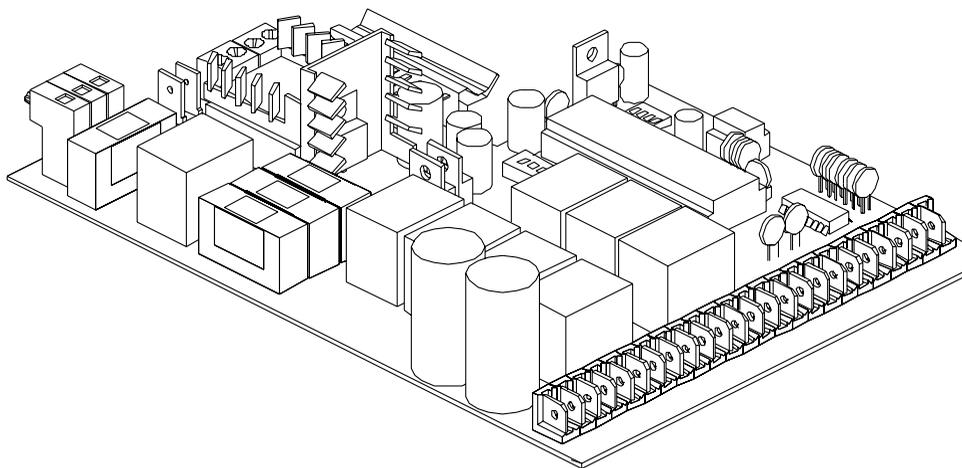


MEC 1000 - 2000

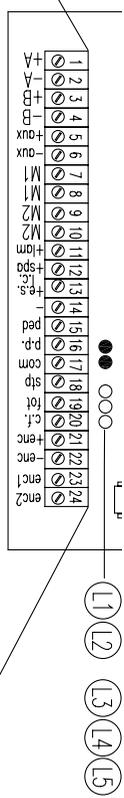
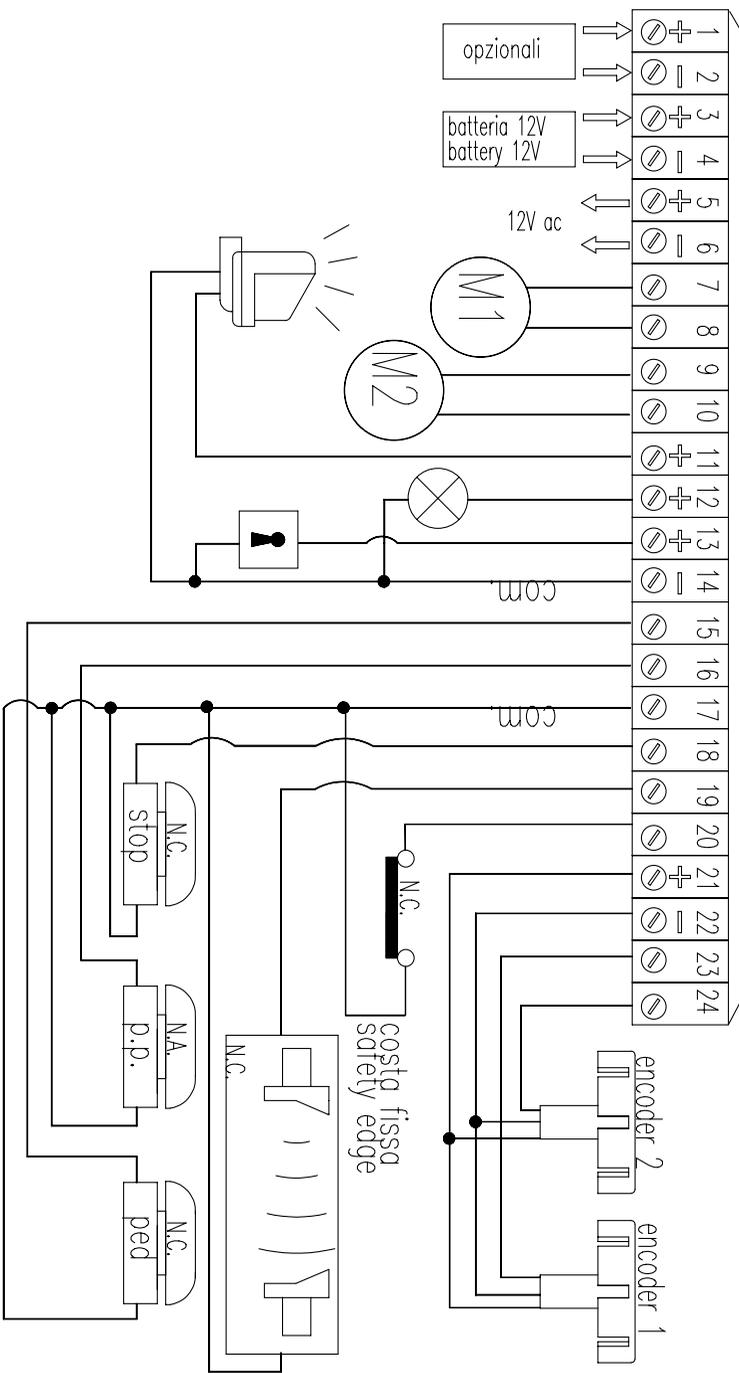
SCHEDA COMANDO PER UNO/DUE MOTORI 12 V CON ENCODER
STEUERSCHALT Tafel FÜR EINEN (ZWEI) 12V MOTOR(EN) MIT ENCODER
CONTROL PANEL FOR ONE-TWO 12V MOTORS WITH ENCODER
PUPITRE DE COMMANDE POUR UN OU DEUX MOTEURS 12V AVEC ENCODEUR
QUADRO DE MANDOS PARA UNO OR DOS MOTORES 12V CON ENCODER



Edizione 01-2000



GUIDA ALL' INSTALLAZIONE
INSTALLATIONSANLEITUNG
INSTALLATION GUIDE
NOTICE D'INSTALLATION
GUÍA PARA LA INSTALACIÓN

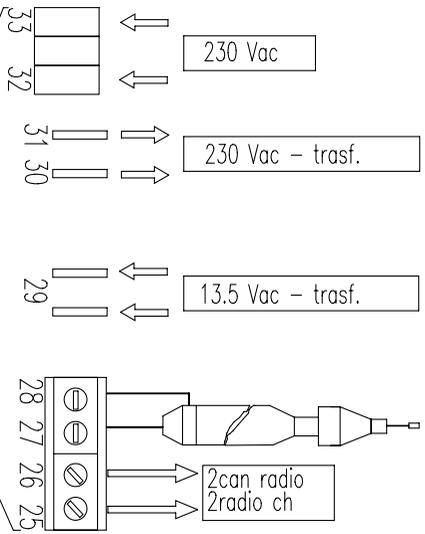
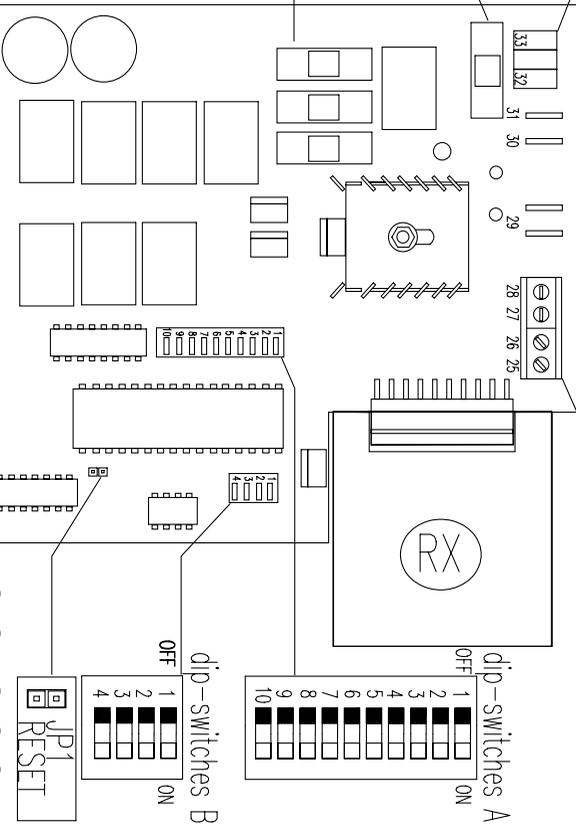


