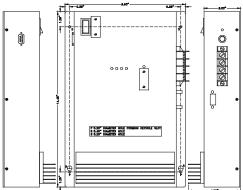


FULLY ISOLATED DC/DC CONVERTER MODEL

MODEL VTC615 Series





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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FULLY ISOLATED DC/DC CONVERTERS

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Electrical (Input)						
Nominal (ip)	24	32	48	72		
Actual (Vdc)	20-35	**28 - 45	40-60	65-90		
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	nt. / 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	60 ± 2.0 KHz				
Idle Power	< 10 Watts	< 10 Watts				
Output Ripple & Noise	< 50 mV	< 50 mV				
Transient Response	< 2V for 50% Surge	< 2V for 50% Surge				
Regulation (Line & Load)	<+/- 0.5%	<+/- 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	Derate Linearly 2.5%	-25°C to +40°C @ maximum output Derate Linearly 2.5% per °C from 40°C (Optional -40°C extra wide temp. operation avail.)				
-F0 -2	(Optional -40°C extra		0 - 95% Relative Humidity (non-condensing) with standard conformal coating			
	0 - 95% Relative Hu	midity	al coating			
Humidity	0 - 95% Relative Hu	midity	al coating			
Humidity Audible Noise Typical Service Life	0 - 95% Relative Hu (non-condensing) wi	midity th standard conform	al coating			
Humidity Audible Noise	0 - 95% Relative Hu (non-condensing) wi NONE Ødb @ 3 ft	midity th standard conform) Dutput 1500VDC (50	0V @ 24V I/P)			
Humidity Audible Noise Typical Service Life Isolation	0 - 95% Relative Hu (non-condensing) wi NONE Ødb @ 3 ft > 10 yrs. (87,600 hrs Input-Case & Input-	midity th standard conform) Dutput 1500VDC (50	0V @ 24V I/P)			
Humidity Audible Noise Typical Service Life Isolation Mechanical Specification	0 - 95% Relative Hu (non-condensing) wi NONE Ødb @ 3 ft > 10 yrs. (87,600 hrs Input-Case & Input-	midity th standard conform) Dutput 1500VDC (50	0V @ 24V I/P)			
Humidity Audible Noise Typical Service Life	0 - 95% Relative Hu (non-condensing) wi NONE Ødb @ 3 ft > 10 yrs. (87,600 hrs Input-Case & Input-Coutput-Case 500VD)	midity th standard conform) Dutput 1500VDC (50	0V @ 24V I/P)			
Humidity Audible Noise Typical Service Life Isolation Mechanical Specification Length Width	0 - 95% Relative Hu (non-condensing) wi NONE Ødb @ 3 ft > 10 yrs. (87,600 hrs Input-Case & Input-Coutput-Case 500VDI	midity th standard conform) Dutput 1500VDC (50	0V @ 24V I/P)			
Humidity Audible Noise Typical Service Life Isolation Mechanical Specification Length Width Height	0 - 95% Relative Hu (non-condensing) wi NONE Ødb @ 3 ft > 10 yrs. (87,600 hrs Input-Case & Input- Output-Case 500VDI	midity th standard conform) Dutput 1500VDC (50 C (1500VDC @ 48V (0V @ 24V I/P)			
Humidity Audible Noise Typical Service Life Isolation Mechanical Specification Length Width Height Clearance	0 - 95% Relative Hu (non-condensing) wi NONE Ødb @ 3 ft > 10 yrs. (87,600 hrs Input-Case & Input-Coutput-Case 500VD) 14.5 in / 36.8 cm 10.2 in / 25.9 cm 4.3 in / 10.9 cm	midity th standard conform) Dutput 1500VDC (50 C (1500VDC @ 48V (0V @ 24V I/P)			
Humidity Audible Noise Typical Service Life Isolation Mechanical Specification Length	0 - 95% Relative Hu (non-condensing) wi NONE Ødb @ 3 ft > 10 yrs. (87,600 hrs Input-Case & Input-Coutput-Case 500VDC 14.5 in / 36.8 cm 10.2 in / 25.9 cm 4.3 in / 10.9 cm 1 inch (2.5 cm) all ar	midity th standard conform) Dutput 1500VDC (50 C (1500VDC @ 48V (0V @ 24V I/P)			
Humidity Audible Noise Typical Service Life Isolation Mechanical Specification Length Width Height Clearance Material	0 - 95% Relative Hu (non-condensing) wi NONE Ødb @ 3 ft > 10 yrs. (87,600 hrs Input-Case & Input-Output-Case 500VDt 14.5 in / 36.8 cm 10.2 in / 25.9 cm 4.3 in / 10.9 cm 1 inch (2.5 cm) all ar Marine Grade Alumi	midity th standard conform) Output 1500VDC (50 C (1500VDC @ 48V (0V @ 24V I/P)			
Humidity Audible Noise Typical Service Life Isolation Mechanical Specification Length Width Height Clearance Material Finish	0 - 95% Relative Hu (non-condensing) wi NONE Ødb @ 3 ft > 10 yrs. (87,600 hrs Input-Case & Input-Coutput-Case 500VD) 14.5 in / 36.8 cm 10.2 in / 25.9 cm 4.3 in / 10.9 cm 1 inch (2.5 cm) all ar Marine Grade Alumi Black Anodize / Pow	midity th standard conform) Output 1500VDC (50 C (1500VDC @ 48V (0V @ 24V I/P)			
Humidity Audible Noise Typical Service Life Isolation Mechanical Specification Length Width Height Clearance Material Finish Fastenings	0 - 95% Relative Hu (non-condensing) wi NONE Ødb @ 3 ft > 10 yrs. (87,600 hrs Input-Case & Input-Coutput-Case 500VD0 14.5 in / 36.8 cm 10.2 in / 25.9 cm 4.3 in / 10.9 cm 1 inch (2.5 cm) all ar Marine Grade Alumi Black Anodize / Pow All 18-8 Stainless St	midity th standard conform) Output 1500VDC (50 C (1500VDC @ 48V (0V @ 24V I/P)			

Note: Specifications are subject to change without notice.



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