280-Watt DC-DC Converters
High Isolation

Series 1723

Features

- 12 or 24 Vdc Input
- 12, 24 or 48 Vdc Output
- 2,000 Vac Isolation
- -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.

Table 1

Input Voltage Range[1] (VDC)	Input Current[2] (ADC)	Output Voltage[1] (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

[1]Can be connected with a positive or a negative ground due to galvanic isolation between the dc input, dc output, and the chassis.
[2]Typical current at full load and nominal input voltage

Specifications

INPUT VOLTAGE	See Table 1 on Page 1
INPUT CURRENT (at full load)	See Table 1 on Page 1
OUTPUT VOLTAGE	See Table 1 on Page 1
OUTPUT CURRENT	See Table 1 on Page 1
OUTPUT POWER (W)	Up to 280 continuous
OUTPUT VOLTAGE REGULATION	±0.5% versus dc input line; ±1.0% versus load
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 (at full load)	Approximately 140 BTU/hour
AMBIENT TEMPERATURE RANGE	-40°C to +70°C (convection cooling)
FRONT-PANEL SWITCH	A combination circuit breaker and ON/OFF switch is provided for dc-input power.
I/O POWER CONNECTIONS	Provided through two-part (header and plug) wire-clamp connectors. A connection to chassis ground is provided for use with #8 hardware.
DIMENSIONS INCHES (MM)	17.0 (432)W x 1.72 (44)H x 11.1 (282)D, excluding mounting brackets and front panel features. See Figure 1.
WEIGHT LBS (KG)	Approximately 8 (4)
ACCESSORIES INCLUDED	User information guide, mating connectors, mounting brackets for 19-inch rack mounting (flush mounting or 5-inch front offset mounting); mounting brackets for 23-inch rack mounting are available upon request.

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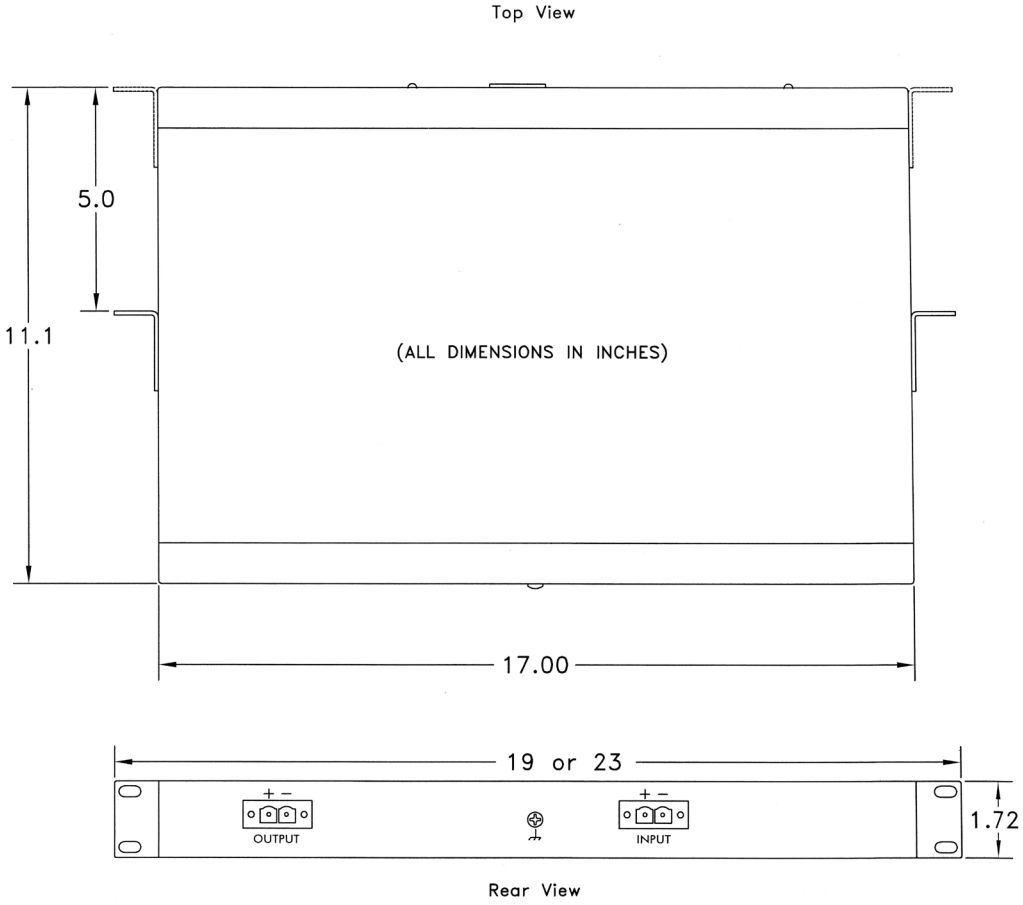
Figure 1



MODEL NUMBERING SEQUENCE	
1723 - **12** - **24** - **12** 1 2 3 4	1. Series 1723 2. Input Voltage (12 or 24Vdc nominal) 3. Output Voltage (12, 24, 48Vdc nominal) 4. Output Current (Maximum Amperes-See Table 1)

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.

Products

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

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