

Solar Charge Controller

PWM Range



RS 232 interface Software for power management.

PWM Range - 10Am-45Amp/12V

Su-Kam's Solar Charge 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

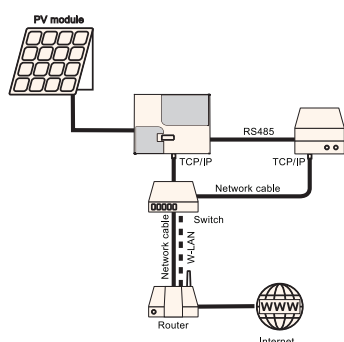
The controller is for off-grid solar systems. This protects the battery from getting over charged using the solar module and over discharged by the loads. The charging process has been optimized for long battery life and improved system performance.

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
- High 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

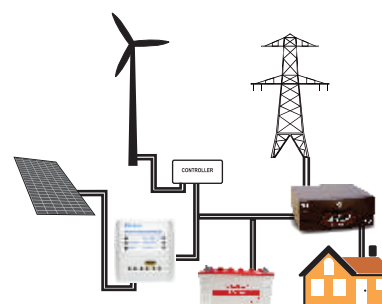
INSTALLATION DIAGRAMS



Solar Net Monitoring System for Charge Controller



For Household Application



Customization for Household Application

Solar Charge Controller

PWM Range

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

Operations/ Options

- Maximum Charging Current: 10-45A
- Single and Dual Solar Array
- Start time: 25 Sec± 5 Sec
- Maximum PVI/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

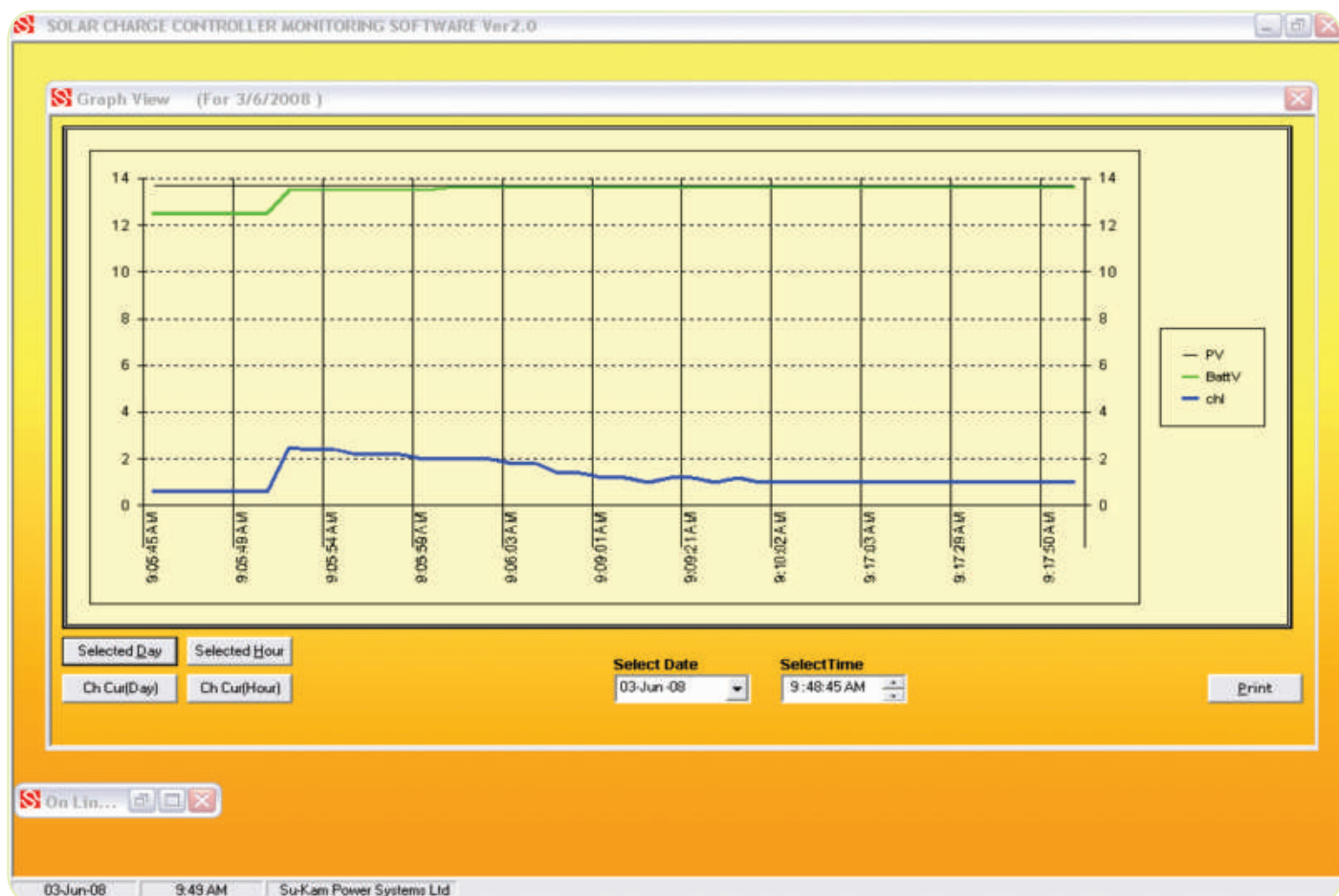
Convenience

- 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.

Solar Charge Controller Monitoring Software



Solar Charge Controller

PWM Range

TECHNICAL SPECIFICATIONS

ELECTRICAL: SOLAR CHARGE CONTROLLER WITHOUT LVD

Model	SCC10A - 45A
Type	Series regulator common negative
Technology	Micro controller based control using MOSFET
System Voltage (configurable)	12 Volt
Charging current	10A - 15A, 20A , 30A, 40A - 45A
Bulk voltage	14.2V (Adjustable 13.2-15 volts)
Absorption period	Held battery voltage at bulk setting for a cumulative period of 1 hour
Float voltage	13.5V
Equalizing voltage	Bulk voltage + 1V
Temperature comp. coefficient	-3mV to -5mV/°C/cell (25°C Reference)
Temperature comp. set points	Bulk, Absorption, Float and Equalization mode
Data Monitoring	Through RS-232

INDICATIONS: LEDS ARE PROVIDED FOR EASY MONITORING OF THE SYSTEM.

LED	Main Function	LED Status	Sub Function
Green	Charging mode	Blinking with long off time Blinking with equal interval Continuously on	Bulk stage Absorption stage Float stage
Green/Red/ Orange (Dual LED)	Equalization mode with Red/Green color	Green continuously on Red continuously on Green Blinking with equal interval Red Blinking with equal interval	Manual mode Auto mode Equalization on in manual mode Equalization on in auto mode
	Fault Display with orange color	Continuously on Blinking with equal interval Blinking with long off time	Wrong battery selection Array over current High temperature
Red	Reverse Polarity	Continuously on	Array/battery reverse polarity

Charge Controller Start Time 25 Sec. ± 5 Sec

GENERAL:

*Operating Ambient Temperature	0°C to 40°C
Storage Temperature	0°C to 55°C
Wire Terminals	Suitable for 10mm ² /25mm ² (max) cable
Relative Humidity	0-95% (NC)
Dimensions (WxDxH) in mm	227 x 140 x 75
Weight (approx.)	1.1 Kg upto 15A / 1.4 Kg for above 20A Models

Note: * 1. For operating in minus degree temp. i.e. lower than equal to -25°C Charge controllers are available on demand.
2. Specifications are subject to change without prior notice.

Solar Charge Controller

PWM Range



RS 232 interface Software for power management.

