

REED

Model R5700

Clamp Ground Resistance Tester



Instruction Manual

REED Instruments

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Safety

- Be aware of your surroundings, environment and measurement scope.
- If the instrument applies to ground resistance testing instead of current power frequency wire it will affect the clamps magnetic property and the accuracy of measurement.
- Pay attention to the labeled words on surface and backboard.
- Before turning on the unit, press on the trigger a couple of times to confirm it can properly open and close.
- Do not press the trigger or clamp any wires when turning on the instrument.
- Only clamp the tested desired object after the display shows “OL Ω ”.
- Keep the contact surface of the jaws clean and refrain from using harsh cleaning products.
- Refrain clamp from shock, specifically the junction surface of jaw.
- The explosion-proof product is prohibited to dismantle and replace the battery in dangerous place.
- When taking measurements the instrument will sporadically “hum”.

- When taking measurements and there is a warning the instrument will begin to beep.
- Do not exceed the max measurements.
- If instrument will not be used for a prolonged amount of time, remove the battery.
- If something is damaged, immediately stop using the unit.

Features

- Auto-ranging ground resistance and leakage current measurements
- 0.001Ω resolution for low resistance measurements
- 9999-count backlit LCD display
- Internal memory stores up to 99 readings
- User adjustable alarms
- Data hold function
- Durable double molded conductor clamp
- 1.26" (32mm) jaw size for large ground rods
- Low battery indicator and auto shut off
- Cat. III 300V safety rating
- Includes 2 resistance calibration Loops (1Ω and 10Ω), battery and hard carrying case

Specifications

Ground Resistance

Range:	0.010 to 0.099 Ω , 0.10 to 0.99 Ω , 1.0 to 49.9 Ω , 50.0 to 99.5 Ω , 100 to 199 Ω , 200 to 395 Ω , 400 to 590 Ω , 600 to 880 Ω , 900 to 1200 Ω
Accuracy:	0.010 to 0.099 Ω : $\pm(1\% + 0.01\Omega)$ 0.10 to 0.99 Ω : $\pm(1\% + 0.01\Omega)$ 1.0 to 49.9 Ω : $\pm(1\% + 0.1\Omega)$ 50.0 to 99.5 Ω : $\pm(1.5\% + 0.5\Omega)$ 100 to 199 Ω : $\pm(2\% + 1\Omega)$ 200 to 395 Ω : $\pm(5\% + 5\Omega)$ 400 to 590 Ω : $\pm(10\% + 10\Omega)$ 600 to 880: $\pm(20\% + 20\Omega)$ 900 to 1200 Ω : $\pm(25\% + 30\Omega)$
Resolution:	0.001 Ω , 0.01 Ω , 0.1 Ω , 1 Ω , 0.5 Ω , 1 Ω , 5 Ω , 10 Ω , 20 Ω , 30 Ω

Current

Ranges:	0 to 9.95A, 10 to 99mA, 100 to 300mA, 0.30 to 2.99A, 3 to 9.9A, 10 to 30A
Accuracy:	0 to 9.95A: $\pm(2.5\% + 1\text{mA})$ 10 to 99mA: $\pm(2.5\% + 5\text{mA})$ 100 to 300mA: $\pm(2.5\% + 10\text{mA})$ 0.30 to 2.99A: $\pm(2.5\% + 0.1\text{A})$ 3 to 9.9A: $\pm(2.5\% + 0.3\text{A})$ 10 to 30A: $\pm(2.5\% + 0.5\text{A})$
Resolution:	0.5mA, 0.1mA, 1mA, 0.01A, 0.1A, 0.1A

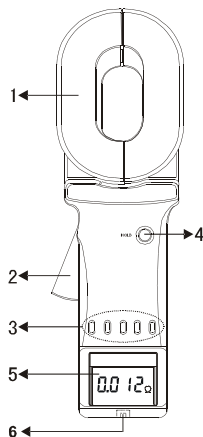
General

Range Selection:	Autoranging
Sampling Time:	0.5s
Display:	9,999 count LCD display
Backlit LCD:	Yes
User Selectable Alarms:	Yes

Display Hold:	Yes
Internal Memory:	Yes up to 99 data points
Autoshut off:	Yes (after 5 minutes)
Power Supply:	4 "AA" Batteries
Over Range Indicator:	Yes
Low Battery Indicator:	Yes
Jaw Opening:	1.26" (32mm)
Overvoltage Category:	CAT. III 300V
Product Certifications:	CE, RoHS
Operating Temperature:	32 to 131°F (0 to 55°C)
Operating Humidity:	10 to 90%
Storage Temperature:	-4 to 140°F (-20 to 60°C)
Dimensions:	11.2 x 3.3 x 2.2" (285 x 85 x 56mm)
Weight:	2.6lbs (1160g)

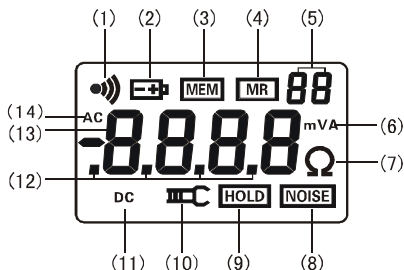
Product Description

1. Clamp Jaw
2. Trigger
3. Power button
Save button
Alarm on/off toggle
Left/right arrow button
Resistance/current functions toggle
4. Data Hold
5. LCD
6. RS232 Port



Display

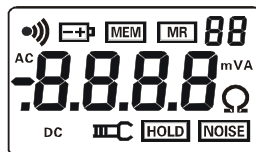
1. Alarm
2. Low Battery Indicator
3. Internal memory full
4. Data inquiry
5. Number of 2-bit stored data group
6. Current, voltage
7. Resistance
8. Noise signal
9. Data hold
10. Clamp jaw open
11. DC
12. Decimal point
13. AC



Operating Instructions

Power On/Off

Press the **POWER** button to turn on the instrument. The LCD will light up when powered on and symbols will appear on the screen.



