

Power Management



Special Design Features

- Automatically disconnects non-critical loads from the battery(ies) to prevent excessive battery discharge
- Automatically reconnects loads if vehicle is started or battery is recharged
- Start Signal Input override to prevent the loads from disconnecting during starting
- Manual override for connecting or disconnecting during emergencies
- Selectable Pre-set models available ranging from 9.0V to 25.0V
- Audible or visual alarm output activates 1 minute before disconnect
- Maximum load current, models up to 300 amps and thermally protected
- 100% Solid-State logic and switching circuitry on most models
- Fully protected
- Low standby current

Intelligent Battery Saving Devices

The Sure Power 13000 family of Low Voltage Disconnects (LVD) is a 100% solid-state electronic protection module which disconnects predetermined auxiliary loads from the starting battery bank to ensure enough power is left in the batteries for starting. A micro-controller senses battery voltage. During normal operation when the battery is sufficiently charged, the LVD connects the loads. Once the battery voltage reaches the shut-off set point, the auxiliary loads are automatically disconnected from the battery(ies) preventing further battery drain. Sure Power has taken steps to prevent false triggering from transient conditions. The LVD will automatically reconnect the loads once the battery reaches 13.0V, or if the starter input or the manual override input is activated.

For low standby current drain, the LVDs consist of 100% solid-state circuitry which uses 8mA or less support current (certain systems use a solid-state control with a relay or solenoid for load switching which draws as much as 300 to 750mA to keep the loads connected). This will reduce the usable power from the battery as much as 22 to 54 amp hours over a three-day weekend just to support the disconnect.

Additional features include up to a 120 second turn off delay, 1 second turn on delay, an alarm output, optional start override, optional manual override, short-circuit protection, overcurrent protection, transient suppression, thermal (over temperature) protection, and ambient temperature operation of -40°C to +85°C.

The Sure Power family of LVDs is ideally suited for applications such as Class 8 heavy-duty trucking sleeper cab loads. It is adaptable to existing 3+1 systems or ideal for 3+0 or 4+0 systems since it does not require differing or special types of batteries. All batteries can be tied together in one common bank. Other applications include marine cabin loads, RV accessories and other devices requiring prioritized load switching.

The Sure Power 3100 family of Low Voltage Disconnects incorporates the same level of sophisticated control, but uses a heavy-duty bi-stable relay for switching much higher current.

MODEL	DISCONNECT VOLTAGE	CURRENT	DESCRIPTION
1001	Adjustable 11.1V to 12.5V	NA	Low Battery Alarm
130512	Adjustable 9.0V to 12.15V	20A	Low Voltage Switch
133121070	12.1V	70A	Solid-State Low Voltage Disconnect, V_{in} and V_{out}
133123070	12.3V	70A	Connections with Deutsch Connectors
137121100	12.1V	100A	
137123050	12.3V	50A	Solid-State Low Voltage Disconnect, Connections with 8mm Studs
137123100	12.3V	100A	
1381180706	11.8V	70A	CAN Capable / 6 Gauge Wire
1381180708	11.8V	70A	CAN Capable / 8 Gauge Wire
3103	25V	300A	24v Low Voltage Disconnect
3104/3105	12.3V	300A	12v Low Voltage Disconnect
3108		300A	24v Disconnect W/ 1hr Disconnect