

SPECIFICATIONS	PARAMETERS	
System Rating	10A @ 12V / 24V	
Technology	PWM	
Maximum Solar Panel Wattage	200Wp @ 12V	400Wp @ 24V
Maximum Solar Panel Voltage	45V	
Low Voltage Disconnect:		
a) By state of Charge	10.25-10.75V	20.5-21.5V
b) Controlled by Voltage	10.25V±1%	20.50V±1%
Load Reconnect	12.0V±1%	24.0V±1%
Boost Voltage:		
a) For Lead Acid	14.50V±1%	29.0V±1%
b) For SMF	14.20V±1%	28.40V±1%
Float Voltage	13.8V±1%	27.6V±1%
Self Consumption	Less than 20mA	
Efficiency:		
a) Charging	>96%	
b) Load	>96%	
Operating Temperature Range	0° C to +50° C	
Dimensions (mm)	138 x 57 x 129 (L x W x H)	
Power Connection	30A Euro Terminal Block	
Wire Size	6mm ² Maximum	
Grounding	Positive	
Net Weight	280 gms	
Enclosure	ABS Plastic, IP21	

LIABILITY EXCLUSION

The manufacturer will not be liable for damages especially on the battery, caused by use other than as intended or as mentioned in this manual or if recommendations of the battery manufacturer are neglected. The manufacturer shall not be liable if there has been service or repair carried out by any unauthorized person and bad system design due to wrong installation.

LUMINOUS POWER TECHNOLOGIES PVT. LTD. reserves the right to make changes in design and specifications without notice.

4

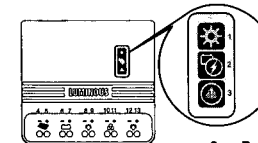
PRN-MN-057-00

Dear Customer,

Thank you for buying luminous Solar Charge Controller. Please read the instructions carefully and thoroughly before using this product.

This Charge Controller is designed to protect your 12V & 24V VRLA or Flooded Lead Acid Batteries from being overcharged as well as discharge of the battery. This Product is designed to work with all types/makes of 12V & 24V Solar Panels.#

DISPLAY PANEL INFORMATION SCC 1210NM-EX



- | | |
|--------------------------|---------------------------|
| 1 – Solar LED | 2 – Battery SOC LED |
| 3 – Fault LED | 4 – PV Terminal - VE |
| 5 – PV Terminal +VE | 6 – Battery Terminal - VE |
| 7 – Battery Terminal +VE | 8 – Load-1 Terminal - VE |
| 9 – Load-1 Terminal +VE | 10 – Load-2 Terminal - VE |
| 11 – Load-2 Terminal +VE | 12 – Load-3 Terminal - VE |
| 13 – Load-3 Terminal +VE | |

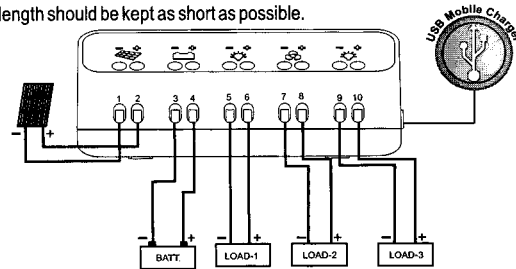
Salient Feature

- In built USB port for mobile phone charging.
- Microcontroller based designs for intelligent operation.
- Equipped with user friendly graphical indicators.
- PWM based technology and charging algorithm suitable for all of VRLA and flooded batteries.
- Equipped with 3 Load outputs.
- Automatic battery voltage selection of 12/24V.
- 3 stage charging (bulk, boost and float).
- Highly efficient with all in-built electrical protections.
- Inbuilt 10Amps. real Load Controller with Battery protection.
- Case Protection: IP21.

1

PRN-MN-057-00

- Connect PV, Battery & Load wires in order indicated 1,2,3,4,5,6,7,8,9,10 in fig. as per color coding to avoid installation faults.
- To avoid any damages, first connect the wire to the controller, then to the battery, panel or load.
- If any grounding is required, always do this on the positive wires.
- Recommended maximum wire size: 6mm².
- The wire length should be kept as short as possible.



DEFAULT SETTINGS

Parameters	Factory Settings
Low Voltage Disconnect	Voltage Controlled ¹
Battery type	Lead Acid ²
Boost Voltage	14.5V@12V / 29.0V@24V
Float Voltage	13.8V@12V / 27.6V@24V

- Note: 1) To select SOC controlled LVD, short jumper JP2 in PCB
 2) To select SMF battery type, short jumper JP3 in PCB

* JP2 & JP3 are mounted on PCB & plugs are available in back side of cabinet.

Recommended panel for 12V Battery operation. 40Wp to 200Wp.

Recommended panel for 24V Battery operation. 75Wp to 400Wp.

2

PROTECTIONS

	Solar Terminal	Battery Terminal	Load Terminal
Reverse Polarity	Protected	Protected	Protected
Short Circuit	Protected	Protected	Protected
Over Current	Protected	Protected	Protected
Reverse Current	Protected	NA	NA
Over Voltage	45V* @24V / 25V@12V	30V@24V / 15V@12V	NA
Shut Down Voltage	NA	10.2V@12V / 20.4V@24V	10.2V@12V / 20.4V@24V
Over Temperature	Reduces current levels with temperature, when temperature above 50°C ambient		

* The solar panel voltage should not exceed this limit for a long time.

WARNING: The combination of different error conditions may cause damage to controller. Always remove the error before you resume the connections.

LOW VOLTAGE DISCONNECT FUNCTION (LVD)

- State of charge (SOC) controlled:

Load	Disconnect Voltage
Greater than 75%	10.25V ±1% @12V/20.50V ±1% @24V
50% - 75%	10.40V ±1% @12V/20.80V ±1% @24V
25% - 50%	10.50V ±1% @12V/21.00V ±1% @24V
Less than 25%	10.75V ±1% @12V/21.50V ±1% @24V

- Voltage controlled LVD: Fixed at 10.25V±1% for 12V operation
 Fixed at 20.5V±1% for 24V operation

Display Indications

Led	Status	Function
Solar	Blinking	Battery Charging
	Steady	Battery Charged
Battery SOC	Green Steady	Battery SOC is 70-100%
	Amber Steady	Battery SOC is 25-70%
	Red Blinking	Battery Low Pre Alarm(SOC is< 25%)
	Red Steady	Battery Low Disconnect
Fault	Blinking	Overload
	Steady	Short-Circuit
Battery SOC+ Fault	Steady	Battery out of range

3