

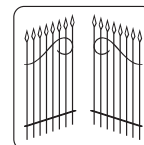
Elpro·27

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).



FADINI
l'apricancello
Made in Italy

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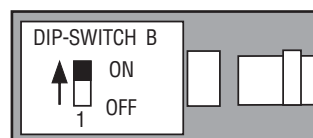
LIBRETTO DI ISTRUZIONI

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 12, 13, 14, 15, 16, 17



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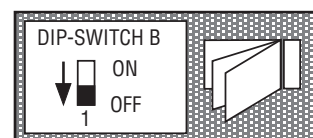
LIBRETTO DI ISTRUZIONI

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

GB

INSTRUCTIONS MANUAL

FOR **OIL-HYDRAULIC SWINGING ACTUATORS**, S-PHASE 230V 50/60Hz
SINGLE or DOUBLE GATES pages 12, 18, 19, 20, 21



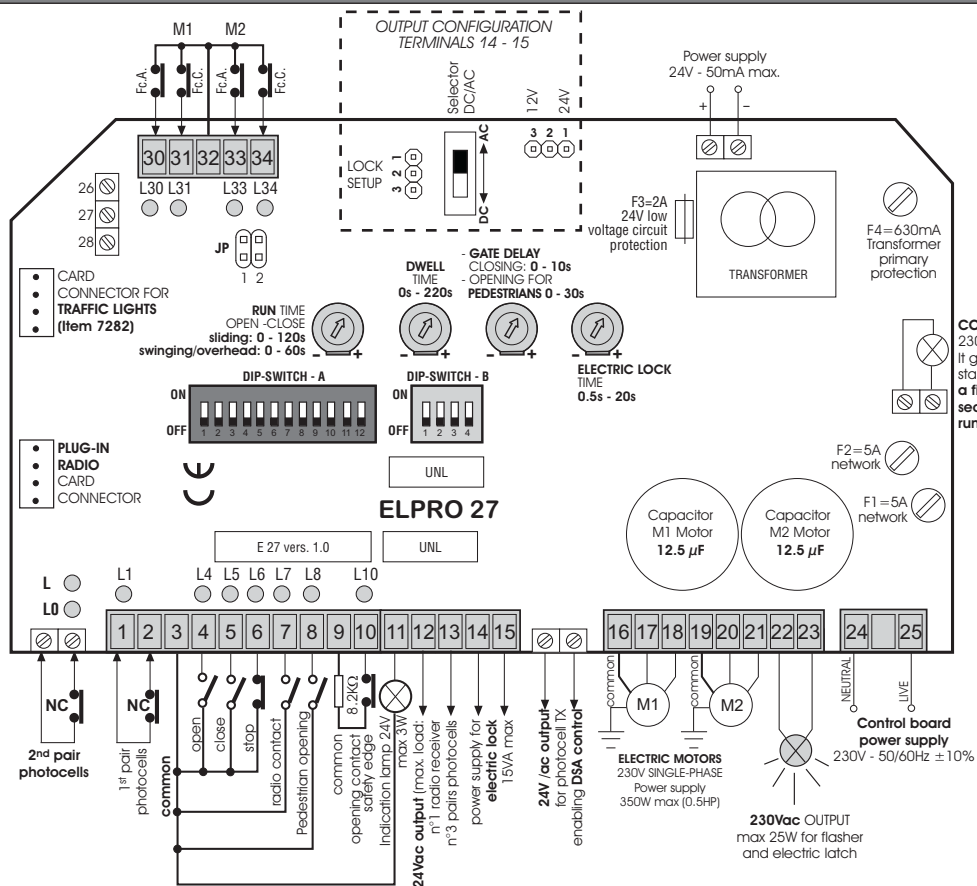
Dis. N. 6893



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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 12 to page 17 - **SWINGING gates** from page 18 to page 21



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 and 92/31 CEE. 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

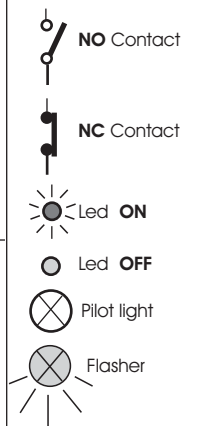
Diagnostic LEDs:

- L ON** = Board on 230V voltage and F1,F2,F3 fuses all right
- L0 ON** = 2nd pair photocells or safety edge, 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 pulsing
- L10 ON** = Safety edge protecting the backward area on gate opening
- 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

