Elpro •27

I Programmatore elettronico con condensatori motore incorporati; idoneo per cancelli battenti a una o due ante, con o senza finecorsa e per cancelli scorrevoli a una o due ante (max. 0,5 CV con frizione meccanica).

GB Electronic control box with incorporated motor capacitors; suitable for oil-hydraulic, single or double swinging gates, with or without limit switches and for single or double sliding gates (max. 0.5 HP with mechanical clutch).

F Programmateur électronique avec condensateurs moteur incorporé; adapté pour ouvre-portails a battant avec 1 ou 2 vantaux, avec ou sans fin de course et pour ouvre-portail coulissants avec 1 ou 2 vantaux (max. 0,5 CV avec embrayage mécanique).

D Elektronische Steueurung mit eingebauten Motor-Kondensatoren; geeignet für ein-oder zweiflügeligen Drehtore, mit oder ohne Endschaltern und für ein-oder zweiflügeligen Schiebetore (max. 0,5 PS mit mechanischer Kupplung).

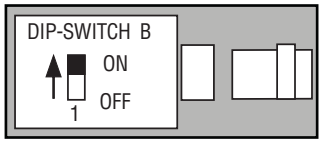
FADINI®
l'apricancello
Made in Italy

I **LIBRETTO DI ISTRUZIONI**
PER APRICANCELLI **SCORREVOLI CON FINECORSA** MONOFASE 230V 50/60Hz
A 1 O 2 ANTE pag. 2, 3, 4, 5, 6, 7

GB **INSTRUCTIONS MANUAL**
FOR **SLIDING** GATE OPERATORS **WITH LIMIT SWITCHES**, S-PHASE 230V 50/60Hz
SINGLE or DOUBLE GATES pages 13, 14, 15, 16, 17, 18

F **NOTICES D'INSTRUCTIONS**
POUR OUVRE-PORTAILS **COULISSANTS AVEC FINS DE COURSE** MONOPHASE 230V 50/60Hz
AVEC 1 OU 2 VANTAUX pages 24, 25, 26, 27, 28, 29

D **BETRIEBSANLEITUNG**
FÜR **SCHIEBETORANTRIEBE MIT ENDSCHALTERN,** EINPHASIG 230V 50/60Hz,
MIT EINEM ODER ZWEI TORFLÜGELN Seite 35, 36, 37, 38, 39, 40

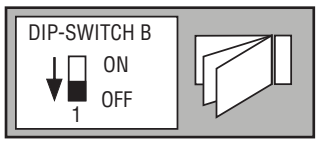


I **LIBRETTO DI ISTRUZIONI**
PER APRICANCELLI A **BATTENTE OLEODINAMICI** MONOFASE 230V 50/60Hz
A 1 O 2 ANTE pag. 2, 8, 9, 10, 11, 12

GB **INSTRUCTIONS MANUAL**
FOR **OIL-HYDRAULIC SWINGING** ACTUATORS, S-PHASE 230V 50/60Hz
SINGLE or DOUBLE GATES pages 13, 19, 20, 21, 22, 23

F **NOTICES D'INSTRUCTIONS**
POUR OUVRE-PORTAILS A **BATTANT HYDRAULIQUES** MONOPHASE 230V 50/60Hz
AVEC 1 OU 2 VANTAUX pages 24, 30, 31, 32, 33, 34

D **BETRIEBSANLEITUNG**
FÜR **ÖLHYDRAULISCHE DREHTOR**ANTRIEBE EINPHASIG 230V 50/60Hz
MIT EINEM ODER ZWEI TORFLÜGELN Seite 35, 41, 42, 43, 44, 45



Dis. N. 6893

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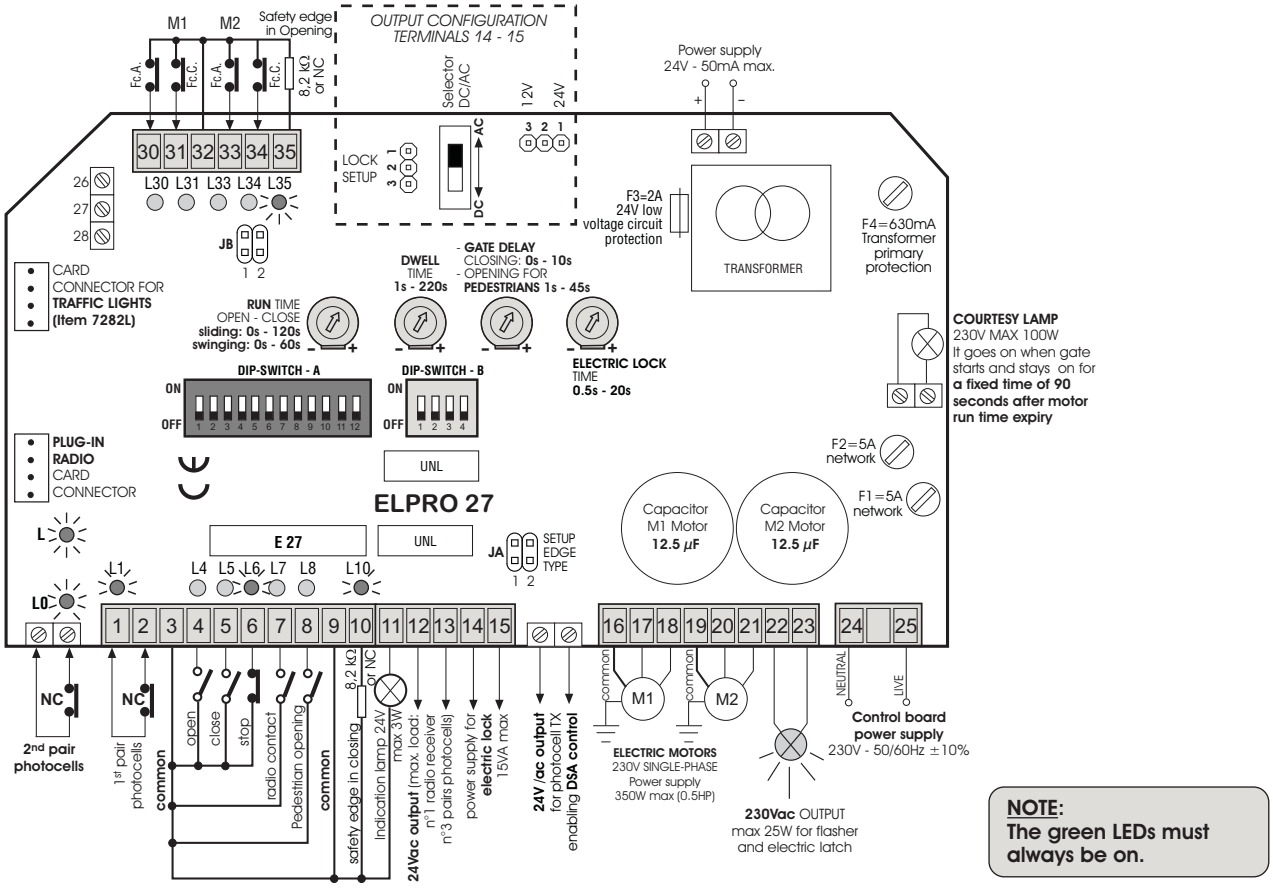
CE

