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Additional Installation Manual for SOLAR POWER BOX: CODE: SOL-G8-PWR-BOX

This solar control box suitable for **Swing and for sliding gate motors**.

A. Solar Panel(s) Installation

1. Install the solar panel(s) in a place with clearance to the sun ray from sun rise to sunset. No trees, building or anything in the way between the panel and the sun.
2. Face the panel to the north. Follow the instruction comes in the panel's box
3. Adjust the angle of the panel approximately as per your location. See table on the Solar Panel instructions

B. Installation of the power Box

1. The Box must be installed on flat surface to fit all the back area of the box
2. Open the box's front cover. Memorized or photo, the batteries connections, and see photos below.
3. Disconnect and remove the batteries from the box, and clip out the slotted duct
4. Make 20mm holes for the cable glands at the **bottom of the box**, fit the glands for the cables of the solar panel and the motor(s).
5. Fit the box on the flat surface that you prepared.
6. Insert the black cable of the solar panel through a gland and tight it
7. Pull the charger out (do not disconnect any wires) and connect the cable of the solar panel to the solar terminals on the charger unit. Double up the coper wire ends twice, make sure that the connections are tight, and the polarity is correct; Red (+) Blue (-)

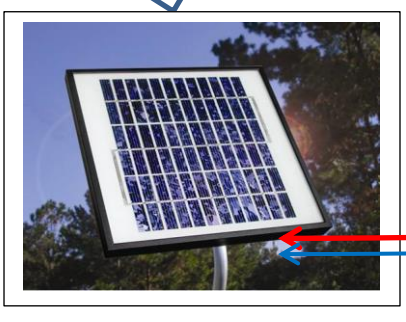
C. Connection of Safety Devices

Connect the power of the safety devices to terminal 9 GSI (not 8 -VA contestant power terminal) **THIS TERMINAL IS NOT FUSED** – never short it, if not working refer to energy saving mode section

D. General Information

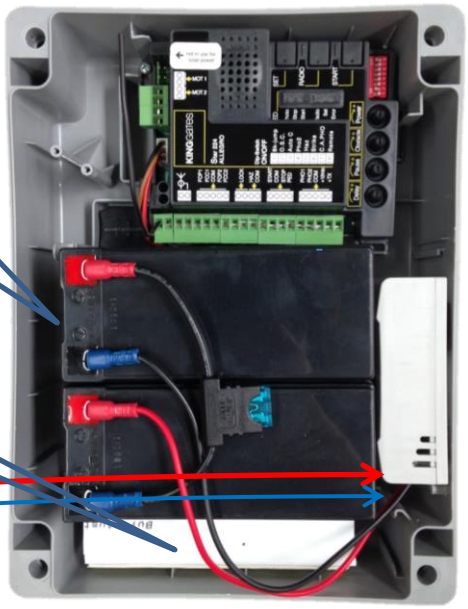
1. The blade fuse of the batteries is 20 Amp
2. The 3-pin power terminal on the corner of the board is not in use with this setup
3. You need to be experienced Gate Automation installer to install this system
4. Connect the motor(s) cables to the motor(s) terminal on the controllers

(A1) Install the panel in a place that is getting sun light all day time; face it to the north, adjust the angle as per the location see instruction of the panel



(B3) Disconnect and take out the batteries

(B3) Batteries support duct

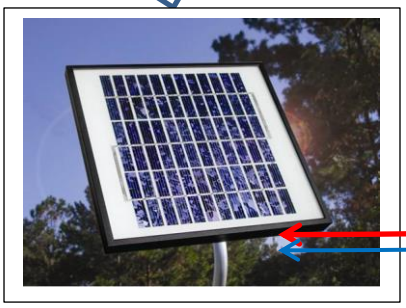


- For swing automation – refer to section E.
- For sliding gate refer to Section F.

E. CONNECTIONS FOR SWING GATE AUTOMATION

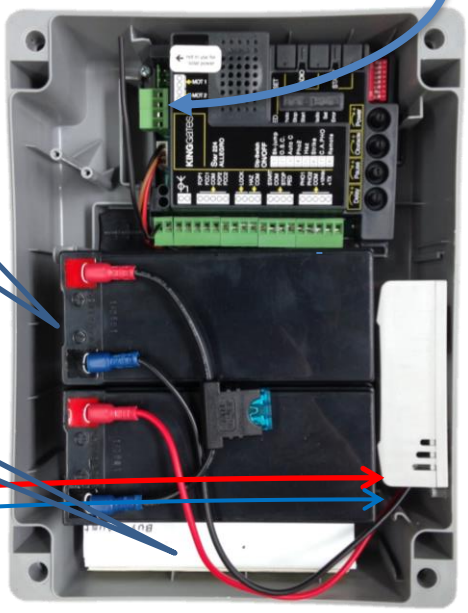
1) Cables to the motor(s) not included in this kit. use round shape cables for better seal with glands.
2) Use flexible 1.5 – 2.0mm copper section cables, for the motor(s). Insert the cables through the glands for better seal, make sure to leave enough cable length in the box to reach the top of it.
3) Clip-in the slotted duct batteries support, and put the batteries back into the box (Fig. 4)
4) Connect the motor(s) cables to the motor(s) terminal on the controllers