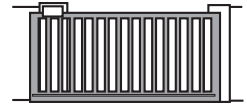
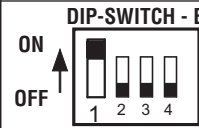
IN CASE OF FAILURE PLEASE MAKE SURE THAT

- 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
- Motor torque selection switch is properly adjusted to meet gate weight and size requirements
- All of the NC contacts of the control board are all right

Symbols

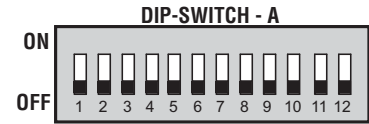


FOR SLIDING GATE AUTOMATIC SYSTEMS WITH LIMIT SWITCHES:
Dip Switch B N°1= ON



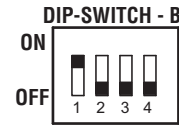
Dip-Switch A

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



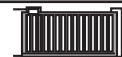
Dip-Switch B

- 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

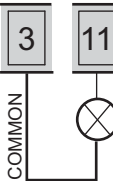
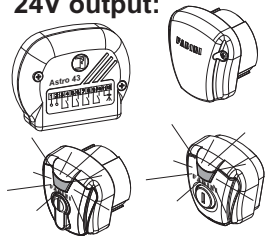
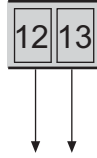
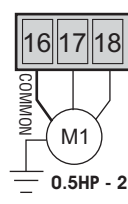

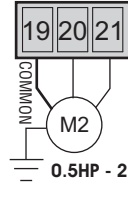

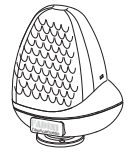
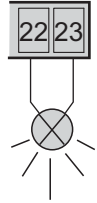
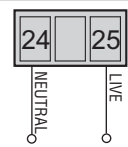
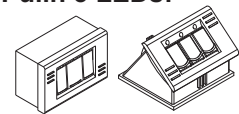
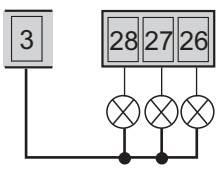



ELECTRICAL CONNECTIONS ON SLIDING GATE MODE - Dip Switch B n°1=ON

Accessory	Electrical connections	Dip-Switch setting and LED indication of functions
<p>2nd pair photocells (fitted inside perimeter):</p>	<p>This pair of photocells stop gate in opening; once cleared from obstacle, gate goes on opening, gate travel is reversed in closing</p> <p>NOTE: in no safety edge is fitted, no need to link out the input terminals, just keep the setting Dip-A N°9=OFF</p>	<p>DIP-SWITCH-A N° 9:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> ON: Photocells 2nd pair in service <input type="checkbox"/> OFF: Photocells 2nd pair not installed <p> L0 ON = no obstacle detected, it goes off in case of obstacle</p>
<p>Photocells:</p>	<p>all of the NC contacts of the safety accessories such as the photocells (receivers) are to be series connected to terminals 1 and 2</p> <p>24Vac output max load: n°1 radio receiver n°3 pairs photocells</p>	<p>DIP-SWITCH-A N° 1:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> ON: gate is stopped in opening and reversed in closing once cleared from obstacle <input type="checkbox"/> OFF: gate is not stopped in opening and is reversed in closing in case of obstacle <p> L1 ON = no obstacle detected, it goes off in case of obstacle</p>
<p>Key-switch:</p>	<p>NO and NC contacts to be connected to the respective terminals in the key- or button-switches.</p> <p>All of the possible setting combinations are described in the instructions sheets included with the respective control accessories</p>	<ul style="list-style-type: none"> <input type="checkbox"/> L4 OFF = no OPENING contact, it goes on whenever an opening pulse is given <input type="checkbox"/> 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
<p>Radio Contact (step by step mode):</p>	<p>Any NO connection to these two terminals will perform the following:</p> <ul style="list-style-type: none"> - 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 	<p>DIP-SWITCH-A N°2 e N°5:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> ON: It does not stop and reverse gate travel in opening <input type="checkbox"/> 2 OFF: always stops & reverses in opening <ul style="list-style-type: none"> <input checked="" type="checkbox"/> ON: step by step with intermediate stop <input type="checkbox"/> 5 OFF: gate travel reversed by any radio pulse <p><input type="checkbox"/> L7 OFF = no RADIO contact, it goes on by any radio pulse</p>
<p>Limit switches:</p>	<p>IMPORTANT: if no limit switches are involved, link out terminals 30 - 31 - 32 - 33 - 34.</p> <p>Limit switches (L-sw.) must have normally closed contacts</p>	<ul style="list-style-type: none"> L30 ON = off on engaging L-sw.O M1 L31 ON = off on engaging L-sw.C M1 L33 ON = off on engaging L-sw.O M2 L34 ON = off on engaging L-sw.C M2



