

# ANALYTIC SYSTEMS

Power Conversion Solutions

DC/DC Converters

Model  
VTC600-MS



## Benefits

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

## Design Features

- ◆ Adjustable output voltage
- ◆ 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
- ◆ MIL Environment Package Standard
- ◆ 2 years parts and labour warranty

## Military Option

Most of the products manufactured by Analytic Systems can be adapted for military use (Commercial Off The Shelf).

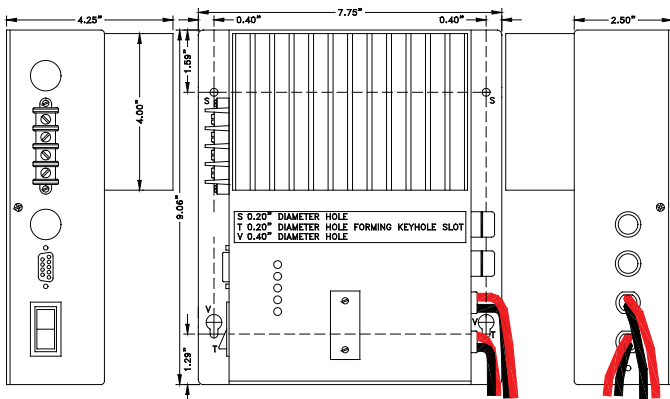
We provide four different levels of ruggedization; most often, a product in military use will use the extra-wide temperature range components to allow operation to -55 degrees Celsius.

The printed circuit boards are also protected against condensation and are enhanced with vibration protection that meets or exceeds MIL-STD810F, Method 514-3 and Cat-1 Proc 1.

C.O.T.S. products are designed to meet various levels of EMC radiated and conducted emissions MIL-STD 461E.

All C.O.T.S. products are manufactured in accordance with IPC-A-610.

 Schedule GSA Contract #GS-07F-5624R



## Description

The VTC600-MS DC DC Converter provides up to 600 watts to power 12 or 24 Volt Military Electronics from a 20 – 40 VDC Source.

This all new single board design incorporates state of the art switchmode technology for unmatched efficiency and ultra-quiet operation. Multiple stages of filtering reduce radiated or conducted noise to very low levels. Extra features include adjustable output voltage, audible and visual indicators for low input voltage, low output voltage, over temperature and overload.

Safety features include reverse input protection, over-temperature shutdown, current limiting, short circuit shutdown, a dry contact alarm relay output and output overvoltage crowbar. Optional features include a remote panel monitoring with On-Off control. We are confident that you will get many years of reliable service from this Voltage Converter.

NATO STOCK NUMBER #NSN-6130-20-000-8980

# DC/DC Converters

## VTC600-MS

<b>Electrical (Input)</b>		
Model Number	VTC600-32-12	VTC600-32-24
Input Volts (DC)	20 – 45	30 – 45
Input Amps (max)	40	40
Input Fuse (AGC)	25A x 2	
Noise on Input	< 50 mV	
<b>Electrical (Output)</b>		
Output Nominal (op)	12	24
Output Volts (DC)	13.6 ± 0.05	27.2 ± 0.05
Output Amps	50 cont./ 55 peak	35 cont. / 40 peak
Output Adjustment	± 0.5	
Output Crowbar	16.0 ± 0.5V	32.0 ± 1.0V
Output Ripple & Noise	< 50 mV	
Transient Response	< 1V for 50% Surge	
Regulation (Line & Load)	< +/- 0.5%	
Duty Cycle	Peak 20% for 10 min maximum Continuous 100% for 24 hours per day	
Efficiency	> 90% @ Maximum Output	
<b>Environment Specification</b>		
Operating Temp. Range	-40° to +55°C @ maximum output Derate Linearly 2.5% per °C from 55°C to 85°C	
Humidity	0 - 95°C 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	
<b>Mechanical Specification</b>		
Length	9.1 in / 23.1 cm	
Width	7.8 in / 19.8 cm	
Height	4.3 in / 10.9 cm	
Material	Marine Grade Aluminium	
Finish	Black Anodize / Powder Epoxy Coat	
Fastenings	All 18-8 Stainless Steel	
Weight	6.0 lb / 2.7 kg	
Connections	#10 AWG Input Wires (Positive & Negative) Four contact output terminals	
Warranty	2 years	

Note: Specifications are subject to change without notice.



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