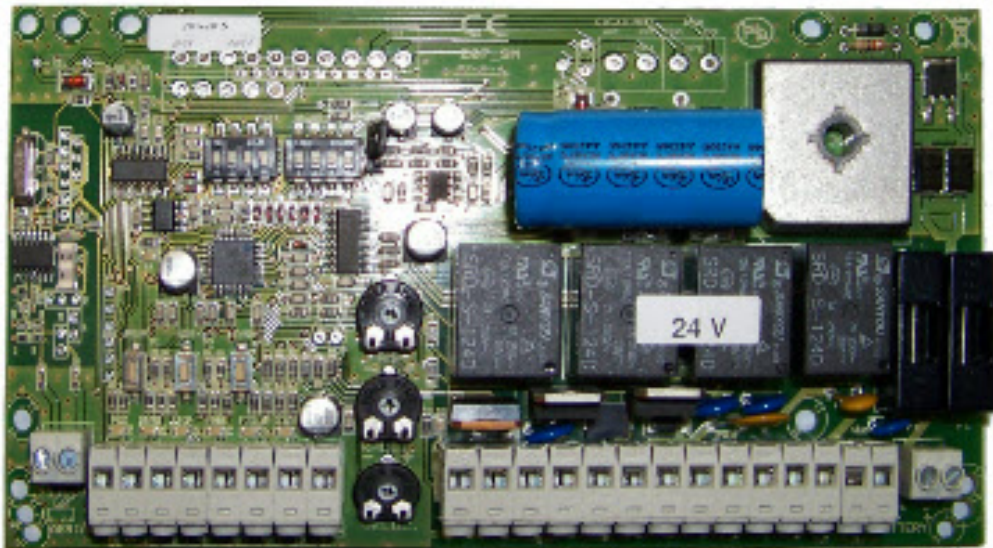


INSTRUCTION MANUAL

Electronic control panel for two 24Vdc motors

ELB24-M2



WARNING!! Before installing, thoroughly read this manual that is an integral part of this Kit. VDS declines any responsibility in the event current standards in the country of installation are not complied with.



GENERAL INFORMATION

ELB24-M2 control panel has been designed to control 1 or 2 operators 24 Vdc for swing gates. It has got an integrated radio receiver. It is also possible to set the slowing down and anti-crashing features that grant an easy and safe installation.

