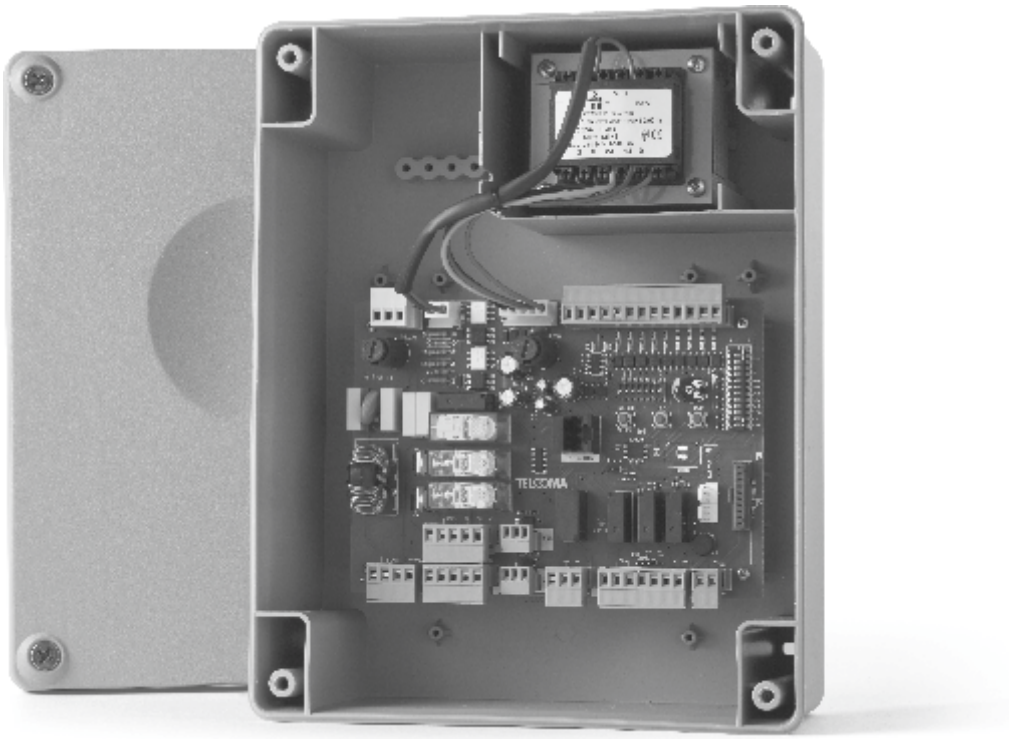
T624
V. 10.2016

CE

mod. T624



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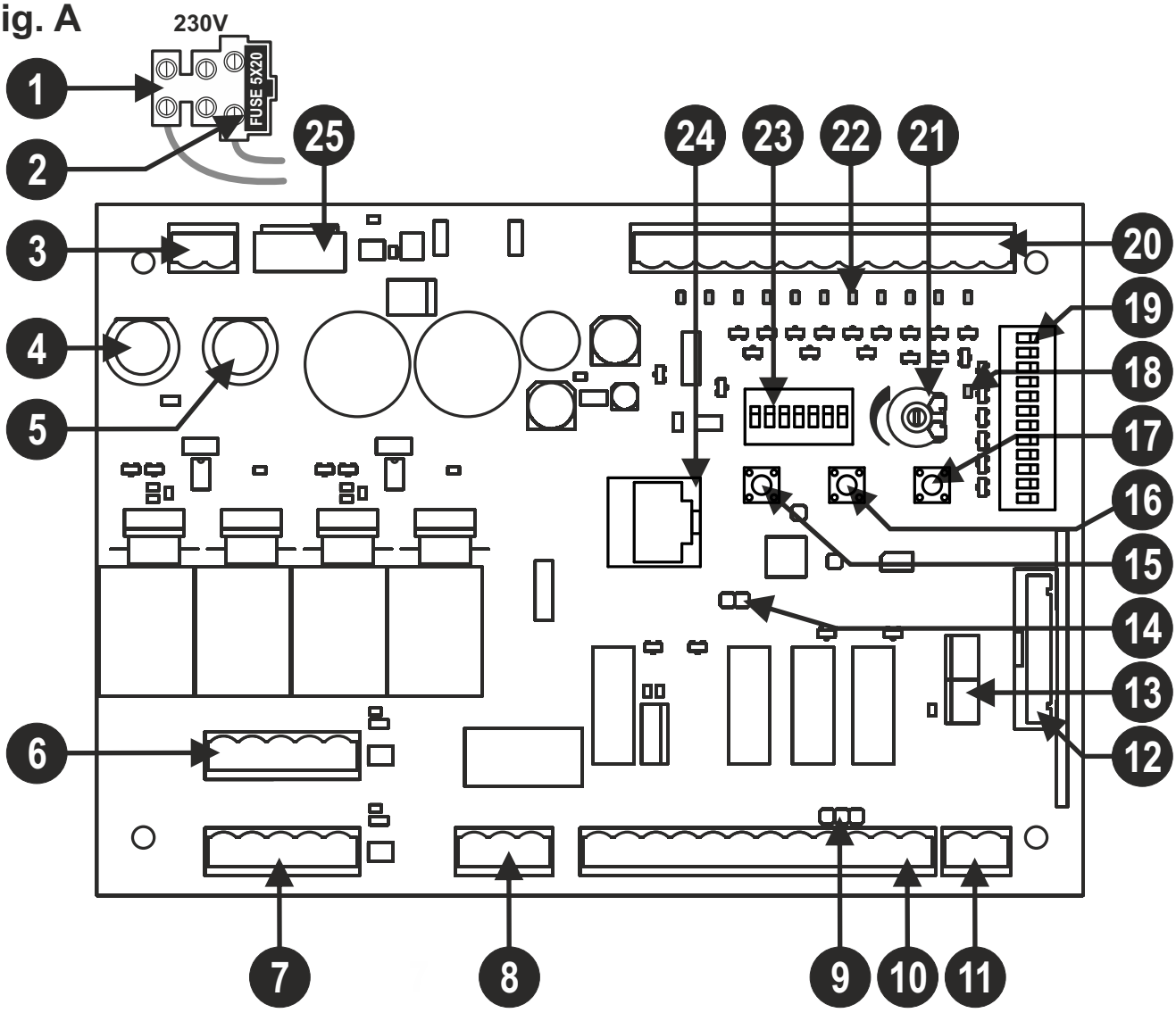
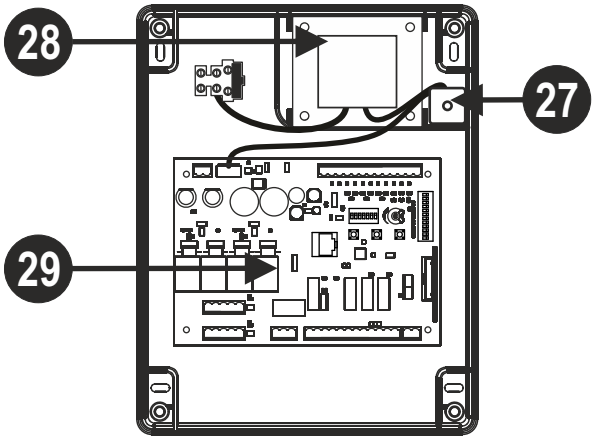
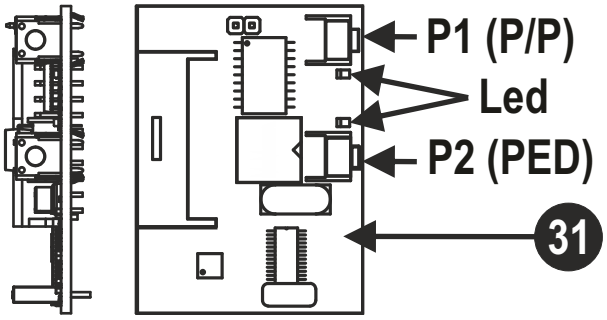
ELECTRONIC CONTROL UNIT FOR 1 or 2 24V-MOTORS
Programming and user instructions

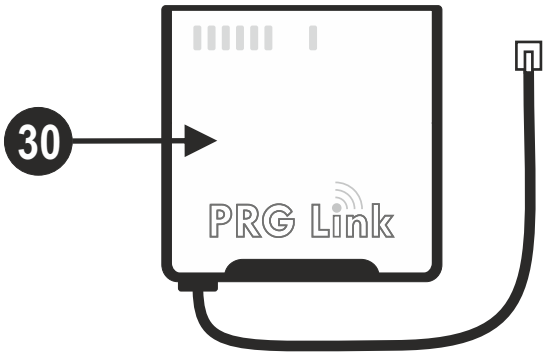
Fig. A

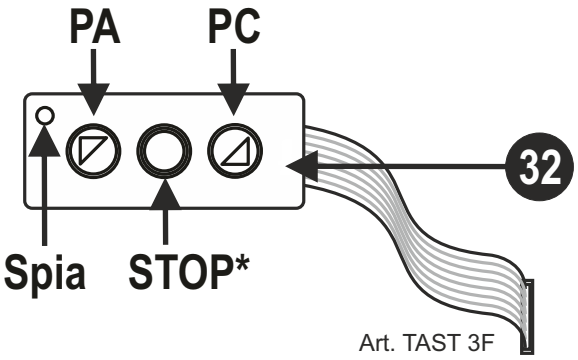






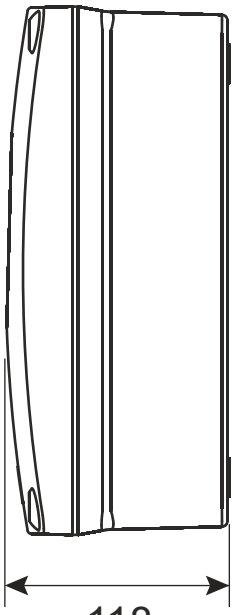
Art. XXXOC2



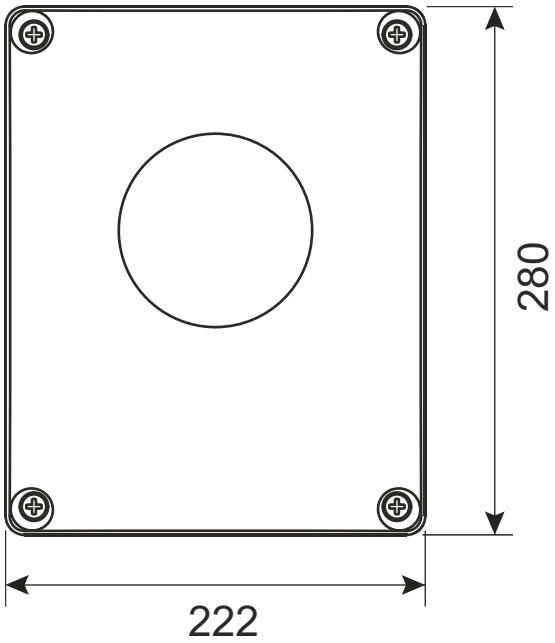


Art. TAST 3F

Fig. B



(mm)



