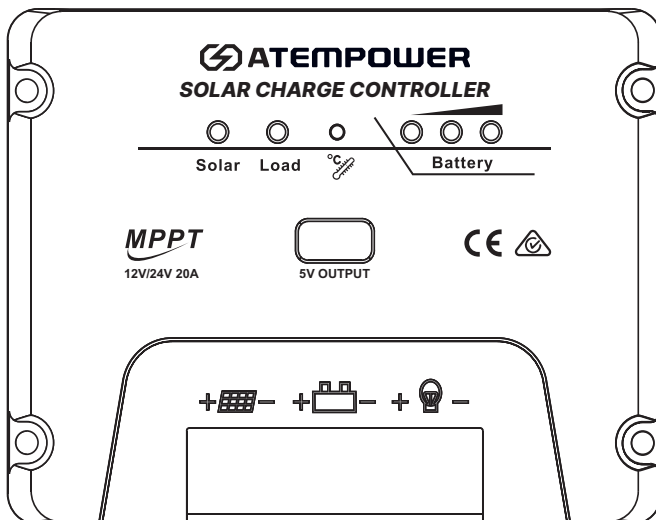




20A MPPT SOLAR CHARGE CONTROLLER

USER MANUAL



ABOUT US

ATEMPOWER, born in June 2017, as a synonym for exciting outdoor experience, is an Australian company with dedication and passion for the R&D of high quality products in the field of renewable energy products, batteries and related accessories.

Since the company was founded, we have committed to innovation that aims to make your life infinitely more convenient. And the belief in our conviction for quality and commitment allows us to innovate in developing products that are optimally tailored to the needs of our amazing customers.

We engineer and supply solar products for homes, 4x4s, recreational vehicles and virtually any application you can think of. And we also develop reliable, high performing deep-cycled batteries and lithium batteries for standby or daily power needs. Accessories include battery chargers and inverters that are ideal for RV's, commercial vehicles, boats, yachts and many more applications!

AtATEMPOWER, we stay true to our DNA by prioritizing technological innovation designed to improve our products and striving to provide excellent customer care. Because we are motivated to explore the limits of solar power!

WARNING & SAFETY GUIDANCE

- Keep your Maximum Power Point Tracking (MPPT) controller & battery away from any liquids at all times.
- Keep the controller clean at all times (always check connectors to ensure they're free of grit before plugging them in).
- Do NOT use the solar controller to charge non-rechargeable batteries. Doing so may result in harm to the user and/or damage to the solar module, battery and controller.
- All lead-acid batteries produce harmful, explosive gases. The battery should be mounted in a well-ventilated area, as far as possible from any ignition sources. Do NOT smoke or have a naked flame in the vicinity of the battery under charge.
- Never tamper with or pull any component of the regulator apart. Doing so will void the warranty.
- The MPPT controller is only suitable for regulating solar modules.
- The MPPT controller is only suitable for LiFePO4 batteries and lead-acid batteries: LEAD, AGM & GEL. The controller should not be used with nickel metal hydride batteries.
- Never connect more than 1 charging source to the MPPT controller.
- The MPPT controller cannot be used to activate over-discharged lithium-ion batteries.
- Once the load terminal is shortened, it will be irretrievably damaged.
- Remove anything covering the MPPT controller to ensure good heat dissipation.
- If the MPPT controller heats up, it will lower the power and may automatically shut off.

PACKAGE LIST

1 PC 20A MPPT Solar Charge Controller

1 PC User Manual



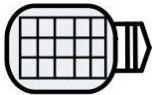
OPERATING THE MPPT CONTROLLER

Please note: not following these instructions may cause damage to the MPPT controller.

Ensure that you attach the positive (+) and negative (-) wires to the appropriate terminals.

1. Connect the positive and negative wires from the battery into the terminals with the battery icon ensuring polarity is correct.
2. Connect positive and negative solar input into the two terminals with the solar icon, ensuring polarity is correct. Then the solar indicator light will turn on if the voltage is normal.
3. The controller is now ready to use.
4. For additional load circuit, connect positive and negative wires to the terminals with the lightbulb icon on the controller.

NOTE: Ensure a fuse is used on battery positive wiring to prevent short circuits and potential damage to the unit or your vehicle

INDICATOR	INDICATED ITEM	STATUS	MEANING
	Solar Panel	Steady ON	Solar panel voltage is higher than the light control voltage
		OFF	Solar panel voltage is less than the light control voltage
	Battery	Any status	Indicate battery energy left is low, right is high.
		The left is Flashing	Battery is nearly or already empty.
	Load	Steady ON	Load receiving power
		OFF	Battery voltage is abnormal.

SPECIFICATIONS

Model	CY1220-MT
Rated charge current	20A
Rated discharge current	20A
Rated voltage	12V/24V auto work
MPPT efficiency	Max: 99%
Over load, short circuit protection	≥1.5 rated current
No load current	<10mA
Over voltage protection	16V; ×2/24V
Charging voltage cut-off	14.7V; ×2/24V
Discharge recovery voltage	11.5V; ×2/24V
Overdischarge voltage cut-off	10.5V; ×2/24V
USB output	5V 1A
Operating temperature	-35°C ~ +55°C
Dimension of controller	131×99.5×29.5(mm) (L×W×H)
Weight	300g

TROUBLESHOOTING

PROBLEM	CAUSE	SOLUTION
Charging symbol not displaying even when the solar panel is in the sun	Solar has been improperly connected to the MPPT controller	Reconnect the solar panel ensuring that the positive and negative terminals are appropriately connected
Load icon is off	Battery is low, the load will start when the battery voltage is higher than 11.5V	Charge the battery
The MPPT controller will not turn on	Battery is insufficiently charged	Charge the battery
	Battery has been connected improperly	Check, and if necessary alter the battery's connection to the MPPT controller



WARRANTY



WARRANTY PERIOD:

Full 12 months warranty from date of purchase against all manufacturing defects. The ATEM POWER MPPT controller comes with guarantees that cannot be excluded under the Australian Consumer Law.

WHAT DOES THE WARRANTY COVER?

Under normal usage conditions, this warranty covers:

1. Any defect in design or manufacture which results in its failure to perform correctly as described.
2. We will either repair or replace the product at our discretion provided that the fault is found to have been caused by a design or manufacturing defect and not misuse or tampering.
3. The limited warranty is the only one that applies to this unit, and it sets forth all the responsibilities of ATEM POWER.

THE WARRANTY DOES NOT COVER:

1. Cost of removing and reinstalling the product.
2. Travel and /or other expenses due to customer's location.
3. Transport charges and damage in transit. It is your responsibility to deliver and pick up your product, including any costs associated with the postage of repairing or replacing your product. If you want to send the product back we recommend that you insure against loss or damage.
4. Any loss directly or indirectly associated with the product that fails to operate.
5. Damage caused by mould, misuse, incorrect operation, abuse, adverse weather, accidents and daily wear and tear.
6. This unit is not intended for commercial use. This warranty does not apply to damage to units from misuse or incorrect installation/connection.
7. Misused, abused, modified, damaged by accident, or used for anything other than normal consumer use as authorized in ATEM POWER's user manual.
8. Attempted repair by anyone other than an authorized facility.