



ASA350 - ID200



Look for these. They are "Tips N Tricks"

GENERAL

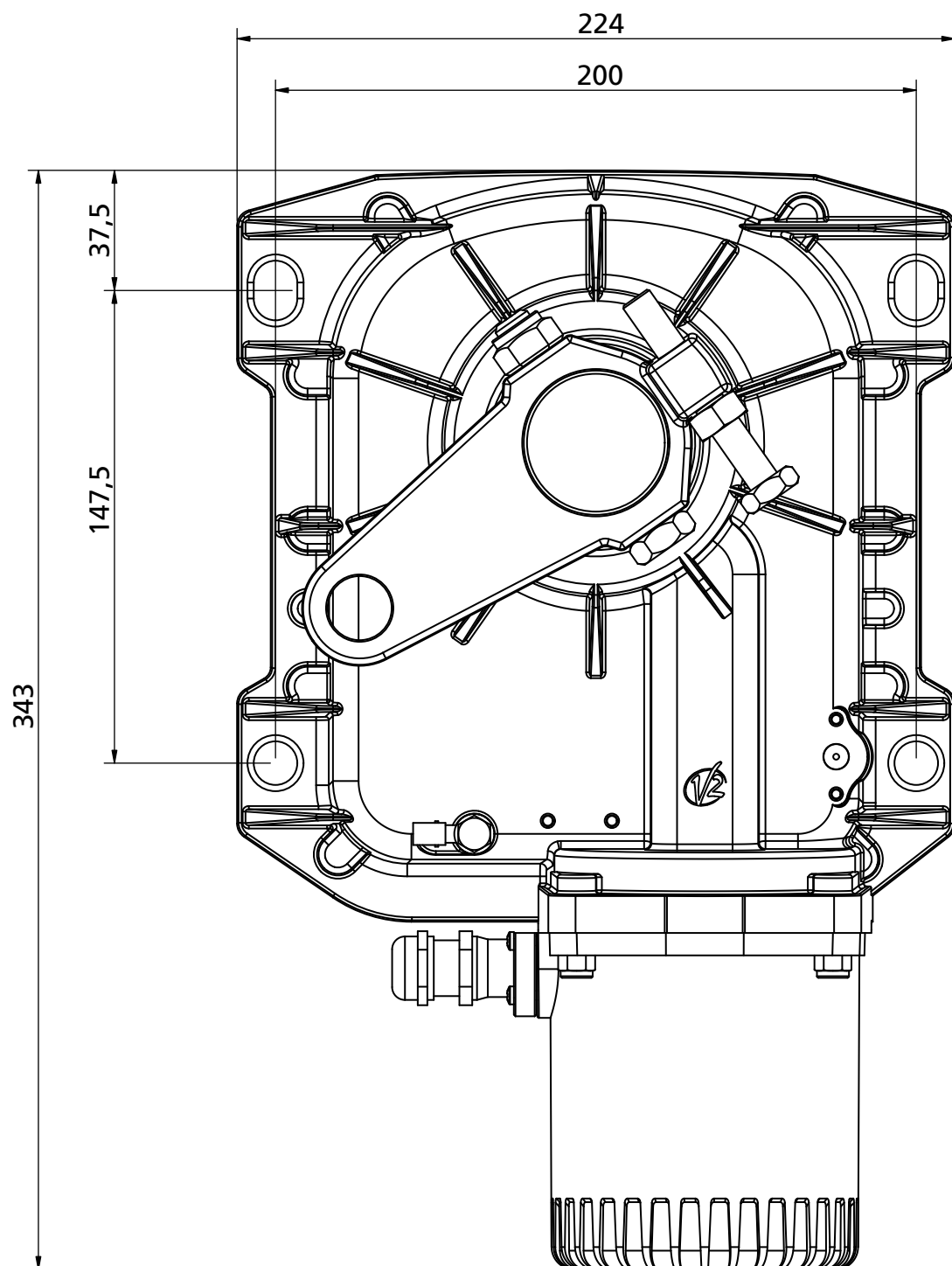
ASA350

Motor Voltage – 24 volt
Power Absorbed – 50 watts
Current Absorbed – 5.2A Maximum
Thrust – 320 N Protection Level – IP67
Duty Cycle – 96%
Dimensions – 398L x 328W x 225H
Opening Time – 16 Seconds
Maximum Leaf – 3.5 metres
Maximum Leaf Weight – 600 Kg

Solar Power connections are on the last page!

ID200

Motor Voltage - 12 / 24 DC
Motor Inputs - Two
Battery Charger – Inbuilt 12/24V
Receiver – Inbuilt or External
Limit Switches – Yes / No
Pedestrian Input – Yes (NO)
Start Input - Yes (NO)
Stop Input – Yes (NC)
Photocell Input – Two (NC)
Electric Lock – Yes 12Vdc 1A
Slow Speed Regulator – Yes



EU DECLARATION OF CONFORMITY AND DECLARATION OF INCORPORATION OF PARTLY COMPLETED MACHINE

Declaration in accordance with Directives: 2014/35/UE (LVD);
2014/30/UE (EMC); 2006/42/CE (MD) ANNEX II, PART B

The manufacturer V2 S.p.A., headquarters in
Corso Principi di Piemonte 65, 12035, Racconigi (CN), Italy

Under its sole responsibility hereby declares that:

the partly completed machinery model(s):
VULCAN-230V, VULCAN-230V-S, VULCAN-120V, VULCAN-24V

Description: electromechanical actuator for gates

- is intended to be installed on gates, to create a machine according to the provisions of the Directive 2006/42/EC. The machinery must not be put into service until the final machinery into which it has to be incorporated has been declared in conformity with the provisions of the Directive 2006/42/EC (annex II-A).
- is compliant with the applicable essential safety requirements of the following Directives:
Machinery Directive 2006/42/EC (annex I, chapter 1)
Low Voltage Directive 2014/35/EU
Electromagnetic Compatibility Directive 2014/30/EU
Directive RoHS3 2015/863/EU

The relevant technical documentation is available at the national authorities' request after justifiable request to:

**V2 S.p.A., Corso Principi di Piemonte 65,
12035, Racconigi (CN), Italy**

The person empowered to draw up the declaration and to provide the technical documentation:

Sergio Biancheri

Legal representative of V2 S.p.A.
Racconigi, il 01/06/2020



IMPORTANT REMARKS

V2 S.p.A. has the right to modify the product without previous notice; it also declines any responsibility to damage or injury to people or things caused by improper use or wrong installation.

m Please read this instruction manual very carefully before installing and programming your control unit.

- This instruction manual is only for qualified technicians, who specialize in installations and automations.
- The contents of this instruction manual do not concern the end user.
- Every programming and/or every maintenance service should be done only by qualified technicians.