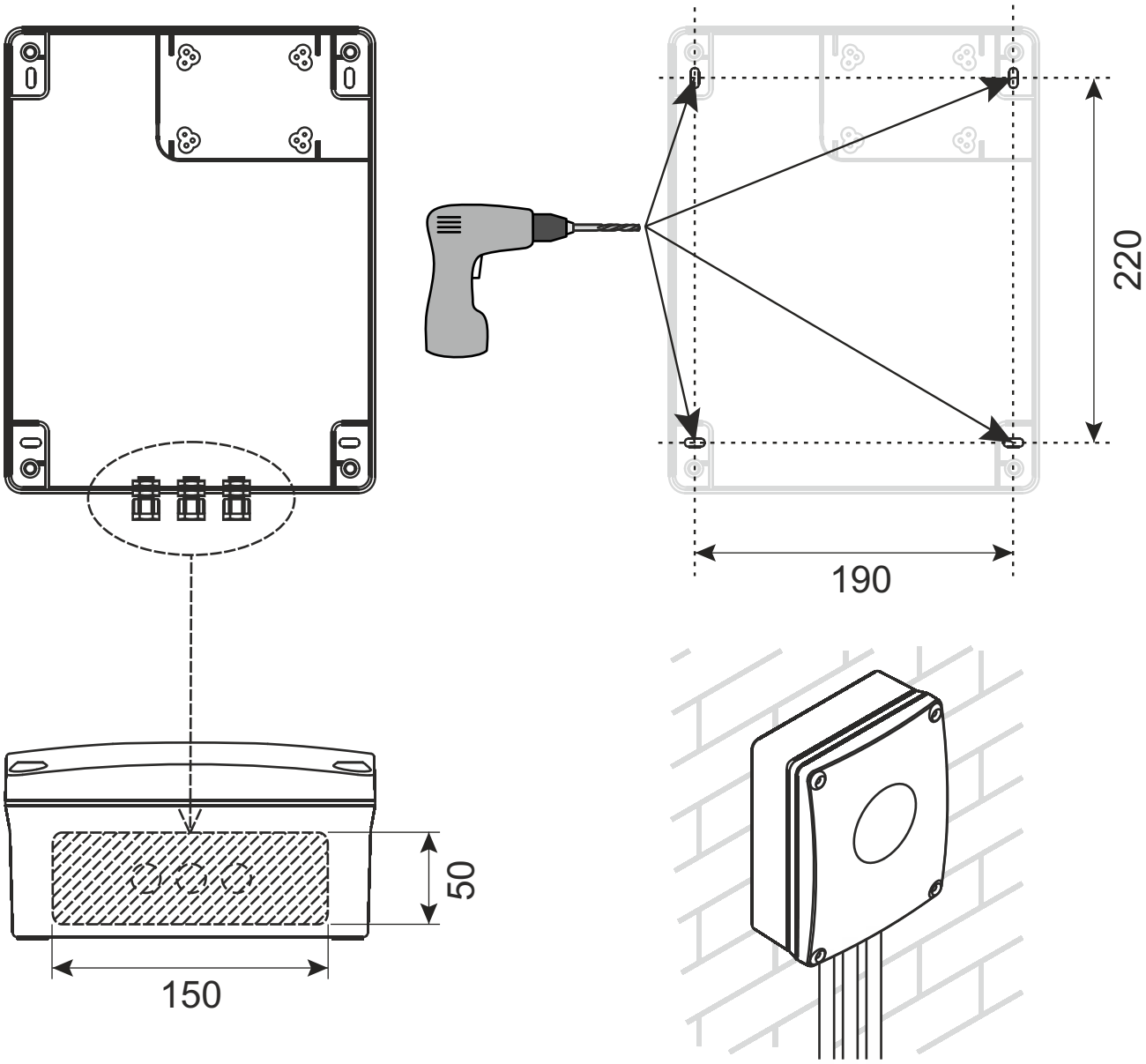


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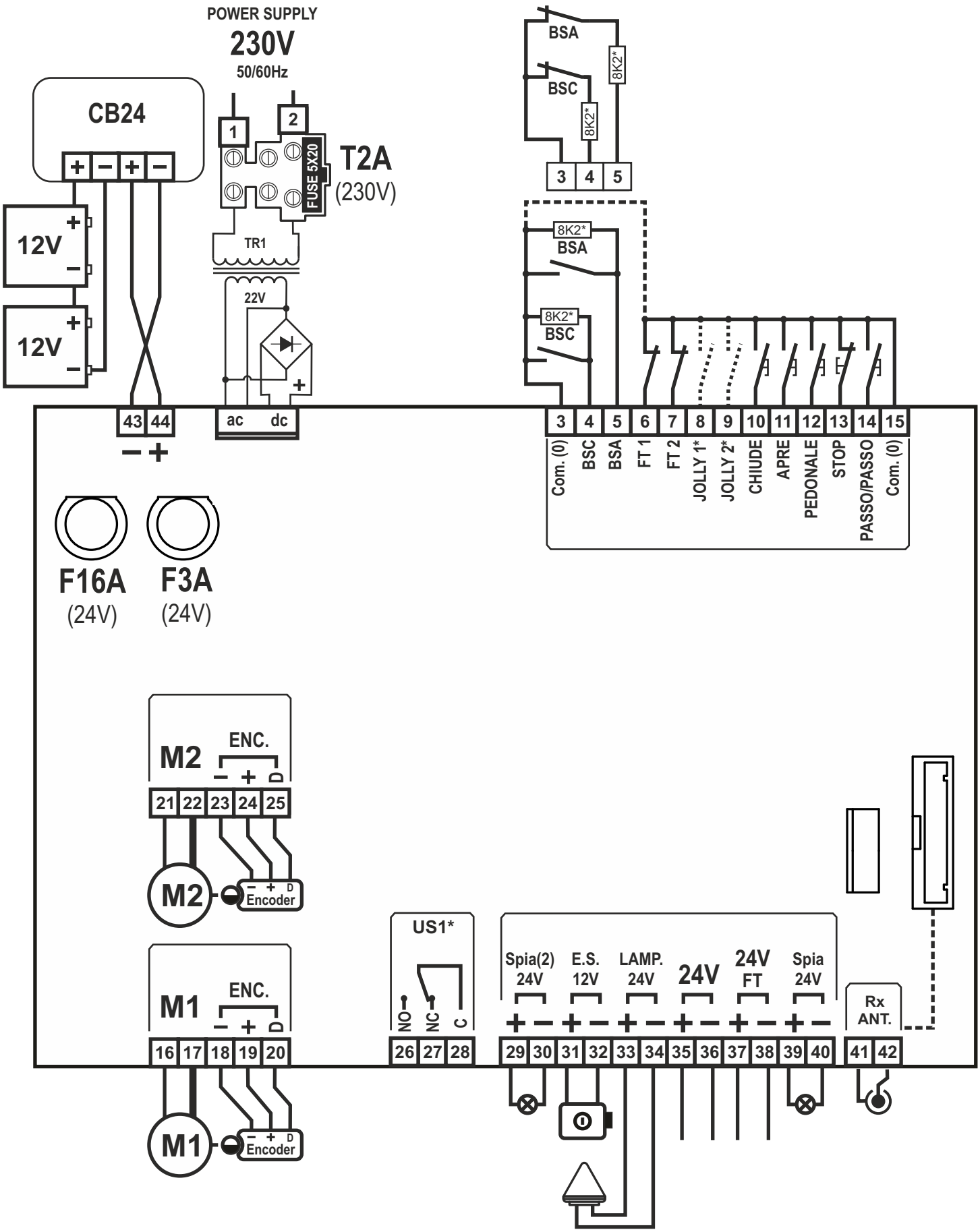
Fig. C



