

## Data Sheet

# AC Power Source

## Model 1657



The 1657 is an AC power source that provides high conversion efficiency and low distortion output. A built-in PFC provides an input power factor of 0.99 at full load. The AC source supplies up to 1500 VA through its universal line output terminal and can operate in one of two voltage ranges, 135 V or 270 V, with 0.1 V resolution. The bright display constantly monitors the output voltage, current, power and frequency and also indicates the selected range and mode of operation. The front panel interface is easy-to-use and includes a control knob for quick setting of voltage and frequency parameters. The 1657 can also be controlled remotely via RS232 interface.

This 1500 VA rated AC power source is ideally suited for industrial product testing applications where power conversion or performance verifications is needed. The 19" rack-mountable design with front to rear airflow ventilation, allows for a compact form factor in automated test environments.

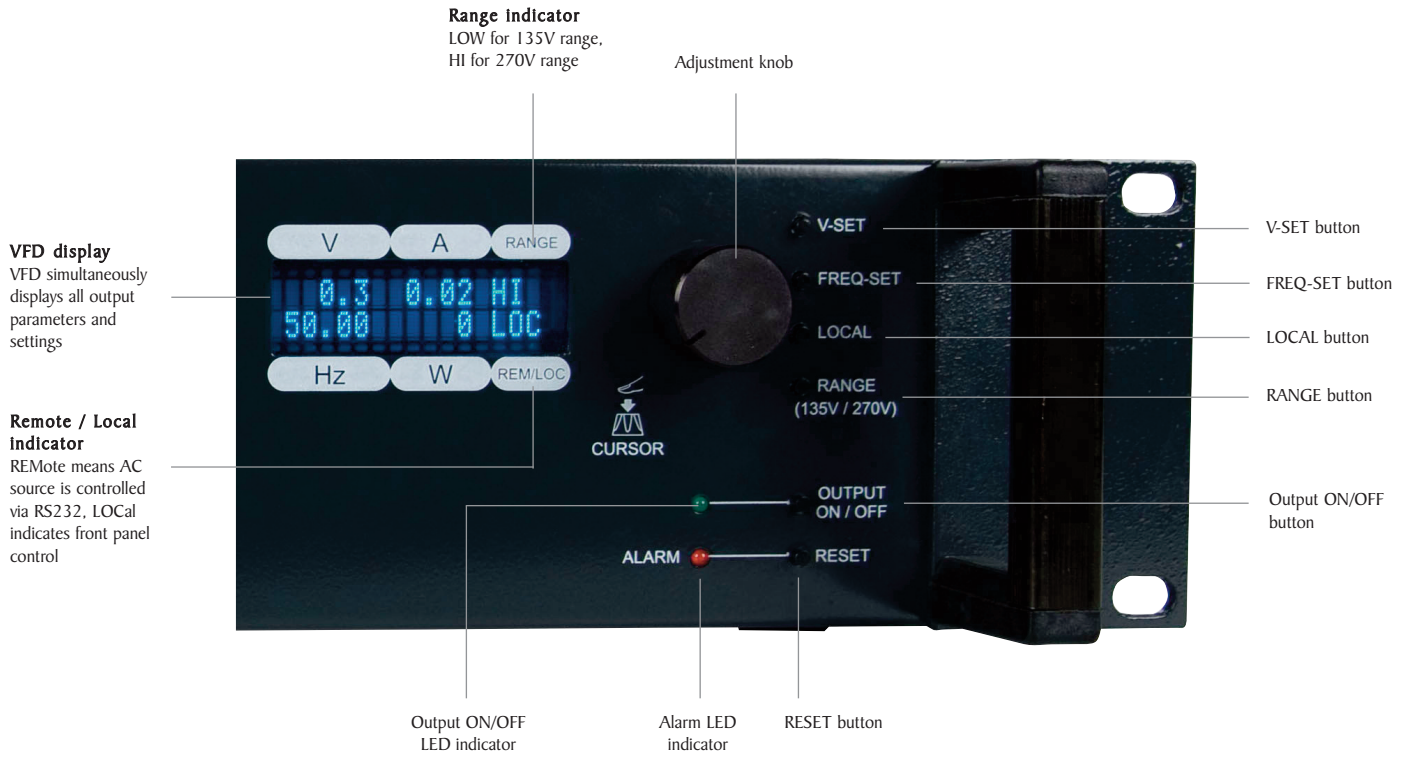
### Applications

- 50/60 Hz margin testing
- 400 Hz testing for avionics equipment
- Component testing
- Characterization of AC to DC converters

