



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
- Solar / Alternative Power Systems
- Emergency Power Backup (UPS)
- Military Applications (COTS)
- Industrial Controls
- Fuel Cells

DC/DC Voltage Converters

VTC615 Isolated Series Voltage Converter

Description

The model VTC615 Voltage Converter supplies either 12V, 24V, 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 the standard output voltage. Devices connected to the converter are protected by an output overvoltage crowbar circuit.

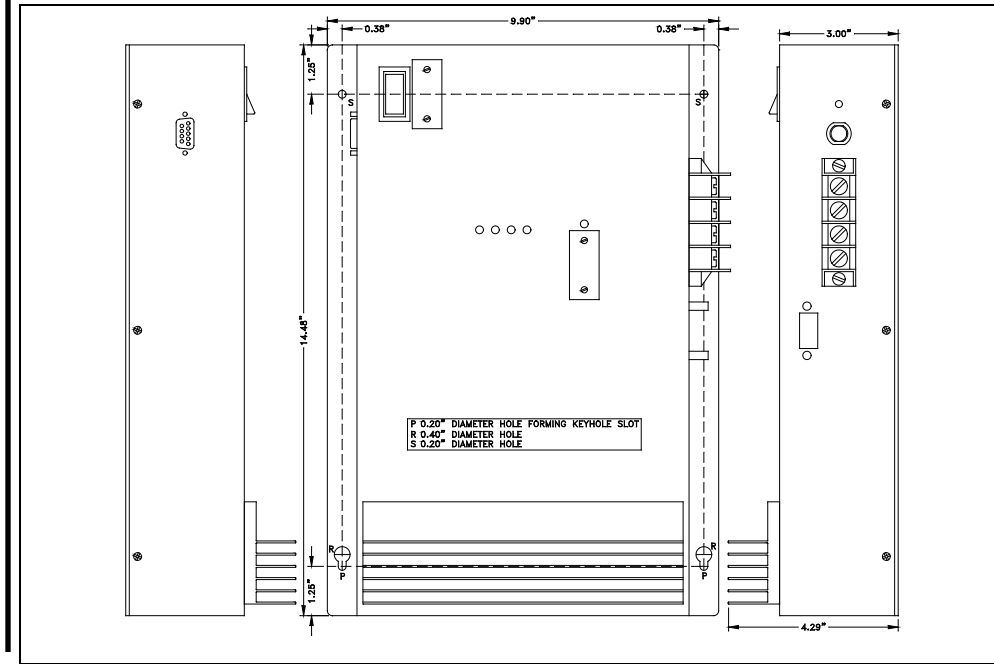
Optional features include a Remote Control, a 19" Rack Mount version, and/or a Digital Volt Ammeter to allow monitoring of output current and output voltage.

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 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

VTC615 Isolated Series Voltage Converters

Mechanical Diagram



Specification

Electrical (Input)

| | | | |
|------------------|---------|--------|--------|
| Nominal (ip) | 24 | 48 | 72 |
| Actual (Vdc) | 20-35 | 40-60 | 65-90 |
| Input Amps (max) | 39.5 | 20.3 | 12.6 |
| Input Fuse (ATC) | 3 x 15 | 1 x 25 | 1 x 15 |
| Noise on Input | < 50 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 (500V @ 24V I/P) 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 | 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 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 | | |

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 | 3 years |
| Safety | Approval to cETLus standards |

Available From: