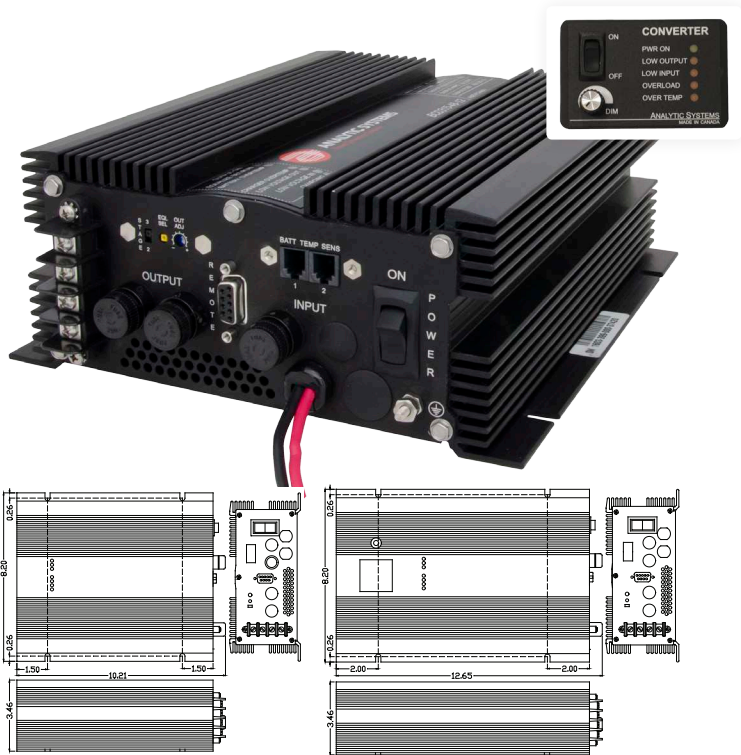


FULLY ISOLATED DC/DC CONVERTER

MODEL VTC315 Series



Description

The model VTC315 Series Voltage Converter supplies either 12V, 24V, or 48 VDC from a 12V, 24V or 48VDC power source.

All new Current Mode switching design offers increased power and reliability in a compact package. Extra input and output filtering reduce EMI to extremely low levels. Reliability features include an input fuse, thermal shutdown, current limiting, reverse battery hookup protection and output short circuit shutdown with automatic recovery.

The output voltage is easily adjusted 1.0 volts above or below the standard output voltage. Devices connected to the converter are protected by an output overvoltage crowbar circuit.

Available options include a Remote Control and/or a Digital Volt Ammeter to monitor output current and voltage.

Benefits

- Ultra-quiet
- Power sensitive electronics without interference
- Rugged and reliable to ensure years of safe and trouble free operation

Design Features

- Fully isolated design
- Adjustable output voltage
- Audible and visual indicators for constant current, low input voltage, low output voltage and over-temperature
- Over-temperature shutdown
- Short circuit protection
- Output over voltage crowbar
- Cycle by cycle current limiting
- Reverse input protection
- Transient Voltage Suppression
- Ultra-quiet low EMI operation
- Dry contact output fail relay
- Custom input / output voltages from 8 to 55 VDC
- Remote control option
- Digital Volt/Ammeter option
- Wide Temperature operation available
- Conformal coating and/or harsh environment ruggedization available

Applications

- ◆ Telecom Power Plants
- ◆ Marine & other Rugged Environments
- ◆ Electric Utilities and Substations
- ◆ Base Station Power
- ◆ Solar / Alternative Power Systems
- ◆ Emergency Power Backup (UPS)
- ◆ Military Applications (COTS)
- ◆ Industrial Controls
- ◆ Solar / Alternative Power Systems
- ◆ Fuel Cells

FULLY ISOLATED DC/DC CONVERTERS

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Electrical (Input)				
Nominal (ip)	12	24	48	72
Actual (Vdc)	11-16	20-35	40-60	65-90
Input Amps (max)	30	22.1	11.1	6.8
Input Fuse	MDA25	MDA25	MDA15	MDA10
Noise on Input	< 25 mV			
Electrical (Output)				
Output Nominal (op)	12	24	48	
Output Volts (DC)	13.6 ± 0.05	27.2 ± 0.05	54.4 ± 0.05	
Output Amps	20 cont. / 22.5 peak	10 cont. / 12.5 peak	5.0 cont. / 6.0 peak	
Output Crowbar	16.0 ± 0.5V	32.0 ± 1.0V	63.9 ± 2.0V	
Output Adjustment	± 1.0			
Switching Frequency	60 ± 2 KHz			
Idle Power	< 10 Watts			
Output Ripple & Noise	< 25 mV			
Transient Response	< 2V for 50% Surge			
Regulation (Line & Load)	< +/- 0.5%			
Duty Cycle	Peak 20% for 10 min max Continuous 100% for 24 hours per day			
Efficiency	> 80% @ 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 - +55°C extra wide temp. operation avail.)			
Humidity	0 - 95% Relative Humidity (non-condensing) with standard conformal coating			
Audible Noise	NONE Ødb @ 3 ft			
Typical Service Life	> 10 yrs. (87,600 hrs)			
Isolation	Input-Case & Input-Output 1500VDC (500V @ 24V I/P) Output-Case 500VDC (1500VDC @ 48V O/P)			
Mechanical Specification				
Length	9.6 in / 24.4 cm			
Width	8.2 in / 20.8 cm			
Height	3.5 in / 6.4 cm			
Clearance	1 inch (2.5 cm) all around			
Material	Marine Grade Aluminium			
Finish	Black Anodize / Powder Epoxy Coat			
Fastenings	All 18-8 Stainless Steel			
Weight	7.5 lb / 3.4 kg			
Connections	Four contact output terminal			
Warranty	3 years			
Safety	Designed to meet CSA 22.2.107.1 & UL458. Certified to meet ABS 11-HS794404B-PDA			

Note: Specifications are subject to change without notice.