AUTOMATION MUST BE IMPLEMENTED IN COMPLIANCE WITH THE EUROPEAN REGULATIONS IN FORCE:

EN 60204-1 (Machinery safety. electrical equipment of machines, part 1: general rules)

EN 12445 (Safe use of automated locking devices, test methods)

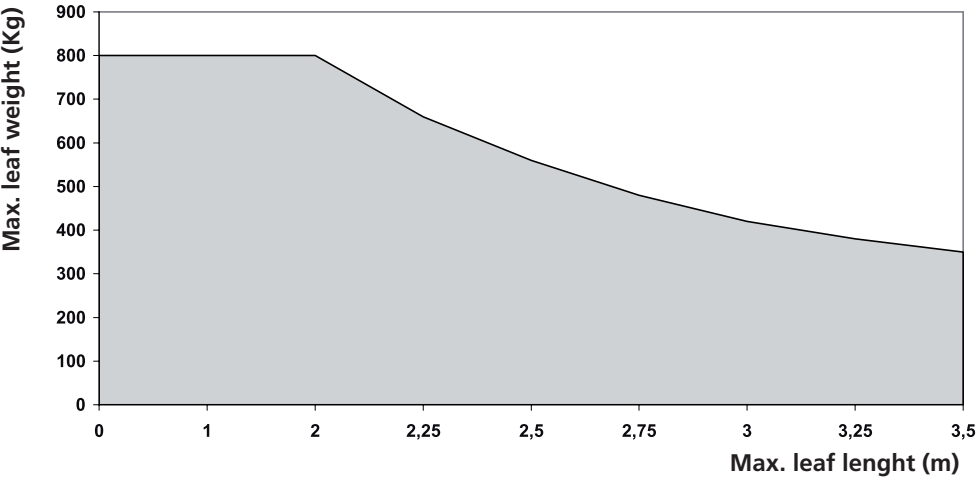
EN 12453 (Safe use of automated locking devices, requirements)

- The installer must provide for a device (es. magnetothermal switch) ensuring the omnipolar sectioning of the equipment from the power supply.
The standards require a separation of the contacts of at least 3 mm in each pole (EN 60335-1).
- The plastic case has an IP55 insulation; to connect flexible or rigid pipes, use pipefittings having the same insulation level.
- Installation requires mechanical and electrical skills, therefore it shall be carried out by qualified personnel only, who can issue the Compliance Certificate concerning the whole installation (Machine Directive 98/37/EEC, Annex IIA).
- The automated vehicular gates shall comply with the following rules: EN 12453, EN 12445, EN 12978 as well as any local rule in force.
- Also the automation upstream electric system shall comply with the laws and rules in force and be carried out workmanlike.
- The door thrust force adjustment shall be measured by means of a proper tool and adjusted according to the max. limits, which EN 12453 allows.
- We recommend to make use of an emergency button, to be installed by the automation (connected to the control unit STOP input) so that the gate may be immediately stopped in case of danger.
- The appliance is not to be used by children or persons with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction.
- Children being supervised do not play with the appliance.

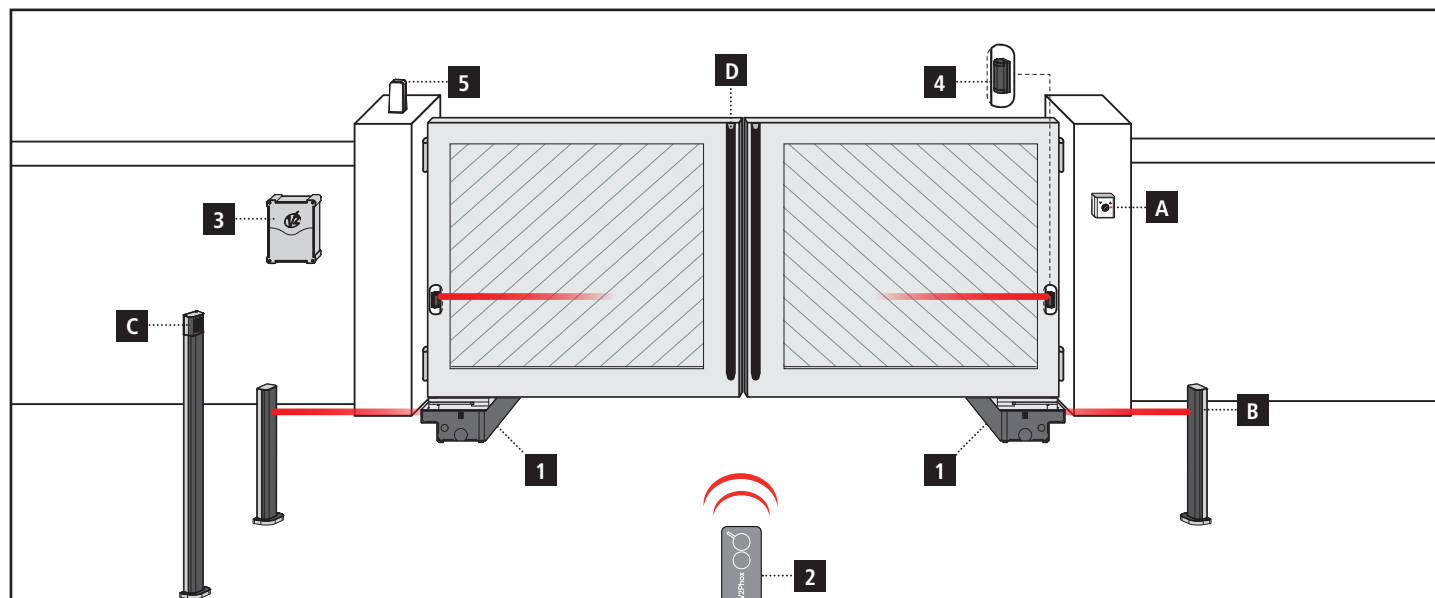
TECHNICAL DATA

		VULCAN-24V	VULCAN-120V	VULCAN-230V	VULCAN-230V-S
Max. leaf lenght*	m x Kg	2 x 600 2,5 x 500 3 x 400 3,5 x 350	2 x 800 2,5 x 550 3 x 400 3,5 x 350	2 x 800 2,5 x 550 3 x 400 3,5 x 350	2 x 800 2,5 x 550 3 x 400 3,5 x 350
Power supply	V / Hz	24	120 / 60	230 / 50	230 / 50
Idling current	A	1	3	1,5	1,5
Maximum current absorption	A	15	4,8	2,4	2
Maximum power	W	-	550	550	460
Nominal power	W	230	350	350	350
Capacitor	µF	-	35	14	14
Opening time (90°)	s	15 ÷ 25	15	17	28
Maximum torque	N m	320	320	320	300
Working temperature	°C	-20 ÷ +55	-20 ÷ +55	-20 ÷ +55	-20 ÷ +55
Thermal protection	°C	-	150	150	150
Working cycle	%	80	30	30	30
Motor weight	Kg	11,5	11	11	11
Protection	IP	67	67	67	67

* **WARNING:** if it is installed the accessory device for opening up to 180° (code 162218), the maximum length of the wing is 2,5m for a maximum weight of 400Kg



INSTALLATION LAYOUT



COMPONENTS

- 1** Motor
- 2** Transmitter
- 3** Control unit
- 4** Photocells
- 5** Flashing light

ADDITIONAL ACCESSORIES

- A** Key switch
- B** Pillar photocells
- C** Pillar-mounted digital radio switch
- D** Safety edges

