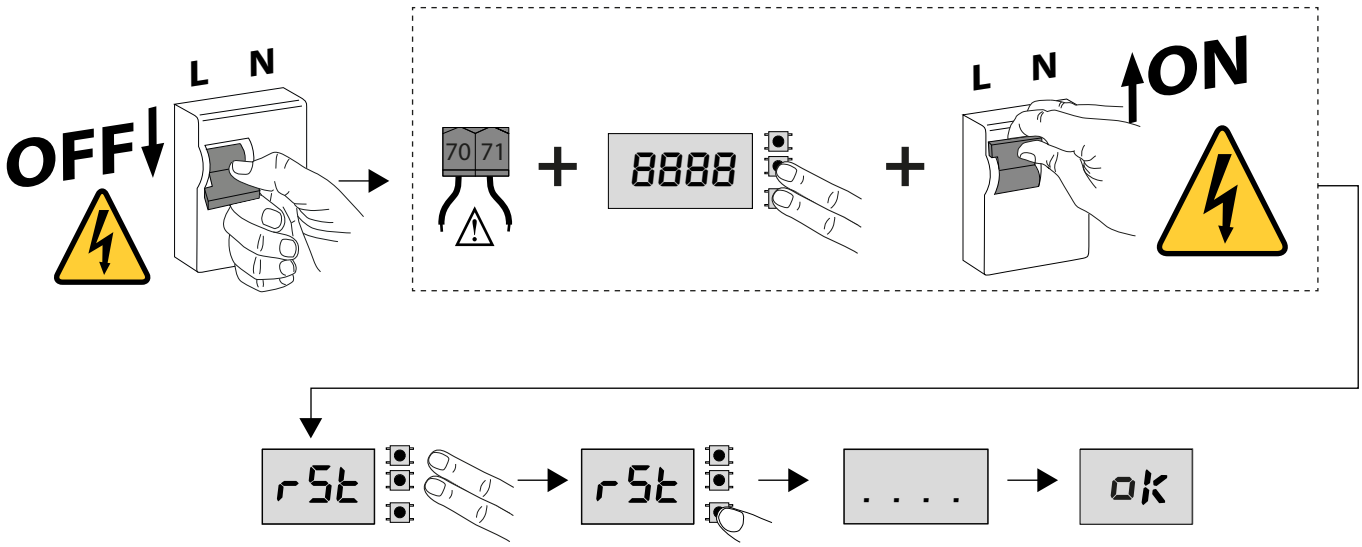




- After adjusting the end stops or modifying their position, a new autoset cycle must be performed.

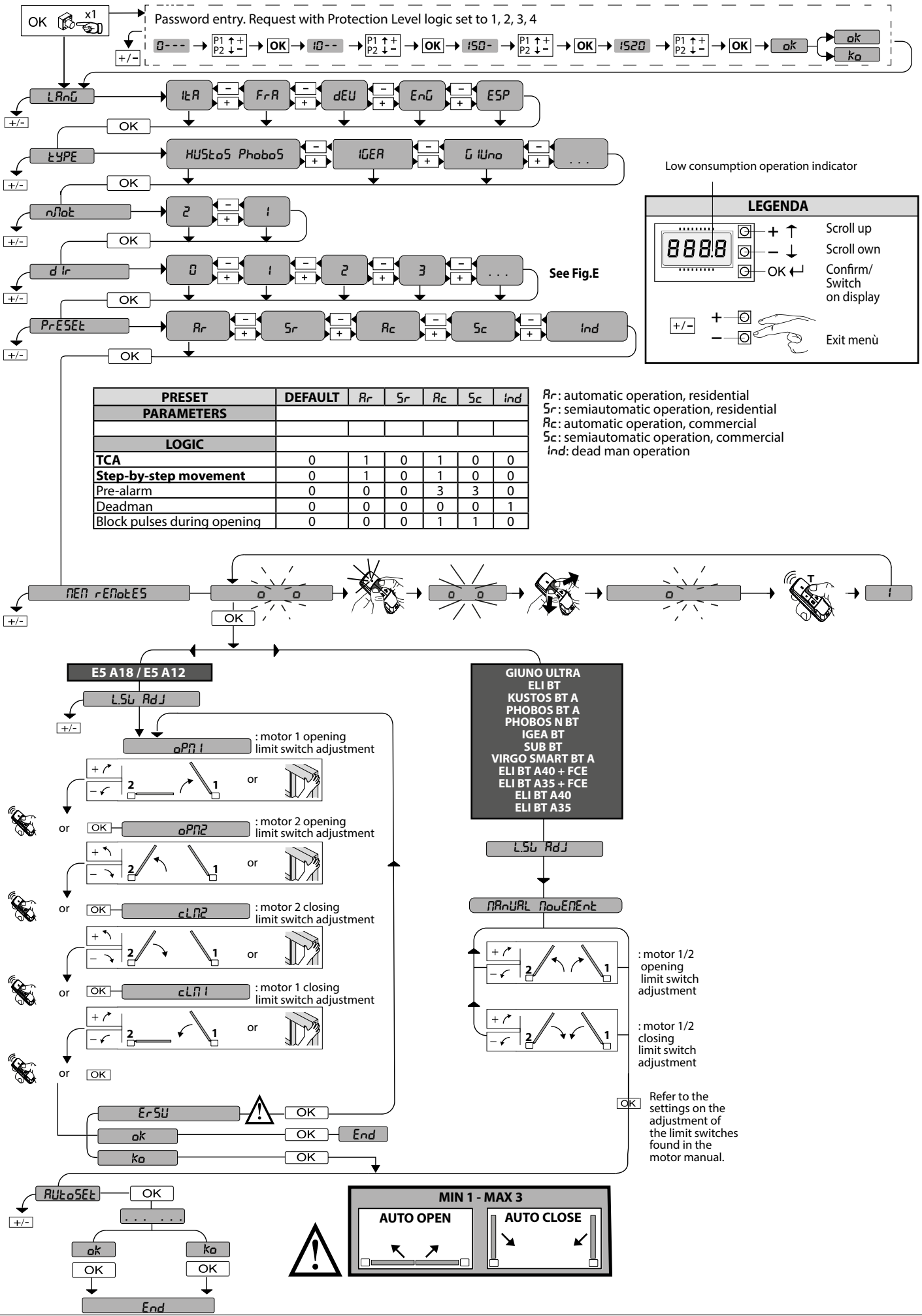
RESTORING FACTORY SETTINGS

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.



