Model 1716 (RR series) dc-to-ac inverters provide 250 volt-amperes of 120-Vac, 60-Hz output power in a compact, lightweight package ideally suited for powering test equipment, laptop computers and other ac loads from 74-Vdc and 36-Vdc electrical systems aboard locomotives and other rail vehicles. High power-conversion efficiencies allow these inverters to operate continuously at full power with simple convection cooling (no fans). These inverters provide well-regulated, frequency-stable outputs well-suited for powering both sensitive electronic equipment and loads normally considered difficult for inverters, including switch-mode power supplies, small motors and other nonlinear loads.

**SPECIFICATIONS**

**Input Voltage Range**
- Model 1716-36RR-120-60: 25 Vdc to 45 Vdc
- Model 1716-74RR-120-60: 50 Vdc to 90 Vdc

**Output Voltage**
118 Vac nominal, single phase (as measured with a conventional average-responding, rms-calibrated voltmeter). Voltage regulation is ±1% versus dc input line and ±2% versus output load.

**Frequency**
60 Hz nominal, ±0.15 Hz maximum variation over the full range of load and input-voltage changes. Temperature coefficient is less than 0.02% per °C.

**Volt-Ampere Rating**
250 VA

**Output Voltage Waveshape**
Three-level stepped approximation to a sine wave with peak, average and rms voltages approximating those of a sine wave.

**Temperature Range**
- Operating: -30°C to +50°C
- Storage: -40°C to +90°C

**Efficiency**
The power conversion efficiency exceeds 85% under full load conditions. At nominal input voltage, the no-load input current is approximately 75 milliamperes for Model 1716-36RR-120-60 and approximately 55 milliamperes for Model 1716-74RR-120-60.

**Protection**
Protection against overloads and accidental short-circuit of the output is provided electronically, and recovery is automatic upon removal of the abnormal load. A front-panel circuit breaker in series with the dc input provides protection against accidental reversal of input polarity during installation.

**Transient-Withstand Capability**
Transient input-voltage surges up to 7,000 volts peak, per IEC 571, Paragraphs 3.5 and 5.4, will not harm the inverter. The abrupt discharge of a 16-µF capacitor, charged to 1,500 Vdc and applied from line to line across the input or from either input line to chassis, will not damage the inverter or interfere with its operation.

**Isolation**
Mutual electrical isolation capable of passing an 1,800-Vdc stress test is provided between the dc input, the ac output and chassis.

**Input/Output Connections**
DC input connections are provided via a two-part (plug and header) connector. The ac output connection is provided via a NEMA type 5-15R duplex receptacle. A front panel chassis ground connection is provided for use with #8 hardware.

**Mechanical**
Dimensions in inches (mm): 3.25 (83) high x 7.60 (193) wide x 11.25 (286) deep (excluding flanges and terminal block). Mounting flange on base is 0.6 (5) wide each side. Terminal block (including cover) extends 0.8 (20) from front panel. Weight: 8 lbs.

For Additional Information
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