ANALYTIC SYSTEMS
Power Conversion Solutions

8128 River Way,Delta,BC Canada V4G1K5
Tel: 604-946-9981
Fax: 604-946-9983
Toll Free: 1-800-668-3884 (US/CANADA)
www.analyticsystems.com

DC/DC Converters

VTC180-MS COTS DC/DC Converter

Benefits

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

Description

The VTC180 Series of voltage converters are variable duty cycle switching power supplies. They can be configured to run from a 32V, 36V, 48V or 72 VDC power systems to provide output voltages as shown below.

The VTC180 Series Voltage Converter features reverse input protection, current limiting, output over-voltage protection, ultra quiet low EMI operation and a wide operating temperature range.

We are confident that you will get many years of reliable service from this Voltage Converter.

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.

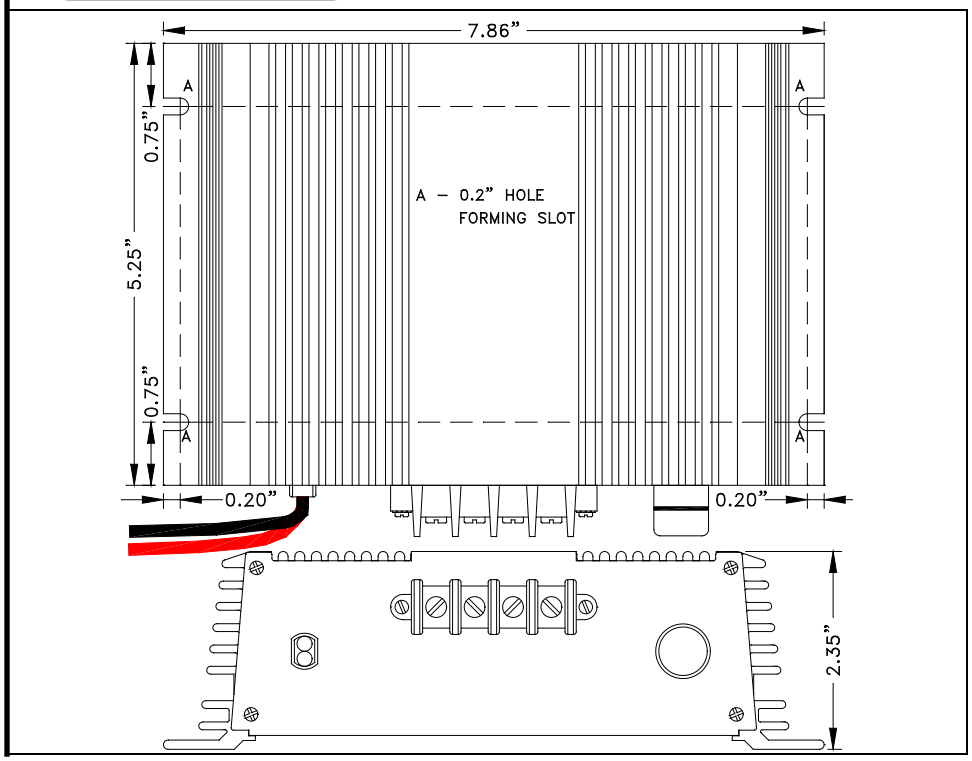
All C.O.T.S. products are manufactured in accordance with IPC-A-610.

Features

- Input voltage range allows operation from 32, 36V, 48V, or 72VDC power systems
- Extremely rugged and well suited for marine and other demanding environments
- High tolerance for shock and vibration
- Ultra-quiet low EMI operation
- Inrush protection
- Current limiting protection
- Reverse input protection
- High Efficiency
- Output over-voltage crowbar
- Remote control option
- Wide-Temperature operation Available
- Conformal Coating and/or Harsh Environment Ruggedization Standard
- 3 year parts and labour warranty

VTC180-MS Series DC/DC Voltage Converter

Mechanical Diagram



Specification

Electrical (Input)

Input Volts (ip)	32	48	72
Actual (Vdc)	♦ 20 – 45	40 – 65	65 – 100
Input Amps (max)	13.6	6.8	4.3
Input Fuse (MDA)	15	10	5
Noise on Input	< 10 mV		

♦ 30 - 45 Vdc input range for a 24Vdc output

Environmental Specification

Operating Temp. Range	-55° to +50°C @ maximum output Derate Linearly 2.5% per °C from 50°C
Humidity	0 - 95°C Relative Humidity (non-condensing) with standard 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

Electrical (Output)

Output Nominal (op)	12	24
Output Volts (DC)	13.6 ± 0.05	27.2 ± 0.05
Output Amps	15 cont. / 18 peak	7.5 cont. / 9.0 peak
Output Adjustment	± 0.5	
Output Crowbar	16.0 ± 0.5V	32.0 ± 1.0V
Output Ripple & Noise	< 10 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	
EMC	Designed to meet MIL-STD 461E	

Mechanical Specification

Length	7.9 in / 20.1 cm
Width	6.0 in / 15.2 cm
Height	2.4 in / 6.1 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
Vibration	Meets MIL-STD810F, Method 514-3 and Cat-1 Proc 1
Interconnect	IPC-A-610
Warranty	3 years

Available From:

ANALYTIC SYSTEMS
INNOVATIVE POWER CONVERSION SOLUTIONS
ISO 9001:2008 Certified Quality System