



AC Clamp
Multimeter



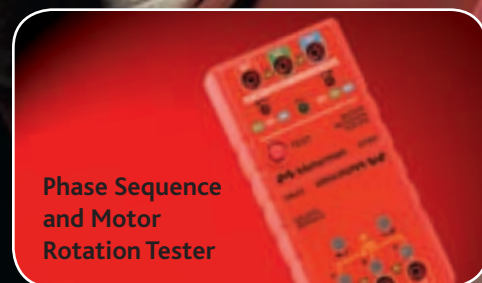
Precision
Pocket
Multimeter

2006

Test Tools Catalog



Dual Input
Digital
Thermometer



Phase Sequence
and Motor
Rotation Tester

New product highlights

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IR608

IR Thermometer with Laser

The IR608 is an infrared thermometer with a laser pointer for easy targeting. A quick and effective diagnostic tool for identifying problems in a wide variety of applications like HVAC/R, fire safety and protection, industrial maintenance, automotive and quality control. The IR608 is robust yet lightweight with a solid ergonomic design.

- Comfortable “pistol grip design”
- Small enough to fit in your pocket
- Measuring range -18 °C to 400 °C (0 °F to 750 °F)
- Fixed emissivity at 0.95
- Laser sighting for accurate targeting (CE EN60825 certified class II)
- Display hold
- Very fast response time
- Backlit display

See page 13 for full product detail.



AC71

Automatic AC Clamp Multimeter

The AC71 is a digital clamp multimeter with two unique additional features: AutoTect™ and automatic backlight. The AutoTect feature automatically senses what type of measurement is being made when the test leads are placed across a measurement point—no knob to turn. The automatic bright blue backlight has a sensor that recognizes when the ambient light becomes dim and turns itself on—no button to push.

- AutoTect™ function automatically selects ac volts, dc volts, resistance or continuity
- Automatic bright blue backlight turns on by itself
- Easy one-button control
- AC current to 600 A
- AC/DC volts to 750/1000 V
- Resistance and continuity beeper
- Safety rated to CAT II 1000 V, CAT III 600 V, cCSAus listed

See page 11 for full product detail.

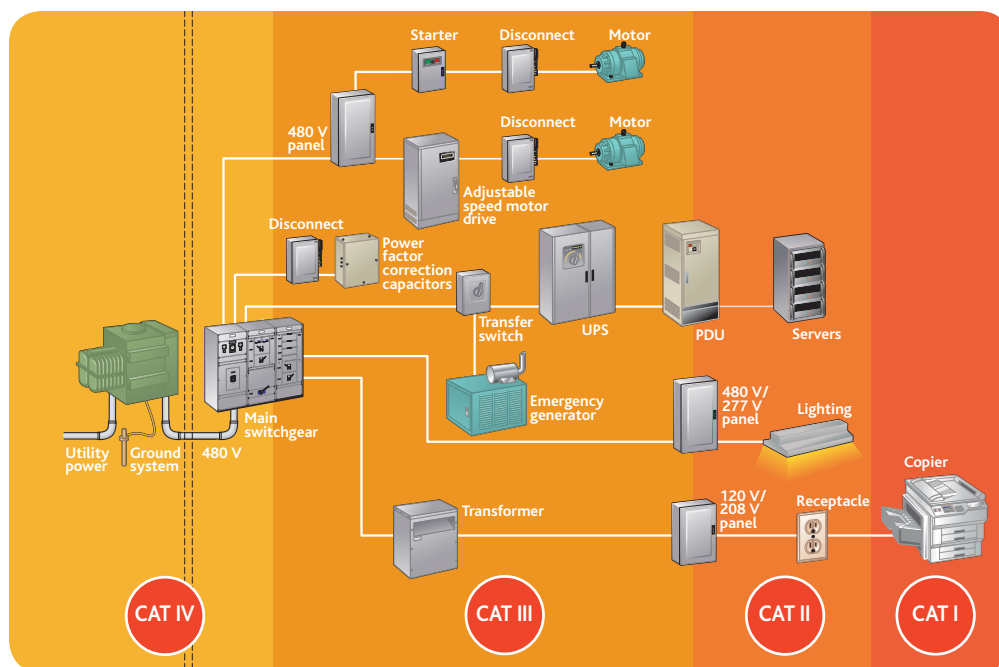
**No waiting.
No shipping
charges.**



No hassle warranty

Our commitment to high-quality products and customer service is demonstrated by our industry exclusive “No Hassle” warranty. In the unlikely event that a Meterman test tool requires warranty service, any of our local dealers are authorized to replace it, on the spot.

Safety



UL and CE EN61010-1 voltage ratings

EN61010-1 category and voltage ratings on multimeter products.

Quality and service beyond compare

Our products

The products shown in this catalog include an extensive selection of portable multimeters, clamp meters, component checkers, bench meters, HVAC testers and specialty tools such as logic probes to meet any testing application. Also shown is a complete selection of accessories including protective cases, test leads and adapters.

Our distributors

The products shown in this catalog are sold and supported by a worldwide network of Meterman distributors and dealers. Should you require any assistance or have questions about our products or their applications, these local dealers stand ready to serve you.

International safety standards

Test equipment must be designed to protect people who work in the high-voltage, high-current environment. 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 is required from test equipment.

Proposed energy regions*

CAT I Electronics, signal level single-phase receptacle loads	CAT II Appliances, portable tools,
CAT III Three-phase distribution, large building lighting systems, distribution panel devices	CAT IV Three-phase at utility connection, electricity meters, outside and service entrance

Meterman® Test Tools recommends only using test equipment in environments below or up to its Category rating, never in a Category above the instrument's rating.

