

**RLH Industries, Inc.**  
**100 Watt Solar Power Supply P/N 8806-1250-04**



**Description**

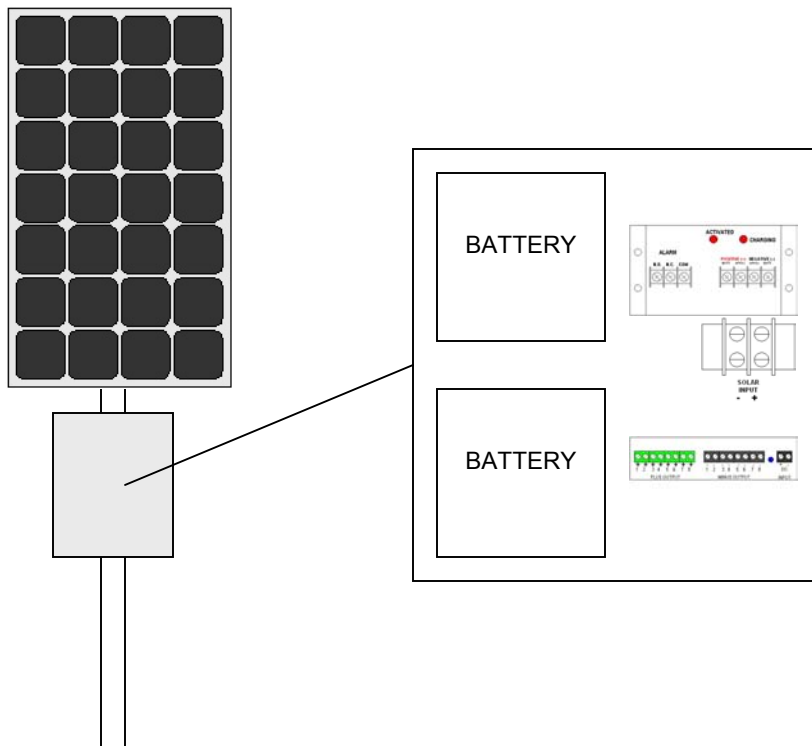
The 150W RLH solar power supply p/n 8806-1250-04 is a fully integrated solution to provide remote powering 7.5 watts (300mA 24VDC maximum). RLH solar power supplies are engineered with highly efficient solar electric modules to ensure reliable operation in any geographical region.

The Supply consists of:

- (1)- 100W solar panel with aluminum mounting bracket
- (1)- 30' 12awg outdoor wire
- (1)- Fiberglass cabinet H18"xW16"xD10"
- (2)- 12V 52.0AH batteries
- (1)- Battery charge regulator

**Specifications**

Solar panel type	110W SM110-24P
Operating voltage	24V
Rated current	3.15A
Maximum voltage output	35.0V
Short circuit current	3.45A
Open circuit voltage	43.5V
Wind loading	50lb/sq
Panel dimensions, (HxWxD)	52"x26"x4"
Circuit protection	Diode across solar array input
Fuse rating	6A
Battery capacity	52.0A/Hr.
Battery Dimensions (HxWxD)	9"x8"x5.5"
Temp. Limits	-40°F to +158°F (-40°C to +70°C)
Power Terminal	8-Position (blue LED indicator)
Maximum recommended load	300mA @ 24VDC (7.5 watts)

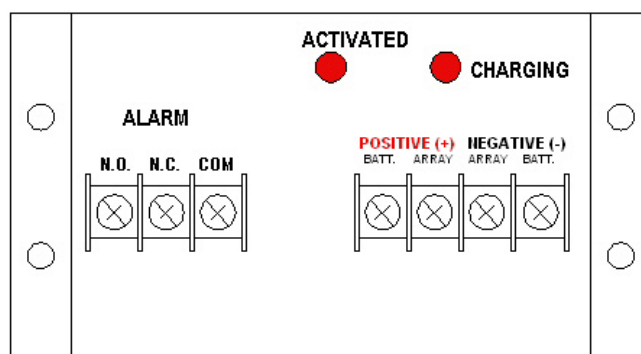


**Battery Charge Regulator**

The battery charge regulator allows maximum array current to flow into the battery through a blocking diode, lighting the red “charging” LED. When the batteries are fully charged the charging LED will turn off and the solar array is shorted to a shunt resistor. A temperature sensor adjusts charging current with ambient temperature change.

**Low Battery Alarm (LBA)**

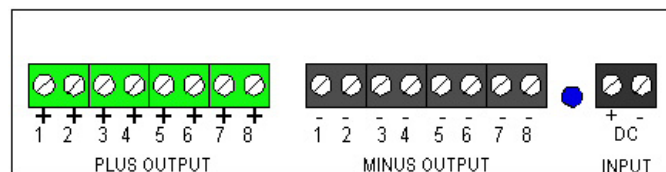
The RLH charge regulator can be ordered with an optional Low Battery Alarm circuit. A separate terminal block is provided for the normally open and the normally closed connection. The alarm is activated at 24.0V and is deactivated at 27.0V. The relay consumes 30mA when activated. This option can be order by adding “LBA” to the end of the solar power supply part number.



