Wilmore ELECTRONICS CO., INC.
P. O. Box 1329, Hillsborough, N. C. 27278, U.S.A.

MODEL 1737-36RR-74-4
DC-DC CONVERTER

Preliminary Information

36-V TO 74-V DC-DC CONVERTER

Model 1737-36RR-74-4

- **OPERATE LOCOMOTIVE ELECTRONICS ON 36-V RAIL TRANSIT VEHICLES**
- **OUTPUT CURRENT UP TO 4 AMPERES**
- **-40°C to +70°C OPERATING TEMPERATURE RANGE**
- **CONVECTION COOLED**
- **EXTREMELY RUGGED AND RELIABLE**

The Model 1737-36RR-74-4 dc-to-dc converter is designed to provide a nominal 74-Vdc output from 36-Vdc battery systems found on many rail transit vehicles. Conservative electrical design, very high operating efficiency and rugged mechanical construction makes it well suited for powering voice/data radios and other sensitive electronic loads in the harsh railroad vehicle environment.

SPECIFICATONS

Input Voltage Range
25 Vdc to 45 Vdc

Output Voltage
74 Vdc nominal. Output voltage is directly proportional to input voltage.

Output Current
4 amperes (continuous duty)

Output Voltage Variation
Versus line: Output voltage is directly proportional to input voltage
Versus load: Less than ± 2 volts for the load range from 0.4 to 4.0 amperes

Output Voltage Ripple
Typically less than 50 mV rms.

Conversion Efficiency
Greater than 90% over most of the load range. No-load input power is typically about 3 watts.

Isolation
Isolation capable of passing a 1,500-Vdc insulation stress test is provided between the converter circuitry and chassis ground. The input and output are not isolated from each other and share a common return.

Transient Withstand Capability
The converter 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.

Ambient Temperature Range
-40°C to +70°C (-40°F to +158°F)
(Convection Cooling)

Protection
Good installation practice for mobile electronic equipment dictates that input fuses or circuit breakers should be located at the power-source end of the cables feeding the converter. For this reason, no user-serviceable protection devices are built inside the Model 1737 to protect against fault conditions at the input to the converter. Instead, a 10-ampere normal-delay fuse or circuit breaker should be installed at or near the dc input source in series with the positive (+) input line.
Protection against accidental reversal of the dc input-voltage polarity during installation is provided by an internal shunt diode working in conjunction with the aforementioned user-supplied input fuse or circuit breaker.

Input/Output Connections
Input and output connections are provided via a heavy-duty barrier-strip terminal block. The terminal block screws accept lugs for use with #10 hardware. A chassis ground connection is provided for use with #8 hardware.

Mechanical
Size:
Dimensions given in inches (mm):
2.5 (64) high x 8.2 (203) wide x 7.6 (191) deep (excluding flanges and terminal block).
Mounting flange on base is 0.5 (13) wide (each side).
Terminal block extends 0.8 (20) from top panel.
Weight:
3.5 pounds (1.6 Kg)
Mounting:
Mounting flange on base accepts four #10 screws.
Hole pattern is 4.5 (114) along each flange and 8.0 (203) front-to-back (flange-to-flange).

For Additional Information
Telephone: (919) 732-9351
Fax: (919) 732-9359
Web: www.wilmoreelectronics.com