Solar Charge Controller

PWM Range

PWM Range - 5Amps/12V

Su-Kam's Solar Charger Controller is a system with advanced MOSFET based PWM Technology. The term "charge controller" refers to a device that charge the battery from solar panel.

Working Principle

The controller is for off-grid solar systems. This protects the battery from getting over charged using the solar module and over discharged by the loads. The charging process has been optimized for long battery life and improved system performance.

The comprehensive self-diagnostics and electronic protection functions prevent damage from installation mistakes or system faults.

Features

- Excellent EMC design
- Nominal system voltage automatic recognition
- Highly efficient Series PWM charging, increases battery life and improves the solar system performance
- Use MOSFET as an electronic switch, without any mechanical switch
- Widely used, automatically recognizes day/night
- Humanized design of browser interface, for convenience of operation
- Full control parameters setting and modification, diversified load control mode
- Gel, Sealed and Flooded battery type options
- Adopt temperature compensation, correction algorithm for charging and discharging parameters
- Automatically and improve battery life
- Electronic protection from overheating, overcharging, over discharging, over load, and short circuit.
- Reverse protection: any combination of solar module and battery

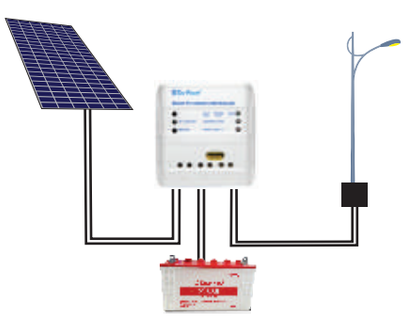
Electronic Protection Updates

- Over Current
- Battery Over charge Protection
- PV/Battery Reverse Polarity
- Reverse Current Flow
- High Temperature

Indicators

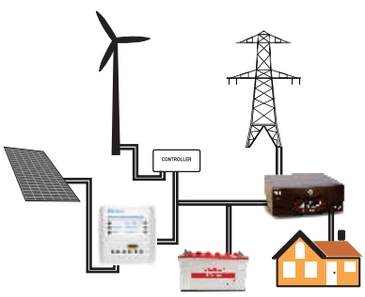
- Low Battery Indication
- Low Battery Reconnect Indication
- Battery High Charging Cutoff
- Charging cutoff reconnect
- Over current Shutdown

INSTALLATION DIAGRAM



For Street Light Application

For Household Application



Customization for Household Application

Solar Charge Controller

PWM Range

Operations/ Options

- Maximum Charging Current: 10-45A
- Single and Dual Solar Array
- Start time: 25 Sec± 5 Sec
- Maximum PV I/P Voltage : 25V per 36Cell Solar Module
- Adjustable Bulk Voltage
- Equalization through Auto/Manual Mode

Applications

- Standalone DC system
- Home Lighting System
- Street Light System
- Stand Alone Solar System

Convenience

- Installation with ease
- Increases the battery life
- Protects the battery from Overcharging
- Compatible with any HUPS/Inverter

Certifications & Approvals

- IEC 62093
- IP 20 Rating
- Approved by MNRE, Govt.Of India
- Approved by Solar Energy Center, Govt of India.

TECHNICAL SPECIFICATIONS

Model	LVD_SCC5 : 12V
Technology	MOSFET based Series regulator (Common Positive)
Precise Control	Through micro controller
Voltage Rating	12 Volt Battery (PV<25V)
Charging current	5A
Bulk Voltage	14.2 V (13.4-15 Volts)
Float to Bulk Transition	Below float setting level for a cumulative period of 1 hour
Absorption Period	For a cumulative period of 1 hour at Max. Bulk Level
Float Voltage	13.6 V
Low Voltage Load Disconnect	11.4V/Battery
Low Voltage Load Disconnect Recovery	12.8V/Battery
Battery deep Discharge charger cut-off	≤ 7V/Battery
Battery deep Discharge charger cut off recovery	> 8V/Battery
High Battery Charger OFF	15.5V
High Battery Recovery Charger ON	14.5V
PV High Cut	30V
PV High Cut Recovery	25V
Automatic Load/ Charger restart time after high current	3.5minutes

Protections	
Over Current	>120% system will shutdown
Output Over Voltage	Provided
Battery over charge / Deep discharge protection	Provided
PV/ Battery Reverse	Provided
Reverse Current Flow From Battery to Solar array	Provided

General	
* Operating Temp.	0°C to 40°C
Storage Temp.	0°C to 55°C
Wire Terminals	suitable for 8mm²
Relative Humidity	0-95% (NC)
Dimensions (WxDxH) in mm	134 x 131 x 38
Weight (approx.)	275 gm.

Note: * 1. For operating in minus degree temperature i.e upto -25°C charge controller are available on demand.
2. Specifications are subject to change without prior notice.

Solar Charge Controller

PWM Range

PWM Range - 10Amps/12V

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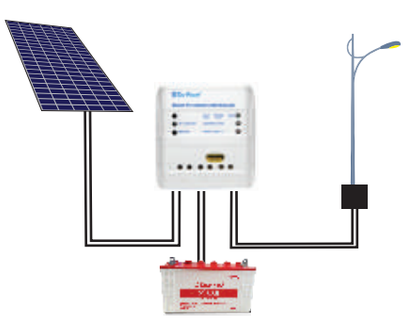
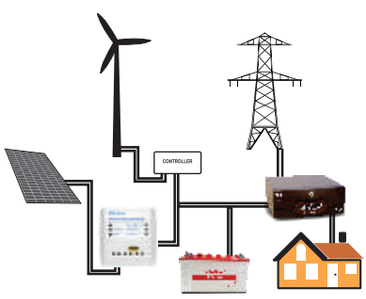


For Street Light Application

For Household Application



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