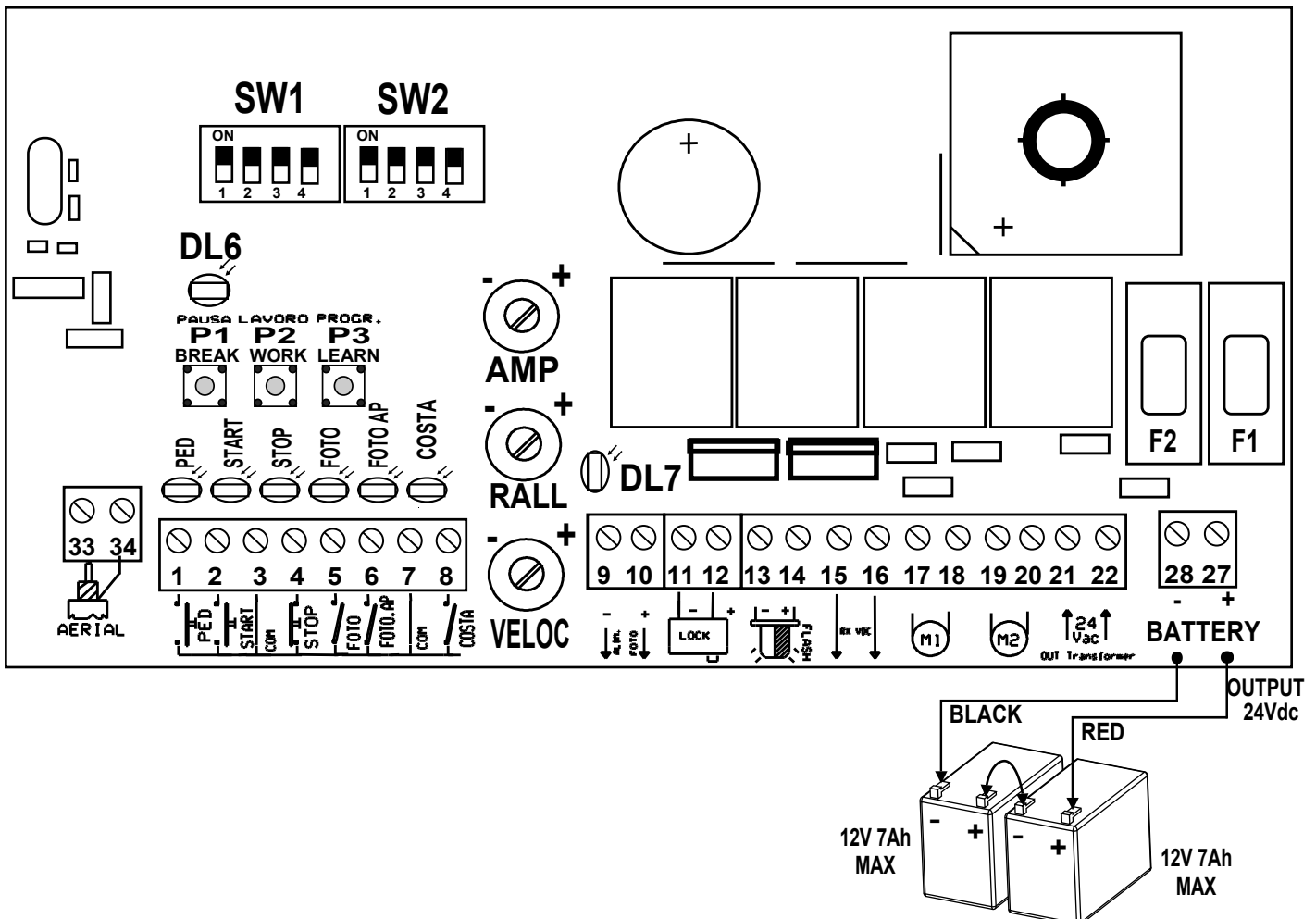
Safety advises.

In order to prevent any kind of accident, only qualified and professional people will be allowed to operate, install, repair or adjust the control panel and only after all the necessary safety rules have been respected, as well as power supply cut off (including the back up batteries). If the control panel will be used for any other purpose (not reported in the user manual), will be not responsible for any kind of damage or accident caused to people, animals or things. This product is not suitable to be installed in an explosive atmosphere. Keep this booklet together with the rest of the technical information regarding the installation in a suitable place and available to professional installer who will need to do future maintenance.

TECHNICAL FEATURES

Absorbed power.....	100 mA
Fuse F1.....	20 A
Fuse F2.....	20 A
Time inversion.....	2 sec.fixed
Temperature to work.....	Da -20°C a +50°C

LAY OUT



Description of the terminals and wirings.