ATTENTION: before starting the electrical connections, select the mode of operation depending on gate type by Dip Switch B N°1 and read the instructions respectively dedicated as follows:
***SLIDING gates* from page 13 to page 18 - *SWINGING gates* from page 19 to page 23.**



NOTE:
The green LEDs must always be on.

General description: the electronic control box ELPRO 27 has been developed to provide a reliable unit to control single or double sliding gate automatic systems with or without limit switches, as well as single or double swinging gate systems fitted with pressure valves. S-phase 230V 50/60Hz ELPRO 27 complies with the Low Voltage Norms 2006/95 CE and Electro-magnetic Compatibility 2004/108/CE. Installation is recommended by qualified technical installation agents in compliance with the existing regulations. The manufacturer is not liable for any incorrect use of this appliance; and also reserves the right to change and update it without previous notice.

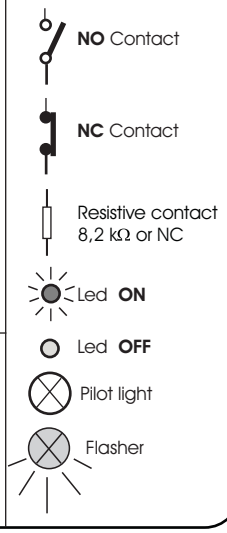
IMPORTANT FOR THE INSTALLATION AND THE CORRECT FUNCTIONING:
- The control box must be installed in a dry and sheltered place; suitable holes are provided with the FADINI universal box for fitting purpose and in case any commercial box is used, this must be adequate to the job
- Make sure that power supply to the control board be 230V ±10%
- Make sure that power supply to the electric motor be 230V ±10%
- For distances longer than 50 metres increase the section of the wires
- Fit the mains to the control box with a high sensitivity, 0.03A, differential, magnetic-thermal circuit breaker
- Cables with 1.5mm² section wires are to be used for the power supply, electric motor and flasher for distances up to 50 m
- Cables with 1mm² section wires are to be used for the limit switches, photocells, push buttons and accessories
- If no photocells are used link out terminals 1 and 2
- If no stop button is used link out terminals 3 and 6
- Open/Close motor run time trimmer must be always superior to the time actually required for the gate travel

N.W.: For applications such as light switching, CCTV, etc. use solid state relays to prevent the microprocessor from being affected

Diagnostic LEDs:
L ON = Board on 230V voltage and F1, F2, F3 fuses all right
L0 ON = 2nd pair photocells, not obstructed
L1 ON = 1st pair photocells not obstructed
L4 OFF = Open, it switches on by any open pulse
L5 OFF = Close, it switches on by any close pulse
L6 ON = Stop, it switches off by any stop pulse
L7 OFF = Radio, it switches on by any pulse from the transmitter/radio contact
L8 OFF = Pedestrian mode, it switches on by any pedestrian pulsing
L10 ON = Safety edge protecting closing
L30 ON = It switches off when Fc.A. (limit switch Opening = L-sw.O) is engaged, M1
L31 ON = It switches off when Fc.C. (limit switch Closing = L-sw.C) is engaged, M1
L33 ON = It switches off when Fc.A. (limit switch Opening = L-sw.O) is engaged, M2
L34 ON = It switches off when Fc.C. (limit switch Closing = L-sw.C) is engaged, M2
L35 ON = Safety edge protecting opening

IN CASE OF FAILURE PLEASE MAKE SURE THAT
- Power supply to the electronic control box is 230V ±10%
- Power supply to the electric motor is 230V ±10%
- All of the fuses is all right
- The photocell contacts are closed
- No voltage drop has occurred from the Elpro board to the electric motor
- All of the NC contacts of the control board are all right

Symbols

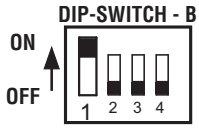


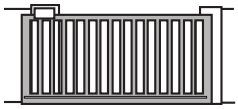
GB Elpro · 27

UNIVERSAL ELECTRONIC CONTROL BOX
SINGLE-PHASE 230V 50/60Hz

meccanica FADINI

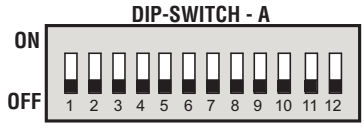
FOR **SLIDING** GATE AUTOMATIC SYSTEMS **WITH LIMIT SWITCHES:**
Dip Switch B N°1= ON





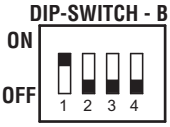
Dip-Switch A

1 = **ON** Photocells stop gate in opening
2 = **ON** Radio, no reversing in opening
3 = **ON** Automatic closing
4 = **ON** Pre-flashing in service
5 = **ON** Radio step-by-step
6 = **ON** Traffic lights mode limit switches connected
7 = **OFF: Blank**
8 = **OFF: Blank**
9 = **ON** 2nd pair photocells in service
10 = **ON** Flasher off in Dwell time
11 = **ON** Gate re-closing in Opening and Dwell on photocells engaging
12 = **OFF: Blank**

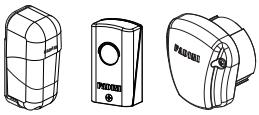
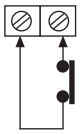
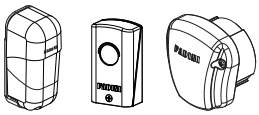
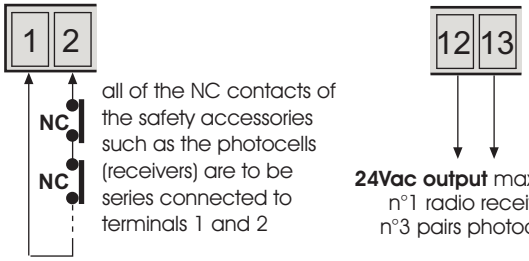
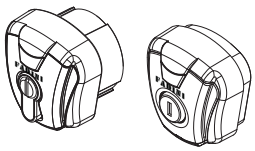
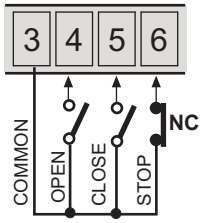
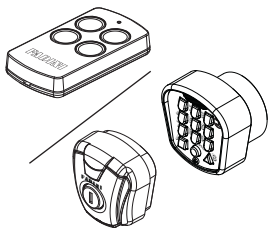
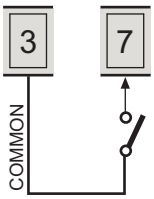
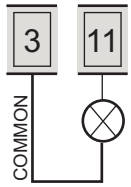


Dip-Switch B

1 = **ON SLIDING GATE** mode
2 = **ON** Hold-on-switched control mode (deadman control)
3 = **ON** Traffic lights on "yellow" for 3 seconds
4 = **ON** DSA control by Photocell transmitters if connected to the dedicated terminals



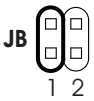
ELECTRICAL CONNECTIONS ON SLIDING GATE MODE - Dip Switch B n°1=ON

Accessory	*Electrical connections*	*Dip-Switch setting and LED indication of functions*
2nd pair photocells (fitted inside perimeter): 	 This pair of photocells stops gate in opening; once cleared from obstacle, gate goes on opening, gate travel is reversed in closing **Dip A No.9=ON and the NC contact connected:** The gates stay stopped as long as the photocells are obstructed. - In opening cycle: obstacle removed, gates go on opening - In closing cycle: obstacle removed, gate travel reversed **NOTE: if no 2nd pair photocells are used, it is not necessary to bridge the contact input, only DIP-SWITCH-A No. 9=OFF**	***DIP-SWITCH-A N° 9:*** **ON**: Photocells 2nd pair in service 9 **OFF**: Photocells 2nd pair not installed **L0 ON** = no obstacle detected, it goes off in case of obstacle
Photocells: 	 all of the NC contacts of the safety accessories such as the photocells (receivers) are to be series connected to terminals 1 and 2 **24Vac output** max load: n°1 radio receiver n°3 pairs photocells	***DIP-SWITCH-A N° 1:*** **ON**: gate is stopped in opening and reversed in closing once cleared from obstacle 1 **OFF**: gate is not stopped in opening and is reversed in closing in case of obstacle **L1 ON** = no obstacle detected, it goes off in case of obstacle
Key-switch: 	 NO and NC contacts to be connected to the respective terminals in the key- or button-switches. All of the possible setting combinations are described in the instructions sheets included with the respective control accessories	**L4 OFF** = no OPENING contact, it goes on whenever an opening pulse is given **L5 OFF** = no CLOSING contact, it goes on whenever a closing pulse is given **L6 ON** = STOP contact closed, it goes off whenever a stop pulse is given
Radio Contact (step by step mode): 	 Any NO connection to these two terminals will perform the following: - Opening only: **Dip 2=ON and Dip 5=OFF** - Gate travel reversing by any pulse **Dip 2=OFF and Dip 5=OFF** - Step by step: Open-Stop-Close-Stop **Dip 2=OFF and Dip 5=ON** - No new pulse is accepted in opening. In Dwell phase and in closing any new pulse stops and reverses gate travel: **Dip 2=ON and Dip 5=ON**	***DIP-SWITCH-A N°2 and N°5:*** **ON**: It does not stop and reverse gate travel in opening 2 **OFF**: always stops & reverses in opening **ON**: step by step with intermediate stop 5 **OFF**: gate travel reversed by any radio pulse **L7 OFF** = no RADIO contact, it goes on by any radio pulse
Indication lamp output 24V- max 3W:	 Output for a 24V max 3 W indication lamp showing the status of the system: Lamp **On** = Gate open Lamp **Off** = Gate closed **0.5s (fast)** flashing = gate closing **1s (normal)** flashing = gate opening	

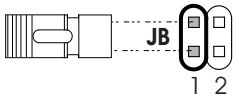
SAFETY EDGES

The two inputs, that are fitted to control the safety edges, are separated for the opening and closing phases. Also, it is possible to select the type of contact connected to them, either N.C. mechanical or 8,2 kΩ resistive, by means of the two jumpers JA1 or JA2.
Thanks to a dedicated microcontroller circuit separately fitted on to the board, the actual integrity and correct functioning of the safety system is constantly controlled. Any possible fault or loss of efficiency is signalled by the L10 and L35 LEDs keeping flashing.

Selecting functioning:

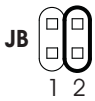


Gate travel is reversed on Opening and Closing for a short spell.

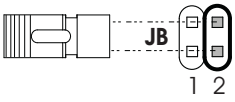


Gate travel is reversed in Opening and Closing for twice as much the spell.

(JB1 jumper)

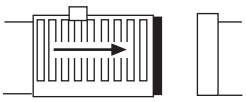
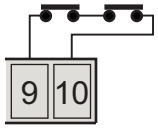
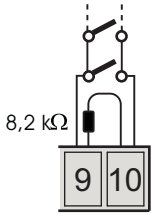
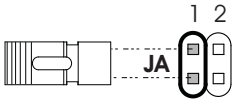
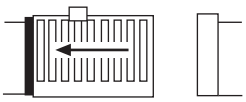
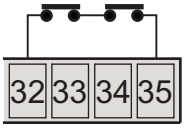
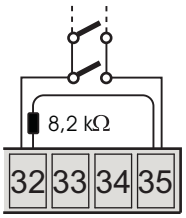
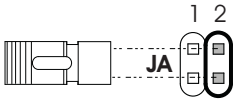
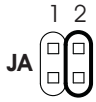


Once the safety edge has been engaged and the obstacle removed, the gate closes automatically. (If automatic close mode has been selected).

