



McUH273

20A Solar Charge Controller
RS 485 Data Port



Conforms to IEC 62093



PROTECTIONS:

- Full Electronic protection against over load or short circuits.
- Protections against deep discharge and over charge of battery.
- Protections against reverse flow of current from battery to panel during night.
- Protections against lightening.
- Epoxy coating of electronics for protections against humidity and dust.

SELF DIAGNOSTIC LED INDICATORS

- Bicolour LED for battery status
- Two different LED indicators for charge status and overload condition.

MODE OF OPERATION

User selectable on board

- Normal mode (Load will be on day and night.
- Dusk to Dawn mode (Load will be on only during night .

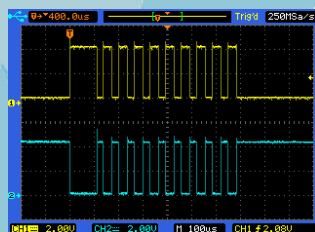
BATTERY TYPE SELECTION

Select the type of battery Li Ion or LFP

AUX: Battery is continuously available irrespective of mode selection or battery level. Output limited to 2A max.

DATA: Available in the form 9600 801

RS 485 (Optional):



LONGER BATTERY LIFE

- PWM algorithm for SMF battery charging for better SOC
- Battery specific algorithm for charging Lithium batteries
- Low voltage disconnect of load from battery.
- Over voltage disconnect of battery from panel.

SAVES ENERGY

- High efficiency series control to regulate the battery and load.
- Extremely efficient and low loss Mosfets to save battery power.

EASE OF INSTALLATION AND USE

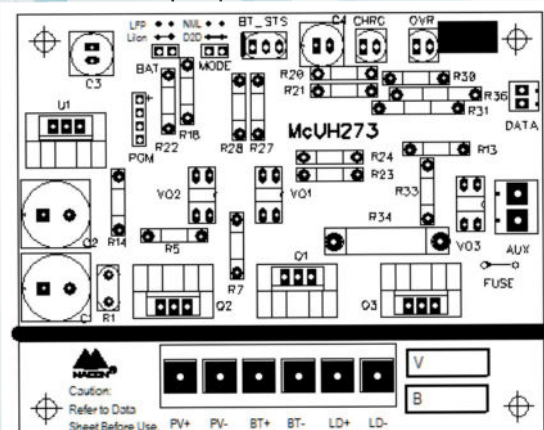
- Industrial grade sheet metal enclosure.
- Easily accessible terminals for connections.

QUALITY CONTROL AND CERTIFICATION

- 100% pre-shipment testing of each controller
- Conforms to IEC 62093 to assure the reliability

If link, Li Ion battery
If no link, LFP battery

If link, D2D operation
If no link, normal operation





LED INDICATORS:

OVER LOAD: RED LED

CHARGING: Green LED stable on.
Bat Fully Charged: LED blinking

BAT STATUS :

- ➔ Bat Low: RED stable
- ➔ Bat Reserve: RED blinking (below LVR)
- ➔ Bat Healthy: GREEN stable (above LVR)
- ➔ Over Voltage: RED and GREEN blinking alternately.

6-WAY TERMINAL :

On board connector marked PV+, PV-, BT+, BT-, LD+ and LD- to make connections to Solar, battery and load.

SELECTABLE SETTINGS:

BAT_SEL:

With Link: Li Ion.
No Link: LFP/SMF.

MODE:

With Link: Dusk to Dawn operation.
No Link: Normal operation.



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SYSTEM:	12/24 V		
CAPACITY:	Solar Panel: 12V: 350 W/ 20 A 24V: 650 W/ 20 A Load: 20 A		
REGULATION:	Low Loss, Series Type		
OUTPUT VOLTAGE DROP:	<250mV at 20A (OVD)		
INPUT VOLTAGE DROP:	<400mV at 20A (IVD)		
BATTERY OPERATION (Based on selection of Link) Or Customized as optional	BATTERY TYPE		
	Lead Acid 12V 24V	Li Ion 11.1V 22.2V	LFP 12.8 25.6V
LOW VOLTAGE PROTECT:	9.5 V 18.5V	8 V 16 V	10 V 20 V
LOW VOLTAGE DISCONNECT:	10.7 V 21.5 V	9.6 V 19 V	11.2 V 22.5 V
LOW VOLTAGE RECONNECT:	12.3 V 24.5 V	11.2 V 22.5 V	13.2 V 26 V
HIGH VOLTAGE DISCONNECT:	14.4 V 28.5 V	12.6 V 25.5 V	14.4 V 29 V
HIGH VOLTAGE RECONNECT:	14.3 V 28 V	12.3 V 25 V	13.8 V 27.5 V
HIGH VOLTAGE PROTECTION:	15 V 30 V	13.5 V 26.5 V	15 V 30 V
DUSK_SENSE	Panel Voltage <2V <5V		
DAWN_SENSE	Panel Voltage > 4V, 10sec delay >8V . 10 sec delay		
PROTECTIONS:	*Short Circuit / Overload *Reverse Battery *Reverse Solar Panel *Reverse flow of current from Battery to Panel during night *Lightening		
Electronic shutdown	If load>20A, load off and checks after 5 seconds automatically		
APPLICATION;	In Door Use Only		
OPERATING TEMP RANGE;	0 to 60° C		
DIMENSIONS: (Enclosure)	155 L x90 W x 45 H (all dim in mm)		