Terminal	Description
1-3 PED	Input Pedestrian (N.O. contact); It opens only the leaf of M1.
2-3 START	Input Start (N.O. contact); step by step feature (open-stop-close).
3-4 STOP	Input Stop (N.C. contact) it always stops the motors. If the contact is used during the pause, it cancels the automatic shutting.
5-7 PHOTO	Input photocells (N.C. contact) working only when gate is closing (it stops and re-opens).
6-7 PH.OP.	Input photocells working when gates is opening/closing (N.C. contact). While opening the gate stops and then re-start; while closing the gate stops and reverses.
7-8 Costa	Input safety edge (N.C. contact) working both in opening/closing. While opening it stops and reverses for 10cm. While closing it stops and reverses completely.
9-10	Output 24 Vdc for photocells power supply (9 negative, 10 positive).
11-12 LOCK	Output 12 Vdc Dip 2 SW2 OFF Electro-lock - 24 Vdc Dip 2 SW2 ON Indicator of gate movement (11 negative, 12 positive).
13-14 FLASH	Output 24Vdc for the flashing light (13 negative, 14 positive).
15-16 RX Vdc	Out put 24 Vdc for accessories (15 positive, 16 negative).
17-18 M1	Output 24Vdc for Motor 1 (max 3A).
19-20 M2	Output 24Vdc for Motor 2 (max 3A).
21-22 OUT TRASF.	Control panel power supply 24 Vac. Wire it to the 24Vac output of the toroidal transformer.
27-28 BATTERY	Back up battery input 24V (27 positive, 28 negative).
33-34	Input antenna for onboard receiver (33 coaxial wire, 34 shield).

P.S.: This control panel is delivered with all N.C. outputs wired (stop, safety edge, photocells, photocells open). If you want to use one of those outputs, cut the wire and do the connection accordingly.

LED description.

PED	It shows the output Pedestrian (normally switched off).
START	It shows the output Start (normally switched off).
STOP	It shows the output Stop (normally switched on).
FOTO	It shows the output Foto (normally switched on, and if the photocells is engaged it switched off).
FOTO AP	It shows the output Foto AP (normally switched on, and if the photocells is engaged it switched off).
COSTA	It shows the output safety edge (normally switched on, B3 and if the safety edge is engaged it switched off).
DL6	It shows the state of the setting.
DL7	Shows the status flash

Close the gate and check that LED stop, foto, foto ap and costa are switched on; otherwise re-check the wirings.

Trimmer description.

AMP	Anti-crashing (obstacle detention) adjustment, when the gate is moving.
RALL.	All adjusted anticlockwise (-) you get an high sensitivity so in case a small obstacle is on the way, the gate stops. All adjusted clockwise (+) you get a low sensitivity so in case a small obstacle is on the way, the gate doesn't stop.
VELOC.	This parameter measures the safety of the gate and it has to be adjusted according to the local norms.

Dip Switches SW1 & SW2 features.

	ON	OFF
SW1	1 Working with 1 motor. Use input M1..	Working with 2 motors (M1 + M2).
	2 Feature "close immediately" enable. When the gate is opening, as soon as the photocells are disengaged, the gate closes after 5 seconds.	Feature "close immediately" disable.
	3 First push in an opposite way to release the electro-lock (for gates with electro-lock only).	Push disable.
	4 Extra push while starting disable.	Extra push of 2 seconds while starting.
SW2	1 Residential feature enable (while opening the control panel does not accept any other Start impulse). When gate has opened, a Start impulse closes the gate without considering the automatic shutting set on it. Residential feature disable. Step by step feature enable also during opening.	Residential feature disable. Step by step feature enable also during opening.
	2 Enable the indicator of gate movement/position on inputs 10-11 (LOCK).	Enable electro-lock on inputs 10-11 (LOCK).
	3 Enable use of resistive safety edge of 8K2.	Enable use of mechanical safety edge (N.C. Contact)
	4 Release	Release off

Fuses description.

F1 - 20A 250V Output battery protection fuse (27-28). - **F2 - 20A 250V** Transformer output 24Vac protection fuse.
FR1 - 0,65A 250V Main power supply 230Vac self-repairing protection fuse (**non replaceable**).
FR2 - 1,6A 250V Self-repairing protection fuse for photocells, electro-lock, flashing light and accessories (**non replaceable**).
WARNING: High risk of electric shock ! Cut off the main power supply from the panel before touching the fuses (F1 and F2). We recommend to re-check the wiring before replacing any fuse

Remote control storing (recommended to be done with the antenna disconnected).

As START button:

- Close the gate. Press once the button P3-LEARN; led DL6 starts flashing.
- Press the remote control button you want to store; led DL6 switched off as confirmation that code has been stored.