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

Accessory	Electrical connections	Dip-Switch setting and LED indication of functions
<p>Indication lamp output 24V- max 3W:</p>	 <p>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</p>	
<p>24V output:</p> 	 <p>24V ac OUTPUT - max load: No. 3 pairs of photocells No. 1 radio receiver No. 1 LED Chis 37 / Chis-E37 key-switch Instructions are attached to the related control accessories</p>	
<p>230V single-phase motor and capacitors:</p>	<p>N°1 MOTOR UP TO 0.5HP (0.36KW) 230V SINGLE-PHASE: connect power supply to M1 output terminals</p>  <p>Capacitor Motor M1 12.5 µF</p> <p>0.5HP - 230V</p>	 <p>MOTOR RUN TIME OPEN - CLOSE 0s - 120s</p>
	<p>N°1 MOTOR UP TO 0.5HP (0.36KW) 230V SINGLE-PHASE: connect power supply to M2 output terminals</p>  <p>Capacitor Motor M2 12.5 µF</p> <p>0.5HP - 230V</p>	 <p>DWELL TIME 0s - 220s</p>
<p>Flasher 230V:</p> 	 <p>230Vac OUTPUT Flasher max 25W</p>	<p>DIP-SWITCH-A N°4 and N°10</p> <p><input type="checkbox"/> ON: Pre-flashing prior to opening 4 OFF: No pre-flashing</p> <p><input type="checkbox"/> 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)</p>
<p>PCB Power Supply 230V:</p>	 <p>Control board power supply 230V - 50/60Hz ±10%</p>	
<p>Power connections to Pulin 3 LEDs:</p> 	 <p>Terminals for the connections of the LEDs of the push buttons Pulin 3</p>	
<p>24Vdc-5W output:</p>	 <p>OUTPUT 24Vdc - 5W max</p>	



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:

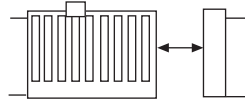
- ON:** Automatic closing
- 3 OFF:** Semi-automatic, closing by pulse



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

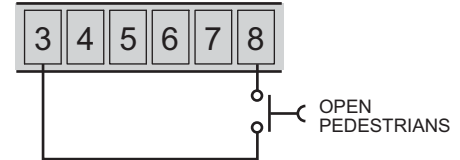
PEDESTRIAN OPENING:

With the gate in fully closed position, an Open 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)

- 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)

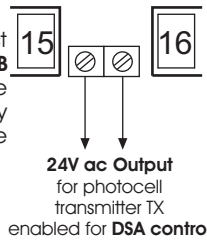
Gate is automatically closed after 3 s from passing between the photocells. In case a second pair of photocells are installed, (Dip 9=ON), both pairs are to be passed across.

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 (Device for Safety Auto-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.



DIP-SWITCH-B N°4:

- ON:** DSA safety control enabled
- 4 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:

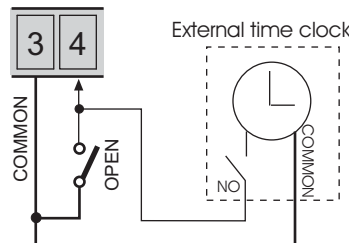
- ON:** Deadman control enabled
- 2 OFF:** Deadman control disabled

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.



