ELECTRONICS CO., INC.

Model 1652
DC-AC INVERTER

Bulletin No. #76A0040

250-VA DC-AC INVERTER

120-VAC, 60-HZ OUTPUT

Model 1652-48-120-60-L

Features:

- 12, 24, 48 OR 130 VDC INPUT
- ISOLATED, REGULATED FREQUENCY-STABLE OUTPUT
- 82%-90% EFFICIENT
- CONVECTION COOLED
- QUASI-SINE-WAVE OUTPUT
- AVAILABLE WITH INTEGRAL HIGH-SPEED TRANSFER SWITCH FOR UPS/STANDBY-POWER APPLICATIONS

Table 1

Nominal Input Voltage[1] (Vdc)	Input Voltage Range (Vdc)	Input Current No Load[2] (Adc)	Input Current Full Load[3] (Adc)	Efficiency[3]	Model Number (Substitute either P, U or L for "X") See below tables.
12	10.5-16	0.25	30	83%	1652-12-120-60-X
24	21-29	0.10	15	86%	1652-24-120-60-X
48	42-58	0.06	6.9	88%	1652-48-120-60-X
130	105-145	0.04	2.8	88%	1652-130-120-60-X

[1] Can be connected as a positive or a negative ground because there is galvanic isolation between the dc input, ac output, and the chassis
[2] Typical plain inverter (-P) at nominal input voltage
[3] Typical at full load and minimum input voltage

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
1652	-P	No Load Transfer Switch		
	-U	Inverter-Preferred Load Transfer Switch	✓	✓
	-L	Line-Preferred Load Transfer Switch	✓	✓

MODEL NUMBERING SEQUENCE	
1652 - 48 - 120 - 60 - L 1 2 3 4 5	1. Series 1652 2. Input Voltage (12, 24, 48 or 130Vdc) 3. Output Voltage (120Vac) 4. Output Frequency (60 or 50Hz) 5. Configuration (P, U or L Version): See Also Page 3

FULL SPECIFICATIONS: SEE PAGE 2

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 (VAC)	118 Vac Nominal, single phase (as measured with a conventional average-responding, rms-calibrated voltmeter)
FREQUENCY	60 Hz nominal ±0.05 Hz maximum variation over the full range of load and input voltage changes. Temperature coefficient is ±0.02% maximum per °C.
VOLT-AMPERE RATING	250 VA
OUTPUT VOLTAGE REGULATION	±0.2% versus dc input line ±2.0% versus load
OUTPUT VOLTAGE WAVE SHAPE	Three-level stepped approximation to a sine wave with peak, average and rms values approximating those of a sine wave.
OPERATING TEMPERATURE RANGE	For 24, 48 and 130-Vdc input versions: -30°C to +60°C For 12-Vdc input versions: -30°C to +40°C (for operation up to +60°C, derate the output volt-ampere rating linearly to 175 VA)
STORAGE TEMPERATURE RANGE	-40° C to +95°C
PROTECTION	Protection against overloads and accidental short-circuit of the output is provided electronically, and recovery is automatic upon removal of the abnormal load. A front-panel circuit breaker in series with the dc input provides protection against accidental reversal of input polarity during installation.
FRONT-PANEL CONTROLS AND INDICATORS	A combination circuit breaker and ON/OFF switch is provided for input power. L and U versions include an ac-line fuse and three LED status indicators.
DC-INPUT CONNECTIONS	Provided via two-part (header and plug) wire-clamp screw terminal block
AC-INPUT CONNECTION (L AND U 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.
AC-OUTPUT CONNECTION	Provided via a standard NEMA 5-15R three-prong receptacle
OUTPUT STATUS CONNECTIONS (L AND U VERSIONS)	Form C contacts (normally open and normally closed) provided via a two-part (header and plug) wire-clamp screw terminal block
CHASSIS GROUND	Provided for use with #8 hardware.
DIMENSIONS	Figure 1 provides overall dimensions.
WEIGHT LBS (KG)	Approximately 10 (5)
ACCESSORIES INCLUDED	User information guide, ac line cord (for L and U versions), mating connectors, mounting brackets for 19-inch rack mounting; brackets for 23-inch mounting are available upon request.

