



## Benefits

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

## Applications

- Marine & other rugged environments
- Electric Utilities and Substations
- Manufacturing Plants
- Steel Mills
- Military Applications (COTS)
- Industrial Controls
- OEM Applications
- Solar / Alternative Power Systems
- Fuel Cells

## Description

# DC/DC Voltage Converters

## VTC310 Isolated Series Voltage Converter

The model VTC310 Voltage Converter supplies 12V, 24V or 48 VDC from a 110V, 220V or 300 VDC power source. Other output voltages up to 360 volts are also available by special order.

The 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 and short circuit shutdown with automatic recovery.

The output voltage is easily adjusted 1.0 volts above or below the standard output voltage to accommodate special requirements.

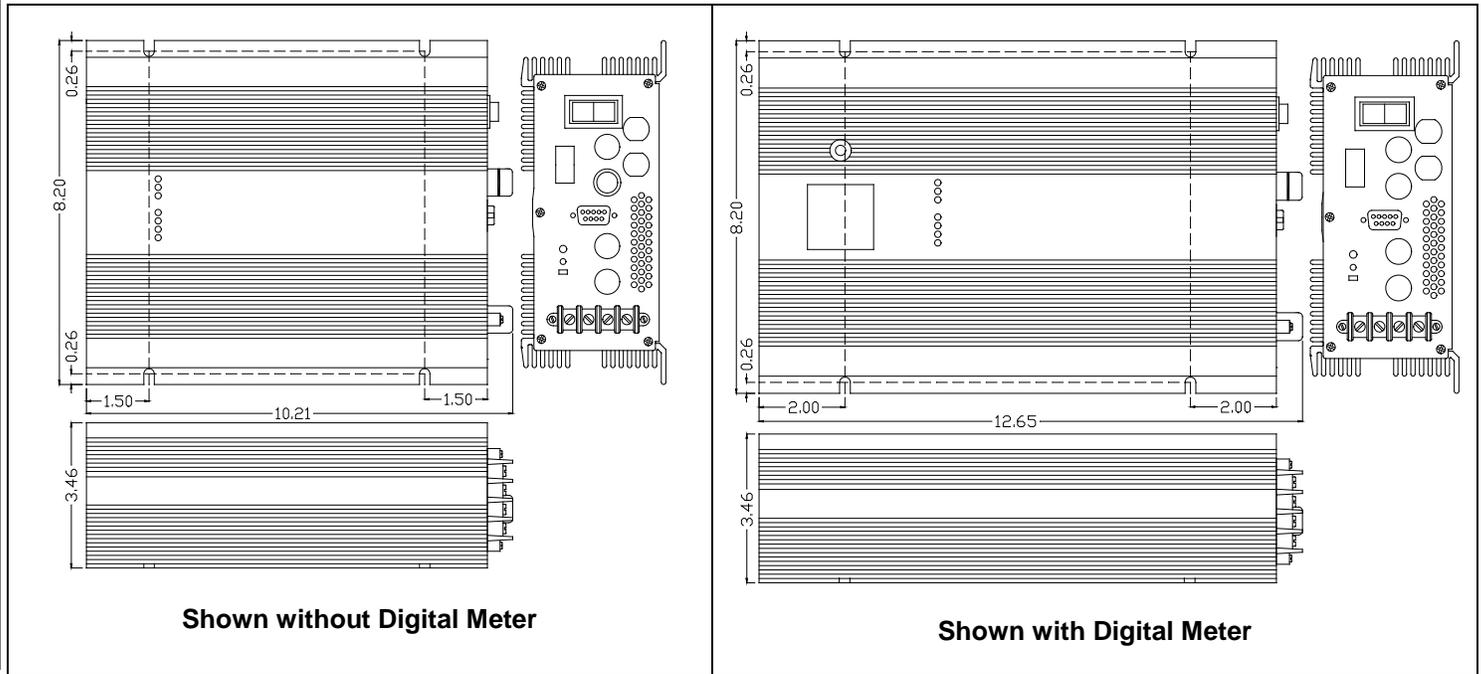
Available options include a Remote Control and/or a Digital Volt Ammeter.

## 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 360 VDC
- Remote control option
- Digital Volt/Ammeter option
- Wide Temperature operation Available
- Conformal Coating and/or Harsh Environment Ruggedization Available

# VTC310 Isolated Series Voltage Converter

## Mechanical Diagram



## Specification

### Electrical (Input)

Nominal (ip)	110	250	300
Actual (Vdc)	100-140	230-280	280-360
Input Amps (max)	4.8	2.1	1.5
Input Fuse (MDA)	6	3	2
Noise on Input	< 25 mV		

### Environmental Specification

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°C 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 (1500VDC @ 48V O/P)

### 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. / 25 peak	10 cont. / 13 peak	5.0 cont. / 6.5 peak
Output Crowbar	16.0 ± 0.5V	32.0 ± 1.0V	63.9 ± 2.0V
Output Adjustment	± 1.0 Vdc		
Output Ripple & Noise	< 25 mV		
Transient Response	< 1V 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 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	Approval to cETLus standards

Available From: