

MajorVTC305 DC/DC Voltage Converter

MajorVTC305 DC to DC Voltage Converter

The **MajorVTC305** 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 **MajorVTC305** 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 72VDC 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
 - ▶ Parallel output diodes allows connection between two or more identical units
 - ▶ 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	
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	None Ødb @ 3 feet
Typical Service Life	>10 years (87,600 hours)
Isolation	Any Input or Output to Case 1500 VDC; Input to Output - Common Negative
Dimensions (L x W x H)	9.1 x 7.8 x 2.5 in / 23.1 x 19.8 x 6.4 cm
Physical	1 inch (2.5 cm) clearance all around; Marine grade aluminum; Black powder epoxy coat, 18-8 Stainless steel fastenings
Weight	4.0 lbs / 1.8 kg
Connections	4 contact output terminals
Warranty	3 years
Safety	CSA/UL Pending

Model Selection Guide

Model	MajorVTC305-12-12	MajorVTC305-12-24
Input Voltage	10.5-18	10.5-28
Input Amps (Maximum)	30	30
Input Fuse	AGC 20 x 2 Amp	AGC 20 x 2 Amp
Noise on Input	< 25 mV	< 25 mV
Low Input Voltage Alarm	10.5 VDC	10.5 VDC
Current Limit	30 Amps in	30 Amps in
Output Nominal	12	24
Output Volts	Input -1 V or 13.5 to 17.0 (whichever is greater)	Input -1 V or 24.0 to 27.5 (whichever is greater)
Output Amps	27	27
Output Crowbar	Programmed Output Volts x 1.2	Programmed Output Volts x 1.2
Ripple & Noise	< 25 mV	< 25 mV
Low Output Voltage Alarm	Programmed Output Volts -2.5 VDC	Programmed Output Volts -2.5 VDC
Transient Response	< 1 V for 50% Surge	< 1 V for 50% Surge
Line & Load Regulation	< ± 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
Efficiency	> 90% @ Maximum Output	> 90% @ Maximum Output

Mechanical Drawing