ENGLISH

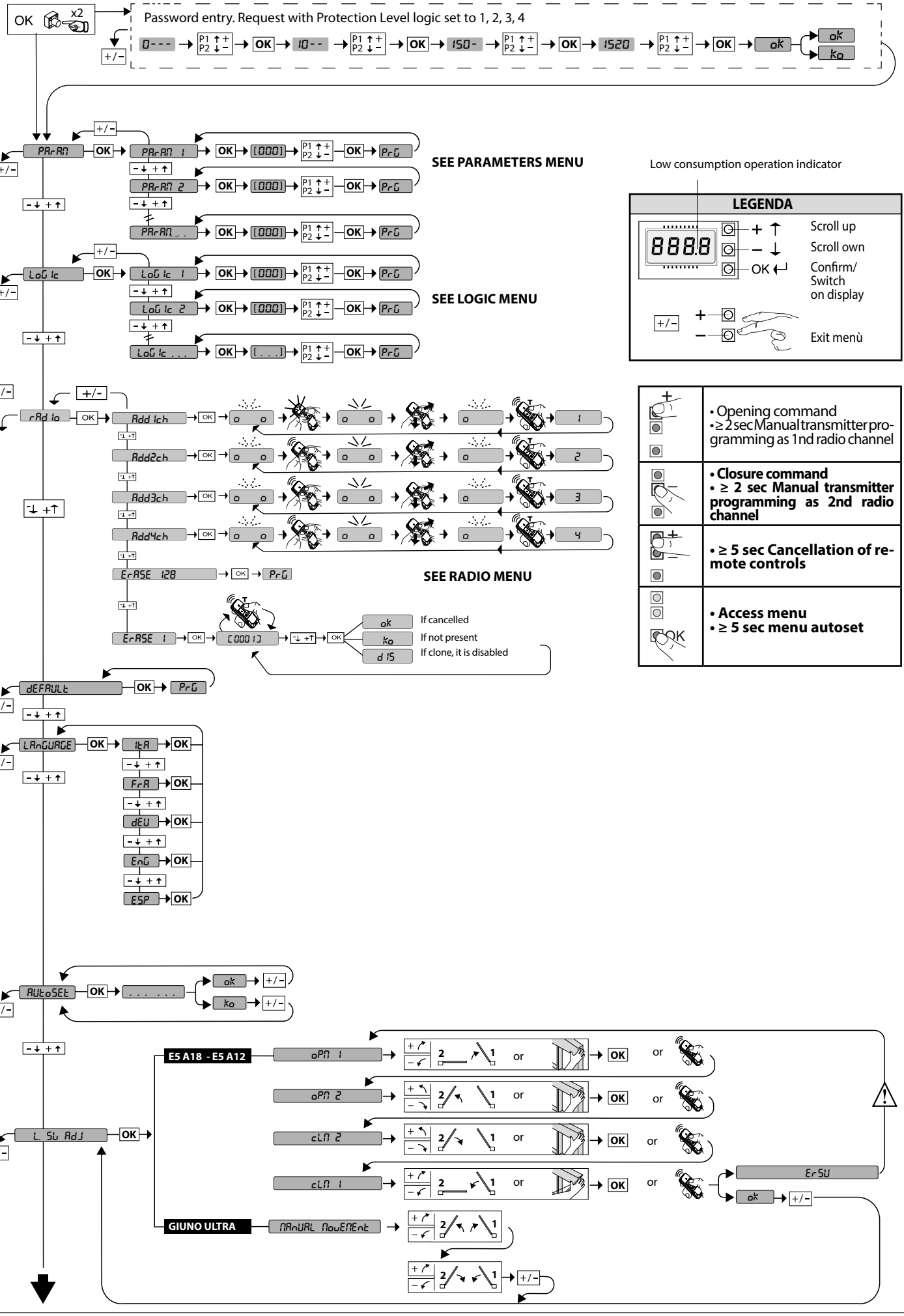
SIMPLIFIED MENU



PRESET	DEFAULT	Ar	Sr	Ac	Sc	Ind
PARAMETERS						
LOGIC						
TCA	0	1	0	1	0	0
Step-by-step movement	0	1	0	1	0	0
Pre-alarm	0	0	0	3	3	0
Deadman	0	0	0	0	0	1
Block pulses during opening	0	0	0	1	1	0

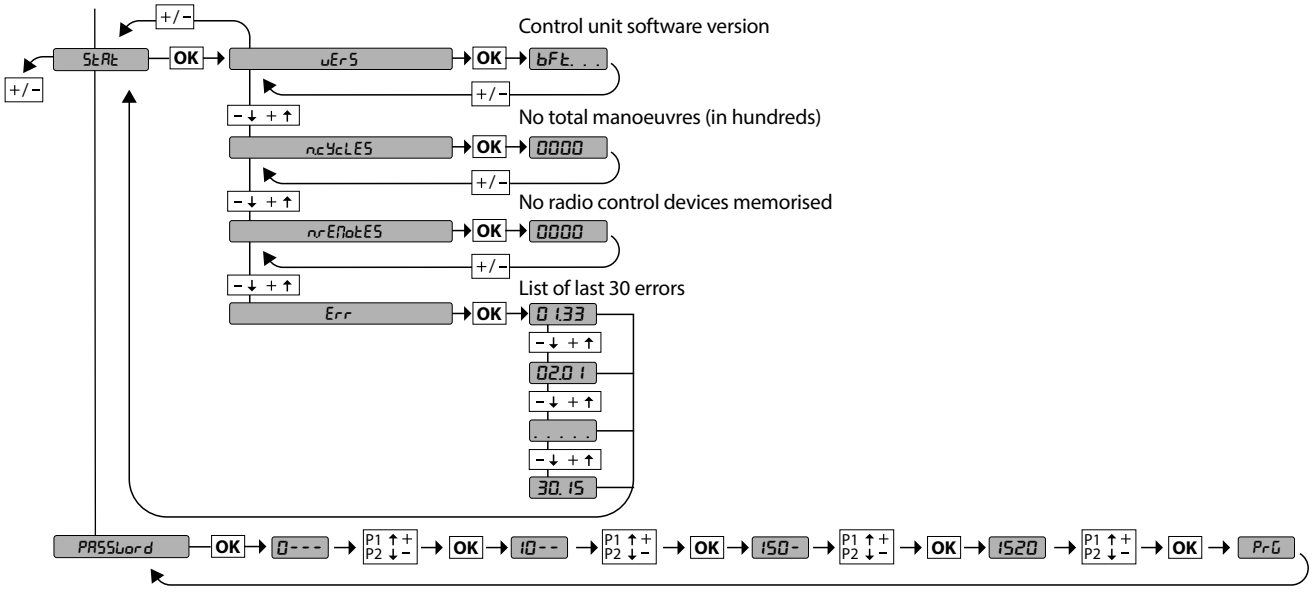
Ar: automatic operation, residential
Sr: semiautomatic operation, residential
Ac: automatic operation, commercial
Sc: semiautomatic operation, commercial
Ind: dead man operation

ACCESS MENUS FIG. 1

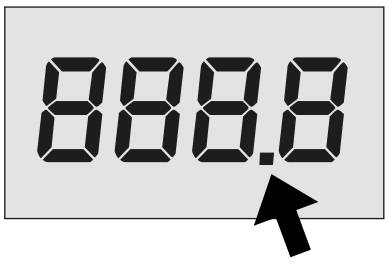


ENGLISH

ACCESS MENUS FIG. 1



LOW POWER MODE (PSAuE) AND ACCESSORIES



active low power mode

To save energy, the control unit disconnects the power supply of the accessories (terminals 50-51) after 10s that the engine is stationary and then all accessories are switched off; the low consumption mode is indicated by a point on the display.