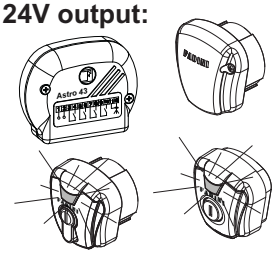
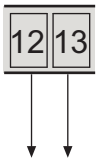
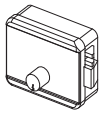
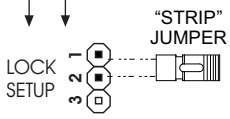
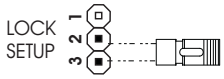
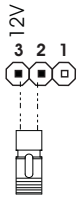
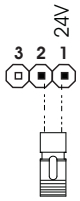
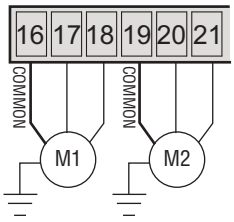
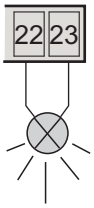
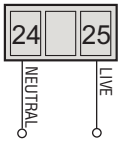


Once the safety edge has been engaged and the obstacle removed, the gate stays stopped until a new pulse is given. (Even if automatic close mode has been selected).

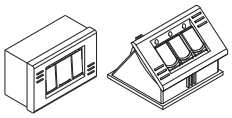
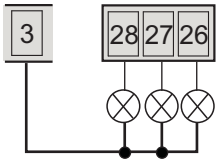
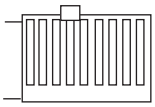
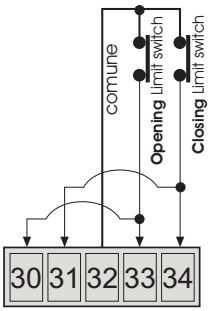
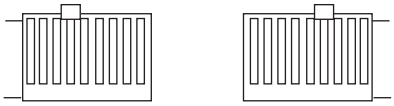
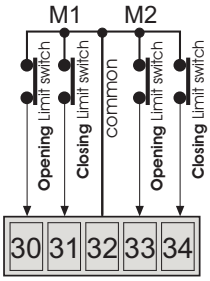
(JB2 jumper)

Accessory	*Electrical connections*	*LED indication*
Safety edge in Closing: 	 *In series if safety edges are mechanical, N.C.*  *In parallel if safety edges are resistive 8,2 kΩ* **Safety edge selection:**  NC safety edge (JA1 jumper)  8,2kΩ Resistive safety edge	 L10 **Normally alight**: whenever the safety edge is engaged, the LED goes off
Safety edge in Opening: 	 *In series if safety edges are mechanical, N.C.*  *In parallel if safety edges are resistive 8,2 kΩ* **Safety edge selection:**  NC safety edge (JA2 jumper)  8,2kΩ Resistive safety edge	 L35 **Normally alight**: whenever the safety edge is engaged, the LED goes off

ELECTRICAL CONNECTIONS ON SLIDING GATE MODE - Dip Switch B n°1=ON

Accessory	*Electrical connections*	*Dip-Switch setting and LED indication of functions*
24V output: 	 24V ac OUTPUT - max load: No. 3 pairs of photocells No. 1 radio receiver No. 1 LED Chis 37 / Chis-E 37 key-switch Instructions are attached to the related control accessories	
Gate electric lock: 	 Power supply output 12Vac/dc or 24Vac/dc for an **electric lock,** 15VA max.  "STRIP" JUMPER Power supply for a mechanical release lock.  Power supply for a magnetic lock to hold the gate/s on gate stop/s.  = alternated current output = direct current output	 **ELECTRIC LOCK** TIME **0.5s - 20s**  12V electric lock power supply  24V electric lock power supply
Output for single-phase motors 230V 350W max - HP 0.5:	**In case of one motor only:** 1) Connect power supply to the terminals Motor M1 2) No gate delay in opening by **Dip-A N°8=ON** 3) Set the trimmer Gate Delay in Closing to zero **In case of 2 motors:** 1) Connect power supply to the terminals Motors M1 and M2 2) No gate delay in opening by **Dip-A N°8=ON** 3) Set the trimmer Gate Delay in Closing to zero 	 **MOTOR RUN** TIME OPEN - CLOSE **0s - 120s**  **DWELL** TIME **1s - 220s**
Flasher 230V: 	 **230Vac** OUTPUT Flasher max 25W	***DIP-SWITCH-A N°4 and N°10:*** **ON**: Pre-flashing before movement 4 **OFF**: No pre-flashing **ON**: Flasher out of service in Dwell time Automatic mode (**Dip 3 = ON**) 10 **OFF**: Flasher in service in Dwell time Automatic mode (con **Dip 3= ON**)
PCB Power Supply 230V:	 **Control board power supply** 230V - 50/60Hz ±10%	

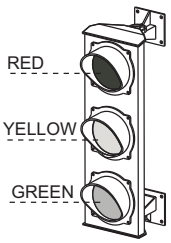
ELECTRICAL CONNECTIONS ON SLIDING GATE MODE - Dip Switch B n°1=ON

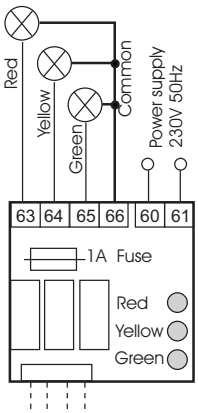
Accessory	*Electrical connections*	*LED indication of functions*
Power connections to Pulin 3 LEDs: 	 Terminals for the connections of the LEDs of the push buttons **Pulin 3**	
24Vdc-5W output:	 OUTPUT 24Vdc - 5W max	
Single sliding gate limit switches:  In applications where only one motor is fitted, connect the inputs of the M1 and M2 limit switches be put in "parallel" (bridge 30 with 33 and 31 with 34, and then connect them to the limit switches Open - Close). **IMPORTANT:** if **no limit switches** are involved, link out terminals 30 - 31 - 32 - 33 - 34. Limit switches (L-sw.) must have normally closed contacts.		**L30 ON**= OFF on engaging L.sw. Opening **L31 ON**= OFF on engaging L.sw. Closing **L33 ON**= OFF on engaging L.sw. Opening **L34 ON**= OFF on engaging L.sw. Closing
Double sliding gate limit switches:  In applications where two motors are fitted, connect the normally closed limit switches to the respective input terminals. **IMPORTANT:** if **no limit switches** are involved, link out terminals 30 - 31 - 32 - 33 - 34. Limit switches (L-sw.) must have normally closed contacts.		**L30 ON**= OFF on engaging L.sw. Opening M1 **L31 ON**= OFF on engaging L.sw. Closing M1 **L33 ON**= OFF on engaging L.sw. Opening M2 **L34 ON**= OFF on engaging L.sw. Closing M2

Traffic lights plug-in card (Optional - Item No. 7282L):

The power supply of this card is independent from that of the control board: 230V 50Hz with an output of 100W at 230V each lamp.
Logic of operation:
- **GREEN** light = driveway **OPEN**
- **RED** light = driveway **CLOSED**
- **YELLOW** light = it switches on before light changes from green to red

Note: In **Pedestrians** mode the traffic light is always **RED**.





