



AN ISO 9001-2008 CERTIFIED COMPANY

McUD30

Microcontroller based
6V/2A Solar Charge Controller
For Small Power Requirements

Useful for small power requirements of upto 2A capacity. Two variants available. With or without Dusk to Dawn operation. Built-in high efficiency LED driver. Suitable for a desired battery type, Lead Acid, SMF, Lithium Ion or Lithium Iron Phosphate.

6V OPERATION

PANEL: 6V/15Wp max

* McUD30-105H

1. Solar Charge Controller without D2D operation. Without LED driver.
2. Output current 2A max
3. Output overload/short circuit protection. Auto reset after 5 sec.

*McUD30-105D

1. Solar Charge Controller with D2D operation with high efficiency LED driver
2. Drive current 700 mA max (factory set as per requirement)

Salient Features:

- ⊗ Max Input Charging Current 2A
- ⊗ Max Output load current 2A
- ⊗ Either Normal or Dusk to dawn operation
- ⊗ With or without LED driver
- ⊗ Fully Electronic Fuse-less protections against reverse panel and reverse battery connections.
- ⊗ Battery charging/discharging algorithm for specific battery type. Lead Acid, SMF, Lilon, LiFePO4 for extended battery life
- ⊗ Indications for battery and charging status for easy diagnosis
- ⊗ Protections against over-charge and deep-discharge of battery.
- ⊗ Protections against over voltage
- ⊗ Automatic shut down of circuit if output overload/short circuit.
- ⊗ Auto reset and check for overload condition after 5 sec
- ⊗ Dimensions 60 L x 60 W x 25 H (mm)

OPERATION:

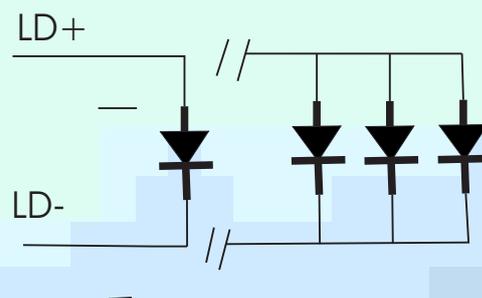
It has six way terminal block for connections to Panel, battery and load as marked on it. Battery status indicator is bicolour LED which turns green when battery voltage is at least LVR and supply is available at the output. This bicolour LED (RED part) starts blinking the moment battery voltage goes below LVR till it reaches LVD when it turns Red and load is disconnected. Unless battery is charged to at least LVR, load will not be on. When panel is connected and panel voltage is more than battery voltage, Charging LED will turn green indicating positive charging of battery. When battery is charged to full, it will blink. When battery reaches its upper limit HVD, it will go in absorption mode. For any reason, battery goes above HVD, bicolour LED will alternately blink Red and Green and circuitry is disabled. This will also happen if 12V battery is connected indicating very high voltage is given to the circuit.

Thus circuit works only in the battery voltage range from LVD to HVD.

In dusk to dawn version 105D, LED driver current is set (factory setting only) to any value upto 700mA to drive LED load.

In normal version 105H, output dc is available when battery is in the same range LVD to HVD. The only difference is that dc is available even with panel voltage being available for charging as well. If load current exceeds 2A, supply is instantly disconnected and bicolour LED turns green and red alternately as a visual indication. After 5 sec, it automatically checks again if overload condition is removed. If yes, supply is again given to the load and blinking is stopped.

Recommended LED connection in V 105D
LED Vf should be 2.7V to 4V
Number of parallel LEDs as per requirement



MFG BY:
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