**Charge Regulator w/ LBA option**

**Wiring**

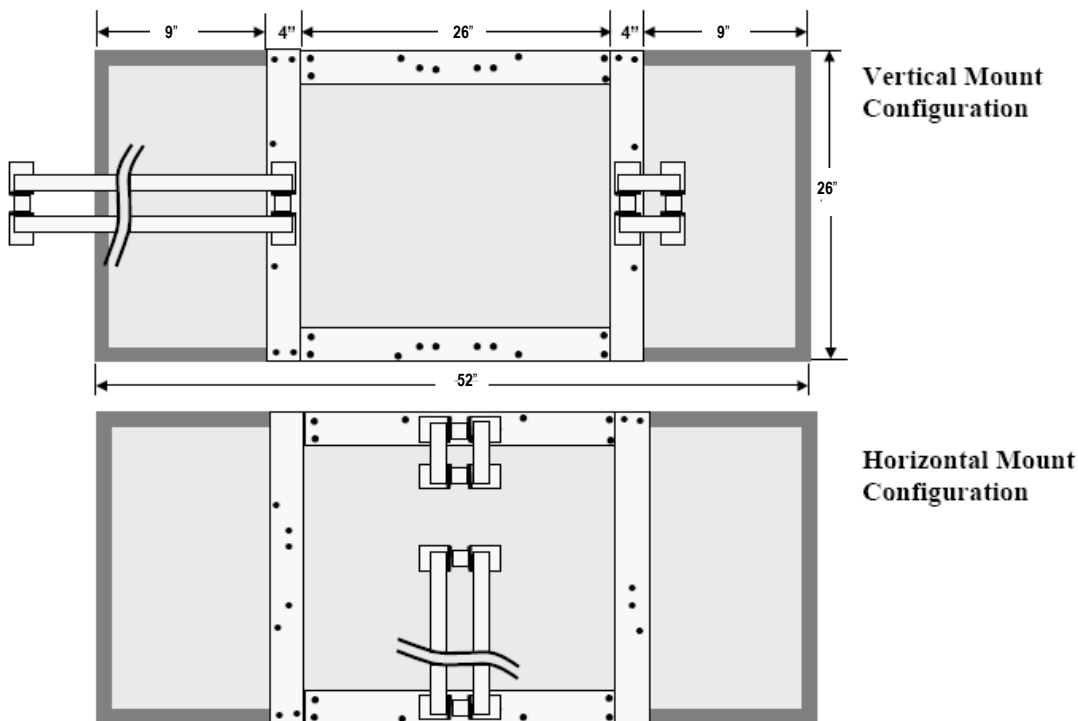
Connect wire leads from solar panel to the “Solar Input” terminal. The positive wire lead from the solar panel is marked with red tape. The fuse should be installed after the solar panel input is connected. The equipment to be powered is connected to the “Plus Output” and “Minus Output” DC power terminal.



**DC Power Terminal**

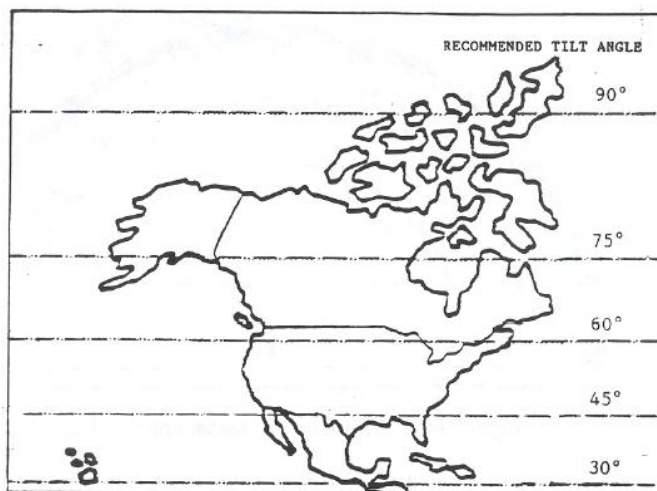
**Panel Mounting Hardware:**

Aluminum mounting brackets provide convenient solar panel attachment to a wall or pole. The bracket can be configured for vertical or horizontal panel mounting.



**Solar Panel Installation**

- The Solar Power Supply must be located so that the solar panels are facing south.
- The location should be free of shadow between the hours of 9:00am and 3:00pm
- For the maximum power generation, the solar panels must be situated with the proper amount of tilt for the latitude of installation. Refer to the latitudinal chart to determine the proper amount of tilt for your location. Note that all figures refer to angle from horizontal.



**Latitudinal Chart for Recommended Tilt Angle**