



Product Datasheet

Stock No: 161-1630

Insulation Tester with Multimeter

English



Specifications

| Function | Range | Resolution | Accuracy |
|-------------------------|---|------------|--|
| DC Voltage | 400mV | 0.01mV | ±(0.06% reading + 4 digits) |
| | 4V | 0.0001V | |
| | 40V | 0.001V | |
| | 400V | 0.01V | |
| | 1000V | 0.1V | ±(0.1% reading + 5 digits) |
| AC Voltage | | | 50 to 1000 Hz |
| | 400mV | 0.1mV | ±(1.0% reading + 7 digits) |
| | 4V | 0.001V | |
| | 40V | 0.01V | ±(1.0% reading + 5 digits) |
| | 400V | 0.1V | |
| | 1000V | 1V | |
| AC + DC Voltage | 400mV | 0.1mV | ±(1.0% reading + 7 digits) (50/60 HZ) |
| | 4V | 0.001V | |
| | 40V | 0.01V | |
| | 400V | 0.1V | |
| | 1000V | 1V | |
| | All AC voltage ranges are specified from 5% of range to 100% of range | | |
| DC Current | 400μV | 0.01μA | ±(1.0% reading + 3 digits) |
| | 4000μV | 0.1μA | |
| | 40mA | 0.001mA | |
| | 400mA | 0.01mA | |
| | 10A | 0.001A | |
| | (20 A: 30 seconds max with reduced accuracy) | | |
| AC Current (AC + DC) | | | 50 to 1000 Hz |
| | 400μV | 0.1μA | ±(1.5% reading + 7 digits) |
| | 4000μV | 1μA | |
| | 40mA | 0.01mA | |
| | 400mA | 0.1mA | |
| | 10A | 0.01A | |

| Function | Range | Resolution | Accuracy |
|--------------------|---|-------------|---------------------------------|
| AC + DC Current | 400 μ V | 0.1 μ A | \pm (1.5% reading + 7 digits) |
| | 4000 μ V | 1 μ A | |
| | 40mA | 0.01mA | |
| | 400mA | 0.1mA | |
| | 10A | 0.01A | |
| | (20 A: 30 seconds max with reduced accuracy) | | |
| | All AC current ranges are specified from 5% of range to 100% of range | | |

NOTE: Accuracy is stated at 65oF to 83oF (18oC to 28oC) and less than 75% RH.

AC switch according to the calibration of sine wave. It generally increases \pm (2% reading + 2% full scale) if non sine wave is less than 3.0.

| Function | Range | Resolution | Accuracy |
|-------------|----------------|-------------------|----------------------------------|
| Resistance | 400 Ω | 0.01 Ω | \pm (0.3% reading + 9 digits) |
| | 4k Ω | 0.0001 k Ω | \pm (0.3% reading + 4 digits) |
| | 40 k Ω | 0.001 k Ω | |
| | 400 k Ω | 0.01 k Ω | |
| | 4 M Ω | 0.001 M Ω | |
| | 40M Ω | 0.001 M Ω | \pm (2.0% reading + 10 digits) |
| Capacitance | 40 nF | 0.001 nF | \pm (3.5% reading + 40 digits) |
| | 400 nF | 0.01 nF | |
| | 4 μ F | 0.0001 μ F | \pm (3.5% reading + 10 digits) |
| | 40 μ F | 0.001 μ F | |
| | 400 μ F | 0.01 μ F | |
| | 4000 μ F | 0.1 μ F | \pm (5% reading + 10 digits) |
| | 40 mF | 0.001 mF | |

| Function | Range | Resolution | Accuracy |
|--|---|---------------------|---|
| Frequency (electronic) | 40 Hz | 0.001 Hz | ± (0.1% reading + 1 digits) |
| | 400 Hz | 0.01 Hz | |
| | 4 kHz | 0.0001 kHz | |
| | 40 kHz | 0.001 kHz | |
| | 400 kHz | 0.01 KHz | |
| | 4 MHz | 0.0001 MHz | |
| | 40 MHz | 0.001 MHz | |
| | 100 MHz | 0.01 MHz | Not specified |
| Sensitivity: 0.8 V rms min. @ 20% to 80% duty cycle and < 100 kHz; 5 V rms min @ 20% to 80% duty cycle and > 100 kHz. | | | |
| Frequency (electrical) | 40 Hz-10 kHz | 0.01 Hz - 0.001 kHz | ± (0.5% reading) |
| | Sensitivity: 1 V rms | | |
| Duty Cycle | 0.1 to 99.90% | 0.01% | ± (1.2% reading + 2 digits) |
| | Pulse width: 100 μs - 100 ms, Frequency: 5 Hz to 150kHz | | |
| Temp | -50 to 1000°C | 0.1°C | ± (1.0% reading + 2.5°C) |
| (type-K) | -58 to 1832°F | 0.1°F | ± (1.0% reading + 4.5°F) (probe accuracy not included) |
| 4-20 mA% | -25 to 125% | 0.01% | ± 50 digits |
| | 0 mA = -25%, 4 mA = 0%, 20 mA = 100%, 24 mA = 125% | | |

