74-V AND 36-V INPUT DC-AC INVERTER

250-VA OUTPUT, 120-VAC, 60-HZ

Model 1716-74RR-120-60

Features:

- FOR LOCOMOTIVE AND RAIL/TRANSIT APPLICATIONS
- WELL-REGULATED, FREQUENCY-STABLE OUTPUT
- INPUT SURGE/TRANSIENT PROTECTION
- HIGHLY EFFICIENT, CONVECTION COOLED

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.

Table 1

Nominal Input Voltage (Vdc)	Input Voltage Range (Vdc)	Input Current No Load[1] (mA)	Efficiency	Model Number
36	25 - 45	Approx. 75	85%	1716-36RR-120-60
74	50 - 90	Approx. 55	85%	1716-74RR-120-60

[1] Typical at nominal input voltage

FULL SPECIFICATIONS: SEE PAGE 2

Specifications

INPUT VOLTAGE AND CURRENT	The nominal input voltage, the input voltage range, and the no-load input current are shown in Table 1.
OUTPUT VOLTAGE (VAC)	118 Vac Nominal, single phase (as measured with a conventional average-responding, rms-calibrated voltmeter)
OUTPUT VOLTAGE REGULATION	±1% versus dc input line ±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 ±0.02% maximum per °C
VOLT-AMPERE RATING	250 VA
OPERATING TEMPERATURE RANGE	-30°C to +50°C
STORAGE TEMPERATURE RANGE	-40° C to +90°C
OUTPUT VOLTAGE WAVESHAPE	Three-level stepped approximation to a sine wave with peak, average and rms values approximating those of a sine wave.
EFFICIENCY	Exceeds 85% under full load conditions. See Table 1 for no-load input current.
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.
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.
MOUNTING IN INCHES (MM)	Flange on base accepts six #10 screws. Hole pattern (3 each side) is 3.8 (97) between holes front-to-back and 8.1 (206) wide.
WEIGHT LBS (KG)	8 (3.7)
ACCESSORIES INCLUDED	User information guide, mating connector

Products

For information about other Wilmore dc-to-ac inverters or for information about other power-conditioning products such as dc-to-dc converters, switching power supplies, and custom power solutions, please contact our sales department.

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