

## INTRODUCTION

The **DP10** and **DP20** are Low Voltage Disconnects (LVD) designed to extend the life of your battery by preventing damaging over-discharge. They can also protect valuable instruments and equipment from potentially damaging low voltage conditions. The LVD is installed between the battery and the load and it disconnects the negative load lead from the negative battery terminal when the disconnect voltage is reached. When installed in parallel with a battery charger, the LVD will automatically reconnect the load after the battery is about 50% charged.

The LVD has a single mounting hole through the center. Two-sided tape may also be used to easily mount it to almost any surface. The LVD uses 0.250" PCB tabs for use with 0.250" quick-disconnect connectors. The electronics are potted for rugged industrial applications. Rather than using mechanical relays that can wear out and draw large currents, these LVD's use semiconductor devices for a lifetime of worry free use.

Models incorporating an onboard audible alarm or headers for remote audible and visual alarms are available to provide sixty seconds warning before the load is disconnected.

## BENEFITS

- Saves battery replacement costs
- Improved battery performance and reliability
- Increased battery life
- Prevents reverse polarity charging of cells
- Minimizes battery pack temperature rise
- Improved equipment performance
- Allows safe, unattended discharge of battery

## FEATURES

- Maximum surge current of twice rating for five seconds
- Works with most battery types (lead-acid and nickel-based are standard)
- Disconnect voltage adjusted to customer specification
- Easy mounting using hardware or two-sided tape
- Audible and visual alarms available

## ACCESSORIES (for alarm models)

- LVD-REDLED      Red Super-Bright LED on 12" long cable (with panel lens)
- LVD-BEEPER      Remote Beeper provided on 12" long cable



**SPECIFICATIONS**

General Conditions: Ambient Temperature = 25 °C (77 °F)

|                                |                              |                        |
|--------------------------------|------------------------------|------------------------|
| Model Number                   | DP10                         | DP20                   |
| Maximum Continuous Current     | 10 A                         | 20 A                   |
| Maximum Surge Current (5 sec.) | 20 A                         | 40 A                   |
| Quiescent Current              | ~2.5 mA                      |                        |
| Maximum Voltage (breakdown)    | 40 V peak                    |                        |
| Disconnect Delay               | 3 sec.                       |                        |
| Operating Temperature          | 0 to 60 °C (32 to 140 °F)    |                        |
| Storage Temperature            | -40 to 80 °C (-40 to 176 °F) |                        |
| Dimensions                     | L 2.05" x W 2.05" x H 1.0"   |                        |
| Weight                         | Approx. 2 oz.                |                        |
| Terminals                      | 0.250" x 0.032" PCB tab      |                        |
| Battery Type                   | Lead-Acid                    | NiCd & NiMH            |
| Standard Disconnect Voltage    | 1.75 V/cell                  | 1 V/cell               |
| Custom Disconnect Voltage      | 1.3 to 2 V/cell              | 0.6 to 1.2 V/cell      |
| Reset Voltage                  | 2.1 V/cell                   | 1.3 V/cell             |
| Battery                        | 6 to 24 V (3-12 cells)       | 6 to 24 V (5-20 cells) |

**DIMENSIONS**