To allow the setting of the accessories (e.g. alignment of the photocells) it is necessary to set PSAuE=0; perform the setting and then set PSAuE=1

If accessories that require uninterrupted power supply (e.g. radio receivers) are used, set PSAuE=0

DIAGNOSTICS

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	
PEd	PED pedestrian 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	
bAro	Activation of BAR safety edge input with ACTIVE reversal ONLY WHILE OPENING, or, if configured as verified safety edge active only while opening, Activation of the associated FAULT input	
bArc	Activation of BAR safety edge input with ACTIVE reversal ONLY WHILE CLOSING, or, if configured as verified safety edge active only while closing, Activation of the associated FAULT input	
SEt	The board is standing by to perform a complete opening-closing cycle uninterrupted by intermediate stops in order to acquire the torque required for movement. WARNING! Obstacle detection not active	
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
Er06	8k2 safety edge test failed	Check safety edge connection and/or parameter/ logic settings
Er07	Opening safety edge test failed	Check safety edge connection and/or parameter/ logic settings
Er08	Closing safety edge test failed	Check safety edge connection and/or parameter/ logic settings
Er09	Short circuit test between 2 adjacent safety inputs failed.	Check the safety input connection

Diagnostics code	DESCRIPTION	NOTES
Er 1H*	Board hardware test error	- Check connections to motor - Hardware problems with board (contact technical assistance)
Er2H*	Encoder error	- Motor or encoder signal power cables inverted/ disconnected or incorrect programming (see Fig. E) - Actuator movement is too slow or stopped with respect to programmed operation.
Er3H*	Reverse due to obstacle - Amperostop	Check fo r 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
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**
Er83	EEPROM memory error	Check that the memory card has been inserted correctly, try turning the card off and on again. If the problem persists, contact technical assistance.
Er8H*- Er9H*	Internal system supervision control error.	Try switching the board off and back on again. If the problem persists, contact the technical assistance department.
ErF2	Power supply overload	
ErF3	Error in the configuration of the logics (SAFE inputs, motor type)	Check that the SAFE logic or motor type configuration is correct.
ErF4	Auxiliary power output overload	-Check the auxiliary power connections. -Check the total power absorption of the auxiliaries
ErF9	Solenoid lock output overload	-Check lock connections - Unsuitable lock
Er5U	Error during limit switch adjustment Only for E5 BT A18 / E5 BT A12	Motor or encoder signal power cables inverted/disconnected or incorrect programming. (see Fig. E)

***H= 0, 1, .., 9, A, B, C, D, E, F**

INSTALLATION MANUAL

1) GENERAL INFORMATION

The **THALIA BT A80/ BT A160** control panel is supplied by the manufacturer with standard settings. Any variation must be set using the built-in on-screen programmer.

Its main features are:
- Control of 1 or 2 24V BT motors
  Note: 2 motors of the same type must be used.
- Electronic torque control with obstacle detection
- Limit switch control inputs based on motor selected
- Separate inputs for safety devices
- Built-in radio receiver rolling code.

The board has a terminal strip of the removable kind to make maintenance or replacement easier. It comes with a series of prewired jumpers to make the installer's job on site easier.
The jumpers concern terminals: 70-71, 70-72, 70-73. If the above-mentioned terminals are being used, remove the relevant jumpers.

2) TESTING

The **THALIA BT A80/ BT A160** panel controls (checks) the start relays and safety devices (photocells) before performing each opening and closing cycle.
If there is a malfunction, make sure that the connected devices are working properly and check the wiring.

3) TUBE ARRANGEMENT Fig. A

4) TERMINAL BOARD WIRING Fig. B

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 the dissipater.
WARNING! For connection to the mains power supply, use a multicore cable with a cross-sectional area of at least 2x1.5mm² of the kind provided for by the regulations in force. To connect the motors, use a cable with a cross-sectional area of at least 1.5mm² of the kind provided for by the regulations in force. The cable must be type H05RN-F at least.

5) TECHNICAL SPECIFICATIONS

	THALIA BT A80	THALIA BT A160	THALIA BT A160 120V
Power supply	220-230V 50/60 Hz		110-120V 50/60 Hz
Stand-by consumption	0,48W		
Power	200W	400W	
Radio frequency	433.92 MHz		
IP	45 - DUO 55 - FLAT	45 - DUO	
Operating temperature range	-20 / +60°C	- 20 / +55°C	
Thermal overload protection	Software		
Accessories power supply	24V ⎓ (≤ 0.5 A)		
AUX 1	NO 24V ⎓ powered contact (≤ 1A)		
AUX 2	NO contact (24V ≂ /≤ 1A)		
Max.n° of transmitters that can be memorized	128		
	2048 (only with expansion kit)		

Usable transmitter versions:
All ROLLING CODE transmitters compatible with U-Security

