Elpro S20

IT PROGRAMMATORE ELETTRONICO PER LA GESTIONE FINO A 2 DISSUASORI A SCOMPARSA, CON O SENZA FINECORSA

GB ELECTRONIC CONTROLLER UP TO 2 AUTOMATIC BOLLARDS, WITH OR WITHOUT LIMIT SWITCH

FR PROGRAMMATEUR ELECTRONIQUE POUR LE CONTROLE JUSQU'À DEUX BORNES ESCAMOTABLES, AVEC OU SANS LE FIN DE COURSE

DE ELEKTRONISCHE STEUERUNG ZUR KONTROLLE BIS ZU 2 AUTOMATISCH VERSENKBAREN POLLER, MIT ODER OHNE ENDSCHALTER

ES PROGRAMADOR ELECTRÓNICO PARA LA GESTIÓN DE HASTA DOS BOLARDOS RETRÁCTIL, CON SIN FINAL DE CARRERA

NL ELEKTRONISCHE PROGRAMMEERINRICHTING VOOR HET BEHEER VAN MAXIMAAL TWEE VERZINKBARE PALEN, MET OF ZONDER EINDSCHAKELAARS

IT

- FINO A 2 DISSUASORI A SCOMPARSA
- APERTURA PEDONALE
- PREDISPOSTO PER SEMAFORO A 3 LUCI
- AUTOMATICO O SEMIAUTOMATICO
- COLLEGAMENTI SEPARATI PER ELETTROVALVOLA
- SISTEMA DI SUPERVISIONE INTEGRITÀ C.S.I.
- PREDISPOSIZIONE PER OROLOGIO ESTERNO
- FUNZIONE PASSO-PASSO
- UOMO PRESENTE

GB

- UP TO 2 BOLLARDS
- STEP-BY-STEP FUNCTION
- PEDESTRIAN OPENING
- PREPARED FOR 3 LAMPS TRAFFIC LIGHTS
- AUTOMATIC OR SEMI- AUTOMATIC
- SEPARATE CONNECTIONS FOR ELECTRIC VALVE
- EXTERNAL TIME CLOCK
- DEADMAN CONTROL
- ISC SYSTEM i.e. INTEGRITY SUPERVISION

FR

- JUSQU'A 2 BORNES ESCAMOTABLES
- OUVERTURE PIETONS
- PREPARE POUR FEU DE CIRCULATION A 3 AMPOULES
- AUTOMATIQUE OU SEMIAUTOMATIQUE
- RACCORDEMENTS SEPARES POUR ELECTROVANNE
- CIRCUIT DE SUPERVISION D'INTEGRITE C.S.I.
- PREPARE POUR HORLOGE EXTERNE
- FONCTION PAS-PAS
- HOMME MORT

DE

- BIS ZU 2 VERSENKBAREN ABSPERRPOLLERN
- GEHTÜRFUNKTION
- FÜR AMPEL MIT 3 LICHTERN VORGESEHEN
- AUTOMATIK- ODER HALBAUTOMATIKBETRIEB
- GETRENNTE ANSCHLÜSSE FÜR ELEKTROVENTIL
- SYSTEM ZUR KONTROLLE DER INTEGRITÄT (I.Ü.S.)
- FÜR EXTERNE UHR VORGESEHEN
- IMPULSBETRIEB
- TOTMANN-BETRIEB

ES

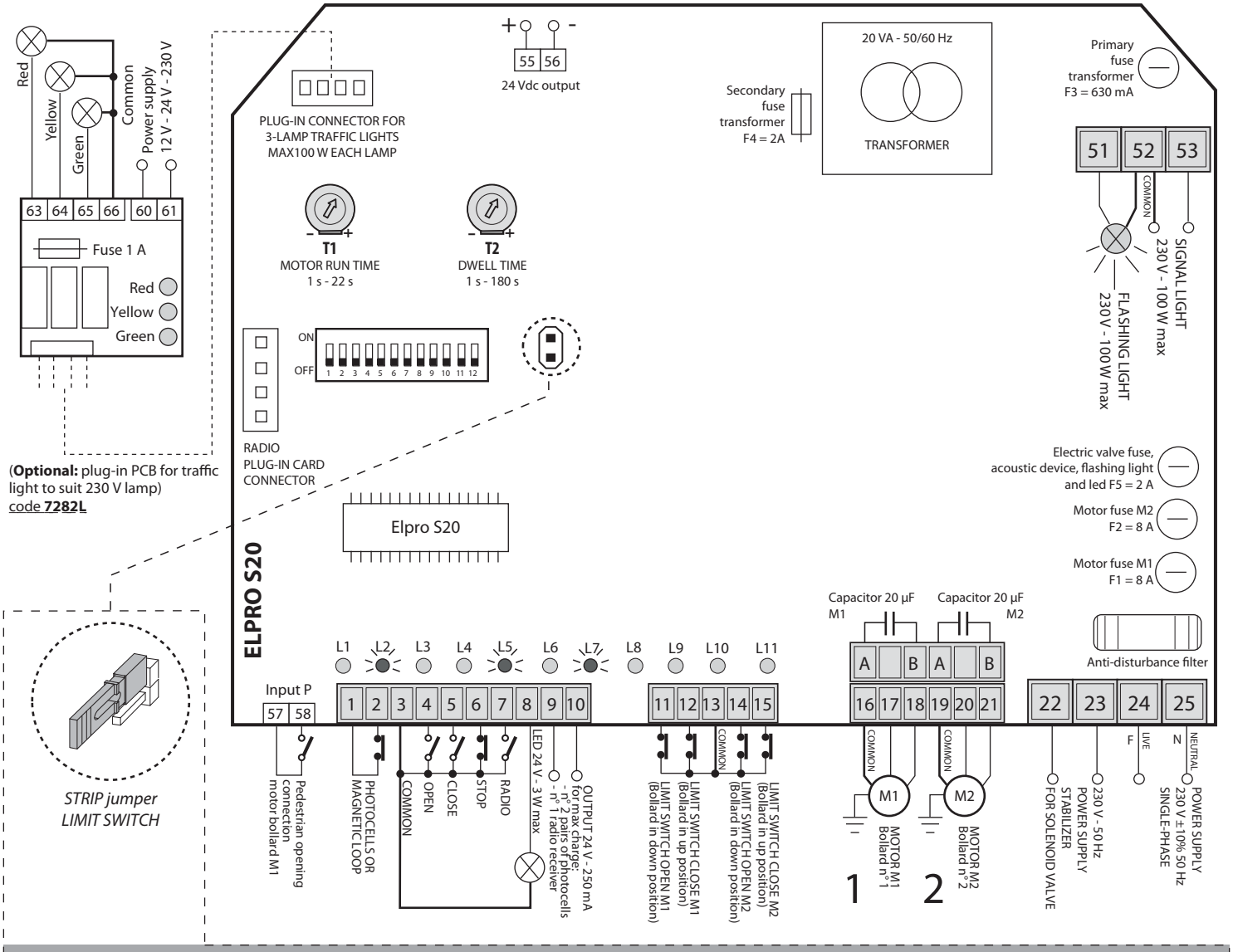
- HASTA 2 BARRERAS ESCAMOTEABLES
- ABERTURA PEATONAL
- PREDISPUESTO PARA SEMÁFORO DE 3 LUCES
- AUTOMÁTICO O SEMIAUTOMÁTICO
- CONEXIONES SEPARADAS PARA ELECTROVÁLVULA
- SISTEMA DE SUPERVISIÓN INTEGRIDAD C.S.I.
- PREDISPOSICIÓN PARA RELOJ EXTERNO
- FUNCIÓN PASO-PASO
- HOMBRE PRESENTE

