Specifications

Features
- Very low power consumption
- Protection against load short-circuit & overload
- No radio interference
- Encapsulated in epoxy potting
- 5 year warranty
- Manufactured with solar power
- Designed and manufactured in North America

Model L3

Electrical Specifications
Voltage configurations 10V to 50V availiable
Max. input voltage 60 volts
Max. current (at 50 °C) 3 amps DC ⎓
Power Consumption
Standby - 0.6 mA, On - 2.3 mA
18 gauge wire leads 15 cm (6 in)
Typical set points: Off: 13.0 Volts On: 12.0 Volts Off
60 seconds at or beyond set point
(other voltage set points and time delays available.)

General Specifications
Temperature range: -40°C to 50°C / -40°F to 120°F
Case: ABS case, completely sealed in epoxy
Weight: 50 g / 2 oz.
Size (H x W x D):
3.8 x 7.0 x 3.1 cm / 1.5 x 2.75 x 1.3 in.
Wire: 18 AWG, 15 cm / 6 in.

Features & Options
Built in load snubbing diode

Options: 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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Installation Guide

Load Control

3 Amp Battery Discharge Protection

eco energy

Advanced Control Solutions

Load Control 3 Amp
L3

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 on and off setpoints move together. Turning clockwise increases the setpoints. The voltage separation between the on and off setpoints is fixed during manufacturing. Different separations ,voltage setpoints and time delays can be ordered.

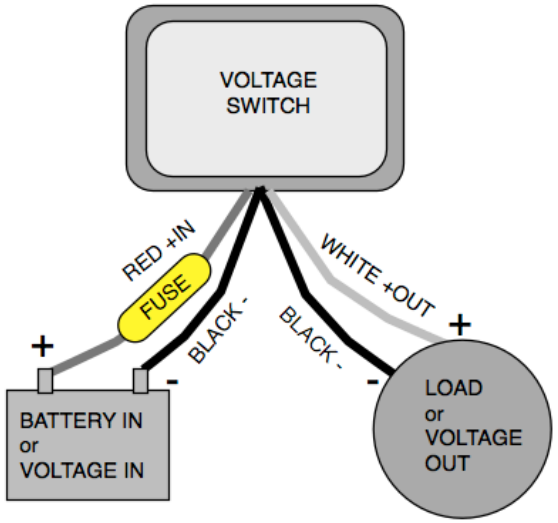
- WARNING -
DO NOT EXCEED A LOAD OF 3 AMPS
A Load > 3 Amps can damage the control

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 input polarity may damage the control

#18 AWG or larger wire must be used.
The positive wires are Red. The negative wires are Black (both black wires are connected together inside the control). A relay can be installed directly on the output wires to increase the current or voltage capabilities.



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 incandecent 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.

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

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 and the voltage has not yet reached the high voltage turn on setpoint.