	Terminal	Definition	Description
Power supply	L	LINE	Single-phase power supply 220-230V 50/60 Hz
	N	NEUTRAL	
Motor	10	MOT1 +	Connection motor 1. Time lag during closing. Check connections shown in Fig.E
	11	MOT1 -	
	14	MOT2 +	Connection motor 2. Time lag during opening. Check connections shown in Fig.E
	15	MOT2 -	
Aux	20	AUX 1-POWERED CONTACT 24V⎓ (≤ 1A)	AUX1 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. Refer to "AUX output configuration" table.
	21		
	26	AUX 2 - FREE CONTACT (N.O.) (24V ≂ /≤ 1A)	AUX 2 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. Refer to "AUX output configuration" table.
	27		
	28	LOCK 12/24V ⎓	Lock type Logic = 0 - 12V ⎓ snap action electric lock output (max 30W). Pulse activated output on each opening.
	29		Lock type Logic = 1 - 12V ⎓ magnet electric lock output (max 15W). Output Activated with gate closed.
			Lock type Logic = 2 - 24V ⎓ snap action electric lock output (max 30W). Pulse activated output on each opening.
			Lock type Logic = 3 - 24V ⎓ magnet electric lock output (max 15W). Output Activated with gate closed.
			Lock type Logic = 4 - Traction lock: active throughout the manoeuvre. Max.: 1 A for 1S, 0.2 A for the rest of the manoeuvre.
Limit switch for ELI 250 BT VIRGO SMART BT A ELI BT A35 V + FCE ELI BT A40 + FCE 5 wires	41	+ REF SWE	Limit switch common
	42	SWC 1	Motor 1 closing limit switch SWC1 (N.C.).
	43	SWO 1	Motor 1 opening limit switch SWO1 (N.C.).
	44	SWC 2	
	45	SWO 2	Motor 2 opening limit switch SWO2 (N.C.).
Limit switch for PHOBOS N BT IGEA BT SUB BT PHOBOS BT A KUSTOS BT A VIRGO SMART BT A 3 wires	42	SW 1	Limit switch control motor 1. For actuators with single-wire limit switch control.
	43	SW 2	Limit switch control motor 2. For actuators with single-wire limit switch control.
Limit switch for GIUNO ULTRA BT A20 GIUNO ULTRA BT A50 E5 BT A18 E5 BT A12	40	- REF SWE	Limit switch common
	42	SW 1	Limit switch control motor 1.
	43	SW 2	Limit switch control motor 2.
Limit switch for ELI BT A35 ELI BT A40	40	- REF SWE	Encoder power supply, white cable
	41	+ REF SWE	Encoder power supply, brown cable
	42	ENC M1	Engine 1 encoder signal, green cable
	43	ENC M2	Engine 2 encoder signal, green cable

	Terminal	Definition	Description
Accessories power supply	50	24V-	Accessories power supply output.
	51	24V+	
	52	24 Vsafe+	Tested safety device power supply output (photocell transmitter and safety edge transmitter). Output active only during operating cycle.
Commands	60	COM IC	IC 1 and IC 2 inputs common
	61	IC 1	Configurable command input 1 (N.O.) - Default START E. START E / START I / OPEN / CLOSE / PED / TIMER / TIMER PED Refer to the "Command input configuration" table.
	62	IC 2	Configurable command input 2 (N.O.) - Default PED. START E / START I / OPEN / CLOSE / PED / TIMER / TIMER PED Refer to the "Command input configuration" table.
Safety devices	70	COM	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 / BAR OP / BAR OP TEST / BAR 8K2 OP/ BAR CL / BAR CL TEST / BAR 8K2 CL Refer to the "Safety input configuration" table.
	73	SAFE 2	Configurable safety input 2 (N.C.) - Default PHOT. PHOT / PHOT TEST / PHOT OP / PHOT OP TEST / PHOT CL / PHOT CL TEST / BAR / BAR TEST / BAR 8K2 / BAR OP / BAR OP TEST / BAR 8K2 OP/ BAR CL / BAR CL TEST / BAR 8K2 CL Refer to the "Safety input configuration" table.
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 - MONOSTABLE RADIO CHANNEL output. The contact remains closed for 1s when the 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 control output. The contact remains closed for the time set at tLIGHt
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 - GATE OPEN ALARM output. Contact stays closed if the leaf stays open for double the set TCA time.
Aux logic= 6 - FLASHING LIGHT output. Contact stays closed while leaves are operating.
Aux logic= 7 - Not used
Aux logic= 8 - Not used
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 used
Aux Logic= 12 – Not used
Aux Logic = 13 - CLOSED GATE STATUS output. The contact remains closed when the gate is closed.
AUX logic = 14 - BISTABLE RADIO CHANNEL output. The contact changes status (open-closed) when the radio channel is activated
AUX Logic = 15 - TIMED RADIO CHANNEL output. The contact remains closed for a programmable time when the Radio channel is activated (oUtPUt t IME). If the key is pressed again during this time, the time count restarts
Aux logic = 16 - OPEN GATE STATUS output. The contact remains closed when the gate is open.
Command input configuration
IC logic= 0 - Input configured as Start E. Operation according to StEP-bY-StEP MoUEMnt logic. External start for traffic light control.
IC logic= 1 - Input configured as Start I. Operation according to StEP-bY-StEP MoUEMnt 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 - Input configured as Ped. The command causes the leaf to open to the pedestrian (partial) opening position. Operation according to StEP-bY-StEP MoUEMnt logic
IC logic= 5 - Input configured as Timer. Operation same as open except closing is guaranteed even after a mains power outage.
IC logic= 6 - Input configured as Timer Ped. The command causes the leaf to open to the pedestrian (partial) opening position. If the input stays closed, the leaf stays open until the contact is opened. If the input stays closed and a Start E, Start I or Open command is activated, a complete opening-closing cycle is performed before returning to the pedestrian opening position. Closing is guaranteed even after a mains power outage.
Safety input configuration
SAFE logic= 0 - Input configured as Phot (photocell) non tested (*). (fig.F, 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.F, 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.F, 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.F, 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.F, 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.F, 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.F, 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.F, 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.F, ref.5). Input for resistive edge 8K2. The command reverses movement for 2 sec.
SAFE logic=9 Input configured as Bar op, safety edge with active inversion only while opening, if activated while closing, the automation stops (STOP) (Fig. F, ref. 3). Allows connecting devices not fitted with supplementary test contact. The operation while opening causes the movement to be reversed for 2 seconds, the operation while closing causes the automation to stop. If not used, leave jumper inserted.
SAFE logic=10 Input configured as Bar op test, safety edge checked with active inversion only while opening, if activated while closing, the automation stops (STOP) (Fig. F, ref. 4). Activates testing safety edges when starting operation. The operation while opening causes the movement to be reversed for 2 seconds, the operation while closing causes the automation to stop.
SAFE logic=11 Input configured as Bar 8k2 op, 8k2 safety edge with active inversion only while opening, if activated while closing, the automation stops (STOP) (Fig. F, ref. 5). The operation while opening causes the movement to be reversed for 2 seconds, the operation while closing causes the automation to stop.
SAFE logic=12 Input configured as Bar cl, safety edge with active inversion only while closing, if activated while opening, the automation stops (STOP) (Fig. F, ref. 3). Allows connecting devices not fitted with supplementary test contact. The operation while closing causes the movement to be reversed for 2 seconds, the operation while opening causes the automation to stop. If not used, leave jumper inserted.
SAFE logic=13 Input configured as Bar cl test, safety edge checked with active inversion only while closing, if activated while opening, the automation stops (STOP) (Fig. F, ref. 4). Activates testing safety edges when starting operation. The operation while closing causes the movement to be reversed for 2 seconds, the operation while opening causes the automation to stop.
SAFE logic=14 Input configured as Bar 8k2 cl, safety edge with active inversion only while closing, if activated while opening, the automation stops (STOP) (Fig. F, ref. 5). The operation while closing causes the movement to be reversed for 2 seconds, the operation while opening causes the automation to stop.

