

74-V OUTPUT DC-DC CONVERTERS



Model 1737-12-74-4

- OPERATE LOCOMOTIVE ELECTRONICS ON 12-V OR 24-V VEHICLES
- OUTPUT CURRENT UP TO 4 AMPERES
- -40°C to +70°C OPERATING TEMPERATURE RANGE
- CONVECTION COOLED
- EXTREMELY RUGGED AND RELIABLE

Models 1737-12-74-4 and 1737-24-74-4 are dc-to-dc converters designed to provide a nominal 74-Vdc output from 12-Vdc and 24-Vdc vehicles, respectively. Conservative electrical design, very high operating efficiency and rugged mechanical construction make them well suited for powering voice/data radios and other sensitive electronic loads in the harsh railroad vehicle environment.

SPECIFICATIONS

Input Voltage Range

For Model 1737-12-74-4:
10.5 Vdc to 15 Vdc
For Model 1737-24-74-4:
21 Vdc to 30 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 ± 3 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.

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, an appropriately-rated 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.

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.

Ambient Temperature Range

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

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

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Information provided in this bulletin is subject to change without notice.