(A1) Install the panel in a place that is getting sun light all day time; face it to the north, adjust the angle as per the location see instruction of the panel



(E4) Connect the batteries

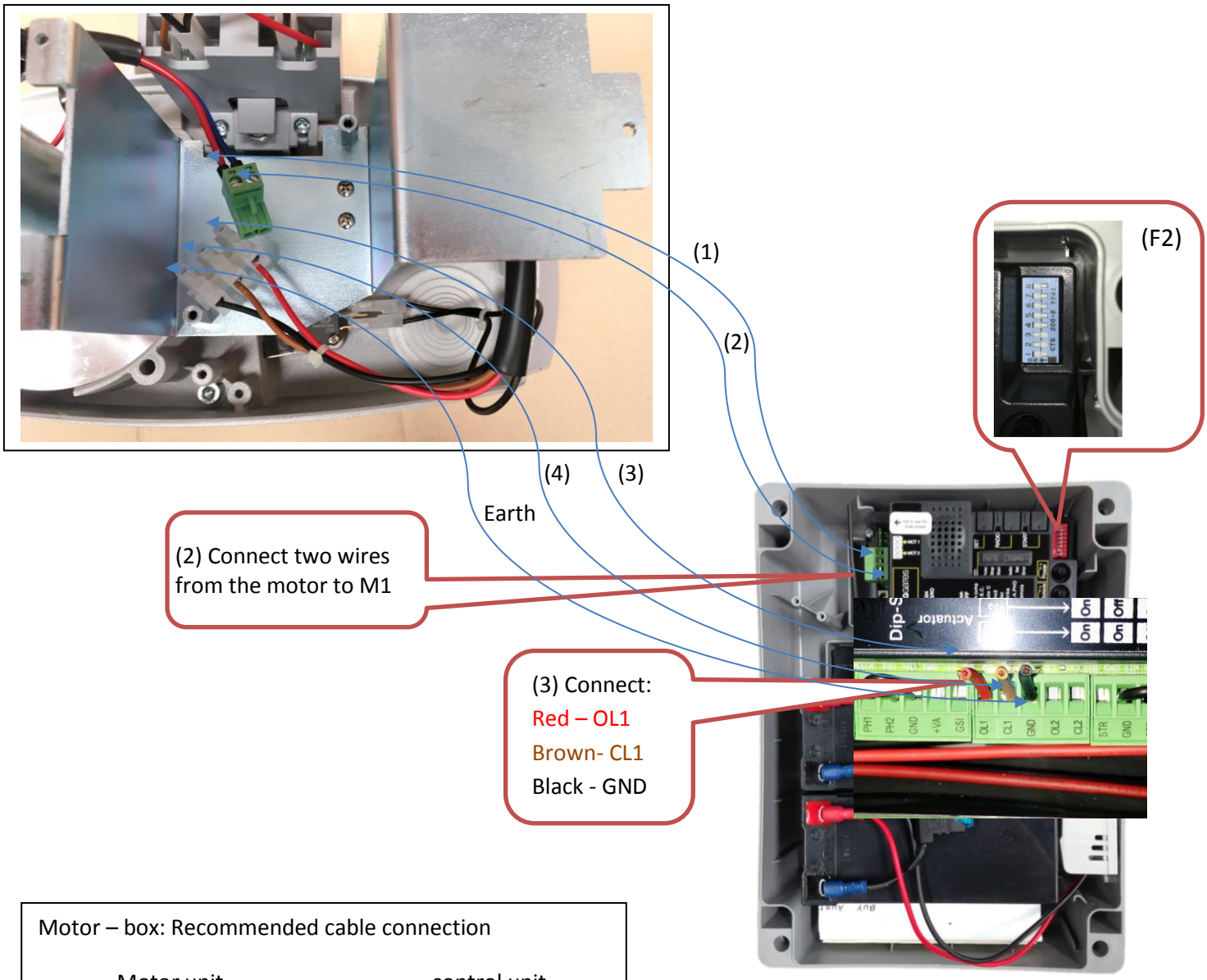
(E3) Batteries support duct



Make sure to choose the correct motor setup with dip switch 1 and 2. See label on the control unit or the manual instruction

F. SLIDING AUTOMATION INSTALLATION

1) Use 5 wires cable to connect the box to the motor. Insert the cable to the box through a gland, make sure to leave enough cable length in the box to get to the terminals at the top of the box.
2) Connect the **motor's** Blue and Red wires to terminal (M1) on the control unit. Keep the polarity of the wires as it is (see Fig 4)
3) Make sure for Dip Switch: 1-OFF , 2- ON
4) With the motor cable; connect the 3 wires limit wires from the motor to the control unit
   Red – OL1 // Brown- CL1 // Black - GND
5) Clip-in the slotted duct batteries support, put the batteries back into the box, connect the battery Cables as it was.
6) Check all connections; connect the Battery (+) terminal to power the system.



