
Specifications

Features

- Very low power consumption
- Protection against load short-circuit & overload
- Reliable -100% solid state
- No radio interference
- 5 year warranty
- Manufactured with solar power
- Designed and built in North America

Model L20 or L20-24V

Electrical Specifications

Max. input voltage 40 volts (60V for 24V control)

Max. current (at 50 °C) 20 amps DC

Power Consumption

Standby - 0.8 mA, ON - 3.6 mA

Typical set points: Off: 13.0 Volts On: 12.0 Volts Off
60 seconds at or beyond setpoint

Adjustable setpoint or time delay with screw driver on
front, +0.5 Volts full right, - 0.5 Volts full left (+1V, -1V
for 24V control)

(other voltage setpoints and time delays available.)

General Specifications

Temperature range: -40°C to +50°C (-40°F to
+120°F)

Case: Stainless steel case.

Weight: 440 grams (15.6 oz)

Size (H x W x D): 8 x 14 x 4.5 cm (3.125 x 5.5 by 1.75
inches)

Mounting: wall mountable

Terminals: 12-24 AWG

Features & Options

Built in load snubbing diode

Options: adjustment on back, custom wire length,
voltage setpoints and time delays.

Warranty

Full 5-Year Warranty

Warranted in entirety, except abuse, within a
period of 5 years following the date of purchase.
In the event a defect develops during the
warranty period, return the unit to eco energy,
postage paid. Eco energy will repair or replace
the product with a new or reconditioned unit of
equivalent quality.

Eco Energy

Since 1992, Eco Energy has been in the business
of designing and manufacturing solar charge
controllers, battery chargers, low voltage
disconnects, current boosters DC converters and
battery voltage monitors.

Eco Energy controls are currently used in power
systems for remote homes and cottages,
recreational vehicles, boats, telecommunication
and navigational systems, natural gas pipeline
operations and other solar battery charging
applications around the world.

Eco Energy is powered by solar power.



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Printed July 2015

Installation Guide

Load Control

20 Amp Battery Discharge Protection



Advanced Control Solutions

Load Control 20 Amp L20

Normal Operation

The voltage switch protects your batteries from being excessively discharged. The input voltage is constantly monitored with an extremely efficient low power draw design.

When the input voltage is at or above the ON setpoint (typically 13.0 volts) for 60 seconds the load will be turned on.

When the input voltage is at or below the OFF setpoint (typically 12.0 volts) for 60 seconds the load is turned off to protect the battery from being discharged excessively.

The adjustment on the front of the control can change the setpoints up to + 0.5 V by turning clockwise, and -0.5 V by turning counterclockwise.

- WARNING -

DO NOT EXCEED A LOAD OF 20 AMPS
A Load > 20 Amps can damage the control

Installation

Location

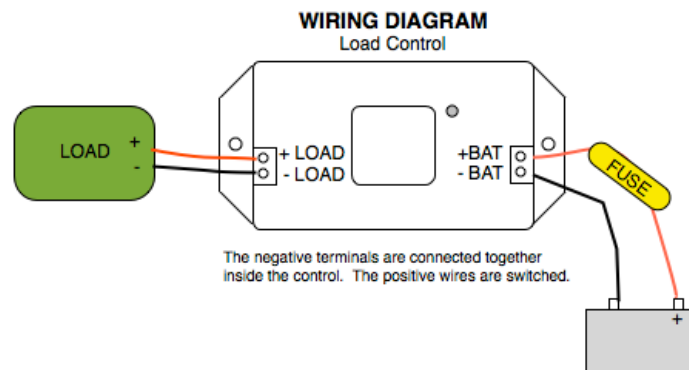
The controller needs to be in a cool location in order to function properly. It should not be in direct sunlight, or mounted in a hot location such as in direct sunlight. The controller should be installed near the batteries, to ensure an accurate battery voltage measurement. The distance from the batteries or input power to the controller should not exceed 40 feet.

Wiring

- WARNING -

DO NOT REVERSE INPUT POLARITY
Reverse polarity may damage the control

#18 AWG or larger wire must be used.
The positive terminals are switched on and off.
The negative terminals are connected together inside the control.



Operation

- WARNING -

MOTORS & COILS PRODUCE VOLTAGE SPIKES
A large voltage spike will damage the control

A motor, pump or other inductive load on the battery input to the control will briefly turn into a generator when turning off. This will cause a large negative voltage spike. A diode, or voltage snubber is required on the motor, pump or relay to prevent large voltage spikes into the control.

Fault Conditions

Loads such as DC motors, and incandescent lights can have large starting currents as much as 10 times the running current. A high current may trigger the overcurrent protection and turn off the load.

After an over current fault the output will remain off until reset.

To reset the control after a short circuit or overload, to turn off power to the input/Battery side.

The load will also be turned off when the control is too hot, however it will automatically turn back on when cooled sufficiently.

Power Indicator Light

Flashes once to show power on.

Load Indicator Light

1 Flash - The voltage reached the low setpoint. This flash will continue until the voltage reaches the high setpoint.
2 Flashes - The load is turned off.
3 Flashes - The load is turned off and the voltage reached the low voltage setpoint.