

## MajorVTC180 DC/DC Voltage Converter

### MajorVTC180 DC to DC Voltage Converter

The **MajorVTC180** Voltage Converter is a variable-duty, cycle-switching power supply with a precision linear regulator output. It can be configured to run from a 32, 48 or 72 VDC power system to provide output voltages as shown below.

The **MajorVTC180** features reverse input protection, current limiting, output over-voltage protection, ultra-quiet, low EMI operation and a wide operating temperature range.



### Product Features

- **Input voltage range**
  - ▶ Allows operation from 32, 48, or 72 VDC power systems
- **Protection**
  - ▶ Reverse input protection
  - ▶ Current limiting
  - ▶ Output over-voltage crowbar
- **Extremely rugged**
  - ▶ Well suited for marine and other demanding environments
- **High tolerance**
  - ▶ For shock and vibration
- **Ultra-quiet**
  - ▶ Low EMI operation
- **High Efficiency**
- **Wide operating temperature range**
- **Easily Mounted**
- **Warranty**
  - ▶ 3 year parts and labour
- **Options**
  - ▶ Ruggedization against shock and vibration
  - ▶ Conformal coating
  - ▶ Can be built to Class 1, Division 2 Standards for Hazardous Duty
  - ▶ Extra wide Temperature Range -40°C to +70 °C

## Product Specifications

Mechanical & Environmental	
<b>Operating Temperature Range</b>	-25 to +50°C @ Maximum Output; Derate Linearly 2.5% per °C from 40°C
<b>Humidity</b>	0-95°C @ Relative Humidity (non-condensing) with optional conformal coating
<b>Audible Noise</b>	None Ødb @ 3 feet
<b>Typical Service Life</b>	>10 years (87,600 hours)
<b>Isolation</b>	Any Input or Output to Case 1500 VDC; Input to Output - Common Negative
<b>Dimensions (L x W x H)</b>	7.9 x 6.0 x 2.4 in / 20.1 x 15.2 x 6.1 cm
<b>Physical</b>	1 inch (2.5 cm) clearance all around; Marine grade aluminum; Black powder epoxy coat, 18-8 Stainless steel fastenings
<b>Weight</b>	4.0 lbs / 1.8 kg
<b>Connections</b>	4 contact output terminals
<b>Warranty</b>	3 years
<b>Safety</b>	CSA/UL Pending

## Model Selection Guide

Model	MajorVTC180-32	MajorVTC180-48	MajorVTC180-72
<b>Nominal Voltage</b>	32	48	72
<b>Voltage</b>	20-45	40-65	65-100
<b>Input Amps (Maximum)</b>	13.6	7.0	4.3
<b>Input Fuse</b>	15	10	5
<b>Noise on Input</b>	< 10 mV	< 10 mV	< 10 mV

<b>Output Nominal</b>	12	24
<b>Output Volts</b>	13.6 ± 0.05 VDC	27.2 ± 0.05
<b>Output Crowbar</b>	16.5 ± 0.5 V	16.5 ± 0.5 V
<b>Output Amps</b>	15 continuous / 18 peak	7.5 continuous / 9 peak
<b>Ripple &amp; Noise</b>	< 10 mV	< 10 mV
<b>Transient Response</b>	< 1 V for 50% Surge	< 1 V for 50% Surge
<b>Line &amp; Load Regulation</b>	< ±0.5%	< ±0.5%
<b>Duty Cycle</b>	Peak 20% for 10 min max; Continuous 100% for 24 hours/day	Peak 20% for 10 min max; Continuous 100% for 24 hours/day
<b>Efficiency</b>	> 90% @ Maximum Output	> 90% @ Maximum Output