mod. T624

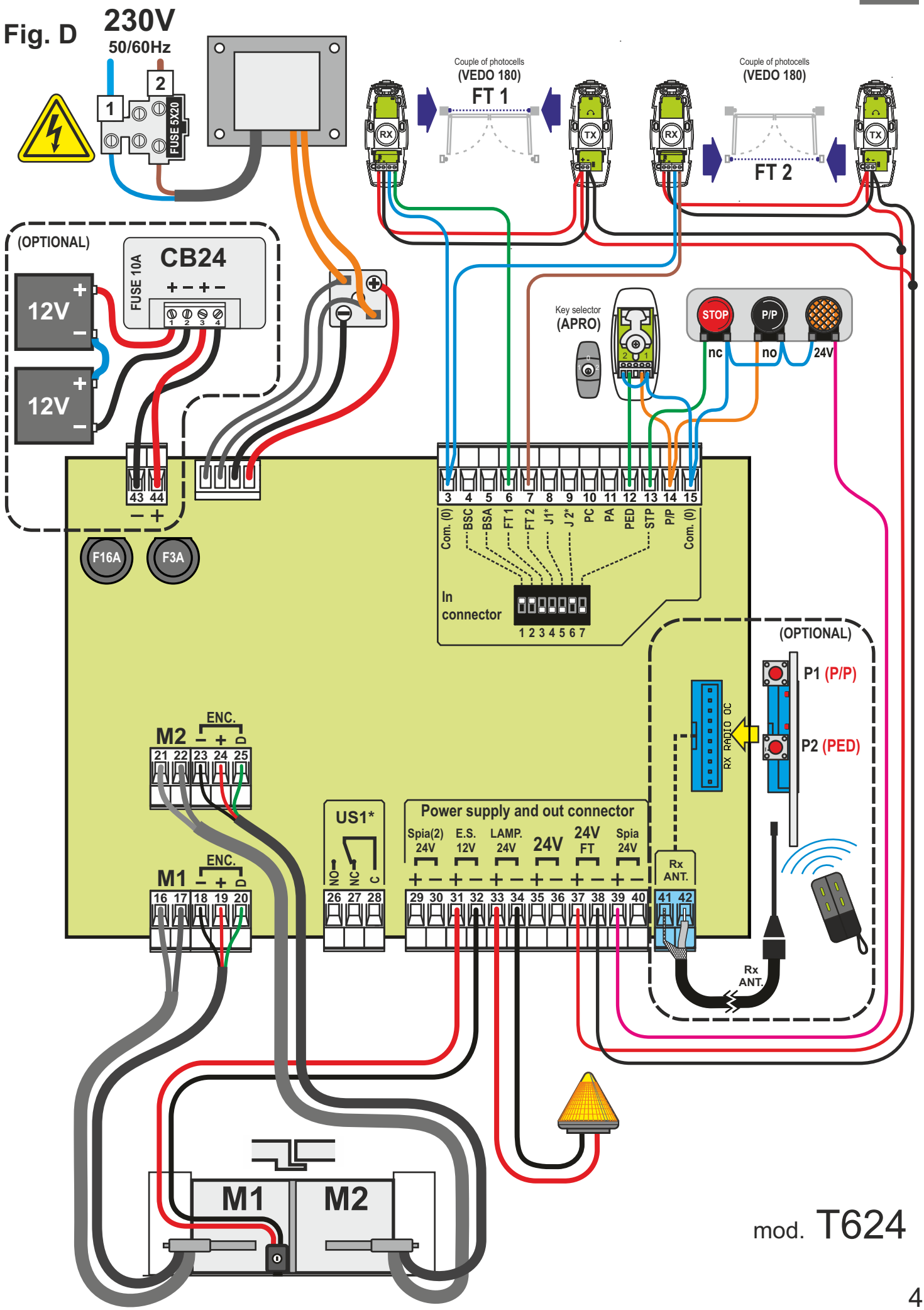


Fig. D
230V
50/60Hz
1
2
FUSE 5X20
Couple of photocells
(VEDO 180)
FT 1
RX
TX
Couple of photocells
(VEDO 180)
FT 2
(OPTIONAL)
CB24
FUSE 10A
12V
12V
43 44
F16A
F3A
Key selector
(APRO)
STOP
P/P
nc
no
24V
3 4 5 6 7 8 9 10 11 12 13 14 15
Com. (0)
BSC
BSA
FT 1
FT 2
J1*
J2*
PC
PA
PED
STP
P/P
Com. (0)
In
connector
1 2 3 4 5 6 7
(OPTIONAL)
P1 (P/P)
P2 (PED)
RX RADIO OC
ENC.
M2
21 22 23 24 25
ENC.
M1
16 17 18 19 20
US1*
NO
NC
C
26 27 28
Power supply and out connector
Spia(2) 24V
E.S. 12V
LAMP. 24V
24V
24V FT
Spia 24V
29 30 31 32 33 34 35 36 37 38 39 40
Rx ANT.
41 42
Rx ANT.
M1
M2

mod. T624

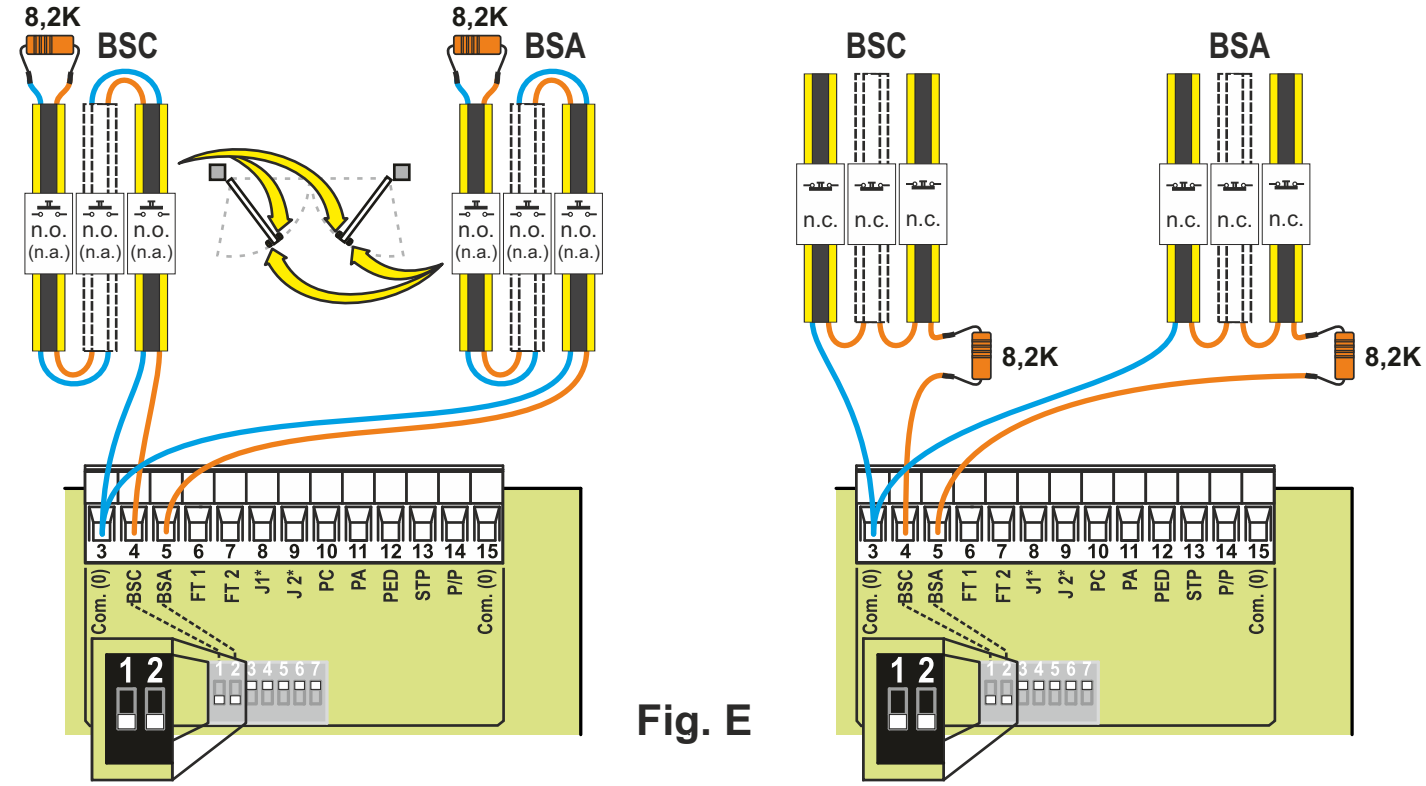
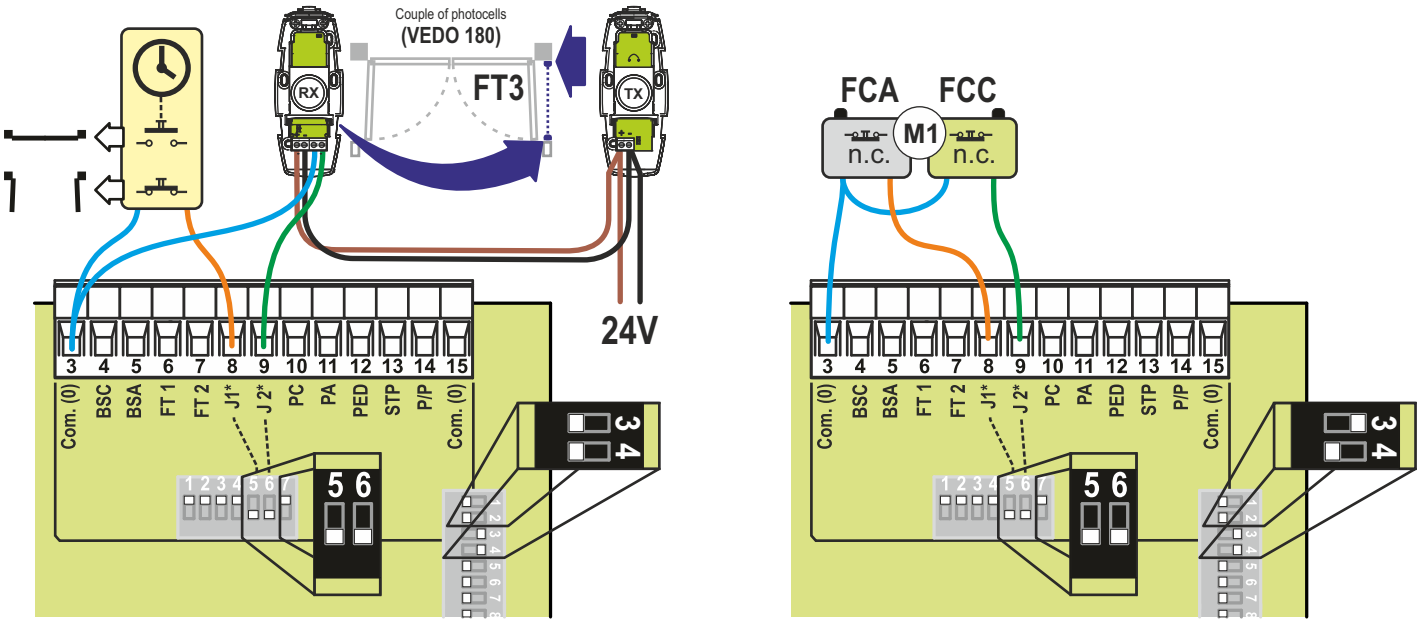

