



AM-540 Advanced HVAC Multimeter

AM-500 Digital Multimeter Series

The AM-540 Advanced HVAC Multimeter is specifically designed for the most demanding HVAC applications. The AM-540 measures a complete range of electrical parameters and key functions such as temperature, dual thermocouples for temperature differential, low pass filter to take accurate measurements on variable frequency drives, capacitance to check motor startup capacitors, and micro amps for flame sensor troubleshooting. With a built-in flashlight and VoltTect™ non-contact voltage detection, the AM-540 is the choice multimeter for a professional HVAC technician.







- AC/DC Voltage up to 1000V, ac/dc current, resistance, frequency, capacitance, temperature, duty cycle.
- Dual thermocouple to take simultaneous temperature readings on low and high side of an HVAC system
- Low pass filter for variable frequency drives
- VoltTect™ Non-contact voltage detection
- Audible continuity
- Diode test
- Dual reading backlit LCD display with analog bar graph
- Data hold
- Max/min memory
- Peak hold (crest)
- Relative zero mode
- Built in work light
- Built in test leads storage and "third hand" test lead holder
- Warning against improper test leads connection
- Auto and manual ranging
- Auto power off and low battery warning
- Safety rated: CAT IV 600V, CAT III 1000V

AM-540 DETAILED SPECIFICATIONS

Specifications	Range	Best Accuracy
AC Voltage	6.000 / 60.00 / 600.0 / 1000 V	±(1.0% Rdg + 3 LSD) @ 45 Hz to 400 Hz, 0 V to 600 V
DC Voltage	600.0 mV 6.000 / 60.00 / 600.0 / 1000 V	±(0.5% Rdg + 2 LSD) @ 6 V to 600 V ranges
Resistance	600.0 Ohms 6.000 / 60.00 / 600.0 kOhms 6.000 / 60.00 MOhms	±(1.0% Rdg + 2 LSD) @ 6 kOhms to 600 kOhms ranges
AC Current	600.0 µA / 6000 µA 60.00 mA / 500.0 mA / 10.00 A	±(2.0% Rdg + 5 LSD) @ 45 Hz to 400 Hz
DC Current	600.0 µA / 6000 µA 60.00 mA / 500.0 mA / 10.00 A	±(1.5% Rdg + 3 LSD)
Frequency	60.00 / 600.0 Hz 6.000 / 60.00 / 600.0 kHz 6.000 / 60.00 MHz	±(0.1% Rdg + 3 LSD)
Duty cycle	10.00% to 90.00%	±(1.2% Rdg + 30 LSD) @ 5Hz to 2 kHz
Capacitance	60.00 / 600.0 nF 6.000 / 60.00 / 600.0 / 6000 µF 60.00 mF	±(3.0% Rdg + 5 LSD) @ 600 nF to 60 µF ranges
Temperature	-40 °F to 1832 °F / -40 °C to 1000 °C	°F: ±(1.0% rdg + 12) @ >104 °F to 752 °F / °C: ±(1.0% rdg + 8) @ >40 °C to 400 °C
Number of temperature inputs	Dual Thermocouple	

For more detailed specifications see instruction manual.

AM-500 SERIES SELECTION GUIDE

			AM-500	AM-510	AM-520	AM-530	AM-540	AM-550
MULTIMETER TYPE			Autoranging	Com / Res	HVAC	Electrical	Adv. HVAC	Industrial
Application:								
Functions	Safety Rating	Safety	CAT III 600V	CAT III 600V	CAT III 600V CAT II 1000V	CAT III 600V CAT II 1000V	CAT IV 600V CAT III 1000V	CAT IV 600V CAT III 1000V
	Measure voltage in noisy environments	True-rms				■		■
	Electrical panels, AC outlets	AC Voltage (V)	600	600	750	750	1000	1000
	DC systems, auto/marine batteries	DC Voltage (V)	600	600	1000	1000	1000	1000
	AC Current - electrical panels, appliances	AC Current (A)	10	10	10	10	10	10
	DC Current - electronics, DC motors	DC Current (A)	10	10	10	10	10	10
	Specified resistance and continuity	Resistance (MOhms)	20	40	40	40	60	60
	Flame sensors	Micro Amps	■	■	■	■	■	■
	Diodes in ac to dc converters	Diode test	■	■	■	■	■	■
	Fuses, light bulbs, wire connections	Continuity	■	■	■	■	■	■
	Household batteries	Battery test	■	■				
	Motor startup or run capacitors	Capacitance		■	■	■	■	■
	Frequency verification	Frequency		■	■	■	■	■
	VolTect™ Non-contact voltage detection	Non-contact voltage		■	■	■	■	■
	Electrical load-time on vs. time off	Duty cycle		■			■	■
Temp of air vents, fuses, transformers	Temperature inputs			1	1	2	2	
Features	Automatically selects measurement range	Autoranging	■	■	■	■	■	■
	Manually select measurement range	Manual ranging		■	■	■	■	■
	Voltage on variable frequency drives	Low pass filter					■	■
	Detect stray voltages	Low Z						■
	Dimly lit areas	Built-in flashlight		■	■	■	■	■
Display	Meter resolution	LCD Counts	2,000	4,000	4,000	4,000	6,000	6,000
	Dimly lit areas	Backlight		■	■	■	■	■
	Monitoring fast changing signals	Bar graph			■	■	■	■
	Two relative measurements on one screen	Dual display					■	■
Events	Data memory	Data hold	■	■	■	■	■	■
	Difference between two measurements	Relative reading		■	■	■	■	■
	Max/min peak measurement	Max/min hold			■	■	■	■
	Specialized signal measurements	Peak hold (crest)					■	■

INCLUDED ACCESSORIES

Model	Batteries (Installed)	Test Leads	Temperature Probe	Temperature Adaptor	Velcro Strap	Carrying Case	User's Manual
AM-500	AAA x2	■					■
AM-510	9V (6F22) x1	■					■
AM-520	9V (6F22) x1	■	K-type probe x1		■	■	■
AM-530	9V (6F22) x1	■	K-type probe x1		■	■	■
AM-540	9V (6F22) x1	■	K-type probe x2	■	■	■	■
AM-550	9V (6F22) x1	■	K-type probe x2	■	■	■	■

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