

USER MANUAL

30A IN-LINE MPPT SOLAR CHARGE CONTROLLER

AT-SOLCHR-AM2430PV01



**We may modify these specifications without prior notice.*

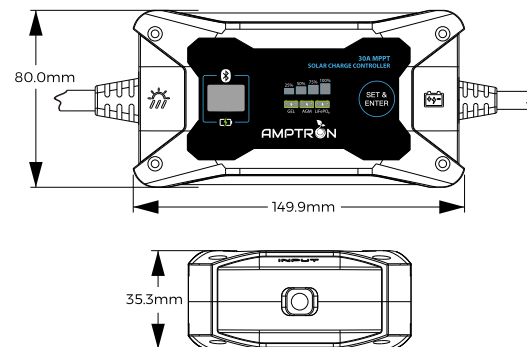
Main Features

- MPPT solar charge controller designed for portability.
- 3-stage charging optimises battery performance.
- Supports battery types GEL / AGM / LiFePO₄
- LCD showing Battery Voltage and Charge Current.
- User-friendly key press operation.
- Easy mounting and storage.
- Designed for the Amtron 200W Solar Blanket (AT-SOLBLANK-19.4-200-BV10)
- Over-charge, Over-temperature, Reverse polarity protections.
- Genuine Anderson connectors.

Warnings

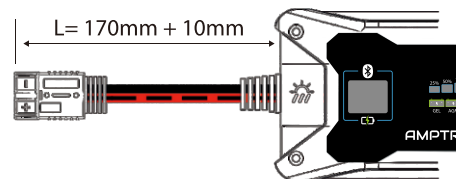
- Designed for 12V/24V batteries, do not connect to battery voltages higher than this.
- Use within rated power and voltage range.
- Keep controller away from water.
- Keep controller away from excessive heat sources. Operating range is 20°C to +55°C
- Avoid direct sunlight.
- Keep space around the controller for good heat dissipation.

Product Dimensions



Wire Dimension

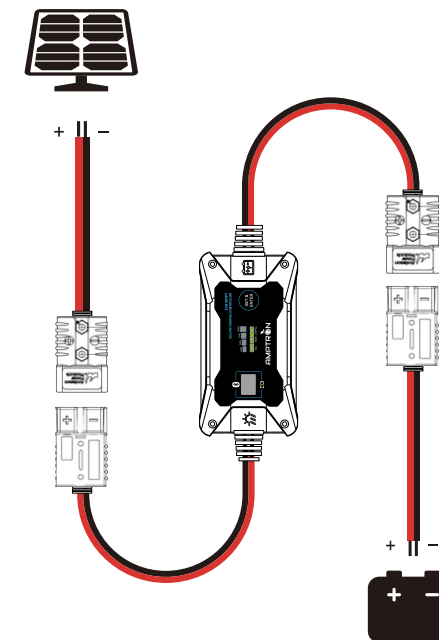
Controller



Specifications

Parameters	Value
No load loss	20mA @ 12V 12mA @ 24V
System Voltage	12V/24V
Battery Type	AGM / GEL / LiFePO ₄
Max Solar Input Voltage	30V VOC (12V Battery) 50V VOC (24 V Battery)
Rated Solar Charge Current	30A
Max Solar Input Power	12V - 450W 24V - 900W
Operating Temperature	-20°C to +45°C
Internal Temperature Protection	-40°C to +80°C
IP Protection	IP45
Net Weight	350g
Dimensions	150 x 80 x 35.3mm

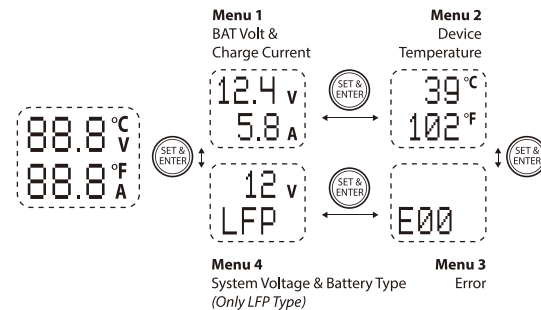
Installation Guide



Note:
First connect the battery, then connect the Solar panel.

LCD Instructions

1. LCD Display Indication



2. Battery SOC Indication



SOC	Charge	LED 1	LED 2	LED 3	LED 4
<25	Charging	●	●	●	●
	Idle	●			
<50	Charging	●	●	●	●
	Idle	●	●		
<75	Charging	●	●	●	●
	Idle	●	●	●	
>75	Charging	●	●	●	●
	Idle	●	●	●	●

● Float Flashing ● Steady On

Key Operation

Function Key	System Mode	Operation	Operation Indication
	View Mode (LCD only)	Long Press	Enter Set Mode
		Short Press	Screen Page Switch
	Set Mode (Battery LED only)	Long Press	Enter Next Set Item or Exit Set Mode & Save
		Short Press	Edit Parameter

Setting Battery Type

System Mode		Description
View Mode	●	The current battery type is selected
Set Mode	●	

Abbreviations	Battery Types
GEL	GEL Battery
AGM	AGM Battery
LiFePO ₄	Lithium Iron Phosphate Battery

Setting Battery Type / Voltage

Lead-acid batteries are selected automatically, and generally do not need to be set. Lithium batteries need to be set as follows:

- First, hold the button for 3 seconds, the battery type indicator will flash.
- Then short press to enter the next battery type.
- When your battery type is highlighted, long press the button for 3 seconds. At this time the display screen will show a battery voltage 12V LFP. If you want to set 24V, short press the button and it will switch to 24V LFP.
- Finally, long press the button for 3 seconds to save your parameters.

	Equalise Charge Voltage	GEL 14.6V
		LiFePO ₄ -
	Boost Charge Voltage	GEL 14.2V
		AGM 14.4V
	Float Charge Voltage	GEL 13.8V
		AGM 13.8V
		LiFePO ₄ -

*For 24V system: each data *2*

Warnings and General Comments

Solar Panels:

It's recommended to use nominal 18V panel for 12V batteries and 36V panels (single 36V panel or 2 units of 18V panels in series) for 24V batteries.

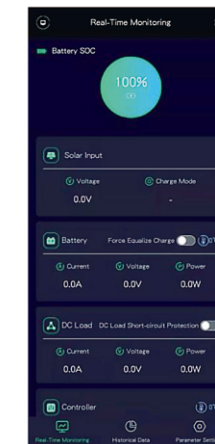
- Do not exceed PV VOC (Voltage Open Circuit). The PV VOC cannot exceed 30V for 12V batteries or 50V for 24V batteries to prevent product damage.
- Charging start condition: PV voltage needs to be 3V higher than battery voltage for charging to start. Eg: PV minimum charging voltage is at 12V, or higher than 27V when voltage is at 24V.
- In addition battery voltage should be higher than 3V.
- Avoid placing solar panels in partially sunny or shaded environments for best performance.
- Keep controller away from water.
- Avoid direct sunlight on the charge controller.

Error Code:

Code	Error
E00	No Error
E01	Over - Discharge
E02	Battery Over Voltage
E06	Device Over Heating
E10	PV Over Voltage
E13	Solar Reverse Polarity
E14	Battery Reverse Polarity

Bluetooth App

A Bluetooth app is available for real-time monitoring of your system. Please search for 'Charge Pro 2.0' or scan the relevant QR code below.



Charge Pro 2.0



Google Play Store



Apple Store

For product support and troubleshooting that is outside the above advice, please contact us via email: **support@amptron.com.au**