



**100 Amp 12/24 volt
Battery Low Volt Disconnect
part 0-852-10**

WARNING!

This unit is only suitable for 9-32 volt electrical systems. The unit must be connected in the order described below. Failure to do this may result in damage to the unit.

Operation

The battery low voltage disconnect guards against excessive battery discharge by disconnecting auxillary loads at a preset disconnect voltage. Ten seconds after the voltage falls below the preset disconnect voltage the alarm output activates. If the voltage remains below the disconnect voltage for a further 50 sec the device will disconnect the auxillary load and deactivate the alarm. If the voltage subsequently rises above the reconnect voltage the device will reconnect the auxillary load. The device will also disconnect the load if the voltage exceeds 16v on a 12v system and 32v on a 24v system. The device automatically senses the system voltage, however if it is connected to a heavily discharged 24v system, i.e. below 20v, it will sense a 12v system. External switches can be connected to manually disconnect the output and override the automatic disconnect.

Installation Instructions

Read all installation instructions before attempting to install the Battery Low Volt Disconnect. An installation wiring diagram is shown on the reverse of this leaflet.

1. Select a cool and ventilated position to install the device which is not exposed to direct sunlight.
2. Mount as close to the battery as possible using a wire of sufficient capacity, minimum of 20.0mm² is recommended for short runs.
3. Isolate the power to the wiring before commencing installation.
4. Mount using the three mounting holes with screws or bolts.
5. Connect the "ground" terminal.
6. Connect the "input positive" terminal.
7. If required program the unit as described below.
8. Connect the "output positive" once no further programming is required.
9. Connect the alarm if required, if the alarm requires greater than 500mA then a relay with a free wheeling diode must be fitted to prevent damage to the device. Our 0-727-14 (12v) or 0-727-26 (24v) would be suitable.
10. Connect the switches if required.

The override function can be used to force the device to reconnect the output for 4 minutes to allow emergency actions to be performed. This will only function if the battery voltage is above 8.5v. To use the override function, connect the "override" terminal to the negative terminal of the battery, using a momentary switch, for 10 seconds and the device will reconnect the output.

Programming

The device will be set to the factory default, see overleaf for the settings. If you require a different setting the device can be reprogrammed as follows:

1. Remove the "input positive" crimp connector just enough to reveal the "input positive" terminal.
2. Temporarily connect together the "input positive" and the "program" terminal using the programming lead supplied to select P1 to P10.
3. The LED will start to flash, the number of flashes indicates the program selected.
4. Keep the connection until the LED has flashed the number of times for the desired program then remove the connection.
5. The LED will then flash the number of times to confirm the selected program.
6. Repeat the process above to select P11 to P14, the device will remember the P1 to P10 already set.



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Program Modes

P1 to P10 are the voltage operating modes, see table below.

P11 is the default alarm mode. The alarm output will activate after a 10 sec delay if the voltage falls below the disconnect voltage. It will deactivate if the voltage rises above the disconnect voltage or after 60 seconds below the disconnect voltage. The alarm will activate in pulse mode if the voltage rises above 16v for a 12v system and 32v for a 24v system.

P12 the alarm will activate constantly after a 10 sec delay if the voltage falls below the disconnect voltage. It will deactivate if the voltage rises above the reconnect voltage. The alarm will not activate if the voltage rises above the over-voltage protection limit. This mode is designed to be used where external battery charger is used.

P13 The output is disconnected when the switch terminal is connected to the negative terminal of the battery.