8,2K
BSC
8,2K
BSA
n.o.
(n.a.)
n.c.
8,2K
8,2K
3 4 5 6 7 8 9 10 11 12 13 14 15
Com. (0) BSC BSA FT 1 FT 2 J1* J 2* PC PA PED STP P/P Com. (0)
1 2

Fig. E


Couple of photocells
(VEDO 180)
FT3
RX
TX
24V
FCA
FCC
M1
n.c.
3 4 5 6 7 8 9 10 11 12 13 14 15
Com. (0) BSC BSA FT 1 FT 2 J1* J 2* PC PA PED STP P/P Com. (0)
5 6
3 4

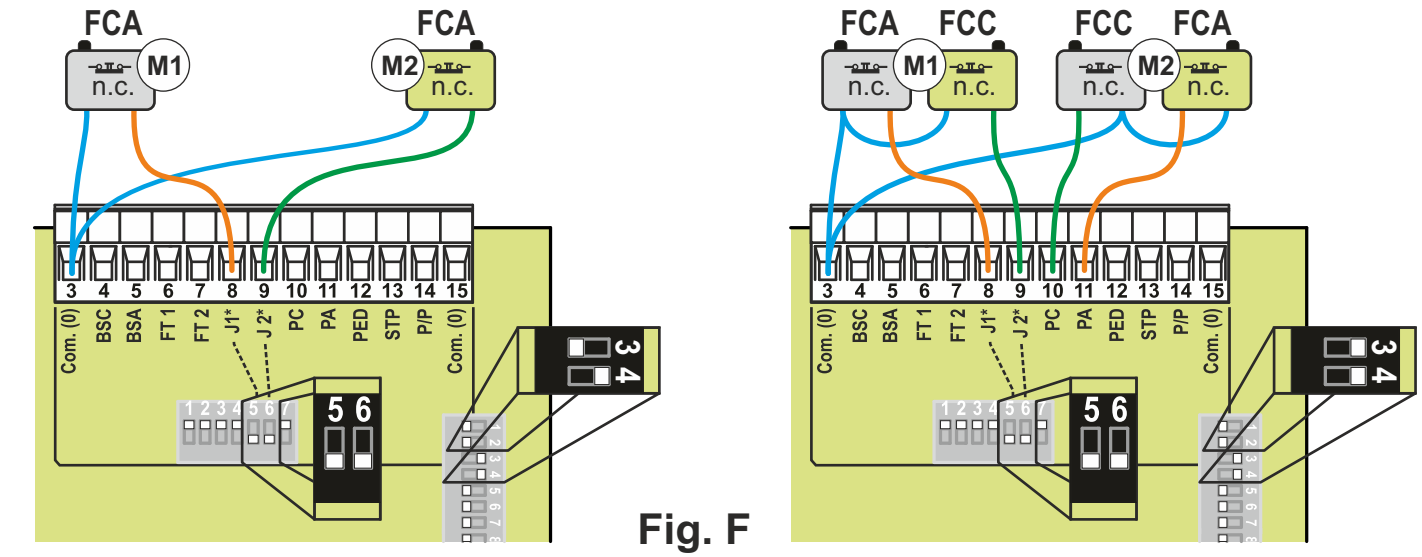

FCA
M1
n.c.
FCA
M2
n.c.
FCA
FCC
M1
n.c.
FCC
FCA
M2
n.c.
3 4 5 6 7 8 9 10 11 12 13 14 15
Com. (0) BSC BSA FT 1 FT 2 J1* J 2* PC PA PED STP P/P Com. (0)
5 6
3 4

Fig. F

CHARACTERISTICS AND COMPONENT DESCRIPTIONS

ECU for the command and control of 1 or 2 gate opening motors (24V).
The main characteristics are:
- 24V-motor output with TORQUE LIMITATION, DECELERATION and SOFT-START.
- TWO INPUTS for the direct control of SAFETY EDGES (8,2K)
- Versatile gate movement control and limitation using ENCODER or TIMER CONTROLLED SENSORS
- EVOLVED PROGRAMMING AND DIAGNOSTICS via the new PRG-Link (optional)
- UNUSED SECURITY DEVICE INPUTS ARE EASILY EXCLUDED.
- Factory set for the connection of a battery charger and buffer batteries (optional) allowing emergency manoeuvres when the 230V power supply is not available.

Component descriptions (fig. A)
1. 230V power supply binding post
2. T2A 230V power supply fuse
3. binding post for the battery charger (CB24) or for the solar panel kit (SUN POWER)
4. 16 A fuse protection for the 24V power supply
5. 3A fuse protecting the 12/24V auxiliary devices
6. 24V output binding post for motor M2 and the encoder sensor input
7. 24V output binding post for motor M1 and the encoder sensor input
8. US1 contact output binding post
9. Photocell continuous power supply Jumper
10. 24V output auxiliary terminal block
11. receiver aerial input binding post Oc2
12. receiver connector OC2
13. keypad TAST 3F connector
14. active procedure reset terminals
15. PROGRAMMING and STOP button
16. P3 button
17. Step-by-step (P/P) button
18. programming led
19. selection dip-switch for optional ECU functions
20. safety and command input terminal board
21. trimmer for maximum torque adjustment
22. safety device / command status leds
23. dip-switch excluding unused safety devices
24. PRG-Link connection
25. external transformer secondary connection
27. transformer secondary power supply stabilizer
28. external power supply transformer
29. T624 electronic circuit
30. PRG-Link (optional)
31. OC2 receiver (optional)
32. adhesive keypad TAST 3F (optional)

PRELIMINARY CHECKS AND IMPORTANT INSTALLATION INFORMATION

BEFORE INSTALLING THE PRODUCT PLEASE CHECK:
1. that the structure is in good working order (posts, hinges, gate leaves) in relation to the power generated by the motors.
2. that sufficiently robust mechanical travel limits have been installed at the gates opening and closing points.
3. that there is no friction or excessive spaces between the lower castors/wheels and the upper roller/guide system.
4. that the original manual locking system has been excluded.
5. that all electrical wiring and cables are in good working order.

Important warnings:
1. The installation of the automation must be carried out correctly by professionally qualified personnel in conformity with the machine directive 2006/42/CEE and the standards EN13241-1, EN 12453 and EN 12445.
2. Carry out risk analysis of the closing system and the solutions used and adopt all necessary security and visual warning devices.
3. Install the command devices (e.g. selector switches) in such a way that the user cannot find himself in dangerous positions.
4. Apply a CE panel or adhesive to the installation containing all danger information and the installation identification data.
5. Make sure the operating instructions, general warnings for a safe installation and the CE conformity declaration have been given to the end user.
6. Make sure that the end user has correctly understood the automatic, manual and emergency operations to be carried out.
7. Once the installation has been completed, carry out a series of tests to make sure that the safety devices, warning signals and release mechanisms are all working correctly.
8. Write the following information down for the user (in the instruction manual for example):
   a. the presence of any residual risk factors that have not been protected and factors that could arrive from unforeseen use of the system.
   b. The end user must disconnect the mains power supply before releasing the gate, carrying out ordinary maintenance intervention or attempting to clean the area of the installation.
   c. The end user must frequently check the installation for visible signs of damage and immediately inform the installer should any arise.
   d. Make sure that the end-user is aware that children must not be allowed to play within the area of an automatic installation and that radio control devices and other command devices are kept out of their reach.
9. Draw up a maintenance plan for the installation (at least every six months) and write the interventions carried out in a maintenance register.

