

500-VA DC-TO-AC INVERTER

120-VAC, 60-HZ SINE-WAVE OUTPUT

FEATURES

- 12, 24, 48 OR 130 VDC INPUT
- ISOLATED, REGULATED FREQUENCY-STABLE OUTPUT
- APPROX. 90% EFFICIENT
- RUGGED, CONSERVATIVE DESIGN
- AVAILABLE WITH INTEGRAL HIGH-SPEED TRANSFER SWITCH FOR UPS/STANDBY-POWER APPLICATIONS



Model 1755-48-120-60-U

Compact and rugged, the 500-VA Model 1755 dc-to-ac inverter is designed to perform equally well in stationary and mobile applications. The inverter provides an isolated, regulated 120-Vac, frequency-stable 60-Hz sine-wave output and is available in 12, 24, 48 and 130-Vdc input versions. The conservatively rated Model 1755 can operate continuously at maximum rated power over a -10°C to +50°C ambient temperature range. It is well suited for powering a variety of loads, from sensitive electronic equipment to small motors and nonlinear loads normally considered difficult for inverters.

The Model 1755 is available as a plain inverter or with built-in automatic load switchover features to permit operation in UPS or standby-power modes.

Table 1

Nominal Input Voltage (Vdc)	Input Voltage Range (Vdc)	Input Current No Load ¹ (A _{dc})	Input Current Full Load ² (A _{dc})	Full Load Efficiency ³	Model Number ⁴
12	10.5-14.5	2.26	54.7	87%	1755-12-120-60
24	21-29	1.06	26.4	90%	1755-24-120-60
48	42-58	0.56	13.2	90%	1755-48-120-60
130	105-145	0.24	5.22	90%	1755-130-120-60

¹Typical plain inverter (-P) at nominal input voltage

²Typical at minimum input voltage

³Typical at nominal input voltage

⁴See reverse side for complete model numbering information

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

118 Vac nominal, single phase

Frequency

60 Hz nominal (50 Hz optional):
±0.01 Hz maximum variation over the full range of load and input voltage changes (crystal controlled)

Volt-Ampere Rating

500 VA (continuous duty at 50°C)

Output Voltage Regulation

±1% versus dc input line
±3% versus load

Output Voltage Wave Shape

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

Efficiency

Typical full-load operating efficiencies and no-load input currents for each model are shown in Table 1

Temperature Range

Operating: -10°C to +50°C
(internal fan cooling)
Storage: -40°C to +95°C

Protection

Protection against output overload (including short-circuit), input under-voltage and input over-voltage is provided electronically. Recovery to normal operation is automatic upon removal or correction of fault conditions. A front-panel circuit breaker is provided in series with the dc input to protect against accidental reversal of dc input polarity during installation.

Front-Panel Controls and Indicators

A combination circuit breaker and ON/OFF switch is provided for dc input power. U and L versions include three LED status indicators (see "U Version" and "L Version" descriptions below).

Mechanical Description

Figure 1 provides overall dimensions. Weight is approximately 11 lbs. Mounting flange on base accepts eight #10 screws.

Standard Configurations

P VERSION: Adding the suffix **P** to the basic model designates a plain inverter, i.e. a unit with no internal inverter-to-line or line-to-inverter transfer switching

provisions ("line" refers to commercial ac power). This version does not have the front-panel LED status indicators, rear-panel ac-line inlet or rear-panel alarm contacts.

U VERSION: Adding the suffix **U** to the basic model number designates the inverter-preferred UPS configuration. In this configuration, the inverter normally provides load power. However, if the inverter output is interrupted, an internal transfer switch automatically transfers the load from the inverter to line. The transfer time between inverter and line is less than one ac cycle. Such transfers are normally not detected by even highly sensitive loads. This version includes auxiliary Form C contacts for remote indication of alarm conditions, a fused ac-line inlet and three front-panel LED status indicators.

L VERSION: Adding the suffix **L** to the basic model number designates a unit which is identical to the "U" version except that, in the L configuration, the load power is normally provided by the line and the inverter operates in the standby mode. If commercial ac power is interrupted, an internal transfer switch automatically transfers the load to the inverter. Upon restoration of commercial ac power, there is a delay of approximately four seconds

after which the load is transferred back to commercial ac power and the inverter again operates in the standby mode. Other features such as transfer speed, alarms, indicators, etc. are the same as in the U version.

Model Numbering Information

For ordering purposes, Series 1755 flange-mount inverters should be identified by a string of product description designators in the following sequence:

- 500 VA sine-wave, inverter (1755)
- input voltage (12, 24, 48 or 130)
- output voltage (120)
- output frequency (60 or 50)
- configuration (P, U or L version)

For example, the correct part number for a 60 Hz inverter with a 48-volt input and the inverter-preferred UPS configuration option is Model 1755-48-120-60-U.

OTHER WILMORE PRODUCTS

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

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

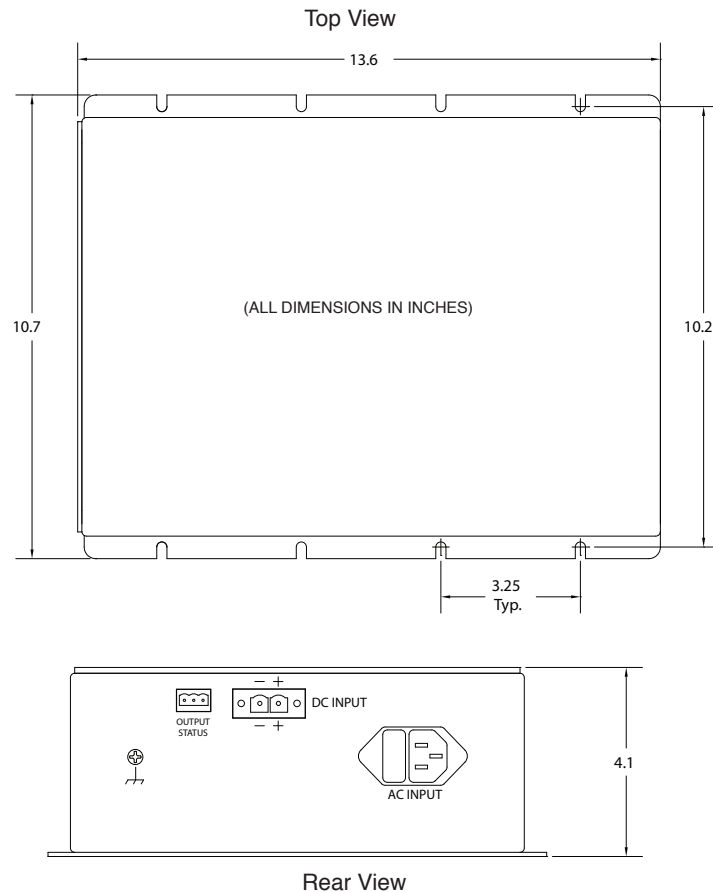


Fig. 1 Overall dimensions. Inverter shown is U or L version.

WILMORE ELECTRONICS COMPANY, INC.

P. O. Box 1329, Hillsborough, N. C. 27278 • Telephone (919) 732-9351 • FAX (919) 732-9359

www.wilmoreelectronics.com