



A Benny Lee Company

PRODUCT USER GUIDE

LVD-24-100

24-Volt Battery Low Voltage Disconnect Owners Guide

(These instructions are intended for use by a technician familiar with electronic products)

- The Model LVD-24-100 is an automatic Low Voltage Disconnect that monitors battery voltage and disconnects the load when the voltage drops below 21.5 VDC.
- The LVD-24-100 is simple to install and maintenance free.
- 3 year warranty



DESCRIPTION

The LVD-24-100 is a 24 volt 100 Amps low voltage battery disconnects. The LVD-24-100 is pre-set to disconnect the load at 21.5 VDC. However, to prevent premature or false disconnect when the battery voltage drops below the 21.5-volt threshold, a 2-minute timer is started. If the battery recovers to above 25 volts, the timer resets and waits. The battery can and will recover if the system is a repeater or remote base station or similar equipment that has a varying demand that fluctuates from low to high current. The 2-minute delay ensures the battery is not disconnected until necessary to prevent damage.

After main power is restored and the battery is recharging, the LVD-24-100 will reconnect the load when the battery voltage exceeds 25 volts.

NOTE: The individual user should take care to determine, prior to use or installation, whether this device is suitable, adequate or safe for the use intended. Since individual applications are subject to great variation, DuraComm makes no representation or warranty as to the suitability, or fitness of these units for any specific application.

SPECIFICATIONS

Voltage Input Range	20 - 20 VDC Max
Current Capacity	100 Amps Max
Disconnect Voltage	21.5 VDC
Reconnect Voltage	25 VDC
Holding Current.....	400 mA
Size	8"W x 5"D x 3" H

INSTALLATION WARNING

WARNING: THERE ARE NO USER SERVICEABLE PARTS INSIDE. HAZARDOUS VOLTAGES EXIST INSIDE THE UNIT. SERVICE AND REPAIR MUST BE REFERRED TO QUALIFIED FACTORY PERSONNEL.

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INSTALLER NOTES

NOTE: DO NOT expose the unit to rain or moisture.

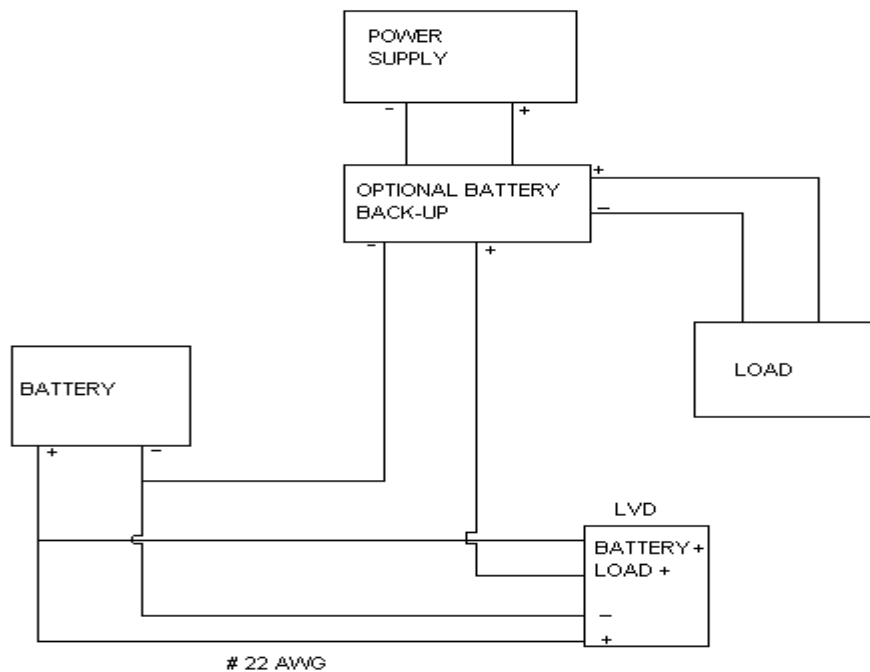
Connect the battery positive to the red terminal labeled, "Battery Positive (+)". Connect the load positive to the red terminal labeled, "Load Positive (+)".