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

Radio channel control configuration
CH logic= 0 - Control configured as Start E. Operation according to StEP-bY-StEP MouEMnt logic. External start for traffic light control.
CH logic= 1 - Control configured as Start I. Operation according to StEP-bY-StEP MouEMnt logic. Internal start for traffic light control.
CH logic= 2 - Control configured as Open. The command causes the leaves to open.
CH logic= 3 - Control configured as Closed. The command causes the leaves to close.
CH logic= 4 - Control configured as Ped. The command causes the leaf to open to the pedestrian (partial) opening position. Operation according to StEP-bY-StEP MouEMnt. logic
Logica CH= 5- Control configured as STOP. The command performs a STOP
CH logic= 6 - Control configured as AUX1. (**) The control activates the AUX1 output
CH logic= 7 - Not used
CH logic = 8- Radio command configured as AUX11 (**). The command activates the AUX11 output (only with expansion card)
CH logic= 9 - Control configured as AUX2. (**) The control activates the AUX2 output
CH logic= 10 - Control configured as EXPO1. (**) The control activates the EXPO1 output
CH logic= 11 - Control configured as EXPO2. (**) The control activates the EXPO2 output
CH logic = 12- Command set up as COURTESY LIGHT The command enables the light with bi-stable logic. At least one auxiliary output must be set as a courtesy light.

(**) Active only if the output is configured as Monostable Radio Channel, Courtesy Light, Zone Light, Stair Light, Bistable Radio Channel or Timed Radio Channel.

6) MOTOR WIRING Fig. E

7) SAFETY DEVICES

7.1) TESTED DEVICES Fig. F

7.2) CONNECTION OF 1 PAIR OF NON-CHECKED PHOTOCELLS FIG.C

7.3) CONNECTION OF 1 PAIR OF CHECKED PHOTOCELLS FIG. D

8) CALLING UP MENUS: FIG. 1

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

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

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

8.4) DEFAULT MENU (dEFAULt)
Restores the controller's DEFAULT factory settings. Following this reset, you will need to run the AUTOSET function again.

8.5) LANGUAGE MENU (LAnGUAGE)
Used to set the programmer's language on the display.

8.6) AUTOSET MENU (AUtoSEt)
- Launch an autoset operation by going to the relevant menu.
- As soon as you press the OK button, the "..... ...." message is displayed and the control unit commands the device to perform a full cycle (opening followed by closing), during which the minimum torque value required to move the leaf is set automatically.

The number of cycles required for the autoset function can range from 1 to 3.
During this stage, it is important to avoid breaking the photocells' beams and not to use the START and STOP commands or the display.
Once this operation is complete, the control unit will have automatically set the optimum torque values. Check them and, where necessary, edit them as described in the programming section.

WARNING!! Check that the impact force value measured at the foreseen points is lower than that indicated in the EN 12453 standard. Impact forces can be reduced by using deformable edges.

Warning!! While the autoset function is running, the obstacle detection function is not active. Consequently, the installer must monitor the automated system's movements and keep people and property out of range of the automated system.

SOLENOID LOCK

WARNING: In the case of leaves longer than 3m, it is essential to install a solenoid lock.

8.7)INSTALLATION TEST PROCEDURE
1. Run the AUTOSET cycle (*)
2. Check the impact forces: if they fall within the limits (**) skip to point 10 of the procedure, otherwise
3. Where necessary, adjust the speed and sensitivity (force) parameters: see parameters table.
4. Check the impact forces again: if they fall within the limits (**) skip to point 10 of the procedure, otherwise
5. Apply a shock absorber profile
6. Check the impact forces again: if they fall within the limits (**) skip to point 10 of the procedure, otherwise
7. Apply pressure-sensitive or electro-sensitive protective devices (such as a

safety edge) (**)
8. Check the impact forces again: if they fall within the limits (**) skip to point 10 of the procedure, otherwise
9. Allow the drive to move only in "Deadman" mode
10. Make sure all devices designed to detect obstacles within the system's operating range are working properly

(*) Before running the autoset function, make sure you have performed all the assembly and make-safe operations correctly, as set out in the installation warnings in the drive's manual.
(**) Based on the risk analysis, you may find it necessary to apply sensitive protective devices anyway

8.8) LIMIT STOP ADJUSTMENT MENU (LSU AdJ)
Used to adjust the limit stops for motors equipped with encoder; moreover, for motors equipped with independent limit stop wiring harness allows the correct positioning of the leaf for the subsequent limit stop adjustment. For motors not specified, the menu is not active and the message" unavailable" is shown on the display
NOTE: these manoeuvres are performed in person preset mode, at slow speed, without the intervention of the safety devices.

8.8.1) GIUNO ULTRA BT A20, GIUNO ULTRA BT A50
Using the „+/-" buttons on the display, bring the leaf in the desired position. To adjust the limit stops, refer to the settings for limit stop adjustment provided in the GIUNO ULTRA motor manual.

8.8.2) E5 BT A12, E5 BT A18
Using the „+/-" buttons on the display, bring the leaf in the position indicated by the display (opening or closing). Once the desired position is reached, confirm the position by pressing the OK button. For E5 motors, the leaf can be manually positioned close to the limit stops by pushing the gate; then move the gate using the„+/-" button until it is against the mechanical stopper. To confirm the position, or use the OK button or the radio control (previously stored).

8.9) STATISTICS MENU
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. A blinking error indicates the first error after the last maintenance.

8.10) PASSWORD MENU
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.

9) CLOSING LIMIT SWITCH PRESSURE Fig. G Ref. A-B
OPENING DIRECTION Fig. E

10) U-LINK OPTIONAL MODULES
Refer to the U-link instructions for the modules.
The use of some models causes lowered radio capacity. Adjust the system using an appropriate antenna tuned to 433MHxz.

WARNING! Incorrect settings can result in damage to property and injury to people and animals.
WARNING!! Check that the impact force value measured at the foreseen points is lower than that indicated in the EN 12453 standard.
Impact forces can be reduced by using deformable edges.

For best results, it is advisable to run the autoset function with the motors idle (i.e. not overheated by a considerable number of consecutive operations).

