

2,200-VA DC-TO-AC INVERTER

115-VAC SINE-WAVE OUTPUT



Model 1747-130-115-60

FEATURES

- **CONSERVATIVELY RATED 2,200 VA IN TWO RACK SPACES (HEIGHT 3.5")**
- **ISOLATED, REGULATED LOW-DISTORTION OUTPUT**
- **QUARTZ CLOCK FREQUENCY STABILITY**
- **APPROX. 90% EFFICIENT**
- **EXTERNAL AUTO-TRANSFER SWITCH AVAILABLE FOR UPS / REDUNDANT-POWER APPLICATIONS**

Designed for space-limited applications within the telecommunications, data processing and utility industries, the Model 1747 dc-to-ac inverter provides up to 2,200 volt-amperes in only 3.5 inches of vertical rack space. The inverter produces a well-regulated 115-Vac, frequency-stable 60-Hz sine-wave output (50Hz models are also available) from station batteries or other dc sources. Standard versions permit operation from either positive or negative 24-Vdc, 48-Vdc or 130-Vdc sources because the dc input is galvanically isolated from the ac output and from the chassis. The inverter is compact, lightweight and compatible with either 19-inch or 23-inch equipment racks.

The Model 1747 is well-suited for powering a variety of loads, from sensitive communications and SCADA/telemetry equipment to loads normally considered difficult for inverters, including small motors and other reactive or high-surge loads. With the addition of Wilmore's Model 1747-ATS automatic transfer switch, the inverter can function as the primary or backup ac source for applications requiring uninterruptible/redundant power. Conservatively designed and well-protected against external faults, the Model 1747 dc-to-ac inverter is ideal for powering waveshape-sensitive and frequency-sensitive ac loads from dc power systems.

Table 1

Nominal Input Voltage (Vdc)	Input Voltage Range (Vdc)	Input Current No Load ¹ (Adc)	Input Current Full Load ² (Adc)	Efficiency ²	Heat Dissipation ² (Btu/hour)	Model Number
24	21-29	2.3	119	88%	1024	1747-24-115-60
48	42-56	1.1	58.3	90%	834	1747-48-115-60
130	105-145	0.4	23.0	91%	743	1747-130-115-60

¹ Typical at nominal input voltage

² Typical at full load and minimum input voltage

SPECIFICATIONS

Input Voltage and Current

The nominal input voltage, the input voltage range, the no-load input current and the full-load input current are shown in Table 1.

Output Voltage

115 Vac nominal, single phase

Output Voltage Regulation

±1.0% versus dc input line
±3.0% versus load

Output Voltage Waveshape

Sine wave with 1-3% total harmonic distortion (typical)

Frequency

60 Hz nominal, ±0.01 hertz maximum variation over the full range of load and input voltage changes

Volt-Ampere Rating

2,200 VA (continuous duty at 50°C)

Efficiency

The power-conversion efficiency, heat dissipation and no-load input current are shown in Table 1.

Temperature Range

Operating: -10°C to +50°C (internal fan cooling)
Storage: -40°C to +85°C

Protection

Protection against short-term overloads is provided electronically, and recovery is automatic upon removal of the fault. Protection against a sustained output overload fault is provided by an output circuit breaker. Protection against accidental reversal of the input-voltage polarity during installation is provided by a shunt diode working in conjunction with the front-panel circuit breaker.

Front-Panel Controls and Indicators

Combination circuit breaker and ON/OFF switches are provided for both input and output power. An AC power meter is provided for assessing output power conditions including true-rms AC potential in Volts, true-rms AC current in Amperes, real AC power in Watts, and AC power factor as a fraction.

Mechanical Description

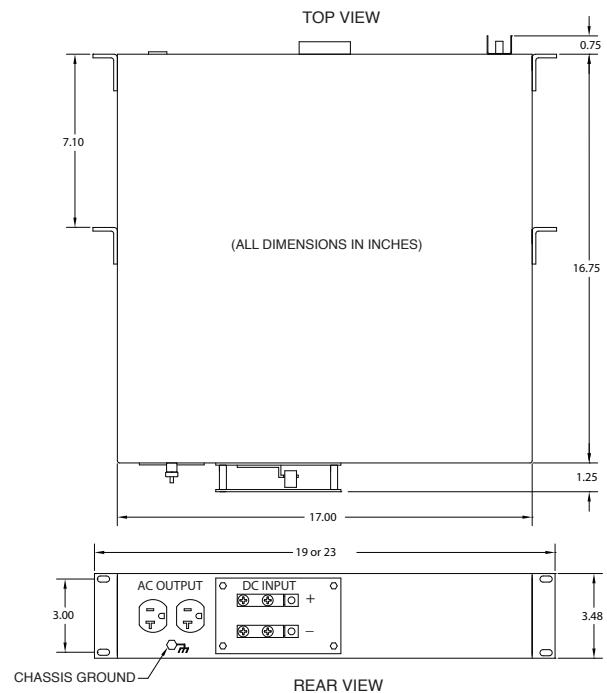
Figure 1 provides overall dimensions. Mounting brackets are provided for use with 19-inch or 23-inch equipment racks. A cover plate protects the dc-input rear-panel wiring connections, which are made via high-current compression lugs.

Output connections are made via a duplex receptacle, NEMA type 5-20R.

Standard front-panel paint color is black.

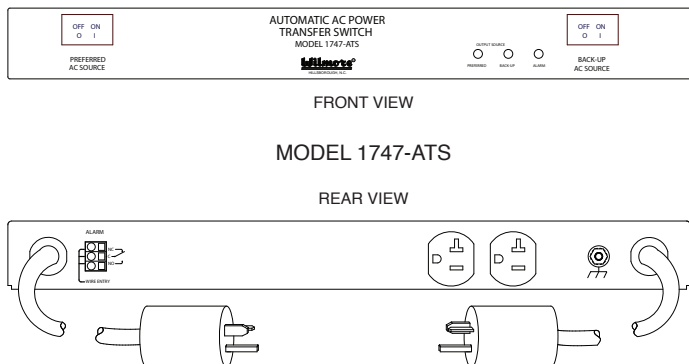
Weight is approximately 22 lbs.

Figure 1. Outline Dimensions



Specifications subject to change without notice

AUTOMATIC TRANSFER SWITCH / POWER DISTRIBUTION UNIT



The Model 1747-ATS automatic transfer switch enables operation of the Model 1747 inverter in a redundant manner with commercial ac power (or with a second inverter) to provide uninterruptible/backup power. The unit combines automatic power-failure sensing and high-speed switchover circuitry in a 1U (1.75" high) enclosure with a rear-panel duplex receptacle. The user can choose to operate the inverter as the ac power source that normally powers the load, or as the standby ac power source. For more information, request Bulletin No. 7052.

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