(**Optional:** Traffic lights plug-in card for 230V Lamps) Item **7282L**

Dip-Switch A
4= ON Pre-flashing Enabled: traffic lights Red - Yellow - Green
4= OFF Pre-flashing Disabled: traffic lights Red - Green
6= ON Limit switches installed
6= OFF Limit switches linked out (functioning by time setting)

Dip-Switch B
3= ON Pre-flashing time prolonged by about 2 seconds (yellow light up to 3 seconds)
3= OFF Standard time as factory-preset

Functioning with 2 lamps (Red and Green):

Dip-Switch A **4 = OFF**
Dip-Switch A **6** = adjust setting depending on whether the limit switches are used or not in the installation

Dip-Switch B **3 = OFF**

FUNCTIONS FOR SLIDING GATE OPENING - Dip Switch B n°1=ON

Description	*Dip - Switch setting and LED indication of functions*

AUTOMATIC / SEMI-AUTOMATIC:
Automatic Cycle: by one pulse from the open command the gate opens and stops in Dwell mode for the time as pre-set on the **Dwell Trimmer**. When this time expires the gate closes automatically.
Semi-automatic Cycle: by one pulse from the open command the gate opens and stops in fully open position. To close the gate, a close pulse is needed.

DIP-SWITCH-A N°3:

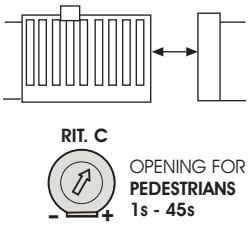
3 **ON**: Automatic closing
OFF: Semi-automatic, closing by pulse

Dwell Trimmer: adjust dwell time on automatic mode from 1s up to 220s

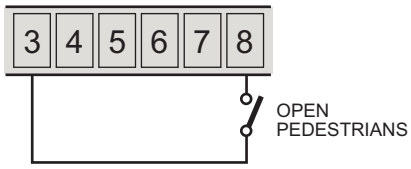
PEDESTRIAN OPENING:
With the gate in fully closed position, a pulse to terminals 3-8 operates the gate for pedestrians.

(On pedestrian mode, it is advisable to set Dip-A N°3= ON for automatic re-closing).

The function "*Pedestrian Opening*" is not in service during the first operation cycle, after a power failure.



○ **L8 OFF** = no pedestrian contact given, it goes on by pulsing for pedestrians



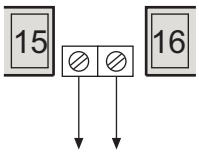
RE-CLOSING BY PASSING ACROSS THE PHOTOCELLS: in opening and dwell cycles (DIP-A N°3=ON)
Gate is automatically closed after 3s from passing between the photocells.
In case a second pair of photocells are installed, (Dip 9=ON), both pairs are to be passed across.

DIP-SWITCH-A N°9 and N°11:

ON: 2nd pair photocells enabled
9 **OFF**: 2nd pair photocells not installed

ON: Automatic closing on passing across the photocells after 3 seconds
11 **OFF**: No automatic closing on passing across the photocells after 3 seconds

DSA: PHOTOCELL AUTOMATIC CONTROL:
For the **DSA** control (**D**evice for **S**afety **A**uto-test) it is necessary to connect **only the photocell transmitters (TX)** to this output and select **Dip-B No.4=ON:** if this function is enabled, ELPRO 27 checks that all the connected photocell devices are cleared from obstacles and properly working before starting any door/gate movements, otherwise the door/gate is not started.



24V ac Output for photocell transmitter TX enabled for **DSA control**

DIP-SWITCH-B N°4:

4 **ON**: DSA safety control enabled
OFF: DSA safety control disabled

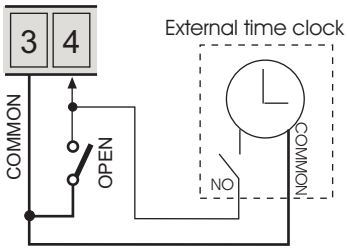
DEADMAN (HOLD-ON-SWITCHED) FUNCTION:
The open/close operations are achieved by "holding on a command switched" (the relays are not self-holding) and consequently the user must be actively present during gate movements until the push-button or the key-switch is released.

DIP-SWITCH-B N°2:

2 **ON**: Deadman control enabled
OFF: Deadman control disabled

PARTY FUNCTION

OPEN-AND-HOLD BY EXTERNAL CLOCK:
Connection: connect the Clock NO contact to OPEN terminals No. 4 and COMMON No. 3, and activate automatic closing by Dip-Switch No. 3=ON. How it works: program the opening time on the clock. At the preset time, the gate will open and remain open (the flashing light will turn off) and will not accept any other command (not even radio commands) until the time set on the clock expires. When this time expires the gate closes automatically after the pause time. While the gate is held open by the time set on the "clock", the indication light keeps giving out two consecutive flashes followed by a long pause.

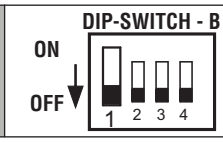


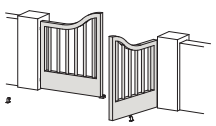
DIP-SWITCH-A N°3:

3 **ON**: Automatic closing

IMPORTANT: use always and only with Dip-A N°3= ON

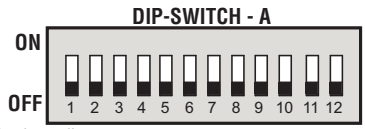
FOR **SWINGING GATE** AUTOMATIC SYSTEMS: set Dip Switch B N°1= OFF





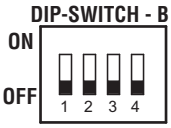
Dip-Switch A

1 = **ON** Photocells stop gate in opening
2 = **ON** Radio, no reversing in opening
3 = **ON** Automatic closing
4 = **ON** Pre-flashing in service
5 = **ON** Radio step-by-step
6 = **ON** Traffic lights mode limit switches connected
7 = **ON** Stroke reversing pulse in Opening cycle
8 = **ON** No gate delay in Opening, motors start together
9 = **ON** 2nd pair photocells in service
10 = **ON** Flasher off in Dwell time
11 = **ON** Gate re-closing in Opening and Dwell on engaging the photocells
12 = **ON** Memory of motor run time settings enabled, with installations where very frequent operations are required