NL

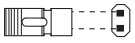
- MAXIMAAL 2 VERZINKBARE PALEN
- VOETGANGERSDOORGANG
- VOORBEREID VOOR STOPLICHT MET 3 LICHTEN
- AUTOMATISCH OF HALFAUTOMATISCH
- GESCHEIDEN VERBINDINGEN VOOR MAGNEETKLEP
- BEWAKINGSSYSTEEM INTEGRITEIT C.S.I.
- VOORBEREIDING VOOR EXTERNE KLOK
- STAP-VOOR-STAP FUNCTIE
- DODEMANSFUNCTIE

GB Elpro S20

ELECTRONIC CONTROLLER UP TO 2 AUTOMATIC BOLLARDS, WITH OR WITHOUT LIMIT SWITCH



LIMIT SWITCH DIAGNOSTIC



Coral, Vigilo, Talos, Talos M30, Strabuc 930 Opinat range of bollards with limit switch: with the STRIP jumper inserted (as in the picture), Elpro S20 checks cyclicly every 10 minutes that the closing limit switches (post raised) are in the correct position; should any of them fail to be such, only the motor of the post not in position is operated until this is fully up as required.

Note well: whenever **Elpro** S20 is re-powered, wait 10 seconds for the logic to become fully operating again.

The electronic control panel Elpro S20 is designed to operate the Talos, Talos M30, Strabuc 930 Opinat, Coral and Vigilo; power supply is 230 V single-phase.
Elpro S20 is capable of monitoring damages or malfunctioning with the system (ISC).
I.S.C. = **I**ntegrity and **S**upervision **C**ircuit, is a special function of Elpro S20 which can self control the electronic PCB and detect any damages occurring with any components or accessories. In this case, provided that the post is fitted with a release electric valve, lowering is allowed automatically. The manufacturing company declines any responsability for incorrect handling and application; also, it reserves the right to change or update the control panel any time.

SYMBOLS:

NO contact

NC contact

Led **ON**

Led **OFF**

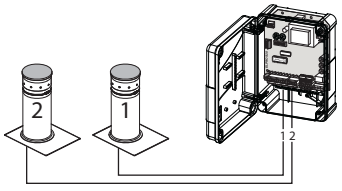
Pilot light

Flasher

IMPORTANT FOR THE INSTALLATION AND THE CORRECT FUNCTIONING:
- The control box must be installed in a dry and sheltered place.
- Make sure that power supply to the control board be 230 V ±10%.
- Make sure that power supply to the electric motor be 230 V ±10%.
- For distances longer than 50 metres increase the section of the wires.
- Fit the mains to the control box with a high sensitivity, 0,03 A, differential, magnetic-thermal circuit breaker.
- Cables with 1,5 mm² section wires are to be used for the power supply, electric motor and flasher for distances up to 50 m.
- Cables with 1 mm² section wires are to be used for the limit switches, photocells, push buttons and accessories.

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

IN CASE OF FAILURE OF THE PANEL:
- Check the electronic PCB voltage supply is 230 V ±10%.
- Check the electric motor power supply is 230 V ±10%.
- For longer distances increase wire section.
- Check fuses.
- The photocell contacts are closed.
- Check all NC contacts.
- The limit switches are properly connected and work correctly.
- In case the electric valve is fitted, check integrity with all fuses.
- Check that no voltage drop has occurred from the control board to the electric motor.