PWM Range - 10Am-45Amp/24V

Su-Kam's Solar Charge 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

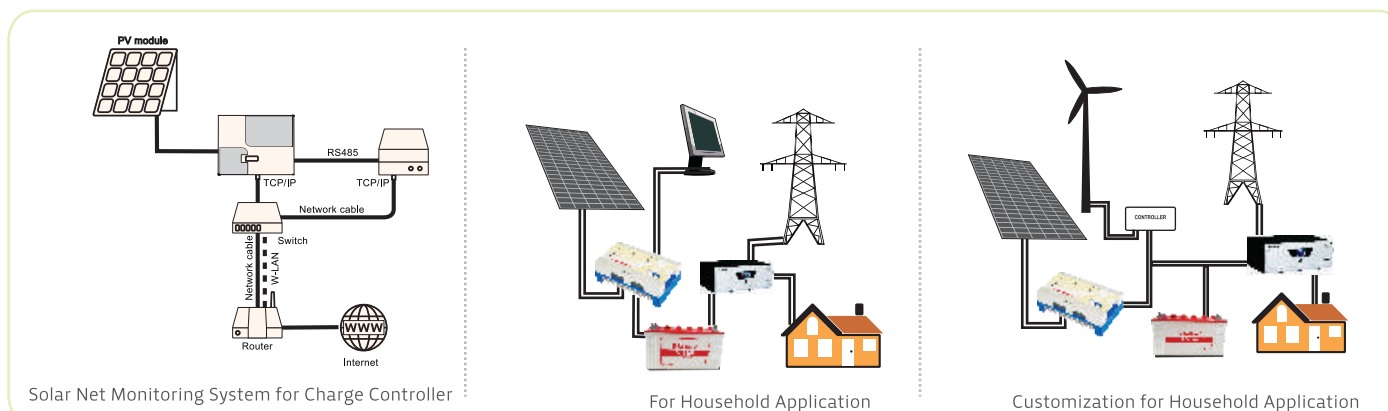
The controller is for off-grid solar systems. This protects the battery from getting over charged using the solar module and over discharged by the loads. The charging process has been optimized for long battery life and improved system performance.

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
- High 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

INSTALLATION DIAGRAM



Solar Charge Controller

PWM Range

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

Operations/ Options

- Maximum Charging Current: 10-45A
- Single and Dual Solar Array
- Start time: 25 Sec± 5 Sec
- Maximum PVI/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
- Off-grid and Micro grid
- Telecom Grid Solar System