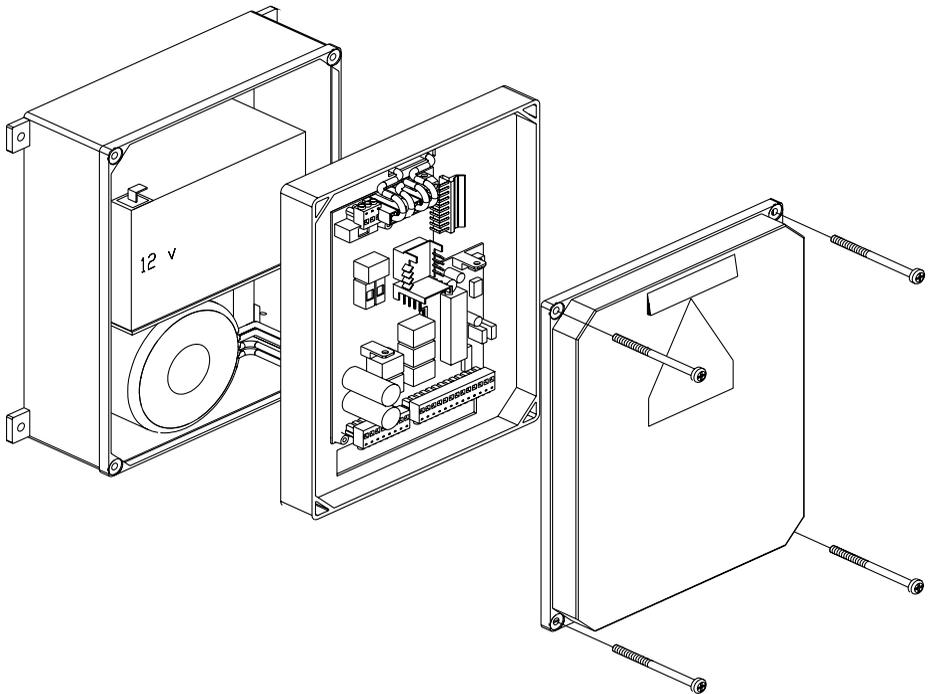
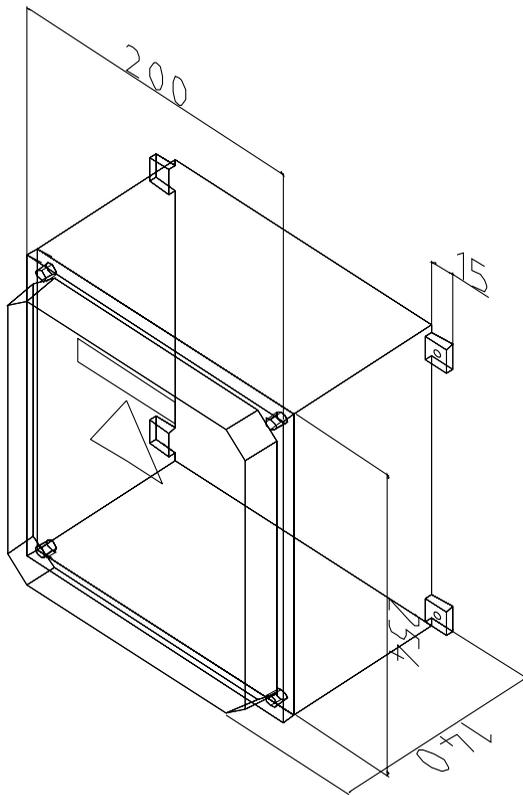
fusib 2A 12V
fuse 2A 12V
Alimentaz. Scheda