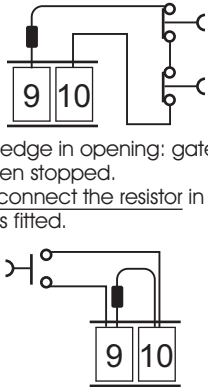
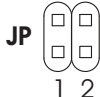
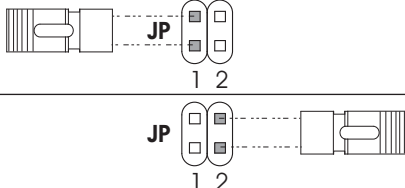
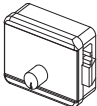

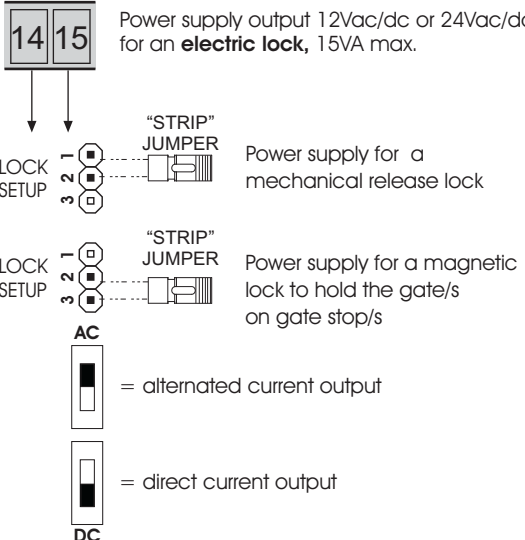
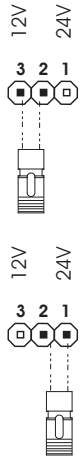
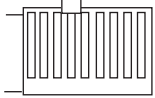
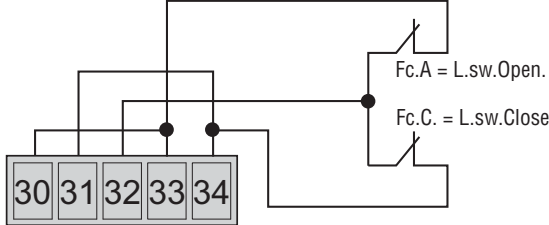

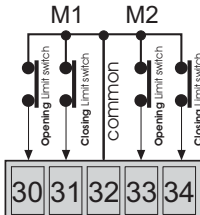
DIP-SWITCH-A N°3:

- ON:** Automatic closing
- 3**

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



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

Accessory	Electrical connections	Dip-Switch setting and LED indication of functions
<p>Safety edge in OPENING:</p> <p>In case a 8.2 KΩ resistive safety edge is fitted, remove the resistor; In case a mechanical safety edge is fitted, use the resistor to either connect the NC or NO contacts as hereby indicated</p>	 <p><i>In series if NC</i></p> <p>Safety edge in opening: gate is reversed for a short bit and then stopped. Series connect the resistor in case a mechanical N.C. safe edge is fitted.</p> <p><i>In parallel if NO</i></p> <p>Parallel connect the resistor in case a mechanical N.O. safety edge is fitted. Any time after the safety edge has been engaged, the gate is stopped until a new command is given. (Even if automatic close mode has been selected).</p>	<ul style="list-style-type: none"> • If no safety edge is used, keep the 8.2 KΩ resistor connected to terminals 9 and 10. • If the safety edge is NC, series connect the resistor with it • If the safety edge is NO, parallel connect the resistor with it (leave the resistor between terminals 9 and 10).
<p>Safety edge in OPENING and CLOSING:</p> 		<p>The safety edge in opening and closing allows for the gate/s to reverse direction for a certain span and then stop.</p> <p>The gate travel reverse span is increased to twice as much.</p>
<p>Gate electric lock:</p>  <p>Output configuration:</p>  <p>ELECTRIC LOCK TIME 0.5s - 20s</p>	 <p>Power supply output 12Vac/dc or 24Vac/dc for an electric lock, 15VA max.</p> <p>LOCK SETUP 1 2 3</p> <p>"STRIP" JUMPER</p> <p>Power supply for a mechanical release lock</p> <p>Power supply for a magnetic lock to hold the gate/s on gate stop/s</p> <p>AC = alternated current output</p> <p>DC = direct current output</p>	 <p>12V 24V</p> <p>12V electric lock power supply</p> <p>12V 24V</p> <p>24V electric lock power supply</p>
<p>Single sliding gate function:</p> 	<p>In applications where <u>only one motor</u> is fitted, it is advisable that 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).</p>  <p>Fc.A = L.sw.Open.</p> <p>Fc.C = L.sw.Close</p>	
<p>Double sliding gate function:</p> 	 <p>M1 M2</p> <p>Opening Limit switch Closing Limit switch common Opening Limit switch Closing Limit switch</p>	<ul style="list-style-type: none"> ☀ L30 ON = OFF on engaging L.sw.O M1 ☀ L31 ON = OFF on engaging L.sw.C M1 ☀ L33 ON = OFF on engaging L.sw.O M2 ☀ L34 ON = OFF on engaging L.sw.C M2