Motor – box: Recommended cable connection

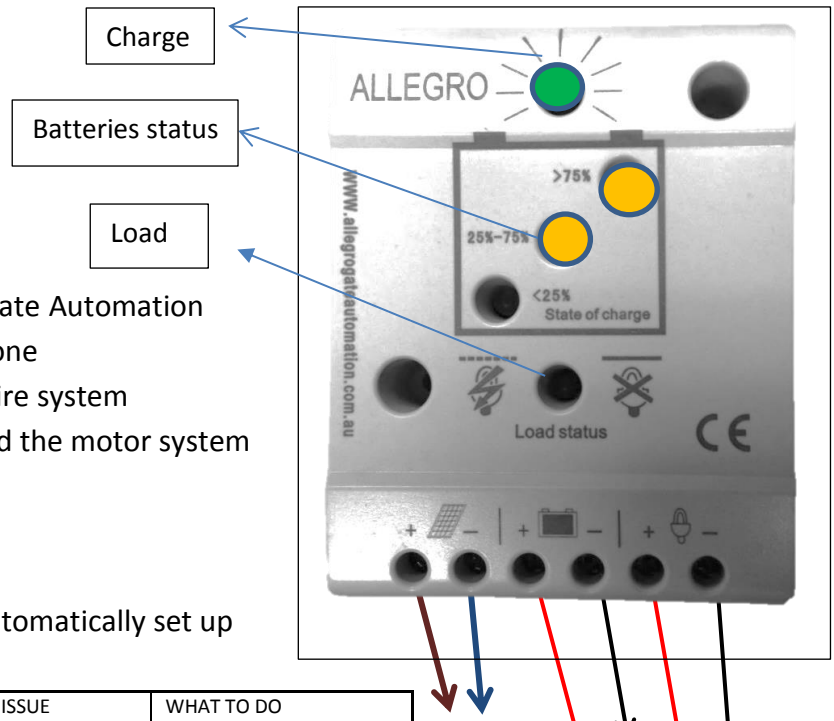
	Motor unit		control unit
1.	RED motor wire	(1)	Motor 1 terminal A
2.	BLUE motor wire	(2)	Motor 1 terminal B
3.	RED Limit Sw. wire	(3)	OL1 terminal
4.	BROWN limit Sw. wire	(4)	CL1 terminal
5.	BLACK limit Sw. wire	(Yell/Green)	GND terminal

G. The Solar Charger Controller

The unit based on micro controller to give the highest energy and keep the system healthy and protected.

The unit is controlling the following:

1. Control the energy from the sun
2. Protecting the solar panel
3. Protects and increase the battery lifespan
4. Protection for electronics



Functions and features

1. Specially designed and configure for Allegro King Gate Automation
2. Plug and play – nothing to do – all automatically done
3. Cut-off Overcharge protection – to protect the entire system
4. Cut-off under-voltage – to protect the batteries and the motor system
5. Low self-consumption
6. LED indicators, to tell you what's going on

After powering up - wait a minute for the system to automatically set up

LED	GOOD WORKING INDICATION	FAULT INDICATION	THE ISSUE	WHAT TO DO
GREEN	On - GOOD	NO CHARGE FORM SOLAR PANEL, OR NOT WORKING GOOD	NO POWER FROM SOLAR PANEL	CHECK PANEL AND WIRING FORM PANEL CHECK BATTERY VOLTAGE TO BE MORE THEN 23V
THREE YELLOW LED'S	BATTERY CAPACITY AND CHARGE LEVEL	ALL 3 LED'S ON - FULLY CHARGED TWO OR ONE ONLY ON- BATTERIES ARE NOT IN FULL CAPACITY/ CHARGE	BATTERY LOW (2-4 YEARS – REPLACE IT)	WAIT FOR CHARGING IN THE SUN, IF NOT HELP, REPLACE BATTERIES
RED LED - LOAD STATUS	OFF- GOOD	ON- RED: NOT GOOD	1. BATTERY NOT GOOD 2. LOAD PROBLEM	1. CHECK CHARGE, CHECK BATTERIES 2. REPLACE BATTERIES
STILL NOT WORKING	LIGHTS OFF OR FLASHING	UNITS MUT BE RESET	RESET THE UNIT	DISCONNECT SOLAR PANEL , TAKE OUT TERMINAL OFF THE BATTERY > WAIT ABOUT 5 SECONDS > CONNECT BATTERIES TERMINAL > CHECK OPERATION > IF GOOD > CONNECT SOLAR PANEL