Mega OHMS


| Terminal Voltage | Range | Resolution | Accuracy | Test Current | Short Circuit Current |
|-----------------------|-----------------------|------------------|-----------------|----------------------------------|-----------------------|
| 125 V (0% ~ +10%) | 0.125-4 M Ω | 0.001 M Ω | \pm (2% + 10) | 1 mA @load 125 k Ω | \leq 1 mA |
| | 4.001-40 M Ω | 0.01 M Ω | \pm (2% + 10) | | |
| | 40.01-400 M Ω | 0.1 M Ω | \pm (4% + 5) | | |
| | 400.1-4000 M Ω | 1 M Ω | \pm (5% + 5) | | |
| 250 V (0% ~ +10%) | 0.250-4 M Ω | 0.001 M Ω | \pm (2% + 10) | 1 mA @ load 250 k Ω | \leq 1 mA |
| | 4.001-40 M Ω | 0.01 M Ω | \pm (2% + 10) | | |
| | 40.01-400 M Ω | 0.1 M Ω | \pm (3% + 5) | | |
| | 400.1-4000 M Ω | 1 M Ω | \pm (4% + 5) | | |
| 500 V (0% ~ +10%) | 0.500-4 M Ω | 0.001 M Ω | \pm (2% + 10) | 1 mA @ load 500 k Ω | \leq 1 mA |
| | 4.001-40 M Ω | 0.01 M Ω | \pm (2% + 10) | | |
| | 40.01-400 M Ω | 0.1 M Ω | \pm (2% + 5) | | |
| | 400.1-4000 M Ω | 1 M Ω | \pm (4% + 5) | | |
| 1000 V (0% ~ +10%) | 1.000-4 M Ω | 0.001 M Ω | \pm (3% + 10) | 1mA @ load 1 M Ω | \leq 1 mA |
| | 4.001-40 M Ω | 0.01 M Ω | \pm (2% + 10) | | |
| | 40.01-400 M Ω | 0.1 M Ω | \pm (2% + 5) | | |
| | 400.1-4000 M Ω | 1 M Ω | \pm (4% + 5) | | |

Note: Accuracy specifications consist of two elements:

·(% reading) – This is the accuracy of the measurement circuit.

·(+ digits) – This is the accuracy of the analog to digital converter.

| | |
|--------------------------|--|
| Store capacitance | 2000 |
| Enclosure | Double molded, waterproof |
| Shock (Drop Test) | 6.5 ft. (2 meters) |
| Diode Test | Test current of 0.9 mA maximum, open circuit voltage 2.8 V dc typical |
| Continuity Check | Audible signal will sound if the resistance is less than 35 Ω (approx.), test current < 0.35 mA |
| PEAK | Captures peaks > 1ms |

| | |
|-------------------------------|---|
| Temperature Sensor | Requires type K thermocouple |
| Input Impedance | > 10 M Ω V dc & > 9 M Ω V ac |
| AC Response | True rms |
| AC True RMS | The term stands for "Root-Mean-Square," which represents the method of calculation of the voltage or current value. Average responding multimeters are calibrated to read correctly only on sine waves and they will read inaccurately on non-sine wave or distorted signals. True rms meters read accurately on either type of signal. |
| ACV Bandwidth | 50 Hz to 1000 Hz |
| Crest Factor | ≤ 3 at full scale up to 500 V, decreasing linearly to ≤ 1.5 at 1000 V |
| Display | 40,000 count backlit liquid crystal with bargraph |
| Overrange Indication | "OL" is displayed |
| Auto Power Off | 15 minutes (approximately) with disable feature |
| Polarity | Automatic (no indication for positive); Minus (-) sign for negative |
| Measurement Rate | 2 times per second, nominal |
| Low Battery Indication | "  " is displayed if battery voltage drops below operating voltage |
| Battery | One 9 V (NEDA 1604) battery |
| Fuses | mA, μ A ranges; 0.5 A/1000 V ceramic fast blow A range; 10 A/1000 V ceramic fast blow |
| Operating Temperature | 41°F to 104°F (5°C to 40°C) |
| Storage Temperature | -40°F to 140°F (-20°C to 60°C) |
| Operating Humidity | Max 80% up to 87°F (31°C) decreasing linearly to 50% at 104°F (40°C) |
| Storage Humidity | < 80% |
| Operating Altitude | 7000 ft. (2000 meters) maximum. |
| Safety | This meter is intended for origin of installation use and protected, against the users, by double insulation per EN61010-1 and IEC61010-1 2nd Edition (2001) to Category IV 600V and Category III 1000V; Pollution Degree 2. The meter also meets UL 61010-1, 2nd Edition (2004), CAN/CSA C22.2 No. 61010-1 2nd Edition (2004), and UL 61010B-2-031, 1st Edition (2003) |