

HARD AT WORK SINCE 1948.

# 2014





### **AMPROBE**<sup>®</sup>

HARD AT WORK SINCE 1948.

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### **No Hassle Warranty** - *No waiting. No shipping charges.*

Our commitment to high-quality products and customer service is demonstrated by our user's manual that comes with each industry exclusive "No Hassle" warranty.

In the unlikely event that an Amprobe Test Tool requires warranty service, any of our local dealers are authorized to replace it, on the spot. (\$500 MSLRP limit)

The product warranty is stated in the product and can be downloaded from www.Amprobe.com

For warranty service, please contact the Amprobe Service Department at 1-877-AMPROBE.



# Clamp Meters

### Innovation

Amprobe invented the first clamp meter and the innovation has never stopped. The Amprobe Navigator<sup>™</sup> Clamp Meter series serves as the first line of defense in any industrial setting. Designed for one-hand operation, our cutting edge navigation system eliminates push buttons with an easy to use joystick allowing you to select functions directly on the large backlit display.

### $\star\star\star\star\star$ **TOP RATED** 5 Out of 5 Stars

See The Top Rated Navigator<sup>™</sup> Clamp Meter Series, read the five star reviews at www.Amprobe.com.



### AMPROBE HARD AT WORK SINCE 1948.

### **Clamp Meters**

### **Clamp Meter Selection Guide** Choose the clamp meter that's right for your job, from basics to industrial.

	ciump	meter			Choose the clamp meter that's right for your job, from basics to industrial.														
MODEL: ACD SMAN ACD SMAN					COCSMAN ROCSMAN ROAD			25th ROTOR DOTA PUS ARMERUS				PRO	NI ROA UNIN ROCAN ROAPRO ROCING				00	COCION PROFILITION	
MODEL:	AC	DSO. AC	ST. AC	DCS' AC	Den AC	2 <sup>20.</sup> AC	ACT ACT	D'NO AC	D'TA AC	ACOC	37 R.5	ool ACS	OA IHA	IA AC	OCAN RC	Die Pr. AC	ocho AC	ACD ACD	
	PG 05	PG 05	PG 05	PG 05	PG 06	PG 06	PG 06	PG 06	PG 06	PG 07	PG 07	PG 08	PG 08	PG 08	PG 08	PG 09	PG 09	PG 09	
	In	dustrial, P Navigato	ower Quali r <sup>™</sup> Clamps	ity		" Clamp ters	Mul	timeter Cla	amps	Large Jaw Industrial	Analog	Lea Cla	kage mps		Basic	Clamps		Specialty	
Safety Rating	CAT IV 600 V	CAT IV 600 V	CAT IV 600 V	CAT IV 600 V	CAT III 600 V	CAT III 600 V	CAT III 600 V	CAT III 600 V	CAT III 600 V	CAT IV 600 V	CAT IV 600 V	CAT II 600 V	CAT II 600 V	CAT III 600 V	CAT III 600 V	CAT III 600 V	CAT III 600 V	CAT III 600 V	
True-rms	•	•	•	•		•			•	•							•	•	
AC Voltage (V)	1000 V	1000 V	1000 V	1000 V	600 V	600 V	600 V	600 V	600 V	750 V	600 V	600 V		600 V					
DC Voltage (V)	1000 V	1000 V	1000 V	1000 V	600 V	600 V	600 V	600 V	600 V	1000 V				600 V					
AC Current (A)	600 A	600 A	600 A	1000 A	400 A	400 A	600 A	600 A	600 A	1000 A	1000 A	60 A	40 A	400 A	1000 A	800 A	800 A	2000 A	
DC Current (A)			600 A	1000 A						1000 A			40 A	400 A		1000 A	1000 A		
Micro Amps								•	•										
Resistance	•	•	•	•	•	•	•	•	•	•	•	•		•	•	•	•	•	
Capacitance	•	•	•	•		•	•	•	•	•						•	•	•	
Frequency (Test Leads)	•	•	•	•			•	•	•	•								•	
Frequency (Jaw)	•	•	•	•			•			•									
Duty Cycle										•									
Relative Zero	•	•	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•	
Temperature		•		•		•		•	•										
Diode Test	•	•	•	•	•		•	•	•	•					•	•	•	•	
Continuity Beeper	•	•	•	•	•	•	•	•	•	•	•	•		•	•	•	•	•	
Non-Contact Voltage	•	•	•	•	•	•												•	
Power (W)	•	•	•	•															
Autoranging	•	•	•	•		•	•	•	•	•		•	•	•	•	•	•		
Total Harmonic Distortion (THD)	•	•	•	•															
Phase Rotation	•	•	•	•															
Inrush Current	•	•	•	•															
dBm reading																			
Backlight	•	•	•	•						•				•			•	•	
Bar Graph	•	•	•	•								•		•				•	
Data Hold	•	•	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•	
Peak hold (Crest)	•	•	•	•						•		•							
AutoTest Function (V,A,R)																		•	
Auto Power-Off	•	•	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•	
Work light (LED)	•	•	•	•															
МАХ	•	•	•	•			•	•	•	•		•		•		•	•		
MIN	•	•	•	•						•		•		•					

### **CAT IV Navigator<sup>™</sup>Clamp Meters**

See a snapshot of harmonics and power quality measurements to help determine if specialized equipment is needed. Use a wide range of measurement options: min/max, power factor and ac/dc. Make quick, accurate measurements with one hand using the joystick control.

- Fast response
- Inrush current measurement for motors
- Low-pass filter for variable frequency drives
- Phase rotation indication
- VolTect<sup>™</sup> non-contact voltage detection
- Continuity beeper
- MAX/MIN and smart data hold

FEATURE	ACD-50NAV	ACD-51NAV	ACDC-52NAV	ACDC-54NAV	BEST ACCURACY		
AC Current		+/- (1.5% rdg + 5 LSD)					
DC Current	-	-	100.00 A, 600.0 A	100.00 A, 1000.0 A	+/- (1.5% rdg + 5 LSD)		
AC Voltage		100.00	) V, 1000 V		+/- (1.0% rdg + 5 LSD)		
DC Voltage		100.00	) V, 1000 V		+/- (0.7% rdg + 2 LSD)		
Resistance		1.0000 k <b>Ω</b> , 10.	000 kΩ, 100.00 kΩ		+/- (1.0% rdg + 3 LSD)		
Frequency		20.0 H	z to 10 kHz		+/- (0.5% rdg +3 LSD)		
Capacitance		4.000	μF, 4000 μF		+/- (1.9% rdg + 8 LSD)		
DCμA	-	1000.0 μA	-	-	+/- (1.7% rdg + 2 LSD)		
Temperature	-	-50°F → 1832°F (-50°C → 1000°C)	-	-50°F → 1832°F (-50°C → 1000°C)	+/- (1% rdg + 1°C)		
<b>THD</b> (Total Harmonics Distortion)		+/- (3.0% rdg + 10 LSD)					
Individual Harmonics		1	<b>→</b> 25		_		
Power		±(A, error×V, reading + V, error×A, reading)					
Power Factor			+/- 3 degrees				
Accommodates Conductors	Up to						
NCLUDED ACCES hermocouple (ACDC	CAT IV CAT II GOO V 10000 V N10140						

### $\star\star\star\star\star\star$ **TOP RATED**

### *"The ACDC-54NAV is my favorite meter*

**for the job site** where ac/dc testing, verification, and troubleshooting are required. This meter is near perfect for the electrician/engineer that regularly works with residential or commercial HVAC, AC Hydraulics, or DC Telco.

- ACDC-54NAV customer reviews

### **Navigate Through Any Job**

Job Function	Applications	Model
Industrial Electricians and	<b>Motor Testing.</b> Use inrush current to test motors capacitance to check start up capacitors and phase rotation to measure three-phase systems	
HVAC Technicians	<b>Power Quality.</b> Quickly determine the efficiency of an electrical system by measuring power factor and working power measurements. Check for harmful harmonics while you perform daily system checks	ACDC-52NAV ACDC-54NAV
	<b>Transformers.</b> The Navigator <sup>™</sup> Clamp is the ideal tool for maintenance and installation of transformers and advanced equipment	
Facilities Maintenance	<b>System Monitoring.</b> Assess and monitor the condition of various systems and advanced equipment such as power quality analyzers	
	<b>Performance Testing.</b> Verify system efficiency and quickly troubleshoot issues to minimize costly downtime by performing load studies, motor testing system checks	ACD-50NAV

ACD-50NAV ACDC-52NAV ACDC-54NAV

### **Clamp Meters**

### Peak hold

- Auto flashlight when clamping
- Large backlit display with analog bar graph Auto power-off
- Overmold body to absorb shock drop-proof to 4' (1.2 m)
- True-rms provides accuracy and dependability



**Recommended Accessories** 



3885



### 

### **Clamp Meters**

180-degree rotating head



FEATURE	ACD-20SW	ACD-23SW	BEST ACCURACY			
True-rms	-	•	_			
AC Current	40.00 A	, 400.0 A	+/- (2.0% rdg + 10 LSD) 50 Hz → 60			
AC Voltage	4.000 V, 40.00 V	, 400.0 V, 600.0 V	+/- (1.2% rdg + 8 LSD) → 50 Hz → 500 Hz at 4 V → 400 V range			
DC Voltage	400.0 mV, 4.000 V, 40	0.00 V, 400.0 V, 600.0 V	+/- (0.5% rdg + 2 LSD)			
Resistance		40.00 kΩ, 400.0 kΩ, , 40.00 MΩ	+/- (1.0% rdg + 4 LSD) at 400 Ω → 400 kt ranges			
Capacitance	-	4.000 μF, 40.00 μF, 400.0 μF, 4,000 μF	+/- (3.0% rdg + 5 LSD) on 40 µF → 400 ranges			
Temperature	-	-30°F → 400°F, (-35°C → 400°C)	+/- (1.0% + 2°F) 32°F → 400°F +/- (1.0% + 1°C) 0°C → 400°C			
Diode Test	•	-	-			
VolTect <sup>™</sup> non-contact voltage detection	70 V → 600 VA	C (50 Hz → 60 Hz)	_			
Backlight	-	•	-			
Accommodates Conductors		Up to 1.18" (30 r	nm) in diameter			

Swivel<sup>™</sup>Clamp Meters ★★★★ TOP RATED

Clamp Meters. The slim jaw puts all features within reach for one-handed operation.

Get fast and easy testing for HVAC and electrical applications. See measurements in tight or

inconvenient spaces with the patented 180-degree rotating head design of Amprobe's Swivel™

• Auto ranging for quick checks

### If an industrial or utility testing application demands a higher level of safety, reach for this CAT IV rated Clamp Meter.

- Extra large jaws accommodate wide wires
- Peak hold
- Audible continuity
- Auto and manual ranging Auto power-off

FEATURE	ACDC-3400 IND
DC Voltage	660.0 mV, 6.600 V, 66.00 V, 660.0 V, 1000 V
AC Voltage	660.0 mV, 6.600 V, 66.00 V, 660.0 V, 750 V
AC Current	66.00 A, 660.0 A, 1000 A
DC Current	660.0 A, 1000 A
Resistance	660.0 Ω, 6.600 kΩ, 66.00 kΩ, 660.0 kΩ, 6.600 MΩ, 66.00 MΩ
Capacitance	6.600 nF, 66.00 nF, 660.0 nF, 6.600 μF, 66.00 μF, 660.0 μF, 6.6 mF
Frequency	66.00 Hz, 660.0 Hz, 6.600 kHz, 66.00 kHz, 660.0 kHz, 1.000 MHz
Continuity	•
Accommodates Conductors	Up to 2.0" (51 mm) in diameter

INCLUDED ACCESSORIES: Deluxe carrying case, test leads, test leads, battery (installed), users manual



### **RS-1007 PRO CAT IV Analog Clamp Meter**

Take these clamp meters to extremes. Digital clamp meters have LCD screens that tend to freeze below 32°F (0°C), but the Amprobe analog clamp meters can take extreme heat or cold and keep on measuring amps and volts without problems or batteries.

- Easy-to-read rotary scale
- Works in temperatures from 5°F to 122°F · Does not need batteries to measure volts or amps

FEATURE	RS-1007 PRO			
AC Voltage	150 V, 300 V, 600 V			
AC Current	15 A, 40 A, 100 A, 300 A, 1000 A			
Resistance	1000 Ω			
Continuity	•			
Accommodates Conductors	up to 1.88" (47 mm) in diameter			
NCLUDED ACCESSORIES: Test leads, battery (installed, for resistance neasurement only), users manual, carrying case				

### **ACD-10 PLUS Clamp Multimeter** with Uniquely Thin Jaws

With thinner jaws than standard clamp multimeters, only 0.4"/10 mm thick, the ACD-10 PLUS, and ACD-14 PLUS, allow access to tight measurement areas and still accommodate conductors up to 1"/25 mm.

### ACD-14 PLUS and ACD-14 TRMS-PLUS **Dual Display Digital Clamp Multimeters**

The professional's choice for both HVAC and electrical applications with a complete set of measurement features including dual displays that allow you to view amperage and voltage measurements simultaneously.

- Continuity buzzer
- Hold and maximum reading functions
- Auto ranging
- · Auto power off and low battery indication
- Rubber over-molded case
- · Frequency is measured by either jaws or test leads (ACD-10 PLUS only)
- Microamps for testing
- flame sensors (ACD-14 PLUS only) • Diode test (ACD-14 PLUS and
- ACD-14 TRMS-PLUS only)
- True-rms for more accurate readings in noisy environments (ACD-14 TRMS-PLUS only)



ACD-14 TRMS-PLUS INCLUDED ACCESSORIES: Test leads, battery (installed), soft carrying pouch, K-type thermocouple with banana plug (ACD-14 PLUS and ACD-14 TRMS-PLUS only), users manual

6

ACD-10 PLUS



**Recommended Accessories** 

ACD-23SW

FOR: ACD-20SW, ACD-23SW, ACD-10 PLUS, ACD-14PLUS and ACD-14 TRMS-PLUS







All second in

### **Clamp Meters**

### **ACDC-3400 IND CAT IV Clamp Meter**

• Data hold • Backlight • Diode test True-rms for accuracy and dependability MAX/MIN recording

• Operates on 50Hz and 60Hz frequencies • Pointer lock - data hold



ACDC-3400 IND

### $\star \star \star \star \star \star$ **TOP RATED** *"Top quality product* Fast, accurate and simple to use."

- ACDC-3400 IND customer review





RS-1007 PRO

### **Clamp Meters**



LH41A

0000

### **AC50A Leakage Current Clamp Multimeter** Great for applications requiring measurement of leakage and fault currents, this clamp measures low AC current down to microamps.

- · Min/max control to see largest/smallest values in a series of measurements
- · Relative value measurement to determine differentials
- Data hold to freeze measurement value on the display
- Digital display with analog bargraph
- Auto power-off to save battery life
- Minimum resolution 0.01 mA

### LH41A AC/DC Low **Current Clamp Meter**

Take precise low-current measurements with 1 mA resolution.

- Data hold
- Auto power-off
- Auto zero button to zero display for DC

FEATURE	AC50A	LH41A _		
AC Voltage	400.0 V			
AC Current	40.00 mA, 400.0 mA, 4.000 A, 40.00 A, 60.0 A	4.000 A, 40.00 A		
DC Current	-	4.000 A, 40.00 A		
Resistance	400 Ω	-		
Continuity	•	-		
Accommodates Conductors	up to 1.2" (30 mm) in diameter	up to 0.78" (20 mm) in diameter		
INCLUDED ACCESSORIES: Batter (installed), users manual, test leads carrying case (AC50A only)	Heapsal same			

### **ACDC-400 Digital Clamp Multimeter**

The ACDC-400 is a full-featured clamp suitable for facility maintenance to field service with wide measurement capabilities.

• 10 mA resolution in the 40 A range • 4000-count, easy-to-read display

• Analog bar graph

- Data hold · Auto power-off
- MAX/MIN recording
- Autoranging FEATURE ACDC-400 AC Voltage 400.0 mV, 4.000 V, 40.00 V, 400.0 V, 600 V DC Voltage 400.0 mV, 4.000 V, 40.00 V, 400.0 V, 600 V AC Current 40.00 A, 400.0 A **DC Current** 400 A Resistance 400.0 Ω, 4.000 kΩ, 40.00 kΩ, 400.0 kΩ, 4.000 MΩ, 40.00 MΩ Accommodates up to 1.18" (30 mm) in diameter Conductors **INCLUDED ACCESSORIES:** Users manual, carrying case, batteries (installed), test leads

### **ACD-6 PRO Digital Clamp Meter** ACD-6 PRO

This high-current clamp doubles as a multimeter for AC and DC voltage, resistance and continuity.

Recommer	nded Acces	sories
FOR: ACDC-40 DL248D Deluxe Test Leads Kit (See Page 60)	0 and ACD-6 ELS2A AC Line Splitter (See Page 60	)
di		

ACDC-400

٠	Auto and manual ranging
٠	Relative zero mode
٠	Auto power-off

- Data hold
- Diode test Audible continuity
- Auto power-off MEASUREMENTS ACD-6 PRO BEST ACCURACY DC Voltage 400.0 mV, 4.000 V, 40.00 V, 400.0 V, 600 V 1.0% + 3 LSD AC Voltage 600 V 2.0% + 5 LSD AC Current 400.0 A, 1000 A 1.5% + 5 LSD 1.0% + 4 LSD Resistance 400.0 Ω, 4.000 kΩ, 40.00 kΩ, 400.0 kΩ, 4.000 MΩ, 40.00 MΩ Accommodates up to 1.77" (45 mm) in diameter Conductors





### ACDC-100 and ACDC-100 TRMS **Digital Clamp Meters**

Accuracy, quality, and proven technology meet in the ACDC-100 and ACDC-100 TRMS offering superior ac/dc measurement capabilities, highest product quality and enhanced ergonomic design.

- Relative zero mode · Auto power-off
- Data hold

- storage
- MAX capture function for inrush current measurements (30 mS response) Diode test

• Didde test							
FEATURE	ACDC-100	ACDC-100 TRMS					
True-rms	-	•					
AC Current	400.0 A, 800 A						
DC Current	400.0 A, 1000 A						
Voltage AC/DC	400.0 mV, 4.000 V, 40.00 V, 400.0 V, 600 V						
Resistance	400.0 Ω, 4.000 kΩ, 40.00 kΩ, 400.0 kΩ, 4.000 MΩ, 40.00 MΩ						
Continuity	•						
Capacitance	500.0 nF, 5.000 μF, 50.00 μF, 500.0 μF, 3000 μF						
Accommodates Conductors	up to 2.0" (50 mm) in diameter						

INCLUDED ACCESSORIES: Deluxe carrying case, test leads, batteries (installed), users manual

### **ACD-15 TRMS-PRO Clamp Multimeter**

This professional meter improves measurement performance and reliability.

- VolTect<sup>™</sup> non-contact voltage level detection Diode test Auto-check feature automatically selects Data hold dc V, ac V or resistance
- Auto and manual ranging

	Dutu II
٠	Backlig
٠	True-rn

FEATURE	ACD-15 TRMS-PRO
True-rms	•
AC Current	400.0 A, 2000 A
Voltage AC/DC	6.000 V, 60.00 V, 600.0 V
Resistance	6.000 kΩ, 60.00 kΩ, 600.0 kΩ, 6
Continuity	•
Frequency	10 Hz → 30 kHz
Capacitance	100.0 nF, 1000 nF, 10.00 μF, 100.0
VolTect™ Non-contact Voltage	•
Accommodates Conductors	up to 1.77" (45 mm) in diam

INCLUDED ACCESSORIES: Deluxe carrying case, test leads, batteries (installed), users manual

### **ELS2A AC Line Splitter**

Measure the current on a 2-wire or 3-wire power cord up to 15 A without having to cut off the plug and separate the conductors, or open electrical boxes on 120 V lines. Use with any Amprobe clamp meter.

- Two measurement loops, 1X and 10X for increased sensitivity Built-in voltage measurement jacks to check for voltage sags
- and surges
- Rated for 120 V, 15 Amps

### **Clamp Meters**

- Audible continuity
- "Third hand" test probe holder
- Rubber over-molded case with built-in probes
- True-rms and backlight (ACDC-100 TRMS only)



- · Auto power-off
- Low battery indication

ms provides accuracy and dependability

.000 MΩ

μF, 2000 μF

neter







### **Recommended Accessories** FOR: ACDC-100, ACDC-100 TRMS and ACD-15 TRMS-PRO

DL248D Deluxe Test Leads Kit (See Page 60)

ELS2A ACLine Splitter







ACD-15 TRMS-PRO



### **Safety Reference Guide**

### International safety standards

Test equipment must be designed to protect people who work in the high-voltage, high-current environments. In order to prevent injury, the International Electrotechnical Commission (IEC) develops international general standards for safety of electrical equipment for measurement, control and laboratory use. The most current standard 61010 specifies overvoltage categories for electrical distribution systems. The category rating increases based on the closeness to the power source and a higher level of user protection that is required from test equipment.



# Digital Multimeters

### Choice

Part of a great value is getting exactly what you need in a tool - nothing more or less. With the Amprobe broad selection of digital multimeters, you can find the perfect match for any job. From the industrial meters safety-rated for CAT IV electrical environments, to simple pocket-sized meters, you'll find a digital multimeter that fits your needs.

### $\star \star \star \star \star$ **TOP RATED** 5 Out of 5 Stars See The Top Rated AM-500 Series **Digital Multimeters**

\* Category ratings per IEC 61010-1 Category boundaries may not be exact





**Digital Multimeters** 

**Digital Multimeters** 

### **Digital Multimeter Selection Guide**

AMPROBE

HARD AT WORK SINCE 1948

Rugged, high performance multimeters for troubleshooting any application

MODEL:	PG 14	PG 14	20 AM-5	30 A.M.	260 A.M.	210 31 <sup>1</sup> PG 16	PG 16	PG 17	PG 17	PG 18	PG 18	PG 18	PG 18	
		Profes	sional Auto ital Multime	anging		XR Full-Si	ize Digital meter	Heavy	/ Duty ultimeters	Autoranging Digital	Pen-style Digital	Pocket	Digital meters	
Safety Rating	CAT III 600 V	CAT III 600V	CAT III 600 V	CAT IV 600 V	CAT IV 600 V	CAT III 600 V	CAT IV 600 V	CAT IV 1000 V	CAT IV 1000 V	CAT III 600 V	CAT II 600 V	CAT II 600 V	CAT II 600 V	
True-rms			•		•	•	•	•						(
AC Voltage (V)	600 V	600 V	600 V	1000 V	1000 V	1000 V	1000 V	1000 V	1000 V	600 V	600 V	600 V	600 V	
DC Voltage (V)	600 V	600 V	600 V	1000 V	1000 V	1000 V	1000 V	1500 V	1500 V	600 V	600 V	600 V	600 V	
AC Current (A)	10 A	10 A	10 A	10 A	10 A	10 A	10 A	2 A	2 A	10 A	2000 μΑ		2000 μΑ	
DC Current (A)	10 A	10 A	10 A	10 A	10 A	10 A	10 A	2 A	2 A	10 A	2000 μΑ		2000 µA	
Micro Amps	•	•	•	•	•	•	•	•		•	•		•	
Resistance	•	•	•	•	•	•	•	•	•	•	•	•	•	
Capacitance	•	•	•	•	•	•	•	•	•		•	•	•	
Inductance						•								
Frequency	•	•	•	•	•	•	•	•	•		•	•	•	
Duty Cycle	•			•	•	•	•	•						
Relative Zero	•	•	•	•	•	•	•	•						
Temperature Inputs		1	1	2	2		1	1						
Diode Test	•	•	•	•	•	•	•	•	•	•	•	•	•	
Continuity Beeper	•	•	•	•	•	•	•	•	•	•	•	•	•	
Non-contact Voltage	•	•	•	•	•						•		•	
Logic Test						•								
Autoranging	•	•	•	•	•	•	•	•	•	•	•	•	•	
Battery Test	•									•				(
DC Loop Current 4-20m A							•	•						
dBm Reading						•	•	•						
Backlight	•	•	•	•	•	•	•	•						
Bar Graph		•	•	•	•	•	•	•						
Data Hold	•	•	•	•	•	•	•	•	•	•	•	•	•	
Peak Hold (Crest)				•	•	•	•	•						
AutoTest Function (V,A,R)											•		•	
Data Logging								•						
PC Interface Capabilities							•							
Auto Power Off	•	•	•	•	•	•	•	•	•	•	•	•	•	
Work Light (LED)	•	•	•	•	•									
Low Pass Filter				•	•									
Low Z					•									1

## **Stray Voltage and** What to Do About It.

### Solve stray voltage problems with the Amprobe True-rms AM-570

The most common place to encounter stray voltage is in unused cable runs or electrical wiring in existing conduit. When buildings are built and wired, electricians often pull extra wire through and leave it unconnected for future use.

For most electrical measurements, a high impedance multimeter is best, since you don't want the meter loading the circuit and affecting the circuit measurements. When dealing with the capacitive coupling, however, a high impedance meter between ground or neutral to the unconnected cable or open connection will indicate some amount of voltage present. This measured voltage reading may be as high as 50% of the energized voltage in the same proximity.

Is this voltage real? Yes, but it's a static voltage, containing no real energy or current flow. Yet this stray voltage reading presents a real source of confusion. Is the connection hot or not? The AM-570 Industrial Digital Multimeter solves this problem. Designed with a high impedance (low Z) function, the AM-570 provides a low impedance load to the measured circuit, desensitizing the meter to low energy and spurious sources of interference. If the measurement points are energized with a "hard" voltage, the meter will simply display the voltage reading. If the measurement points contain a stray or ghost voltage, the meter will read very close to zero volts, indicating the circuit or connection is not energized.

### **Digital Multimeters**



The True-rms AM-570 also includes VolTect<sup>™</sup> non-contact voltage detection and dual thermocouples for measuring the high and low side of an AC system which calculates temperature differential effortlessly.





AM-570

### $\star \star \star \star \star$ **TOP RATED**

"The features measure up to a lot of other industrial meters with big, well-known names, and yet there is more here than many of them - like dual temperature probes, noncontact voltage detection, and frequency/duty measurement. One of the best features is the LCD backlight - it is verv bright and uniform throughout the display, and brighter than several meters costing 4 to 5 times as much."

- AM-570 customer review

### HARD AT WORK SINCE 1948

### **Digital Multimeters**



### **AM-500 Series Digital Multimeters**

Best-in-class autoranging, digital multimeters with features for residential, commercial electrical, industrial and HVAC applications. Features include True-rms, dual thermocouples for measuring temperature differential, low impedance to detect stray voltage, low pass filter to accurately measure variable frequency drives and a built-in flashlight.

- Five autoranging multimeters safety rated up to CAT IV 600 V
- True-rms
- VoltTect<sup>™</sup> non-contact voltage detection verifies voltage presence
- · Measure differential temperature easily with dual thermocouples
- Detect stray voltages with low impedance and low-pass filters
- Easily operate with large backlit LCD display, built-in flashlight and rubber tilt stand

### **Recommended Accessories**

**TPK-62** 

DL248D Deluxe Test Leads Kit

(See Page 60











Se	ries Selection Guide	AM-510	AM-520	AM-530	AM-560	AM-570	
	Application:	Feature:	Com / Res	HVAC	Electrical	Adv. HVAC	Industrial
	Safety Rating	Safety	CAT III 600 V	CAT III 600 V	CAT III 600 V	CAT IV 600 V CAT III 1000 V	CAT IV 600 V CAT III 1000 V
	Measure voltage in noisy environments	True-rms			•		•
	Electrical panels, AC outlets	AC Voltage (V)	600 V	600 V	600 V	1000 V	1000 V
	DC systems, auto/marine batteries	DC Voltage (V)	600 V	600 V	600 V	1000 V	1000 V
	AC Current - electrical panels, appliances	AC Current (A)	10 A	10 A	10 A	10 A	10 A
S	DC Current - electronics, DC motors	DC Current (A)	10 A	10 A	10 A	10 A	10 A
NO	Specified resistance and continuity	Resistance (MOhms)	40 MΩ	40 MΩ	40 MΩ	60 MΩ	60 MΩ
Functions	Flame sensors	Microamps	•	•	•	•	•
un	Diodes in AC to DC converters	Diode test	•	•	•	•	•
•	Fuses, light bulbs, wire connections	Continuity	•	•	•	•	•
	Household batteries	Battery test	•	-	-	-	-
	Motor startup or run capacitors	Capacitance	•	•	•	•	•
ſ	Frequency verification	Frequency	•	•	•	•	•
	Non-contact voltage detection	VolTect™	•	•	•	•	•
	Electrical load-time on vs time off	Duty cycle	•			•	•
	Temp of air vents, fuses, transformers	Temperature inputs	-	1	1	2	2
10	Automatically selects measurement range	Autoranging	•	•	•	•	•
Features	Manually select measurement range	Manual ranging	•	•	•	•	•
Ē.	Voltage on variable frequency drives	Low pass filter	-	-	-	•	•
ea	Detect stray voltages	Low Z	-	-	-	-	•
	Dimly lit areas	Built-in flashlight	•	•	•	•	•
X	Meter resolution	LCD counts	4,000	4,000	4,000	6,000	6,000
la	Dimly lit areas	Backlight	•	•	•	•	•
Display	Monitoring fast changing signals	Bar graph	-	•	•	•	•
	Two relative measurements on one screen	Dual display	-	-	-	•	•
S	Data memory	Data hold	•	•	•	•	•
ht	Difference between two measurements	Relative reading	•	•	•	•	•
ivents	Max/min peak measurement	Max/min hold	-	•	•	•	•

### INCLUDED ACCESSORIES FOR ALL AM-500 SERIES MULTIMETERS:

Specialized signal measurements

Test leads (pair), K-type thermocouple (AM-520, AM-530, AM-560 and AM-570 only), batteries (installed), carrying case, users manual, Temperature adaptor (AM-560 and AM-570 only)

Peak hold (crest)



### AM-510 Commercial/Residential Multimeter

Designed for light commercial and advanced residential applications, the AM-510 enables you to re-wire an electrical panel, install light fixtures, troubleshoot home appliances, electrical sockets and automotive electrical issues.

- Voltage up to 600 V ac/dc, ac/dc current and resistance
- Frequency, capacitance, duty cycle
- VolTect<sup>™</sup> non-contact voltage detection

### **AM-520 HVAC Multimeter**

Designed for HVAC professionals, quickly measure temperature, micro amps and capacitance. The AM-520 measures a complete range of electrical parameters and features VolTect<sup>™</sup> non-contact voltage detection.

- Voltage up to 600 V ac/dc, ac/dc current and resistance
- Frequency, capacitance, duty cycle for troubleshooting applications

Replacement part: TPK-59

### AM-530 True-rms Electrical Contractor Multimeter

Quickly troubleshoot voltage, perform repairs, run new wiring, check continuity on electrical connections, identify blown fuses, check motors or check transformers. The AM-530 is the perfect multimeter for the professional electrician.

- Voltage up to 600 V ac/dc, ac/dc current, resistance, frequency, capacitance, and temperature. True-rms

- Replacement part: TPK-59

### **AM-560 Advanced HVAC Multimeter**

Measure a complete range of electrical parameters for HVAC applications with dual thermocouples for taking differential temperature measurements, low pass filter for variable frequency drives and capacitance. It features micro amps for flame sensor troubleshooting. The AM-560 is the choice multimeter for a professional HVAC technician.

- AC/DC Voltage up to 1000 V, ac/dc current, resistance, frequency, capacitance, temperature, duty cycle.
- Dual thermocouple for simultaneous
- temperature measurements on low/high side of HVAC systems
- · Low pass filter for variable frequency drives

Replacement part: TPK-62

### **AM-570 Industrial Multimeter**

For professional electricians who need to maintain service or troubleshoot advanced electrical systems systems, the AM-570 is packed full of features such as true-rms, dual thermocouples, a low impedance mode, and a low pass filter to accurately take measurements on variable frequency drives.

- AC/DC Voltage up to 1000 V, ac/dc current, resistance, frequency, capacitance, temperature, duty cycle.
- Low Z to detect stray voltages
- Low pass filter for variable frequency drives
- VolTect<sup>™</sup> non-contact voltage detection

Replacement part: TPK-62

For ordering information see page 63. For detailed specifications go to **www.Amprobe.com** 

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detection

### **Digital Multimeters**

 Audible continuity, diode test, backlit LCD display, data hold and relative zero mode

AM-510

8.8.8.8

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 VolTect<sup>™</sup> non-contact voltage detection Audible continuity, diode test, backlit LCD display, data hold, relative zero mode



 VolTect<sup>™</sup> non-contact voltage detection • Audible continuity, diode test, backlit LCD display, data hold, relative zero mode



AM-520



AM-530

• VolTect<sup>™</sup> non-contact voltage

• Audible continuity, diode test, backlit LCD display, data hold,

AM-560

200.0

· Audible continuity, diode test, backlit LCD display, data hold, relative zero mode

AM-570



### HARD AT WORK SINCE 1948

### **Digital Multimeters**



 $\star \star \star \star \star$ **TOP RATED** 

"Excellent - full featured multimeter Great Price too!" "I use

this instrument on a daily basis when I visit various communication rooms to repair radio equipment. All I need is this and a laptop, and what a back saver!"

- 38XR-A customer reviews

### **Recommended Accessorie**

DL248D	Deluxe Test Leads Kit (See Page 60)
CT235A	Clamp Attachment
CT237B	Clamp Attachment
CT238A	Clamp Attachment
	(See Page 60)
38SW-A	RS232 Software/Cable
	(38XR-A DMM)
USB-KIT3	Software kit 38XR-A
	(See Page 62 )
<b>O</b> DL248D	11.1
DL248D	
СТ235А, С	Т237В, СТ238А
Ē	1

**XR** Series Multimeters

· Relative, peak, and average and data hold

The XR Multimeter Series lets lets you customize features and functions for your electronic, electrical, plant maintenance or HVAC applications.

HVAC contractors and field service technicians have a choice of the manual ranging 37XR-A with capacitance or the auto-ranging, True-rms 38XR-A with temperature and backlight.