fusib 12A 12V
fuse 12A 12V
Motore 1

fusib 12A 12V
fuse 12A 12V
Motore 2

fusib 6A 230V
fuse 6A 230V





**COLLEGAMENTI ELETTRICI - ELEKTROANSCHLÜSSE - ELECTRICAL CONNECTION
 CONNEXIONS ELECTRIQUES - CONEXIONES ELÉCTRICAS**

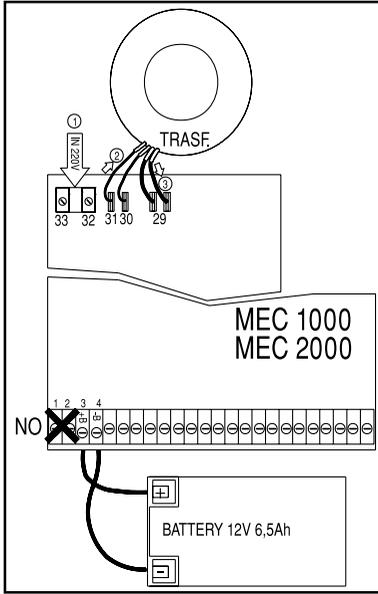
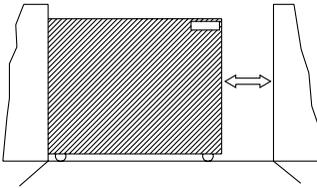


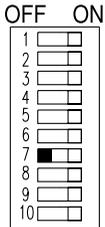
fig.2

- 1** In 230 V ac di linea
 In 230 V ac Liniestrom
 230 V ac mains power input
 In 230 V ac de ligne
 Entrada 230 V ac de línea.
- 2** In 230 V ac al trasformatore
 In 230 V ac zum Transformator
 230 V ac input to transformer
 In 230 V ac au transformateur
 Entrada 230 V ac al transformador.
- 3** Out 13.5 V ac dal trasformatore
 Out 13.5 V ac vom Transformator
 13.5 V ac output from transformer
 Out 13.5 V ca du transformateur
 Salida 13.5 V ca desde el transformador.

**PROGRAMMAZIONE DIP-SWITCHES - EINSTELLEN DER DIP-SWITCHES
 DIP-SWITCH SETTING - REGLAGE DIP-SWITCHES - REGULACIÓN DE LOS DIP-SWITCHES**



Dip-switches A



Dip-switches B

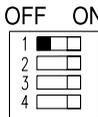
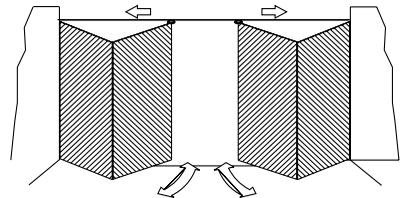
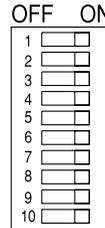


fig.3



Dip-switches A



Dip-switches B

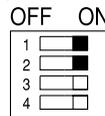
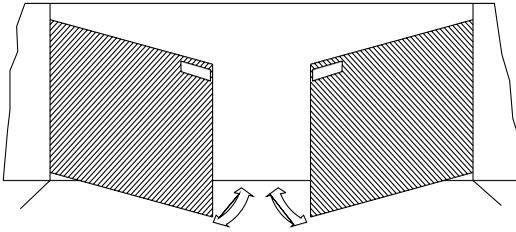


fig.4



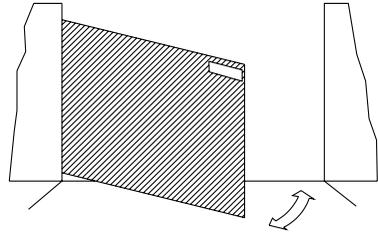
Dip-switches A

	OFF	ON
1	<input type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>
6	<input type="checkbox"/>	<input type="checkbox"/>
7	<input type="checkbox"/>	<input type="checkbox"/>
8	<input type="checkbox"/>	<input type="checkbox"/>
9	<input type="checkbox"/>	<input type="checkbox"/>
10	<input type="checkbox"/>	<input type="checkbox"/>