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

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

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

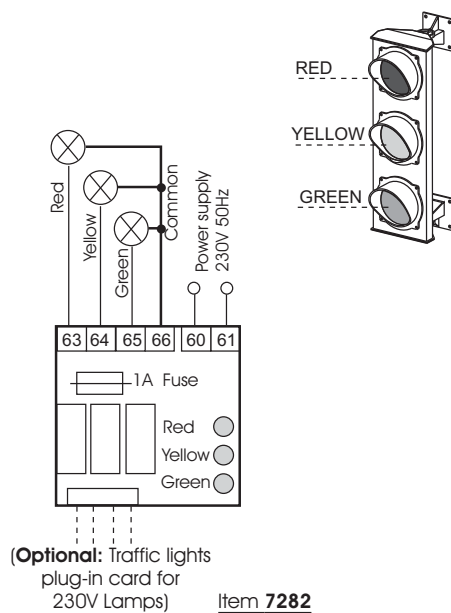
- 4 = ON** Pre-flashing Enabled: traffic lights Red - Yellow - Green
- 4 = OFF** Pre-flashing Disabled: traffic lights Red - Green
- 6 = ON** Limit switches installed
- 6 = OFF** Limit switches linked out (functioning by time setting)

Dip-Switch B

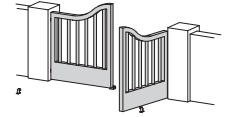
- 3 = ON** Pre-flashing time prolonged by about 2 seconds
(yellow light up to 3 seconds)
- 3 = OFF** Standard time as factory-preset

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**

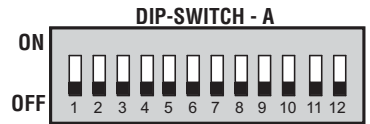


FOR SWINGING GATE AUTOMATIC SYSTEMS:
set Dip Switch B N°1= OFF



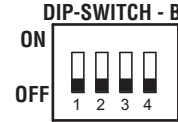
Dip-Switch A

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

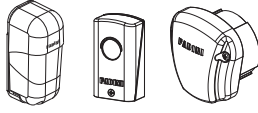
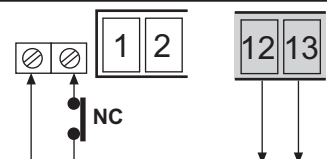

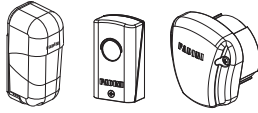
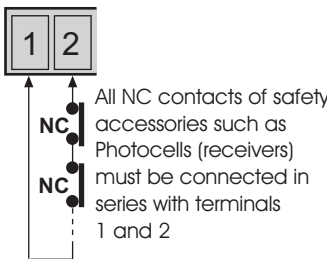

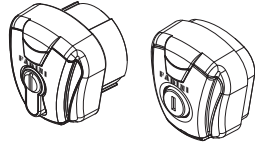
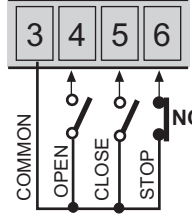

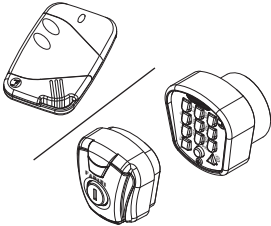
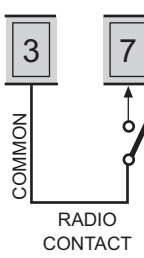
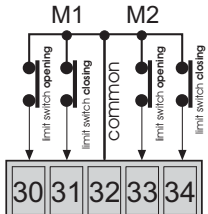






Dip-Switch B

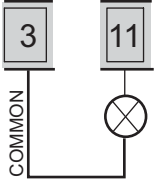
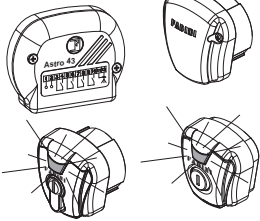
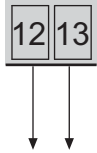
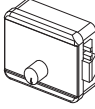
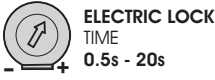
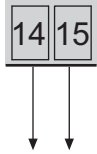
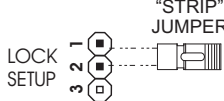
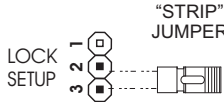