For electronics troubleshooting, the True-rms 37XR-A offers component and logic test. If you're an engineer, designing or troubleshooting industrial automation and control systems, check out the 38XR-A, a True-rms multimeter with bright blue backlight and an optical PC interface.

 Autoranging · Min/max and data hold

- Analog bar graph
- Input warning tone when test leads are in Separate door for easy battery and fuse access wrong jack
- Low battery indication
- Auto power-off to save battery life
  - VolTect<sup>™</sup> Non-contact voltage detection

FEATURE	37XR-A	38XR-A
True-rms	• 1.000 mV, 10.00 V, 1000 V	
DC Voltage		
AC Voltage	1.000 mV, 10.00 <sup>v</sup>	V, 100.0 V, 1000 V
DC Current	100.0 μA, 1.000 μA, 10.00 mA	, 100.0 mA, 400.0 mA, 10.00 A
AC Current	100.0 μA, 1.000 μA, 10.00 mA	, 100.0 mA, 400.0 mA, 10.00 A
Resistance	1000.0 Ω, 10.000 kΩ, 100.00 kΩ,	1000.0 kΩ, 10.00 MΩ , 40.00 MΩ
Continuity	•	
Diode	•	
VolTect <sup>™</sup> Non-Contact Voltage Detection	• 40.00 nF. 400.0 nF, 4.000 μF, 40.00 μF	
Capacitance		
Frequency	100.00 Hz, 1.0000 kHz, 10.000 kHz	z, 100.00 kHz, 1.0000 MHz, 10.000 MHz
Temperature	_	-4°F → 2372°F (-20°C → 1300°C)
Duty cycle	0.00% → 90.0%	
Logic test	•	-
Inductance	40 H	-
dBm	-13 dBm → + 50 dBm	

**INCLUDED ACCESSORIES:** Magne-Grip<sup>™</sup> holder with magnetic hanging strap, users manual, K-type thermocouple (38XR-A only), batteries (installed), test leads





### HD110C and HD160C Heavy-duty Multimeters

Built for harsh environments, these unusually rugged meters offer extra features and superior protection that keep them operating reliably in heavy-duty applications.

- Measures up to 1500 V dc and 1000 V ac and withstands transients up to 12 kV (CAT IV 1000 V) – unmatched by other digital
- multimeters IP 67 rated and sealed to prevent dirt, grime
- and moisture from entering the case and causing inaccurate readings or damaging shorts
- Tough, fire-retardant thermoplastic resists grease and chemical spills and other environmental hazards

FEATURE	HD110C	
True-rms	-	
DC Voltage	200.0 mV, 2.000 V, 20.00 V, 200.0 V, 1500 V	
AC Voltage	200.0 mV, 2.000 V, 20.00 V, 200.0 V, 1000 V	
Current AC/DC	200.0 μA, 2.000 mA, 20.00 mA, 200.0 mA, 2.000 A	
Resistance	200.0 Ω, 2.000 kΩ, 20.00 kΩ, 200.0 kΩ, 2.000 MΩ, 20.00 MΩ	
Diode	•	
Continuity		
Frequency	-	
Capacitance	-	
Temperature	-	

INCLUDED ACCESSORIES: Test leads, batteries (installed), users manual, Magne-Grip<sup>™</sup> holder with magnetic hanging strap

### Why you need a True-rms reading multimeter.

Answer: True-rms instruments are be off as much as 50%. Since you may not accurate on any AC waveform. There are two basic AC measuring systems. One is measuring, a True-rms instrument should "average sensing, RMS indicating." This

is the most common system because it is affordable and easy to manufacture. An instrument with this type of measuring system measures the average of a sine wave, and then multiplies it by 1.112, allowing the instrument to indicate RMS. This measuring system is only accurate on sine waves.

The second measuring method is called "RMS Sensing, RMS Indicating." An instrument with this type of measuring system computes the RMS value of the measured waveform (sine or otherwise). This is referred to as "True-rms" reading. This measuring system is accurate for any waveform. When an average sensing instrument is used on a non-sinusoidal waveform, measurement accuracy could



For ordering information see page 63. For detailed specifications go to **www.Amprobe.com** 

38SW-A, USB-KIT3

### **Digital Multimeters**

- All sensitive components are shock-mounted for drop resistance to at least eight feet • Magne-Grip<sup>™</sup> holder with magnetic hanging strap frees both hands for work
- Automatic polarity indication
- Superior 10,000 count resolution with bar graph Bright backlight for superior visibility
- · Auto power-off to save batteries plus low battery indication



know what type of AC waveform you are be used whenever possible.





HD160C

### $\star \star \star \star \star$ **TOP RATED** "Great product with

unlimited features'

"A workhorse that does everything I need and then some."

- HD160C customer reviews

### **Recommended Accessories** DL248D Deluxe Test Leads Kit See Page 60 CT235A **Clamp Attachment** Clamp Attachment CT237B

CT238A Clamp Attachment



### HARD AT WORK SINCE 1948.

### **Digital Multimeters**

• Autoranging feature automatically sets up

voltage, current, and resistance ranges

• Voltage up to 600V ac/dc

**AM-500 Autoranging Multimeter** 



AM-500



DM73C

Resistance	Auto power off	
FEATURE	AM-500	BEST ACCURACY
AC/DC Voltage	2.000 V, 20.00 V, 200.0 V, 600 V 200 mV, 2.000 V, 20.00 V, 200.0 V, 600 V	+/- (1.0% rdg + 3 LSD) @ 45 Hz to 400 Hz, 2 V to 200 V ranges +/- (0.8% rdg + 1 LSD) @ 2 V to 200 V ranges
AC/DC Current	200.0 μA, 2000 μA, 20.00 mA, 200.0 mA, 2.000 A, 10.00 A 200.0 Ω, 2.000 kΩ, 20.00 kΩ, 200.0 kΩ, 2.000 MΩ, 20.00 MΩ	+/- (1.0% rdg + 2 LSD) +/- ( (1.0% rdg + 2 LSD) @ 2 kΩ to 200 kΩ ranges
Resistance	200.0 μA, 2000 μA, 20.00 mA, 200.0 mA, 2.000 A, 10.00 A	+/- (1.2% rdg + 2 LSD)
INCLUDED ACCESSO carrying case, users mai	DRIES: Test leads (pair), batteries (installed), nual	

For residential or DIY applications. Install, troubleshoot or repair light fixtures, fans, appliances, or

Audible continuity

Diode test

• Data hold, and auto power-off

automotive electrical problems with the ease and safety of a CAT III 600 V rated product.

### DM73C Multimeter with Built-in Test Probe

Take one-handed measurements with this pocket-sized pen-style digital multimeter.

- Continuity beeper
- LCD display plus analog bar graph
- Auto power-off

· ·		
FEATURE	DM73C	
AC Voltage	3.400 V, 34.00 V, 340.0 V, 600 V	
DC Voltage	3.400 V, 34.00 V, 340.0 V, 600 V	
Resistance	340.0 Ω, 3.400 kΩ, 34.00 kΩ, 340.0 kΩ, 3.400 MΩ, 34.00 MΩ	
<b>INCLUDED ACCESSORIES:</b> Test 2 batteries (installed), spare tip, use		



Great things do come in small packages. Get innovative features, a full set of measurement functions and high safety ratings in an ultra-compact size. Only 3/8" (9.5 mm) thick, each meter weighs less than 3 oz (85 g).

- Easy, one-touch button control
- Oversize, easy-to-read digital display
- VolTect<sup>™</sup> non-contact voltage detection
- (PM55A only) Automatically selects ac volts, dc volts or resistance, for convenience (PM55A only)
- Low Z input impedance detect ghost voltages
- Hi Z input impedance for electronic circuitry
- (PM55A only)

٠	Continuity	beeper
---	------------	--------

- Diode test
- Data hold
- 30 ms high speed max hold
- Autoranging
- Auto power off



users manual



# **Electrical Testers**

### SAFETY

Use Amprobe tools with confidence. Our tools are tested by Amprobe and certified by UL and other regulatory groups around the world. Amprobe tools are proven performers that protect you and your equipment.







PM514

**INSP-3** 121.5 Vrms 60 Hz **Polarity OK** Volt Drop @15A=4.2% (1.1% Hot + 3.1% Neut) Loaded Voltage =116.4 Gnd Impedance =  $.27\Omega$ Wiring Inspection Tester



### **Electrical Testers**



# Is it Hot or Not?

### Why utility crews trust the Amprobe TIC 300 PRO

Feedback from a major US utility and the 30 underground crews who serve a North American citv

In every truck, on every trouble call, there's Lights flash and the TIC 300 PRO beeps with company in the Northeast. The crew's work tioning points. takes them down manholes under historic cities where the infrastructure is aging and the problems are frequent.

shooting, John K. can get calls anytime day easy to press with heavy gloves, which is imor night from one of 30 underground crews. portant because the crew must wear gloves When a cable installer or splicer encounters and full PPE. out-of-the ordinary electrical problems on the job, they call in a "trouble man". And when the trouble man has guestions on how equipment operates, he calls John. John constantly stresses the importance of safety to all the crews. He tells them to always assume it's After using the TIC tracer product line for begin the job by checking to see if the prob- just press the Test button. lem area is live or dead. That's the job of the TIC 300 PRO non-contact voltage detector.

### After two decades of using **Amprobe TIC tracers, the** crews know it, trust it, and feel safe – exactly what they need.

Approximately 300 TIC tracers are in use throughout the system. Every crew carries at least one and usually two units in the truck. The cable installers, cable splicers, and trouble men all use them daily, often multiple times each day. They might see an exposed conductor, or a cable that's been cut off or broken. Sometimes one crew starts a job on their shift and another picks it on the next shift, and they need to know for sure what they are walking into.

one tool crews reach for first to ensure increasing frequency as it nears a source of their safety. That's the TIC 300 PRO. It's the electricity, leaving the user no doubt whether go-to tool for underground crews servicing the area is live or not. They can also quickly secondary power lines for a large US utility track where fault lines between two func-

The crews like how simple the TIC 300 PRO is to use. One bright yellow button turns it on or off. With another button, the user can As lead engineer responsible for trouble- select either low or high voltage. Buttons are

> The TIC tracers get thrown around in the truck, but the tools are durable enough to take the rough treatment. John has seen some units last more than 20 years.

live until they know for sure. Whether they're more than two decades, the crews all know working on 120 V, 240 V, 5k V or greater, it, trust it, and feel safe with them. To ensure on cables, transformers, or switches, they a particular unit is working properly, they can

> John is not only responsible for troubleshooting but also for bringing new products into the company, so he's knowledgeable about his tool choices. He's looked at competitive non-contact voltage detectors, but the trust factor keeps the TIC 300 PRO his number one choice. It does the job, it doesn't fail, and his crews trust it. And that's exactly what they need.



### **TIC 300 PRO High Voltage Detector**

Rugged and reliable for utility, industrial, heavy manufacturing and mine safety applications, the Amprobe TIC 300 PRO with VolTect<sup>™</sup> detects voltages in low, medium and high voltage applications with bright visual and loud audible alerts.

- Utility tool for checking transmission lines, power distribution equipment, down power lines, fuses, and load break connectors
- · Lower voltage setting for checking voltage presence in breaker panels, breakers, power outlets and wiring
- Verifies presence of voltage from 30 V ac to 122,000 V ac (122 kV)

FEATURE	TIC 300 PRO
VolTect <sup>™</sup> Non-Contact Volt- age Detection	30 V ac → 1500 V ac 1500 V ac → 122,000 V ac (with Hot St
48" long	_
Voltage	

INCLUDED ACCESSORIES: CC-300 PRO carrying case, users manual, batteries (installed



### **Electrical Testers**

- MSHA certified and intrinsically safe · Push button functionality for ease of use with PPE gloves
- Visual and audible voltage indication Self-test verifies tester works properly • Ergonomic design with a convenient handle • Drop-proof to 6' (1.8 m)





**TIC 410A** Hot Stick for the TIC 300 PRO Safely check voltages up to 122 kV with this 48 inch Hot Stick and the TIC 300 PRO.

Recommended Accessories

CC-300 PRO Carrying Case (Replacement part)

### \*\*\*\* **TOP RATED** "This tester is very

accurate!" "I have used these testers for years, this model is convienient, small enough to carry in my pocket, and is a great tester for all of your electrical needs. I totally recommend it."

"Fast and easy to use. I would not think of going to work without it."

- TIC 300 PRO customer reviews



### 

### **Electrical Testers**



### LT-10 Fluorescent Lamp Tester

Troubleshooting fluorescent lamps is as easy as 1-2-3, saving you valuable time and money. The Amprobe Fluorescent Lamp Tester is a problem solving tool designed to easily test whether fluorescent light bulbs and ballasts are working prior to installation or removal. The intuitive single button operation allows you to troubleshoot lamps and avoid wasteful disposal of fluorescent light bulbs and ballasts.

The compact tool easily fits in your pocket and the industry leading 48" antenna making it easy to test fluorescent bulbs while still in the fixture, often eliminating the need to stand on a ladder.

- Tests fluorescent (electroluminescent) lights
- Built-in VolTect<sup>™</sup> non-contact voltage detection
- Filament pin test to check continuity of bulb
- Simple, one-handed, single button operation
- Ultra compact design for portability
- included to test lights and voltage without a ladder Compatible with all fluorescent light bulbs: - T2, T4, T5, T8, T9, T10, T12 Fluorescent
- energy saving light bulbs

• 48" removable, fully retractable antenna

FEATURE	LT-10	
Compatible lamps:	T2, T4, T5, T8, T9, T10, T12 Fluorescent energy saving light bulbs	
Test voltage:	Approximately 3 kV / 280 kHz	
Field strength:	Approximately 100 µV/m at 260 - 300 kHz	
Maximum antenna length:	48" (1.2 m)	
VolTect™ non-contact voltage detection:	AC 90 V to AC 600 V, 50/60 Hz to CAT II 300 V, CAT I 600 V	
Filament pin test	T2, T4, T5, T8, T9, T10, T12	

### INCLUDED ACCESSORIES:

48" antenna, adaptor plate, users manual, battery and carrying case



### **Troubleshoot fluorescent lamps** in three quick steps.





### Step 1: Bulb

Check bulb for presence of gas.



### Step 2: Pins

Check pins for voltage continuity.

### **Step 3: Voltage**

Check voltage presence with non-contact voltage detection.

If all three steps pass, replace the ballast.

### **INSP-3 Wiring Inspector**

Verify in seconds whether a building's wiring complies with electrical code. Save time and money by testing more efficiently and identifying issues crucial to the safety and performance of an electrical system.

- Large display shows all relevant test data, no scrolling or switching screens needed
- Find faulty wiring that needs repair without removing outlet cover plates or panel covers, includina:
- Faulty splices and connections
- Incorrect wiring
- Undersized wiring
- Faulty or incorrectly wired AFCIs / GFCIs
- Incorrect line voltage
- Poor ground quality

FEATURE	INSP-3	BEST ACCURACY
Load:	Constant 10, 15 or 20 AMP simulation regardless of line voltage	_
Operating Voltage:	95 V ac → 140 V ac	+/- 2% + 2 LSD
GFI Trip:	6.0 mA nominal to trip GFI, 30 mA to trip RCD	-
AFCI Trip:	Up to 8, 120 AMP pulses within 1/2 second period –	
INCLUDED ACCESSORIES: Power cord, 9 V alkaline battery (Installed), users manual, carrying case		

systems.

### **Perform Voltage Drop Testing** Without Overheating Faulty Lines.

Testing electrical lines under load provides more protect your customers and yourself by checking information on line conditions that one might expect. The National Electrical Code recommends a voltage drop less than 5% on both feeders and branch circuits under load.

High voltage drop and high ground impedance can result from many different issues, including poor slices or connections; undersized wiring for length of run; too many devices connected to the branch circuit; corroded connections; worn switch or circuit breaker contacts and faulty or worn outlets.

Voltage drop relates not only to safety, but also to the function and reliability of electrical systems, especially when modern electronic devices are used on the line.

Contrary to what many assume, electronic products such as computers, copiers, and office equipment can put significant loads on lines. This type of equipment also tends to be the most sensitive to disturbances that heavy loads can create, such as surges, spikes and low voltage.

Excessive voltage drop that is not corrected will often create one or several problems, including premature motor burn-out; component failure; "crashing" or loss of computer data; overheating of motors, electrical lines and other equipment; and highly sensitive lines that easily fluctuate from spikes, surges line noise and other factors.

In addition to marginal equipment operation, high voltage drop can also cause overheating associated with electrical files. This is an excellent reason to



### **Electrical Testers**

Volt Drop @15A=4.2% (1.1% Hot + 3.1% Neut)

ded Voltage =116.4

nce = .271

· Verify performance of electrical systems with user selectable 10, 15 and 20 amp loads Flashing screen clearly indicates incorrect wiring or voltage drop test failure Test without tripping circuit breakers or blowing fuses

• Check grounding for safety and ability to support sensitive electronic equipment

drop under load.

If a line is not tested under load the system may have faults that will not be known until equipment is connected to the line. At this point, excessive voltage drop will almost surely create a callback.

Checking voltage drop under load is a great way to assure yourself and your customers that lines are in good condition, safe and will hold up for years of efficient operation. This test should not be overlooked in the service of electrical wiring

Source: National Electrical Contractors Association, Inc. "Perform Voltage Drop Testing Without Overheating Faulty Lines." Electrical Contractor June 1994, Print.