TABLE "A" - PARAMETERS MENU - (PArAM)

Parameter	Motors	min.	max.	Default	Personal	Definition	Description
oPEn dELAY t IME		0	10	3		Motor 2 opening delay time [s]	Motor 2 opening delay time with respect to motor 1.
cLS dELAY t IME		0	25	6		Motor 1 closing delay time [s]	Motor 1 closing delay time with respect to motor 2. **NOTE:** if the time is set to maximum, before starting, engine 1 waits for the complete shut down of engine 2.
tcA		0	120	10		Automatic closing time [s]	Waiting time before automatic closing.
PEd tcA		0	120	0		Automatic closure time from pedestrian manoeuvre [s]	Waiting time before automatic closure after a pedestrian manoeuvre, ONLY if different from 0. If the parameter is set to 0, the waiting time after a pedestrian manoeuvre is the same as the non-pedestrian manoeuvre.
trF. LGhtcLr. t		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.
t. L IGht		30	300	90		Lighting time of the courtesy light [s]	Lighting duration of the courtesy light [s]
oUtPUt t IME		1	240	10		Activation time of the timed output [s]	Timed radio channel output activation time in seconds
oP. d ISt. SLoUd	SUB BT	10	100	10		Slow-down distance during opening [%]	Slow-down distance for motor(s) during opening, given as a percentage of total travel. **WARNING: Once the parameter has been edited, a complete uninterrupted opening-closing cycle is required. WARNING: when the display reads "SET", obstacle detection is not active. ATTENTION: with actuators with integrated locks, the permanently active slowdown to a value higher than 5 is mandatory. WARNING: in GIUNO, the slow-down distance is set with the sliding sensors ATTENTION: for the ELI BT A35 engine type, the slowing cannot be excluded; values below 10% will be considered to be 10%.**
	E5 BT A18	10	100				
	PHOBOS VELOCE BT B35	10	100				
	E5 BT A12	20	100				
	All others	0	100				
cL. d ISt. SLoUd	SUB BT	10	100	10		Slow-down distance during closing [%]	Slow-down distance for motor(s) during closing, given as a percentage of total travel. **WARNING: Once the parameter has been edited, a complete uninterrupted opening-closing cycle is required. WARNING: when the display reads "SET", obstacle detection is not active. ATTENTION: with actuators with integrated locks, the permanently active slowdown to a value higher than 5 is mandatory. WARNING: in GIUNO, the slow-down distance is set with the sliding sensors ATTENTION: for the ELI BT A35 engine type, the slowing cannot be excluded; values below 10% will be considered to be 10%.**
	E5 BT A18	10	100				
	PHOBOS VELOCE BT B35	10	100				
	E5 BT A12	20	100				
	All others	0	100				
d ISt. dEcEL	PHOBOS VELOCE BT B35	15	100	15		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. **WARNING: Once the parameter has been edited, a complete uninterrupted opening-closing cycle is required. WARNING: when the display reads "SET", obstacle detection is not active.**
	ELI BT A35 V	15	100				
	ELI BT A35 V + FCE	15	100				
	All others	0	100				
PEd oPEn inG		10	100	100		Partial opening M1 [%]	Partial opening distance as a percentage of total opening following activation of PED pedestrian command.

Parameter	Motors	min.	max.	Default	Personal	Definition	Description
oP. ForcE		1	100	50		Leaf force during opening [%]	Force exerted by leaf/leaves during opening. This is the percentage of force delivered, beyond the force stored during the autoset cycle (and subsequently updated), before an obstacle alarm is generated. The parameter is set automatically by the autoset function. **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		1	100	50		Leaf force during closing [%]	Force exerted by leaf/leaves during closing. This is the percentage of force delivered, beyond the force stored during the autoset cycle (and subsequently updated), before an obstacle alarm is generated. The parameter is set automatically by the autoset function. **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 (**).**
Suc PrESSUrE ForcE		0	100	100		Leaf pressure force on the closure limit-switch [%]	The force exerted by the leaf during the pressure on the closure limit-switch.
oP SPEEd	SUB BT	20	100	100		Opening speed [%}	Percentage of maximum speed that can be reached by motor(s) during opening. **WARNING: Once the parameter has been edited, a complete uninterrupted opening-closing cycle is required. WARNING: when the display reads "SET", obstacle detection is not active.**
	ELI BT A35 V	20	100				
	All others	15	100				
cL SPEEd	SUB BT	20	100	100		Closing speed [%]	Percentage of maximum speed that can be reached by motor(s) during closing. **WARNING: Once the parameter has been edited, a complete uninterrupted opening-closing cycle is required. WARNING: when the display reads "SET", obstacle detection is not active.**
	ELI BT A35 V	20	100				
	All others	15	100				
SLoU SPEEd	SUB BT	20	50	25		Slow-down speed [%]	Opening and closing speed of motor(s) during slow-down stage, given as a percentage of maximum running speed. **WARNING: Once the parameter has been edited, a complete uninterrupted opening-closing cycle is required. WARNING: When the display reads ""SET"", obstacle detection is not active. ATTENTION: for motor type ELI BT A35 it is not possible to exclude the deceleration; values greater than 50% will be considered at 50%.**
	ELI BT A35 V	20	50				
	ELI BT A35 V + FCE	20	50				
	PHOBOS VELOCE BT B35	15	50				
	All others	15	100				
MA IntErvnCE		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.
(**) Impact forces can be reduced by using deformable edges.

TABLE "B" - LOGIC MENU - (LoG Ic)

Logic	Definition	Default	Cross out setting used	Optional extras
Motor tYPE	**Motor type** (Set the type of motor connected to the board).	0	0	Motors not active
			1	NOT MANAGED
			2	NOT MANAGED
			3	IGEA BT
			4	NOT MANAGED
			5	NOT MANAGED
			6	SUB BT
			7	KUSTOS BT A - PHOBOS BT A - PHOBOS N BT
			8	GIUNO ULTRA BT A 20 - GIUNO ULTRA BT A50
			9	VIRGO SMART BT A - 5 wires
			10	VIRGO SMART BT A - 3 wires
			11	E5 BT A18
			12	E5 BT A12
			13	ELI BT A40 + FCE
			14	ELI BT A35 V + FCE
			15	ELI BT A40
			16	ELI BT A35
			17	PHOBOS VELOCE BT B35
tcA	**Automatic Closure**	0	0	Logic not enabled
			1	Switches automatic closing on
			2	It activates automatic closure also after a reversal due to an obstacle when closing. In case of a reversal during opening, it retries opening after 2 seconds; if it finds an obstacle during opening 4 consecutive times, it closes. Configuration can only be activated with the E5 BT A12 motor (motor type 12). ⚠ The logic can only be used with pedestrian doors the energy of which is limited to within 1.69J.