Dip-switches B

	OFF	ON
1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>

fig.5



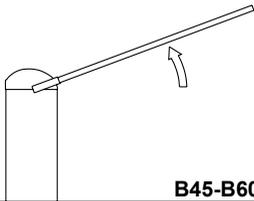
Dip-switches A

	OFF	ON
1	<input type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>
6	<input type="checkbox"/>	<input type="checkbox"/>
7	<input checked="" type="checkbox"/>	<input type="checkbox"/>
8	<input type="checkbox"/>	<input type="checkbox"/>
9	<input type="checkbox"/>	<input type="checkbox"/>
10	<input type="checkbox"/>	<input type="checkbox"/>

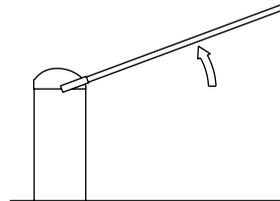
Dip-switches B

	OFF	ON
1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>

fig.6



B45-B60



Dip-switches A

	OFF	ON
1	<input type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>
6	<input type="checkbox"/>	<input type="checkbox"/>
7	<input checked="" type="checkbox"/>	<input type="checkbox"/>
8	<input type="checkbox"/>	<input type="checkbox"/>
9	<input type="checkbox"/>	<input type="checkbox"/>
10	<input type="checkbox"/>	<input type="checkbox"/>

Dip-switches B

	OFF	ON
1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>

fig.7

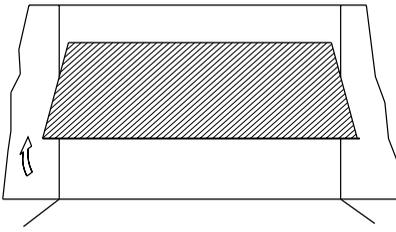
Dip-switches A

	OFF	ON
1	<input type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>
6	<input checked="" type="checkbox"/>	<input type="checkbox"/>
7	<input checked="" type="checkbox"/>	<input type="checkbox"/>
8	<input type="checkbox"/>	<input type="checkbox"/>
9	<input type="checkbox"/>	<input type="checkbox"/>
10	<input type="checkbox"/>	<input type="checkbox"/>

Dip-switches B

	OFF	ON
1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>

fig.8



I- Schema elettrico per 2 motori; collegare solo l'encoder del motore 1.

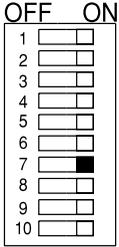
D- Schaltplan für 2 Motoren; nur den Encoder des 1 Motors anschließen.

GB- Electrical diagram for 2 motors; only connect the encoder of the first motor.

F- Schéma électrique pour 2 moteurs; connecter seulement l'encodeur du 1^{er} moteur.

E- Esquema eléctrico para 2 motores; conecte sólo el encoder del 1^o motor.