ELECTRIC CONNECTIONS

	Term. n.	Function / Device	V/I max	Notes
230V	**1** (L) **2** (N)	power supply input	230/2A	Connect to the 230V power supply.
BSC 8K2*	3,15 (com) **4**	Safety edge input Cuts in during CLOSING	8K2/NC	Input for closing direction enabled. Connect 8,2K safety edges or an N.C. contact with 8,2K resistance in series (fig. E). If unused (binding post free), set dip 1 to ON (part. 23 fig. A).
BSA 8K2*	3,15 (com) **5**	Safety edge input Cuts in during OPENING	8K2/NC	Input for opening direction enabled. Connect 8,2K safety edges or an N.C. contact with 8,2K resistance in series (fig. E). If unused (binding post free), set dip 2 to ON (part. 23 fig. A).
FT1	3,15 (com) **6**	Photoelectric cell input	NC	Travel direction inversion during closing. If unused (binding post free), set dip 3 to ON (part. 23 fig. A).
FT2	3,15 (com) **7**	Photoelectric cell input	NC	Temporary movement block during the opening stage. Travel direction inversion during closing. If unused (binding post free), set dip 4 to ON (part. 23 fig. A).
J1	3,15 (com) **8**	Input for selectable functions	-	See dip-switch setting 3 and 4 (part. 19 fig. A). If unused, set dips 3 and 4 to OFF and then set dip 5 (part. 23 fig. A) to OFF.
J2	3,15 (com) **9**	Input for selectable functions	-	See dip-switch setting 3 and 4 (part. 19 fig. A). If unused, set dips 3 and 4 to OFF and then set dip 6 (part. 23 fig. A) to ON.
PC	3,15 (com) **10**	Command input CLOSE	NA	CLOSING only command, during opening it inverts and closes.
PA	3,15 (com) **11**	Command input OPEN	NA	OPENING only command, during closing it inverts and opens.
PED	3,15 (com) **12**	PEDESTRIAN command input	NA	With a 2 motor installation, only M1 opens. With a 1 motor installation it opens partially for a set amount of time (see “programming pedestrian opening”).
STP	3,15 (com) **13**	STOP button input	NC	Blocks all functions. If unused, set dip 7 to ON (part. 23 fig. A)
P/P	3,15 (com) **14**	STEP BY STEP command	NA	See settings for dip 1 and 2 (part. 19 fig. A)

	Term. n.	Function / Device	V/I max	Notes
M1	**16** (+ open) **17** (- open)	Output motor M1	24/5A	Motor M1 moves first in the opening direction and is delayed during closing. An eventual electric lock should be fitted to this gate leaf.
ENC 1	**18** (-) **19** (+) **20** (D)	Encoder sensor input motor M1	5-12V	This device will be detected if it is present during programming, otherwise it will be excluded.
M2	**21** (+ open) **22** (- open)	Output motor M2	24/5A	M2 is the second motor to move and the first one to close.
ENC 2	**23** (-) **24** (+) **25** (D)	Encoder sensor input motor M2	5-12V	This device will be detected if it is present during programming, otherwise it will be excluded.
US1	**26** (no) **27** (nc) **28** (c)	Contact for selectable functions	/4A	Potential free contact. See settings for dip 7 (part. 19 fig. A)
24V	**29** (+) **30**	Uscita per spia di segnalazione allarmi	24dc/0,2A	3 flashes indicate “obstacle detected” 4 flashes indicate “encoder not present” 5 flashes indicate “motor control failure” 6 flashes indicate “maintenance alarm”
12V	**31** (+) **32**	Alarm indicator light output	12dc/1,5A	Attiva per qualche secondo ad ogni inizio apertura.
24V	**33** (+) **34**	WARNING LAMP output	24Vdc/1A	Output active while the motor is working With DIP 5 (part. 19 fig. A) ON, the warning-light lights up 5 s before the motor begins to move.
24V	**35** (+) **36**	Output for auxiliary device power supply	24dc/0,5A	e.g. photocells, external receivers or other 24Vac devices
24V FT	**37** (+) **38**	Output for Transmitter / Photocell power supply	24dc/0,5A	Output only active during the manoeuvre and the reclosing pause period, connect the photoelectric cell projectors so that the minimum amount of power is used. If the jumper (part. 9 di fig. A) is set to ON this output will be continuously active.
24V	**39** (+) **40**	Indicator light output	24dc/0,2A	Status indication: automation CLOSED – led off during OPENING – flashes slowly during CLOSING – flashes quickly STOP (block) – remains lit during the RECLOSING PAUSE – double flashing with pause
	41 Calza **42** Cent.	Receiver aerial input	/	Antenna connection for the OC2 module (optional) inserted into slot det. 12, fig. A. Use an antenna with characteristics compatible with the receiver.

SAFETY DEVICE EXCLUSION DIP-SWITCHES

Use these dip-switches (part. 23 fig. A) to excluded inputs of unused safety devices.
A dip-switch set to ON (Excluded) is the same as bridging the Common (binding post 6) and any one of these 7 inputs.

Function	n.	OFF-ON	Mode	Descrption
BSC	1	OFF		With a closing safety edge installed
		ON	EXCLUDED	Excludes the closing safety edge input. **Attention! Binding post 4 must remain disconnected.**
BSA	2	OFF		With an opening safety edge installed
		ON	EXCLUDED	Excludes the opening safety edge input. **Attention! Binding post 5 must remain disconnected.**
FT1	3	OFF		With installed photoelectric cells
		ON	EXCLUDED	Excludes the input for photocell 1. The same as bridging binding post 6 with the common
FT2	4	OFF		With installed photoelectric cells
		ON	EXCLUDED	Excludes the input for photocell 2. The same as bridging binding post 7 with the common
J1	5	OFF		With a device installed
		ON	EXCLUDED	Excludes the input J1. The same as bridging binding post 8 with the common
J2	6	OFF		With a device installed
		ON	EXCLUDED	Excludes the input J2. The same as bridging binding post 9 with the common
STP	7	OFF		With a STOP button installed
		ON	EXCLUDED	Excludes the STOP input. The same as bridging binding post 13 with the common

DIP-SWITCH SETTING

Select the desired options which will become active once one of the following conditions has been met:
- resetting the ECU (short circuit the RESET binding post 14 fig. A)
- switch the power to the ECU OFF and ON
- at the end of a complete closing cycle the new settings will be read.

Function	n.	Off - On	Mode	Descrption
STEP-BY-STEP INPUT AND RADIO CHANNEL MODE (CH1)	**1** **2**	OFF OFF	OPEN - STOP - CLOSE	During opening, upon pressing the P/P button the gate stops, pressing it again the gate closes. During closing, upon pressing the P/P button the gate stops, pressing it again the gate opens.
		ON OFF	OPEN - CLOSE	During opening, upon pressing the P/P button the gate stops for a few seconds and then closes. During closing, upon pressing the P/P button the gate stops for a few seconds and then opens.
		OFF ON	ALWAYS OPENS “CONDOMINIUM”	During opening, pressing the P/Pbutton has no effect. During the pause, pressing the P/Pbutton has no effect. During closing, upon pressing the P/P button the gate stops for a few seconds and then opens.
		ON ON	OPENS-CLOSES with no reversal during opening	During opening, pressing the P/Pbutton has no effect. During the pause, upon pressing the P/Pbutton the gate closes. During closing, upon pressing the P/P button the gate stops for a few seconds and then opens.

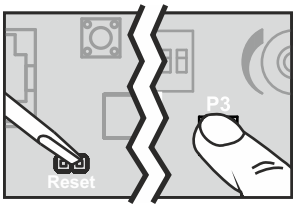
Function	n.	Off - On	Mode	Descrption
JOLLY INPUT MODE	3 4	OFF 3 4 OFF	J1 = TIMER J2 = FT3	J1=TIMER input; closes the gate when the contact is opened and opens it when the contact is closed. J2=third photocell input (FT3); intervenes only during opening and forces closing. Use N.C. contacts.
		ON 3 4 OFF	J1 = FCA M1 J2 = FCC M1	Stops only motor M1 using electric travel limits. Use N.C. contacts
		OFF 3 4 ON	J1 = FCA M1 J2 = FCA M2	Motors are stopped during OPENING using electric travel limits. Use N.C. contacts
		ON 3 4 ON	J1 = FCA M1 J2 = FCC M1 PA = FCA M2 PC = FCC M2	For installations with 4 travel limits. Connect the travel limits of motor M1 to the inputs FCC and FCA. Connect the travel limits of motor M2 to the inputs J1 and J2. Use N.C. contacts
PREFLASH	5	OFF	EXCLUDED	The flashing light operates together with the motor.
		ON	INSERTED	The flashing light operates 5 seconds before any operation.
RE-CLOSURE TIMER	6	OFF	EXCLUDED	After one complete opening, the control unit only closes again with a manual control.
		ON	INSERTED	After one complete opening, the control unit closes automatically after the programmed pause time.
US1 OUTPUT	7	OFF	Dry contact	This contact gives information regarding the status of the gate. The relay activates as the gate begins to open and deactivates only after complete closing has been achieved.
		ON	Channel 2 (OC2)	Second radio channel output. If you don't use this function the second radio channel will activate pedestrian opening.
GATE RELEASE JOLT	8	OFF	EXCLUDED	Function excluded.
		ON	INSERTED	The gate release jolt is needed to release the electric lock. The gate with M1 installed will carry out a brief closing movement before starting the opening cycle.
SLOWDOWN	9	OFF	EXCLUDED	There is no slowdown in the last part of travel.
		ON	INSERTED	With the slowdown function connected, the motor halves its speedtowards
POWER CLOSING JOLT	10	OFF	EXCLUDED	Power closing is not carried out.
		ON	INSERTED	The ECU will end the closing manoeuvre with a brief increase to full power on motor M1.
1 - 2 MOTORS	11	OFF	1 MOTOR	Only the M1 output is enabled. The pedestrian command partially opens and closes motor M1
		ON	2 MOTORS	Enables both motor outputs (M1 and M2). The pedestrian command completely opens and closes the gate with motor M1.
RECLOSING AFTER THE PHOTOELECTRIC CELLS	12	OFF	EXCLUDED	Function excluded.
		ON	INSERTED	The activation of photoelectric cell reduces the pause time for whatever is value previously was to 2 seconds.