Connect the two-position barrier screw terminal strip to the battery using hookup wire, from No. 22 gauge to No. 16 gauge. Observe proper polarity to prevent damage to the LVD circuitry.

The LVD-24-100 was adjusted and calibrated at the factory for correct voltages disconnect and re-connect. No adjustment is required.

CAUTION: Under no circumstances should more than 30 VDC be applied to the input. Permanent damage to the LVD-24-100 will result.

INSTALLATION BLOCK DIAGRAM



CONDUCTOR PRETREATMENT

All kinds of copper conductors can be clamped without treatment. DO NOT solder tin stranded conductors. The solder yields and fractures under high pressure. The result is increased contact resistance and excessive temperature rise. Additionally, corrosion has been observed due to the fluxes. Notch fractures at the transition from the rigid tinned part to the flexible conductors are also possible. Ferrules can be used as a protection when wiring stranded conductors. Copper ferrules prevent the current transfer from being influenced by dissimilar metals and remove the risk of corrosion. Always use the correct tool to crimp the ferrule.

RECOMMENDED COPPER WIRE SIZE FOR CURRENT CAPACITY

(Insulated Wire, Single Conductor in free air)

<u>Current Level in Amperes</u>	<u>Wire Size</u>
<7 AMPERES	20 AWG Up to 5 feet 18 AWG Up to 10 feet
14 AMPERES	18 AWG Up to 5 feet 16 AWG Up to 10 feet
20 AMPERES	16 AWG Up to 5 feet 14 AWG Up to 10 feet
30 AMPERES	14 AWG Up to 5 feet 12 AWG Up to 10 feet
40 AMPERES	12 AWG Up to 5 feet 10 AWG Up to 10 feet
50 AMPERES	10 AWG Up to 5 feet 8 AWG Up to 10 feet
70 AMPERES	8 AWG Up to 5 feet 6 AWG Up to 10 feet
100 AMPERES	6 AWG Up to 5 feet 4 AWG Up to 10 feet

LIMITED WARRANTY

DuraComm warrants to the initial end user, each power supply manufactured by DuraComm to be free from defects in material and workmanship, when in normal use and service for a period of three year from the date of purchase, from an authorized DuraComm dealer.

Should a product manufactured by DuraComm fail or malfunction due to manufacturing defect, or faulty component, DuraComm, at its option, will repair or replace the faulty product or parts thereof, which, after examination by DuraComm, prove to be defective or not operational according to specifications in effect at the time of sale to the initial end user. The product that is replaced or repaired under the provisions of this warranty, will be warranted for the remainder of the original warranty period, only, and will not extend into a new three year warranty period.

The limited warranty does not extend to any DuraComm product which has been subject to misuse, accidental damage, neglect, incorrect wiring not associated with manufacture, improper charging voltages, or any product which has had the serial number removed, altered, defaced, or changed in any way.

DuraComm reserves the right to change, alter, or improve the specifications of its products at any time, and by so doing, incurs no obligation to install or retrofit any such changes or improvements in or on products manufactured prior to inclusion of such changes.

DuraComm requires any product needing in or out of warranty service to be returned to DuraComm. All requests for warranty service must be accompanied by proof of purchase, such as bill of sale with purchase date identified. DuraComm is not responsible for any expenses or payments incurred for the removal of the product from its place of use, transportation or shipping expenses to the place of repair, or return expenses of a repaired or replacement product to its place of use.

The implied warranties which the law imposes on the sale of this product are expressly LIMITED, in duration, to the three (3) year time period specified herein. DuraComm will not be liable for damages, consequential or otherwise, resulting from the use and operation of this product, or from the breach of this LIMITED WARRANTY.

Some states do not allow limitations on the duration of the implied warranty or exclusions or limitations of incidental or consequential damages, so said limitations or exclusions may not apply to you. This warranty gives you specific legal rights which vary from state to state.

This warranty is given in lieu of all other warranties, whether expressed, implied, or by law. All other warranties, including WITHOUT LIMITATION, warranties of merchantability and fitness or suitability for a particular purpose, are specifically excluded. DuraComm reserves the right to change or modify its warranty and service programs without prior notice.

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