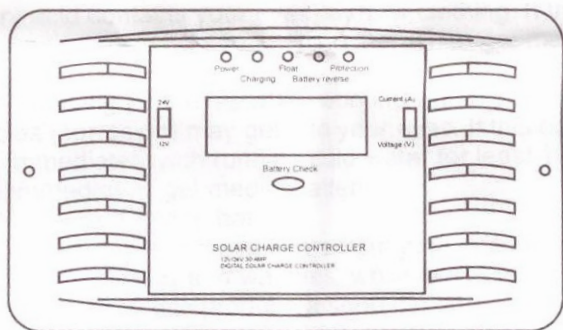
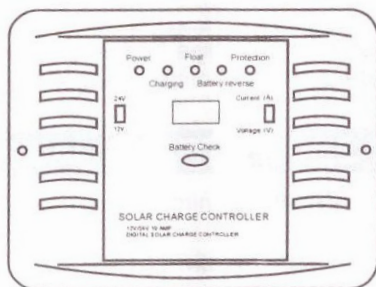


User's Manual



Solar charge controller
Model SC-10-A/SC-30-A
For 12-Volt / 24-Volt
Batteries and Solar Panels

12/24 Volt Solar Charge Controller SC-10-A/SC-30-A

IMPORTANT SAFETY INSTRUCTIONS

WARNING-RISK OF EXPLOSIVE GASES

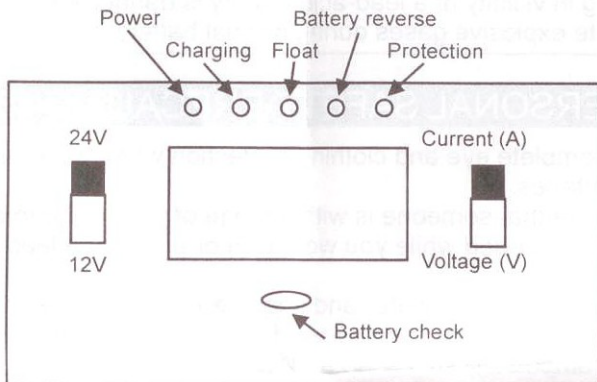
Working in vicinity of a lead-acid battery is dangerous. Batteries generate explosive gases during normal battery operation.

PERSONAL SAFETY PRECAUTIONS

- Wear complete eye and clothing protection when work with lead-acid batteries.
- Make sure that someone is within range of your voice to come to your aid if needed while you work with or are near a lead-acid battery.
- Have plenty of fresh water and soap nearby for use in case battery acid contacts your eyes, skin, or clothing. If this happens, wash immediately with soap and water. Then get medical attention.
- Avoid touching your eyes while working with a battery. Acid particles (corrosion) may get into your eyes. If this occurs, flush eyes immediately with running cold water for least 10 minutes. Then immediately get medical attention.
- Never charge a frozen battery.
- Remove all personal metal items from your body such as rings, bracelets, necklaces and watches, while working with a lead-acid battery. A battery can produce a short circuit current high enough to weld a ring (or the like) to metal, causing a severe burn.
- Take care not to drop any metal tool or metal object onto the battery. This may result in a spark or short circuit across the battery or another electrical device that may cause an explosion.
- Always operate the charge controller in an open, well-ventilated area.
- Never smoke or allow spark or flame in the vicinity of the battery. Batteries generate explosive gases.
- Neutralize any acid spills thoroughly with baking soda before attempting to clean up.

The solar charge controller is designed to protect your 12 volt or 24 volt battery from being overcharged by solar panel, it also provides the protection of battery reverse connection. This controller will display charging current or battery voltage from the LCD meter.

Indication of front panel



LED indication:

Power: Solar power has sufficient voltage, power LED will light.

Charging: Indicates the solar power charges the battery.

Float: After full charging the battery, the controllers enter the float mode.

Battery reverse: LED lights when battery is reversely connected.

Protection: LED lights when temperature of heat sink is up to about 60°C and LED off when temperature drops down to about 55°C .

Switch:

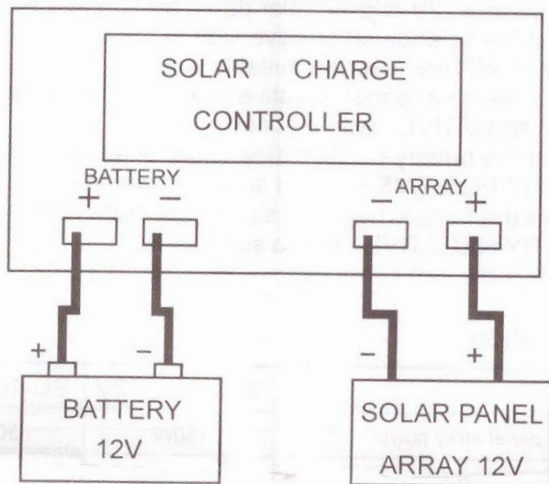
24V/12V selection switch: Selects the 12V or 24V solar panel and battery.

