

MajorVTC605 DC/DC Voltage Converter

MajorVTC605 DC to DC Voltage Converter

Step up a 12 VDC battery to between 13.5 and 17.0 V or 24 and 27.5 VDC in 0.5 VDC increments (via 3 position DIP switch), or stabilize a 12 or 24 VDC power system.

Safety features include reverse input protection, low input voltage alarm, low output voltage alarm, over temperature shutdown and alarm, and output overvoltage crowbar. If the input voltage exceeds the regulated output voltage, the unit simply passes the voltage through with full LC filtering and a single schottky diode drop (0.5 VDC or less). Optional features include a dry contact alarm relay output, and remote panel monitoring with On/Off control.

Applications include temporarily brightening 12 Volt headlights or work lights, increasing voltage into an automotive or marine ignition system for hotter spark and/or prevention of failures due to voltage drop during engine start, stabilizing 12 and 24 VDC power systems in marine, automotive or aeronautical environments and more.



Product Features

- **Adjustable Output Voltage**
- **Audible & visual indicators**
 - ▶ for constant current, low input voltage, low output voltage & over-temperature
- **Extremely rugged**
 - ▶ Well suited for marine and other demanding environments
- **High tolerance**
 - ▶ For shock and vibration
- **Ultra-quiet**
 - ▶ Low EMI operation
- **High Efficiency**
- **Protection**
 - ▶ Current limiting protection
 - ▶ Output over-voltage crowbar
 - ▶ Reverse input protection
 - ▶ Dry contact output fail relay
- **Warranty**
 - ▶ 3 year parts and labour
- **Options**
 - ▶ Remote Control
 - ▶ Ruggedization against shock and vibration
 - ▶ Conformal coating
 - ▶ Parallel output diodes to allow connection between 2 or more identical units
 - ▶ 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 4.3 in / 23.1 x 19.8 x 10.8 cm
Physical	1 inch (2.5 cm) clearance all around; Marine grade aluminum; Black powder epoxy coat, 18-8 Stainless steel fastenings
Weight	6.0 lbs / 2.7 kg
Connections	4 contact output terminals
Warranty	3 years
Safety	CSA/UL Pending

Model Selection Guide

Model	MajorVTC605-12-12	MajorVTC605-12-24
Input Voltage	10.5-18	10.5-28
Input Amps (Maximum)	50	50
Input Fuse	AGC 30 Amp x 2	AGC 30 Amp x 2
Noise on Input	< 50 mV	< 50 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	45	45
Output Crowbar	Programmed Output Volts x 1.2	Programmed Output Volts x 1.2
Ripple & Noise	< 50 mV	< 50 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