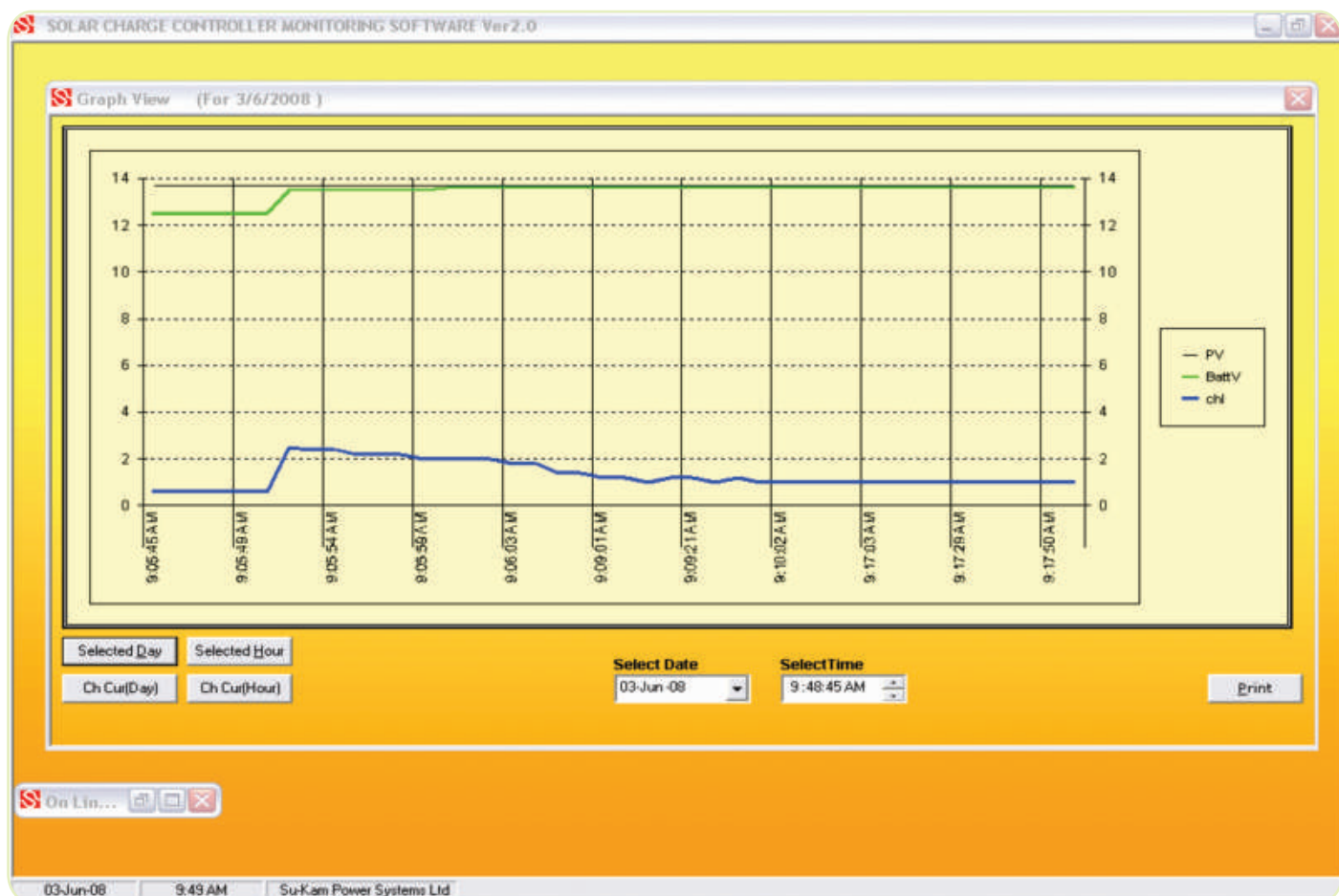
Convenience

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- Increases the battery life
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- Compatible with any HUPS/Inverter

Certifications & Approvals

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Solar Charge Controller Monitoring Software



Solar Charge Controller

PWM Range

TECHNICAL SPECIFICATIONS

ELECTRICAL: SOLAR CHARGE CONTROLLER WITHOUT LVD

Model	SCC10A - 45A
Type	Series regulator common negative
Technology	Micro controller based control using MOSFET
System Voltage (configurable)	24 Volt
Charging current	10A - 15A, 20A , 30A, 40A - 45A
Bulk voltage	28.4V (Adjustable 26.4-30 volts)
Absorption period	Held battery voltage at bulk setting for a cumulative period of 1 hour
Float voltage	27V
Equalizing voltage	Bulk voltage +2V
Temperature comp. coefficient	-3mV to -5mV/°C/cell (25°C Reference)
Temperature comp. set points	Bulk, Absorption, Float and Equalization mode
Data Monitoring	Through RS-232

INDICATIONS: LEDS ARE PROVIDED FOR EASY MONITORING OF THE SYSTEM.

LED	Main Function	LED Status	Sub Function
Green	Charging mode	Blinking with long off time Blinking with equal interval Continuously on	Bulk stage Absorption stage Float stage
Green/Red/ Orange (Dual LED)	Equalization mode with Red/Green color	Green continuously on Red continuously on Green Blinking with equal interval Red Blinking with equal interval	Manual mode Auto mode Equalization on in manual mode Equalization on in auto mode
	Fault Display with orange color	Continuously on Blinking with equal interval Blinking with long off time	Wrong battery selection Array over current High temperature
Red	Reverse Polarity	Continuously on	Array/battery reverse polarity

Charge Controller Start Time 25 Sec. ± 5 Sec

GENERAL:

*Operating Ambient Temperature	0°C to 40°C
Storage Temperature	0°C to 55°C
Wire Terminals	Suitable for 10mm ² /25mm ² (max) cable
Relative Humidity	0-95% (NC)
Dimensions (WxDxH) in mm	227 x 140 x 75
Weight (approx.)	1.1 Kg upto 15A / 1.4 Kg for above 20A Models

Note: * 1. For operating in minus degree temp. i.e. lower than equal to -25°C Charge controllers are available on demand.
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Solar Charge Controller

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RS 232 interface Software for power management.

