Wilmore® ELECTRONICS CO., INC.

Model 1755 -74-110-60-P
DC-AC INVERTER

Bulletin No. 76A0028

74-V INPUT DC-AC SINE WAVE INVERTER 500VA

Features

- FOR ON BOARD LOCOMOTIVE APPLICATIONS
- ISOLATED, REGULATED, FREQUENCY-STABLE OUTPUT
- INPUT SURGE/TRANSIENT PROTECTED
- 90% EFFICIENT

Model 1755-74-110-60-P

Designed to power low-earth-orbit (LEO) satellite systems, laptop computers and other ac loads from 74-Vdc locomotive battery systems, the Model 1755-74 dc-to-ac inverter provides 500 volt-amperes of 110-Vac, 60-Hz output power in a lightweight package. Its high power-conversion efficiency allows the inverter to operate continuously at full power. The isolated, regulated, and frequency-stable sine-wave output is well-suited for powering a variety of loads, including sensitive electronic equipment as well as nonlinear loads normally considered difficult for inverters.

Specifications

Input Voltage
52 Vdc to 90 Vdc (74 Vdc nominal)

Output Voltage
110 Vac nominal, single phase
Voltage regulation is ±3% versus dc input line and ±3% versus output load.

Frequency
60 Hz nominal, ±0.01 Hz maximum variation over the full range of load and input-voltage changes (crystal controlled).

Volt-Ampere Rating
500 VA (continuous duty) with surge capability for high-inrush loads

Output Voltage Waveshape
Sine wave with 1%-3% total harmonic distortion (typical)

Efficiency
The power conversion efficiency exceeds 90% for most of the output load range. At nominal input voltage, the no-load input current is approximately 0.2 amperes.

Temperature Range
Operating: -10°C to +50°C (internal fan cooling)
Storage: -40°C to +95°C

Protection
Protection against output overload (including short-circuit) and input overvoltage is provided electronically. Recovery to normal operation is automatic upon removal or correction of fault conditions. A front-panel circuit breaker is provided in series with the dc input to protect against accidental reversal of dc-input polarity.

SPECIFICATIONS-continued on next page

74-V INPUT DC-AC SINE WAVE INVERTER 500VA

Specifications (cont'd)

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

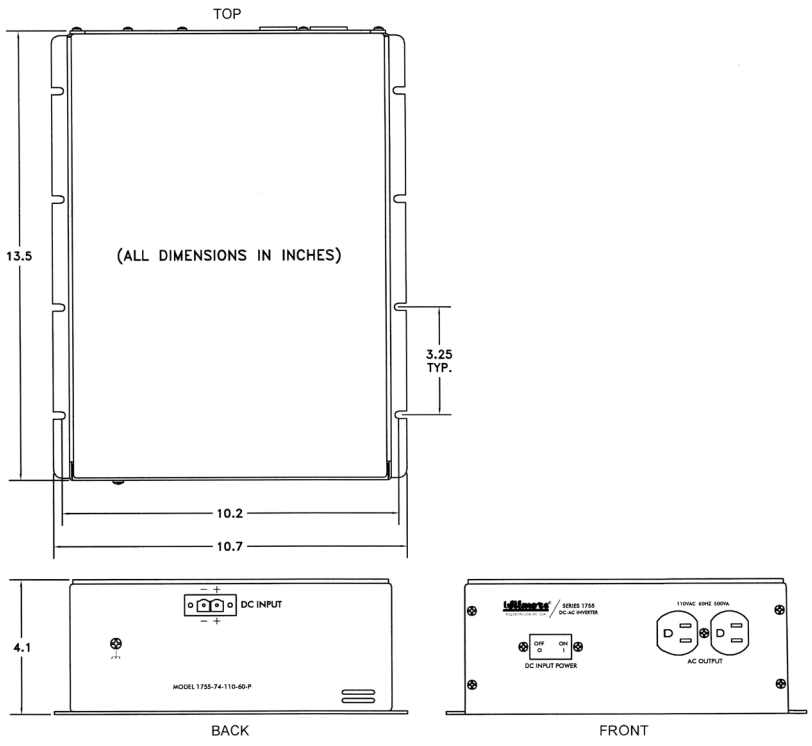
Transient-Withstand Capability
The inverter will not be damaged when its input is subjected to high energy transients as specified in IEC 1000-4-5, Surge Immunity Test, Level 3, applied line-to-line or line-to-chassis.

Input/Output Connections
DC input connections are provided via a two-part (plug and header) connector.
AC output connections are provided via a NEMA type 5-15R duplex receptacle.
A chassis connection is provided via an 8-32 screw on the front panel.

Front Panel Features
A combination circuit breaker and ON/OFF switch is provided for dc input power.

Mechanical
Figure 1 provides overall dimensions.
Weight is approximately 11 lbs.
Mounting flange on base accepts eight #10 screws.

Figure 1



Products

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

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