Dip-switches A



Dip-switches B

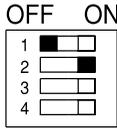


fig.9

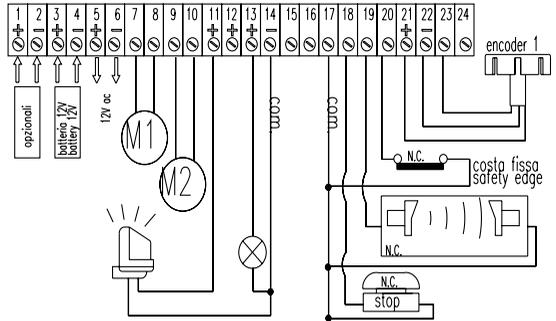


fig.10

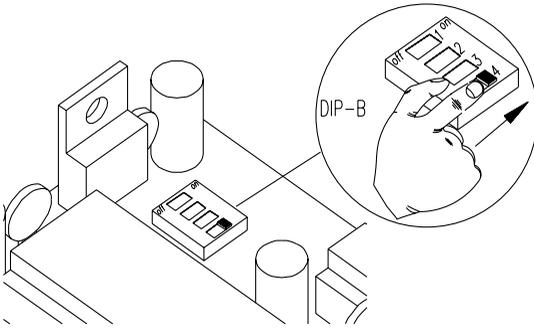


fig.11

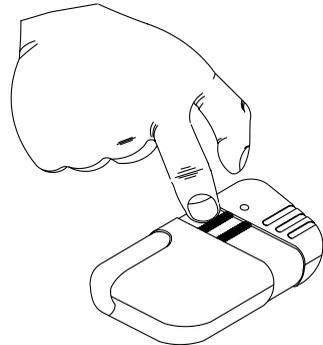


fig.12

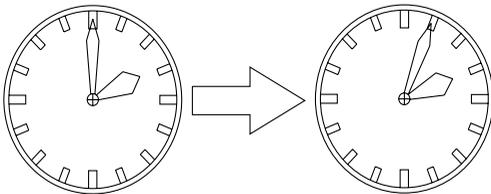


fig.13

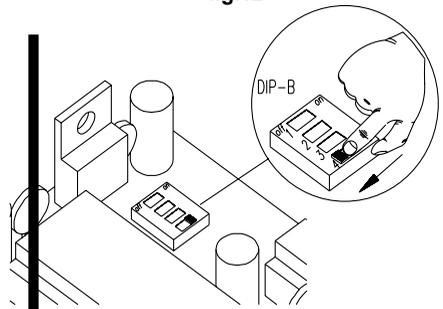


fig.14

English

12V POWER SUPPLY
LOGIC WITH MICROPROCESSOR
ELECTRONIC ADJUSTMENT OF MOTOR TORQUE
END OF MANOEUVRE MOTOR DECELERATION
DOOR OPENING AND CLOSING DELAYS
WORK AND PAUSE TIME SELF-LEARNING FUNCTION
LED DISPLAY OF INPUT STATUSES
12V INPUT PROTECTION WITH FUSE
12V OUTPUT PROTECTION WITH FUSE
BUILT-IN BATTERY CHARGER CIRCUIT

CONNECTIONS TO THE TERMINAL BOARD

- 1-2** OPTIONAL: 12 Vdc POWER SUPPLY supplementary voltage INPUT
+ Terminal 1, - Terminal 2. Contacts may only be used with the stabiliser card.
- 3-4** 12 Vdc, 6Ah DRY BATTERY input,
The battery powers the panel for 24 h in the standby mode and approx. 20 minutes if the motor is working (approx. 30 manoeuvres).
+ Terminal 3, - Terminal 4.
- 5-6** 12 V OUTPUT 12 Vdc outlet, max. 20 W.
For power supply to RECEIVERS and PHOTOCELLS, etc..
Protected by a 2A fuse (5x20).
+ Terminal 5, - Terminal 6.
- 7-8** M1 motor output 12 Vdc, max. 50 W.
Connect the motor with the electric lock. Delayed action during closing (this delay can be adjusted with dip-switches 7A and 8A). Protected by a 12 Ah fuse.
- 9-10** M2 motor outlet 12 Vdc, max. 50 W.
Connect the motor without the electric lock. Delayed action during opening. (Fixed delay).
Protected by a 12 Ah fuse.
- 11-14** 12 Vdc output for FLASHING LIGHT, max. 20 W. + Terminal 11, - Terminal 14 (Common=14).
- 12-14** INDICATOR LIGHT OUTPUT 12 Vdc, max. 15 W.
This lights up at the beginning of the opening phase until the gate is totally closed.
+ Terminal 12, - Terminal 14 (Common=14).
- 13-14** ELECTRIC LOCK OUTPUT 12 Vdc, max. 15 W.
This is active for 1 second before and 3 seconds after the close delay door (M1) starts opening. DIP 2B can be used to select the courtesy light which remains on for approx. 3 minutes after the manoeuvre has terminated. + Terminal 13, - Terminal 14 (Common=14).
- 15-17** PEDESTRIAN pushbutton input (Normally Open contact); this does exactly the same job as the OPEN/CLOSE pushbutton; DIP 1A is used to control this function. (Common=17).
If the card is configured for 2 motors the pedestrian impulse completely opens the M1 motor door. If it is configured for one motor the pedestrian open function can be programmed as preferred.
- 16-17** OPEN/CLOSE (or STEP-BY-STEP) push button input. Dip-switches 3A and 1A (CONTROL CARD) are used to control this input. DS 3A can be used to disable the inversion of direction during the opening phase, while DS 1A enables the OPEN/STOP/CLOSE/STOP function; Normally Open contact. (Common=17).
When DIP 1B is ON (2 motors) the open-close and pedestrian functions are active, if DIP 1B is OFF (one motor) the following can happen:
when DIP8 is OFF the open-close and pedestrian functions are normal,
when DIP8 is ON the open-close button becomes just an open button while the pedestrian button becomes the close button.

