



# LVD-RM Series

## Rackmount Low Voltage Disconnect



- The LVD-RM Series are automatic Low Voltage Disconnects that monitor battery voltage and disconnect the load when the voltage drops below the preset disconnect voltage.
- Simple to install and maintenance free
- 3 year warranty

Models	LVD-12-RM	LVD-24-RM	LVD-48-RM
Battery Voltage	12 Volts	24 Volts	28 Volts
Input Voltage Range, maximum	15 VDC	35 VDC	60 VDC
Maximum Current, continuous	75 Amps		
Low Voltage Disconnect	10.0 VDC	20.0 VDC	42.0 VDC
Low Voltage Re-Connect	12.5 VDC	25.0 VDC	50.0 VDC
Holding Current	200 mA		
Dimensions, product	3.5 H x 19 W x 5.25 D inches		
Dimensions, shipping	7 H x 21 W x 10 D inches		
Weight, shipping	5 lbs.		

**\*NOTE: Specifications are subject to change without notice.**

## Table of Contents

Section 1   Important Safety Instructions .....	2
LVD-12-RM Specific Instructions .....	3
LVD-24-RM Specific Instructions .....	3
LVD-48-RM Specific Instructions .....	3
Section 2   Installation.....	4
Installation Block Diagram.....	4
Section 3   Maintenance.....	5
Conductor Pretreatment.....	5
Recommended Copper Wire Size for Current Capacity .....	5
Section 4   Warranty.....	6
Section 5   Contact Us .....	7

## Section 1 | Important Safety Instructions

**THESE INSTRUCTIONS ARE INTENDED FOR USE BY A TECHNICIAN FAMILIAR WITH ELECTRONIC PRODUCTS.**

**WARNING: There are no user serviceable parts inside. Service must be referred to a qualified factory technician or factory trained technician. DO NOT operate the unit in a hot, enclosed environment or compartment. Be sure adequate ventilation for cooling is provided since heat buildup will shorten component life.**

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

### **LVD-12-RM Specific Instructions**

The LVD-12-RM is pre-set to disconnect the load at 10 VDC. However, to prevent premature or false disconnect when the battery voltage drops below the 10-volt threshold, a 2-minute timer is started. If the battery recovers to above 10 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 the AC main power is restored and the battery is recharging, the LVD-12-RM will reconnect the load when the battery voltage exceeds 12.5 volts.

### **LVD-24-RM Specific Instructions**

The LVD-24-RM is pre-set to disconnect the load at 20 VDC. However, to prevent premature or false disconnect when the battery voltage drops below the 20-volt threshold, a 2-minute timer is started. If the battery recovers to above 20 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 the AC main power is restored and the battery is recharging, the LVD-24-RM will reconnect the load when the battery voltage exceeds 25 volts.

### **LVD-48-RM Specific Instructions**

The LVD-48-RM is pre-set to disconnect the load at 42 VDC. However, to prevent premature or false disconnect when the battery voltage drops below the 42-volt threshold, a 2-minute timer is started. If the battery recovers to above 42 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 the AC main power is restored and the battery is recharging, the LVD-48-RM will reconnect the load when the battery voltage exceeds 50 volts.

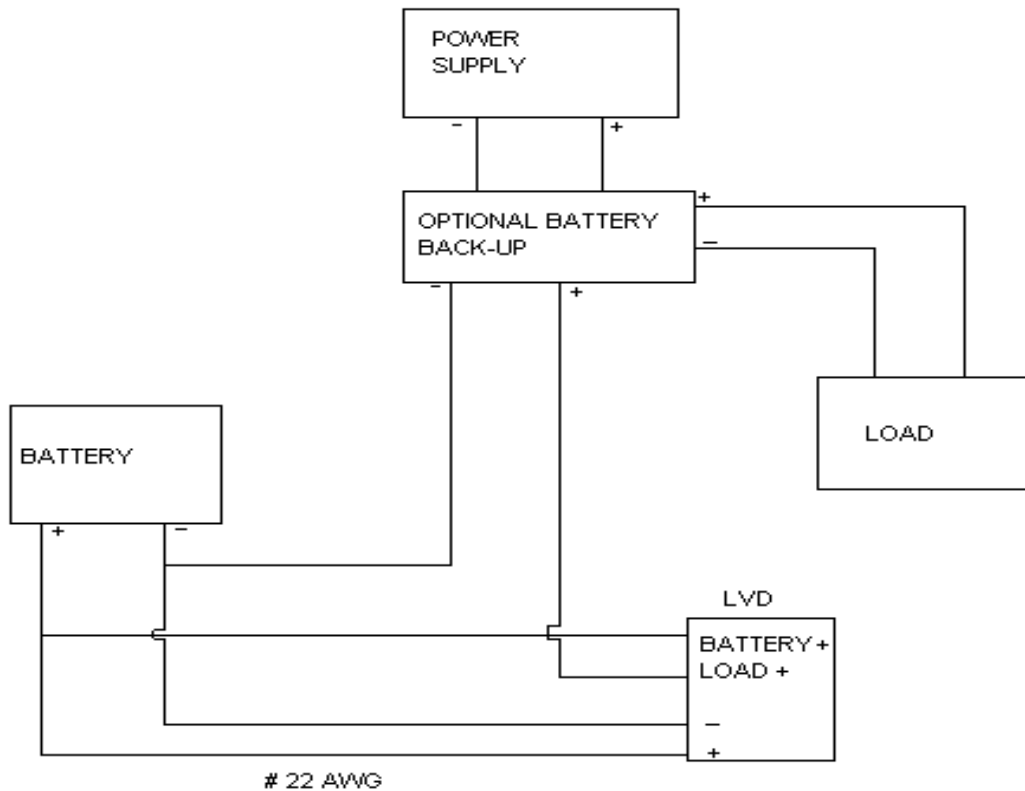
## Section 2 | Installation

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

1. Connect the battery positive to the red terminal labeled, “Battery Positive (+)”.
2. Connect the load positive to the red terminal labeled, “Load Positive (+)”.
3. 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-RM is adjusted and calibrated at the factory for correct voltages disconnect and re-connect. No additional adjustment is required.

### Installation Block Diagram



## Section 3 | Maintenance

### 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)

Current Level in Amperes	Wire Size Requirements According to MIL-W-5088B	
	Up to 5 feet	Up to 10 feet
<7 AMPERES	20 AWG	18 AWG
14 AMPERES	18 AWG	16 AWG
20 AMPERES	16 AWG	14 AWG
30 AMPERES	14 AWG	12 AWG
40 AMPERES	12 AWG	10 AWG
50 AMPERES	10 AWG	8 AWG
70 AMPERES	8 AWG	6 AWG
100 AMPERES	6 AWG	4 AWG

## Section 4 | 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 years 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 that 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.

## Section 5 | Contact Us

**Location**

6655 Troost Avenue  
Kansas City, MO. 64131

**Phone Numbers:**

816-472-5544  
800-467-6741

**Fax Number:**

816-472-0959

**Email Purchase Orders to**  
[order@duracomm.com](mailto:order@duracomm.com)

[www.DuraComm.com](http://www.DuraComm.com)

