

12-V TO 12-V ISOLATING DC-DC CONVERTER



Model 1730-12-12-2

- REGULATED AND ISOLATED OUTPUT
- 2-AMPERE OUTPUT CURRENT RATING
- -40°C to +70°C OPERATING TEMPERATURE RANGE (CONVECTION COOLED)
- ELECTRICALLY AND MECHANICALLY RUGGED

The Model 1730-12-12-2 dc-to-dc converter provides a regulated and well-filtered 13.6-Vdc output from 12-Vdc battery systems. This output is galvanically isolated from the source and chassis and, therefore, may be connected either as a positive or a negative output. Designed to perform equally well in mobile and stationary applications, these converters can be used to operate low-power radio transceivers, data modems and other sensitive electronic loads.

SPECIFICATONS

Input Voltage Range

9 Vdc to 18 Vdc

Output Voltage and Current

13.6 Vdc @ 2 amperes (continuous duty @ maximum rated ambient temperature)

Output Voltage Regulation

Versus line: $\pm 0.5\%$

Versus load: $\pm 0.5\%$

Output Voltage Ripple

Typically less than 10 mV rms and 100 mV peak-to-peak

Protection

Protection against overloads and load short circuits is provided electronically. Recovery to normal operating conditions is automatic upon removal of an overload or short-circuit fault.

Protection against accidental reversal of the dc input-voltage polarity during installation is provided by a shunt diode working in conjunction with a user-supplied input fuse or circuit breaker. See section titled "Installation".

Isolation

Isolation capable of passing a 2000-Vdc stress test is provided between the input and output and between the input and chassis.

The output is galvanically isolated from the chassis (100 Vdc stress test rating).

Input/Output Connections

The input and output connections are provided via heavy-duty barrier-strip terminal blocks. The terminal-block screws accept lugs for use with #6 hardware.

Ambient Temperature Range

-40°C to +70°C (-40°F to +158°F) with convection cooling

Installation

Good installation practice for electronic equipment operated from a battery source dictates that input fuses or circuit breakers should be located at the battery end of the cables feeding the converter. For this reason, no protection devices are built inside the Model 1730-12-12-2 to protect against fault conditions at the input to the converter. Instead, the input line should be externally fused at 10 amperes.

Mechanical

Dimensions are 1.7" h x 5.3" w x 7.7" d (excluding terminal blocks). Baseplate mounting holes accept #10 hardware on a 4.9" x 4.9" pattern.

Weight is approximately 1.3 pounds.

For Additional Information

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