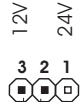
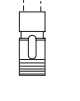
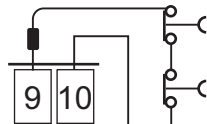
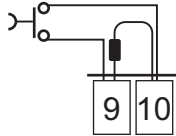
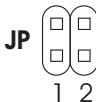
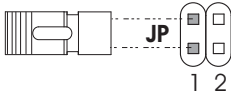
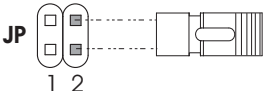
- 1 = OFF SWINGING GATE mode
- 2 = ON Hold-on-switched (deadman) control
- 3 = ON Traffic lights "yellow" for 3 seconds
- 4 = ON DSA control by photocell transmitters if connected to the dedicated terminals



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

Accessory	Electrical connections	Dip-Switch setting and LED indication of functions
<p>2nd pair photocells: fitted inside perimeter</p> 	 <p>24Vac output max. load: n°1 radio receiver n°3 pairs photocells</p> <p>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</p>	<p>DIP-SWITCH-A N°9:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> ON: Photocells 2nd pair in service <input type="checkbox"/> OFF: Photocells 2nd pair not installed <p> L0 ON = no obstacle detected, it goes off in case of obstacle</p>
<p>1st pair photocells: fitted outside perimeter</p> 	 <p>All NC contacts of safety accessories such as Photocells (receivers) must be connected in series with terminals 1 and 2</p> <p>24V ac output max. load: n°1 radio receiver n°3 pairs photocells</p>	<p>DIP-SWITCH-A N° 1:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> ON: stop gate/s in opening and reverse travel in closing when cleared <input type="checkbox"/> OFF: no stop in opening and reverse travel in closing when obstructed <p> L1 ON = no obstacle, it goes off in case of obstruction</p>
<p>Key-switch:</p> 	 <p>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</p>	<ul style="list-style-type: none"> <input type="checkbox"/> L4 OFF = no OPENING contact, it goes on whenever an opening pulse is given <input type="checkbox"/> 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
<p>Radio contact (step by step mode):</p> 	 <p>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</p>	<p>DIP-SWITCH-A N°2 and N°5 :</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> ON: It does not stop and reverse gate travel in opening <input type="checkbox"/> OFF: always stops & reverses in opening <ul style="list-style-type: none"> <input checked="" type="checkbox"/> ON: step by step with intermediate stop <input type="checkbox"/> OFF: gate travel reversed by any radio pulse <p><input type="checkbox"/> L7 OFF = no RADIO contact, it goes on by any radio pulse</p>
<p>Limit switches:</p>	 <p>IMPORTANT: if no limit switches are involved , link out terminals 30 - 31 - 32 - 33 - 34.</p> <p>Limit switches (L-sw.) must have normally closed contacts</p>	<ul style="list-style-type: none">  L30 ON = off on engaging L-sw.O M1  L31 ON = off on engaging L-sw.C M1  L33 ON = off on engaging L-sw.O M2  L34 ON = off on engaging L-sw.C M2


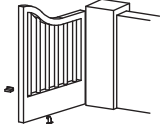
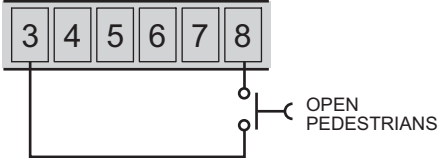
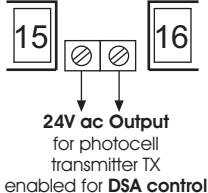
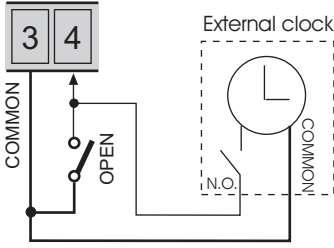