SETTING THE MOTOR TYPE

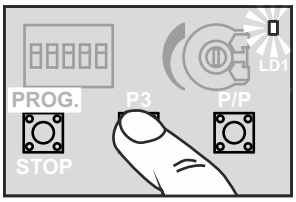
T624 is a versatile ECU that can be adapted to control most 24V automatic devices. The motor setting is only required for certain models in order to optimise the parameters for that particular motor.
Procedure:
1) Keep the PROG. Button held down for (det. 15, fig. A) about 3 seconds until the led LD1 lights up (det. 18, fig. A)
2) Keep button P3 held down until the led LD1 flashes, release P3.
3) the led will now indicate which motor is being used by flashing every 2 seconds as follows:
a. 1 flash = STANDARD motor (default)
b. 2 flashes = MOLE motor
c.3 flashes = ...24REV motor
d.4 flashes = ...FAST motor
4) Press PP to change the selection, check the change in the number of flashes.
5) Once you have chosen the desired motor press Stop/Prog to memorise it.
The type of motor that has been set in the ECU will be indicated a soon as the programmer is powered up (or after it has been reset) by the number of flashes indicated above.
warning:
- for a standard motor use the STANDARD setting (default value);
- using the motor parameters (which can be set via PRGLINK) you can optimise the performance of a vast range of motors.

MOTOR POSITIONING MANOEUVRE

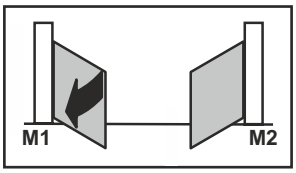
Using this procedure we can set the type of motors that are connected to the ECU in order to prepare the installation for programming and / or to determine whether or not the motors have been correctly installed.
During this procedure the buttons will work in the "manual mode" and all security devices will be ignored.
Procedure:

1 

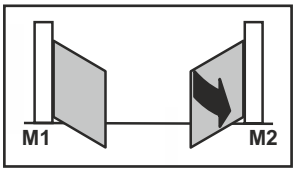
Hold down button P3 (part. 16, fig. A) and reset the ECU by short circuiting the binding posts (det. 14, fig.1).

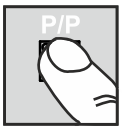
2 

After about 3 seconds led LD1 will light up (det. 18, fig. A) as well as the warning light, release button P3.
The procedure has been activated.

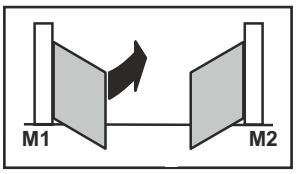
3 

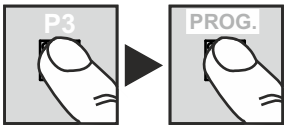
Press the PROG button to OPEN M1 (if the motor closes invert wires 30 and 31).

4 

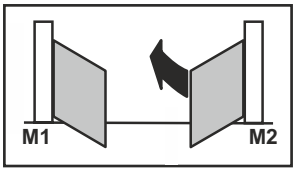


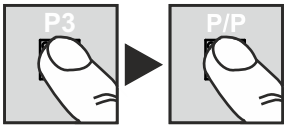
Press the button P/P to OPEN M2 (if the motor closes invert wires 35 and 36).

5 



Press P3 and PROG, motor M1 will CLOSE.

6 



Press P3 and P/P, motor M2 will CLOSE.

To get back to the normal operating mode, reset the ECU (by short circuiting the binding posts, det. 14, fig.A).

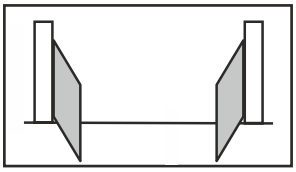
PROGRAMMING THE TRAVEL DISTANCE AND PAUSE TIMES

This programming procedure will detect and memorise all the work times that the motor requires in order to complete each single opening and closing manouvre including the automatic reclosing times.
Two work time programming methods are available:
- 1) AUTOMATIC work time programming (simplified)
- 2) ADVANCED work time programming (manual)
The choice depends on the type of automation: the first choice (automatic) has fixed parameters such as gate delay deceleration times, while the second choice (manual) allows you to precisely adjust the gate delay and deceleration area.
- If you are unsure which method to use, try the automatic mode first and only use the manual mode if the gates are not operating as required.
- Manual programming is obligatory for asymmetrical systems where the gate that has to close first has a greater angle of manoeuvre than the second gate leaf.
During the automatic detection procedure
During the work time programming stage P/P (part. 17 di fig.A) should be activated several times. In alternative you can use P/P commands connected to binding post 14, fig. C) or a radio control transmitter that has already been memorised in channel (P1).
The sequence will change according to the type of installation and the travel limit will be automatically detected by the ENCODER sensor (optional connection) as an alternative to the current sensor integrated in the ECU.
If the encoder has been installed the ECU will memorise the effective gate movement SPACE. If encoder sensors are not detected during programming, the ECU will compensate by detecting and memorising each gate work cycle individually.
Important notes to read before programming:
A. Make sure the movement area of the gate is free of obstacles and that you are not interfering with any photoelectric cells or sensors connected to the ECU.
B. Make sure the opening and closing direction mechanical travel limits have been installed on both gate leaves and **that they are robust enough to be able to a moving gate.**
C. Set the trimmer (part 21, fig. A) to about half way for the first programming cycle. If the motor is not able to complete the manoeuvre increase the torque by rotating the trimmer clockwise.
D. If you are only using one motor, set dip 11 to OFF and wire it to M1.
E. If the installation has two gates (sliding or hinged) set dip 11 to ON. The motor wired to M1 will move first in the opening direction and its gate will have the electric lock fitted to it. Motor M2 will start to close first during normal operation (the self-learning cycle has a difference sequence of movement).
Execute one of the following procedures:

AUTOMATIC PROGRAMMING (simplified)

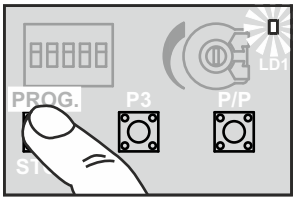
DIP 9 ON DURING programming for a self-learning cycle that decelerates after 5 seconds so it can find the mechanical travel limit safely. Use this setting for long and/or heavy.
DIP 9 OFF DURING programming for rapid mechanical travel limit detection (without deceleration).
DIP 9 set to ON only AFTER programming. The set deceleration times will be enabled
Before beginning programming check the correct settings and connections by observing the leds (det. 22, fig. A):
Led **BSC, BSA, FT1, FT2, J2 and STP** must be LIT.
Led **J1, PC, PA, PED and P/P** must be OFF.

1



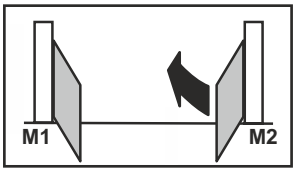
Cut off the power to the ECU and disconnect any eventual batteries during programming.
Release the gate leaves and move them to an almost fully open position.
Rearm the motor gears and power up the installation.

2



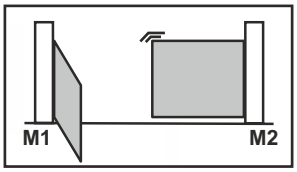
Hold down the PROG button (part. 15, fig. A) for about 3 seconds until led LD1 lights up (part. 18, fig. A)
The ECU is now in the programming stage.

3



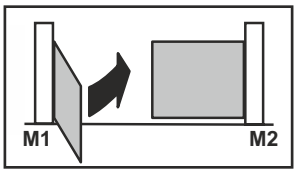
Press the P/P button (part. 17, fig. A) the gate with motor M2 should begin to close, if it moves in the opening direction instead, stop programming by switching off the power, invert the wires (21 - 22) of motor M2 and repeat the procedure from point (1).

4

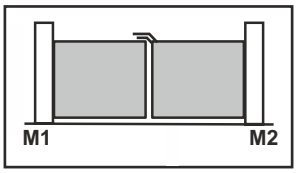


When the gate leaf with M2 has completely closed it will stop and the other motor (M1) will begin to close.
If the motor rotates in the wrong direction, switch off the power, invert the wires (16-17) of M1 and repeat the programming procedure from point (1).
If the motors stop before reaching the travel limits, increase the power trimmer.

5

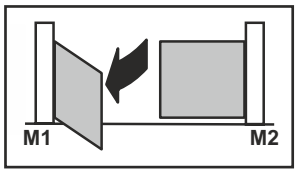


6

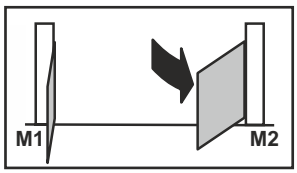


When the gate leaf with M1 has completely closed it will stop and start to open automatically.

7

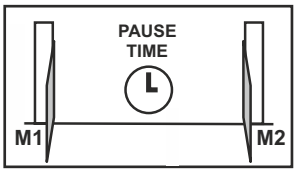


8



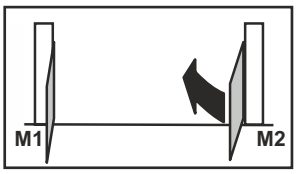
When the gate with M1 finds the opening travel limit, the other motor M2 will begin to move.

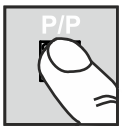
9



When the gate with M2 has opened completely (reaching the mechanical stop), pause time memorisation will start (if automatic reclosing is not being used you may move directly to point (6a).

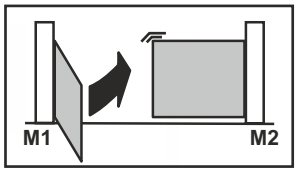
10





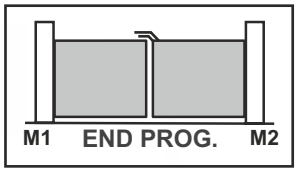
Once the desired pause time has elapsed, press button P/P and motor M2 will begin to close.

11



When the gate with M2 has found the closing travel limit, the other motor M1 will begin to close.

12

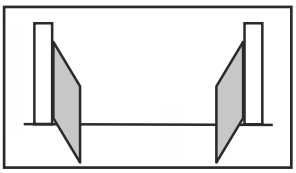


When the gate with M1 has closed completely, the motor will stop, led LD1 will switch off and the ECU will quit programming
Checks: force, times and stopping points. We advise you to consider inserting deceleration points (DIP 9 set to ON) to reduce impact against the travel limits so reducing wear and tear on the mechanical parts.
Repeat programming if you have modified the mechanical travel limits.

