

MajorVTC 1000 Watt Series

The **MajorVTC1000** Voltage Converter supplies either 12, 24, 32 or 48 VDC from a -48, 72, 110, 250, or 300 VDC power source.

All new Current Mode switching design offers increased power and reliability in a compact package. Extra input and output filtering reduce EMI to extremely low levels. Reliability features include an input fuse, thermal shutdown, current limiting, reverse battery hookup protection and output short circuit shutdown with automatic recovery.

The output voltage is easily adjusted 0.5 volts above or below the standard output voltage. Devices connected to the converter are protected by an output overvoltage crowbar circuit. 1 or 2 high quality analog meters can be added (factory option) to allow monitoring of output current and output voltage.



Product Features

- **Fully Isolated Design**
- **Transient Voltage Suppressor**
- **Adjustable Output Voltage**
- **Audible & Visual Indicators**
 - ▶ For constant current, low input voltage, low output voltage & over-temperature
- **Extremely Rugged**
 - ▶ Well suited for marine, industrial and other harsh environments
- **High Tolerance**
 - ▶ For shock and vibration
- **Ultra-Quiet**
 - ▶ Low EMI operation
- **Protection**
 - ▶ Current limiting protection
 - ▶ Output over-voltage crowbar
 - ▶ Reverse input protection
 - ▶ Dry contact output fail relay
 - ▶ Short circuit shutdown
 - ▶ Over temperature shutdown
- **Generous Heatsink & Thermostatically Controlled Fan**
 - ▶ For reliable operation
- **Custom Input Voltages**
 - ▶ From 100 to 360 VDC
- **Custom Output Voltages**
 - ▶ From 8 to 55 VDC
- **Warranty**
 - ▶ 3 year parts and labour
- **Options**
 - ▶ Remote Control Panel
 - ▶ Voltmeter and/or Ammeter
 - ▶ Ruggedization against shock and vibration
 - ▶ Conformal coating
 - ▶ Parallel output diodes allow connection between two or more identical units
 - ▶ 19" Rackmount
 - ▶ Extra wide Temperature Range -40°C to +70 °C

Product Specifications

Mechanical & Environmental	
Operating Temperature Range	0 to 40°C @ Maximum Output; Derate Linearly 2.5% per °C from 40°C
Humidity	0-95°C @ Relative Humidity (non-condensing) with optional conformal coating
Audible Noise	34.5 dB
Typical Service Life	>10 years (87,600 hours)
Isolation	Input-Case & Input-Output 1500 VDC; Output-Case 500 VDC
Dimensions (L x W x H)	14.5 x 10.2 x 5.5 in / 36.8 x 25.9 x 14.0 cm
Physical	1 inch (2.5 cm) clearance all around; Marine grade aluminum; Black powder epoxy coat, 18-8 Stainless steel fastenings
Weight	12.0 lbs / 5.5 kg
Connections	4 contact output terminals
Warranty	3 years
Safety	CSA/UL Pending

Model Selection Guide

MajorVTC	1000-48	1000-72	1000-110	1000-250	1000-300
Nominal Input Voltage	48	72	110	250	300
Input Voltage	40-65	65-100	100-140	230-280	280-360
Input Amps (Maximum)	36.3	22.3	14.5	6.3	5.2
Input Fuse	30	25	20	7	6
Noise on Input	< 50 mV	< 50 mV	< 50 mV	< 50 mV	< 50 mV

Nominal Output Volts	12	24	32	48
Output Volts	13.6 ± 0.05 VDC	27.2 ± 0.05 VDC	36.3 ± 0.05 VDC	54.4 ± 0.05 VDC
Output Adjustment	± 0.5 V	± 0.5 V	± 0.5 V	± 0.5 V
Output Amps Continuous	0-60	0-40	0-30	0-20
Output Amps Maximum	70	45	34	22.5
Output Crowbar	16.0 ± 0.5 V	32.0 ± 1.0 V	42.7 ± 1.3 V	63.9 ± 2.0 V
Ripple & Noise	<50 mV	<50 mV	<50 mV	<50 mV
Transient Response	< 2 V for 50% Surge	< 2 V for 50% Surge	< 2 V for 50% Surge	< 2 V for 50% Surge
Switching Response	60 ± 2 kHz	60 ± 2 kHz	60 ± 2 kHz	60 ± 2 kHz
Idle Power	< 10 Watts	< 10 Watts	< 10 Watts	< 10 Watts
Line & Load Regulation	< ±0.5%	< ±0.5%	< ±0.5%	< ±0.5%
Duty Cycle	Peak 20% for 10 min max; Continuous 100% for 24 hours/day	Peak 20% for 10 min max; Continuous 100% for 24 hours/day	Peak 20% for 10 min max; Continuous 100% for 24 hours/day	Peak 20% for 10 min max; Continuous 100% for 24 hours/day
Efficiency	> 85% @ Maximum Output	> 85% @ Maximum Output	> 85% @ Maximum Output	> 85% @ Maximum Output