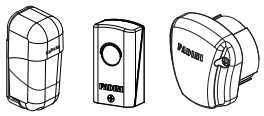
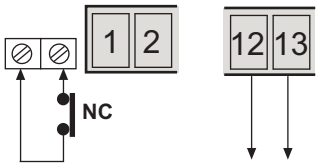
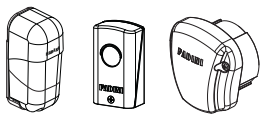
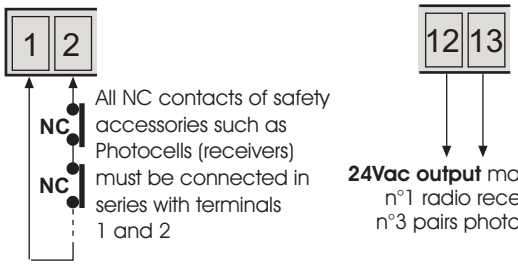
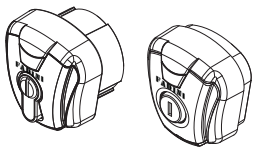
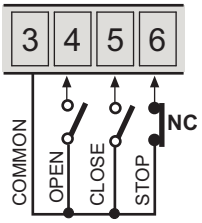
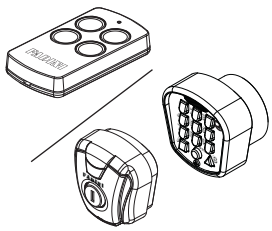
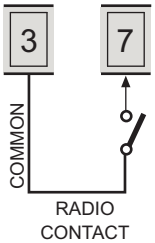
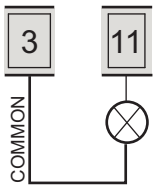


Dip-Switch B

1 = **OFF SWINGING GATE** mode
2 = **ON** Hold-on-switched (deadman) control
3 = **ON** Traffic lights "yellow" for 3 seconds
4 = **ON** DSA control by photocell transmitters if connected to the dedicated terminals



ELECTRICAL CONNECTIONS ON SWINGING GATE MODE - Dip Switch B n°1=OFF

Accessory	*Electrical connections*	*Dip-Switch setting and LED indication of functions*
2nd pair photocells: fitted inside perimeter 	 **24Vac output** max. load: n°1 radio receiver n°3 pairs photocells **Dip A No.9=ON and the NC contact connected:** The gates stay stopped as long as the photocells are obstructed. - In opening cycle: obstacle removed, gates go on opening - In closing cycle: obstacle removed, gate travel reversed **NOTE: if no 2nd pair photocells are used, it is not necessary to bridge the contact input, only DIP-SWITCH-A No. 9=OFF**	***DIP-SWITCH-A N°9:*** ■ **ON**: Photocells 2nd pair in service 9 **OFF**: Photocells 2nd pair not installed **L0 ON** = no obstacle detected, it goes off in case of obstacle
1st pair photocells: fitted outside perimeter 	 All NC contacts of safety accessories such as Photocells (receivers) must be connected in series with terminals 1 and 2 **24Vac output** max. load: n°1 radio receiver n°3 pairs photocells	***DIP-SWITCH-A N° 1:*** ■ **ON**: stop gate/s in opening and reverse travel in closing when cleared 1 **OFF**: no stop in opening and reverse travel in closing when obstructed **L1 ON** = no obstacle, it goes off in case of obstraction
Key-switch: 	 NO and NC contacts to be connected to the respective terminals in the key- or button-switches. All of the possible setting combinations are described in the instructions sheets included with the respective control accessories	○ **L4 OFF** = no OPENING contact, it goes on whenever an opening pulse is given ○ **L5 OFF** = no CLOSING contact, it goes on whenever a closing pulse is given **L6 ON** = STOP contact closed, it goes off whenever a stop pulse is given
Radio contact (step by step mode): 	 Any NO connection to these two terminals will perform the following: - Opening only: **Dip 2=ON and Dip 5=OFF** - Gate travel reversing by any pulse **Dip 2=OFF and Dip 5=OFF** - Step by step: Open-Stop-Close-Stop **Dip 2=OFF and Dip 5=ON** - No new pulse is accepted in opening. In Dwell phase and in closing any new pulse stops and reverses gate travel: **Dip 2=ON and Dip 5=ON**	***DIP-SWITCH-A N°2 and N°5 :*** ■ **ON**: It does not stop and reverse gate travel in opening 2 **OFF**: always stops & reverses in opening ■ **ON**: step by step with intermediate stop 5 **OFF**: gate travel reversed by any radio pulse ○ **L7 OFF** = no RADIO contact, it goes on by any radio pulse
Indication lamp output 24V- max 3W:	 Output for a 24V max 3W indication lamp showing the status of the system: Lamp **On** = Gate open Lamp **Off** = Gate closed **0.5s (fast)** flashing = gate closing **1s (normal)** flashing = gate opening	

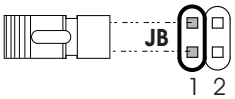
SAFETY EDGES

The two inputs, that are fitted to control the safety edges, are separated for the opening and closing phases. Also, it is possible to select the type of contact connected to them, either N.C. mechanical or 8,2 kΩ resistive, by means of the two jumpers JA1 or JA2.
Thanks to a dedicated microcontroller circuit separately fitted on to the board, the actual integrity and correct functioning of the safety system is constantly controlled. Any possible fault or loss of efficiency is signalled by the L10 and L35 LEDs keeping flashing.

Selecting functioning:

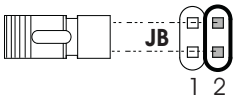
Gate travel is reversed on Opening and Closing for a short spell.

Once the safety edge has been engaged and the obstacle removed, the gate closes automatically. (If automatic close mode has been selected).



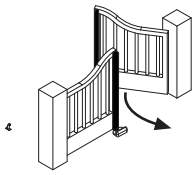
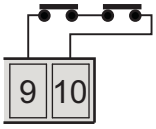
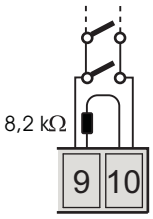
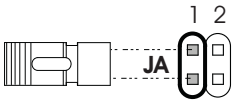
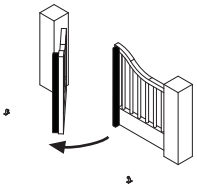
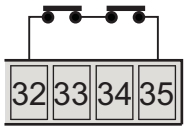
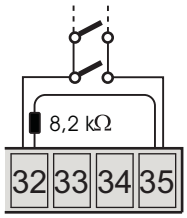
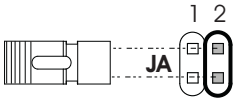
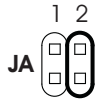
(JB1 jumper)

Gate travel is reversed in Opening and Closing for twice as much the spell.