 $\star \star \star \star \star$ TOP RATED "Call this product "THE DETECTIVE!""

INSP-3

"A big time saver! If you want to know all about your branch circuits... GET THIS INSTRUMENT !!!" - INSP-3 customer reviews



### **Electrical Testers**

· Motor shaft rotation indicator protected by



PRM-4

Recommended Part TL-PRM-4 **Replacement Test Leads** 



9.8" (L) x 7.5" (W) x 4.3" (D) (250 mm x 190 mm x 110 mm)



### **PRM-4 Phase Sequence / Motor Rotation Tester**

Phase sequence testing is crucial for many three-phase loads. Improperly connected motors can result in reverse rotation, which can damage the equipment powered by the motor. Ensure electrical equipment is correctly and safely connected with Amprobe's PRM-4.

• Identifies 3-phase sequence • Open phase check

CAT III circuitry

- 3-phase to phase input voltage, 100 V ac to 600 V ac max
- 45 to 70 Hz frequency



**INCLUDED ACCESSORIES:** Test leads with alligator clips. carrying case, users manual, 9 V battery (installed)



### **MO-100 Milliohmmeter**

Spot potential failures fast with the portable, battery powered MO-100. Check for opens or shorts in motor windings, generators and transformers. Test heating elements and wire-to-wire resistance in critical electrical connections.

- Accurate four terminal measurement down to 100  $\mu\Omega$  without test leads resistance compensation
- Three test currents with over-temperature protection for measurement precision
- Protection against inadvertent connection to overvoltage
- Potential lead resistance, current lead resistance checks
- Indicates measurement errors due to temperature or connection problems

CE C N10140

- Auto-hold and auto-off features • Lightweight, robust and compact
- "O-Ring" sealed enclosure

2	FEATURE	MO-100	
	Measuring Ranges	$\begin{array}{l} 0 \rightarrow 200.0 \ \text{m}\Omega \ \text{in steps of } 100 \ \mu\Omega \\ 0 \rightarrow 2000 \ \text{m}\Omega \ \text{in steps of } 1 \ \text{m}\Omega \\ 0 \rightarrow 20.00 \ \Omega \ \text{in steps of } 10 \ \text{m}\Omega \\ 0 \rightarrow 200.0 \ \Omega \ \text{in steps of } 100 \ \text{m}\Omega \\ 0 \rightarrow 2000 \ \Omega \ \text{in steps of } 1 \ \Omega \end{array}$	
	Test Current	1 mA (2000 Ω range) 10 mA (20 Ω / 200 Ω ranges) 100 mA (200 mΩ / 2000 mΩ ranges)	

INCLUDED ACCESSORIES: Users manual, test leads, batteries (installed)



### **VP-1000SB**

Designed for safe and convenient, non-contact ac voltage detection without interruption to electrical systems, the VP-1000SB provides 3-way visual, audible and vibration alerts when ac voltage is present.

- Designed to discern between hot and neutral wires up to CAT IV 1000 V ac · Safety rated for indoor and
- breakers, wall sockets, junction boxes, and fuses

outdoor applications

FEATURE	VP-1000SB	
AC Voltage Detection	90 → 1000 V ac	
Indicator	Lights, Beeps and Vibrates	
Safety Rating	CAT IV 1000 V	
Isers manual, batteries (installed)		

### **VP-440 Non-contact Volt Probe**<sup>®</sup>

Designed for safe, non-contact voltage detection, this voltage probe doesn't require much budget or demand much space. It fits conveniently in a shirt pocket, tool belt, or pouch.

• Safely check for ac voltages without • Completely insulated, with no disconnecting the electrical loads • Test cables, circuit breakers, wall

sockets, junction boxes, and fuses

exposed metal or conductive parts • No current flow is needed for correct operation

FEATURES	VP-440
AC Voltage Detection	100 V → 1000 V
Indicator	Lights
Safety Rating	CAT III 1000 V

INCLUDED ACCESSORIES: Users manual, batteries (installed) CE C

### ST-101B / ST-102B Socket Testers

Easily check and confirm proper wiring of electrical receptacles with the Amprobe ST-101B and ST-102B Receptacle Testers. Quickly test sockets and confirm wiring and operation of AC outlets with the ST-101B and confirm that GFCI breakers are properly wired for protection with the ST-102B.

- Confirm proper wiring and operation of AC socket
- Easy-to-read lights indicate common wiring problems
- (ST-102B only) • For use on 110-125 V ac

FEATURES	ST-101B
AC Voltage	110 V → 125 V
GFCI	-

SE

INCLUDED ACCESSORIES: Instruction sheet



### **Electrical Testers**

• Test for ac voltage cables, circuit









### • The trip test to confirm that GFCI protection is working properly



ST-102B

### **AMPROBE**<sup>®</sup>

### **Electrical Testers**



### **PY-1A Voltage Tester**

The Amprobe PY-1A Voltage Tester pocket-sized voltage tester detects AC and DC voltage ranges on cables, circuit breakers, wall sockets, junction boxes, and other electrical wiring through direct contact.

• Neon lights indicate AC voltage at 120, 240, 277, 480V and DC voltage at 160, 330, 380, and 600V • For use on energized or non-energized circuits

· Simple one hand operation, no buttons or

setup required

- Test leads store conveniently in back of unit, properly spaced for outlet testing.
- CSA listed. Safety rated to European Standard 61010-01 Category III 600V

FEATURE	РҮ-1А		
AC Voltage	120 V, 240 V, 277 V, 480 V		
DC Voltage	160 V, 330 V, 380 V, 600 V		
INCLUDED ACCESSORIES: Users manual			

 $\star \star \star \star \star$ **TOP RATED** "So many wonderful

features for such a small package"

"Easy to read voltage display, probe securing, and convenient size are the features I like."

- PY-1A customer reviews



LAN-1

### $\star \star \star \star \star$ **TOP RATED**

"I liked the ease of use" "The tester was easy to use and worked very well in the field, it made the job a lot more easy. I recommend this tool for the field or home."

- LAN-1 customer reviews



### LAN-1 LAN Tester

With quick, go/no-go tests, you can find opens, shorts and miswired cable installations. You can either step through the test cable one at a time, or let the unit automatically pulse through the pin-outs and display the results.

- Remote termination module tests installed cable on wall plate or patch panels
- Perform loopback or remote tests
- Buzzer sound warns for error condition in cable • Two sets of LED lights indicate source and test
- Maximum line length: 328 yards (300 m)

FEATURE	LAN-1		
Cable Types Tested	10/100 base-T; 10 base-2; RJ45; AT&T 258A; EIA / TIA 568A/568B; Token Ring		
Continuity Maximum Length	> 300 meters		
Connector Types	RJ45, BNC		

**INCLUDED ACCESSORIES:** Users manual, batteries (installed), remote terminator. RJ45 to female BNC cable, RJ45 to male BNC cable, RJ45 to RJ45 cable, Female BNC to Female BNC cable



# **Wire Tracers** and Underground Locators

### **TECHNOLOGY**

When you want to be absolutely sure you're digging in the right place, depend on the technology leader. No other systems even come close to the speed, reliability and accuracy of Amprobe Underground Cable and Pipe Locators. They are specifically designed for your electrical and utility applications. Amprobe invented Wire Tracer technology and continues to lead the industry today.

### $\star \star \star \star \star$ TOP RATED 5 Out of 5 Stars See The Top Rated Advanced

Wire Tracers



AMPROBE AT-3500

**Underground Locators** 

and

Tracers

Wire

### HARD AT WORK SINCE 1948.

### Wire Tracers / Locators



Recommended Accessorie

SC-3500 Signal Clamp MLS55-3 Pipe Transmitter

SC-3500

MLS55-3

### **AT-3500 Underground Cable/Pipe Locator System**

Keep productivity high and operational costs low, with the AT-3500. This rugged, economical solution helps you locate underground energized and de-energized wires, cables and pipes. Great for parking lot and airport lighting applications, it precisely pinpoints buried services, with exceptionally fast sound and meter response.

- Precisely pinpoint buried cables and wires
- Three testing modes for best accuracy: - Passive power (50 Hz / 60 Hz)
- Passive radio (RF)
- Active T-3500 signal generator with induction mode directly connected to the cable with test leads or optional clamp

### · Proven 33 kHz frequency for most

- Avoid lines at utility construction sites with highly sensitive power and radio modes
- Take depth measurements up to 16' (4.9m) Backlit multiple-segment digital display with
- audible alerts to show and tell location of buried cables
- Semi-automatic gain control for fast signal location and control

locating applications	2
FEATURE	

FEATURE	AT-3500		
Depth Measurement	16 ft (4.9 m)		
Passive Tracing Frequencies	50 Hz / 60 Hz		
Transmitter Frequency	Single, non-adjustable		
Receiver Active Frequencies (Hz)	32.768 kHz		
Receiver Passive Frequencies (Hz)	Range 1: radio 15 kHz to 23 kHz Range 2: power network 50 Hz / 60 Hz; optionally 100 Hz (can be adjusted by Amprobe service personnel)		
Receiver Depth Display Accuracy	Range 1: radio +/- 20% Range 2: power network +/- 20% Range 3: transmitter +/- 5% (>5m (6 ft), +/- 20% (<5m (15 ft)		
Receiver Depth Range	Maximum 16 ft (4.9 m)		

carrying case, users manual, batteries (installed)







### $\star \star \star \star \star$ **TOP RATED** "This product is great for

finding depth and location" "I've used one for years locating phone and gas lines and it works great. I can find and track wire or pipe and also know how deep within a few inches for digging and locating."

- AT-3500 customer reviews

### **AT-4000-A Series Advanced Wire Tracer**

Amprobe invented wire tracer technology decades ago and continues to set the standard today. The most advanced of all wire tracers, the AT-4000-A Series combines the technology, features and functions to make wire tracing fast and precise.

interrupt power

for open tracing

- One universal transmitter automatically switches to trace energized and non-energized (open, broken) wires
- Receiver is not position-sensitive - get accurate readings without rotating
- Locates breakers, neutrals, and ground lines
- Locates and traces wires in walls,
- floors, conduit, and computer cables Pinpoints shorts, ground faults and broken wires

SPECS		
Transmitter operating voltage		
Operating frequency		
Receiver short mode range and open mode range	20' (6 m) i	n ai
FEATURES	AT-4001-A	

FEATURES	AT-4001-A	AT-4003-A	AT-4004-A	AT-4005-A
Traces energized wires without power interruption. Locates breakers without power interruption	•	•	•	•
Traces unenergized wires (wire continuity and wire grounded at the end). Pinpoints shorts and ground faults	•	•	•	•
Traces unenergized open wires (broken or disconnected wire). Pinpoints place where wire is broken	•	•	•	•
Supplied with clamp-on attachment to inject signal without making contact with bare wire	-	_	•	•
Supplied with Battery Booster to strengthen signal for open tracing	_	-	_	•

KIT CONTAINS:	AT-4001-A	AT-4003-A	AT-4004-A	AT-4005-A
Carrying Case	Soft SV-1000	Hard CC-AT-4000	Hard CC-AT-4000	Hard CC-AT-4000
Receiver R-4000 CON	•	•	•	•
Transmitter T-4000	•	•	•	•
110V Pigtail - Banana Plug Cord Set C2901	•	•	•	•
Alligator Clip - Banana Plug Cord Set C2902	•	•	•	•
Grounding Test Lead 25' (7.6 m) MTL-G	•	•	•	•
Alligator Clip for Ground Lead VRC-320	•	•	•	•
Clamp-on Transmitter Accessory A2202	-	-	•	•
Rechargeable Battery Pack B2024	-	-	_	•
Battery Pack Recharger B2025	_	-	_	•
Users Manual	•	•	•	•

### Wire Tracers / Locators

- · Performs tests without having to
- · Does not interfere with sensitive electronic equipment Precise sensitivity adjustment · Battery booster strengthens signal
- Clamp-on attachment injects signa for non-contact operation



DA M	<u> </u>
RANG	ק:

9 V - 300 V ac/dc

32.786 kHz

air from the traced wire under test conditions

AT-4005-A

### $\star\star\star\star\star\star$ **TOP RATED** "A must have for all

### electricians"

"This product will find wires buried in walls! Imagine being able to trace a circuit with a problem either from the receptacle device to where it has caused a problem or is discontinuous or shorted"

"With the AT-4004-A, I'm able to work in all situations with ONE unit! It's sensitive, easy to use, and with the optional clamp, it's easy to trace a conductor without the hassle of trying to find a suitable connection point."

- AT-4004-A customer reviews



### Wire Tracers / Locators



AT-2005-A



AT-2004-A



Without interrupting power, you can trace live wires buried or hidden behind walls up to 13' (4 m) deep.

- Traces unenergized and open (broken) wires
- Locates breakers, neutral and ground lines
- · Locates and traces wires in walls, floors, conduit, computer cables, etc.
- · Pinpoints shorts, ground faults and broken wires • Does not interfere with sensitive
- electronic equipment

FEATURES	AT-2004-A	AT-2005-A
Traces energized wires and locates breakers without interrupting power	•	•
Traces non-energized wires (continuity and grounded wire) and pinpoints shorts & ground faults	•	•
Traces unenergized open wires (broken or disconnected wire). Pinpoints place where wire is broken	•	•
Supplied with clamp-on attachment to inject signal without making a contact with bare wire	•	•
Includes battery booster that strengthens signal for open tracing	-	•

KIT CONTAINS:	AT-2004-A	AT-2005-A
R-2000 Receiver	•	•
S2600-A Transmitter 9-300 V	•	•
T2200 Transmitter for open tracing	•	•
Clamp-on Transmitter Accessory A2201CE	•	•
B2024 Rechargeable Battery Pack	-	•
B2025 Battery Pack Recharger	-	•
C2901 Cordset 110 Volt Plug to Banana Plugs	•	•
C2902 Cordset Alligator Clips to Banana Plugs	•	•
Users Manual	•	•



AT-1000

**AT-1000 Wire Tracer** 

For basic applications where accuracy and routine troubleshooting are important, choose the Amprobe first-tier circuit tracer.

- Trace energized lines up to 300 V ac or V dc
- Trace unenergized and open conductors Identifies breakers and fuses without
- powering down Locates shorts
- · Identifies wires in a bundle
- Traces coaxial cable shield • Receiver range 1 to 3 feet from a cable being traced

system wiring

• Identifies control, alarm and telephone

FEATURE	AT-1000		
Trace energized lines up to 300 V ac or V dc	100 V → 125 V ac (X1000 Transmitter)		
Range 1-3' from a cable being traced	R1000 Receiver		

**INCLUDED ACCESSORIES:** Users manual, batteries (installed), transmitter, receiver, connection cables, carrying case



### **CT-100 and CT-326-C Current Tracers**

For tough industrial applications, we recommend these heavy-duty current instruments to trace live wires buried underground or hidden behind walls up to 4' (1.2 m) deep.

- Performs tests without having to interrupt power
- electronic equipment
- Locates breakers, neutral and ground lines Locates and traces wires in walls, floors, conduit, computer cables, etc.

FEATURES	CT-100	CT-326-C
Traces energized wires and locates breakers without interrupting power	9 V → 300 V ac/dc	9 V → 300 V ac/dc
Traces non-energized wires (continuity and grounded wire) and pinpoints shorts & ground faults	T-100 Transmitter & 9 V batteries	Transmitter & 9 V batteries
Digital filter to assure accuracy in noisy industrial environments	-	•
Sensitivity Settings	3	12

INCLUDED ACCESSORIES: Users manual, transmitter, receiver, connection cables, carrying case

### $\star \star \star \star \star$ **TOP RATED**

"Hands down best circuit tracer on the market"

"This unit has proven to be 100% accurate every time. It has never failed me and it is one of the first tools I purchase when going to work for a new company."

- CT-326-C customer reviews

### **BT-250 Breaker Tracer**

this durable and dependable tracer.

FEATURES	BT-250
Voltage Range	90 V → 250 V
Frequency Range	40 Hz → 70 Hz

connection cable, light fixture adapter, batteries (installed)



### **Wire Tracers / Locators**

• Pinpoints shorts and ground faults • Does not interfere with sensitive



CT-100



CT-326-C

HARD AT WORK SINCE 1948

### Wire Tracers / Locators



# **Power Quality Counts**

### **DM-III - Power Quality, Improving Plant Efficiency**

### $\star \star \star \star \star$ **TOP RATED**

### "Definitley worth the Investment"

"This meter has a lot of useful features that can be used to monitor services, equipment, generators or individual circuits. It can be used to record before and after any work done to document savings on power factor correction, energy efficient lighting, VFDs instead of cross the starters also used in Harmonic recordings."

- DM-III Multitest F customer reviews

The Superior Group, an electrical contracting company based in Columbus, Ohio, uses the Amprobe DM-III Multitest F Power Quality Recorder as a regular part of its business. The company works on a wide variety of projects, from very large data centers, to public works and even voice and data through its data vision.

"We are probably one of the larger electrical contractors in the area," said Rich Hartman, vice president of service and small projects for The Superior Group. "We employ approximately 150 people at this time and electrical construction makes up 60-70 percent of our business. We have 13 service trucks that will do anything from a one-hour service call to \$100,000 projects." Because of its diverse customer base, which includes Coca-Cola. Chase Bank and Abercrombie and Fitch, The Superior Group needs a flexible tool that can troubleshoot a wide variety of problems.