After 5 minutes of inactivity the LCD will blink for 30 seconds and then automatically shut off. Press the **POWER** button to delay the automatic shut off.



When in the Data HOLD mode, press the HOLD button to get out of the HOLD mode and press the **POWER** button to shut the off. When setting the alarm value, it is required to press the **POWER** or **AL 3** button for 3 seconds to shut off.



When the instrument is turned on it will automatically calibrates and go into resistance measurement mode. If it doesn't calibrate properly the LCD will show "ER". The error could be from the jaw not being closed properly or from dirt build up on the metal surface of the clamp.



Resistance Measurement

When instrument is turned on and "OL Ω" is displayed on the LCD you can measure the resistance. Pull the trigger to open the clamp and clamp on the calibration loop being measured to read the resistance value.

If the unit is beeps and the display flashes, the resistance measurement is exceeding the critical set alarm. While in Data HOLD mode press the HOLD button to exit and press the **POWER** button to power off.

While in MR mode, press the **SAVE** button to exit the status and continue to measure. When setting the critical alarm value it is required to press the **POWER** button or **AL 3** button for 3 seconds to exit the mode and continue to measure. While in current test mode press the Ω button to change to resistance test mode.

Current Measurement

Once powered on, press the “**A**” button to go into current mode displaying AC 0.00mA (as shown in picture). Pull the trigger and clamp on the wire to read the current value.



Display showing OL A: Current being measured exceed the clamps max.

When the instruments beeps and the display flashes it means the current being measured exceeds the alarm critical value implemented.

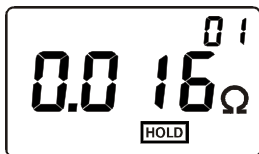
While in Data HOLD mode, press the **HOLD** button to exit the status and continue to measure.



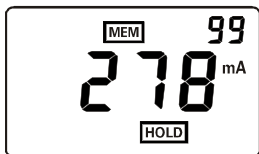
While in MR mode, press the **SAVE** button to exit the status and continue to measure. While setting the critical alarm value it is required to press the **POWER** button or **AL 3** button for 3 seconds to exit the mode and continue to measure. While in resistance test mode press the **A** button to change to current test mode.

Data Hold/Unlock/Store

While in test mode, press the HOLD button to save the present value. When the display shows HOLD, the hold value can be set as a group of data and the number is automatically stored. Press the **HOLD** button again to cancel hold, and the LCD symbol will disappear. Up to 99 groups of data can be stored. When the memory is full, the MEM symbol will flash on the LCD.

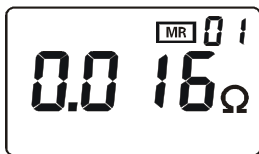


Under the data inquiry mode, press the SAVE button to exit the data inquiry and hold, store the data. While setting the critical alarm value it is required to press the POWER button or AL 3 button for 3 seconds to exit the mode and continue to hold and store data. The data will not be lost when instrument is turned on and off.

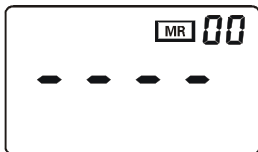


Accessing Saved Data

Press the **SAVE** button to enter inquiry mode and the first data group will be display. Press the right and left arrows to move through the stored data. If no data is stored it will display as shown in picture.

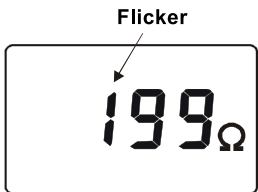


Note: While setting the critical alarm value it is required to press the **POWER** button to exit mode and press the **SAVE** button to enter into the inquiry mode.

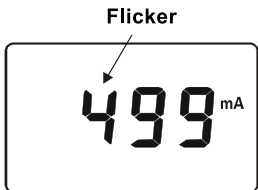


Setting the Alarm

While in test mode, press the **AL** button to open or close the alarm functions. Press the **AL 3** button for 3 seconds to enter into the alarm critical value settings function. The highest value will flicker, set the max value. Press the **AL** button to convert the number to a high digit and low digit. when the number is flashing on the LCD, press the right and left arrow buttons to change the number value. After setting the values you want, press the **AL 3** button for 3 seconds to confirm the critical value. If value measured exceeds these alarms, the instrument will begin beeping.



During the setup process, press the **POWER** button to exit the critical alarm setting function and back to measurement mode, without changing the previous set value. While in data enquiry mode, press the **SAVE** button to exit the mode and to set the critical alarm value.



Notes
