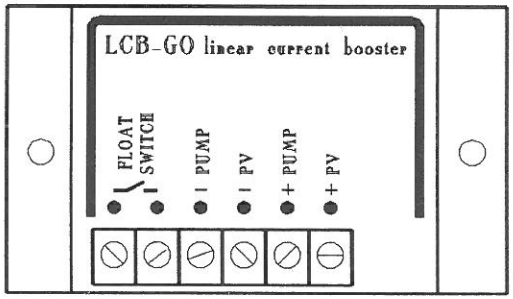
Installation Manual for the LCB - GO Pump Controller



The SHURflo "LCB - GO" pump controller is a DC power converter designed as an interface between a DC (Solar)-Pump (e.g. SHURflo 9300 series) and a DC power source, like solar panels, wind generators,.. The main function of this controller is to maximise the daily water output while providing protection for the pump.

The solid state controller will protect the pump system and give trouble free service for many years. When used in a solar pumping system, directly connected to the solar power, it will protect the pump from over voltage and over current conditions as well as will provide current boosting in low sunshine (radiation) conditions.

The manual will show you how to make the connection for your particular system configuration and the wiring diagram is given.

Power Matching of the Controller

For use on panel direct systems, the LCB Pump Controller is set to keep the voltage constant around the maximum power point of the panels, and matching the electric requirements of the pump. The purpose for the matching is to maximise the daily water output of the solar pumping system.

Wiring the LCB Pump Controller

a. Float switch (remote) ON/OFF Circuit is used to turn the pump on and off from a remote location, e.g. a float switch in a reservoir. (Short the two terminals to turn the pump off.)
b. PV- (IN) Negative wire from the PV array.
c. PV+ (IN) Positive wire from the PV array.
d. PUMP- (OUT) Negative wire from the pump (load).
e. PUMP+ (OUT) Positive wire from the pump (load).

*** Note:**

IMPORTANT = Watch for the correct electric connection = **IMPORTANT**
("+" / "-" cable connection)

INSTALL INDOORS ONLY, UNLESS CONTROLLER IS BEING INSTALLED IN A WATERTIGHT CASING

== DO NOT EXPOSE THE CONTROLLER == INTO DIRECT SUNLIGHT

LCB - GO Specification

* Maximum input voltage	45 VDC (Open Circuit) (Two Panels 12 V nom. in series max.)
* Start up voltage with	25,0 V +/- 2% two modules 17,5 V mpp in series
* Output voltage limiting	28 volt
* Maximum power consumption of the PV-pump-system	150 watts
* Maximum output current	5 amps
* Power consumption	25 ma
* Ambient temperature	14°F - 113°F (-10...+45°C)
* Short-circuit protection	20 sec.

Features

1) Current boosting for the matching the load requirements of the pump motor.

2) Voltage limiting for pump protection

3) Remote float switch circuit.

4) One year limited warranty

Installation

(see diagram on next page)

1) Mount the LCB using two screws. If necessary (high ambient temperature > 100°F) and for better heat derivation use metal plates surfaces for installation (heatsink extension).

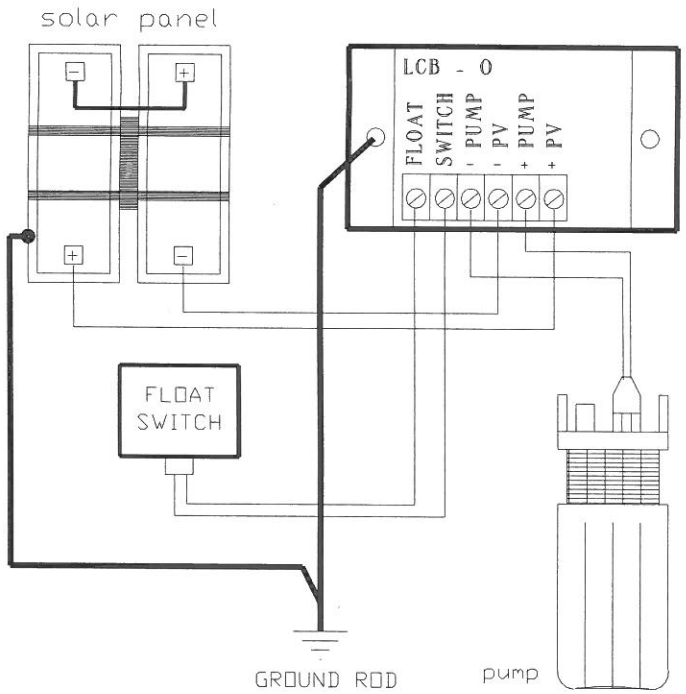
2) Connect the PV-panel cable, while covering the solar panels against sunshine (radiation).

3) Connect the solar pump cable. Tighten carefully!

4) If required, connect the float switch to the terminals.
"Bridged", stops the pump

WIRING DIAGRAM

LCB-GO



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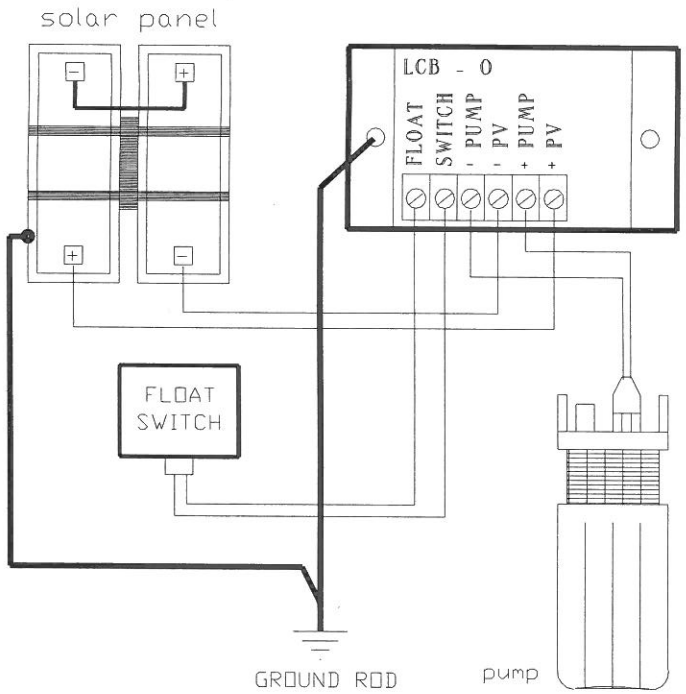
LCB-GO



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