"The biggest thing we use the DM-III for are power issues with our industrial customers and even some of the new construction projects," Hartman said. "A lot of times we're looking at voltage problems, at motors of drives dropping out, so we'll go in and record for a week to see if the issues are power quality related or if it's something with the plant. Power quality has always

been an issue. We have done harmonics readings on some equipment for one of our clients. They were having harmonics issues on their drives, which we ended up putting on some capacitors to correct."

Including power quality analysis as a regular part of plant maintenance improves safety, saves energy as fuel prices skyrocket, and helps companies meet increasing emissions regulations. The Amprobe DM-III gives technicians a single, affordable tool with complex testing capabilities to take a global look at systems and run them efficiently.

### "The thing I like about the Amprobe **DM-III** is that it's compact and easy to use"

"The thing I like about the Amprobe DM-III is that it's compact and easy to use," Hartman said. "It's a no-brainer to take out in the field and set-up. Everything about it is more userfriendly than what we used in the past."

# **Power Quality**

### EFFICIENCY

Reduce downtime, predict equipment life and cut energy costs with Amprobe tools. The Amprobe insulation resistance testers support your preventative maintenance programs while the Amprobe power quality tools help you conserve energy and keep your equipment operating at peak performance. Use the Amprobe ground testers to not only operate efficiently, but also safely.







Quality **Ground / Power** -**Insulation** 

GP-2A

### HARD AT WORK SINCE 1948

### **Insulation / Ground / Power Quality**



**Recommended Accessories** 

AMB-45-CABLE USB to 3.5mm

 $\star\star\star\star\star\star$ 

needs"

just brilliant'

- AMB-45

customer reviews

**TOP RATED** 

"Met and exceeded my

"The high volt and low ohm

features go hand in hand with this type of meter, the memory

and record feature that lets me download to my computer is

Male Connector

Communication Cable

### **AMB-45 Digital Insulation Tester**

Test insulation of wires, cables, transformers and electrical motors quickly and easily with this rugged tester.

· Quickly test insulation of wires, cables, transformers and electrical motors

absorption ratio test

- Includes test leads and PC software
- Selectable test voltages 250 V, 500 V and 1000 V
- Programmable timer to perform the dielectric
- · Sensitive ohmmeter for checking resistance of motor windings Built-in voltmeter
- Data logging capabilities
  - Download data to PC

FEATURES	AMB-45
Insulation resistance (250 V dc)	4.000 ΜΩ, 40.00 ΜΩ, 400.0 ΜΩ, 4000 ΜΩ
Insulation resistance (500 V dc)	4.000 ΜΩ, 40.00 ΜΩ, 400.0 ΜΩ, 4000 ΜΩ
Insulation resistance (1000 V dc)	4.000 ΜΩ, 40.00 ΜΩ, 400.0 ΜΩ, 4000 ΜΩ
Low resistance	400.0 Ω, 4000 Ω
Voltage ac/dc	600.0 V

INCLUDED ACCESSORIES: Test leads, users manual, batteries (installed), carrying case, software & download cable

CAT III 600 V



# 0000 0000 00

AMB-25

### **AMB-25 Digital Insulation Resistance Tester**

Quality tools don't have to be expensive. These affordable, rugged megohmmeters are fast and easy to use, and offer the features you need for most insulation test applications including wires, cables, transformers and motors.

• Selectable test voltages up to 1000 V

(DAR) test

- Button lock for Dielectric Absorption Ratio
- · Sensitive ohmmeter for checking resistance of motor windings
- Internal memory stores up to 9 readings

FEATURES	AMB-25		
Insulation resistance (250 V dc)	40.00 ΜΩ, 400.0 ΜΩ		
Insulation resistance (500 V dc)	400.0 ΜΩ, 1000.0 ΜΩ		
Insulation resistance (1000 V dc)	400.0 ΜΩ, 2000.0 ΜΩ		
Low resistance	999.9 Ω		
INCLUDED ACCESSORIES: Test leads, users manual, patteries (installed)			

### **Insulation / Ground / Power Quality** AMB-50, AMB-55 and AMB-110 .... **Industrial High Voltage Insulation Testers** Professional insulation diagnostics, automated calculations and step voltage testing satisfy the 8888 most demanding applications. Accurately test cables, transformers, motors, surge arrestors and generators in noisy environments such as high voltage switch yards. Built-in noise rejection • Use one tester for low and high voltage systems • Measure and display all parameters with selectable test voltages: simultaneously on large LCD - AMB-50: 500 V, 1000 V, 2500 V and 5000 V Fast charging and testing AMB-50 - AMB-55: 250 V to 5000 V with 25 V • Dual power source: receptacle or rechargeable batteries increments - AMB-110: 500 V to 10,000 V with 25 V • Built-in memory stores up to 1000 measurements with time and date increments Record and manage measurement data with illustrate a response to the applied voltage PC Software via either RS232 or USB Programmable timer Automatic discharge of test object after measurement is complete AMB-110 B-55 0 Ω → 999 kΩ, $1.00 \Omega \rightarrow 9.99 M\Omega$ $10.0 \text{ M}\Omega \rightarrow 100.0 \text{ M}\Omega$ 1.00 Ω → 9.99 GΩ → 5500 V 0 V → 10000 V .00 nA → 9.99 nA, 10.0 nA → 99.9 nA, AMB-55 999 nA, 1.00 μA → 9.99 μA, 10.0 μA → 99.9 μA 100 μA → 999 μA, 1.00 mA → 5.50 mA 0.01 → 100.0 0 → 100.0 0 → 100.0 0 mA → 5.50 mA 0 V → 600 V → 99.9 nF, 100 nF → 999 nF, 1 μF → 50.0 μF 0.0 . 128 kB INCLUDED ACCESSORIES: Test lead, large jaw alligator clips, batteries, users manual, CAT III 600 V CE C N10140 AMB-50 AMB-55 AMB-110 **Recommended** Accessories AMB-110 AMB-50-KIT1 Test leads (AMB-50) $\star \star \star \star \star$ (Replacement part) AMB-KIT1 Test leads **TOP RATED** (AMB-55, AMB-110) Replacement part) "All the required tests AMB-KIT2 10 KV Shielded Lead can be done with this with Tip (AMB-110 product" Replacement part "Measurement of dielectric discharge has importance in the measurement of insulation resistance, it's really a diagnostic

filters and shielded test leads provide high EMI immunity.

- R(t) graph plots resistance in real-time to

FEATURE	AMB-50	AN
Insulation Resistance	0.5 MΩ → 20 GΩ, 2 MΩ → 40 GΩ, 5 MΩ → 100 GΩ, 100 MΩ → 1000 GΩ	
Test Voltage and Step Voltage Diaplay Range	0 V → 5000 V	0 V -
Current Display Range	0 mA → 1.2 mA	0. 100 nA → 9 10
Dielectric Absorption Ratio (DAR)	0 → 9.99	
Polarization Index (PI)	0 → 9.99	
Dielectric Discharge Test (DD)	0 → 9.99	
Leakage Current Display Range	1 mA → 1.2 mA	
External Voltage Measurement	30 V → 600 V	
Capacitance Measurement	_	0 nF →
Download PC Interface	•	
Memory Size	18 Measurements	

carrying case, software, RS-232 cable (AMB-55, AMB-110 only), USB cable



AMB-50-KIT1

insulation tester.

- AMB-110 customer reviews

### **Insulation / Ground / Power Quality**



AMB-3

### **AMB-3 Insulation Testers**

Cut unscheduled downtime and reduce shock hazards. Quickly check the insulation resistance value of electric equipment and lines with this small, easy to-operate tester.

- Sensitive ohmmeter for checking Mirror scale
  - resistance of motor windings
- Battery OK test

Built-in voltmeter

• Automatic discharge of equipment capacitance for safe removal of test leads

FEATURE	AMB-3
Insulation Resistance with 500 V dc Test Voltage	0 Ω → 1000 MΩ
Voltmeter	0 → 600 V AC

INCLUDED ACCESSORIES: Users manual, batteries (installed), carrying case, test leads

### $\star \star \star \star \star$ **TOP RATED**

"Best product on the market, job well done."

"Very easy to use and read, I would recomend this to anyone."

- AMB-3 customer reviews



AMC-4

### AMC-2, AMC-3 and AMC-4 Hand-Cranked **Insulation Testers**

Test insulation of wires, cables, transformers and electrical motors without batteries or external power. With these hand-cranked tools, you're always ready to test.

- · Sensitive ohmmeter for checking resistance of motor windings
- Light and smooth operating crank

- Guard terminal eliminates surface leakage that may influence readings
- Rugged cross coil movement
- High impact housing
  - Spring-loaded terminal connection

	FEATURE	AMC-2	AMC-3	AMC-4
	Insulation Resistance with 500 V dc Test Voltage	0 Ω → 100 MΩ	_	0 Ω → 100 MΩ
_	Insulation Resistance with 1000 V dc Test Voltage	_	0 Ω → 500 MΩ	0 <b>Ω →</b> 500 MΩ
S	Low Resistance (5 V DC)	0 Ω → 200 Ω	0 Ω → 200 Ω	0 Ω → 200 Ω

AMC-LEADS Test leads (AMC-2, AMC-3, AMC-4) (Replacement part)

**Recommended Accessorie** 

INCLUDED ACCESSORIES: Users manual, carrying case, test leads

### \*\*\*\* **TOP RATED**

"Easy to read dial and durable." "This is one of the most durable meters for testing resistance and simple to use."

- AMC-2 customer reviews

### **No Hassle Warranty** - No waiting. No shipping charges.

Our commitment to high-quality products and customer service is demonstrated by our industry exclusive "No Hassle" warranty.

In the unlikely event that an Amprobe Test Tool requires warranty service, any of our local dealers are authorized to replace it, on the spot. (\$500 MSLRP limit)

The product warranty is stated in the user's manual that comes with each product and can be downloaded from www.Amprobe.com

For warranty service, please contact the Amprobe Service Department at 1-877-AMPROBE.



### **GP-2A Ground Resistance & Resistivity Tester**

For installation and troubleshooting, this instrument provides accurate and reliable measurements of ground resistance and soil resistivity to help you reduce power quality problems.

- Measures earth ground resistance with
- 3-point (fall of potential) or 2-point tests Calculates resistivity with 4-point test
- Automatic voltage measurement prevents
- false measurements

FEATURE	GP-2A
Ground Resistance	1999 <b>Ω</b>
Ground Resistivity	314 kΩm
AC Currrent	-
AC Voltage	0 V – 460 V

**INCLUDED ACCESSORIES:** Users manual, batteries (installed), connection cables, 4 ground stakes, PC software and USB cable, carrying case



### **DGC-1000A Clamp-on Ground Resistance Tester**

User-friendly and accurate, the DGC-1000A helps you work safely without test leads or auxiliary electrodes. The on-board memory and data logging features improve efficiency.

- Accurate ground resistance measurements from
- 0.025 to 1500 Ohms True-rms current and leakage current

measurements

- Accurate readings in less than 10 seconds Audible alert if continuity beep if the resistance is below 40 Ohms

FEATURE	DGC-1000A
Ground Resistance	0.025 Ω → 1500
Ground Resistivity	-
AC Currrent	0.2 mA → 30.00
AC Voltage	-

INCLUDED ACCESSORIES: Carrying case. users manual, resistance calibration plate, batteries (installed)



### **Insulation / Ground / Power Quality**

- Autoranging
- Store up to 999 measurements Create custom reports by downloading
- data to a PC
  - C E



GP-2A

**Recommended Accessories** 

AMPRB-ET4 Set Earth Testing

Accessory Kit (Replacement part)

• Data logging capability - 116 records Individual data point recordings • User selectable high and low ohm audible alerts • Auto power-off (can be disabled) · Low battery indicator

A		
0Ω		
0 A		
CAT II 600 V	CE	<b>C</b> N10140



DGC-1000A

### $\star \star \star \star \star$ **TOP RATED** "Great instrument. An advantage to have."

"This tool proved invaluable and allowed the customer to save thousands on downtime and predictive maintenance, I highly recommend it."

- DGC-1000A customer reviews

### **Insulation / Ground / Power Quality**



### $\star\star\star\star\star\star$ **TOP RATED** "Definitely worth the investment!"

"This meter has a lot of useful features that can be used to monitor services, equipment, generators or individual circuits. It can be used to record before and after any work done to document savings on power factor correction, energy efficient lighting, VFDs instead of cross the starters - worth the money."

- DM-III Multitest F customer reviews

### **Recommended Accessories**

CC-DM-III	Hard Carrying Case
DM-CT-100	100 Amp Current
	Transducers
DM-CT-HTA	1000 Amp Current
	Transducers
	(included with DM III
	Multitest)
AM-FLEX33	3000 Amp Flexible
	Current Transducer
	(included DM III
	Multitest F)
C2006	PC Cable and
	Software Interface
	(Replacement part for
	DM III Multitest and
	DM III Multitest F)
DMT-EXTPS	External Power Supply
	(Replacement part for
	DM III Multitest and
	DM III Multitest F)
TLDM	Test Lead Set
	(Replacement part for
	DM III Multitest and
	DM III Multitest F)

DM-III Multitest and DM-III Multitest F

### **Power Ouality Recorders**

Cut energy costs and improve operating efficiency with the Amprobe full-featured three-phase Power Quality Recorders. They offer the essential functions and capabilities for today's demanding electrical environments.

- Measures and records a broad spectrum of power quality parameters with true-rms accuracy
- · Compatible with a wide range of current transducers
- Works with single- and three-phase systems (Y and Delta)
- Detects and records voltage anomalies, sags and surges
- · Tests insulation of wires, cables, transformers and electrical motors
- Programmable timer to perform the Dielectric Absorption Ratio Test
- · Selectable polarization of ohmmeter for checking grounding continuity

- Built-in scope displays waveforms
- Manual and programmable recording start • Ensure uninterrupted data recording with
- password protection
- Records up to 64 parameters (single- or threephase) simultaneously
- Special data compression system and user selectable rates allow recording from several hours to several years
- · Downloads measurements to PC with software
- Line or battery powered
- Automatic voltmeter protects against misuse on hazardous energized systems

FEATURE	DM-III MULTITEST	DM-III MULTITEST F	
AC Voltage	60	600 V	
AC Currrent	1000 A	3000 A	
Optional CTS	1000 A, 3000 A	100 A	
Harmonics	THD, DO	THD, DC to 49th	
Power	W, VAR, VA		
Energy	Wh, WARh, VAh		
Voltage Anomalies	Sag / Surge		
Power Factor	0.00 +/- 1.00		
Frequency	50 / 60 Hz		
Phase Sequence	1-2-3		
Insulation Tester	50 V, 100 V, 250 V, 500 V, 1000 V		
Ground Resistance	Resistance & Resistivity		

**INCLUDED ACCESSORIES:** External power supply, users manual, test leads, ground resistance test leads with 4 ground stakes, carrying case, PC software with USB cable, 3 current transducers (1000 amps for Multitest and 3000 amps for Multitest F)





# Temperature



### TARGETED

When you need tools designed specifically for all the jobs you do in HVAC, turn to Amprobe. When you need to measure temperature, the complete line of Amprobe temperature measurement tools range from infrared thermometers to specialized thermometers offering remote access to measurements.

 $\star \star \star \star \star$ **TOP RATED** 5 Out of 5 Stars See The Top Rated IR-750 Infrared Thermometer



### **Temperature**



### **IR-700 Series Infrared Thermometers**

The Amprobe IR-700 Series Infrared Thermometers offer five IR thermometers with precision performance, unparalleled accuracy and response time. Specifically designed for HVAC/R, electrical, industrial maintenance, automotive as well as quality control and fire prevention applications.

- Distance to Spot ratio up to 50:1
- Wide temperature ranges
- · Adjustable emissivity for measuring a
- variety of materials Min/max memory



	IR-750
**** TOP RA	TED

### "Excellent resolution"

"Great tool for taking temp readings while keeping your hands away from moving parts.

I have used this tool to take temp readings on radiators, air conditioners and engine parts while the engine was running, keeping my hands at a safe distance. I would recommend this tool

- IR-750 Infrared Thermometer, customer reviews

100% of customers who reviewed this product also recommend it.

### **Recommended Accessories**

EPS-700 External Power Supply IR-750 (Optional accessory)

	IR-710	IR-720	IR-730	IR-750
Distance to Spot (D:S)	10:1	20:1	30:1	50:1
Temperature Range	0°F to 716°F -18°C to 380°C	-26°F to 1922°F -32°C to 1050°C	-26°F to 2282°F -32°C to1250°C	-58°F to 2822°F -50°C to1550°C
Best Accuracy	±2% (Typical)	±1.8% (Typical)		
Emissivity	0.95	Adjustable from 0.10 to 1.00		
Display Resolution		0.1°C / 0.1°F 0.1°C / 0.1°F of reading < 999.9		
Backlit dual LCD display	•	•	•	•
Auto display and MIN/MAX Memory	•	•	•	•
DIF/AVG Temperature Display	_	•	•	•
Tripod mount	-	•	•	•
Programmable high and low alarm	_	_	_	•
USB cable	-	-	-	•
Built-in memory	_	_	_	99
K-type thermocouple measurement	-	-	-	•

INCLUDED ACCESSORIES: Battery (installed), users manual Carrying case: IR-720, IR-730, IR-750 IR-750 only: K-type thermocouple, USB cable and software CD CE C N10140



### **Precision** Performance

### The Amprobe IR-750, Extremely High Accuracy and 50:1 **Distance to Spot.**

Instead of perching on a ladder or crawling on your hands and knees to take critical temperature measurements, use the advanced Amprobe IR-750 50:1 Infrared Thermometer to check supply and return registers, find leaky or broken ducting, map temperatures, check compressor lines and much more. With data-logging capabilities downloadable to PC and a K-type thermocouple inputs, you're able to take temperature measurements up

- your target
- the target

The larger the Distance to Spot (D:S) ratio, the better the resolution and the smaller the area that can be measured. The IR-750 with a D:S of 50:1, will measure a 1" diameter at a distance of 50" away, perfect for demanding quality and process control applications.

to 2822°F (1550°C).



For ordering information see page 63. For detailed specifications go to **www.Amprobe.com** 

### **Temperature**



### Get the most accurate measurements by following these basic guidelines:

Get as close as safely possible to

 Know the D:S ratio for your thermometer. The area of the spot grows larger the further you are from

• If you need to measure a reflective target, mask it with flat black paint or black tape. IR thermometers calculate the surface temperature of an object by measuring the amount of energy emitted. Shiny or reflective objects have excess emissivity that can skew your temperature measurements.

 Experiment with several angles to capture the best reading and mitigate reflected energy

### $\star \star \star \star \star$ **TOP RATED**

"This IR thermometer has proven indespensable for board level troubleshooting as it helps find hot spots, overloaded components that are over stressed (hot) and gives accurate temperatures of the component. It helps in locating shorts and other problems which can cause failure to the assembly. Wonderfully easy to control in hand and be easy to read."

- IR-750 Infrared Thermometer, customer review

### **Temperature**

• 8:1 distance-to-spot ratio

Built-in LED flashlight to illuminate

• Bright laser pointer

dark areas

CDECIFICATI



IR-450



SPECIFICATIONS	III450
 Range	-22°F → 932°F (-30°C → 500°C)
Distance to Spot Size	8:1 ratio
Best Resolution	0.5°F (0.2°C)
Best Accuracy	+/- 4°F (2°C)
Emissivity	Pre-set 0.95
INCLUDED ACCESSORIES:	Battery (installed),

**Flashlight and Laser Pointer** 

automotive and quality control applications.

**IR-450 Infrared Pocket Thermometer,** 

A must have tool for everyday applications, the IR-450 3-in-1 Infrared Pocket Thermometer, Laser Pointer, and Flashlight offers a uniquely small and convenient form factor with

guickly check temperatures in HVAC/R, fire safety and protection, industrial maintenance,

professional 8:1 distance to spot ratio. More portable than traditional infrared thermometers,

• Holds temperature reading (selectable °F/°C) for ten seconds

users manual. pocket clip





IR6084

### $\star$ **TOP RATED**

### "It doesn't get any easier."

"I would recommend this tool very highly to HVAC technicians and anybody that has to evaluate heat loss and efficient use of energy."

- IR608A Customer reviews

### • Fast response time

**IR608A Infrared Thermometer with Laser Pointer** Point and press for quick and easy non-contact temperature measurement. Use this effective diagnostic tool to identify temperature for HVAC, fire safety and protection, industrial

· Pocket-sized, ergonomic design • Laser sighting for accurate targeting (CE EN60825 certified Class II)

Display hold

maintenance, automotive and quality control.

- Backlight display for visibility in a variety of working conditions • Low battery indicator

CE C N10140

SPECIFICATIONS	IR608A	
Range	0°F → 750°F (-18°C → 400°C)	
Distance to Spot Size	8:1 ratio	
Best Resolution	0.5°F (0.2°C)	
Best Accuracy	+/- 2% of reading or +/- 3.5°F (+/- 2°C) whichever is greater	
Emissivity	Pre-set 0.95	

INCLUDED ACCESSORIES: Battery (installed), users manual



### **THWD-3 and TH-3 Relative Humidity and Temperature Meters**

An exceptionally wide ambient temperature range makes these meters versatile and accurate.

- Large LCD displays two measurements simultaneously
- Extended probe stem for easy access to air ducts
- Dew point and wet bulb (THWD-3 only)
- Min/max readings

**INCLUDED ACCESSORIES:** Carrying case, battery (installed), users manual

### **TH-1 Compact Probe Style Relative Humidity Meter**

Slip this little meter in your pocket and be ready for quick temperature and humidity checks.

- Displays relative humidity and temperature simultaneously Measure wet bulb and dew point
  - Data hold
- · Precision capacity relative humidity sensor with twistable protective cap

FEATURE	THWD-3	TH-3	
Temperature – Internal Sensor		+ 140°F → 60°C)	
Relative Humidity	5 <b>→</b> 95%		
Dew Point Temp	• –		
Wet Bulb Temp	• –		

**INCLUDED ACCESSORIES:** Carrying case, users manual, battery

### **THWD-5 Relative Humidity and Temperature** Meter with Wet Bulb and Dew Point

Designed for HVAC technicians and plant maintenance engineers, this microprocessor-based psychrometer provides quick, easy access to wet bulb and dew point values as well as temperature and relative humidity.

• Extended probe for easy access to targets

readings easy-to-see

- Large digital dual display with backlight makes
- Temperature with 0.1 degree resolution in °F or °C, front panel selectable

RANGE	BEST ACCURACY
0% → 100%	+/- 3% from 10% $\rightarrow$ 90% (at cal temp) +/- 5% for other
14°F → 140°F (-10°C → 60°C)	+/- 0.6°C (+/- 1°F)
100.0°F → 139.8°F (-73.4°C → 59.9°C)	-
7.88°F → 139.8°F (-13.4°C → 59.9°C)	-
_	14°F → 140°F (-10°C → 60°C) 00.0°F → 139.8°F (-73.4°C → 59.9°C)

INCLUDED ACCESSORIES: Carrying case, users manual, batteries (installed)

### **Temperature**

• Temperature measurement range: -4°F (-20°C) to 140°F (60°C) Data hold • Capacitive sensor with protective cover Auto power-off



• Results in metric or English • Stores min/max readings for comparisons





-



 Stores min/max measurements Data hold freezes last reading • Tripod mountable

THWD-5

### **Temperature**



TMD-56

### $\star \star \star \star \star$ **TOP RATED**

### "Works great, use it all the time"

"Get a lot of use out of it. I'm a maintenance tech in a large paint shop and use it to check oven temps, I can log temps throughout the day and download on the computer. Great product with a lot of features."

TMD-56 **Customer reviews** 

### **TMD-50 Series Thermometers**

The professional choice for HVAC technicians, electricians and research, industrial process, and quality control applications, these thermometers offer dual inputs for easy super-heat and sub-cool temperature measurements. Monitor and track temperatures, the multi-logging thermometers feature real-time clocks with a calendar, user-selectable recording intervals, and easy data recall using up and down keys.

• °F/°C selectable

PC Interface

- Dual input: T1, T2, T1-T2
- Audible alert with Hi/Lo settings for out-of-range measurements
- Min/max with elapsed time, average, relative, hold functions
- Time and relative settings
- In-field thermocouple offset adjustment
- Robust holster protects the instrument

USB

• Auto power-off saves batteries

FEATURE	TMD-50	TMD-53	TMD-56
Thermocouple Type	К	K, J	К
Basic Accuracy	0.1%	0.05%	0.05%
Number of Parameters on the Display	1	3	3
Real time clock - Wireless Beeper with Setting	-	•	•
Data Capture	-	-	256 Samples
Data Logger	-	-	16,000 Points

### Temperature ranges for TMD-56 series by thermocouple:

THERMOCOUPLE TYPE	TEMPERATURE RANGE	
К-ТҮРЕ	-328°F → 2501°F (-200°C → 1372°C)	
J-TYPE	-346°F → 2192°F (-210°C → 1200°C)	
Т-ТҮРЕ	-328°F → 752°F (-200°C → 400°C)	
E-TYPE	-346°F → 1832°F (-210°C → 1000°C)	
R-TYPE	32°F → 3212°F (0°C → 1767°C)	
S-TYPE	32°F → 3212°F (0°C → 1767°C)	
N-TYPE	-58°F → 2372°F (-50°C → 1300°C)	



### **TMD-50**

These highly accurate thermometers give precise measurements on a large, easy-to-read backlit display. The robust holster protects the instrument. Auto power-off saves batteries.

- Dual input: T1, T2, T1-T2 °F/°C selectable Average/relative zero functions

**INCLUDED ACCESSORIES:** Users manual, 2 K-type thermocouples, 4 batteries (installed)



### **TMD-53**

When your application demands even higher accuracy, choose these models. An audible alert with Hi/Lo settings detects out-of-range measurements.

- K/J-type thermocouple selection
- Dual input

- · Min/max with elapsed time, average, relative, hold functions

**INCLUDED ACCESSORIES:** Users manual, 2 K-type thermocouples, batteries (installed)



### **TMD-56**

Monitor and track temperatures with these multi-logging thermometers. All models feature a backlit triple-display, real-time clock with calendar and user-selectable recording intervals with easy data recall.

- Download data to PC via USB
- Data capture: 256 samples with real-time data • Data logging: 16 sets, maximum 16,000
- data points

 Thermocouple offset adjustment **INCLUDED ACCESSORIES:** USB cable and

software, users manual, 2 K-type thermocouples, batteries (installed)





### **Temperature**

• Min/max/hold functions In-field thermocouple offset adjustment

- Time % relative settings • 0.05% basic accuracy to 0.2°F (0.1°C) resolution • °F/°C selectable



- Record, max, min, max-min, average, relative zero and hold functions · Audible alerts with Hi/Lo setting Resolution 0.1°F/1°F (0.1°C/1°C)







TMD-50



TMD-53



TMD-56

### **Temperature**



TR200-A



**TR200-A Temperature and Relative** Humidity Data Logger

One compact unit monitors both temperature and humidity and records it on your PC using the USB interface. Amprobe software included.

- Record sample interval timing, start/stop, date, time, Hi/Lo alarm threshold, and units • Visible LED warnings alert you to air quality
- IP-65 rating for dust and moisture
- problems





**Environmental** 

### PRECISION

High quality tools designed to save HVAC/R professionals time, money and keep buildings healthy. From simple, one-time checks to advanced instruments that measure humidity and airflow or check for gas leaks, Amprobe offers a complete line of tools designed specifically for environmental solutions.



TR300

### $\star \star \star \star \star$ **TOP RATED**

"Excellent documentation "Customer says it is too hot in the

office. Is there really a problem? Nov you can know for sure one way or the other."

- TR300 customer reviews

### **TR300 Temperature and Relative** Humidity Data Logger

Wall-mountable, self-standing, or tri-pod mountable, this data logger configures to your application.

• Temperature, relative humidity, dew point or web bulb measurements with real-time date/ hour stamp

conditions

- Stores up to 16,000 readings
- Records data to a PC with USB cable and Amprobe software included
- Audible and visual alerts help you monitor IAQ • Programming on-screen or from the PC

FEATURES	TR200-A	TR300
Dual Display LCD	-	•
Air Temperature Reading	14°F → 140°F (-10°C → 60°C)	-4°F → 158°F (-20°C → 70°C)
Temperature Accuracy	+/- 1°F (+/- 0.6°C)	+/- 1°F (+/- 0.6°C)
RH Reading	0.0 to 99.9%	0 to 100%
RH Accuracy	+/- 3% at 77°F (25°C)	+/- 3% from 10 - 90%
Recording	16,000	16,000
Dew Point Reading	-	•
On Screen Programmable	-	•
Software Programmable	•	•

INCLUDED ACCESSORIES: Batteries (installed), users manual, PC software CD and USB cable



 $\star \star \star \star \star$ **TOP RATED** 5 Out of 5 Stars See The Top Rated GSD600 Gas Leak Detector

<ul> <li>&gt; 320 Methane /Propane (pp)</li> <li>&gt; 160 BATT</li> <li>&gt; 80 BATT</li> <li>&gt; 00</li> </ul>	> 640 💽	Combustible G
> 80 📰 BATT > 40 💽 LC	> 320 🕅	Detector Methane /Propane (pp
> 80 💽 🖸 🖸 ol > 40 💽	> 160 🔝	BATT
	> 80 📰	
READY	> 40 💽	<b>D</b> LC
	READY	
		GSD600



### HARD AT WORK SINCE 1948.

### **Environmental**



MT-10



**Recommended Accessories** 

K-type external

temperature probe

### **MT-10 Moisture Meter**

Measure the moisture content of wallboard, wood, mortar, plaster or other building materials to identify areas of water damage or harmful mold growth. Check wood or concrete flooring before installation, wood during drying or before woodworking.

• Three-color LED indicates moisture severity

• Backlight makes display visible in dim areas

**INCLUDED ACCESSORIES:** Users manual, battery



### $\star \star \star \star \star$ **TOP RATED**

"If you build quality, this is your tool."

"I watched the Amprobe MT-10 in action when my insurance adjuster came to check out ceiling damage. The rafters without visible water damage showed moisture, the insulation that needed replacing was quickly identifiable and the wall showed the path the water took to the next floor. Wow, this will save waiting to see mold or disintegration long before permanent damage."

MT-10 customer reviews

Data hold

### **TMA5 Mini Vane Anemometer**

This pocket-sized tool gives you an easy way to measure air flow, temperature and humidity in the HVAC systems of residential, commercial or industrial buildings.

- Measures air velocity, temperature and ambient Maximum wind speed display temperature (in °F or °C), humidity, dew point, wet bulb, wind chill
- Simple, two-button operation
- Auto power-off with disable feature • Low battery indication
- Selectable wind units: mph, ft/m, Knt, m/s, km/h, BF
- Ergonomic design with wrist strap
- External temperature probe included

FEATURE	ТМА5
Wind Speed Range	0.5 → 44.7 mph, 60 → 3937 ft/m, 0.4 → 38.8 knt, 1.1 → 20.0 m/s, 0.7 → 72.0 km/h, 1 → 8 BF
Air Temperature Range	32°F → 122°F (0°C → 50°C)
External Temperature Range	-4°F → 158°F (-20°C → 70°C)
Air RH% Range	5% → 95% RH
Wind Speed Response	averaging every 2 seconds
Temperature Response Time	60 seconds (typical)
Air RH% Response Time	60 seconds (typical)
Wind-Chill Display	•
Dew Point Temperature	•
Wet Bulb Temperature	•

INCLUDED ACCESSORIES: Battery (installed), users manual, external temperature probe, ergonomic wrist strap

CE C N10140



### **TMA10A Anemometer with Flexible Precision Vane**

The essential tool for HVAC technicians, the TMA10A measures air velocity or volume (CFM), plus temperature. Just enter surface area type for accurate airflow measurements.

- Large dual display for viewing airflow or
- velocity measurement including temperature
- Long flexible cord to access remote vanes
- Continuous moving average for up to 2 hours
- Air velocity average for up to 8 points

FUNCTION	RANGE	BEST ACCURACY	
Air Velocity	0.40 → 25.00 m/s	+/- 2% of full scale	
All velocity	125 → 4900 ft/min	+/- 2% of full scale	
A in Flaur	0.01 → 99.99 m³/sec	0 → 9.999 m	
Air Flow	1 ft → 9999 cfm	0 → 9.999 ft	
Air Temperature °F (°C)	32°F → 122°F (0°C to 50°C)	+/- 1.5°F (0.8°C)	

INCLUDED ACCESSORIES: Carrying case, battery (installed), users manual, optional PC interface for charting or analysis



### $\star$ **TOP RATED**

"Does all that is asked of it! It is highly accurate and results are repeatable." - TMA10A customer review

### **TMA40-A Anemometer, Relative Humidity** and Temperature

With one tool, you can measure air velocity (FPM) or air volume (CFM), relative humidity, and temperature. Large digital display with backlight and flexible measurement vane makes measuring easier in difficult areas. Measures up to 99 points and logs up to 2400 measurements.

<ul> <li>Flexible measurement vane for accessing difficult areas</li> <li>Measures air velocity (fpm), air volume (cfm), relative humidy, and temperature</li> </ul>		<ul> <li>Measure up to 99 points</li> <li>Data logging up to 2400 data points</li> <li>Optional PC interface for charting or analysis</li> <li>Large digital display with backlight</li> </ul>	
FUNCTION	RANGE	RESOLUTION	ACCURACY
Air Velocity	0.4 to 32 m/s (1.3 to 105 ft/s)	0.1 m/s (0.1 ft/s)	+/- 3%
Air Volume	0 → 99999 (cfm/cmm)	0.1 CMM - 1 CFM	+/- 3%
Temperature	-4°F → 158°F (-20°C → 70°C)	0.1°F (0.1°C)	± 0.6°C (± 1°F)
Relative Humidity	0 → 100%	0.1%	+/- 3% @ 77°F (25°C)

INCLUDED ACCESSORIES: Carrying case, battery (installed), users manual, optional PC interface for charting or analysis



48

TPK-60

### Environmental

- Multi-point air flow (cfm) average • PC interface for charting or analysis • Min/max/average reading on a single point • Data hold
- · Auto power-off function





TMA10A

**Recommended Accessories** 







"Great tool." "The Amprobe TMA40-A is a great tool for air flow measurement. It does Dew point, wet bulb, dry bulb, air speed, and air velocity. Great tool for troubleshooting duct problems."

