



samlexsolar®

10A



Charge Controller

Model
SMC-10
10 Amps

Design Features

- Series Type with PWM control
- Automatic battery voltage detection: 12V / 24V
- 10A charging current
- 10A load terminals for current compensated low voltage disconnect and auto reconnect
- Multistage, temperature compensated charging
- Colored LEDs for operational status, State of Charge and faults
- Electronic protections

5 YEAR LIMITED WARRANTY



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| PARAMETER | | SPECIFICATIONS – MODEL NO. SMC-10 | |
|----------------------------------|--|--|--|
| | | 12V BATTERY SYSTEM | 24V BATTERY SYSTEM |
| SYSTEM | TYPE | Series Type with PWM control | |
| | BATTERY TYPE | Factory preset for Lead Acid - Gel Type (No Equalization) | |
| | NOMINAL BATTERY SYSTEM VOLTAGE | 12V or 24V Auto Detection: 9V to 17V is detected as 12V Battery 17.1V to 34V is detected as 24V Battery | |
| | MAXIMUM CHARGING/LOAD CURRENT | 10A | 10A |
| | SELF CONSUMPTION | < 4mA | < 4mA |
| | MINIMUM BATTERY VOLTAGE TO START OPERATION | 9V | 9V |
| | GROUNDING | Common Positive Grounding or Negative Grounding on Negative Battery Terminal | |
| INPUT SIDE (SOLAR PANEL / ARRAY) | MAXIMUM OPEN CIRCUIT VOLTAGE | < 47V | < 47V |
| | MAXIMUM SHORT CIRCUIT CURRENT | 10A | 10A |
| CHARGING CHARACTERISTICS | BOOST CHARGE VOLTAGE | 14.4VDC | 28.8VDC |
| | END OF CHARGE VOLTAGE | 13.9VDC | 27.8VDC |
| | EQUALIZATION VOLTAGE | Equalization is Factory preset in OFF condition (Default for Gel Battery) | |
| | INTERNAL TEMPERATURE COMPENSATION | Voltage Coefficient of Temperature: – 4mV/°K/Cell | |
| | | | – 24mV/°K |
| LOAD CONTROL | LOW VOLTAGE DISCONNECT (LVD) | Current Compensated: 11.6V at Load Current = 0A to 11.28V at Load current = 10A | Current Compensated: 23.2V at Load Current = 0A to 22.56V at Load current = 10A |
| | LOW VOLTAGE RECONNECT (LVR) | Current Compensated: 12.4V at Load Current = 0A to 12.72V at Load current = 10A | Current Compensated: 24.8V at Load Current = 0A to 25.44V at Load current = 10A |
| | LOAD CURRENT COMPENSATION | LVD: – 32mV/A; LVR: +32mV/A | LVD: – 32mV/A; LVR: +32mV/A |
| | NIGHT LIGHT FUNCTION | Factory preset in OFF condition | |
| MONITORING AND DISPLAY | DISPLAY TYPE | 4 Multicolor LEDs | 4 Multicolor LEDs |
| | OPERATING PARAMETERS DISPLAYED | Normal Operation, State of Charge, Load Status and Faults | |

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| PARAMETER | | SPECIFICATIONS – MODEL NO. SMC-10 | |
|---------------------------------|---|--|--|
| | | 12V BATTERY SYSTEM | 24V BATTERY SYSTEM |
| INPUT/OUTPUT CONNECTIONS | TYPE AND WIRE SIZE | Terminal with 4mm dia. tubular hole and setscrew. Will accommodate: Conductor - stranded wire: 4mm ² / AWG #12 Conductor - solid wire: 6 mm ² / AWG #9 | |
| | OVERLOAD / SHORT CIRCUIT | PV Side: Disconnect input if current is > 12.5A for 3 sec Load Side: Disconnect Load output if load current > 12.5A for 3 sec | |
| PROTECTIONS | OVER TEMPERATURE (MEASURED INSIDE THE MICROCONTROLLER) | > 80°C: Shut down the Load (PV is still connected). Auto-reset at < 75°C. > 85°C: Disconnect PV input. Auto reset at 80°C. | |
| | OVER CHARGE | Disconnect PV and Load at ≥ 15V. Auto reset at < 15V. | Disconnect PV and Load at ≥ 30V. Auto reset at < 30V. |
| | OVER VOLTAGE AT PV INPUT | 48V | 48V |
| | REVERSE POLARITY OF PV PANEL | Up to 47V | Up to 36V |
| | REVERSE BATTERY AND LOAD POLARITY | Yes. NOTE: Reverse battery polarity combined with short circuited or polarized load may damage the load or the controller. | |
| | REVERSE CURRENT PROTECTION AT NIGHT | Yes | Yes |
| COMPLIANCE | SAFETY ELECTROMAGNETIC COMPATIBILITY EUROPEAN STANDARD ROHS QUALITY | CE marked - Low Voltage Directive 2006/95/EG; CE marked - 2004/108/EG EN60730-1; EN60730-2-11 Compliant ISO-9001 ISO-14001 | |
| ENVIRONMENTAL | OPERATING AMBIENT TEMPERATURE | -25°C to + 50°C / -13°F to +122°F | -25°C to + 50°C / -13°F to +122°F |
| | INGRESS PROTECTION | IP 32 | IP 32 |
| GENERAL | DIMENSIONS | 145 x 100 x 30 mm / 5.71 x 3.94 x 0.94 in | |
| | WEIGHT | 150 gm. / 0.33 lb | |

NOTES:

- Technical data at 25°C / 77°F
- Specifications are subject to change without notice
- Special Order (Minimum Order Quantity applicable) with following customized programming. Customized programming is also possible with optional Programming Remote Control Model No. PA RC100:

| | |
|------------------------|--|
| Boost Voltage: | 12V Battery: 14.0V to 14.9V; 24V Battery: 28.0V to 29.8V |
| End of Charge Voltage: | 12V Battery: 13.5V to 14.4V; 24V Battery: 27.0V to 28.8V |
| Equalization Voltage: | 12V Battery: 14.4V to 15.3V; 24V Battery: 28.8V to 30.6V |
| Battery Type: | Liquid (Flooded / AGM) with Equalization; Gel without Equalization |
| Load Disconnect: | 12V Battery: 10.8V to 12.3V; 24V Battery: 21.6V to 24.6V |
| Load Reconnect: | 12V Battery: 11.5V to 12.9V; 24V Battery: 23.0V to 25.8V |
| Night Light Function: | OFF / ON or for set duration of 1 to 8 Hrs |

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