500 VA & 1000VA DC-AC SINE WAVE INVERTERS

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

Model 1756-48-120-60-U

Compact and rugged, the 500-VA Model 1755 and the 1000-VA Model 1756 dc-to-ac inverters are designed to perform equally well in stationary and mobile applications. The inverters provide an isolated, regulated 120-Vac, frequency-stable 60-Hz sine-wave output and are available in various dc-input versions.

These are available as plain inverters 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] (Adc)	Input Current Full Load[2] (Adc)	Output Power (VA)	Full Load Efficiency[3]	Model Number[4] (see Table 2 below)
12	10.5-14.5	2.26	54.7	500	87%	1755-12-120-60-X
24	21-29	1.06	26.4	500	90%	1755-24-120-60-X
24	21-29	1.0	53.5	1000	90%	1756-24-120-60-X
48	42-58	0.56	13.2	500	90%	1755-48-120-60-X
48	42-58	0.4	25.8	1000	92%	1756-48-120-60-X
130	105-145	0.24	5.22	500	90%	1755-130-120-60-X
130	105-145	0.18	10.3	1000	92%	1756-130-120-60-X

[1]Typical plain inverter (-P) at nominal input voltage
[2]Typical at minimum input voltage
[3]Typical at nominal input voltage
[4]See Page 3 for complete model numbering information

Table 2

Model	Suffix in Model Number Sequence (substitute for "X" in above table)	Configuration (See Page 3 for More Information)	Form C Alarm Contacts ("Output Status")	Front Panel LEDs
1755 1756	-P	No Load Transfer Switch		
	-U	Inverter-Preferred Load Transfer Switch	✔	✔
	-L	Line-Preferred Load Transfer Switch	✔	✔

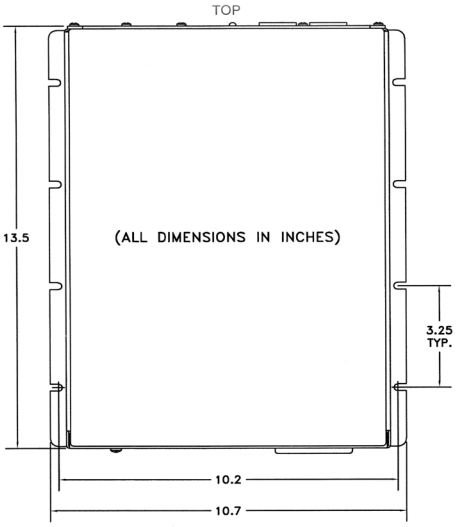
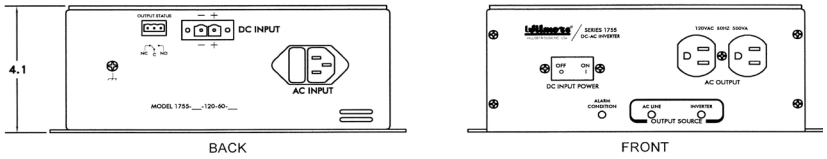


Figure 1



Specifications

INPUT VOLTAGE	See Table 1 on Page 1
INPUT CURRENT AT NO LOAD	See Table 1 on Page 1
INPUT CURRENT AT FULL LOAD	See Table 1 on Page 1
EFFICIENCY	See Table 1 on Page 1
OUTPUT VOLTAGE	118VAC nominal, single phase
FREQUENCY	60Hz nominal (50Hz optional) ±0.01Hz maximum variation over the full range of load and input voltage changes (crystal controlled)
VOLT-AMPERE RATING	See Table 1 on Page 1
OUTPUT VOLTAGE REGULATION	±1% versus dc input line; ±3% versus load
OUTPUT VOLTAGE WAVE SHAPE	Sine wave with 1%-3% total harmonic distortion (typical)
TEMPERATURE RANGE	Operating: -10° C to +50° C (internal fan cooling) Storage: -40° C to +95° C
PROTECTION	Provided electronically against output overload (including short-circuit), input under-voltage and input over-voltage. Recovery to normal operation is automatic upon removal or correction of fault conditions. Protection against accidental reversal of dc-input polarity provided by front-panel circuit breaker.
FRONT-PANEL CIRCUIT BREAKER	Combination circuit breaker and ON/OFF switch provided for dc-input power
FRONT-PANEL INDICATORS (U AND L VERSIONS)	Three LED status indicators display the active ac output source and the alarm status.
DC-INPUT CONNECTIONS	Provided via two-part (header and plug) wire-clamp screw terminal blocks
AC-INPUT CONNECTION (U AND L VERSIONS)	Provided via an IEC 60320-C14 receptacle. A three-conductor detachable cable terminated in a NEMA 5-15P plug is provided with the inverter for connecting an alternate AC source.
OUTPUT STATUS CONNECTIONS (U AND L VERSIONS)	Form C contacts (Normally Open and Normally Closed) provided via a two-part (header and plug) wire-clamp screw terminal block
AC-OUTPUT CONNECTIONS	Provided via two standard NEMA 5-15R three-prong receptacles
DIMENSIONS	See Figure 1 above.
MOUNTING	Mounting flange on base accepts eight #10 screws.
WEIGHT & COLOR	Approximately 11 pounds. Standard paint color is black.
ACCESSORIES INCLUDED	Mating connectors, user information guide, AC input line cord (U and L versions)

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500 VA & 1000VA DC-AC SINE WAVE INVERTERS

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, in dicators, etc. are the same as in the U version.

MODEL NUMBERING SEQUENCE	
1756 - 130 - 120 - 60 - U 1 2 3 4 5	1. Series 1755 (500VA) or 1756 (1000VA) 2. Input Voltage [12Vdc (1755 only), 24, 48 or 130Vdc] 3. Output Voltage (120Vac) 4. Output Frequency (60 or 50Hz) 5. Configuration (P, U or L Version)

Model Numbering Information

For ordering purposes, Series 1755 and 1756 flange-mount inverters should be identified by a string of product description designators in the following sequence:

- 500 VA sine-wave, inverter (1755) or 1000VA sine-wave, inverter (1756)
- input voltage (12, 24, 48 or 130 Vdc)
- output voltage (120 Vac)
- output frequency (60 or 50 Hz)
- configuration (P, U or L version)

For example, the correct part number for a 1000VA, 60 Hz inverter with a 130-volt input and the inverter-preferred UPS configuration option is Model 1756-130-120-60-U.

Products

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

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