- TMA40-A customer reviews



TMA40-A



### HARD AT WORK SINCE 1948

### Environmental



# 11110 01

RLD-1

### **Recommended Accessories**

RLD-1 SENSOR Replaceme Sensor Replacem



### $\star$ **TOP RATED**

### "Best tool for the job!"

In over 25 years of business, I've seen units with suspected refrigerant leaks but were too small to find. With the Amprobe RLD-1 refrigerant leak detector I can take the guess work out of finding and repairing a refrigerant leak. I recommend that if you are in the HVAC business this is a must have for every tool bag!"

- RLD-1 Customer reviews

### **TMA-21HW Hot Wire Anemometer**

Hot wire anemometer technology eliminates bearings and rotating parts to make these meters durable and measurements stable and accurate. It's the simple, safe way to monitor indoor air quality and measure air flow and temperature in residential, commercial and industrial air conditioning systems.

- 4' (1.2m) telescopic wand no ladder needed for Data hold, min/max with time stamp most commercial applications Measures air flow volume in CFM, CMM
  - Data memory and real-time function (99 sets)
    - 512KB auto data-logging capacity
    - USB interface
- Instant average, 2/3 Vmax flow measurements
- Velocity m/s, ft/min, knots, km/hr, mph Relative humidity and temperature measurement
- Wet bulb and dew point
- Large backlight LCD display shows five parameters

FEATURE	TMA-21HW	BEST ACCURACY
Air Flow	0.10 m/s → 30.00 m/s 0.2 km/hr → 110.0 km/hr 10 ft/min → 6000 ft/min 0.10 knots → 59.0 knots 0.12 MPH → 68.00 MPH	+/- 3% of rdg +/-1% FS
Air Flow Volume	0.000 CFM → 999900 CFM 0.000 CMM → 999900 CMM	+/- 3%
Temperature	- 4°F → 140°F (-20°C → 60°C)	+/- 0.9°F (+/- 0.5°C)
Relative Humidity	0.0 → 100%	+/- 3%
Data-logging via USB	•	_
Wet Bulb / Dew Point	•	_

INCLUDED ACCESSORIES: Batteries (installed), hard carrying case, users manual, USB cable and PC software

### **RLD-1 Refrigerant Leak Detector**

Troubleshoot air conditioning systems quickly and accurately with the RLD-1. State-of-the-art technology makes it easy to precisely pinpoint a wide variety of halogenated refrigerant leaks.

- Detects R-134a, R-404a, R-407c, R-410a, R-22, Freon and other refrigerants
- Sensitive gas sensor and advanced digital signal processing for high accuracy
- · Built-in suction pump for precise sensor response
- Tri-color LED display and audio clearly indicate leaks
- High-Medium-Low (H/M/L) leak
- sensitivity selector Automatic zero and background compensation
- Low battery indication
- Ambient concentration reset

nent	FEATURE	RLD-1
nent part)	Detectable Gases	R-134a, R-404a, R-407c, R-410a, R-22, Freon
	R-22, 134a Sensitivity	H - 3g/year, M - 15g/year, L - 30g/year
	R-404a, 407c, 410a Sensitivity	H - 4g/year, M - 20g/year, L - 40g/year
)	Alarm Method	Buzzer, Tricolor LED bar Indicator
	Power Usage	2 C size (3V dc) Alkaline Batteries
	Snake Tube Length	15.5″ (40 cm)

INCLUDED ACCESSORIES: Batteries (installed), users manual, carrying case, leak check bottle. AC adapter





### **GSD600 Gas Leak Detector**

Detect dangerous methane or propane leaks that can lead to explosions and gas poisoning. With its five-level LED and audible alarms, the GSD600 helps you assess whether the area is safe or needs to be vented. The frequency of the beeping increases with the concentration of the gas, allowing you to pinpoint the source of the leak in piping or appliances. The display provides an accurate measurement of the gas present in the area.

- Detects combustible gases
- · Quickly identifies and pinpoints gas leaks for closed piping systems
- Automatic calibration feature level LED alarm: >40, >80, >160, >320, and >640 ppm
- Mute function and LED alerts for quiet areas

FEATURE	RANGE
Methane	40 ppm → 640 ppm
Propane	35 ppm → 580 ppm
Sensitivity	35 ppm (propane)

INCLUDED ACCESSORIES: Battery (installed),

carrying case, users manual

### **Ultrasonic Leak Detectors**

When leaks occur in pressurized systems, they emit an ultrasonic frequency humans can't hear. These ultrasonic leak detectors convert the sounds into an audible range for fast, easy leak detection.

### **ULD-300 Ultrasonic Leak Detector**

Quickly locate gas leaks in pressurized air lines, steam lines, and refrigeration systems regardless of gas type (CFC, HFC, nitrogen and other non-combustible gases).

- Locates arcing in an electrical system
- Finds the ends of buried PVC pipes
- Parabola shield reduces background noise

**INCLUDED ACCESSORIES:** Flexible tubing adapter, tubular extension, carrying case, power parabola, headphone, batteries (installed)

### **TMULD-300 Ultrasonic Leak Detector with Ultrasonic Transmitter**

When leaking gases are not sufficiently pressurized, use the TMULD-300. It includes an ultrasonic transmitter that creates sound waves so you can check door or trunk seals for air tightness, or windshields for water tightness.

 Same features as ULD-300 Transmitter "pressurizes" an area with ultrasonic sound

UT-300 transmitte

INCLUDED ACCESSORIES: Flexible tubing adapter, tubular extension, carrying case, power parabola, headphone, batteries (installed),



"This tool paid for itself many times over. I have found leaks large and small inside walls, on evaporator coils, condensers and water lines. I've loaned it to colleagues who purchased your product immediately after using mine. These tools lead the industry in leak detection through its sensitivity and ability to detect negative or positive pressure."

### Environmental

0

GSD600

• Built-in earphone jack (earphones not included) for loud environments · Flexible probe to access difficult measurement

Auto power-off

areas



\*\*\*\* **TOP RATED** "Accurate, affordable, and easy to use."

"This is one of the most economical tools I have used. Simple, yet accurate in use and detection."

- GSD600 customer reviews



· Access difficult or dangerous areas with extension tube







"Great product."

- TMULD-300, Customer reviews



ULD-300

TMULD-300

### **Recommended Accessories**

UT-300 Ultrasonic Transmitter (ULD-300) (Replacement part)

ULD-300-KIT1 Adapter Kit For ULD-300: **TEA-1** Flexible tubing adapter PB-1 power parabola HP-1 headphone TE-1 tubular extension (Replacement part)



### HARD AT WORK SINCE 1948

### Environmental



### **CM-100 Carbon Monoxide Meter**

This compact meter measures the presence of carbon monoxide and warns you when it exceeds safe levels.

• Alarm is preset to 25 ppm to warn about possible danger • Adjustable CO warning levels: 25, 30, 35,

• 45, 50, 70, 100 and 200 ppm

- Backlight for viewing in dim areas Auto power-off to save batteries
  - Self-test feature
- Dual digital backlit display

FEATURE	CM-100
Range	0 ppm → 999 ppm
Resolution	1 ppm
INCLUDED ACCESSORIES: Users manual, batteries (in	stalled) CE 🔮

### CO2-100 Handheld Carbon Monoxide Meter

Get instant feedback on carbon monoxide levels up to 9,999 ppm, while you check the air quality compliance of hospitals, schools, offices, or production floors.

- Large, easy-to-read triple LCD display of CO2, temperature and relative humidity
- Selectable display of dew point and wet bulb
- · High performance low-drift sensor designed
- with NDIR (Non-Dispersive Infrared)
- waveguide technology
- Backlight for working in dim areas • TWA (time-weighted average) display for an 8-hour period

INCLUDED ACCESSORIES: Batteries (installed), users manual, carrying case

FEATURE	TURE CO2-100 CO2-200		
C02	0 → 9999 ppm 0 → 9999 ppm		
Temperature Range	emperature Range $14^{\circ}F \rightarrow 140^{\circ}F(-10^{\circ}C \rightarrow 60^{\circ}C)$ $14^{\circ}F \rightarrow 140^{\circ}F(-10^{\circ}C \rightarrow 60^{\circ}C)$		
RH Range	0% → 95%	0% → 95%	
DP (Dew Point Temp.)	-4°F → 139.8°F (-20°C → 59.9°C)	-4°F → 139.8°F (-20°C → 59.9°C)	
WB (Wet Bulb Temp.)	24.8°F → 139.8°F (-5.0°C → 59.9°C)	23°F → 139.8°F (-5.0°C → 59.9°C)	
Resolution	1 ppm - CO <sub>2</sub> concentration, 0.1°C / °F - Temp, 0.1%RH - Humidity	1 ppm - CO <sub>2</sub> concentration, 0.1°C / °F - Temp, 0.1%RH - Humidity	

CO2-200

CO2-200 Wall-Mounted Carbon Monoxide Meter

Monitor critical, environmentally controlled areas such as laboratories and production facilities with this permanently mounted air quality meter.

- · CO2 measurements up to 9,999 ppm, temperature, relative humidity, dew point and wet bulb
- Audible alarm threshold setting for carbon dioxide levels with output drive relay to control air flow system
- High performance low drift sensor designed with NDIR (Non-Dispersive Infrared) wave guide technology with automatic back ground calibration
  - Recording of min, max and average values with recall function
  - Data hold

INCLUDED ACCESSORIES: Batteries (installed), carrying case, power adapter 110-240 V ac, users manual

### **TACH-10 and TACH20 Combo Tachometers**

Measure rotational speed of motors, conveyor belts and other moving or rotating systems with these handheld tachometers. The TACH20, our top-of-the-line tachometer includes six adapters, a surface speed wheel for contact RPM measurement and an infrared beam for non-contact measurements. The TACH-10 is an economical, universal tachometer that measures rotational and surface speed using both contact and non-contact methods.

- Built-in memory function automatically stores maximum, minimum, and average values as well as the last measurement displayed Easy to select units and mode functions
- and in.

FEATURE	TACH-10	TACH20
Rotation (Non-Contact)	10.0 rpm → 99999 rpm	1 min → 99999 min
Rotation (Contact)	10.0 rpm → 19999 rpm	1 min → 19999 min
Surface Speed (Contact)	1.0000 → 9999.9 m/min 3.0000 → 30,000 ft/min 1.0 → 10,000 yd/min	0.10 → 1999 m/min 0.40 → 6550 ft/min 4.00 → 78700 in/min 0.10 → 33.30 m/sec 0.10 → 109 ft/sec
INCLUDED ACCESSORIES: Batt carrying case, adapters	teries (installed), users manual, reflective tape,	CE C

### LM-100 and LM-120 Light Meters

These portable, easy-to-use digital light meters measure interior illumination levels from fluorescent, metal halide, high-pressure sodium or incandescent sources. Switch off, reduce or increase the output level of lighting fixtures. Reduce the energy burden of the building by significantly increasing the efficiency of its lighting system.

- · Measure in lux or footcandles, front panel switchable Simple, one-handed operation
- Silicon photodiode sensor and filter for accuracy and high-resolution

FEATURES	LM-100	LM-120
langing	Manual Automatic / Manual	
llumination Sensor	Silicon photodiode and filter	
Range Lux	20, 200, 2000, 20000, 200000	
Range Footcandles	20, 200, 2000, 20000	
Calibration Point	2854 °K Cosine Angular corrected per JIS C 1609:1993 and CNS 5119 general A class	
Data	Data hold Data hold, min/max	

### LM-200LED Light Meter

This professional tester accurately measures light output of LED sources for all visible light ranges.

- Lux or footcandle measurement units. user selectable
- Data hold
- Max recording captures highest light measurement
- Measuring lights source include all visible ranges

### FEATURE LM-200LED 200, 2,000, 20,000, 200,000 lux LED Light Measurement 20, 200, 2,000, 20,000 footcandle

INCLUDED ACCESSORIES: Users manual, battery (installed) carrying case





CO2-100

 $\star$ **TOP RATED** 

### "Consistent calibration and fast updating." "I use this tool to check environmental CO2 conditions

in theaters and in the field. The range is good with humidity readings that went to 3% in Colorado sub-alpine desert and CO<sub>2</sub> readings that topped the 9,999 ppm limit in productions."

- CO2-100 Customer reviews



- Data hold, min/max, average functions Long term drift compensation for accurate readings

- CO2-200

15 minutes STEL

dioxide level

(short-term exposure limit) value

Audible alarm threshold setting by carbon

### Environmental

### • Select RPM using infrared beam or adapter: m/min, m/sec, ft/min, ft/sec, in/min, m, ft,

### · Auto power-off function

· Analog dc voltage output to operate with chart recorder or data logger (LM-120 only) Zero adjustment (LM-120 only) • Auto power-off to save battery life

Accurate measurements with spectral

- response close to CIE luminous
- spectral efficiency
- Angled light cosine correction

 Extendable wire (approximately 5' (1.5 m) Measurements according to JISC1609:1993 and CNS 5119 general A class specifications

> BEST ACCURACY +/- 3% (Calibrated to standard incandescent lamp 2856° K) and corrected LED day white -light spectrum







TACH-10

**TACH20** 

### **Recommended Accessories**

TACH-20-KIT1	Tip, Wheel, Shaft, Funnel and Reflective Tape (TACH20 Replacement part)
TACH-20-ADPT	Adaptor For TACH20 (Replacement part)
TACH-10-KIT1	Convex / Concave Tip, Reflective Tape (TACH-10 Replacement part)



### $\star \star \star \star \star$ **TOP RATED** "Excellent meter for lighting uses."

"I've found this meter's accuracy is as advertised at +/- 3%, its consistency under flickering AC driven LEDs (120Hz) is actually better than higher end meters that are unable to compute the samples accurately. Overall, an impressive meter at a great price, that I use for rough photometric tests as well as general illumination measurements."

### - LM-200LED customer reviews



### Environmental



SM-20-A

### $\star \star \star \star \star \star$ **TOP RATED**

"I work in a manufacturing plant and regularly check sound levels to make sure we are using the right hearing protection. We have been using the Amprobe SM-20-A Sound Meter for its ease of use and simple operations, and quick and easy testing. Love it and recommend it to everyone."

- SM-20-A customer reviews



These sound meters meet the measurement needs of safety engineers, health, industrial and safety offices as well as quality control. Use them to check compliance with safety regulations and perform acoustic analysis. They use two different weighting filters required by the IEC 651 and ANSI S1.4 Type 2 for audio filtering.

- A-weighting for general noise sound level
  - Display with 0.1dB steps on a 4-digit LCD • Slow (1 sec) and fast (125ms) response
- · C-weighting for measuring sound level of acoustic material control in various environments
- settings to check peak and average noise levels
- PC interfaces (SM-20-A only)

FEATURES	SM-10	SM-20-A
Microphone	1/2" Electret condenser microphone	
Standard Applied	IEC 651 Type 2, ANSI 1.4 Type 2	
Dynamic Range	50 dB	
Time Weighting	FAST (125 mS), SLOW (1 sec)	
Frequency Range	31.5 Hz → 8 kHz	
Measuring Level Range (Auto Range)	A-Weighting: 30 dB → 130 dB C-Weighting: 35 dB → 130 dB	
Data	Data hold Min/max	
Internal Memory	-	14,000 records

INCLUDED ACCESSORIES: Carrying case, users manual, battery (installed), USB cable download and software CD (SM-20-A only)





SM-CAL1

- **SM-CAL1 Sound Meter Calibrator** This instrument generates the fixed sound level signals needed to calibrate sound level meters.
- Two output levels: 94 dB and 114 dB
- Output frequency: 1000Hz
- Fits 0.5" microphones
- Easy one-handed operation

• CE: conforms to ANSI S1.40 - 1984 and

Low battery indicator

- IEC942 1988 Class 2
- INCLUDED ACCESSORIES: Battery (installed), users manual



# **Solar Energy** and Battery **Testers**

### GREEN

You need to be ready to test and troubleshoot new technologies as they emerge and alternative energy is the hottest trend. The Amprobe solar solution suite equips you to install, maintain and troubleshoot solar systems as well as analyzing the energy efficiency of solar panels, water heaters and windows. Use the Amprobe line of battery testers not only for green energy applications but also to test UPS and battery back-up systems.





### Solar Energy / Battery Testers



Solar-100

### $\star \star \star \star \star$ **TOP RATED**

"This is an excellent device for quick measurements of irradiance out in the field. I was surprised that it can measure BTUs as well as headlight brightness and window tint.

It can also demonstrate the advantages of tracking and the effects of cloud cover. Great value for the money."

- SOLAR-100



SOLAR-600

### "A great instrument."

customer reviews

### **Recommended Accessories**

SOLAR-BAT1 Rechargeable Lithium Battery SOLAR-600 (Replacement accessorv)



### **SOLAR-100 Power Meter**

Optimize the placement of solar systems and analyze window efficiency with the SOLAR-100. Measure solar output and calculate overall energy and efficiency.