GB **Elpro S20**

ELECTRONIC CONTROLLER UP TO 2 AUTOMATIC BOLLARDS, WITH OR WITHOUT LIMIT SWITCH

CE UK CA

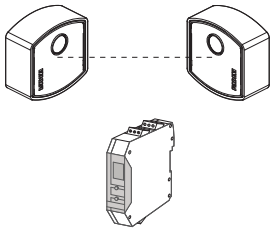
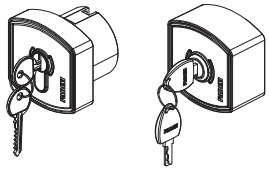
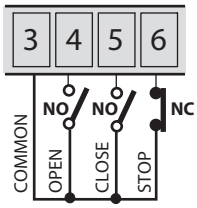
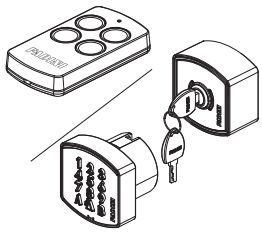
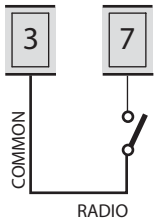
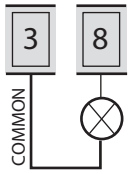
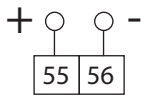
DIAGNOSTIC LEDS

L1 = pedestrian opening, normally **OFF**, alight when a pedestrian open pulse is given
L2 = photocells or loop, normally **ALIGHT**, if obstructed light goes off
L3 = open, normally **OFF**, alight when an open pulse is given
L4 = close, normally **OFF**, alight when a close pulse is given
L5 = stop, normally **ON**, it goes off when a stop pulse is given
L6 = radio, normally **OFF**, alight when a radio pulse is given
L7 = normally **ON**, mains voltage and fuse integrity F1, F2, F3, F4
L8 = limit switch open M1, normally **ON**, it goes off when the post is in down position
L9 = limit switch close M1, normally **ON**, it goes off when the post is in up position
L10 = limit switch open M2, normally **ON**, it goes off when the post is in down position
L11 = limit switch close M2, normally **ON**, it goes off when the post is in up position

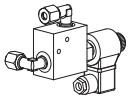
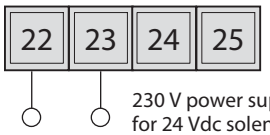
DIP-SWITCHES

1 = ON Photocells or loop stop while opening
2 = ON Radio no reversing while opening
3 = ON Automatic closing
4 = ON Pre flashing activated
5 = ON Radio step by step stop in between
6 = ON Pedestrian opening motor M1 only one post operating
7 = ON Deadman control
8 = Traffic lights (see functions)
9 = Traffic lights (see functions)
10 = ON No lamp on during dwell time
11 = ON Close on dwell time after passage through photocells or over the loop
12 = ON Max working time 90 s. OFF = 18 s

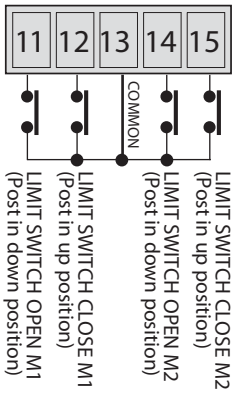
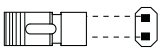
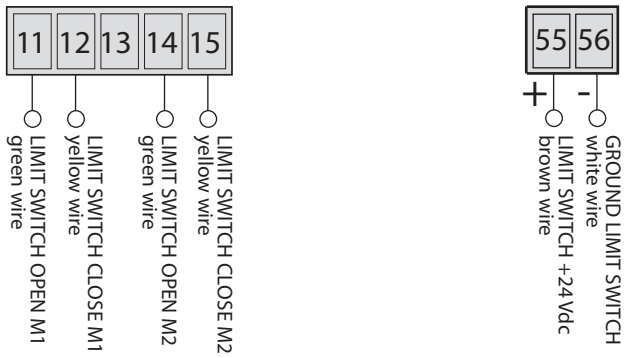
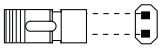
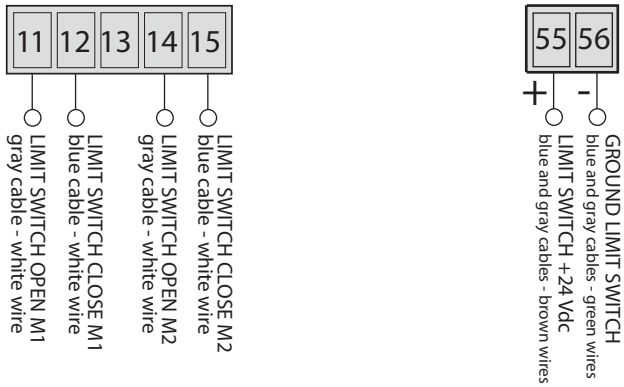
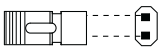
LOW VOLTAGE ELECTRICAL CONNECTIONS

