

150 WATT TRIPLE OUTPUT DC-DC CONVERTER FOR RAILWAY APPLICATIONS

- NOMINAL 74 VDC INPUT (STANDARD LOCOMOTIVE POWER BUS)
- WIDE DC INPUT
- WIDE TEMPERATURE RANGE
- HIGH RELIABILITY
- RUGGED CONSTRUCTION



SPECIFICATIONS

DC INPUT: 50.0 - 82.0 VDC with 74.0 VDC nominal.

EFFICIENCY: 70% minimum or greater .

LINE LOAD AND REGULATION:

- +5.0 VDC nominal output : $\pm 5\%$ @ 1.0 A min; 6.0 A max
- +12 VDC nominal output : $\pm 5\%$ @ 0.2 A min; 7.0 A max
- 12 VDC nominal output : $\pm 5\%$ @ 0.1 A min; 1.0 A max

NOMINAL OUTPUT VOLTAGE:

- +5.0 VDC ± 0.3 V at 6.0A
- 12 VDC ± 1.0 V at 1.0A
- +12 VDC ± 1.0 V at 7.0A

INPUT RIPPLE : 2.0 VRMS, 60 Hz through the operating temperature rate.

OUTPUT RIPPLE:

- + 5.0 VDC Output: 100 mV peak-to-peak, 20 MHz bandwidth
- ± 12.0 VDC Output: 200 mV peak-to-peak, 20 MHz bandwidth

INPUT LOADING: The unit does not require more than 240 Watts while delivering maximum output currents.

VIBRATION:

- Operating: 1.5 G s RMS, 0.5 Hz to 2 KHz.
- Non-Operating: 2 G s RMS, 0.5 Hz to 2 KHz.

OUTPUT CURRENT LIMITING: The unit provides protection against overloads and short circuits. No damage results from any overload condition. The unit automatically returns to full rated operation within three seconds upon removal of the overload condition. Peak output currents are limited to 12 A, max.

OPERATING TEMPERATURE RANGE:

- Operating: $-30\text{ }^{\circ}\text{C}$ to $+70\text{ }^{\circ}\text{C}$.
- Non-Operating: $-30\text{ }^{\circ}\text{C}$ to $+80\text{ }^{\circ}\text{C}$.
- Relative Humidity: 5-90%, non-condensing.

ISOLATION: The unit passes the hi-pot test where 1065 VAC, 60 Hz is applied between chassis ground and each or both of the inputs. Also between +5 VDC, +12 VDC, -12 VDC outputs or their return lines to chassis ground for one minute.

SHORT CIRCUIT PROTECTION: No damage occurs if any of the +5 VDC, +12 VDC, -12 VDC or any combination of these ioutput voltages are shorted at either of their outputs, returns or chassis ground for an indefinite amount of time.

VOLTAGE POLARITY: Accidental reversal of the input voltage polarity does not damage the unit when the unit is protected by a 15-Ampere fuse or circuit breaker at the power source.

OVER VOLTAGE PROTECTION: The unit is protected electronically from an overvoltage condition as follows:
+ 5.0 VDC output never to exceed 6.0 VDC; ± 12 VDC output never to exceed ± 15 VDC. Input power to the unit may need to be removed and re-applied to resume unit operation.

WEIGHT : 3.75 lbs max.

MECHANICAL DIMENSIONS