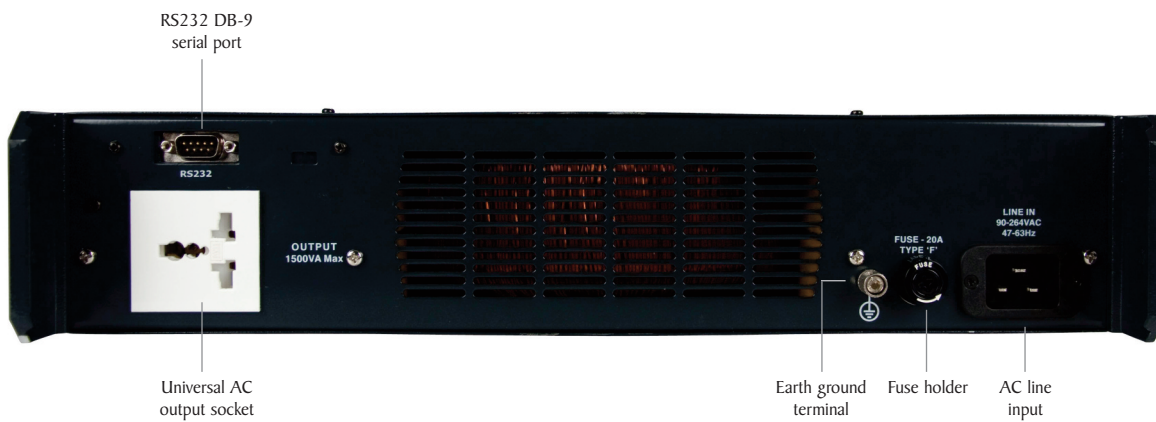
### Features and Benefits

- Low distortion sine-wave output with programmable frequency and voltage
- Two selectable output voltage ranges of 135 VAC or 270 VAC
- Output frequency adjustable from 45 Hz to 450 Hz in 0.01 Hz steps
- 0.1 V settable resolution
- Automatic protection against overload, short circuit, and over temperature
- Output ON/OFF switch
- Bright VFD display
- Remote programming through RS232 serial interface
- Input power factor of 0.99 allows for maximum power to be delivered from the AC outlet
- Standard 19" rack construction
- Conforms to EN55022, class A, safety standard EN60950

## Front Panel Operation



## Rear Panel



## Specifications

Model	1657
<b>Input</b>	
Voltage	90 – 264 VAC single phase 100 – 264 VAC for continuous full load operation
Frequency	47 – 63 Hz
Current	20 A max.
Power factor	0.99 typical at 115 VAC, 60 Hz, full load
Efficiency	> 85% at full load & nominal line input
<b>Output Power</b>	
Maximum Power	1500 VA
Accuracy	±2% of ES.
Resolution	1 W
<b>Output Voltage</b>	
Low Range	0 - 135 V <sub>RMS</sub>
High Range	0 - 270 V <sub>RMS</sub>
Accuracy	± 1% of ES.
Resolution	0.1 V
Distortion	< 2% @ 220 V <sub>RMS</sub> , 50 Hz, full load Worst case: < 5% @ 270 V <sub>RMS</sub> , 450 Hz, full load
Line Regulation	± 0.1% of ES.
Load Regulation	± 1% of ES.
Temp Coefficient	0.05% per °C from 25 °C
<b>Output Current</b>	
Low Range (135 V)	12 A <sub>RMS</sub> (Limited to 1500 VA)
High Range (270 V)	6 A <sub>RMS</sub> (Limited to 1500 VA)
Accuracy	± 1% of ES.
Resolution	0.01 A
Crest Factor	3
Power Factor	0.8 Lag to 0.8 Lead
<b>Output Frequency</b>	
Range	45 – 450 Hz
Accuracy	0.2% of ES.
Resolution	0.01 Hz
<b>Supplemental Characteristics</b>	
Protection	Output Trip with Alarm indication for Overload (OL), Short Circuit (SC), and Over Temperature (OT)
Output Connector	Universal socket
Cooling	Internal forced front to rear cooling Note: Provide sufficient space around air inlets and outlets for proper cooling
Weight	approx. 24 kg (53 lbs)
Dimensions	88.0 mm (H) x 482.6 mm (W) x 500.0 mm (D) 3.46" (H) x 19"(W) x 19.7" (D)
Safety & EMC	EN60950 & EN55022 Class A
<b>Environmental</b>	
Operating Temperature	0 °C to 45 °C
Storage Temperature	-20 °C to 60 °C
Humidity	< 90% non-condensing
<b>One Year Warranty</b>	
Included accessories	Power cord, Instruction manual

Note: All specifications apply to the unit after a temperature stabilization time of 15 minutes and are tested at the output terminal with temperature at 25 °C ± 5 °C, nominal input of 120 VAC/230 VAC and output of 250 VAC/125 VAC, and at 50 Hz/60 Hz with a resistive load. Specification and information are subject to change without notice.

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