

# VTC315i Series DC/DC Voltage Converter



A product of:



## Benefits

- Ultra-Quiet
- Convection cooled, no noisy fan
- Power sensitive electronics without interference
- Rugged & Reliable
- Ensure years of safe and trouble free operation

## Applications

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

## DC/DC Converters

### VTC315i Series (isolated)

## Description

The model VTC315 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.

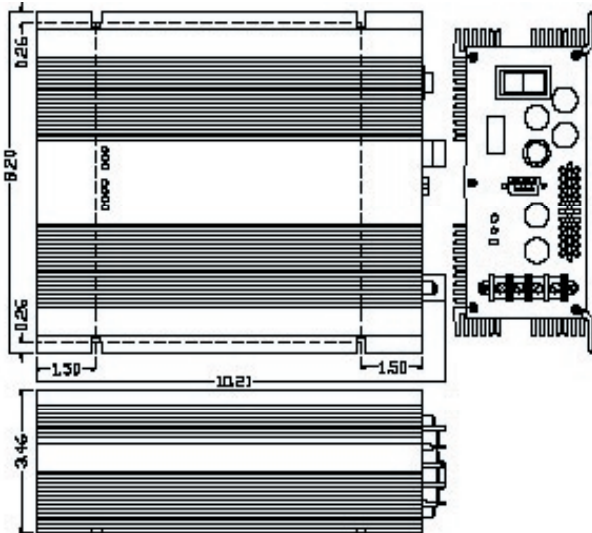
The output voltage is easily adjusted 0.5 volts above or below the standard output voltage. Devices connected to the converter are protected by an output overvoltage crowbar circuit.

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

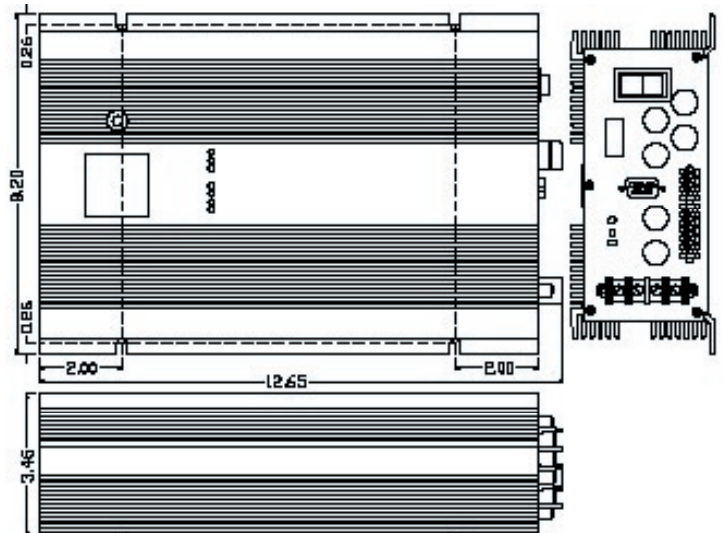
## Features

- Fully Isolated Design
- 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
- 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
- 3 year parts and labour warranty

## Mechanical Diagram



Shown without Digital Meter



Shown with Digital Meter

## Specifications (Specifications Subject to Change Without Notice)

### Electrical (Input)

Nominal (ip)	24	48
Actual (Vdc)	20-35	40-60
Input Amps (max)	22	9.6
Input Fuse	MDA25	MDA15
Noise on Input	< 25 mV	

### Environmental Specifications

Operating Temp. Range	-25° 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 optional conformal coating
Audible Noise	NONE Ødb @ 3 ft
Typical Service Life	> 10 yrs. (87,600 hrs)
Isolation	Input-Case & Input-Output 1500VDC Output-Case 500VDC

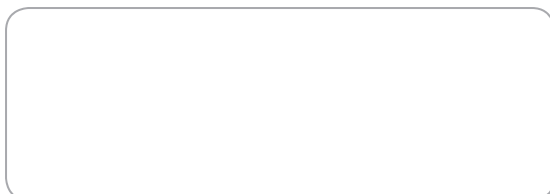
### Electrical (Output)

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	± 0.5		
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		

### Mechanical Specifications

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	Approval to cETLus standards pending

Available from:



# RIPEnergy

The power conversion company

RIPEnergy AG  
Wägitalstrasse 24  
CH-8854 Siebnen  
Switzerland

Ph +41-(0)43-818 53 85  
Fax +41-(0)43-818 53 87  
www.ripenergy.ch