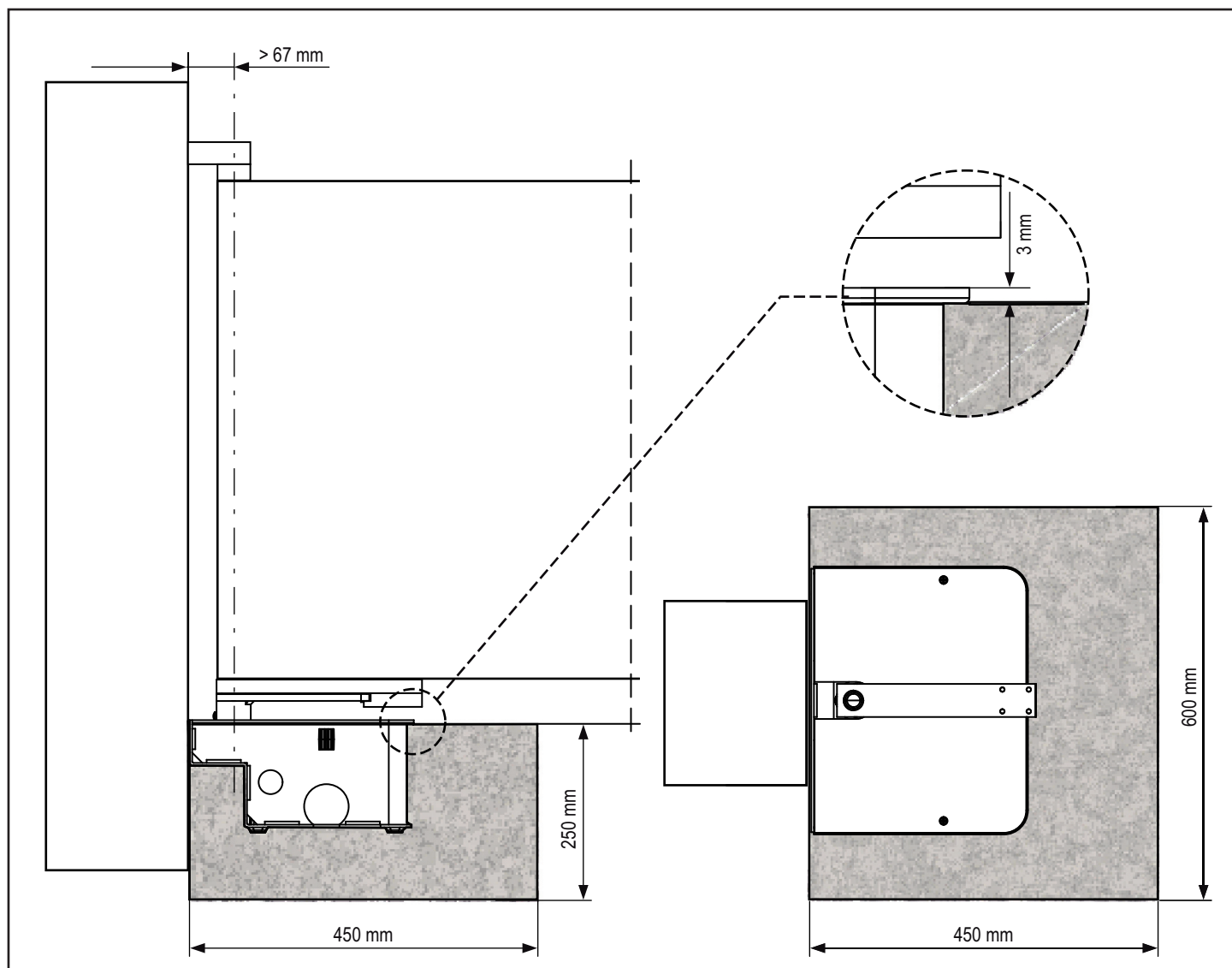
LENGTH OF THE CABLE	< 10 metres	from 10 to 20 metres	from 20 to 30 metres
Power supply 230V	3G x 1,5 mm ²	3G x 1,5 mm ²	3G x 2,5 mm ²
Photocells (TX)	2 x 0,5 mm ²	2 x 0,5 mm ²	2 x 0,5 mm ²
Key switch	4 x 0,5 mm ²	4 x 0,5 mm ²	4 x 0,5 mm ²
Photocells (RX)	2 x 0,5 mm ²	2 x 0,5 mm ²	2 x 0,5 mm ²
Flashing light	2 x 1,5 mm ²	2 x 1,5 mm ²	2 x 1,5 mm ²
Antenna (integrated into the flashing light)	RG174	RG174	RG174

PREPARATORY STEPS

The new series of actuators VULCAN, has been devised to serve gates up to 800 Kg with leaf up to 3 meters wide (look at the table technical data). Before proceeding with the installation, please make sure that your gate opens and closes freely, and that:

- Hinges and pins are in optimum condition and properly greased.
- No obstacles are within the moving area.
- There is no friction with the ground or between the leaves.
- The stop limit switch must be installed inside the foundation box (see paragraph about Installation of the stop limit switches)

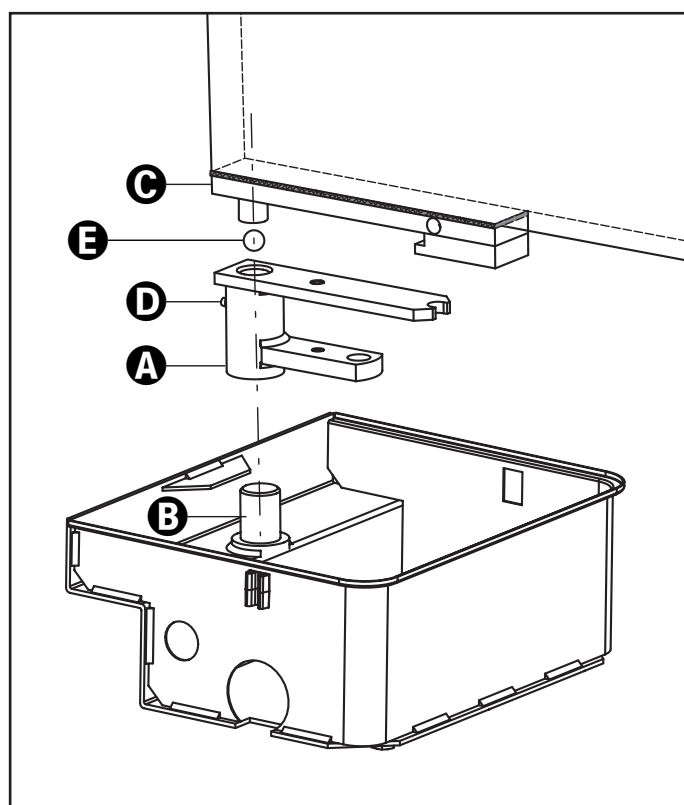
POSITIONING THE FOUNDATION BOX AND THE LEVER CONTROL AND BLOCKING SYSTEM



1. Depending on the dimensions, dig a suitably sized foundation ditch (it is recommended to provide adequate drainage in order to avoid water pooling).
2. Place the foundation box inside the trench, with the support pivot aligned with the hinge axis.
3. Install a conduit for the electrical cables, and another for drainage.
4. Embed the foundation box in concrete, ensuring it is level and plumb.

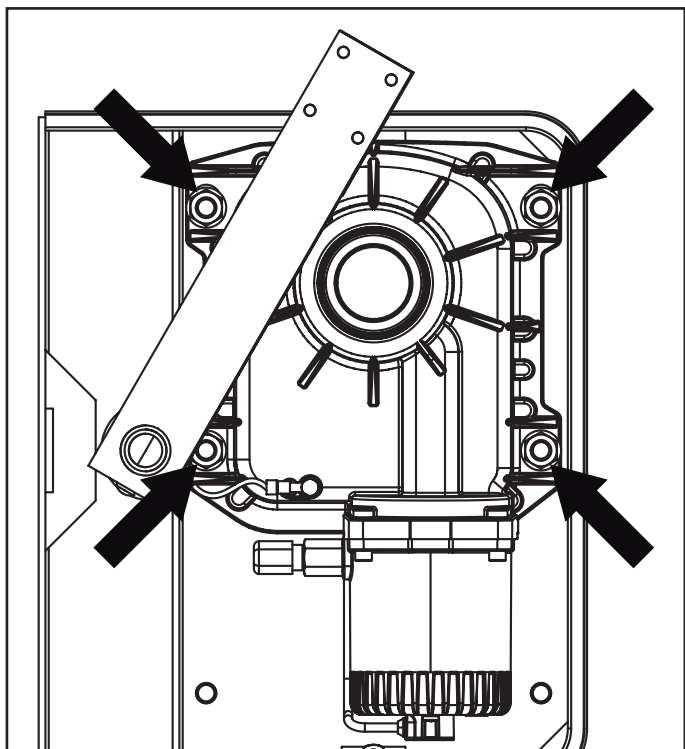
⚠ WARNING: ensure that the concrete used is properly cured prior to proceeding with the following steps.

5. Insert the control rod **A** over the foundation box supporting pivot **B**.
6. Insert the ball **E** into the special hole after having greased it
7. Fix with a strong welding the wing of the gate on the release lever **C**, then put everything on the driving bracket **A** in correspondence of the hole
8. Grease the mechanism using the appropriate grease nipple **D**

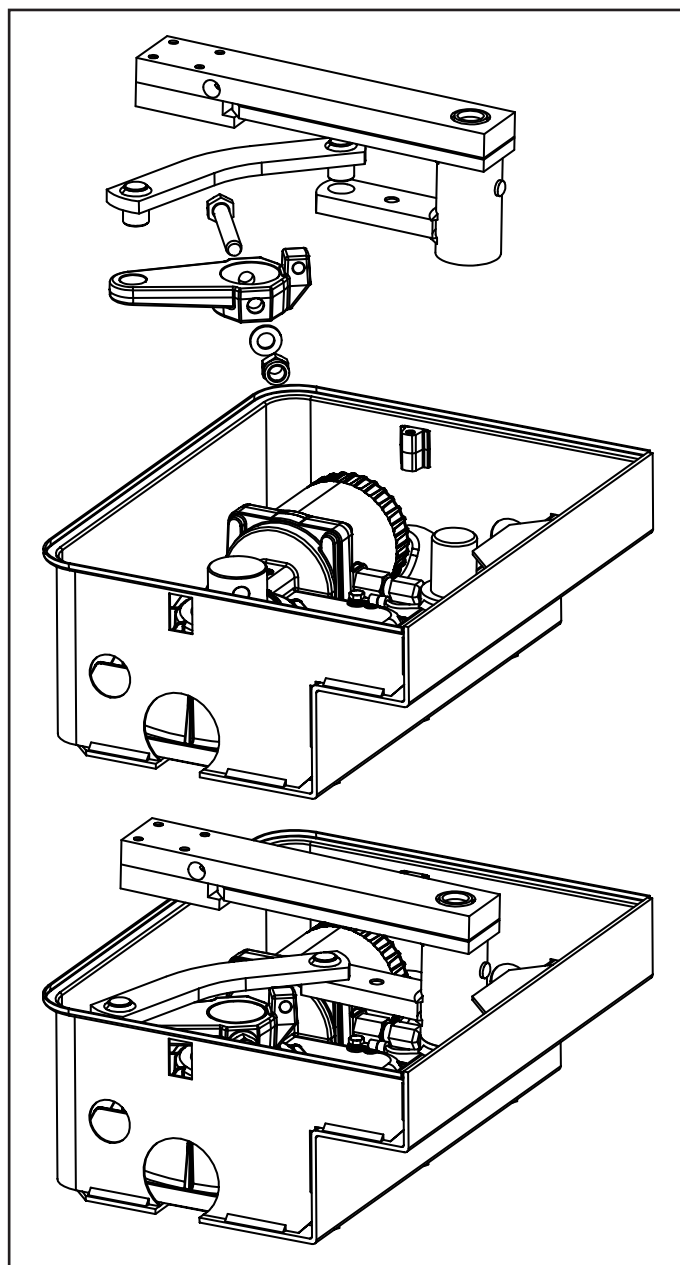


INSTALLING THE MOTOR REDUCER

1. Place the motor reducer gear unit inside the foundation box.
2. Fix the motor reducer in place inside the foundation box by tightening the 4 nuts.

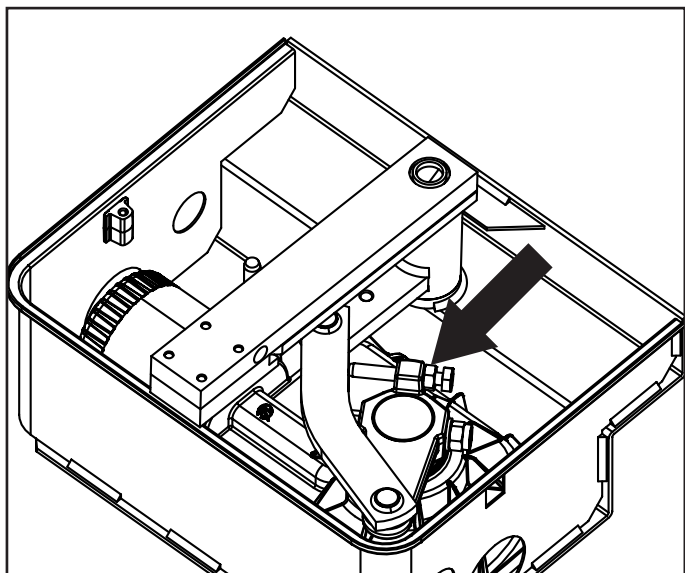


3. Mount the motor connecting rod on the motor drive shaft and fix the screw in place using the corresponding self-locking nut.
4. Connect the motor connecting rod to the control rod by means of the elbow lever.
5. Connect the motor to the control unit, following the instructions in the following paragraph.

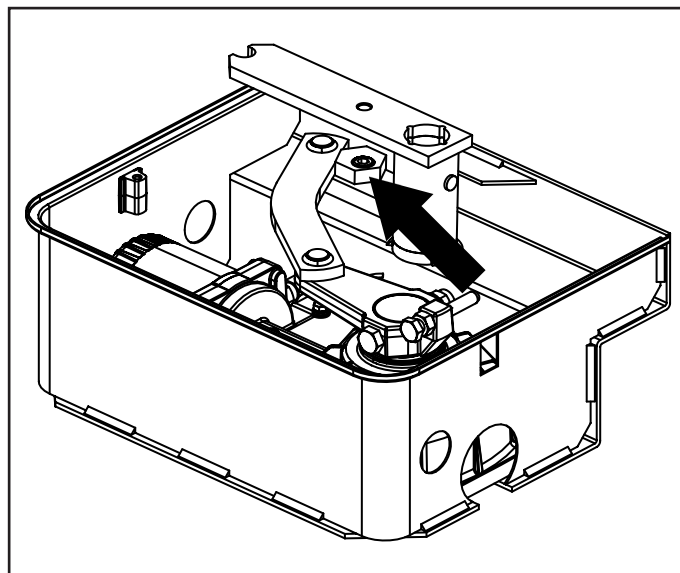


INSTALLATION OF THE STOP LIMIT SWITCHES

1. Place the gate in the maximum closed position, and then attach the limit switch screw as shown in the figure.



2. Place the gate in the maximum open position, and then attach the limit switch nut as shown in the figure, and tighten the screw.



ELECTRICAL CONNECTIONS

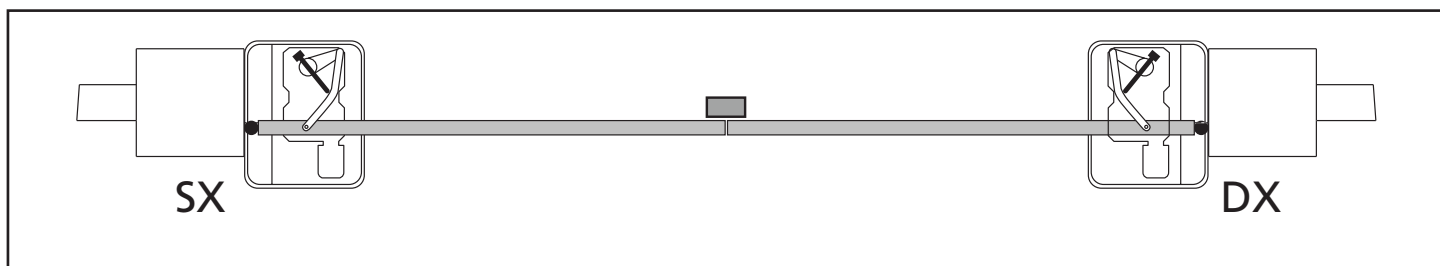
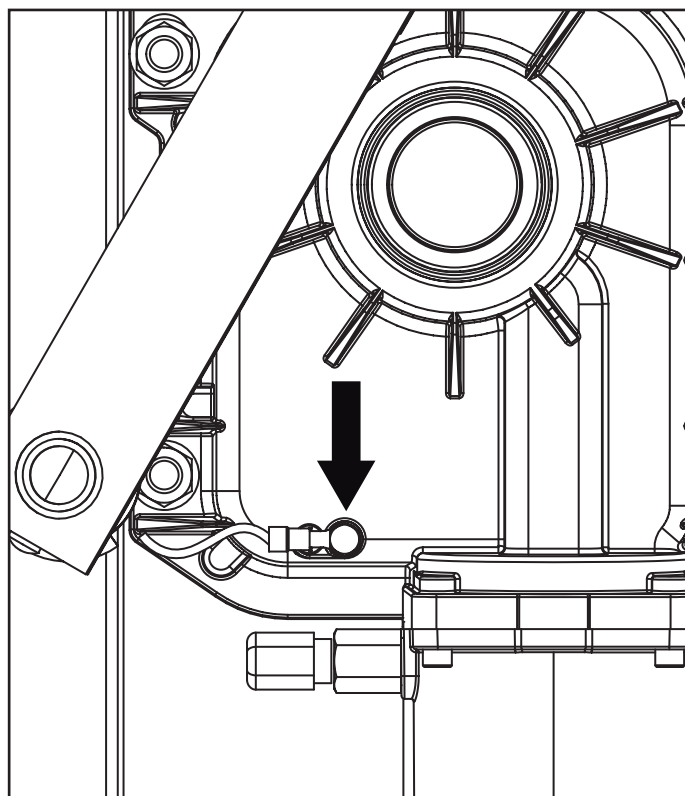
VULCAN-230V / VULCAN-120V

Motor cable	CONTROL UNIT	
	DX motor	SX motor
YELLOW - GREEN	GND	GND
GREY	COMMON	COMMON
BLACK	OPENING	CLOSING
BROWN	CLOSING	OPENING

⚠ WARNING: Always connect the earth cable to the mains power earth system. Use the special fastom shown in the figure, and a cable with a minimum cross sectional area of 2.5 mm²

VULCAN-24V

Motor cable	CONTROL UNIT	
	DX motor	SX motor
BLUE	+	-
BROWN	-	+



ENCODER CONNECTION

To connect the encoders please refer to the control unit manual.

⚠ WARNING: For the encoders to work properly it is essential that the stoppers inside the case are installed correctly.

⚠ ATTENTION: DO NOT use the motor cable channel for the sensor cables.

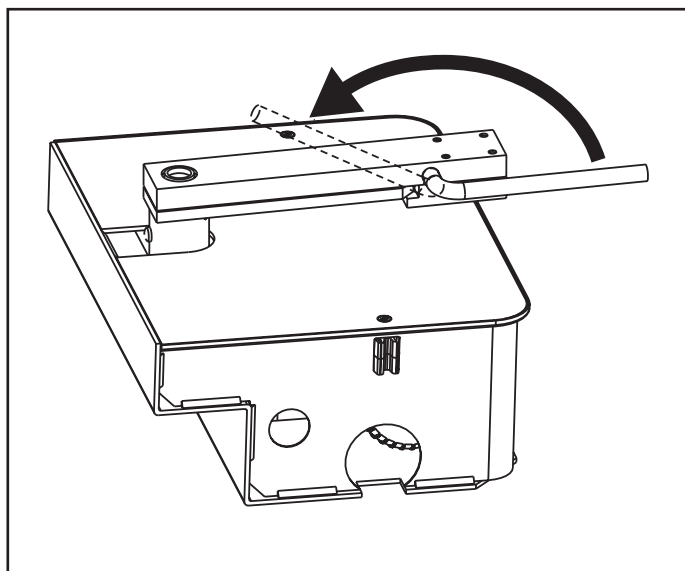
⚠ ATTENTION: extensions of the cables must be made only with a 4x0,22 shielded cable with polyethylene sheath

⚠ ATTENTION: connect the shielding braith sheath to the common accessories. Check that the ground of the power supply of the accessories is connected to the common accessories.

EMERGENCY UNBLOCKING

In the case of a power failure, the gate can be unblocked mechanically by operating the motor.

Insert the supplied unblocking lever and rotate 180° clockwise. Automation will be automatically restored the first time the motor is operated.



- **TIP** – Always install the motor/s and program using safety loops as described below before installing accessories. Accessories should be installed one by one following successfully installing and programming the motors.
- **TIP** – You need to fit three small loops of wire to your safety inputs to make anything work. These need to be removed later if you install safety devices to these input terminals. But for now, take two pieces of light gauge wire (speaker or telephone wire is good) about 40mm long and strip both ends 7mm and insert them as above from 5 to 6, and 5 to 7. Also 10 to 11.
 - **TIP** - Ensure JP1 on the control board is set to the correct voltage for your system.
- **TIP** – The transformer has two voltages. Use red and black for 12 volts or red and green for 24 volts. These connect to FS3 and FS4.
 - **TIP** – If using one motor only (single gate) use the terminals for Motor 2.
- **TIP** – The manual offers simple setup. It works well. Manual programming gives more control and is used by professional installers to adjust settings. You can also.
- **TIP** – If using solar power refer to the manual for correct input power connection (Last two pages). Also get hold of a copy of the solar power tips n tricks.
- **TIP** – If using wireless keypad KEYPADP6 set it to 20Bit mode to work with this board.

CONVERTING FROM AN OLD K50 OR CTR50

- Questions – service@automaticsolutions.com.au

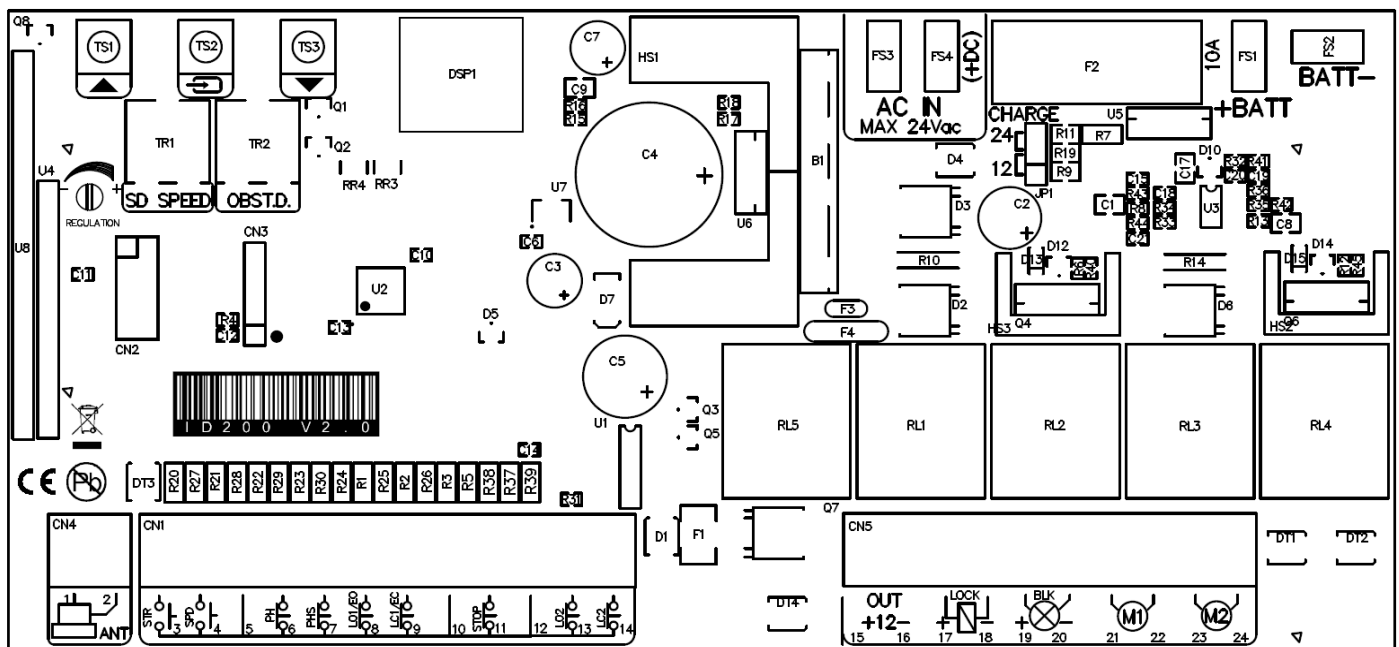
Control unit low voltage

For 2 motors

ID200 V2

GB Instructions Manual

Rev. 2,0



Important: Read carefully this manual before the installation. This manual is integral part of your product, keep it for reference.

Warnings: First of all verify that this product is suitable for the installation. Read carefully technical characteristic before the installation.

Installation of this control unit must be properly done by qualified installers, following rules and regulations of installation country.

It's mandatory do periodic maintenance each 6 month. Maintenance or repairing must be done by qualified Technicians. Turn power off before maintenance or repairing.

This device is intended for gate automation, any other applications is strongly advised.

Not respecting of rules may cause serious damage to peoples, animals, things. Manufacturer discharges all responsibility for missed respect of rules.

Don't let this control unit unattended or where children can reach

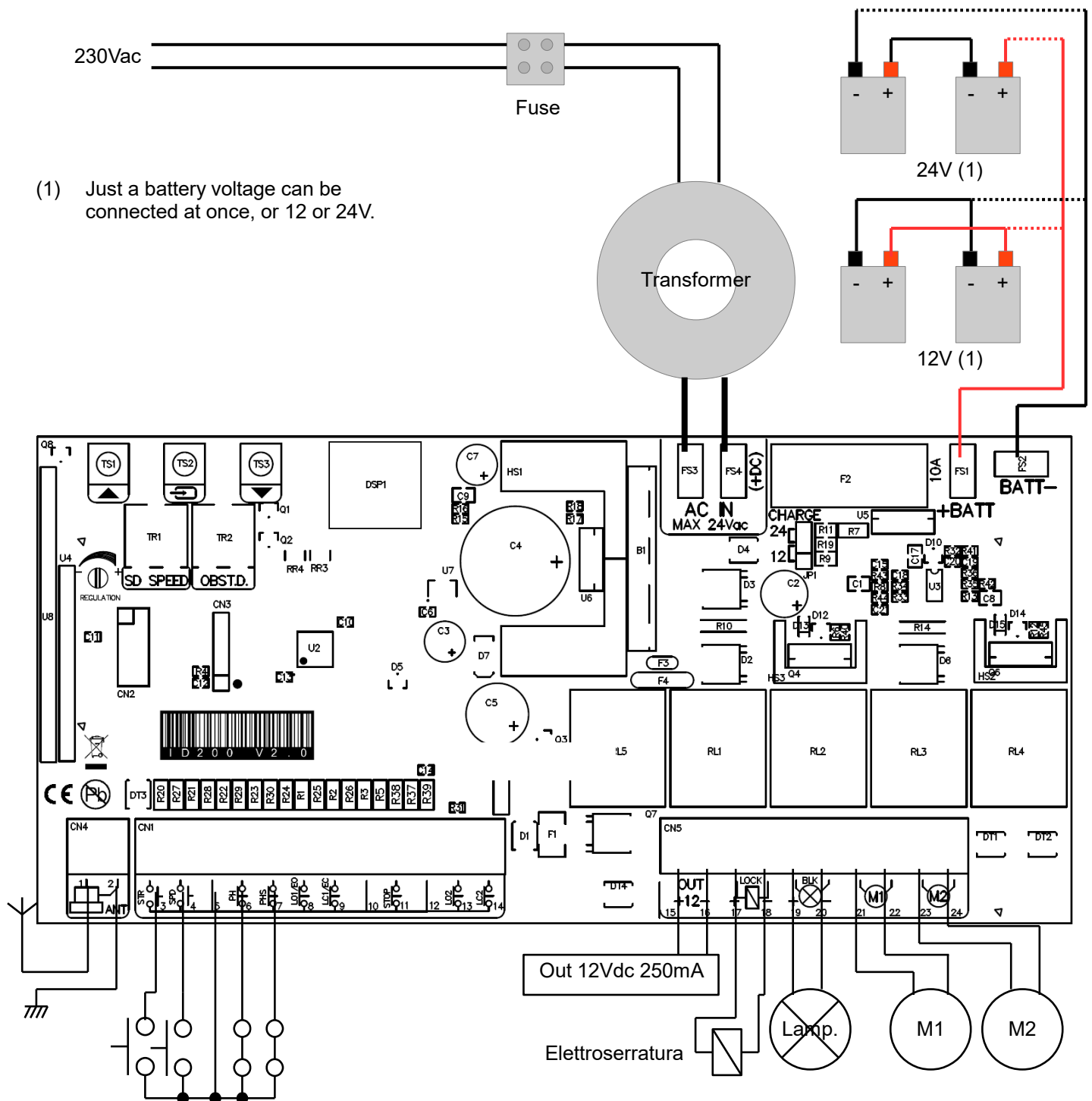
Preliminary checking: Before to install this control unit, verify that all the connected devices respect the technical characteristics mentioned in the table which follows. Verify that a working and suitable life switch is installed upline the installation. Verify that cables composing the installation, are suitable for it.

Technical characteristics

Power Supply	12-20Vac/100-200VA
Max. Current out	250mA
Embedded Battery charger	12/24V 100mA
Max motor current	8A (200VA transformer)
Max flashing light current	1A
Max electriclock current	2A
Operating temperature range	-5 +60°C
Backup battery	(2x) 12V 4.5Ah

Wiring

Main functions



- 1 Antenna.
- 2 Antenna's shield.
- 3 Start input N.O. or Open input N.O. (See menu operative logic "□L").
- 4 Start Pedestrian input N.O. or Open input N.O. (See menu operative logic "□L").
- 5 Common
- 6 Photocells input N.C. or N.O (see advanced menu "P□").

7	Photostop input N.C. or Detect input N.O. (see advanced menu "SF").
8	Opening Edge or Limit Switch open for slave motor 1 (see advanced menu "E□").
9	Closing Edge or Limit Switch close for slave motor 1 (see advanced menu "E□").
10	Common.
11	Stop input N.C. or N.O. (see advanced menu "SP").
12	Common.
13	Limit Switch open for master motor 2. Left unconnected both limit switches 2 they are automatically disabled.
14	Limit Switch close for master motor 2. Left unconnected both limit switches 2 they are automatically disabled.
15-16	Aux power supply output 12Vdc 250mA.
17-18	Electric lock output (12/24Vdc, according to transformer output).
19-20	Flashing light output (12/24Vdc, 1A, according to transformer output). With blinking or fix output. A very slow blinking it alerts for power failure.
21-22	Output slave motor 1 (12/24Vdc, according to transformer output).
23-24	Output master motor 2 (12/24Vdc, according to transformer output).
TR1	Slow down speed trimmer.
TR2	Obstacle detection sensitivity trimmer.
TS1	Up button.
TS2	Enter button.
TS3	Down button.
DSP	Display
FS3- FS4	Transformer input 12-20Vac / 100-200VA
F2	Rapid fuse 10A.
FS1- FS2	Backup battery in 12/24Vdc (attention: select right value)
JP1	Charger voltage selector for backup battery: 12/24Vdc

Inputs status

When the control unit is in standby, user can read inputs status on display:

- : No inputs active.
- SP : Stop input active.
- PS : Photostop input active.
- E□ : Analog edge opening input active.
- E□ : Analog edge closing input active.
- P□ : Photocells input active.
- SE : Start input active.
- Pd : Pedestrian input active.
- P : Open input active.
- L : □lose input active.
- : Limit switch open motor 1 (slave) active.
- : Limit switch close motor 1 (slave) active.
- : Limit switch open motor 2 (master) active.
- : Limit switch close motor 2 (master) active.

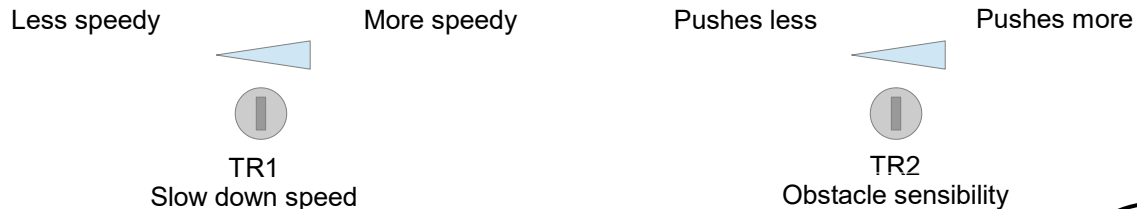
During pause, the display show the seconds countdown to closing.

Trimmers setting

Slow down speed trimmer regulates the slow down speed. Do not set speed too low (less than 10cm/sec on the wing edge) to avoid that gate stops in very cold conditions.

Obstacle sensibility trimmer fine tunes the obstacle detection level learned by the control unit during working times programming. This fine regulation must be do after working times learning.

Normally the trimmer goes in the center, in this position it should suit most installations. If it is necessary to resolve problems related to norms or to environmental situations (ex. strong wind) is it possible to regulate this trimmer increasing or decreasing sensibility.



Simple Setup



1. Check motor direction

Push and release the ENTER button. The display will show $\square L$. Use UP/DOWN buttons to select $\square \uparrow$. Press ENTER and now select available options (Open motor 1, Close motor 1 etc.) and hold the ENTER button down to check your motor direction. Example - If you only have one motor it should be connected to M2. Use the option $\square 2$ to check that motor is opening. If not stop - reverse the two motor wires in M2 and test again. When happy with motor/s direction you can exit this menu and again to exit all menus.

To exit this menu select EH or push up and down together.

After 20 seconds without actions, control unit exits itself from this menu.

2. Choose single or double gate mode.

The control board by default is set to double gate so this next step is only for single gate installations. To enter advanced menu hold down the ENTER button for 4 seconds, until the display shows $\square \uparrow$. Use the UP/DOWN buttons to select $\square \square$. Use the UP/DOWN buttons to find $\square 5$ and press ENTER to select for single gate mode.

To exit this menu select EH or push up and down together.

After 20 seconds without actions, control unit exits itself from this menu.

3. Quick program.

To program the working times, open the gate/s, then keep pushed UP till you read $\square \square$ on the display. The control unit will do several tests and then it will learn working times. When the procedure is finished the LED screen returns to normal.

4. Quick radio code learning.

Push the DOWN button, " $\square \downarrow$ " will appear on display. Transmit with the remote to be learnt as Start or Open command (according to " $\square L$ " menu). Push twice DOWN to select pedestrian start

5. Quick radio code erasing:

Hold down DOWN button up to on display it appears " $\square \downarrow$ " (5 seconds about), then release the button. All codes are now erased.

6. Auto learning transmitters.

It's possible to learn transmitters quickly without using the base menu. To insert a new transmitter transmit 3 times with the new remote, making at least 1 second pause between each transmission. Then transmit 3 times with a transmitter already in memory and then once with the new. When programming is done, the blinker flash once. **Attention:** function must be enabled, refer to "advanced menu" - auto learning transmitters. The new code takes the same channel as the one used to insert it.

Main menu

To exit this menu select **EH** or push *up* and *down* together.

6

Main menu (Continue)

Display	Function	Choiches	Description	Default
d1	Dearman mode	o1 c1 o2 c2 EH	Open motor 1. Close motor 1. Open motor 2. Close motor 2. Exit.	-
EH	Exit	-	Exit from main menu.	-

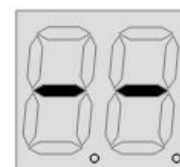
Board programming

Advanced menu

To enter advanced menu hold down enter button 4 seconds, till on display it appear **e1**. With up/down it's possible to select all items in this menu.

To exit this menu select **EH** or push *up* and *down* together.

After 20 seconds without actions, control unit exits itself from this menu.