- Windows performance testing: calculate and verify heating or heat reduction caused by direct sunlight
- · Research the location of solar panels or solar water heaters
- Measures solar power and transmission
- Power mode measures incident solar radiation • Transmission mode calculates the percentage of solar power transmission through materials such as windows
- Convenient display with remote sensor technology
- Selectable measurement units (W/m2 or BTU/ft2xh)
- Min/max function identifies locations with maximum or minimum power
- Also useful for physics and optical laboratories, meteorology, agriculture

FEATURE	SOLAR-100
Solar Power	Up to 2000 W/m <sup>2</sup> , 634 BTU/(ft2xh)
Max/Min	•
Data Hold	•

INCLUDED ACCESSORIES: Battery (installed), carrying case, users manual



### **SOLAR-600 Solar Analyzer**

Install, maintain, troubleshoot and evaluate the efficiency of solar panels with this these professional analyzers. The SOLAR-600 also offers real-time data logging and PC downloads for further analysis.

- Determine the proper inverter size and
- optimum power output position of panels
- Identify broken or worn-out cells
- I-V curve test with cursor for solar cells
- Maximum solar power (Pmax) search
- by auto-scan
- Maximum voltage (Vmaxp) at Pmax
- Maximum current (Imaxp) at Pmax
- Voltage at open circuit (Vopen)
- Current at short circuit (Ishort)
- I-V curve with cursor
- Calculation of panel efficiency (%)
- Manual single point test
- Real time datalogging and PC download

FEATURE	SOLAR-600
DC Voltage:	0.000 V → 9.999 V, 10.00 V → 60.00 V
DC Current:	0.01A → 9.99 A, 10.0 A → 12.0 A
DC Current Simulation	0.01 A → 9.99 A, 10 A → 12 A
Power	0 W → 720 W
Efficiency	•
Scan delay	0 mS → 3000 mS
Alarm	•
Solar Panel Area	0.001 m2 → 9999 m2
Standard Light Source	10 W/m2 → 1000 W/m2
Data Storage Memory	99 records
Data Logging	•

INCLUDED ACCESSORIES: Users manual, rechargeable battery pack (installed), ac adapter, USB cable and software CD, test leads, carrying case





### **BAT-200 Battery Testers**

Battery failure is one of the most common causes for sensor or instrument failure. This portable universal battery tester makes checking batteries simple.

- Easy-to-read color-coded display with "Good". "Low" and "Replace/Recharge" indicators
- Tests standard and rechargeable batteries: 9V,
- AA, AAA, C, D, 1.5V Button Type

FEATURE	BAT-200
Battery Type	9V, AA, AAA, C, D, 1.5V Button Type
Analog Scale	•

INCLUDED ACCESSORIES: Users manual

### **BAT-500 Battery Tester**

Here's the quick, accurate way to test back-up batteries and UPS systems without taking batteries off line.

- Comparator function to guickly access battery condition as Pass, Warning or Fail
- Store up to 99 user program able settings for guick battery diagnostics
- Test battery impedance to calculate its true life
- Works with most batteries: compact storage batteries, alkaline and lead-acid up to 500 Ah

FEATURE	I I I I I I I I I I I I I I I I I I I
Maximum Battery Capacity	Up to
Battery Type	Alkaline, Nicke Nickel-C Lithium-ion (Li-io
DC Voltage	4.00
Impedance	40 mΩ, 4
Data Capture Memory	50
Data Logging Memory	960
PC Download	

### **INCLUDED ACCESSORIES:** Users manual, software manual, batteries, ac adaptor, RS232C (to USB Bridge) cable, software CD,

kelvin clips



### **Solar Energy / Battery Testers**

 Compact design • Ergonomic battery holder





BAT-200

- Resistance measurement up to 40 ohms and voltage up to 40 V • Simultaneously measure battery resistance and voltage Compact and lightweight
- · For trending/life cycle analysis download test results to a PC

### BAT-500

500 amp hours

- el-Metal Hydride (NiMH),
- -Cadmium (NiCd), on) and lead-acid batteries

00 V. 40.00 V

400 mΩ, 4 Ω, 40 Ω

00 data sets

600 data sets

.





**BAT-500** 

### **Solar Energy / Battery Testers**



**CR50A Capacitance Tester** 

Inspect and verify components for quality control by quickly checking circuits with this full-range capacitance and resistance meter.

- Dual zero adjustments pots to null strays and test leads
- "Zero adjust" pots for low ohms and capacitance ranges

- Special "low ohms" range
- Low battery indication

### LCR55A Inductance, Capacitance

CR50A

20 Ω, 200 Ω, 2 kΩ, 20 kΩ, 200 kΩ,

2 MΩ, 20 MΩ

200 pF, 2000 pF, 2 μF, 20 μF, 200 μF, 2 mF, 20 mF

-

•

### and Resistance Tester

The ultimate electronic component verifier measures inductance, capacitance, resistance, transistors, diodes and microwave diodes.

- Plug-in test slots and test leads with threaded alligator clips for precision testing
- "Zero adjust" pot for ohms Low battery indication

LCR55A

20 Ω, 200 Ω, 2 kΩ, 20 kΩ,

2 MΩ, 20 MΩ

200 pF, 2000 pF, 2 μF, 20 μF, 200 μF, 2 mF

200 µH, 2 mH, 200 mH, 200 H

Hfe, Iceo (NPN, PNP)

Std (3 V) & microwave oven (8 V)

Data hold and max hold

Auto power-off

FEATURE

Resistance

Capacitance

Inductance

Transistors

Continuity test

Diodes

-		1
	LCR55A	

-

### $\star$ **TOP RATED**

### "Very reliable."

"We work in the HVAC industry and capacitors are a common issue. The Amprobe LCR55A Capacitance Tester has been a great investment and time saver. A guick check and record has identified weak capacitors and saved us from costly call backs."

- LCR55A customer reviews



### **R-115S Remcon Momentary Switch Relay (3-wire) RC-120S Remcon Closet Light Relay (2-wire)**

When you need low-voltage control circuits for safe operation in industrial and process control environments, choose these low-voltage relays with built-in transformers. Each unit operates independently, so you can install one relay and operate it with as many switches as needed or control multiple relays with a single switch.

• Uses light 22 gauge wire, saving the time and expense of pulling Romex or armored cable

**INCLUDED ACCESSORIES:** Users manual, test leads

with alligator clips, battery (installed)

- Simplifies wiring no need to wire back to separate low voltage transformers
- Operates silently so you can install relays at the fixture instead of at a remote location

FEATURE R-115S RC-1205 105 V → 125 V AC Voltage AC Current Up to 6.5 A (1/4 HP max motor load at 120 V) 60 Hz Frequency Safe Control Switching, Maximum 10 V DC 10 milliamps





### Accessories

and red tip length extender

48" long silicone lead wires, probe tips, alligator

Same as DL243D plus spring loaded crimp tips

Standard leads: 40" PVC insulated lead with standard tips

plus threaded large alligator clips, CE approved alligator

clips, 0.6" jaw, shrouded 90° banana plugs, one red and

clips, spade lugs, fold-out carrying case

**Test Leads** 

DL243D

**DL248D** 

**E** CE

TL35B



DL243D





TL35B

### TL1500

Heavy duty test leads CAT IV / 1000 V, 1500 V MAX 

one black leads and clips



TL1500

### **Line Splitter**

### ELS2A, AC Line Splitter

- Measures load current without splitting line cord
- Two measurement points, X1 and X10 for increased sensitivity
- Built-in voltage measurement jacks
- 115 V, 15 A



### **Current Clamps**

### CT235A

• AC/DC current clamp,1000 A (50/10 kHz), mV output, 1.2" max conductor

### CT237B

• AC/DC current clamp, 200 A (50/10 kHz), mV output, .75" max conductor

### CT238A

5

• AC/DC current clamp, 20 A (50/20 kHz) Low current version

### Thermocouple

### TPK-59, Thermocouple

- Accessory for multimeters and clamp-ons with temperature input
- Measures temperature from -50°F  $\rightarrow$  600°F
- Plugs directly to a meter without additional adapters

	CC-ACDC	DC205C	CC-MEG	SV-U	VC221B	VC
30XR-A					•	
33XR-A					•	
34XR-A					•	
37XR-A					•	
38XR-A					•	
5XP-A					•	
15XP-B					•	
35XP-A					•	
AC40C						
AC50A AC68C						
	•					
AC75B	•					
ACD-50NAV ACD-51NAV						
ACDC-52NAV	•					
ACD-53NAV	•					
ACDC-54NAV	•					
ACD-20SW	•					
ACD-21SW	•					
ACD-22SW	•					
ACD-23SW	•					
ACD-10 PLUS						
ACD-10 TRMS-PLUS						
ACD-14 PLUS						
ACD-14 TRMS-PLUS						
ACD-15 TRMS-PRO				•		
ACD-16 TRMS-PRO				•		
ACD-41PQ				•		
ACD-45PQ						
ACD-6 PRO				•		
ACDC-100				•		
ACDC-100 TRMS				•		
ACD-3300 IND	•					
ACDC-3400 IND	•					
ACDC-400				•		
AD40B						
AM-140-A					•	
AM-160-A					•	
AM-220 AM-240						
AM-250					•	
AM-270 AM-500					•	
AM-500 AM-510					•	
					•	
AM-520 AM-530					•	
AM-530 AM-560					•	
AM-560 AM-570					•	
AM-570 AM8C					•	
CR50A					•	
DGC-1000A	•					
	-			-		
DM73C				•		
DM78C				•	-	
DM7C DM9C					•	
HD110C		•			•	
HD110C HD160C		•			•	
INSP-3		•			•	
LCR55A					•	
LH41A						
PM51A						
PM5TA PM55A						
RS-1007	•					
RS-3 PRO						
TIC 300 PRO	-					
GP-2A			•			
DM III Multitest						
AMB-45			•			
			•			

### Accessories

DC205C

Deluxe Heavy Duty

Carrying Case 9.6 x 4.7 x 4.3"





CC-ACDC Soft Pouch Zippered Carrying Case 11.5 x 4.5 x 2.8" (292 x 114 x 70 mm)

CC-MEG Soft Carrying Case 10 x 8.5 x 3.25" (254 x 216 x 89 mm)

(244 x 119 x 109 mm)





SV-U

VC221B Padded Vinyl Carrying Case 8.5 x 4.5 x 2.5" (216 x 114 x 64 mm)

**VC3A** Rugged zippered Carrying Case 4.5 x 2.2 x .4" (114 x 56 x 10mm)

VC30A Vinyl Carrying Case 7.5 x 3.4 x 1.5" (191 x 86 x 38 m

CC-DM-III Deluxe Heavy Duty Carrying Case 18.3 x 15.0 x 7.3" (465 x 381 x 184 mm)

CC-300 PRO Leather Carrying Case 10.84 x 4.20 x 2.40" (275 x 107 x 70 mm)



### **Product Fuse Directory and Software**

### **Product Fuse Directory**

MODEL	PART NUMBER	FUSE TYPE
RS-1007	FP500	0.5A/1000V, 6.3X32mm
RS-3 PRO	FP500	0.5A/1000V, 6.3X32mm
AM 250	FP650	630mA/500V, 6X32mm
AM-250	FA-12.5A/500V	12.5A/500V, 6X32mm
	FP160	10A/600V, 10X38mm
AM-270	FUSE-1A	1A/600V, 10X38mm
	FA-0.5A/700V	0.5A/700V, 6.3X32mm
AM-500	FP400	10A/600V, 6.3X25 mm
	FP500	0.5A/1000V, 6.3X32mm
AM-510	FP400	10A/600V, 6.3X25 mm
AM-520	FP500	0.5A/1000V, 6.3X32mm
	FP410	11A/1000V, 10X38mm
	FP500	0.5A/1000V, 6.3X32mm
AM-530	FP410	11A/1000V, 10X38mm
	FP500	0.5A/1000V, 6.3X32mm
AM-560	FP410	11A/1000V, 10X38mm
	FP500	0.5A/1000V, 6.3X32mm
AM-570	FP410	11A/1000V, 10X38mm
	FP160	10A/600V, 10X38mm
AM-140-A	FUSE-1A	1A/600V, 10X38mm
	FP412	0.44A/1000V, 10X38mm
AM-160-A	FP410	11A/1000V, 10X38mm
	5X20-250.5	0.5A/250V, 5X20mm
AM-220	6X32-250V10A	10A/250V, 6X32mm
	5X20-250.5	,
AM-240		0.5A/250V, 5X20mm
	6X32-250V10A	10A/250V, 6X32mm
30XR-A	FP160	10A/600V, 10X38mm
	FP375	0.25A/700V, 6.3X32mm
33XR-A	FP100	10A/1000V, 10X3 8mm
	FP300	0.315A/1000V, 6.3X32mm
34XR-A	FP100	10A/1000V, 10X38mm
	FP300	0.315A/1000V, 6.3X32mm
37XR-A	FP100	10A/1000V, 10X38mm
	FP500	0.5A/1000V, 6.3X32mm
38XR-A	FP100	10A/1000V, 10X38mm
	FP500	0.5A/1000V, 6.3X32mm
5XP-A	FP300	0.315A/1000V, 6.3X32mm
15XP-B	FP200	2A/1000V, 6.3X32mm
35XP-A	FP200	2A/1000V, 6.3X32mm
HD110C	FP700	2A/1500V, 8X65mm
HD160C	FP700	2A/1500V, 8X65mm
DM7C	FP900	200mA / 700V, 6.3X32mm
DM9C	FA-6X32/.63	0.63A/500V, 6X32mm
Dilloc	FP540	10A/600V, 6.3X32 mm
PRM-4	FP900	200mA/700V, 6.3X32mm
AMB-45	FA-0.5A/700V	0.5A/700V, 6.3X32mm
S2600	380.25-6X32	0.25A/380V, 6X32mm
T-100,T-300	3AG-312.250	0.25A/250V, 6.3X32mm
(CT-100, 326B)	2502 6722	24/2501/ 6Y22mm
T2200 (AT-200X)	2502-6X32	2A/250V, 6X32mm
T-4000 (AT-400X)	FA6X46MM	0.25A/1000V, 6X46mm
X1000 (AT1000)	380.25-6X32	0.25A/380V, 6X32mm
CR50A	FP125	0.1A/250V, 5X20mm
LCR55A	FP125	0.1A/250V, 5X20mm
AU92	FP520	0.5V/500V, 6.3X32 mm
	FP540	10A/600V, 6.3X32 mm
AM8C	FP150	200mA/250V

### **Software and Cables**

Transfer measurement data to your computer with these kits.

For complete details on Amprobe software and to download the latest versions, please visit (www.amprobe.com/softwaredownloads.html)

### **Download Suite Software**

Download Suite is a free software package compatible with most of the Amprobe instruments with download capabilities. Enjoy the benefits of this powerful software package for a wide selection of Amprobe megohmeters, ground resistance testers, multitesters, and power quality recorders.

- Install software once and use it with all supported Amprobe products
- All instruments share the same file format. You can open files recorded by you, other people, or the Amprobe instruments right on your PC.
- Download Suite automatically checks your version for upgrades and keeps your version current.
- Windows7 compatible

### USB-KIT2

• Download software with connection cable for Amprobe clamp meters

### **USB-KIT3**

• Download software with connection cable for Amprobe multimeters

### **RS-USB, USB to RS-232 Adapter**

- Converts the USB port of a PC to RS-232
- Supports Windows 95 (OSR2X), 98, 2000, ME, XP, Vista, Mac 8.6 and higher
- Works with Amprobe instruments with download capabilities
- Works with many other products with USB ports, including cameras, Palm Pilot, card readers, mouse, security systems, etc.
- Frees up the serial port for other uses

### TM-SWA, USB Cable and Software

- Allows for real-time data downloads from TMA10A and TMD90A
- Records two channels simultaneously



MODEL #	PRODUCT #	PG #	MODEL #
15XP-B	3534088	*	AT-4004-A
30XR-A	2727774	*	AT-4005-A
33XR-A	2727788	*	BAT-200
34XR-A	2727795	*	BAT-500
35XP-A	2727849	*	BT-120
37XR-A	2727808	16	BT-250
38XR-A	2727824	16	CM100
5XP-A	2727851	*	CO2-100
AC50A	3033017	8	CO2-200
AC68C	2727919	*	CR50A
AC75B	2727885	*	CT-100
ACD-10 PLUS	3037808	6	CT-326-C
ACD-10 TRMS-PLUS	3037813	*	CT235A
ACD-14 PLUS	3086905	6	CT237B
ACD-14 TRMS-PLUS	3086910	6	CT238A
ACD-15 TRMS-PRO	2730690	9	DGC-1000A
ACD-16 TRMS-PRO	2730713	*	DL243D
ACD-20SW	3472723	6	DL248D
ACD-21SW	3472738	*	DM-III MULTITEST
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\* This product is available for order but not in the catalog. For detailed specifications go to www.Amprobe.com

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Specifications subject to change without notice.

Virm Polarity CK 00 Hz off Drop @15A=4.2% .1% Hot + 3.1% Neut) oaded Voltage =116.4 nd Impedance = .27Ω Wiring Inspection Tester