Accessory	*Electrical connections*	*Dip-switch setting and LED indication of functions*
Photocells or loop detectors: 	 Photocells or Loop detectors **24 Vac output** max load: 2 pairs photocells 1 radio receiver	**DIP-SWITCH N° 1 and N° 11:** 1 **ON**: photocells or loop stop while opening, reverse on closing once obstacle is removed **OFF**: photocells or loop do not stop while opening, reverse on closing in caseof an obstacle 11 **ON**: during dwell time, automatic mode (dip-switch 3 = ON) after engaging the photocellsor loop, it closes 5 s later **OFF**: it does not close after engaging the photocells or loop **L2 ON** = no obstacle, it goes off in case of obstuction
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	**L3 OFF** = no OPENING contact, it goes on whenever an opening pulse is given **L4 OFF** = no CLOSING contact, it goes on whenever a closing pulse is given **L5 ON** = STOP contact closed, it goes off whenever a stop pulse is given
Radio contact (step by step mode): 	 - 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 pulses tops and reverses gate travel: **dip 2 = ON** and **dip 5 = ON**	**DIP-SWITCH N° 2 and N° 5:** 2 **ON**: it does not reverse on opening **OFF**: it reverses at any pulse 5 **ON**: step by step with stop in between **OFF**: standard operation **L6 OFF** = no RADIO contact, it goes on by any radio pulse
Indication lamp output 24 V max 3 W:	 Output for a 24 V max 3 W indication lamp showing the status of the system: Lamp **ON** = post in down position, free passage Lamp **OFF** = post in up position, closed passage Flashing **0,5 s (fast)** = rising post Flashing **1 s (normally)** = lowering post With external clock: **2 short flashes** followed by a longer pause	
24 Vdc output:	 Output for 24 Vdc applications	

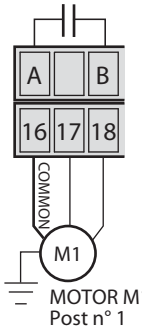
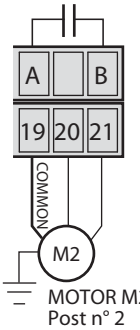
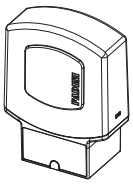
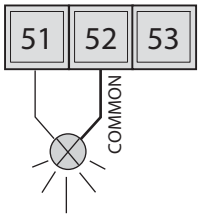
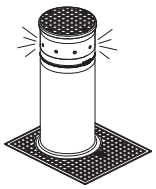
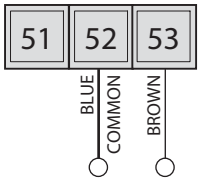
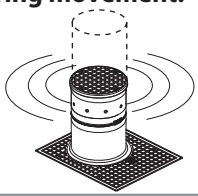
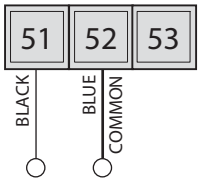
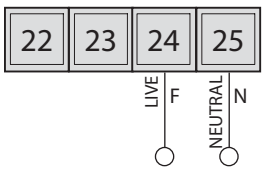
ELECTRICAL POWER CONNECTIONS

