



# 228 Leakage Current Tester



## Model 228 Special Purpose AC/DC Milliammeter

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



## 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
<b>Equivalent network component values:</b>	Designed around IEC 990 (excluding fuse)		
<b>Equivalent measuring instrument load:</b>	1 MΩ - 10pF	1 MΩ - 62 pF	1 MΩ - 1 pF
<b>Ranges:</b>	0.3, 1, 3, 10 M.I.U.	0.3, 1, 3, 10 M.I.U.	0-100 mA RMS
<b>Current accuracy:</b>	±2% F.S. @ 60 Hz		
<b>Meter measurement method:</b>	True RMS		
<b>Meter frequency response:</b>	(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% of F.S.	±2% F.S.
200 KHz to 1 MHz	±2% F.S.	±2.5% F.S.	±5% F.S.
<b>Output sensitivity:</b>	Full scale meter indication equals 1V RMS (Measured with a 1 MΩ, 12 pF load)		
<b>Output accuracy:</b>	±2% of reading @ 60 Hz		
<b>Output frequency response:</b>	(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 1 MHz	±5% of reading		
<b>Voltmeter range:</b>	0-300 V (AC or DC)		
<b>Voltmeter accuracy:</b> 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 100Hz)		
<b>Voltmeter frequency response:</b>	DC to 1 KHz		
<b>Power requirements:</b>	(2) 9V (NEDA 1604A) batteries		
<b>Physical:</b>	7" x 5.25" x 3.125", 2-1/2 lbs (1.4kg), ABS plastic, fused input		
<b>Environmental:</b>	27°C ±2° C, 70% non condensing relative humidity.		
<b>Maximum operating range:</b>	0° to 40° C		

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.

## Ordering Information

Specifications subject to change without notice.

Leakage Tester	Catalog No.	ACCESSORIES	Catalog No.
228 Leakage Current Tester	40027	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.