- 17-18** STOP BUTTON. This button stops the gate no matter what manoeuvre it's making. Press the OPEN/CLOSE button to start the gate moving again.
Normally closed contact. (Common=17).
- 17-19** PHOTO DEVICE safety input for PHOTOCELLS, SAFETY EDGES, etc.. DIP 2A. is used to control this function. Normally closed contact. (Common=17).
- 17-20** MOBILE SAFETY EDGE – PHOTO DEVICE controlled by DIP 1B.
Normally closed contact. (Common=17).
If DIP1 is OFF (1 motor), it works as a fixed edge, during the opening phase the control will cause the gate to close for about 2 seconds.
If DIP1 is OFF (2 motors), it works as a photocell; if it cuts in during the closing phase the gate will totally reopen, while it will remain inactive during the closing phase.
- 21-22-23** MOTOR 1 (M1) ENCODER INPUT.
Terminal n° 21, + / brown,
Terminal n° 22, - / blue,
Terminal n° 23 control pulse / white.
- 21-22-24** MOTOR 2 (M2) ENCODER INPUT. (only for MEC2000).
Terminal n° 21, + / brown,
Terminal n° 22, - / blue,
Terminal n° 24 control pulse / white.
- 25-26** 2nd RADIO CHANNEL OUTPUT OF 2nd RADIO CHANNEL
When a two channel receiver is used, the lighting installation, another piece of equipment, etc., can be controlled.
Please see the receiver instructions for details of electrical connections.
- 27-28** RECEIVING AERIAL INPUT (Please also see further receiver instructions for 433.92 Mhz frequency)
Connect the SHEATH to terminal n° 28 and the CABLE to terminal n° 27. If there is no suitable earth connection the aerial sheath should not be connected.
- 29-29** 13.5 V dc input from toroidal transformer (fig. 2 - 3).
- 30-31** 230 V ac input to toroidal transformer (fig. 2 - 3).
- 32-33** 230 V ac mains power supply input (fig. 2 - 3).

INSTALLATION

- 1- Position the card vertically.
- 2- Make sure to respect the polarities.
- 3- Different wires should be used for different circuits.
- 4- The cross-section of the cables of the mains line and the motor lines must be calculated to suit their length and absorption levels.
recommended cross-section of power cables 1.5 mm² ;
recommended cross-section of motor cables 2.5 mm² ;
- 5- Install the electrical panel at not more than 5 m from the motor reducers. When the control circuits comprise very long lines (over 50 m) it should be decoupled with relays installed in the control panel.
- 6- The ducts entering and leaving the equipment must be preferably installed by keeping the initial level of protection unaltered (IP43).
- 7- If a fuse blows, it must be replaced with another one of the same type.
- 8- Connect the Normally Closed contacts that are not used to the common.

TESTING THE INSTALLATION

The small green LED's indicate N.C. inputs, if the contacts are closed the LED's must be on (if N.C. inputs are not used, they must be connected to the common circuit).

- | | |
|-----------------|--|
| L1 red | Indicates the pedestrian command is working (on while signal is being received). |
| L2 red | Indicates the step-by-step command is working (on while signal is being received). |
| L3 green | Indicates the stop command is working (off while signal is being received). |

	DIP n°7	DIP n°8	% D.OP	% D.CL	EXAMPLE with 100 pulses memorised:
Min. ↑	OFF	OFF	2.34	4.69	2.34 delay open pulses, 4.69 delay close pulses
	ON	OFF	4.69	9.38	4.69 delay open pulses, 9.38 delay close pulses
↓ Max.	OFF	ON	9.38	18.75	9.38 delay open pulses, 18.75 delay close pulses
	ON	ON	18.75	37.5	18.75 delay open pulses, 37.5 delay close pulses

N° 9A-10A ELECTRONIC TYPE CLUTCH

4 levels.

The MEC1000 / MEC2000 panel is fitted with an encoder that can control the effective speed of the gate or the two gates independently in the case of swing gates.