Accessory	*Electrical connections*	*Dip-switch setting and LED indication of functions*
Electric valve power supply: 	 230 V power supply for 24 Vdc solenoid valve stabilizer	

LIMIT SWITCH CONNECTIONS

Accessory	*Electrical connections*	*Dip-switch setting and LED indication of functions*
Old type limit switch NC: • ***Strabuc 930 Opinat*** and in the previous versions of: • ***Talos - Talos M30*** • ***Coral - Vigilo <u>with LEDs</u>*** • ***Strabuc*** range		 With the STRIP jumper inserted (as in the picture), Elpro S40 checks cyclicly every 10 minutes that the closing limit switches (post raised) are in the correct position; should any of them fail to be such, only the motor of the post not in position is operated until this is fully up as required. N.W.: the limit switches for not in use bollards are to stay blank. **<u>Do not bridge them.</u>**
New limit switches hall effect for CORAL - VIGILO as standard from 2019 • ***Coral - Vigilo*** range 		 With the STRIP jumper inserted (as in the picture), Elpro S40 checks cyclicly every 10 minutes that the closing limit switches (post raised) are in the correct position; should any of them fail to be such, only the motor of the post not in position is operated until this is fully up as required. N.W.: the limit switches for not in use bollards are to stay blank. **<u>Do not bridge them.</u>**
New limit switches hall effect for TALOS as standard from 2018 • ***Talos*** range **- *Talos M30*** 		 With the STRIP jumper inserted (as in the picture), Elpro S40 checks cyclicly every 10 minutes that the closing limit switches (post raised) are in the correct position; should any of them fail to be such, only the motor of the post not in position is operated until this is fully up as required. N.W.: the limit switches for not in use bollards are to stay blank. **<u>Do not bridge them.</u>**

ELECTRICAL POWER CONNECTIONS

Accessory	*Electrical connections*	*Dip-switch setting and LED indication of functions*
Motors:	**Important:** when doing the electric power connections it is better to connect only one motor and its respective limit switches. Put the posts into phase one by one. 20 µF additional capacitor in case of power shortage for Motor M1  MOTOR M1 Post n° 1 20 µF additional capacitor in case of power shortage for Motor M2  MOTOR M2 Post n° 2	**DIP-SWITCH N° 12:** 12 **ON**: motor run time max 90 s **OFF**: motor run time max 18 s  **T1 MOTOR RUN** TIME **1 s - 22 s**  **T2 DWELL** TIME **1 s - 180 s**
External flashing lamp: 	 230 V - 100 W max It is possible to connect both the external flashing lamp and the intermittent signal led lights which are on only during the rising and lowering movement. The cable for the connection is the one labelled as flashing lights cable.	**DIP-SWITCH N° 4 and N° 10:** 4 **ON**: pre-flashing **OFF**: no pre-flashing 10 **ON**: flashing light out of service on dwell time. Automatic mode **OFF**: light flashes on dwell time. Automatic mode
Signal led lights: 	 Signal led lights output 230 V - 100 W max Output for intermittent signal led lights during the movement both rising and lowering and also on dwell in up position: the lights are off only when the bollard is in down position. Connect the **blue-common** wire and the **brown** wire of the bollard flashing light cable.	
Acoustic signal "beeper" during movement: 	 Acoustic signal device 230 V - 100 W max The acoustic signal device inside the bollard is active duringrising and lowering. The connection wires are the **blue-common** and the **black** one of the flashing light cable.	
PCB power supply:	 PCB power supply 230 V ±10% 50 Hz single phase Electronic programmer power supply.	

FUNCTIONS

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

Automatic / semi-automatic:

Automatic cycle: after an opening pulse, the bollard goes down, it stops for dwell time pre-set in trimmer T2, after the pre-set time it closes automatically.
Semi-automatic: after an opening pulse, the bollard goes down. A closing pulse is needed to close.