Logic	Definition	Default	Cross out setting used	Optional extras
PSAuE	**Power Down activation**	1	0	Power Down DEACTIVATED, i.e. the power supply of the accessories is always present. ⚠ The stand-by consumption with deactivated logic is > 0.5 W
			1	Power Down ACTIVE, i.e. the power supply of the accessories is deactivated with the gate stopped.
UL InH 1	**Activates ULink Protocol**	0	0	Both U-Link connectors support the new U-Link2.0 protocol.
			1	Enabling of the U-Link protocol (previous version) on the optional card connector 1. The previous version of the U-Link protocol can be activated on connector 1.
FASt cLS.	**Fast closing**	0	0	Logic not enabled
			1	Closes 3 seconds after the photocells are cleared before waiting for the set TCA to elapse.
bAtt conF IG	**Battery config.**	0	0	No operative change.
			1	Total opening and waiting for the power to come back on.
			2	Partial opening based on the "partial opening" parameter, and waiting for the power to come back on.
			3	Total closure and waiting for the power to come back on.
StEP-by-StEP MouEMnt	**Step-by-step movement**	0	0	Inputs configured as Start E, Start I, Ped operate with 4-step logic.
			1	Inputs configured as Start E, Start I, Ped operate with 3-step logic. Pulse during closing reverses movement.
			2	Inputs configured as Start E, Start I, Ped operate with 2-step logic. Movement reverses with each pulse.
PrE-ALArM	**Pre-alarm**	0	0	The flashing light comes on at the same time as the motor(s) starts.
			1-10	The pre-alarm function is activated: The flashing light comes on before the motor(s) starts. The value of the parameter indicates the duration of the pre-flashing in seconds.
hoLd-to-rUn	**Deadman**	0	0	Pulse operation.
			1	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.**
			2	Emergency Deadman mode. Usually pulse operation. If the board fails the safety device tests (photocell or safety edge, Er0x) 3 times in a row, the device is switched to Deadman mode, which will stay active until the OPEN UP or 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.**
			3	Dead-man function during closing. The input 61 is configured as OPEN UP. The input 62 is configured as CLOSE UP. The opening manoeuvre occurs automatically, the closing manoeuvre continues until the control button (CLOSE) is pressed. ⚠ **WARNING: safety devices are not active during the closure.**
oPEn IbL	**Block pulses during opening**	0	0	Pulse from inputs configured as Start E, Start I, Ped has effect during opening.
			1	Pulse from inputs configured as Start E, Start I, Ped has no effect during opening.
tcA IbL	**Block pulses during TCA**	0	0	Pulse from inputs configured as Start E, Start I, Ped has effect during TCA pause.
			1	Pulse from inputs configured as Start E, Start I, Ped has no effect during TCA pause.
cLoSE IbL	**Block pulses during closing**	0	0	Pulse from inputs configured as Start E, Start I, Ped has effect during closing.
			1	Pulse from inputs configured as Start E, Start I, Ped has no effect during closing.
rAM bLob c. oP	**Hammer during opening**	0	0	Logic not enabled
			1	Before opening completely, the gate pushes for approx. 2 seconds as it closes. This allows the solenoid lock to be released more easily. **IMPORTANT - Do not use this function if suitable mechanical stops are not in place.**
rAM bLob c. cL	**Hammer during closing**	0	0	Logic not enabled
			1	Before closing completely, the gate pushes for approx. 2 seconds as it opens. This allows the solenoid lock to be released more easily. **IMPORTANT - Do not use this function if suitable mechanical stops are not in place.**
bLoc PErS ISt	**Stop maintenance**	0	0	Logic not enabled
			1	If motors stay idle in fully open or fully closed position for more than one hour, they are switched on in the direction of the stop for approx. 3 seconds. This operation is performed every hour. NB: In hydraulic motors, this function serves to compensate a possible reduction in the volume of oil due to a drop in temperature during extended pauses, such as during the night, or due to internal leakage. **IMPORTANT - Do not use this function if suitable mechanical stops are not in place.**
PrESS Suc	**Closing limit switch pressure**	0	0	Movement is stopped only when the closing limit switch trips: in this case, the tripping of the closing limit switch must be adjusted accurately (Fig.G Ref.B).
			1	Use when there is a mechanical stop in closed position. This function allows leaves to press against the mechanical stop without the Amperostop sensor interpreting this as an obstacle. Thus the rod continues its stroke for a few seconds after meeting the closing limit switch or as far as the mechanical stop. In this way, the leaves come to rest perfectly against the stop by allowing the closing limit switches to trip slightly earlier (Fig.G Ref.A).