Accessory	Electrical connections	Dip - Switch setting and LED indication of functions
<p>Indication lamp output 24V- max 3W:</p>	 <p>Output for a 24V max 3 W indication lamp showing the status of the system: Lamp On = Gate open Lamp Off = Gate closed 0.5s (fast) flashing = gate closing 1s (normal) flashing = gate opening</p>	
<p>24V Output:</p> 	 <p>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</p>	
<p>Gate electric lock:</p>  <p>Output configuration:</p>  <p>ELECTRIC LOCK TIME 0.5s - 20s</p>	 <p>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</p> <p>LOCK SETUP</p>  <p>Power supply for a mechanical release lock</p>  <p>Power supply for a magnetic lock to hold the gate/s on gate stop/s</p> <p>AC = alternated current output</p>  <p>DC = direct current output</p> 	 <p>12V 24V</p> <p>12V electric lock power supply</p>  <p>12V 24V</p> <p>24V electric lock power supply</p>
<p>Safety edge in OPENING:</p> <p>In case a 8.2 KΩ resistive safety edge is fitted, remove the resistor; In case a mechanical safety edge is fitted, use the resistor to either connect the NC or NO contacts as hereby indicated</p>	 <p><i>In series if NC</i></p> <p>Safety edge in opening: gate is reversed for a short bit and then stopped. <u>Series connect the resistor</u> in case a mechanical N.C. safety edge is fitted</p>  <p><i>In parallel if NO</i></p> <p><u>Parallel connect the resistor</u> in case a mechanical N.O. safety edge is fitted. Any time after the safety edge has been engaged, the gates are stopped until a new command is given. (Even if automatic close mode has been selected).</p>	<ul style="list-style-type: none"> • If no safety edge is used, keep the 8.2 KΩ resistor connected to terminals 9 and 10. • If the safety edge is NC, series connect the resistor with it • If the safety edge is NO, parallel connect the resistor with it (leave the resistor between terminals 9 and 10).
<p>Safety edge in OPENING and CLOSING:</p> 	 	<p>The safety edge in opening and closing allows for the gate/s to reverse direction for a certain span and then stop.</p> <p>The gate travel reverse span is increased to twice as much.</p>



FOR SWINGING GATE SYSTEMS Dip-B N°1=OFF

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

Description	Dip - Switch setting and LED indication of functions
<p>AUTOMATIC / SEMI-AUTOMATIC: Automatic Cycle: by one pulse from the open command the gates open and stop in Dwell mode for the time as pre-set on the Dwell Trimmer. When this time expires the gates close automatically. Semi-automatic Cycle: by one pulse from the open command the gates open and stop in fully open position. To close the gates, a close pulse is needed.</p>	<p>DIP-SWITCH-A N°3:</p> <p><input type="checkbox"/> ON: Automatic closing <input checked="" type="checkbox"/> 3 OFF: Semi-automatic</p> <p> Dwell Trimmer: adjust dwell time on automatic mode from 1s up to 220s</p>
<p>PEDESTRIAN OPENING ONLY FOR M1 MOTOR: With the gates in fully closed position, an Open pulse to terminals 3-8 operates the gate for pedestrians</p> <p>(On pedestrian mode, it is advisable to set Dip-A N°3= ON for automatic re-closing)</p> 	<p><input checked="" type="radio"/> L8 OFF = no "pedestrians" command given, the LED goes on by pulsing for pedestrians</p> 
<p>RE-CLOSING BY PASSING ACROSS THE PHOTOCELLS: in opening and dwell cycles (DIP-A N°3=ON) Gate is automatically closed after 3 s from passing between the photocells. In case a second pair of photocells are installed, (Dip 9=ON), both pairs are to be passed across.</p>	<p>DIP-SWITCH-A N°9 and N°11:</p> <p><input type="checkbox"/> ON: 2nd pair photocells enabled <input checked="" type="checkbox"/> 9 OFF: 2nd pair photocells not installed</p> <p><input type="checkbox"/> ON: Automatic closing on passing across the photocells after 3 seconds <input checked="" type="checkbox"/> 11 OFF: No automatic closing on passing across the photocells after 3 seconds</p>
<p>DSA: PHOTOCELL AUTOMATIC CONTROL: For the DSA control (Device for Safety Auto-test) it is required that only the photocell transmitters (TX) be connected to this output and the 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 doors/gates are not started.</p> 	<p>DIP-SWITCH-B N°4:</p> <p><input type="checkbox"/> ON: <u>DSA safety</u> control enabled <input checked="" type="checkbox"/> 4 OFF: <u>DSA safety</u> control disabled</p>
<p>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.</p>	<p>DIP-SWITCH-B N°2:</p> <p><input type="checkbox"/> ON: Deadman control enabled <input checked="" type="checkbox"/> 2 OFF: Deadman control disabled</p>
<p>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.</p>	<p>DIP-SWITCH-A N°7:</p> <p><input type="checkbox"/> ON: Stroke reversing pulse in opening enabled for 2s <input checked="" type="checkbox"/> 7 OFF: No stroke reversing pulse</p>
<p>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.</p>	<p>DIP-SWITCH-A N°12:</p> <p><input type="checkbox"/> ON: Memory of motor run time settings enabled <input checked="" type="checkbox"/> 12 OFF: No memory enabled</p>
<p>PARTY FUNCTION</p> <p>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.</p> 	<p>DIP-SWITCH-A N°3:</p> <p><input type="checkbox"/> ON: Automatic closing <input checked="" type="checkbox"/> 3</p> <p>IMPORTANT: use always and only with Dip-A N°3= ON</p>



