



The Big Blue Buildings  
Mackay & Townsville

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### AT-SOLCHR-AM2440NV01

This is an advanced high-efficiency and ultra-fast Multi-peak Maximum Power Point Tracking (MPPT) solar charge controller with built-in Bluetooth. The Maximum Power Point Tracking algorithm increases the energy efficiency, typically 15% to 20% higher than traditional PWM charging efficiency.

- The controller is compatible with Sealed Lead Acid, Gel, AGM, and Lithium Iron Phosphate batteries.
- Fast MPPT starts with ultra-fast sweeping of the entire V-I curve.
- Smart MPPT algorithm ensures better tracking in multiple power points.
- High PV harvest performance in weak sunlight conditions, advanced multi-peak tracking can accurately track the optimum power with partial shading.
- Excellent peak efficiency exceeds 98%.
- Bluetooth + Android & IOS App available.
- Support automatic identification of battery voltage.
- Overrating electronic components to minimize the power loss from heating, full charge power output up to 45°C.
- Supports external battery voltage sampling in order to compensate for voltage drop and losses in the wiring, allowing more accurate setting of control parameters.
- Supports temperature compensation by automatically adjusting or turning off the charge and discharge parameters to avoid battery overheating to prolong battery life.
- LCD screen displays key operating information and facilitates parameter settings.
- Advanced protection for battery charging & discharging.
- No cooling fan, over-rated heatsink, and electronic components. Built-in over-temperature protection mechanism. The charge current and load will be decreased with temperature increase to reduce the controller's temperature rise.
- Allowance for exceeding the rated solar input power by max 25% without controller damage.
- Extensive electronics protections including PV reverse polarity & reverse current protection.
- Supports historical data storage with 300 days of data logging.
- Supports standard RS 485 MODBUS protocol for external communications.
- The controller is negatively grounded.
- Optional external LCD monitor available.



### SPECIFICATIONS

Item	Specification	Description/Remark
<b>Model</b>	AT-SOLCHR-AM2440NV01	40A 12V/24V AM MPPT Bluetooth Solar Charge Controller – Lithium compatible
<b>Battery System Voltage</b>	12V/24V Auto (FLD/GEL/SLD) Manual (Li/User)	
<b>No-load Loss</b>	12ma (12V), 10ma (24V)	
<b>Max. Solar input voltage</b>	<100Voc	
<b>Rated charge current</b>	40A	
<b>Max Load Output Current</b>	20A	
<b>Max. usable Photo-voltaic system input power</b>	600W/12V 1200W/24V	
<b>Light Control Voltage</b>	5V*n	
<b>Light Control Delay Time</b>	10s	
<b>Operating Temperature</b>	-35°C ~ +45°C	
<b>IP Protection</b>	IP32	
<b>Communication Port</b>	RS485	Modbus protocol
<b>Altitude</b>	≤ 3000m	
<b>Product dimensions</b>	L-255mm x W-180mm x H-71.1mm	
<b>Weight</b>	2kg	