Wilmore ELECTRONICS CO., INC.
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SERIES 1722
DUAL OUTPUT
DC-DC CONVERTERS

BULLETIN NO. 6081D

400-WATT DC-DC CONVERTERS
DUAL OUTPUT

Series 1722

- **24, 48 OR 130 VDC INPUT**
- **TWO 200-WATT OUTPUTS WHICH CAN BE ANY COMBINATION OF 13, 24 OR 48 VDC**
- **OUTPUTS ARE INDEPENDENTLY REGULATED AND ISOLATED**
- **HEIGHT 1.75" (1 RACK SPACE)**
- **HIGHLY EFFICIENT (90%) AND CONVECTION COOLED**

Series 1722 dc-to-dc converters provide well-regulated dc output voltages from station batteries or other widely fluctuating dc sources. Each output is galvanically isolated from the source, the chassis and the other output 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 critical electronic loads.

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 1722 converters will operate continuously at any load within their rating over a wide ambient temperature range with simple convection cooling.

Eighteen standard configurations are possible with the input and output voltages given in Tables 1 and 2 below. Complete part numbers for each version are explained in the section titled MODEL NUMBERING INFORMATION on the reverse side of this bulletin. Output voltages other than those in Table 2 are also available - contact our sales department for more information.

Table 1
Standard Input Voltages

Input Voltage Range (VDC)	Input Current[1] (ADC)
21-29 (24 nominal)	18.6
42-58 (48 nominal)	9.0
105-145 (130 nominal)	3.3

[1]Typical current at full load and nominal input voltage

Table 2
Standard Output Voltages[2]

Output Voltage (VDC)	Output Current (ADC)
13.3	0-15
24	0-8
48	0-4

[2]Other output voltages also available, subject to 200W-per-output limit.

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 Table1.

Output Voltage and Current

The output voltage and output current for standard outputs are shown in Table 2 (other voltages available-contact our sales department)

Output Voltage Regulation

Versus line: ±0.5%
Versus load: ±1%
The two outputs are independently regulated.

Output Voltage Ripple

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

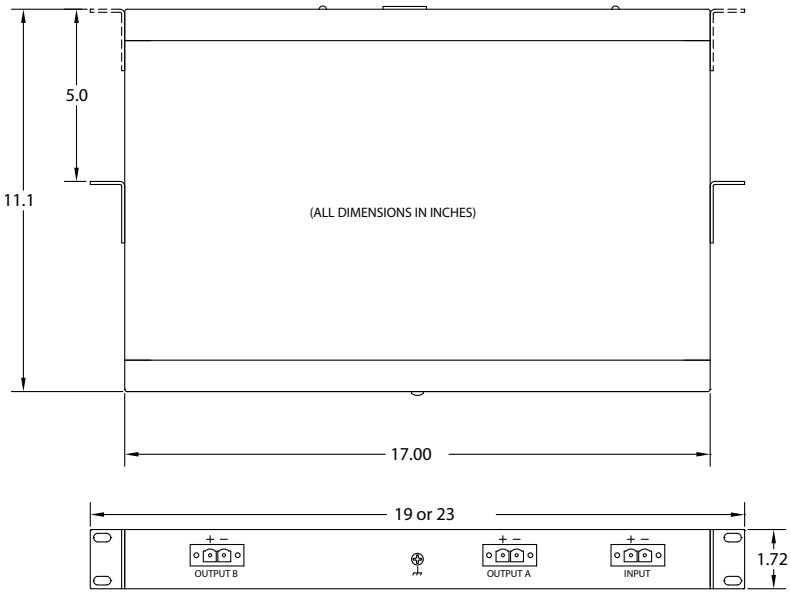
Isolation and Grounding

Mutual electrical isolation is provided between the input circuit, each output circuit, and chassis ground.

Protection

Protection against output overloads, short-circuits and overvoltages is provided electronically. Each output is independently protected, and ordinarily a fault on one output will not affect the other. Recovery to normal operating conditions is automatic upon removal of the overload or short-circuit fault. Following an overvoltage shutdown of either converter output, input power must be removed and reapplied to resume operation of the affected output. 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.

Top View



Rear View

Fig. 1 Series 1722 Overall Dimensions

Ambient Temperature Range

Operating: -30°C to +50°C (convection cooling)
Storage: -40°C to +95°C

Efficiency

The efficiency reaches 90% at approximately 20% of full load on each output and remains above 90% for most of the load range. The no-load input power is approximately 5 watts. Heat dissipation is approximately 150 BTU/hour at full load.

Front-Panel Switch and LED

A combination circuit breaker and ON/OFF switch is provided for input power. An LED is provided for each output to indicate the presence (ON) of proper output voltage.

Physical Characteristics

Refer to Fig. 1 for overall dimensions. Weight is approximately 10 pounds. Brackets are provided for 19-inch and 23-inch rack mounting.

MODEL NUMBERING INFORMATION

Series 1722 converters are identified by three number groups separated by hyphens. The first group is the series number (**1722**) and the second group specifies the nominal input voltage (**24**, **48**, or **130**). The third group specifies the two output voltages separated by a forward slash, with the higher of the two voltages given first. For example, **Model 1722-48-24/13** is a 48-volt-input dc-to-dc converter with outputs of 24 volts and 13 volts.

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, dc-to-ac inverters, and uninterruptible power systems, please contact our sales department.

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