

TriStar MPPT 30 Solar Charge Controller by Morningstar



Price: CAD \$659.00

SKU: MRTRISTAR-MPPT30

Product Categories: [MPPT : 30A-39A](#), [Charge Controllers](#), [Shop](#)

Product Tags: [30A](#), [30A mppt](#), [canada](#), [charge controller](#), [controller](#), [morningstar](#), [morningstar tristar](#), [MPPT](#), [regulator](#), [solar](#), [solar charge controller](#), [Tristar](#), [TriStar 30](#), [tristar 30A](#), [tristar mppt 30A](#), [TS-MPPT-30](#)

Product Page:

<https://www.modernoutpost.com/product/tristar-mppt-30-solar-charge-controller-by-morningstar/>

Product Summary

Morningstar's TriStar MPPT 30 solar controller with TrakStar Technology™ is an advanced maximum power point tracking (MPPT) battery charger for off-grid photovoltaic (PV) systems up to 1.6kW. The controller provides the industry's highest peak efficiency of 99% and significantly less power loss compared to other

MPPT controllers.

Product Description

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The TriStar MPPT features a smart tracking algorithm that maximizes the energy harvest from the PV by rapidly finding the solar array peak power point with extremely fast sweeping of the entire I-V curve. This product is the first PV controller to include on-board Ethernet for a fully web-enabled interface and includes up to 200 days of data logging.

Model: TS-MPPT-30 TriStar MPPT 30 Key Features...

Maximizes Energy Harvest

MorningStar's TrakStar MPPT Technology features:

- Better peak power point tracking than other MPPT controllers
- Very fast sweeping of the entire I-V curve
- Recognition of multiple power points during shading or mixed PV arrays
- Excellent performance at sunrise and low solar insolation levels

Extremely High Reliability

- Robust thermal design and no cooling fans
- Parallel circuit design provides less stress and longer life for electronic components
- No mechanical relays
- Extensive electronic protections including PV short circuit protection
- Epoxy encapsulated inductors and conformally coated printed circuit boards

Very High Efficiency

- Peak efficiency of 99%
- Proprietary tracking algorithm minimizes power losses
- Low self-consumption
- Continuous operation at full power to 45°C without need to de-rate
- Selected electronic devices with higher ratings to minimize losses from heating

Extensive Networking and Communications Capabilities

- Enables system monitoring, data logging and adjustability. - Uses open standard MODBUS™ protocol and Morningstar's

MS View software.

- Meterbus: communications between compatible Morningstar products - Serial RS-232: connection to a personal computer - EIA-485: communications between multiple devices on a bus - Ethernet: fully web-enabled interface to a local network or internet; view from a web browser or send email/text messages.

Metering and Data Logging

- Optional TriStar meter or remote meter provides detailed operating data, alarms and faults - Three LED's display system status - Up to 200 days of data logging via meters or communications ports **TriStar MPPT 30**

Specifications...

Electrical

- Peak Efficiency 99% - Nominal System Voltage 12, 24, 36 or 48 volts DC (select in the order form) - Max. Solar Open Circuit Voltage 150 volts DC - Battery Operating Voltage Range 8-72 volts DC - Maximum Self-consumption 2.7 Watts - Transient Surge Protection 4500 Watts/port

Safety / Protection

- Solar: Overload, Short Circuit, High Voltage - Battery: High Voltage - High Temperature - Lightning and Transient Surges - Reverse Current at Night

Environmental

- Ambient Temperature -40°C to +45°C - Storage Temperature -55°C to +100°C - Humidity 100% non-condensing

Tropicalization

- Epoxy encapsulation - Conformal coating - Marine rated terminals

Battery Charging

- Charging algorithm 4-stage - Charging stages Bulk, Absorption, Float,

Equalize

Temperature Compensation

- Coefficient -5mV/°C/cell (25° ref) - Range -30°C to +80°C - Set points Absorption, Float, Equalize, HV - Note: Remote Temperature Sensor is included.

Mechanical

- Dimensions 29.1 x 13.0 x 14.2 cm / 11.4 x 5.1 x 5.6 inch - Weight 4.2 kg / 9.2 lbs. - Max. Wire Size 35 mm² / 2 AWG - Conduit knockouts M20; ½, 1, 1 ¼ inch - Enclosure Type 1 (indoor and vented) IP20

Communications Ports

- MeterBus - RS232

Certifications

- CE Compliant - ETL Listed (UL1741) - cETL (CSA C22.2 No. 107.1-01) - FCC Class B Part 15 Compliant - Complies with (NEC) U.S. National Electric Code - RoHS Compliant - Manufactured in a certified ISO 9001 facility

WARRANTY

- Five year warranty period.

Product Attributes

- Dimensions: 1 × 1 × 1 cm
- Weight: 5.9 kg