

280-WATT DC-DC CONVERTERS SINGLE OUTPUT / HIGH ISOLATION



Series 1723

- 12 OR 24 VDC INPUT
- 12, 24 or 48 VDC OUTPUT
- -40°C TO 70°C TEMPERATURE RANGE, CONVECTION COOLED
- HEIGHT 1.75" (1 RACK SPACE)

Series 1723 dc-to-dc converters provide a well-regulated dc output voltage from station batteries or other widely fluctuating dc sources. This output is galvanically isolated from the source and chassis and, therefore, may be connected either as a positive or a negative output. Applications include powering radio transceivers, telecommunications equipment, supervisory control systems and other electronic loads requiring a high degree of electrical isolation from the dc source.

Designed for rack mounting, these state-of-the-art converters achieve superior electrical performance in a low profile enclosure. Conservatively rated and very efficient, Series 1723 converters will operate continuously at any load within their rating over a wide ambient temperature range with simple convection cooling. Six standard single-output 280-watt models are available with different combinations of input and output voltages per the table below. Additional voltage combinations are available on request – contact our sales department for more information.

Table 1

Input Voltage Range (VDC)	Input Current ¹ (ADC)	Output Voltage (VDC)	Output Current (ADC)	Model Number
10-16 (12 nominal)	26.1	13.6	0-20	1723-12-12-20
	27.5	24	0-12	1723-12-24-12
	27.5	48	0-6	1723-12-48-6
20-30 (24 nominal)	12.9	13.6	0-20	1723-24-12-20
	13.7	24	0-12	1723-24-24-12
	13.7	48	0-6	1723-24-48-6

¹Typical current at full load and nominal input voltage

SPECIFICATIONS

Input Voltage and Current

The input voltage range, nominal input voltage and nominal input current at full output load for standard models are shown in Table 1.

Output Voltage and Current

The output voltage and output current for standard models are shown in Table 1 (other voltages available-contact our sales department)

Output Voltage Regulation

Versus line: $\pm 0.5\%$
Versus load: $\pm 1.0\%$

Output Voltage Ripple

5 millivolts rms (typical)
50 millivolts peak-to-peak (typical)

Isolation

Isolation capable of withstanding a 2,000-Vac stress test is provided between the input and output and between the input and chassis.

Protection

Protection against overloads, short-circuits and output overvoltages is provided electronically. Recovery to normal operating conditions is automatic upon removal of the overload or short-circuit fault. Following an overvoltage shutdown, input power to the converter must be removed and reapplied to resume converter operation. Protection against accidental reversal of the dc input-voltage polarity during installation is provided by a shunt diode working in conjunction with the front-panel circuit breaker.

Efficiency

The efficiency reaches 85% at approximately 15% of full load and remains above 85% for most of the load range. The no-load input power is approximately 3 watts. Heat dissipation is approximately 140 BTU/hour at full load.

Ambient Temperature Range

-40°C to +70°C
(convection cooling)

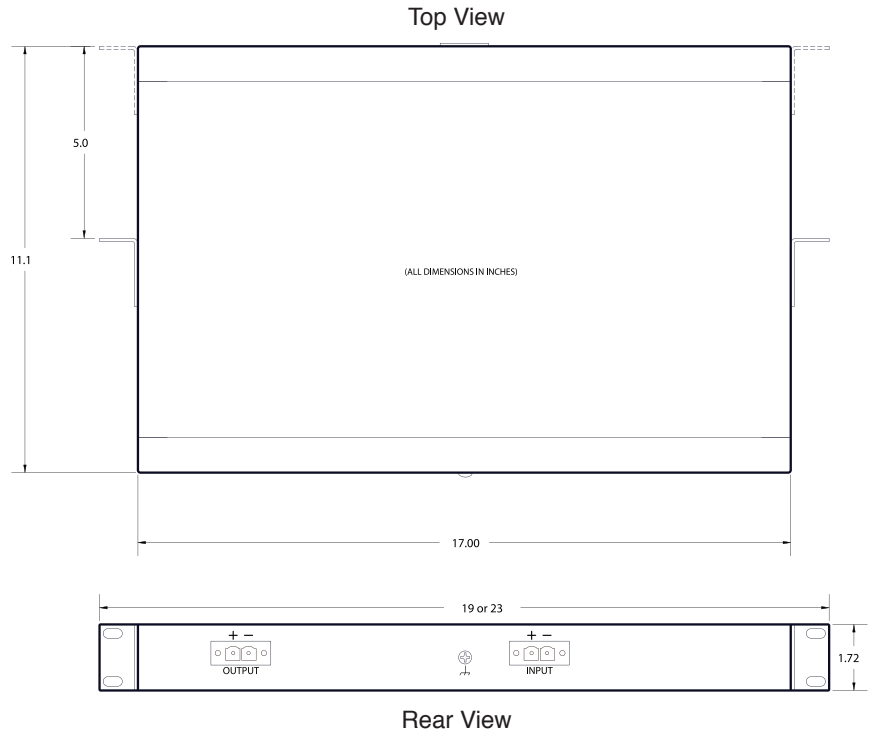


Fig.1 Series 1723 Overall Dimensions

Front-Panel Switch

A combination circuit breaker and ON/OFF switch is provided for input power.

Physical Characteristics

Refer to Fig. 1 for overall dimensions. Weight is approximately 8 pounds. Brackets are provided for 19-inch and 23-inch rack mounting.

MODEL NUMBERING INFORMATION

Series 1723 converters are identified by four number groups. In sequence, these give the basic series number (**1723**) the nominal input voltage, the nominal output voltage, and the maximum load current. For example, **Model 1723-12-24-12** is a 12-volt to 24-volt converter with a 12-ampere maximum load rating.

OTHER WILMORE PRODUCTS

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

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

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