

CZH-LABS Electronics-Salon

30Amp Automatic Low Voltage Disconnect Module (LVD)

Model: D-1021

Version: 3.0 (Aug-25, 2020)



Features:

- To protect electronics from damaging low voltages and prevent a deep discharge of a battery during an extended power outage, the LVD module will automatically disconnect the battery when the voltage falls below the user adjustable cutoff voltage. When power is restored the Smart Switch will automatically reconnect the battery. thereby protecting the battery from total discharge (helping to prolong the life of the battery). Applications for Solar systems, Alarm systems, UPS systems, Mobile systems, or any application where you need to protect the battery from total discharge.
- Programmable voltage setting for Disconnect and Reconnect (rocker switch set to AUTO). With emergency ON or OFF function, if you want switch output to be immediate and remain ON or OFF, you can set rocker switch to ON or OFF.
- Set rocker switch to AUTO, when the battery voltage drops to less than or equal Disconnect Value and continuously held for 5 seconds, load switch will OFF. When the battery voltage rise to greater than or equal Reconnect Value and continuously held for 5 seconds, load switch will return to ON state. this will better prevent malfunction.
- Based on Microcontroller and MOSFET (on status resistance < 0.003 ohm), more precise voltage, smart and long life switch output. Green-red dual color LED indication for output switch ON and OFF.

Voltage Version List:

Part number	Output Switch Type	Suitable Battery	Rated Current
MD-D1021/12V-1	P Channel MOSFETs Switch V+, Common V-	12V	30 Amp
MD-D1021/18V-1		18V	
MD-D1021/24V-1		24V	
MD-D1021/36V-1	N Channel MOSFET Switch V-, Common V+	36V	
MD-D1021/48V-1		48V	

Specifications:

	12V	18V	24V	36V	48V
Operating voltage	6 ~ 18 VDC	9 ~ 28VDC	10 ~ 32 VDC	13 ~ 48 VDC	18 ~ 60 VDC
Rated current	30 Amp				
Quiescent current (Load switch off)	1.8 ~ 2.2mA			1.8 ~ 2.2mA	
Quiescent current (Load switch on)	9.5 ~ 10.5mA			6.5 ~ 7.5mA	
Disconnect voltage	10.0, 10.7, 11.4, 12.1 Vdc Programmable	15.0, 16.0, 17.0, 18.0 Vdc Programmable	20.0, 21.4, 22.8, 24.2 Vdc Programmable	30.0, 32.1, 34.2, 36.3 Vdc Programmable	40.0, 42.8, 45.6, 48.4 Vdc Programmable
Reconnect voltage	10.7, 11.4, 12.1, 12.8 Vdc Programmable	18.0, 19.0, 20.0, 21.0 Vdc Programmable	21.4, 22.8, 24.2, 25.6 Vdc Programmable	32.1, 34.2, 36.3, 38.4 Vdc Programmable	42.8, 45.6, 48.4, 51.2 Vdc Programmable
Default setting Disconnect / Reconnect	10.0Vdc / 11.4Vdc	17.0Vdc / 18.0Vdc	20.0Vdc / 22.8Vdc	30.0Vdc / 34.2Vdc	40.0Vdc / 45.6Vdc
Disconnect / Reconnect Voltage Tolerance	+/- 0.1Vdc (max.)			+/- 0.2Vdc (max.)	
Load Switch ON Status Resistance	0.0023 ohm			0.003 ohm	
Disconnect / Reconnect LED state	Red / Green				
Terminal block wire	26 ~ 10AWG, 5.26mm square				

NOTE:

- 1, Setting disconnect and reconnect values, reconnect value must more than disconnect value.
- 2, Do not reverse connect battery polarity, otherwise it will damage battery or the module.

Terminal Block Connects:

- B+ : Connect battery positive.
- B- : Connect battery negative.
- L+ : Connect load positive.
- L- : Connect load negative.

Dimensions