Push
Enter
4 seconds



Display	Function	Choiches	Description	Default
e1	Time menu	e1 s1 e2 s2 do dc eL EH	Working time slave motor 1 (in seconds). Slowing down start time (since start) of slave motor 1. Working time master motor 2 (in seconds). Slowing down start time (since start) of master motor 2. Delay time of slave motor in opening direction (in seconds). Delay time of master motor 2 in closing direction (in seconds). Electric lock on time. If set to 0 the lock output works as Open gate light (ON when gate is open). Exit.	25 22 25 22 02 05 02
55	Single motor mode	45 nE	Single motor gate Double wing gate	nE
d2	Resets to defaults	45 nE EH	Confirming with 45 the control unit is reset to factory defaults. Attention, this procedure doesn't erase the radio codes.	-
rC	Release motor pressure.	45 nE	The gate reverses for few tenths once he has reach the end. Normal operations.	nE
Ar	Automatic remotes learning	45 nE	Automatic remotes learning enabled. Automatic remotes learning disabled.	nE
c5	Kickback stroke	45 nE	Kickback stroke enabled. Kickback stroke disabled.	nE
55	Soft start	45 nE	Soft start enabled. Soft start disabled.	45
5L	Limit switches in series to the motor	45 nE	Limit switches in series to the motor (opening the circuit) Normal operations.	nE

Advanced menu (Continue)

Display	Function	Choiches	Description	Default
ร 0	Radio mode	1b 4b	Each radio button is learned separate. The installed can choose ho to learn a code: (c 1 Start/Open, c 2 Pedestrian/close). Learning a button of a remote, let all the other 3 buttons being learn automatically.	1b
L 0	Electric Lock mode	45 0b	Magnetic electric lock. Impulsive electric lock.	0b
E 0	Opening Edge mode	d5 00 0c A0 L5 EH	Disabled. Normally Open. Normally Close. Analogic input 8K2. Limit switch open slave motor 1 Exit.	d5
E c	Closing Edge mode	d5 00 0c A0 L5 EH	Disabled. Normally Open. Normally Close. Analogic input 8K2. Limit switch close slave motor 1 Exit.	d5
P c	Photocell mode	0c 00	Normally Open. Normally Close. Attention: Rules of several countries forbid to use safety systems with N.O. Output. Please be sure of safety regulations of your country before to modify this parameter.	0c
SP	Stop mode	0c 00	Normally Open. Normally Close. Attention: Rules of several countries forbid to use safety systems with N.O. Output. Please be sure of safety regulations of your country before to modify this parameter.	0c
SF	Safety input mode	P5 dE	Photostop mode N.C. (Photocell operating in opening mode too) Detect mode N.O.(Photocell for rapid close after the car has passe through the gate)	dE
L5	Limit switches mode (all 4 LS)	0c 00	Normally Close. Normally Open.	0c
bL	Blinker mode	45 0b	Flashing output. Fix on output.	45
c 0	Cycles counter	-	Shows cycle counter in 3 group of 2 digits. Example: 123.456 is shown as: 12 - 34 - 56	-
EH	Exit	-	Exits advanced menu.	-

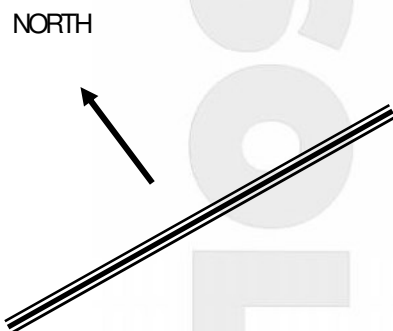
GENERAL SOLAR NOTES

SOLAR PANEL SIZE

Generally speaking simple automatic gate installations will work perfectly in Australia using a 10 watt solar panel. The solar panel size determines the amount of energy you can collect each day. In a simple gate installation we need to collect enough energy to power our control board and run the gate and a 10 watt panel will do this. If however the installation is to include keypads, safety beams or other power hungry devices it may be necessary to increase the solar panel size. Another example where you may wish to consider upsizing your solar panel is where you may have a partially shaded area and you need to collect your energy each day in a shorter period of time. If you do decide to increase the size of your solar panel it may be necessary to install a simple regulator to protect your battery. Check with Automatic Solutions regarding this.

SOLAR PANEL DIRECTION

Your solar panel ideally should be mounted at an angle of 35 degrees and facing north (NB: In Australia).

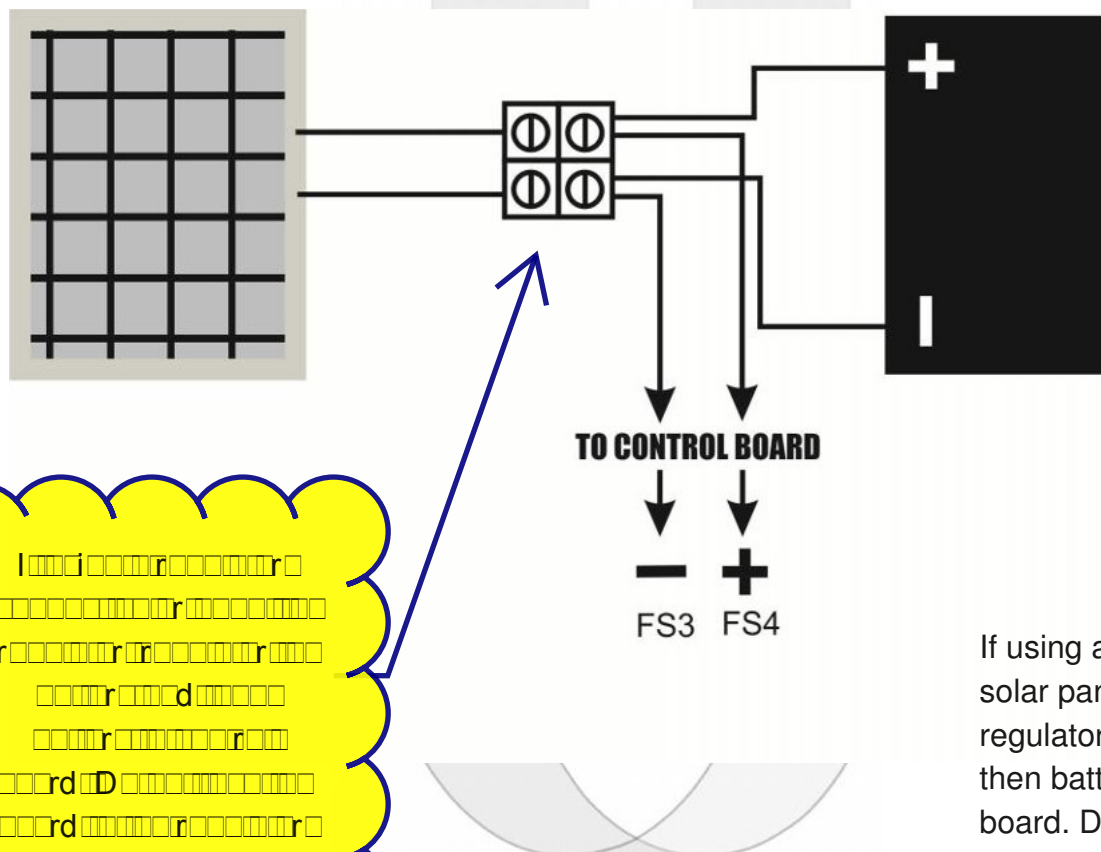


BATTERY SIZE

The battery stores the energy that you collect each day and your system draws on this battery to operate. All batteries have a limit to their storage capacity and can therefore only store enough energy to last our system a certain period of time. What happens if we have for example three days with little or no sunlight, very dark and overcast days? Our battery capacity reduces. The size of the battery will determine the number of days we can have as backup or how many days our system can survive without charging. In general terms bigger is better.

CABLES

Cables must be low voltage cables (5mm is good). Length of cables must be kept to a minimum. Ideally the solar panel will be no more than 10 metres from the battery and the battery will be no more than 5 metres from the motor. Connections must be clean and good quality.



If using a regulator go solar panel to regulator, regulator to battery and then battery to control board. Do not take the board to the regulator.

Solar Panel Connection ID200

