228 Leakage Current Tester

Model 228 Special Purpose AC/DC Milliameter

Designed specifically to measure hazardous "Leakage Currents" or "Touch Currents" which may appear when a person touches the conductive surface of electrical or electronic equipment.

The 228 is designed around IEC990, ANSI and UL guidelines.

- **True RMS Readings**
- **Reads in Measurement Indication Units (MIU) up to .005 MIU**
- **Output Allows Measurement of Peak Current in Non-Sinusoidal Wave Forms**
- **Let-Go, Reaction, and Burn Hazard Response Networks**
- **Detects dangerous AC & DC Leakage currents**
- **Includes Test Leads, Alligator Clips, Batteries and Manual**

Ordering Information	
Leakage Tester	**Catalog Number**
228 Leakage Current Tester	40027
Accessories	**Catalog Number**
Test Leads w/Screw-On Alligator Clips	00125
Case, Black Padded Nylon Carrying	00834
Optional carrying case includes convenient storage pouch for test leads and Operators Manual	

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Specifications

The specifications apply to sinusoidal AC waveforms only.
Accuracy is not guaranteed for non-sinusoidal or complex waveforms.

General	Reaction Response Network	Let-Go Response Network	Unweighted Burn Hazard Response Network
Equivalent network component values	Designed around IEC 990 (excluding fuse)		
Equivalent measuring instrument load	1 MΩ - 10 pF	1 MΩ - 62 pF	1 MΩ - 1 pF
Ranges	0.3, 1, 3, 10 M.I.U.	0.3, 1, 3, 10 M.I.U.	0-100 mA RMS
Current accuracy	±2% F.S. @ 60 Hz		
Meter measurement method	True RMS		
Meter frequency response	(Relative to ANSI C101-1992 or UL-1459 2nd edition)		
DC to 1 Hz	Pointer shall track within 5% of peak		
2Hz to 19Hz (Accuracy not supported)			
20 Hz to 200 KHz	±2% F.S.	±2.5% F.S.	±2% F.S.
200 KHz to 1 MHz	±2% F.S.	±2.5% F.S.	±5% F.S.
Output sensitivity	Full scale meter indication equals 1V RMS (Measured with a 1 MΩ , 12 pF load)		
Output accuracy	±2% of reading @ 60 Hz		
Output frequency response	(Relative to ANSI C101-1992 or UL-1459 2nd edition)		
DC to 50Hz	±2% of reading		
50 Hz to 100 kHz	±2.5% of reading	+2% / -3% of reading	±2% of reading
100 kHz to 200 kHz	±5% of reading		
200 kHz to 1 MHz	Accuracy not supported		
Voltmeter range	0-300 V (AC or DC)		
Voltmeter accuracy:			
DC to 1 Hz	Pointer shall track within 5% of peak		
2Hz to 19Hz (Accuracy not supported)			
20 Hz to 1KHz	±3% F.S. @ 60 Hz (Add ±1% for every additional 100 Hz)		
Voltmeter frequency response	DC to 1 KHz		
Power requirements	(2) 9V (NEDA 1604A) batteries		
Physical	7" x 5.25" x 3.125", 2-1/2 lbs (1.4kg), ABS plastic, fused input		
Environmental	27°C ±2° C, 70% non condensing relative humidity		
Maximum operating range	0° to 40° C		

Specifications subject to change without notice

Any discussion in this document regarding UL, ANSI or IEC specifications is for Reference purposes only.

The input network utilized in the M228 is detailed in Figures 1 through 3 on page 4 of the Manual.
The customer is advised to obtain the latest specification from the rating agency.

NOTE: For specification information call ANSI at (212) 642-4900 or UL in Northbrook, IL at (847) 272-8800.