

1000V AC/DC Digital Insulation Resistance Tester



Functions

- Insulation Resistance 2.0GΩ
- Earth-bond Resistance 20.00kΩ
- 1000V AC/DC
- Resistance 40MΩ
- Frequency 99.99kHz
- Capacitance 10000μF
- Continuity and Diode test
- mAmps
- Temperature: -32° to 2462°F (-2000° to 1350°C)

Features

- PI/DAR test
- A-hold/ Hold
- Zero reading
- Lock reading
- Rotary style selector
- Protective rubber boot
- Kick stand
- Test lead holders
- Remote probe
- Auto power off
- Backlit / Worklight
- 1-Year limited warranty



Includes

- Silicone test leads w/ alligator clips (red and black) (ATL57)
- Insulation test probe w/ alligator clips (red & black)
- K-Type thermocouple
- Soft carrying case
- Batteries (4 AA)
- Manual

600V
CAT IV

1000V
CAT III



RoHS
Compliant

Applications

- Test for capacitive leakage between conductors
- Test for insulation deterioration
- Build up of dirt or moisture in motor windings



Specifications

AC and DC Current

RANGE	RESOLUTION	Accuracy 45Hz to 400Hz $\pm(\% \text{ rdg} + \text{digits})$	Accuracy 400Hz to kHz $\pm(\% \text{ rdg} + \text{digits})$
400mV	0.1mV	$\pm(1.0\% + 5 \text{ dgts})$	$\pm(2\% + 3 \text{ dgts})$
4V	0.001V		
40V	0.01V		
400V	0.1V		
1000V	1V	$\pm(2\% + 3 \text{ dgts})$	$\pm(2\% + 3 \text{ dgts})^1$

1. kHz bandwidth
Input impedance 10M Ω (nominal), <100pF, AC-coupled
Overload protection 1000V rms or DC

DC Voltage

RANGE	RESOLUTION	Accuracy 45Hz to 400Hz $\pm(\% \text{ rdg} + \text{digits})$
4V	0.001V	$\pm(0.2\% + 3 \text{ dgts})$
40V	0.01V	
400V	0.1V	
1000V	1V	

Accuracies apply to 100% of range
Input impedance 10M Ω (nominal), <100pF
Overload protection AC 1000V rms or DC

Continuity

RANGE	RESOLUTION	Accuracy	OVERLOAD PROTECTION
400.0 Ω	0.1 Ω	Approx. 40 Ω	600V

Diode Test

RANGE	RESOLUTION	ACCURACY	OVERLOAD PROTECTION
1.8V	0.001V	$\pm(2\% + 1 \text{ dgts})$	600V

Capacitance

RANGE	RESOLUTION	ACCURACY	OVERLOAD PROTECTION
10.00nF	0.01nF	$\pm(2.5\% + 5 \text{ dgts})$	600V
100.0nF	0.1nF		
1.000 μ F	0.001 μ F		
10.00 μ F	0.01 μ F		
100.0 μ F	0.1 μ F	$\pm(3\% + 5 \text{ dgts})$	600V
1000 μ F	1 μ F		
10000 μ F	1 μ F		

Voltage

AC and DC CURRENT	RANGE RESOLUTION	RESOLUTION	ACCURACY
AC (45Hz to 1000Hz)	40mA	0.01mA	$\pm(1.5\% + 5 \text{ dgts})^1$
	400mA	0.1mA	
DC	40mA	0.01mA	$\pm(0.5\% + 5 \text{ dgts})$
	400mA	0.01mA	

1. 1kHz bandwidth
Overload 600mA for 2 minutes Max.
Overload Protection 440mA, 1000V, FAST fuse

OHMS

RANGE	RESOLUTION	$\pm(\% \text{ of rdg} + \text{digits})$
400 Ω	0.1 Ω	$\pm(0.3\% + 5 \text{ dgts})$
4k Ω	0.001k Ω	
40k Ω	0.01k Ω	
400k Ω	0.1k Ω	$\pm(0.7\% + 5 \text{ dgts})$
4M Ω	0.001M Ω	
40M Ω	0.01M Ω	$\pm(1.2\% + 10 \text{ dgts})$

1. Accuracies apply from 0 to 100% of range
Overload protection 600V rms or DC
Short circuit current <1.0mA

DC Millivolts

RANGE	RESOLUTION	$\pm(\% \text{ of rdg} + \text{digits})$
400mV DC	0.1mV	$\pm(0.2\% + 3 \text{ dgts})$

Frequency

RANGE	RESOLUTION	ACCURACY
99.99Hz	0.01Hz	$\pm(0.1\% + 3 \text{ dgts})$
999.9Hz	0.1Hz	
9.999kHz	0.001kHz	
99.99kHz	0.01kHz	

Temperature

RANGE	RESOLUTION	ACCURACY ¹
-40° to 752°F (-200° to 999°C)	0.1°F (0.1°C)	$\pm(1.5\% + 3.6^\circ\text{F} (1.5\% + 2^\circ\text{C}))$
1000° to 2642°F (1000° to 1350°C)	1°F (1°C)	$\pm(1.5\% + 3^\circ\text{F} (1.5\% + 2^\circ\text{C}))$

1. Accuracies apply following 90 minutes setting time after a change in the ambient temperature of the instrument

Earth-Bond Resistance Measurement

RANGE	RESOLUTION	ACCURACY
20.00 Ω	0.01 Ω	$\pm(1.5\% + 3 \text{ dgts})$
200.0 Ω	0.1 Ω	
2000 Ω	1 Ω	
20.00k Ω	0.01k Ω	

1. Accuracies apply from 0 to 100% of range
2. Overload Protection: AC 2V rms or DC
3. Open Circuit Test Voltage: > 4.0V, < 8V
4. Short Circuit Current: > 200.0 mA

Insulation Resistance

Output Voltage	Display Range	Resolution	ACCURACY
50V (0 to 20%)	0.01 to 6M Ω	0.01M Ω	$\pm(3\% + 5 \text{ dgts})$
	6 to 50M Ω	0.1M Ω	
100V (0 to 20%)	0.01 to 6M Ω	0.01M Ω	$\pm(3\% + 5 \text{ dgts})$
	6 to 60m Ω	0.1M Ω	
	60 to 100M Ω	1M Ω	
250V (0 to 20%)	0.1 to 60M Ω	0.1M Ω	$\pm(1.5\% + 5 \text{ dgts})$
	60 to 500M Ω	1M Ω	
500V (0 to 20%)	0.1 to 60M Ω	0.1M Ω	$\pm(1.5\% + 5 \text{ dgts})$
	60 to 500M Ω	1M Ω	
1000V (0 to 20%)	0.1 to 60M Ω	0.1M Ω	$\pm(1.5\% + 5 \text{ dgts})$
	60 to 500M Ω	1M Ω	
	0.6 to 2.0G Ω	0.1G Ω	

1. Measurement Range: 0.01M Ω to 2G Ω
2. Test Voltages: 50, 100, 250, 500, 1000V
3. Test Voltage Accuracy: 0 to +20%
4. Short-Circuit Test Current: 1mA nominal
5. Auto Discharge: Discharge time <0.5 sec. for C = 1 μ F or less
6. Live Circuit Detection: Inhibit test terminal voltage >30V prior to initialization of test
7. Maximum Capacitive Load: Operable with up to 1 μ F load