

encore

Telecom MPPT Solar Charge Controller

KX100T



PoweredON®

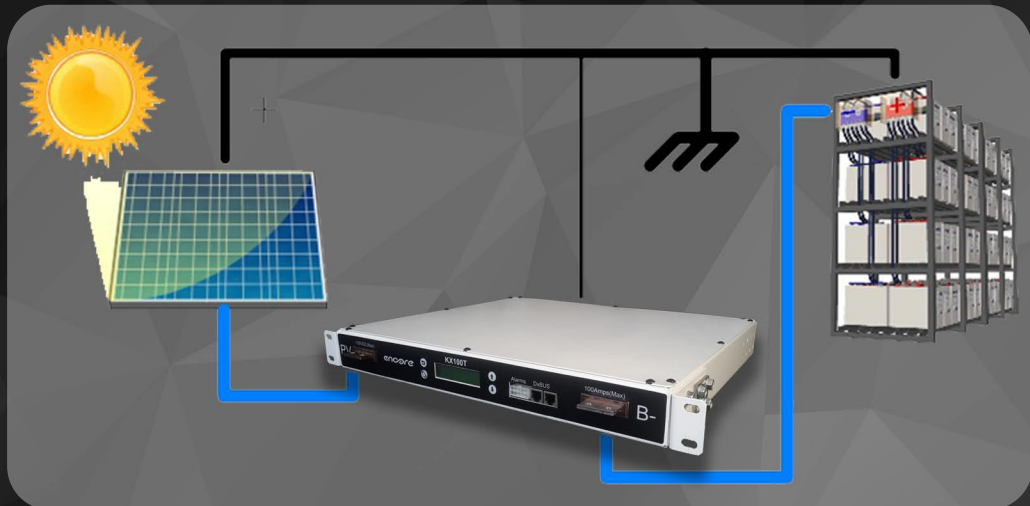
- Maximum Power Point Tracking
- Positive Grounding - Negative Switching
- Reverse Current Protection

The KX100T Solar Charge Controller is a photovoltaic (PV) charge controller that tracks the electrical maximum power point of a PV array to deliver the maximum available current for charging batteries. When charging, the KX100T Solar Charge Controller regulates battery voltage and output current based on the amount of energy available from the PV array and state-of-charge of the battery.

The KX100T is the only one of its kind in the market with the unique negative switching feature that ensures both safety and ruggedness which is essential for any telecommunications equipment installation.

The KX100T Solar Charge Controller is especially designed for Telecom applications for -48VDC Systems. It is designed for a positive grounded / common system. The KX100T switches the negative to achieve MPPT. The KX100T has a much higher operating input voltage, which enables the application to use thinner wires from the PV array to the charge controller. It comes in standard rack mount housing with only 3 wires to connect for full operation. KX100T is also enabled with a communications port so that live data and daily reports can be extracted both locally and remotely via telemetry system.

The KX100T Charge Controller incorporates a dynamic Maximum Power Point Tracking (MPPT) algorithm designed to maximize energy harvest from the PV array. The MPPT constantly adjusts the operating power points of the array to ensure it stays on the maximum power point. It does not stop energy harvest to sweep the array like some other competing products. This feature is beneficial in all sunlight conditions, especially in areas with fast moving cloud cover and quickly changing solar conditions



Specifications

- Maximum Power Point Tracking (MPPT) delivers maximum available power from PV array to battery bank up to 97% efficient
- Negative switching system for Telecommunications applications
- Positive grounding for cathodic protection
- Modular design allows the unit to continue operation if one of the internal power module develops a fault
- Integrated PV & battery bank reverse polarity protection
- Full output current up to 45°C without thermal derating
- Selectable two or three stage charging algorithms with manual equalization to maximize system performance and improve battery life
- 8-Configurable auxiliary alarm outputs
- Two-line, 16-character liquid crystal display (LCD) and four buttons for configuration and system monitoring
- Input over-voltage and under-voltage protection, output over-current protection, and backfeed
- (reverse current) protection (warning and fault messages appear on LCD when unit shuts down as a protective measure)
- Over-temperature protection and power derating when output power and/or ambient temperature are high
- DxBus™-enabled network communications protocol

Nominal battery voltage	-48VDC
Max PV array voltage	150VDC
Max PV array open circuit voltage	150VDC
Array short-circuit current	100ADC maximum
Maximum wire size	50mm2
Total power consumption while operating	25 Watts max (At Full Power)
Charger regulation method	Three-stage (bulk, absorption, float) Two-stage (bulk, absorption)
Display	16x2 LCD
Navigation	2 Button
Alarms	4 x user configurable dry contact alarm outputs
Communication Interface	RS485 Isolated (2xRJ12)
Communication Protocol	DxBus™ open protocol
Dimensions	(H x W x D) 2 x 19 x 16" (1U Standard 19")
Weight (shipping)	~7.5 kg
Shipping dimensions	(H x W x D) 5 x 25 x 21"
Mounting	Standard 19" rack mount
Operating temperature range	-20 to +45 °C (-4 to 113 °F)
Storage temperature	-40 to +85 °C (-40 to 185 °F)



"*Encore ThingsNET* provides easy-to-use visibility and control options; which makes us capable of providing the most perfect corporate solutions by maximizing service efficiency. Our prized RMS is a complete IOT solution that brings together people, processes, data and things; to make networked connections more relevant and valuable than ever before!"



"*Encore StoreBOX* provides incomparable longevity and optimization statistics. The embedded microcomputer intelligence, along with our sophisticated proprietary algorithm that goes in each unit, makes us stand out from the rest of the herd. With extensive R&D, we unravel storage solutions that are better than anything out there!"



"*Encore PoweredON* is the energy centric platform of our organization. Our smart product designs offer fully featured devices with the most efficiently designed footprints. Mixing this up with our state-of-the-art proprietary algorithm and our relentless R&D towards innovating renewable energy systems, we provide the most optimal power solutions.



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