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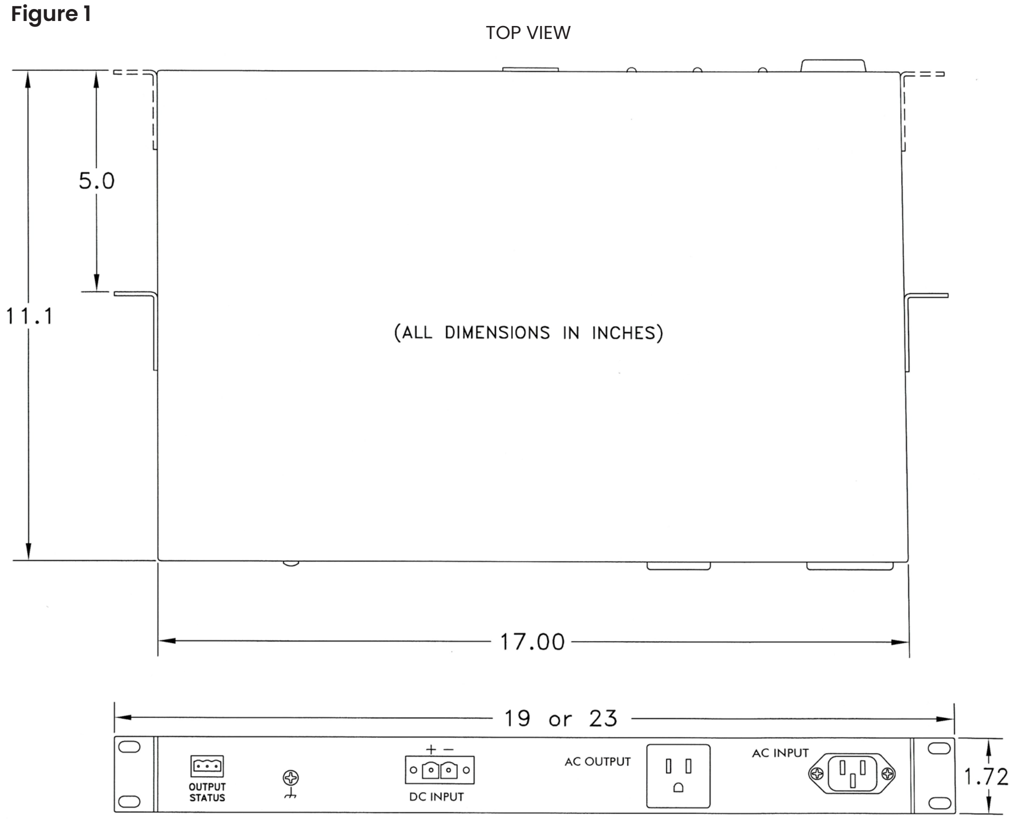
Figure 1



REAR VIEW OF MODEL 1652 L AND U VERSIONS

STANDARD CONFIGURATIONS

P VERSION	»	The suffix **P** designates a plain inverter, with no internal inverter-to-line or line-to-inverter transfer switching provisions ("line" refers to commercial ac power or another available ac source). This version does not have the front-panel LED status indicators, rear-panel ac-line inlet or rear-panel auxiliary Form C contacts.
U VERSION	»	The suffix **U** designates the inverter-preferred UPS configuration wherein the inverter normally provides load power. When the inverter output is interrupted, an internal transfer switch automatically transfers the load from the inverter to the line in less than one AC cycle. Such transfers are normally not detected by even highly sensitive loads.
	»	Includes auxiliary Form C contacts (i.e. both Normally Open and Normally Closed) for remote indication of alarm
L VERSION	»	The suffix **L** designates the line-preferred configuration wherein 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 five seconds (to verify stability of the ac line) after which the load is transferred back to commercial ac power and the inverter again operates in standby mode.
	»	Includes auxiliary Form C contacts (i.e. both Normally Open and Normally Closed) for remote indication of alarm

Products

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

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