ADVANCED PROGRAMMING (manual)

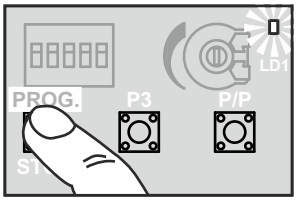
DIP 9 ON DURING programming for a self-learning cycle that decelerates after 5 seconds so it can find the mechanical travel limit safely. Use this setting for long and/or heavy.
Before beginning programming check the correct settings and connections by observing the leds (det. 22, fig. A):
Led **BSC, BSA, FT1, FT2, J2 and STP** must be LIT.
Led **J1, PC, PA, PED and P/P** must be OFF.

1



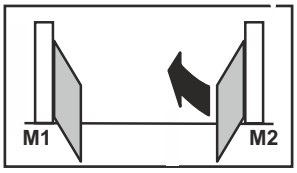
Cut off the power to the ECU and disconnect any eventual batteries during programming.
Release the gate leaves and move them to an almost fully open position.
Rearm the motor gears and power up the installation.

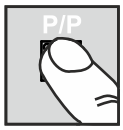
2



Hold down the PROG button (part. 15, fig. A) for about 3 seconds until led LD1 lights up (part. 18, fig. A)
The ECU is now in the programming stage.

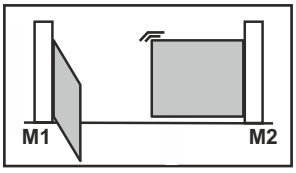
3





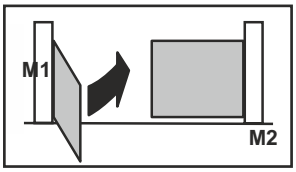
Press button P/P (part. 17, fig. A) the gate with motor M2 should begin to close, if it moves in the opening direction instead, stop programming by switching off the power, invert the wires (21-22) of motor M2 and repeat the procedure from point (1).

4

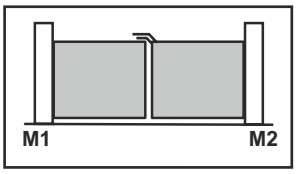


When the gate leaf with M2 has completely closed it will stop and the other motor (M1) will begin to close.
If the motor rotates in the wrong direction, switch off the power, invert the wires of M1 and repeat the programming procedure from point (1).
If the motors stop before reaching the travel limits, increase the power trimmer.

5

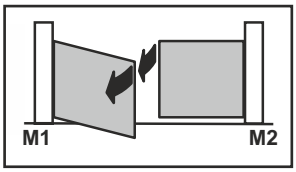


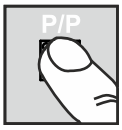
6



When the gate leaf with M1 has completely closed it will stop and start to open automatically.

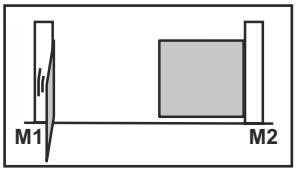
7



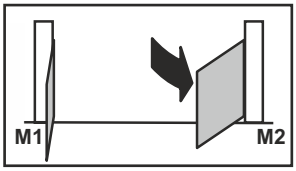


Press P/P again when M1 has reached the desired gate delay angle, the motor will stop for a second and then start to open again.
After this point we can manually insert the DECELERATION start points using P/P (DIP 9 set to ON) the motor will stop for a second then start again. Otherwise wait until the gate reaches the travel limit.

8

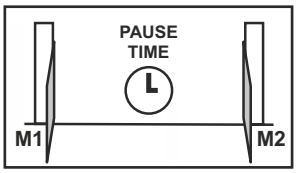


9



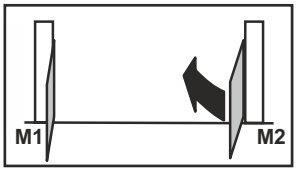
When the gate with M1 has opened completely, the motor will stop and the other motor (M2) will start to move automatically.
After this point we can manually insert the DECELERATION start points using P/P (DIP 9 set to ON) the motor will stop for a second then start again. Otherwise wait until the gate reaches the travel limit.

10



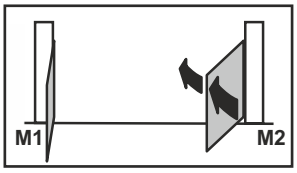
When the gate with M2 has opened completely (reached the travel limit), the motor will stop and the pause time memorisation will start (if automatic reclosing is not being used you may move directly to point (11).

11



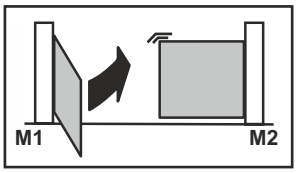
Once the desired pause time has elapsed, press button P/P and motor M2 will begin to close.

12



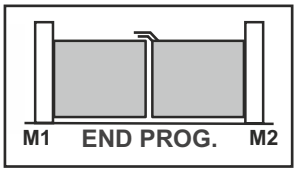
Press P/P again when M2 has reached the desired gate delay angle, the motor will stop for a second and then begin to close again.
At this point you can manually insert the DECELERATION start point using P/P if DIP 9 is set to ON. The motor will stop for a second and then begin to move again. Otherwise wait until the gate reaches the travel limit.

13



When the gate with M2 reaches the closing travel limit, the other motor M1 will move.
After this point we can manually insert the deceleration start points using P/P (DIP 9 set to ON) the motor will stop for a second then start again. Otherwise wait until the gate reaches the travel limit.

14



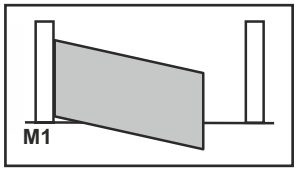
When the gate with M1 has closed completely, the motor will stop, led LD1 will switch off and the ECU will quit programming.
Checks: force, times and stopping points. We advise you to consider inserting deceleration points (DIP 9 set to ON) to reduce impact against the travel limits so reducing wear and tear on the mechanical parts.
Repeat programming if you have modified the mechanical travel limits.

ADVANCED PROGRAMMING (manual) WITH SINGLE GATE LEAF AUTOMATION

DIP 9 ON DURING programming for a self-learning cycle that decelerates after 5 seconds so it can find the mechanical travel limit safely. Use this setting for long and/or heavy.
DIP 9 OFF DURING programming for rapid mechanical travel limit detection (without deceleration).

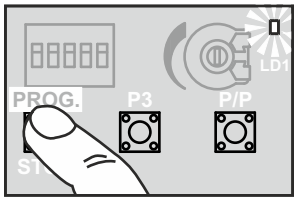
Before starting programming check the correct setting and connection of the inputs using the status leds (part. 22, fig. A):
Leds **BSC, BSA, FT1, FT2, J2 and STP** must b**e ON.**
Leds **J1, PC, PA, PED and P/P** must be **OFF.**

1



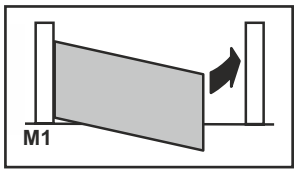
Switch off the power to the ECU.
Release the motor and move the gate to the position “almost open”.
Re-engage the motor and switch on the power to the installation.

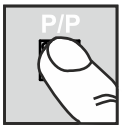
2



Hold down the PROG button (part. 15, fig. A) for about 3 seconds until led LD1 lights up (part. 18, fig. A)
The ECU is now in the programming stage.

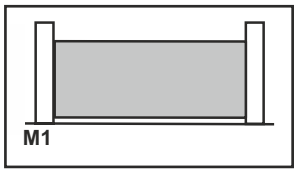
3



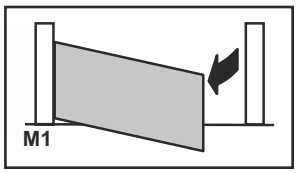


Press the P/P button (part. 17, fig. A) the gate should begin to close, if it moves in the opening direction instead, stop programming by switching off the power, invert the wires of the motor and repeat the procedure from point (1).
If the motor stops before reaching the travel limits increase the torque level using the trimmer.

4



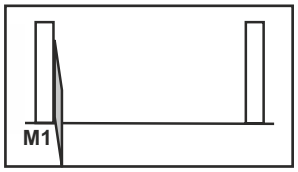
5



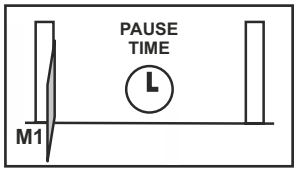
After having found the M1 closing travel limit it will open automatically.

At this point you may manually insert the DECELERATION start point using P/P if DIP 9 is set to ON. The motor will stop for a second and then begin to move again.

6

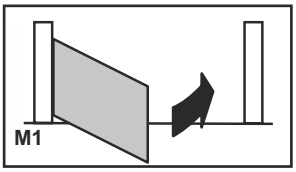


7



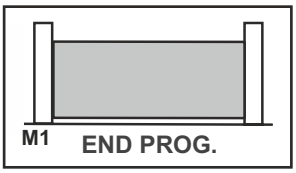
When the gate has completed the opening cycle (and has arrived at the mechanical stop) pause time memorisation will start (if automatic reclosing is not required move directly to point (8).

8



Once the desired pause time has elapsed, press button P/P and the motor will begin to close.
At this point you may manually insert the DECELERATION start point using P/P if DIP 9 is set to ON. The motor will stop for a second and then begin to move again.

9

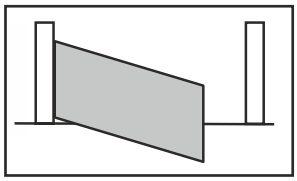


When the gate has completed the closing cycle the motor will stop, led LD1 will switch off and the ECU will quit the programming procedure.
Checks: force, work times and stopping points. Decide whether or not to use deceleration (recommended), DIP 9 ON to reduce the impact on the mechanical travel limits and to reduce mechanical wear and tear.
If you modify the mechanical travel limits you must repeat the programming cycle.