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

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

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

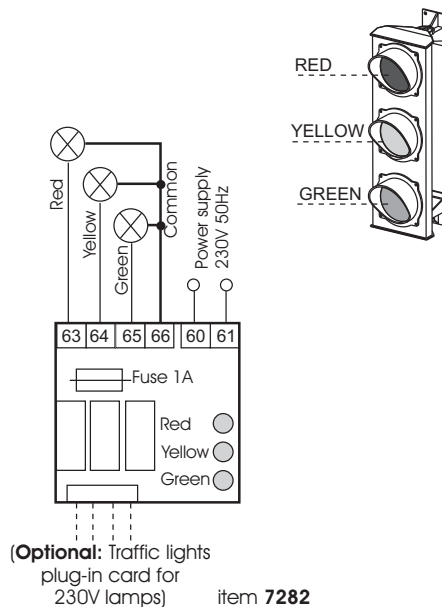
- 4 = ON** Pre-flashing Enabled: traffic lights Red - Yellow - Green
- 4 = OFF** Pre-flashing Disabled: traffic lights Red - Green
- 6 = ON** Limit switches installed
- 6 = OFF** Limit switches linked out (functioning by time setting)

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**



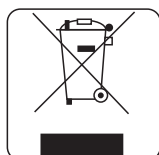
FOR SWINGING GATE SYSTEMS Dip-B n°1=OFF

Accessory	Electrical connections	Dip - Switch setting and LED indication of functions
<p>Single-phase motor 230V and capacitors:</p>	<p>In case of one motor only:</p> <ol style="list-style-type: none"> 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 <p>In case of 2 motors:</p> <p>Gate delay in Opening, with a fixed time of 2s: if required, it must be enabled by Dip-A N°8=OFF</p>	<p>DIP-SWITCH-A N°8</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> ON: No gate delay in opening <input type="checkbox"/> 8 OFF: 2s gate delay in opening enabled
<p>Electric latch and flashing lamp 230V:</p>	<p>230Vac OUTPUT for electric latch. Important: power supply must be off during Dwell time by Dip-A n°10=ON</p> <p>230Vac OUTPUT for flashing lamp max 25W</p>	<p>DIP-SWITCH-A N°4 and N°10</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> ON: Pre-flashing before opening <input type="checkbox"/> 4 OFF: No pre-flashing <ul style="list-style-type: none"> <input checked="" type="checkbox"/> ON: Out of service in Dwell phase Automatic mode (by Dip 3= ON) <input type="checkbox"/> 10 OFF: Powered, ie. in service in Dwell phase Automatic mode (by Dip 3= ON)
<p>Board power supply 230V:</p>	<p>Electronic control board power supply 230V - 50/60Hz ± 10%</p>	
<p>Power connections to Pulin 3 LEDs:</p>	<p>Terminals for the connections of the LEDs of the push buttons Pulin 3</p>	
<p>24Vdc-5W Output:</p>	<p>OUTPUT 24Vdc - 5W max</p>	

Elpro-27



- 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.



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

**VIETATO GETTARE NEI RIFIUTI
MATERIALI NOCIVI PER L'AMBIENTE**



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

**DISPOSE OF PROPERLY
ENVIRONMENT-NOXIOUS MATERIALS**



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e-mail: info@fadini.net - www.fadini.net

La ditta costruttrice si riserva di apportare modifiche al presente libretto senza preavviso