(JB2 jumper)

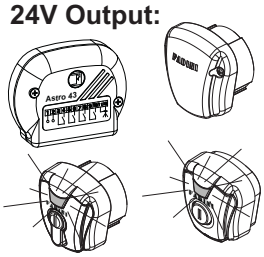
Once the safety edge has been engaged and the obstacle removed, the gate stays stopped until a new pulse is given. (Even if automatic close mode has been selected).

Accessory	*Electrical connections*	*LED indication*
Safety edge in Closing: 	 *In series if safety edges are mechanical, N.C.*  *In parallel if safety edges are resistive 8,2 kΩ* **Safety edge selection:**  NC safety edge (JA1 jumper)  8,2kΩ Resistive safety edge	 L10 **Normally alight**: whenever the safety edge is engaged, the LED goes off
Safety edge in Opening: 	 *In series if safety edges are mechanical, N.C.*  *In parallel if safety edges are resistive 8,2 kΩ* **Safety edge selection:**  NC safety edge (JA2 jumper)  8,2kΩ Resistive safety edge	 L35 **Normally alight**: whenever the safety edge is engaged, the LED goes off

ELECTRICAL CONNECTIONS ON SWINGING GATE MODE - Dip Switch B n°1=OFF

Accessory	*Electrical connections*	*Dip - Switch setting and LED indication of functions*

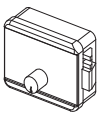
24V Output:



12 13

24V ac OUTPUT - max load:
No. 3 pairs of photocells
No. 1 radio receiver
No. 1 LED Chis 37 / Chis-E 37 key-switch
Instructions are attached to the related control accessories

Gate electric lock:



14 15

Power supply output 12Vac/dc or 24Vac/dc for an **electric lock,** 15VA max. The electric lock is to be fitted onto the gate operated by the M1 motor, delayed in closing cycle.

ELECTRIC LOCK TIME **0,5s - 20s**

"STRIP" JUMPER

LOCK SETUP 3 2 1

Power supply for a mechanical release lock

LOCK SETUP 3 2 1

Power supply for a magnetic lock to hold the gate/s on gate stop/s

12V 3 2 1 — 12V electric lock power supply

24V 3 2 1 — 24V electric lock power supply

AC = alternated current output

DC = direct current output

Output for single-phase motors 230V 350W max:

In case of <u>one motor only:</u>
1) Connect power supply to the terminals Motor M1
2) No gate delay in opening by **Dip-A N°8=ON**
3) Set the trimmer Gate Delay in Closing to zero

In case of <u>2 motors:</u>
Gate delay in Opening, with a fixed time of 2s: if required, it must be enabled by **Dip-A N°8=OFF**

16 17 18 19 20 21

COMMON — M1 — motor delayed in closing

COMMON — M2 — motor delayed in opening

MOTOR RUN TIME OPEN-CLOSE **0s - 60s**

DWELL TIME **1s - 220s**

GATE DELAY IN CLOSING **0s - 10s**

DIP-SWITCH-A N°8:

8 **ON**: No gate delay in opening
OFF: 2s gate delay in opening enabled

Electric latch and flashing lamp 230V:

22 23

230Vac OUTPUT for electric latch. **Important: power supply must be off during Dwell time by Dip-A n°10=ON**

230Vac OUTPUT for flashing lamp max 25W

DIP-SWITCH-A N°4 and N°10:

4 **ON**: Pre-flashing before movement
OFF: No pre-flashing

10 **ON**: Out of service in Dwell phase Automatic mode (by **Dip 3= ON**)
OFF: Powered, ie. in service in Dwell phase Automatic mode (by **Dip 3= ON**)

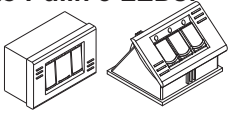
Board power supply 230V:

24 25

NEUTRAL — LIVE

Electronic control board power supply
230V - 50/60Hz ±10%

Power connections to Pulin 3 LEDs:



3 — 28 27 26

Terminals for the connections of the LEDs of the push buttons **Pulin 3**

24Vdc-5W Output:

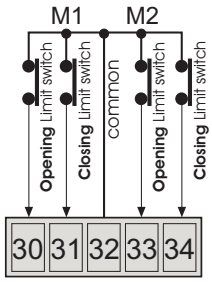
\+ -

29 30

OUTPUT
24Vdc - 5W max

ELECTRICAL CONNECTIONS ON SWINGING GATE MODE - Dip Switch B n°1=OFF

Accessory	*Electrical connections*	*LED indication of functions*
Limit switches:	**IMPORTANT:** if **no limit switches** are involved, link out terminals 30 - 31 - 32 - 33 - 34. Limit switches (L-sw.) must have normally closed contacts.	**L30 ON**= OFF on engaging L.sw. Opening M1 **L31 ON**= OFF on engaging L.sw. Closing M1 **L33 ON**= OFF on engaging L.sw. Opening M2 **L34 ON**= OFF on engaging L.sw. Closing M2



Traffic lights plug-in card (Optional - Item No. 7282L):

The power supply of this card is independent from that of the control board: 230V 50Hz with an output of 100W at 230V each lamp.

Logic of operation:
- **GREEN** light = driveway **OPEN**
- **RED** light = driveway **CLOSED**
- **YELLOW** light = it switches on before light changes from green to red

Note: In **Pedestrians** mode the traffic light is always **RED**.

