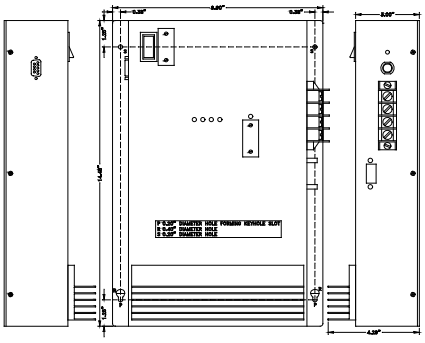
MDS POWER®

VTC615 SERIES
DC/DC CONVERTER

PRODUCT OVERVIEW



Description

The model VTC615 Voltage Converter supplies either 12V, 24V, 32V or 48 VDC from a 24V, 48V or 72VDC 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 thestandard output voltage. Devices connected to the converter are protected by an output overvoltage crowbar circuit.

Optional features include a Remote Control, a 19" Rack Mount version, and/or a Digital Volt Ammeter to allow monitoring of output current and output 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 overvoltage 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 12 to 55 VDC
- Remote control option
- Digital volt/ammeter option
- 19" rackmount option (VTC615R)
- Wide-temperature operation available
- Conformal coating and/or harsh environment ruggedization available

Applications

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

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TECHNICAL SPECIFICATIONS

ELECTRICAL (INPUT)				
Nominal (ip)	24	32	48	72
Actual (Vdc)	20-35	**28 - 45	40-60	60-90
Input Amps (max)	39.5	30	20.3	12.6
Input Fuse (ATC)	3 x 15	2 x 20	1 x 25	1 x 15
Noise on input	< 50 mV			
** Actual startup is at 29 VDC input, depending on model				
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	40 cont. / 45 peak	20 cont. / 25 peak	10 cont. / 12.5 peak	
Output Crowbar	16.0 ± 0.5V	32.0 ± 1.0V	63.9 ± 2.0V	
Output Adjustment	± 1.0 V			
Switching Frequency	60 ± 2.0 KHz			
Idle Power	< 10 Watts			
Output Ripple & Noise	< 50 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	> 85% @ Maximum Output			
ENVIRONMENT SPECIFICATION				
Operating Temp. Range	-25°C 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 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	14.5 in / 36.8 cm			
Width	10.2 in / 25.9 cm			
Height	4.3 in / 10.9 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	7.0 lb / 3.2 kg			
Connections	Four contact output terminals			
Warranty	Five years			

Note: Specifications are subject to change without notice.

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