



## DC/DC Converters

### VTC1015R Isolated DC/DC Converters

#### Benefits

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

#### Applications

- Telecom Power Plants
- Electric Utilities and Substations
- Marine & other rugged environments
- Base Station Power (Radio & Telecommunications)
- Industrial Controls (OEM Applications)
- Solar / Alternative Power Systems
- Emergency Power Backup (UPS)

#### Description

The model VTC1015R Rackmount Voltage Converter supplies either 12V, 24V, or 48 VDC from a 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.

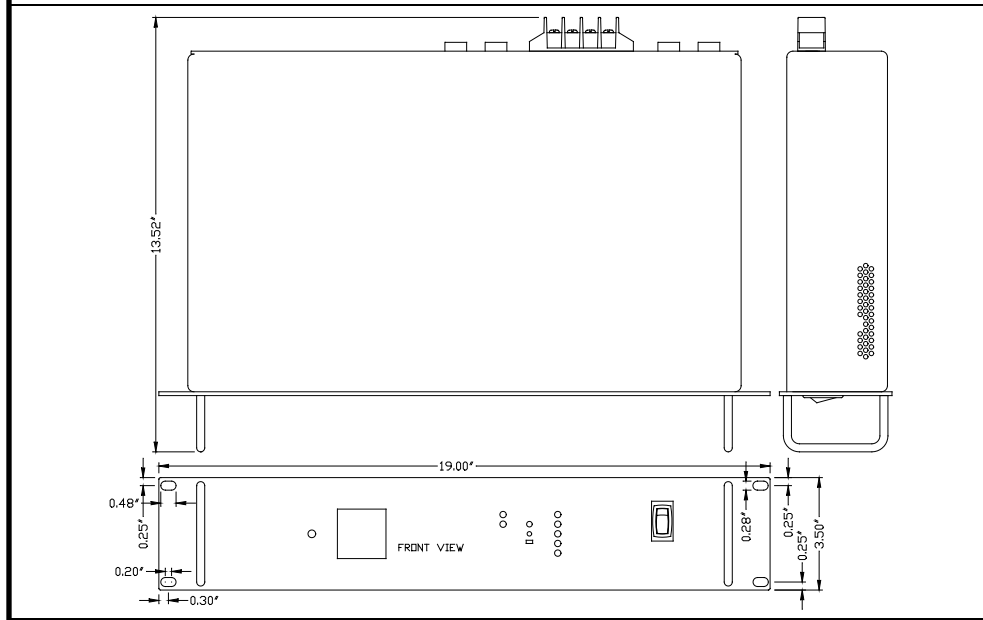
All rackmount units come standard with High quality digital output meters to allow monitoring of output current and output voltage. An optional Battery Back-up is also available.

#### Features

- Fully Isolated Design
- Transient Voltage Suppressor
- Adjustable output voltage
- Audible & visual indicators for constant current, low input voltage, low output voltage & over-temperature
- Over-temperature shutdown
- Short circuit protection
- Output overvoltage crowbar
- Cycle by cycle current limiting
- Reverse input protection
- Ultra-quiet low EMI operation
- Dry contact output fail relay
- Thermostatically controlled cooling fan
- Standard Digital Volt/Ammeter
- Custom input / output voltages from 12 to 55 VDC
- Battery Back-up option
- Wide-Temperature operation Available
- Conformal Coating and/or Harsh Environment Ruggedization Available
- 3 year parts and labour warranty

# VTC1015R Series DC/DC Voltage Converter

## Mechanical Diagram



## Specification

### Electrical (Input)

<b>Nominal (ip)</b>	24	48	72
<b>Actual (Vdc)</b>	20-35	40-60	65-90
<b>Input Amps (max)</b>	72.6	36.3	23
<b>Input Fuse (ATC)</b>	3 x 25A	2 x 20A	1 x 30A
<b>Noise on Input</b>	< 50 mV		

### Environmental Specification

<b>Operating Temp. Range</b>	-25° to +40°C @ maximum output Derate Linearly 2.5% per °C from 40°C (Optional -40°C extra wide temp. operation avail.)
<b>Humidity</b>	0 - 95°C Relative Humidity (non-condensing) with optional conformal coating
<b>Audible Noise</b>	NONE Ødb @ 3 ft (34.5 dB when fan operating)
<b>Typical Service Life</b>	> 10 yrs. (87,600 hrs)
<b>Isolation</b>	Input-Case & Input-Output 1500VDC (500VDC @ 24V I/P) Output-Case 500VDC (1500VDC @ 48V O/P)

### Electrical (Output)

<b>Output Nominal (op)</b>	12	24	48
<b>Output Volts (DC)</b>	13.6 ± 0.05	27.2 ± 0.05	54.4 ± 0.05
<b>Output Amps</b>	60 cont. / 70 peak	40 cont. / 45 peak	20 cont. / 22.5 peak
<b>Output Adjustment (Vdc)</b>	± 1.0 V		
<b>Output Crowbar</b>	16.0 ± 0.5V	32.0 ± 1.0V	63.9 ± 2.0V
<b>Switching Frequency</b>	60 ± 2.0 KHz		
<b>Idle Power</b>	< 10 Watts		
<b>Output Ripple &amp; Noise</b>	< 50 mV		
<b>Transient Response</b>	< 2V for 50% Surge (Output Amps/2)		
<b>Regulation (Line &amp; Load)</b>	< +/- 0.5%		
<b>Duty Cycle</b>	Peak 20% for 10 min maximum Continuous 100% for 24 hours per day		
<b>Efficiency</b>	> 85% @ Maximum Output		

### Mechanical Specification

<b>Depth</b>	13.5 in/ 34.3 cm
<b>Width</b>	19.0 in/ 48.3 cm
<b>Height</b>	2u (3.5 in.)
<b>Material</b>	Marine Grade Aluminium
<b>Finish</b>	Black Anodize / Powder Epoxy Coat
<b>Fastenings</b>	All 18-8 Stainless Steel
<b>Weight</b>	12.0 lb / 5.5 kg
<b>Connections</b>	Four contact output terminals
<b>Warranty</b>	3 years
<b>Safety</b>	cETLus to UL1012 & CSA22.2

Available From: