

# 37619-MI

## Battery Low Voltage Protection Module

Non-isolated, DC voltage disconnect relay module for preventing over discharge of lithium and lead-acid batteries. Adjustable cutoff and reconnect voltages. Relay opens when Input voltage drops below set limit, closes when input reaches the adjustable restart value.

0-10 minutes Adjustable reconnect delay.

Rated: 12-36V Batteries

Max Voltage: 60VDC

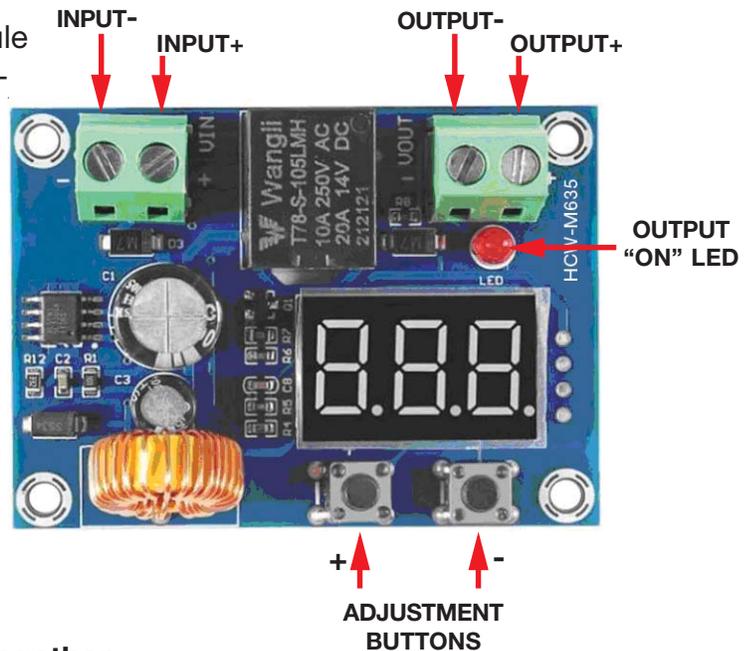
Relay Rated: 20A max @ 14VDC/125VAC

Output voltage: same as Input voltage

Control Accuracy: 0.1V

Power consumption: <1.5W

L: 2-1/4" W: 1-5/8" H: 3/4" WT: .08



### NOTE: Non-Isolated

Input - and Output - are internally connected together

Module draws power as long as connected to battery even if Load is Disconnected

This Cutoff Module operates with 1 Absolute Value (Low Voltage Cutoff) AND 1 Difference Value (Hysteresis)

### Setting Cutoff Voltage:

Press "+" Button once to display the present value, double-click the "+" Button, the decimal point flashes, then press "+" or "-" to adjust the value. After no operation for ~3 seconds, the module will save and exit the Set Mode.

### Setting Reconnect Voltage (Hysteresis):

NOTE: Important!!

You set a value that is **Added** to the Low Voltage Cutoff value;

Ex: if Cutoff is set for 11.0V and you want to Reconnect load at 13.5V:

You set this value to 2.5V (11 + 2.5=13.5)

Press "-" Button once to display the present value, double-click the "-" Button, the decimal point flashes, then press "+" or "-" to adjust the value. After no operation for ~3 seconds, the module will save and exit the Set Mode.

**DO NOT** set the Reconnect Voltage same or close to Cutoff Voltage as any loading may cause a voltage drop and the relay will oscillate on/off rapidly (Chatter) and could damage load or module.

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## Battery Low Voltage Protection Module

### Setting Delay Time: 0-10min (1min Steps)

Long press the “-” Button until the Display flashes, then press the “+” or “-” button to set the Reconnect Delay value “T” (Time after reaching Reconnect Voltage Value before Load is Connected). When the Battery voltage reaches the reconnect value, it will delay “T” minutes until the load is reconnected.

The delay time range from 000 to 010 minutes, and it displays like: 000 or 001 or 005 or 010. Note: No decimal point is displayed.

Examples:: 1: Disconnect when the Battery voltage is lower than 11V and reconnect when the Voltage is over 12.5V. No Delay  
Long press “+” Button until the Display starts flashing, press the “+” or “-” button to set the value at 11V. After the flashing stops, long press “-” and the Display is flashing, press the “+” or “-” button to set the difference value as 1.5 V. Wait for ~3 seconds, the module will save and exit the Set Mode.

2. Disconnect when the Battery Voltage is lower than 11V and the reconnect when the Voltage is over 12.5V, with a delay of 2 minutes.

SET AS 1: Above:

Long press a the “-” Button, Display flashes, press the “+” or “-” Button to set T=2.

Wait for ~3 seconds, the module will save and exit the Set Mode.

### Reset:

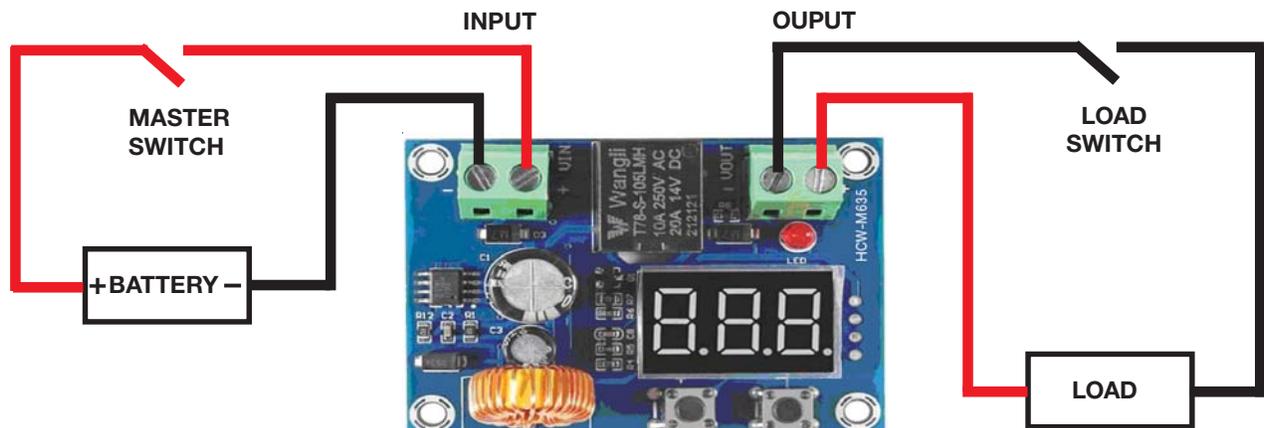
Return to factory default settings: (Cutoff 12V, difference (Hysteresis): 2V)

Remove power from module, press and hold both buttons at the same time, and then turn power ON. At this time, “888” is displayed on the display to indicate that the factory reset is successful.

### Meter Calibration:

Apply a known accurate Voltage to the input.

Press & Hold “+” Button, Display flashes, Press the “+” or “-” button to match the input voltage.



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