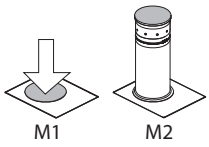
DIP-SWITCH N° 3:

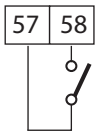
3 — **ON**: automatic closing
OFF: no automatic closing. Semi-automatic function

Dwell time: from 1 to 180 s

Pedestrian opening:

This command is separate from the standard opening command. When all the posts are in up position, on pulsing input P dip-switch 6 = ON and 3 = ON, post n° 1 (motor M1) goes down for pedestrian opening, for the time pre-set in Trimmer T2, after this time it closes automatically. The function *pedestrian opening* is not in service during the first operation cycle, after a power failure.





Pedestrian opening contact terminals post motor M1

DIP-SWITCH N° 3 and N° 6 both on ON:

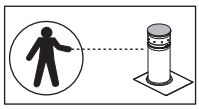
3 — **ON**: automatic closing
OFF: No automatic closing. Semi-automatic closing

6 — **ON**: pedestrian opening motor M1
OFF: standard operation

Dwell time: from 1 to 180 s

Hold on switched (deadman) control:

Open and close operations are achieved *by holding a switch on* (no relay self-holding is involved) therefore a physical attendance is required to keep the post opening or closing until either the button or key is released.

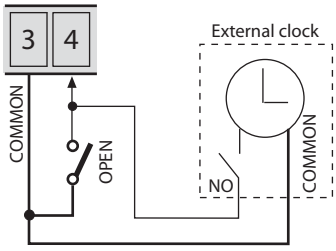


DIP-SWITCH N° 7:

6 — **ON**: deadman control
OFF: standard operations

External clock (optional):

The electronic programmer Elpro S20 can be connected to a clock for the post opening and closing.
Connection: connect in parallel the NO clock contact to the 4 OPEN and 3 COMMON terminals, automatic closing is by dip-switch n° 3 = ON.
How it works: program the opening time on the clock. At the preset time, the post goes down 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 posts 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 N° 3:

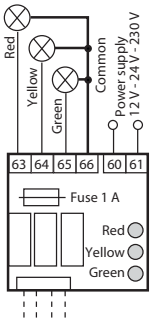
3 — **ON**: automatic closing
OFF: No automatic closing. Semi-automatic function

Trimmer pausa: da 1 s fino a 180 s

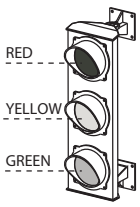
Plug-in traffic lights interface (optional - code 7282L):

The interface power supply (12 V - 24 V - 230 V - 100 W output per lamp) is independent from the one of the programmer.
It can work also with the 2 lamps, red and green traffic lights (dip-switch 8 = OFF and 9 = OFF)
Working logic:
- **GREEN** light = post in **down position**, **OPEN** passage
- **RED** light = moving post or in **up position**, **CLOSED** passage
- **YELLOW** light = it lights before the switching from the green light to the red light.

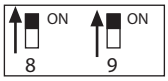
Note: during **pedestrian mode** the traffic light is always **RED**.



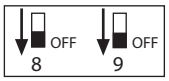
(**Optional:** plug-in PCB for 230V traffic lights) code **7282L**



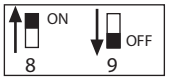
DIP-SWITCHES:



Dip-switch **8 = ON** and **9 = ON**
The yellow light turns on for the time of **10 s** after the red light turns on and **after 7 s the post starts rising**



Dip-switch **8 = OFF** and **9 = OFF**
The yellow light turns on for the time of **0 s** and after **0 s** the red light turns on and **the post starts rising immediately**



Dip-switch **8 = ON** and **9 = OFF**
The yellow light turns on for the time of **2 s** after the red light turns on and **after 2 s the post starts rising**

Dip-switch **8 = OFF** and **9 = ON**
The yellow light turns on for the time of **6 s** after the red light turns on and **after 5 s the post starts rising**