Specifications

Models
LVD16-12 (12 volts) or LVD16-24 (24 volts)

Electrical Specifications
Voltage configurations 12 or 24 volts
Max. Voltage 16V or 32V continuous
Max. current (at 70°C) 16 amps DC
Power Consumption Relay Off: 1.5 mA
Power Consumption Relay On: 92 mA (12V)
44 mA (24V)
16 gauge wire leads
Typical set points: (user adjustable)
12V On: 13.0 Volts Off: 12.1 Volts
24V On: 26.0 Volts Off: 24.2 Volts

General Specifications
Temperature range: -40°C to +70°C
-40°F to +160°F
Case: ABS case, sealed in epoxy
(except for voltage adjustment on back)
Weight: 125 grams
Size (H x W x D): 5.1 x 5.1 x 3.8 cm (2 x 2 x 1.5 ")
not including mounting tabs or switch
Mounting: wall mountable

Features & Options
Relay type. Built in load snubbing diode.
Optional CSA General Approval C22.2 14.
Or CSA Class I Div II, CD, T4
Alternate output on when voltage is low.

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 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 and is a member of the Canadian Solar Industry Association.

eco energy

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Installation Guide

LVD-16
12V and 24V

16 Amp Low Voltage Disconnect

Intelligent Charging Solutions

eco energy

LVD-16

This high performance low voltage disconnect increases battery life by preventing excessive battery discharge.

The controller turns on the load when the battery voltage is high. When the battery voltage is too low the control switches the load off. In this way the battery is protected from excessive discharge.

Excessive discharge reduces battery life and can cause batteries to freeze and crack at low temperatures.

Direct replacement for Bobier 16/8 LVD.

Features

- Low Battery consumption
- Extreme temperature range –40°C to +70°C (-40°F to +160°F)
- Encapsulated in epoxy potting
- Adjustable voltage set-point
- Manual momentary reconnect switch
- No radio interference
- 5 year warranty
- Designed and built in North America

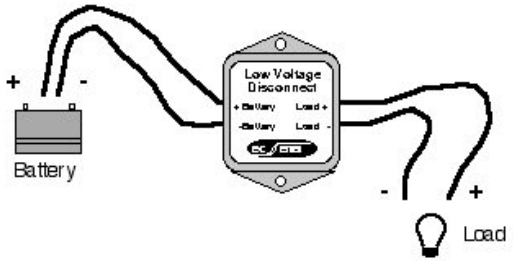
Installation

WARNING
Controllers should not be installed in the same enclosure as batteries as this is a corrosive environment.

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 an excessively hot location.

To ensure an accurate battery voltage measurement, the controller should be installed near the batteries, but not in the battery box.

Wiring
#16 AWG or larger wire must be used.



Operation

The controller keeps the load off until the battery voltage rises to a preset turn ON voltage. It then turns on the load. When the battery voltage drops to the OFF voltage the load is turned off, and stays off until the voltage returns to the ON voltage.

There is an adjustment on the back of the control that raises and lowers both of these set-points together. Turn clockwise to have the disconnect occur at a higher voltage, counter clockwise for a lower voltage.

The hystersis (the difference between the on and off voltages) is factory set, other values can be factory ordered.

There is a time delay built into the Low Voltage Disconnect that averages the battery voltage over time to help prevent a premature low voltage disconnect.

The manual reconnect switch is specially designed so as not to create any sparks for operation in hazardous atmospheres. When pressed, the switch turns on the load even if the battery voltage is low.

To increase the life of the relay, there is a built in diode across the load output. This increases the life of the controller when turning off motors or other inductive loads and also reduces any radio interference.

Basic Testing
A power supply can be put on the input (Battery+ and Battery-). The relay will turn on when the input reaches the turn ON set-point and turn off when the input voltage drops to the turn OFF set-point.