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

INSTALLATION MANUAL

Logic	Definition	Default	Cross out setting used	Optional extras	
IcE	**Ice feature**	0	0	The Amperostop safety trip threshold stays at the same set value.	
			1	The controller automatically adjusts the obstacle alarm trip threshold at each start up. WARNING!! Check that the impact force value measured at the foreseen points is lower than that indicated in the EN 12453 standard. If in doubt, use auxiliary safety devices. This feature is useful when dealing with installations running at low temperatures. WARNING: once this feature has been activated, you will need to perform an autoset opening and closing cycle.	
Mot. on	**Number of active motors**	2	1	Only motor 1 active (1 leaf).	
			2	Both motors are activated (2 leaves).	
InSTALLAt Ion AttErnAt IvE	**Installation alternative**	0	0	See Fig.E0	
			1	See Fig.E1	
			2	See Fig.E2	Excluding IGEA BT
			3	See Fig.E3	
			4	See Fig.E4	Only for VIRGO
			5	See Fig.E5	
			6	See Fig.E6	
			7	See Fig.E7	
1 SAFE	**Configuration of safety input SAFE 1. 72**	0	0	Input configured as Phot (photocell).	
			1	Input configured as Phot test (tested photocell).	
			2	Input configured as Phot op (photocell active during opening only).	
			3	Input configured as Phot op test (tested photocell active during opening only).	
2 SAFE	**Configuration of safety input SAFE 2. 73**	6	4	Input configured as Phot cl (photocell active during closing only).	
			5	Input configured as Phot cl test (tested photocell active during closing only).	
			6	Input configured as Bar, safety edge.	
			7	Input configured as Bar, tested safety edge.	
			8	Input configured as Bar 8k2. **(Inactive on SAFE 11,13).**	
			9	Input configured as Bar OP, safety edge with inversion active only while opening. If while closing, the movement stops.	
			10	Input configured as Bar OP TEST, safety edge tested with inversion active only while opening. If while closing, the movement stops.	
Only with an expansion card. If you do not use the expansion card, leave the default setting (15) — 10 SAFE	**Configuration of safety input SAFE 10. 77**	15	11	Input configured as Bar OP 8k2, safety edge with inversion active only while opening. If while closing, the movement stops. **(Inactive on SAFE 11,13).**	
11 SAFE	**Configuration of safety input SAFE 11. 78**	15	12	Input configured as Bar CL, safety edge with inversion active only while closing. If while opening, the movement stops.	
12 SAFE	**Configuration of safety input SAFE 12. 79**	15	13	Input configured as Bar CL TEST, safety edge tested with inversion active only while closing. If while opening, the movement stops.	
13 SAFE	**Configuration of safety input SAFE 13. 80**	15	14	Input configured as Bar CL 8k2, safety edge with inversion active only while closing. If while opening, the movement stops. **(Inactive onSAFE 11,13).**	
			15	Input configured as deactivated. To be used without the expansion card. (Not active on Safe 1,2).	
1 Ic	**Configuration of command input IC 1. 61**	0	0	Input configured as Start E.	
			1	Input configured as Start I.	
			2	Input configured as Open.	
			3	Input configured as Close.	
2 Ic	**Configuration of command input IC 2. 62**	4	4	Input configured as Ped.	
			5	Input configured as Timer.	
Only with an expansion card — 10 Ic	**Configuration of command input IC 10. 64**	2	6	Input configured as Timer Pedestrian.	
11 Ic	**Configuration of command input IC 11. 65**	3			
1ch	**Configuration of the 1st radio channel command**	0	0	Radio control configured as START E.	
			1	Radio control configured as Start I.	
			2	Radio control configured as Open.	
2ch	**Configuration of the 2nd radio channel command**	9	3	Radio control configured as Close	
			4	Radio control configured as Ped	
			5	Radio control configured as STOP	
3ch	**Configuration of the 3rd radio channel command**	2	6	Radio control configured as AUX1 **	
			7	Not used	
			8	Radio control configured as AUX11 ** (only with an expansion card)	
4ch	**Configuration of the 4th radio channel command**	5	9	Radio control configured as AUX2 **	
			10	Radio control configured as EXPO1 **	
			11	Radio control configured as EXPO2 **	
			12	Control configured as COURTESY LIGHT The command enables the light with bi-stable logic. At least one auxiliary output must be set as a courtesy light	
1AUX	**Configuration of AUX 1 output. 20-21**	6	0	Output configured as a monostable radio channel	
			1	Output configured as SCA, gate open light.	
2AUX	**Configuration of AUX 2 output. 26-27**	0	2	Output configured as Courtesy Light command.	
			3	Output configured as Zone Light command.	

Logic		Definition	Default	Cross out setting used	Optional extras
Only with an expansion card	10AUX	**Configuration of AUX 10 output. 22-23**	3	4	Output configured as Stair Light
				5	Output configured as Alarm
				6	Output configured as Flashing light
				7	Not used
	11AUX	**Configuration of AUX 11 output. 24-25**	1	8	Not used
				9	Output configured as Maintenance
				10	Output configured as Flashing Light and Maintenance.
				11	Not used
				12	Not used
				13	Output configured as closed Gate Status
				14	Output configured as a Bistable radio channel
				15	Output configured as a Timed radio channel
				16	Output configured as open Gate Status
LocK		**Lock type. 28-29**	0	0	Output configured for 12V snap-action electric lock.
				1	Output configured for 12V magnet electric lock. Max.0.5A Power Down is not active with this setting
				2	Output configured for 24V snap-action electric lock.
				3	Output configured for 24V magnet electric lock. Max.0.25A Power Down is not active with this setting
				4	Traction lock: active throughout the manoeuvre. Max.: 1 A for 1S, 0.2 A for the rest of the manoeuvre.
Prot. LEu		**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 replays. Enables programmed Replays to be added to the receiver's memory. **D** - 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 from 0 logic setting
				2	Not used
				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. **C** - Wireless automatic addition of Replays is disabled. Function C remains unchanged with respect to function 0
				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 Replays is disabled. **D** - The option of editing the board's parameters via the U-link network is disabled. Transmitters are memorized only using the relevant Radio menu.
SEr IAL ModE		**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.
AddrESS		**Address**	0	[___]	Identifies board address from 0 to 119 in a local BFT network connection. (see U-LINK OPTIONAL MODULES section)
PUSh Go		**Push&Go (Only for E5 BT A12)**	0	0	Logic not active
				1	Manually pushing the stopped leaf toward the opening direction determines the automatic opening.
I EXPI		**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 Ped 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 safety Bar OP, safety edge with inversion active only while opening, if while closing the movement stops.
				12	Input configured as safety Bar CL, safety edge with inversion active only while closing, if while opening the movement stops.
				13	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.
				14	Input configured as Phot op test safety, tested photocell active only while opening. Input 3 (EXPI2) on input/output expansion board is switched automatically to safety device test input, EXPFAULT1
				15	Input configured as Phot cl test safety, tested photocell active only while closing. Input 3 (EXPI2) on input/output expansion board is switched automatically to safety device test input, EXPFAULT1
				16	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.
				17	Input configured as safety Bar OP test, safety edge with inversion active only while opening, if while closing the movement stops. Input 3 (EXPI2) on input/output expansion board is switched automatically to safety device test input, EXPFAULT1.
				18	Input configured as safety Bar CL test, safety edge with inversion active only while closing, if while opening the movement stops. Input 3 (EXPI2) on input/output expansion board is switched automatically to safety device test input, EXPFAULT1.

Logic	Definition	Default	Cross out setting used	Optional extras
2 EXP I	**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 Ped 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 safety Bar OP, safety edge with inversion active only while opening, if while closing the movement stops.
			12	Input configured as safety Bar CL, safety edge with inversion active only while closing, if while opening the movement stops.
1 EXPo	**Configuration of EXPO1 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.
2 EXPo	**Configuration of EXPO2 output on input-output expansion board 6-7**	11	5	Output configured as Alarm.
			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	Not used
			13	Not used
			14	Output configured as closed Gate Status
			15	Output configured as Bistable Radio Channel
			16	Output configured as timed Radio Channel
trAFF ic L IGht PrEFLASh inG	**Traffic light pre-flashing**	0	0	Output configured as open Gate Status
			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.

TABLE "C" – RADIO MENU (rAd io)

Logic	Description
Add 1ch	**Add 1ch Key** associates the desired key with the 1nd radio channel command.
Add2ch	**Add 2ch Key** associates the desired key with the 2nd radio channel command.
Add3ch	**Add 3ch Key** associates the desired key with the 3nd radio channel command.
Add4ch	**Add 4ch Key** associates the desired key with the 4nd radio channel command.
ErASE 128	**Erase List** **WARNING!** Erases all memorized transmitters from the receiver's memory.
ErASE 1	**Eliminates individual radio control** Removes a radio control (if clone or replay is disabled) To select the radio control to be deleted, enter the position or press a button on the radio control to be deleted (the position is displayed)

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