Dip-Switch A
4= ON Pre-flashing Enabled: traffic lights Red - Yellow - Green
4= OFF Pre-flashing Disabled: traffic lights Red - Green

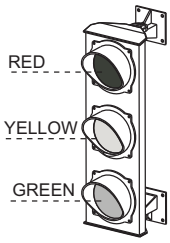
6= ON Limit switches installed
6= OFF Limit switches linked out (functioning by time setting)

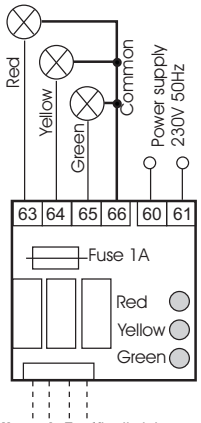
Dip-Switch B
3= ON Pre-flashing time prolonged by about 2 seconds (yellow light up to 3 seconds)
3= OFF Standard time as factory-preset

Functioning with 2 lamps (Red and Green):

Dip-Switch A **4 = OFF**
Dip-Switch A **6 =** adjust setting depending on whether the limit switches are used or not in the installation

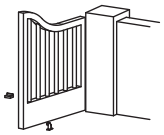
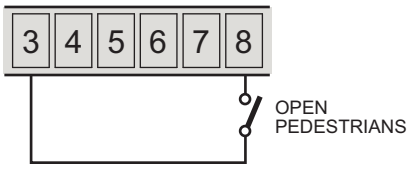
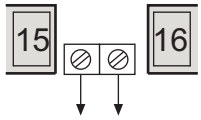
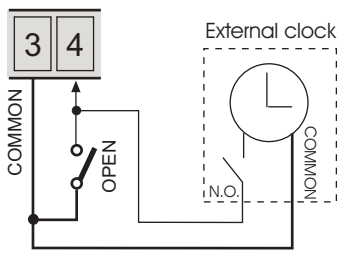
Dip-Switch B **3 = OFF**





(**Optional:** Traffic lights plug-in card for 230V lamps) item **7282L**

FUNCTIONS FOR SWINGING GATE OPENING - Dip Switch B n°1=OFF

Description	*Dip - Switch setting and LED indication of functions*
AUTOMATIC / SEMI-AUTOMATIC: **Automatic Cycle:** by one pulse from the open command the gate opens and stops in Dwell mode for the time as pre-set on the **Dwell Trimmer**. When this time expires the gate closes automatically. **Semi-automatic Cycle:** by one pulse from the open command the gate opens and stops in fully open position. To close the gate, a close pulse is needed.	***DIP-SWITCH-A N°3:*** 3 **ON**: Automatic closing **OFF**: Semi-automatic, closing by pulse **Dwell Trimmer:** adjust dwell time on automatic mode from 1s up to 220s
PEDESTRIAN OPENING: With the gate in fully closed position, a pulse to terminals 3-8 operates the gate for pedestrians. (On pedestrian mode, it is advisable to set Dip-A N°3= ON for automatic re-closing). The function "*Pedestrian Opening*" is not in service during the first operation cycle, after a power failure. 	**L8 OFF** = no pedestrian contact given, it goes on by pulsing for pedestrians 
RE-CLOSING BY PASSING ACROSS THE PHOTOCELLS: in opening and dwell cycles (DIP-A N°3=ON) Gate is automatically closed after 3s from passing between the photocells. In case a second pair of photocells are installed, (Dip 9=ON), both pairs are to be passed across.	***DIP-SWITCH-A N°9 and N°11:*** 9 **ON**: 2nd pair photocells enabled **OFF**: 2nd pair photocells not installed 11 **ON**: Automatic closing on passing across the photocells after 3 seconds **OFF**: No automatic closing on passing across the photocells after 3 seconds
DSA: PHOTOCELL AUTOMATIC CONTROL: For the **DSA** control (**D**evice for **S**afety **A**uto-test) it is necessary to connect **only the photocell transmitters (TX)** to this output and select **Dip-B No.4=ON:** if this function is enabled, ELPRO 27 checks that all the connected photocell devices are cleared from obstacles and properly working before starting any door/gate movements, otherwise the door/gate is not started.  **24V ac Output** for photocell transmitter TX enabled for **DSA control**	***DIP-SWITCH-B N°4:*** 4 **ON**: DSA safety control enabled **OFF**: DSA safety control disabled
DEADMAN (HOLD-ON-SWITCHED) CONTROL: The open/close operations are achieved by " holding on a command switched" (the relays are not self-holding) and consequently the user must be actively present during gate movements until the push-button or the key-switch is released.	***DIP-SWITCH-B N°2:*** 2 **ON**: Deadman control enabled **OFF**: Deadman control disabled
STROKE REVERSING PULSE IN OPENING CYCLE This function helps the gate electric lock to release with the gate/s in fully closed position,even in "Pedestrians" mode: the gates in closed position are pushed to close direction for **2 seconds** before the opening cycle begins.	***DIP-SWITCH-A N°7:*** 7 **ON**: Stroke reversing pulse in opening enabled for 2s **OFF**: No stroke reversing pulse
APPLICATIONS IN BLOCKS OF FLATS: This is a function for heavy duty applications with frequent inversions of direction: this function, when enabled, takes into account the remaining motor run time when there is an inversion of direction or passage between the photocells.	***DIP-SWITCH-A N°12:*** 12 **ON**:Memory of motor run time settings enabled **OFF**: No memory enabled
PARTY FUNCTION **OPEN-AND-HOLD BY EXTERNAL CLOCK:** Connection: connect the Clock NO contact to OPEN terminals No. 4 and COMMON No. 3, and activate automatic closing by setting Dip-Switch No. 3=ON. How it works: program the opening time on the clock. At the preset time, the gates will open and remain open (the flashing light will turn off) and will not accept any other command (not even radio commands) until the time set on the clock expires. When this time expires the gates close automatically after the pause time. While the gates are held open by the time set on the "clock", the indication light keeps giving out two consecutive flashes followed by a long pause. 	***DIP-SWITCH-A N°3:*** 3 **ON**: Automatic closing ***IMPORTANT: use always and only with Dip-A N°3= ON***

CE

I - Prima dell'installazione da parte di personale tecnico qualificato, si consiglia di prendere visione del Libretto Normative di Sicurezza che la Meccanica Fadini mette a disposizione.

GB - Please note that installation must be carried out by qualified technicians following Meccanica Fadini's Safety Norms Manual.

F - L'installation doit être effectuée par un technicien qualifié suivant le manuel des Normes de Sécurité de Meccanica Fadini.

D - Vor der Installation durch qualifiziertes tecnisches Personal wird empfohlen das Handbuch zu den Sicherheitsvorschriften durchzulesen, das die Meccanica Fadini zur Verfügung stellt.

I Direttiva **2003/108/CE**
Smaltimento dei materiali elettrici ed elettronici

VIETATO GETTARE NEI RIFIUTI
MATERIALI NOCIVI PER L'AMBIENTE

GB **2003/108/CE** Directive
for waste electrical and electronic equipments

DISPOSE OF PROPERLY
ENVIRONMENT-NOXIOUS MATERIALS

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