You can store up to max. 32 different codes for the Start.

As Pedestrian button:

- Close the gate. Press twice the button P3-LEARN; led DL6 starts flashing.
- Press the remote control button you want to store; led DL6 switched off as confirmation that code has been stored.

You can store up to max. 32 different codes for the Pedestrian.

Remote control cancellation.

Cancellation of a single code stored into START or PEDESTRIAN:

- Press at the same time both buttons P3-LEARN and P1-BREAK; led DL6 starts flashing quickly.
- Within 10 sec. press remote control button you want to cancel; led DL6 switches off to confirm the cancellation.

Cancellation of all codes stored into the control panel:

Press at the same time both buttons P3-LEARN and P1-BREAK for about 10 seconds. Led DL6 starts flashing quickly and after 10 seconds will switch off confirming the cancellation has been done.

Preliminary checks before setting the control panel.

- Power the control panel and verify that LED Stop, Foto, Foto AP and Costa are on; if this doesn't correspond, re-check the wirings and or safety devices state. Any NC contact not used, has to be wired/closed.
- Verify that all safety devices installed in the gate are working properly in order to reduce any possible accident.
- Verify the correct wirings, keeping in mind that 1st START impulse has to open the gate, otherwise, just swap the wires 17-18 for M1 and/or 19-20 for M2.

Automatic setting of the stroke with leaves delay and slowing down spaces fix.

Following instruction are for a 2 leaves swing gate; in case of 1 single swing leaf (dip 1 SW1 ON) the instruction regards only the motor M1.

- Place the leaves half way opening; keep pressed the button PROGR. until both operators will start closing (approx. 10 seconds).
- The control panel closes the leaves until they touch the mechanical stoppers.
- M1 starts opening and after 3 seconds M2 starts opening too.
- Both operators will stop automatically at the mechanical stoppers in opening.
- Then, the control panel will close the leaves finishing with a slowing down before touching the mechanical stoppers in closing.
- The control panel automatically goes out from the setting and it is ready to work.

In the automatic setting, the delay between the 2 leaves is 3 seconds both in opening and closing and the slowing down is approx. 4 seconds before reaching the mechanical stoppers.

WARNING: In case of re-adjustment of the trimmer RALL. or VELOC. it is ABSOLUTELY necessary to repeat the setting.

Manual setting of the stroke with leaves delay and slowing down spaces customized.

Following instruction are for a 2 leaves swing gate; in case of 1 single swing leaf (dip 1 SW1 ON) the instruction regards only the motor M1.

- Close the gate and press once button P3-LEARN; led DL6 starts flashing.
- Press once button P2-WORK; M1 leaf starts opening.
- As soon as M1 leaf has reached the position you want to set the slowing down, press again the button P2-WORK, the leaf will start the slowing down procedure. If you don't want any slowing down, then ignore this topic and go further.
- After that, M1 leaf will hit the mechanical stopper in opening and automatically will stop.
- Press again button P2-WORK to start counting the delay of the leaves in opening; Led DL6 flashes fast.
- Press again button P2-WORK to stop the counting for the time to apply to the delay in opening. Automatically M2 leaf starts opening.
- When M2 leaf has reached the position you want to set the slowing down, press again button P2-WORK, the leaf will start the slowing down procedure. If you don't want any slowing down, then ignore this topic and go further.
- After that, M2 leaf will hit the mechanical stopper in opening and automatically will stop.
- Press once again the button P2-WORK. Leaf with M2 starts closing.
- When M2 leaf has reached the position you want to set the slowing down in closing, then press button P2-WORK and the leaf will start the slowing down procedure. If you don't want any slowing down, then ignore this topic and go further.
- After that, M2 leaf will hit the mechanical stopper in closing and automatically will stop.
- Press remote button P2-WORK to start counting the delay of the leaves in closing (Led DL6 starts flashing quickly).
- Press again button P2-WORK to stop the counting for the time to apply to the delay in closing. Automatically M1 leaf starts closing.
- When M1 leaf has reached the position you want to set the slowing down in closing, then press button P2-WORK and the leaf will start the slowing down procedure. If you don't want any slowing down, then ignore this topic and go further.
- After that, M1 leaf will hit the mechanical stopper in closing and automatically will stop.
- When the closing has finished, the control panel will automatically go out from the programming and it will be ready to work.

