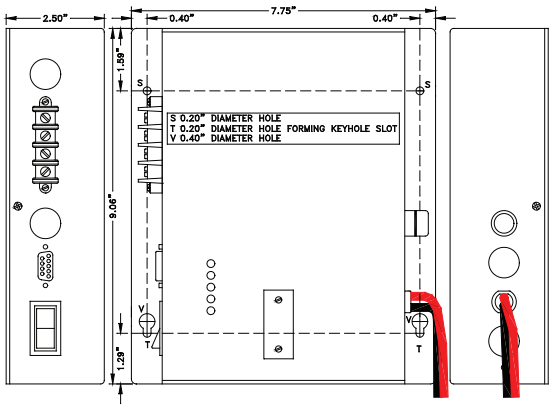
ANALYTIC SYSTEMS
Power Conversion Solutions

DC/DC CONVERTER
MODEL VTC305 SERIES



Description

Step up a 12 VDC battery to between 13.5 and 17.0 or 24.0 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, a dry contact alarm relay output 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 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 12V and 24 VDC power systems in marine, automotive or aeronautical environments and more.

Benefits

- Ultra-Quiet
- Power sensitive electronics without interference
- Rugged & Reliable
- Ensure years of safe and trouble free operation

Design Features

- Vibration proof output voltage adjustment by 3 position DIP switch
- Audible & visual indicators for constant current, low input voltage, low output voltage & over-temperature
- Extremely rugged and well suited for marine and other demanding environments
- High tolerance for shock and vibration
- Ultra-quiet low EMI operation
- Current limiting protection
- Reverse input protection
- Output over-voltage crowbar
- Dry contact output fail relay
- Remote control option
- Wide-Temperature operation available
- Parallel output diodes available
- Conformal Coating and/or Harsh Environment Ruggedization Available
- 3 year parts and labour warranty

Applications

- Marine Electronics Displays
- Mobile Offices (TV and Radio Vans)
- Automotive / RV
- Electric Utilities and Substations
- Base Station Power (Radio & Telecommunications)
- Industrial Controls (OEM Applications)
- Field Work / Construction Sites
- Solar / Alternative Power Systems
- Any 12 or 24V Equipment

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Electrical (Input)		
Input Volts (DC)	10.5-18	10.5-28
Input Amps (max)	30	
Input Fuse (AGC)	20 x 2 Amp	
Noise on Input	< 25 mV	
Low Input Voltage Alarm	10.5 VDC	
Current Limit	30 Amps in	
Electrical (Output)		
Output Nominal (op)	12	24
Output Volts (DC)	Input - 1V or 13.5 to 17.0 Whichever is greater	Input - 1V or 24.0 to 27.5 Whichever is greater
Output Current (Amps)	*27	
Output Crowbar	Programmed Output Volts x 1.2	
Output Ripple & Noise	< 25 mV	
Low Output Voltage Alarm	Programmed Output Voltage minus 2.5 VDC	
Transient Response	< 1V for 50% Surge	
Regulation (Line & Load)	< +/- 0.5%	
Duty Cycle	Continuous 100% for 24 hrs per day	
Efficiency	> 90% @ Maximum Output	
Environment Specification		
Operating Temp. Range	-25° to +40°C @ maximum output Derate Linearly 2.5% per °C from 40°C (Optional -40°C extra wide temp. operation avail.)	
Humidity	0 - 95% Relative Humidity (non-condensing) with optional conformal coating	
Audible Noise	NONE Ødb @ 3 ft	
Typical Service Life	> 10 yrs. (87,600 hrs)	
Isolation	Any Input or Output to Case 500 VDC Input to Output – Common Negative	
Mechanical Specification		
Length	9.1 in / 23.1 cm	
Width	7.8 in / 19.8 cm	
Height	2.5 in / 6.4 cm	
Material	Marine Grade Aluminium	
Finish	Black Anodize / Powder Epoxy Coat	
Fastenings	All 18-8 Stainless Steel	
Weight	4.0 lb / 1.8 kg	
Connections	Four contact output terminals	
Warranty	3 years	

* The actual output current capability depends upon the input/output voltage ratio. To obtain the actual output current capability at any given input voltage, use the following formula:
Output Amps = Input Volts/Output Volts x 27
For example, at 11 VDC in and 13.6 VDC out, the output current = 11/13.6 x 27 = 22.8 amps

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An ISO9001 and AS9100 Registered Company Battery Chargers • Inverters • Power Supplies • Voltage Converters

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