



McH10Si PWM SOLAR CHARGE CONTROLLER

McH10Si is Solar Charge Controller with series regulation. Its control circuitry is extremely efficient. It not only charges the battery from solar panel in the optimum way using the fullest power without loss but maintains the highest SOC of the battery under charge. Input losses are practically negligible due to high efficiency charging in a series mode. Similarly battery loss in load circuit is less than 3% making it better than 97% efficient. It comes with all protections in input and output circuitry in the worst case fault conditions. Battery charging with temperature compensation is available as optional.

It comes equipped with unique panel sensing circuitry. It activates charging only when power from panel is available. The unit comes with self diagnostic features for detailed operational states. Multifunctional indicators instantly display all the operations.

Its PWM mode of charging keeps the battery in excellent SOC to have prolonged life of battery. Optional temperature compensation further enhances the charging.

Salient Specifications:

SYSTEM:	12V
CAPACITY:	Panel 150Wp Max, Load 10 A Max
REGULATION:	LOW LOSS, SERIES TYPE
NLC:	No Load Current/Quiescent current < 5mA
OVD:	Output Voltage Drop < 300mV at 10A load
IVD:	Input Voltage Drop < 300mV at 10A charge
LVD:	Low Voltage Disconnect, 11.4V
HVD:	High Voltage Disconnect, 14.4V
LVR:	Low Voltage Reconnect, 12.7V
HVR:	High Voltage Reconnect, 14.35V

PROTECTIONS: Short circuit and overload at load
Over current from panel
Reverse polarity of Battery and Panel
Reverse current flow from battery to panel
Lightening protection in panel circuit

ON BOARD BACK UP FUSE: 25 A

APPLICATION: IN DOOR USE ONLY.

AMBIENCE: Operating Temp 0 to 50 Deg C, 90% RH

DIMENSIONS: 145 L x 98 W x 30 H (all dim in mm)

WEIGHT: 200 gms

Indicators and Controls:

RST : Reset switch. When load exceeds the rated capacity, supply to the output terminals is disconnected. Remove the fault condition of overload or short. Press RST to restore the supply.

NML/OVR : Bicolour LED. When battery voltage is available at output terminals, it turns Green. If overload conditions, it turns Red. RST switch will bring back it to Green under proper loads.

CHRG : Bicolour LED. 1. Green: When panel is connected properly and voltage is more than 12V. Slow flicker continuous.

2. Amber: Battery voltage is more than HVD. (Over Voltage of Battery)

Absorption mode started.

3. Amber flickering: PWM charging.

4. Red: Panel connected in reverse

5. Red flickering: Panel voltage is very low / battery not connected.

BTLO : Red LED. When battery voltage is less than LVD level, it turns on and disconnects the supply to the load. It will be on only when battery is charged above LVR level.

When battery is connected for the first time, its voltage must be more than LVR to have supply at output. If BTLO is on, battery must be charged first through panel. Once in loop, battery will work between LVD and HVD as specified.