WARNING: In case of re-adjustment of the trimmer RALL. or VELOC. it is ABSOLUTELY necessary to repeat the setting.

Manual setting of the stroke using a remote control.

- Store the remote control to the START (see page 5).
- Close the gate and press once both buttons P3-LEARN and P2-WORK; led DL6 starts flashing quickly.
- Hereinafter follow up the setting as reported (see page 6) pressing remote control button just stored instead of P2-WORK button.

Setting of the automatic shutting time.

- Close the gate and press once button P3-LEARN; led DL6 starts flashing.
- Press once the button P1-BREAK; led DL6 starts flashing quickly, the control panel is counting the automatic shutting time.
- To stop the counting, press again the button P1-BREAK; led DL6 switches off. Maximum time to set is 120 seconds.

To disable the automatic shutting:

- Press once the button P3-LEARN.
- Press quickly twice (2 times) button P1-BREAK

How to get separate inputs OPEN-CLOSE.

How to turn START into CLOSE only:

Cut off power supply, keep pressed both buttons P3-LEARN and P1-BREAK and give power back keeping the buttons pressed down; led DL6 flashes to confirm the good success of the operation, now release the buttons.

How to turn PED into OPEN only:

Cut off power supply, keep pressed both buttons P3-LEARN , P2-WORK and P1-BREAK and give power back keeping the buttons pressed down; led DL6 flashes to confirm the good success of the operation, now release the buttons.

How to go back to START and PED as sequential/standard inputs:

To get START back, cut off power supply, keep pressed both buttons P3-LEARN and P2-WORK and give power back keeping the buttons pressed down; led DL6 flashes to confirm the good success of the operation, now release the buttons.

To get PED back, cut off power supply, keep pressed both buttons P3-LEARN and P2-WORK and give power back keeping the buttons pressed down; led DL6 flashes to confirm the good success of the operation, now release the buttons.

P.S.: The control panel 207 is delivered from the factory with inputs START and PED as sequential/standard inputs.

Additional important information.

- This control panel can work with or without back up battery. In any case, it uploads and keeps charged the back up battery at the same time; approx. 24h are necessary to re-charge the battery for completely. In case the control panel works only with the back up battery, the photocells start working only in presence of a START signal; moreover, if a flashing light or a door indicator are wired on the panel, the frequency of the blinks will slow down to save energy. If the back up battery has almost run out, the control panel remains powered but when the battery runs out completely, the panel doesn't accept the START signal; the panel needs 140 mA as normal working that is equivalent to 50 hours working with a back up battery of 7Ah and in Stand-By 38 mA that is equivalent to 184 hours with a back up battery of 7Ah.
- This control panel is provided with an anti crashing system that recognises the obstacles. This feature can be adjusted by the Trimmer AMP. When the gate meets an obstacle while opening, it stops and reverses the stroke for about 1 sec. and after 30 sec. it closes automatically. When the gate meets an obstacle while closing, it stops and re-opens completely. In case the automatic shutting is enable and the gate hits an obstacle, the control panel will try to close the gate for max. 3 times then the gate will remain open, waiting for a START signal in order to close.



Our products if installed by qualified personnel capable to evaluate risks, comply with norms UNI EN 12453, EN 12445



The CE mark complies with EEC European direttiva 89/336 + 93/68 D.L.04/12/1992 n.476

The data and images are for guidance only
VDS reserves the right to change at any time characteristics of the products described in its sole discretion, without notice.

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