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	0°C to 45°C (32F-113F)
Relative Humidity	Maximum relative humidity 80% for temperature up to 31°C decreasing linearly to 50% relative humidity at 45°C
Altitude	Operating below 2000m
Storage Temperature	-20°C ~ 60°C (-4F to 140F) , < 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
Dimension	L317.5 x W177.8 x H76.2mm (12.5 x 7 x 3in) with clamshell
Weight	689.46g (1.52lb) with clamshell
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); Battery (installed); User's 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**

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