PROGRAMMING OF PEDESTRIAN OPENING (only for automations with one motor, dip-switch 11 to OFF)

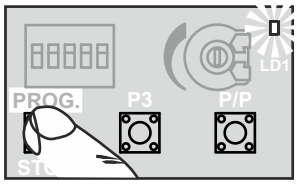
The partial opening command can be activated through the PED input (term. 12) or with the second channel of the OC2 receiver (dip-switch 7 OFF);the options are those set for the Step-by-Step with function dip-switches 1 and 2.
In 2 motor mode (dip-switch 11 ON),the pedestrian command fully opens just the gate leaf with M1
In 1 motor mode (dip-switch 11 OFF),the pedestrian command partly opens the gate leaf with M1.The time is set at approx. 1/3 of total opening movement; to change the time, proceed as follows.

1



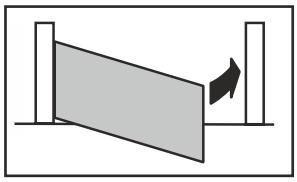
Cut off the power supply to the control unit.
Release the motors and put the gate leaves in the “almost open” position.
Lock the motors and power the installation.

2



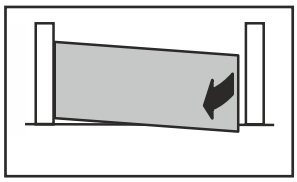
Press the PROG button (part 17, fig. E) and hold it down for about 3 seconds, until LED LD1 (part 9, fig. E) remains constantly on.
The control unit is now in programming mode.

3

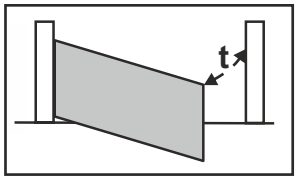


Press the PED button (connected to the input term. 12 or the memorized remote control). The gate closes and when the limit position is acknowledged, it opens again automatically.

4

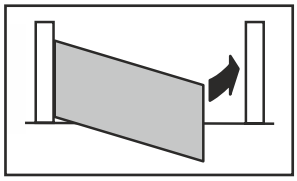


5

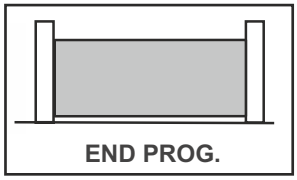


When the gate reaches the desired opening position, press the PED button again; the control unit stores the time and closes the gate.

6



7



When the closing movement is complete, the control unit exits automatically from programming.

MODIFYING THE PAUSE TIMES

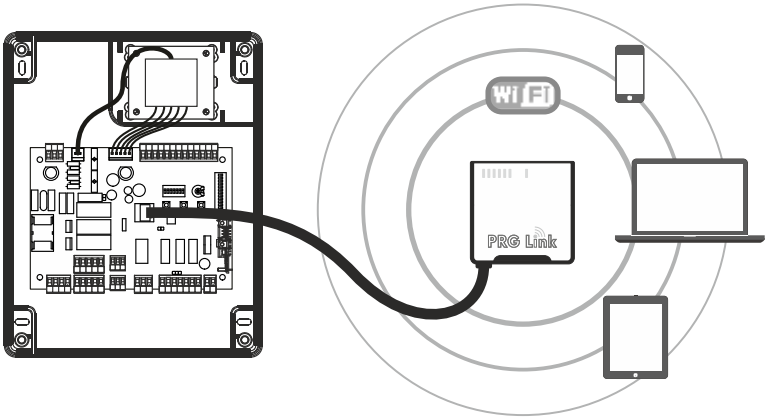
This procedure allows you to modify the pause time set during a previous programming procedure.
This operation must be carried out with the gate closed.
1) Press the PROG button (part. 15, fig. A) and hold it down until the Led LD1 remains lit (part. 18, fig. A)
2) Press the PROG button again, led LD1 will start to flash and the ECU will begin to memorise the pause time.
3) Once the desired pause time has elapsed, press the PROG button. Led LD1 will switch off and the procedure will terminate.

SENSITIVITY ADJUSTMENT

According to the standard EN 12445 every automation installation must pass the impact test measured with the specific instrument.
Carry out the impact test and adjust the motor force by rotating the trimmer (part. 21, fig. A).
If this is not sufficient to remain within the boundaries of the graph supplied by the standards in force, we advise you to install a rubber protective edge at the head of the gate so as to soften the impact.
If you have adjusted the sensitivity setting and added a rubber profile to the head of the gate and you are still unable to satisfy the standards in force, you will need to add other safety devices such as a sensitive safety edge to the moving part of the gate.

MODIFYING AND CONTROLLING SETTINGS USING PRG-Link (optional)

The PRG LINK system is a WI-FI interface dedicated to programming, control and diagnostics of the latest generation Telcoma ECU's.
Using PRG LINK and its dedicated software application, the operator takes advantage of a powerful Wi-Fi network that allows him to intervene on the ECU without having to directly access the dip-switches.
A laptop, tablet or smart phone is all that's needed to run quick and precise diagnostic processes.
An advantageous solution for all those who have to manage installations on a daily basis and in the future would like to do so by means of a long-distance Wi-Fi connection.



To cancel all settings carried out with PRG-Link proceed as follows:
1) Hold the PROG. Button (det. 15, fig. A) down for about 3 seconds until led LD1 (det. 18, fig. A) lights up
2) Press and hold down P3 for about 10 seconds until LD1 remains lit.
3) the parameters have been reset and you may release button P3.

TECHNICAL DATA

	U.M.	T624
Mains power supply	Vac/Hz	230/50-60
Maximum absorption	A	2
Number of motor outputs		2
Motor power supply	V	24dc
Maximum motor power	VA	2 x 180 (1 x 300)
Protection class	IP	56
Operating temperature	°C	-20 +55

DISPOSAL

This product ismade up of various components that could contain pollutants.Dispose of properly!
Make enquiries concerning the recycling or disposal of the product, complying with the local laws in force.

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http: www.cardin.it

CODICE	SERIE	MODELLO	DATA
DCE113	PRG	24 Vdc	18-07-2016

Dichiarazione di Conformità CE
(Dichiarazione del costruttore)

Il costruttore: CARDIN ELETTRONICA S.p.A.
DICHIARA CHE L'APPARECCHIATURA DESTINATA AD ESSERE INSERITA IN MACCHINE E NON FUNZIONANTE IN MODO INDIPENDENTE:

Nome dell'apparato	Centralina elettronica per 1 o 2 motori 24 Vac
Tipo di apparato	Centralina elettronica
Modello	CC242ETOP, CC242ETOPCB, CC242EXTOP, CC242EXTOPCB, T624
Marchio	Cardin Elettronica
Anno di prima fabbricazione	2016

è conforme alle disposizioni delle seguenti direttive comunitarie:
- Direttiva 2014/30/EU (Compatibilità Elettromagnetica)
- Direttiva 2014/35/EU (Bassa Tensione)

e sono state applicate le seguenti norme e/o specifche tecniche:
- EN 55014-1 : 2006+A1+A2
- EN 55014-2 : 1997+A1:2001+A2:2008
- EN 61000-3-2 : 2006+A1+A2
- EN 61000-3-3 : 2013
- EN 60335-1 : 2011
- EN 62233 : 2008

DICHIARA CHE L'APPARECCHIATURA È IDEATA PER ESSERE INCORPORATA IN UNA MACCHINA O PER ESSERE ASSEMBLATA CON ALTRI MACCHINARI PER COSTITUIRE UNA MACCHINA CONSIDERATA DALLA DIRETTIVA 2006/42/CE E SUCCESSIVI EMENDAMENTI.
INOLTRE DICHIARA CHE NON È CONSENTITO METTERE IN SERVIZIO L' APPARECCHIATURA FINO A CHE LA MACCHINA NELLA QUALE SARÀ INCORPORATA E DELLA QUALE DIVENTERÀ COMPONENTE NON SIA STATA IDENTIFICATA E DICHIARATA LA CONFORMITÀ ALLE DI SPOSIZIONI DELLA DIRETTIVA 2006/42/CEE E SUCCESSIVI EMENDAMENTI.

Cardin Elettronica si impegna a trasmettere, in risposta a una richiesta adeguatamente motivata delle autorità nazionali, informazioni pertinenti sulla quasi-macchina in oggetto.

Codognè il 20/10/2015

CARDIN®
RIELLO ELETTRONICA
TELCOMA

Persona autorizzata a costituire la documentazione tecnica

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Ing. A. Fiorotto (Responsabile tecnico R&D Laboratory)

Rappresentante legale dell'azienda

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Dott. Cristiano Cardin (Amministratore delegato)

- La dichiarazione di conformità CE per i prodotti Cardin è disponibile in lingua originale nel sito www.cardin.it nella sezione "norme e certificazione" attraverso il link:

- Les déclarations de conformité CE des produits Cardin sont disponibles dans la langue originale sur le site www.cardin.it dans la section "normes et certificats" par le lien :

- Las declaraciones de conformidad CE de los productos Cardin se encuentran disponibles en el idioma original en el sitio www.cardin.it en la sección "normas y certificaciones" en el enlace:

- The CE conformity declaration for Cardin products is available in original language from the site www.cardin.it under the section "Standards and Certification" via the link:

- Die CE-Konformitätserklärungen für die Cardin-Produkte stehen in der Originalsprache auf der Homepage www.cardin.it im Bereich "Normen und Zertifizierung" zur Verfügung unter dem Link:

Riello Elettronica Group **http://www.cardin.it/Attachment/dce113.pdf**