PWM Range - 10Amp-45Amp/48V

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INSTALLATION DIAGRAM



Solar Charge Controller

PWM Range

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

Operations/ Options

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

Applications

- Standalone DC system
- Home Lighting System
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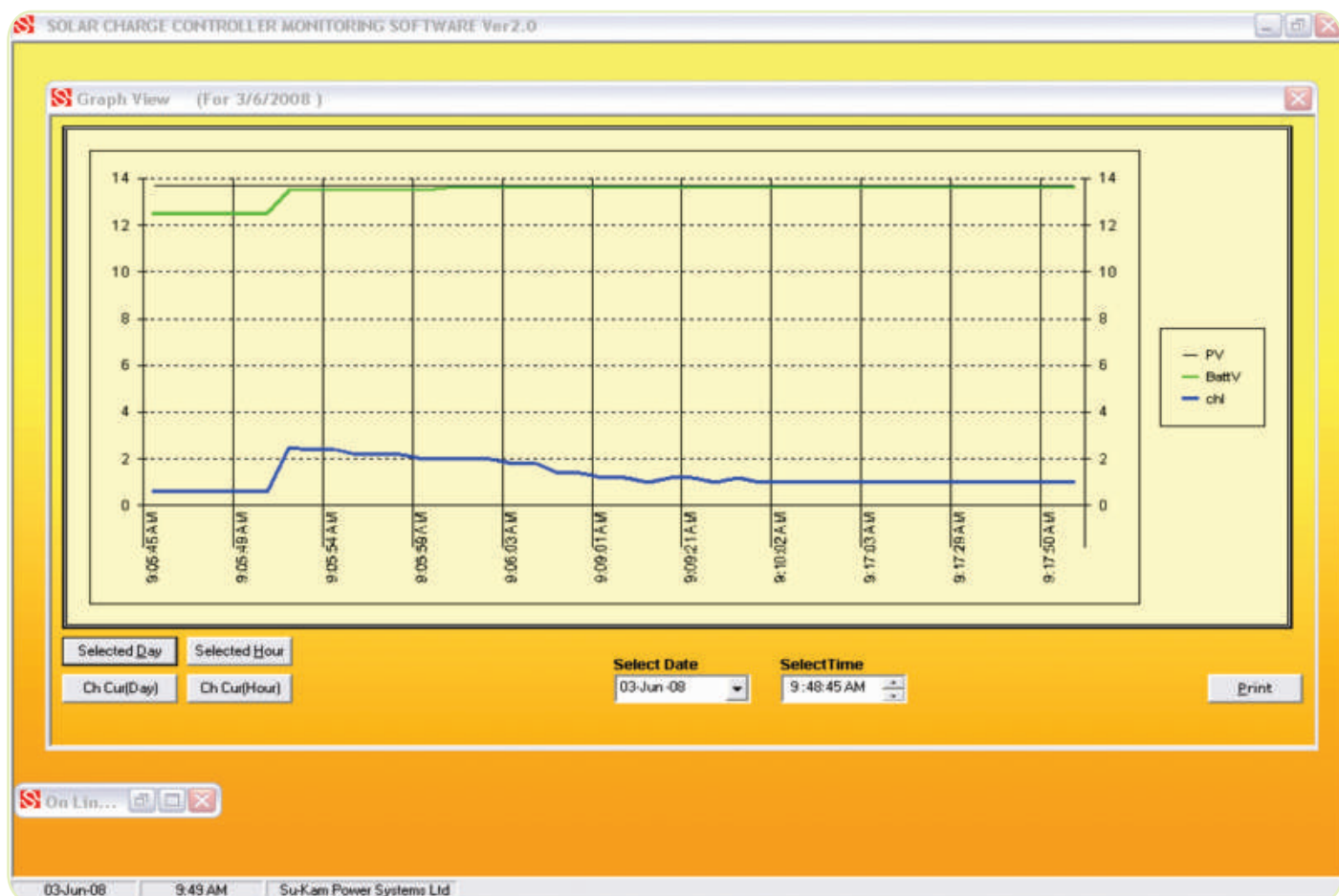
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Solar Charge Controller Monitoring Software



Solar Charge Controller

PWM Range

TECHNICAL SPECIFICATIONS

ELECTRICAL: SOLAR CHARGE CONTROLLER WITHOUT LVD

Model	SCC10A - 45A
Type	Series regulator common negative
Technology	Micro controller based control using MOSFET
System Voltage (configurable)	48 Volt
Charging current	10A - 15A, 20A , 30A, 40A - 45A
Bulk voltage	56.8V (Adjustable 52.8-60 volts)
Absorption period	Held battery voltage at bulk setting for a cumulative period of 1 hour
Float voltage	54V
Equalizing voltage	Bulk voltage +4V
Temperature comp. coefficient	-3mV to -5mV/°C/cell (25°C Reference)
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