

MPPT Solar Charge Controller

Model :Tracer-4210RN



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Tracer MPPT Solar charge controller

Tracer series 40A mppt solar controller adopts MPPT technology (Maximum Power Point Tracking). The advanced tracking algorithm make the solar panel operate at ideal voltage which the solar panel can produce the maximum available power. Compared to conventional PWM solar controller, MPPT solar controller technology increase charge efficiency up to 30% and decrease the power of solar array needed.

Tracer mppt solar controller has the ability to step-down the higher voltage solar array to recharge a lower voltage battery bank. Max.100VDC input. So it allows on grid solar panels or thin film Amorphous Solar Panel to charge the off-grid battery. And the cable size can be reduced because of the small current from the solar array.'

Tracer 4210RN MPPT Solar Controller Feature:

- MPPT technology
- Two Color Black and Silver Optional
- Peak conversion efficiency of 97 %
- High Tracking efficiency of 99%
- Several seconds tracking speed
- Very fast Sweeping of the entire I-V curve
- 4- Stage charge with PWM output
- Excellent thermal design and nature air cooling
- Full power output in ambient temperatures up to 45°C
- Temperature compensation function
- Sealed, Gel, Flooded battery type optional
- Diversified load control: Manual, Dusk to Dawn, Dual timer, TEST
- RJ45 interface with remote meter MT-5 (optional)
- ON/OFF, Dusk to dawn, 1-15h timer
- Max PV input power 520W for 12V system, 1240W for 24V system
- Standard 2 years warranty
- CE certificate

Tracer 4215RN MPPT Solar Controller Specification:

Model No	Tracer-4210RN
Nominal System Voltage	12VDC 24VDC Auto work
Rated Battery Current	40A
Maximum Battery Voltage	32V
Max. Solar Input Voltage	Tracer-4210RN 100VDC
Max. PV input power	12V/ 520W 24V /1040W
Self-consumption*	<10mA(24V)
Charge Circuit Voltage Drop	≤0.26V
Discharge Circuit Voltage Drop	≤0.15V
Communication	TTL232 / 8pin RJ45
Environmental parameters	Parameter
Working temperature	-35°C to +55°C
Storage temperature	-35°C to +80°C
Humidity	10%-90% NC
Enclosure	IP30
Mechanical	Parameter
Dimension	242 x 169 x 91 / mm
Mounting holes	180 x 160 / mm
Mounting hole size	Φ5
Terminal	25mm ²
Weight	2.05kg

*Charging & discharging circuit close, LED indicator & tube OFF, remote meter disconnected.

Battery voltage setting (25°C)

Charging Parameter			
Battery charging setting	Gel	Sealed	Flooded
High Volt Disconnect	16V; x2/24V	16V; x2/24V	16V; x2/24V
Charging limits voltage	15.5V; x2/24V	15.5V; x2/24V	15.5V; x2/24V
Equalization voltage	—	14.6V; x2/24V	14.8V; x2/24V
Boost voltage	14.2V; x2/24V	14.4V; x2/24V	14.6V; x2/24V
Float voltage	13.8V; x2/24V	13.8V; x2/24V	13.8V; x2/24V
Boost return voltage	13.2V; x2/24V	13.2V; x2/24V	13.2V; x2/24V
Low voltage reconnect	12.6V; x2/24V	12.6V; x2/24V	12.6V; x2/24V
Under voltage recover	12.2V; x2/24V	12.2V; x2/24V	12.2V; x2/24V
Under voltage warning	12V; x2/24V	12V; x2/24V	12V; x2/24V
Low voltage disconnect	11.1V; x2/24V	11.1V; x2/24V	11.1V; x2/24V
Boost duration	2 hours	2 hours	2 hours
Equalize duration	--	2 hours	2 hours

Environmental Specification

Environment	Parameter
Working temp.	-35°C~+55°C
Storage temp.	-35°C~+80°C
Humidity	10%-90%(NC)
protection	IP30 (indoor)