AM-270
True-rms Industrial Multimeter with Temperature

Amprobe's AM-270 is a commercial, true-rms multimeter for electrical and HVAC applications and is dedicated to electrical and HVAC professionals. Safety rated to CAT IV 600 V and CAT III 1000 V for outdoor and indoor applications requiring direct connection to main panel of the building or measurement of the outdoor wiring connecting building the utility transformer. This true-rms multimeter measures complete range of electrical parameters including voltage, current, resistance and frequency. It also covers HVAC application with temperature, capacitance and micro amps functions. True-rms sensing for superior accuracy.

Additional Features

- **True RMS (TRMS)**
- **Measures AC/DC voltage up to 1000V, Current, Resistance, Frequency, Capacitance and Temperature**
- **Auto and manual ranging**
- **Auto power off**
- **Audible continuity**

CAT III 1000 V | CAT IV 600 V

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Safety Certification

All Amprobe tools, including the Amprobe AM-270, are rigorously tested for safety, accuracy, reliability, and ruggedness in our state-of-the-art test lab. In addition, Amprobe products that measure electricity are listed by a 3rd party safety lab, either UL or CSA. This system assures that Amprobe products meet or exceed safety regulations and will perform in a tough, professional environment for many years to come.

Specifications

General Specifications	AM-270
Display	-4/5 digits 5000 counts LCD display
Update Rate	Digital Data 5 per second nominal; 52 Segments Bar-graph 60 per second nominal
Operating Temperature	32 °F to 113 °F (0 °C to 45 °C)
Relative Humidity	Maximum relative humidity 80% for temperature up to 87.8 °F (31 °C) decreasing linearly to 50% relative humidity at 113 °F (45 °C)
Altitude	Operating below 6562 ft (2000 m)
Storage Temperature	-4 °F to 140 °F (-20 °C to 60 °C), < 80% R.H. (with battery removed)
Temperature Coefficient	nominal 0.15 x (specified accuracy)/°C @(0°C -18°C or 28°C -45°C), or otherwise specified
Pollution Degree	2
Safety	The meter (all versions) is protected, against the users, by double insulation per EN61010-1 and IEC61010-1 2nd Edition (2001) to CAT III 1000V & CAT IV 600V. The meter (all versions) also meet CSA C22.2 No. 1010-1-92* to CAT III 1000V. AM-120 & AM-130 Terminals (to COM) ratings: V: Category III 1000 Volts AC & DC, and Category IV* 600 Volts AC & DC. A / mAµA: Category III and Category IV* 500 Volts AC and 300 Volts DC.
E.M.C.	Meets EN61326(1997, 1998/A1), EN61000-4-2(1995) and EN61000-4-3(1996). Also meets former standards EN55011(1991) and EN50082-1(1997)
In an RF field of 3V/m	Capacitance function is not specified Other function ranges: Total Accuracy = Specified Accuracy + 30 digits. Performance above 3V/m is not specified
Power Supply	Single standard 9V battery NEDA1604, JIS006P or IEC6F22
Power Consumption	4.3 mA typical
Low Battery	Below approx. 7V
APO Timing	Idle for 17 minutes
Dimensions	7.6 (L) x 3.9 (W) x 2.1 (H) in (192.7 x 97.8 x 53.5 mm)
Weight	1.01 lb (0.42 kg)
Special Features	Data-Hold; Range-Hold; Backlighted Display; Optional PC-interface capabilities 50ms Record MAX-MIN readings at fast 20/second measurement mode; 5ms Crest (Instantaneous Peak-Hold) MAX-MIN readings; Relative-Zero offset mode; Zoom 5x analog pointer at 60/s
Accessories	Test leads (pair); 9 V battery (installed); user manual; banana plug K type thermocouple
Optional PC-interface Capabilities	50ms Record MAX-MIN readings at fast 20/second measurement mode; 5ms Crest (Instantaneous Peak-Hold) MAX-MIN readings; Relative-Zero offset mode; Zoom 5x analog pointer at 60/s