The motor thereby becomes sensitive to any drops in speed that can be caused either by an obstacle or the mechanical travel stop. This sensitivity can be adjusted to 4 levels with dip-switches 9A and 10A. Fitters should opt for an average maximum power level.

	DIP n° 9	DIP n° 10	POWER LEVEL
Min. ↑	OFF	OFF	1 MINIMUM
	ON	OFF	2 AVERAGE MINIMUM
↓ Max.	OFF	ON	3 AVERAGE MAXIMUM
	ON	ON	4 MAXIMUM

DIP-SWITCH B

N° 1B **ON** enables 2 motors.

OFF enables just one motor.

NB: 1 motor activates the relays of both motors in parallel but only reads from the M1 motor encoder.

For use with 2-motor up-and-over doors.

When DIP 7A is OFF, the reversal stroke is enabled to prevent the motor from locking.

For use with sliding gates.

N° 2B **ON** enables the courtesy light.

OFF enables the electric lock.

Output 13/14.

N° 3B **ON** enables the pre-flashing function.

OFF disables the pre-flashing function.

N° 4B **ON** enables all the memorising functions.

OFF is the position at which it must stay when memorising operations have terminated (normal opening and closing operation).

MEMORIZING WORK AND PAUSE TIME

Exit the automatic cycle and open the door a little.

NB: only for barriers, incline the bar to 45° from horizontal.

- 1- Move dip 4B to the memorising position, i.e., ON (fig. 11). The light will start flashing.
- 2- Give an impulse with the remote control unit or the open/close button (fig. 12). The gate should start closing; if it opens, suspend programming by resetting the electrical panel (use the tip of a screwdriver to short circuit the two metal reset pins for a second), and then switch off the panel and invert the motor.

- 3- About 2 seconds after closing (fig. 13), the gate opens automatically.
- 4- Wait for a certain amount of time T (as preferred) and then give an impulse to close the door. T becomes the pause time before automatic closing (if programmed with dip 4A). During all these phases the light keeps flashing.
- 5- Now that all the open/close phases have been memorised, move dip 4B to OFF (fig. 14).
- 6- During normal use, when the gate is closing it is supported, while in the opening phase it never reaches the travel stop (ground supports).

After memorising has terminated, make the automatic system carry out a complete manoeuvre (open/close) without activating any devices.

MEMORISING THE PEDESTRIAN OPENING FOR A MOTOR

- 1- Move dip 4B to ON; the light will start flashing.
- 2- Press the PEDESTRIAN button; the gate connected to motor M1 will start opening.
- 3- Stop the gate at the required point by pressing the PEDESTRIAN button.
- 4- Press the PEDESTRIAN button again or wait for the pause time to elapse for the gate to close.
- 5- Move dip 4B to the OFF position and check the light stops flashing.

Memorising has now terminated.

MEMORY RESET

If any or all of the previously modified settings need to be changed, proceed as follows:

- 1- power the control card,
- 2- touch the two pins of the JP1 jump with the tip of a screwdriver for at least 1 second,
- 3- the previously memorised settings have now been deleted.

The position of dip 4B is irrelevant during this operation.

EQUIPMENT DATA

The control panels for the automatic opening of models MEC 1000 and MEC 2000, comply with the following characteristics:

-power voltage: 19 V dc

voltage of the power circuits that supply the motors: 19 V dc

-auxiliary circuit voltage: 12,5 V dc

-electronic circuit voltage: 12,5 V dc

-the equipment is guaranteed to work outdoors under normal working conditions which are specified below:

* ambient temperatures no higher than 40°C (average value referring to a time of 24 hours no higher than 35°C)

* ambient temperatures no lower than -25°C

* temporary relative humidity up to 100% at 25°C

-nominal current of the motor's power circuit: 12 A for each motor

-nominal current of the auxiliary circuits: 2 A.

Servizio Assistenza Tecnica (Italia)



Via E. Fermi, 43
36066 SANDRIGO (VI) ITALY
Tel. 0039 0444 750190
Fax 0039 0444 750376

E-mail: info@taitalia.com
<http://www.taitalia.com>