Current / Voltage switch: Shows the charging current or battery voltage in charging process.

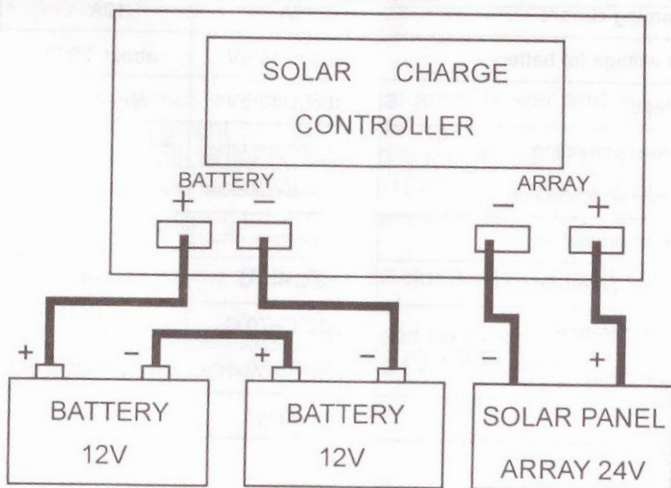
Key: Connects the battery and presses this key then LCD shows the battery voltage. In this case we suggest not connect the solar panel array. The damaged battery is not applicable to this mode.

Connection diagram: (bottom view)

12V system: 12V solar panel, 12V battery and 24V/12V selection switch must be set to 12V.



24V system: 24V solar panel, 24V battery and 24V/12V selection switch must be set to 24V.



Connection procedures:

1. Fix the mounting of the solar controller panel.
2. Select correct 12V or 24V solar panel and battery mode.
3. Connect the solar panel positive side to the solar controller ARRAY POSITIVE + with a suitable wire.
4. Connect the solar panel negative side to the solar controller ARRAY NEGATIVE - with a suitable wire.
5. Connect the battery positive side to the solar controller BATTERY POSITIVE + with a suitable wire.
6. Connect the battery negative side to the solar controller BATTERY NEGATIVE - with a suitable wire.

Specification:

	SC-10-A/12V	SC-10-A/24V
Max. solar panel array power	150W	300W
Input voltage	16.5V~22V	33V~40V
Max. input voltage	25V	45V
Max. Charging current	10A	10A
Constant voltage for battery	about 14.6V	about 29.2V
Float voltage	about 13.5V	about 27V
Temperature protection	OK(by electronic circuit)	OK(by electronic circuit)
Battery reverse protection	OK(by electronic circuit)	OK(by electronic circuit)
Output short protection	OK(by electronic circuit)	OK(by electronic circuit)
operating temperature	0°C~40°C	0°C~40°C
Storage temperature	-10°C~70°C	-10°C~70°C
Dimension (mm.)	140 5(L)x104(W)x31(H)	140 5(L)x104(W)x31(H)
Weight	205g	205g

	SC-30-A/12V	SC-30-A/24V
Max. solar panel array power	400W	800W
Input voltage	16.5V~22V	33V~40V
Max. input voltage	25V	45V
Max. Charging current	30A	30A
Constant voltage for battery	about 14.6V	about 29.2V
Float voltage	about 13.5V	about 27V
Temperature protection	OK(by electronic circuit)	OK(by electronic circuit)
Battery reverse protection	OK(by electronic circuit)	OK(by electronic circuit)
Output short protection	OK(by electronic circuit)	OK(by electronic circuit)
operating temperature	0°C~40°C	0°C~40°C
Storage temperature	-10°C~70°C	-10°C~70°C
Dimension (mm.)	181(L)x104(W)x31(H)	181(L)x104(W)x31(H)
Weight	275g	275g

Caution: Do not exceed the solar array power and the controller's current and voltage ratings:

Maximum solar array power 400W for SC-30-A/12V, 800W for SC-30-A/24V and 150W for SC-10-A/12V, 300W for SC-10-A/24V. Maximum charging current 30 amps for SC-30-A and 10 amps for SC-10-A.

Do not reverse the Battery and Solar Array connections to the controller.

Do not misconnect solar panel and battery of 12V or 24V, and be sure correctly to choose the 24V/12V selection switch.