

WE GO THE DISTANCE FOR YOU



Ruggedized Track Rackmount UPS

Product Info

- Suitable for wide temp range applications (-37°C to +74°C).
- Ideal for environmentally harsh outdoor locations.
- Fits in all types of traffic enclosures, control panels and custom pedestals.
- Low harmonic AC sinewave output in backup mode.
- Fully programmable AC threshold voltages.
- External connections accessible from the front panel.
- Six fully programmable dry contacts for greater control.
- Back-lit LCD display and LED indicators.
- Remote access via RS-232, USB & Network.
- Time / Date stamp of events and alarms – up to 100 events.
- Temperature-compensated charging. Maximizes battery life in harsh environments.

Ruggedized UPS Specifications TRTC-2000-N1

ELECTRICAL INPUT	
Voltage Range, VAC	90 to 150 programmable Default 100 to 130 +/- 2VAC
Frequency, Hz	60 +/- 3 Hz
Maximum Input Current, A	30 A (Resistive)
Inrush Current	Load Dependent
Over current Protection	Double pole single throw circuit breaker rated 30 A for input and output DC bus 60 A breaker
Transient Suppression	MOV transient suppression elements (>150 V)
Step Load Response (50% Load Charge)	1/2 Cycle Full Recovery (Full resistive load)
Short Circuit Protection	15 A Circuit Breaker
Battery String Voltage, VDC	48 (Four 12VDC Batteries)

ELECTRICAL PERFORMANCE	
Transfer Time	
- Controller	4 to 10 ms
- PTS	<30 ms
- TOTAL	<65 ms
Efficiency, Line Mode	>95% (Resistive Load)
Efficiency, Inverter Mode	>80% (Resistive Load)

ELECTRICAL OUTPUT	
Apparent Power, VA	2000VA (Inverter Mode) 2000VA (Line Mode)
Active Power, W	1500 (Inverter Mode) 1500 (Line Mode)
Power Factor	0.75
Output Voltage, VAC	120 nominal
Line and Buck/Boost Mode	100-130 +/- 2 VAC (follows input voltage)
Inverter Mode	120 VAC +/- 5%
Frequency, Hz	60 +/- 0.4 Hz
Transformer	Linear (non-isolated)
Output Waveform	Sine Wave
Output Waveform THD	<3% (Resistive Load)
Load Crest Factor	3:1 (Max)
Overload Capacity	110% for 3 min.

**EXTREME
ENVIRONMENTAL
CONDITIONS**



FUNCTIONS	
Brownout Protection	Unit boosts output voltage (or transfers to battery) during brownout or low input line conditions and returns to normal when input power stabilizes over user-selected time period. Setpoints for Transfer / Retransfer, To / From Battery / Boost are users programmable.
Generator Compatibility	Generator mode allows wider variation in input voltage and frequency for use with an AC generator
Battery Charger 10 A	PFC switch-mode, two-stage charger, temperature compensated (-2.5 to -5 mV/°C/cell), auto shutoff about 50°C
Inverter Mode	Capable of running continuously in inverter mode
Inverter Mode Current Limit	Continuous electronic current limit is provided
Remote Monitoring	- Input and out put voltages - Input line frequency - Output power - Battery voltage - Battery temperature

CONTROL TERMINAL BLOCK	
Functions	A. Provides 6 sets of programmable contacts at pin 1 thru pin 18 for intersection flash control, Remote Alarms, Pagers or other user interface. 1. "Low Batt": batteries have reached approximately 40% capacity remaining 2. "On Batt": unit is in inverter mode 3. "Timer": unit has been in inverter mode for 2 hours (programmable) 4. "Alarm": any of the following conditions occur: a. Line Frequency error b. Low Output voltage c. No Temperature Probe d. Overload e. No battery connected f. High temperature g. Low temperature 5. "Fault": any of the following conditions occur: a. Short circuit b. Batt low voltage c. Batt high voltage d. High temperature e. Overload B. Provides 48 VDC signal to PTS on pins 21 & 22 C. Triggers self-test by momentarily shorting pin 19 & 20 with less than 100 ohm
Contact Type	Form C. Dry contacts rated 1 Amp at 240 V
Wiring	Uses 14-26 AWG

COMMUNICATIONS	
RS-232/USB/Ethernet ports	Monitors, controls with terminal emulation software
RS-232	DB-9, Female, Opto-Isolated, straight-thru cable
USB	B-Type receptacle
Ethernet (Optional)	10/100 Mbps Ethernet, auto-detected
Display Panel	2-line LCD

ENVIRONMENTAL	
Operating Temp °C	-37 to +74°C (See Notes 1 & 2)
Storage Temp °C	-50 to +75°C
Humidity	<95% non-condensing
Altitude, ft (m)	10,000 (3000) (See Note 2)

MECHANICAL	
Dimensions (WxDxH) inch/mm	W 17.5/444 - 19/483 w/flange D 10.5/267 H 5.25/133 - 3 U
Weight (lb/kg)	46.2/21
Mounting	19" (483 mm) rak or shelf mount
Input Connection	3 Position Terminal Block
Output Connection to Loads	Two 3 Position Terminal Blocks
Cooling	Microprocessor controlled, 12 VDC, 3.6" (92 mm) fan
Audible Noise Level, dBA	<40
MBS/PTS Dimensions (WxDxH) inch/mm	W 17.5/444 - 19/483 w/flange D 8.5/216 H 3.5/89 - 2U
MBS/PTS Weight (lb/kg)	7.0/3.2
MBS/PTS Mounting	Shelf or 19" rack mount
MBS/PTS Input Connection	Terminal Block
MBS/PTS Output Connection to Loads	Terminal Block
MBS/PTS Output Connection to UPS	6 foot cable ready for hard wire to UPS terminal block
MBS/PTS Cooling	Convection (approx 7 W contractor coil dissipation)

DESIGNED TO CONFORM TO	
Electrical Safety	UL-1778, CSA-170.1, UL-1950
EMI	FCC Class A
Surge Immunity	Tested to: IEC 1000-4-5, IEEE C62.41

NOTES:

- Between 55° and 74°C, the unit is de-rated to a maximum rectified-capacitive load of 1500VA / 1200W
- De-rate operating temperature above 4900 ft (1500m) by 2°C per additional 1000 ft (300m)

EXTREME ENVIRONMENTAL CONDITIONS



**2538 E. 54th Street
Huntington Park, CA 90255
Office: 310-689-2328
Fax: 310-689-2329
sales@marathon-power.com
info@marathon-power.com
www.marathon-power.com**

Your local representative / distributor is