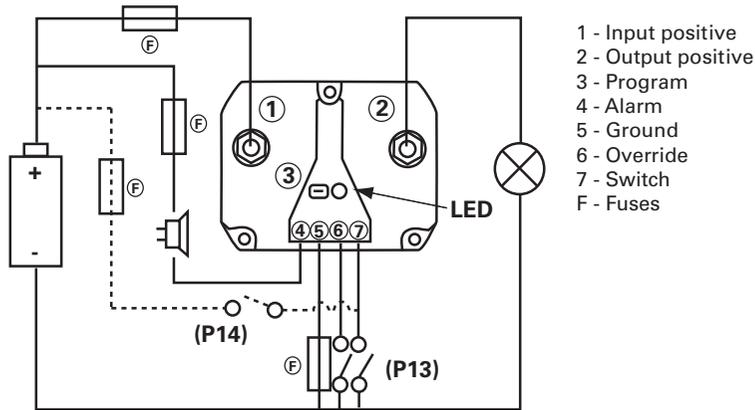
P14 The output is disconnected when the switch terminal is connected to the positive terminal of the battery.

Safety

This device is designed for auxillary equipment only, it must not be used to disconnect equipment that is critical to the safe operation of the vehicle.

The device should not be exposed to; severe mechanical shock, extreme temperature, direct sunlight, vigorous vibration, near hot parts.

The device should be; used within a dry environment, have sufficient space around it for cooling, protection fuses fitted (The ground fuse should be a maximum of 500mA to 1A, other fuses appropriate to the load).



- 1 - Input positive
- 2 - Output positive
- 3 - Program
- 4 - Alarm
- 5 - Ground
- 6 - Override
- 7 - Switch
- F - Fuses

PROGRAM MODES

Program Number	12V		24V	
	Disconnect	Reconnect	Disconnect	Reconnect
P1	10.5V	12V	21V	24V
P2	10V	11.5V	20V	23V
P3	9.5V	11.5V	19V	23V
P4	11V	13.5V	22.5V	26.5V
P5	11.5V	13.5V	23V	27.5V
P6	10.5V	12.5V	21V	25V
P7*	11.5V	12.5V	23V	25.5V
P8	11V	12.5V	23.5V	25.5V
P9	12V	13V	24V	26V
P10	10V	13V	20V	26.5V
P11*	Alarm Mode = Normal			
P12	Alarm Mode = Battery Charger Enable			
P13*	Switch Mode = Low			
P14	Switch Mode = High			

*Factory Default Settings

Program Modes

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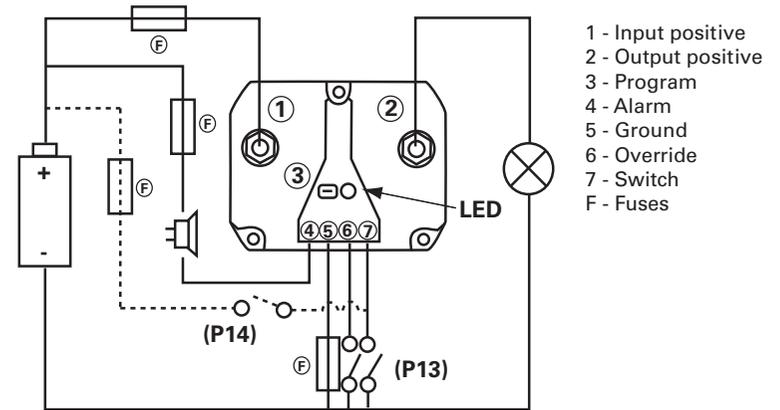
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PROGRAM MODES

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	Disconnect	Reconnect	Disconnect	Reconnect
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P2	10V	11.5V	20V	23V
P3	9.5V	11.5V	19V	23V
P4	11V	13.5V	22.5V	26.5V
P5	11.5V	13.5V	23V	27.5V
P6	10.5V	12.5V	21V	25V
P7*	11.5V	12.5V	23V	25.5V
P8	11V	12.5V	23.5V	25.5V
P9	12V	13V	24V	26V
P10	10V	13V	20V	26.5V
P11*	Alarm Mode = Normal			
P12	Alarm Mode = Battery Charger Enable			
P13*	Switch Mode = Low			
P14	Switch Mode = High			

*Factory Default Settings