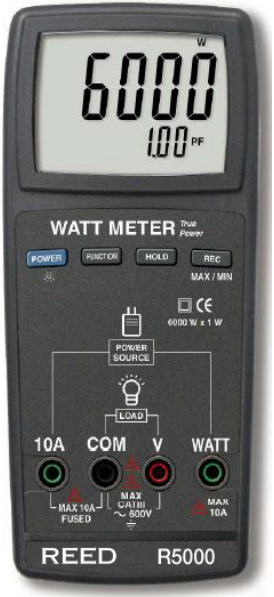
REED

Model R5000

Watt Meter



Instruction Manual

1-877-849-2127 | info@reedinstruments.com
www.reedinstruments.com

Table of Contents

Safety

- Do not apply overload voltage or current to the input terminal
- Remove test leads before opening the battery cover
- Only use a dry cloth to clean the plastic case
- Installation Categories III-600V
- Pollution Degree 2

Features

- True RMS Current and Voltage measurements
- Measures Watt (AC), AC A, AC V, and pF
- Large dual display LCD with Backlight
- Full function Auto Range
- Max & Min. Record
- Data Hold
- RS232 Computer Interface
- Low-Battery Indicator

Specifications

Zero:	Automatic adjustment
Sampling Time:	Approx. 1 second
Operating Temperature:	0 to 50°C (32 to 122°F)
Operating Humidity:	Less than 80% RH
Power Supply:	1 x 9V Battery
Weight:	398g (0.88lbs)
Dimensions:	190 x 88 x 40mm (7.5 x 3.5 x 1.6”)
Includes:	TL-88-1 test leads and 6AM6X 9V battery
Optional Accessories:	FC-300 Fused Test Lead Set and CA-05A Soft Carrying Case

Electrical Specifications

Max Input Value:	AC Voltage: 600V; AC Current: 10A
Frequency Response:	AC V/A is from 40 to 400 Hz

Accuracy is tested under an input signal of a 50/60 Hz Sine Wave.

Watt (True Power) - Auto Range

Range:	6000W
Resolution:	1W
Accuracy:	±(1% + 5W) at 23°C ±5°C

Measuring Signal comes from the front LOAD plug terminals.

AC Voltage and Current (True RMS) - Auto Range

Range:	600V / 10A
Resolution:	0.1V / 0.01A
Accuracy:	±(0.3% + 0.3V) / ±(0.3% + 0.03A) at 23°C ±5°C

PF (Power Factor)

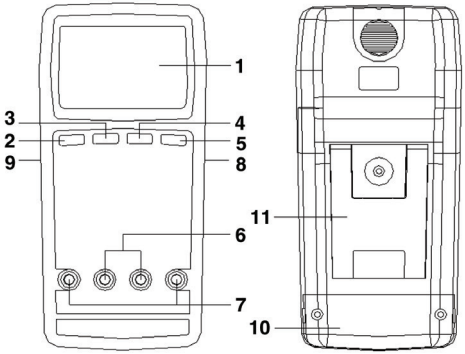
Range:	1.00
Resolution:	0.01
Accuracy:	±(1% + 2d) at 23°C ±5°C

PF (Power Factor) specification tests were taken in an environment with an RF Field Strength of less than 3 V/M and a Frequency of less than 30 MHz.

For service on this or any other REED product or information on other REED products, contact REED Instruments at info@reedinstruments.com

Instrument Description

1. Display
2. Power/ Backlight Button
3. Function Button
4. Hold Button
5. Record Button
6. Load Terminal
7. Power Source
8. RS232 Output Terminal
9. AC Adapter Terminal
10. Battery Cover
11. Stand



Operating Instructions

Press and hold the Power button for to turn the meter on and off.

Voltage Measurements

1. Turn the meter on.
2. Press the Function button to select ACV.
3. Connect the Red Test Lead to the V Input Terminal and Black Test Lead to the COM Input Terminal.
4. Touch the test leads to the Voltage source.
5. Read the AC Voltage measurement on the display. The value indicated corresponds to the position selected. If the Display shows " ---- " it indicates an out-of-range measurement.

Current Measurements

1. Turn the meter on.
2. Press the Function button to select ACA
3. Connect the Red Test Lead to the 10A Input Terminal and the Black Test Lead to the COM Input Terminal.
4. Touch the test leads to the Current source.
5. Read the AC Current measurement on the display. The value indicated corresponds to the position selected. If the Display shows " ---- " it indicates an out-of-range measurement.

Watt Measurements

1. Turn the meter on.
2. Verify your voltage of the equipment, either 110V or 220V.
3. Turn off the Power Source.
4. Plug in the Load (equipment) to the V Terminal and COM Terminal.
5. Plug in the power source to the WATT Terminal and 10A Terminal.
6. Push the Function button to change the function for measuring ACV/ACA.
7. Turn on the Power Source and read out the Work Voltage on the top part of the LCD.
8. Turn on the equipment power switch. Let it work, and read out the Power Consumption from the bottom part of the LCD.
9. Push the Function Button to change to WATT/PF measurements.
10. Read the Active Power and Power Factor value on the LCD.

Data Hold

While taking a measurement, press the Hold button. The measured value will freeze and a HOLD symbol will appear on the LCD. Press the Hold button again to continue taking measurements.

Data Record (Max/Min Reading)

1. Press the Record button once to start the Data Record function. A REC symbol will appear on the LCD.
2. Press the Record button again to display the Max value. A REC MAX symbol will appear on the LCD.
3. To delete the maximum value, press the Hold button. The MAX symbol will disappear from the LCD.
4. Press the Record button again to display the Min value. A REC MIN symbol will appear on the LCD.
5. To delete the minimum value, press the Hold button. The MIN symbol will disappear from the LCD.
6. To exit the Data Record function, press and hold the Record button for 2 seconds. The meter will revert back to normal measurements.

Backlight

While the meter is taking a measurement, press the Backlight button to turn the LCD backlight on and off.

Auto Power Off

This meter will turn off after 10 min of inactivity. To disable this feature, press the Record button.

RS232 PC Serial Interface

The data output is a 16 digit stream that can be utilized for a user's specific application. An RS232 cord is required to link this instruments to a PC.

The 16 digit data stream will be displayed in the following format:
D15 D14 D13 D12 D11 D10 D9 D8 D7 D6 D5 D4 D3 D2 D1 D0

Each digit indicates the following:

D0:	End Word
D1 to D8:	Display reading, D1 = LSD, D8 = MSD. If the display reading is 1234, then D8 to D1 is: 00001234
D9:	Decimal Point (DP), position from right to the left 0 = No DP, 1= 1 DP, 2 = 2 DP, 3 = 3 DP
D10:	Polarity 0 = Positive 1 = Negative
D11 & D12:	Annunciator for Display ACV = 50, W = 47, A = 52, PF = 54
D13:	Upper display data = 1 Lower display data = 2
D14:	4
D15:	Start Word

RS232 Format:	9600, N, 8, 1
Baud rate:	9600
Parity:	No parity
Data bit no.:	8 Data bits
Stop bit:	1 Stop bit

Battery Replacement

When the low battery symbol appears on the top left corner of the LCD you will need to replace the batteries. When the meter has low batteries the measurements will become less accurate. Make sure there are no test leads attached to the meter, and that the meter is turned off before opening the battery compartment.

1. Remove the battery cover with a screwdriver.
2. Replace the 9V battery and close the battery compartment.

Notes

Notes _____