Electrical Specification	AM-270		
Accuracy is +/-(% reading digits + number of least significant digits) or otherwise specified, at 23°C +/- 5°C & less than 75% R.H. True RMS models ACV & ACA accuracies are specified from 5 % to 100 % of range or otherwise specified. Maximum Crest Factor <3:1 at full scale & <6:1 at half scale, and with frequency spectrums, besides fundamentals, fall within the meter specified AC bandwidth for non-sinusoidal waveforms.			
	Range	**Accuracy**	
DC Voltage	50.00mV, 500.0mV, 5.000V, 50.00V, 500.0V, 1000V	0.12% + 2d 0.06% + 2d 0.08% + 2d	
	NMRR: >60dB @50/60Hz CMRR: >120dB @ DC, 50/60Hz, RS=1KΩ Input Impedance: 10MΩ, 16pF nominal (44pF nominal for 50mV & 500mV ranges)		
AC Voltage	50Hz -- 60Hz 50.00mV, 500.0mV, 5.000V, 50.00V, 500.0V, 1000V	0.5% + 3d	
40Hz -- 500Hz	50.00mV, 500.0mV, 5.000V, 50.00V, 500.0V, 1000V	0.8% + 3d 1.0% + 4d 1.2% + 4d	
Up to 20kHz	50.00mV, 500.0mV, 5.000V, 50.00V, 500.0V, 1000V	0.5dB* 3dB* Unspec'd	
	*Specified from 30% to 100% of range CMRR: >60dB @ DC to 60Hz, Rs=1kΩ Input Impedance: 10MΩ, 16pF nominal (44pF nominal for 50mV & 500mV ranges)		
Temperature	-50 °C TO 1000 °C -58 °F TO 1832 °F	0.3% + 3d* 0.3% + 5d*	
	*Thermocouple range & accuracy not included		

Electrical Specification	AM-270		
DC Current	**Range**	**Accuracy**	**Burden Voltage**
	500.0µA 5000µA 50.00mA 500.0mA 5.000A 10.00A*	0.2%+4d	0.15mV/µA 0.15mV/µA 3.3mV/mA 3.3mV/mA 0.03V/A 0.03V/A
	*10A continuous, 20A for 30 second max with 5 minutes cool down interval		
AC Current	50Hz -- 60Hz 500.0µA 5000µA 50.00mA 500.0mA 5.000A 10.00A*	 0.6% + 3d 1.0% + 3d 0.6% + 3d	 0.15mV/µA 0.15mV/µA 3.3mV/mA 3.3mV/mA 0.03V/A 0.03V/A
440Hz -- 1kHz	500.0µA 5000µA 50.00mA 500.0mA 5.000A 10.00A*	0.8% + 4d 0.8% + 4d 0.8% + 4d 1.0% + 4d 0.8% + 4d 0.8% + 4d	0.15mV/µA 0.15mV/µA 3.3mV/mA 3.3mV/mA 0.03V/A 0.03V/A
	*10A continuous, 20A for 30 seconds max with 5 minutes cool down interval Crest mode for V & A functions Accuracy: Specified accuracy ±150 digits for changes > 5 ms in duration		
Ohms	50.00Ω 500.0Ω 5.000kΩ, 50.00kΩ, 500.0kΩ 5.000MΩ 50.00MΩ	0.2% + 6d 0.1% + 3d 0.1% + 2d 0.4% + 3d 1.5% + 5d	
Open Circuit Voltage	< 1.3VDC (< 3VDC for 50Ω & 500Ω ranges)		
Audible Continuity Tester **Audible Threshold**	between 20Ω and 200Ω. Fast response time < 100µs		

Diode Tester	**Range**	**Accuracy**	**Test Current (Typical)**	**Open Circuit Voltage**
	2.000V	1%+1d	0.8mA	< 3.5 VDC

Frequency	**Function**	**Ensitivity (Sine RMS)**	**Range**
Accuracy: 0.01% + 2d	mV 5V 50V 500V 1000V Ω, Cx, diode µA, mA, A	300mV 2V 20V 80V 300V 300mV 10% F.S.	6Hz - 125kHz 6Hz - 125kHz 6Hz - 20kHz 6Hz - 1kHz 6Hz - 1kHz 6Hz - 125kHz 6Hz - 125kHz

Capacitance	**Range**	**Accuracy**
	50.00nF 500.0nF 5.000µF 50.00µF 500.0µF 9999µF	0.8% + 3d 0.8% + 3d 1.0% + 3d 2.0% + 3d 3.5% + 5d 5.0% + 5d
	*Accuracies with film capacitor or better	
Resistance	50.00 Ω, 500.0 Ω, 5.000 kΩ, 50.00 kΩ, 500.0 kΩ, 5.000 MΩ, 50.00 MΩ	

Included Accessories: test leads, K Type thermocouple with banana plug, 9 V battery (installed) and user manual
For complete specifications, please download the product manual on **amprobe.com**