*Category Ratings per IEC1010-1.

Category boundaries may not be exact.

	UL	cCSAus	CAT I	CAT II	CAT III	CAT IV
Multimeters						
30XR	Yes	cULus		600 V	300 V	
33XR	Yes	cULus		1000 V	600 V	
34XR	Yes	cULus		1000 V	600 V	
37XR	Yes	Yes		1000 V	600 V	
38XR	Yes	Yes			1000 V	600 V
5XP		Yes	1000 V	600 V	300 V	
15XP		Yes	1000 V	600 V	300 V	
35XP		Yes	1000 V	600 V	300 V	
AM8B	Yes	cULus		300 V		
DM7				600 V		
DM73B	Yes			600 V	300 V	
DM78A	Yes		600 V	300 V		
DM9				600 V		
HD110B					1000 V	
HD115B					1000 V	
HD160B					1000 V	
PM51	Yes	cULus		600 V	300 V	
PM53	Yes	cULus		450 V	300 V	
PM55	Yes	cULus		600 V	300 V	
Electrical						
ECB50	Yes				150 V*	
EPM3		Yes			600 V	
VT500	Yes	cULus			300 V	
Clamp Meters						
AC40A		Yes			600 V	
AC50	Yes	cULus		600 V		
AC65				600 V	300 V	
AC68	Yes	Yes			600 V	
AC71		Yes		1000 V	600 V	
AC75		Yes		1000 V	600 V	
AD105					1000 V	
AD40A		Yes			600 V	
Bench Top Meter						
BDM40			1000 V			

* US version. Products sold in other countries may vary.

All of the products shown in this catalog are CE marked and for sale in the EC except: TP probes and TL246B.





Full-featured, full-size multimeters, XR Series

38XR

True-rms with optical PC interface.

Great for field troubleshooting in industrial, automation, process and plant environments.

- 10,000-count with high 0.25 % accuracy
- Bright blue backlight for dim environments
- Duty cycle, capacitance and frequency
- Magne-Grip™ holster with magnetic hanging strap
- 4-20 mA loop current with % readout
- Temperature to 1300 °C (2372 °F), type K thermocouple included
- True-rms ac + dc coupled for accurate measurements
- RS-232 data out for use with optional software, Model 38-SW

Three-year warranty



Five meters designed for electronic, electrical, plant maintenance and HVAC applications

Magne-Grip™ Holster with magnetic hanging strap



Many DMM users find they need a “third hand” when taking a measurement with their meter. We designed the Magne-Grip™ holster to protect the meter and provide the “third hand” DMM users need. An innovative magnetic hanging strap secures the meter to a convenient steel surface, freeing both hands for work. Included with all XR meters.

37XR

True-rms with component and logic test.

True-rms meter for electronics troubleshooting at the bench or job site. The highest accuracy meter in the XR series.

- Autoranging 10,000 count with 0.1 % accuracy for the most accurate measurements
- LCR functions: inductance, capacitance and resistance
- Frequency, duty cycle and logic test
- Bright blue backlight for dim environments
- Magne-Grip™ holster with magnetic hanging strap

Three-year warranty



34XR

True-rms with temperature and backlight.

Designed for maintenance, repair and installation of electrical and electro-mechanical equipment. Ideal for contractors and field service technicians.

- True-rms for the most accurate measurements
- Extended 4000 µF capacitance range for motor run/start testing
- Bright blue backlight for dim environments
- Duty cycle, frequency and capacitance for complete measurement capability
- Temperature to 1000 °C (1832 °F) with a type K thermocouple included
- Magne-Grip™ holster with magnetic hanging strap
- Data hold, Min/Max and bar graph

Three-year warranty



33XR

Manual ranging with temperature and capacitance.

33XR gives the contractor and field service technician all the essential measurement functions they need in a rugged package.

- Temperature, frequency and capacitance
- Extended 4000 μF capacitance range for motor run/start testing
- Magne-Grip™ holster with magnetic hanging strap
- Data hold, Peak Hold, Min/Max and REL

One-year warranty



30XR

Includes VolTect™, a built-in non-contact voltage tester.

The 30XR has all the basic functions for automotive, residential and education applications.

- 9 functions, 30 ranges handles most measurement needs
- Magne-Grip™ holster with magnetic hanging strap frees both hands for work
- Battery/fuse door designed for easy accessibility
- Battery tester

One-year warranty



Pick the multimeter that is right for you.

	30XR	33XR	34XR	37XR	38XR
Measurement					
Voltage dc	600 V	1000 V	1000 V	1000 V	1000 V
Voltage ac	600 V Average	750 V Average	750 V Trms ac	750 V Trms ac	750 V Trms ac + dc
DC current	10 A	10 A	10 A	10 A	10 A
AC current	10 A	10 A	10 A TRMS	10 A TRMS	10 A TRMS
Resistance	20 M Ω	4 M Ω	40 M Ω	40 M Ω	40 M Ω
Continuity	•	•	•	•	•
Diode	•	•	•	•	•
Non-contact voltage detect	•				
Capacitance		4000 μF	4000 μF	400 μF	400 μF
Frequency		1 MHz	1 MHz	10 MHz	10 MHz
Temperature		1000 °C (1832 °F)	1000 °C (1832 °F)		1300 °C (2372 °F)
Duty cycle			•	•	•
Logic test				TTL/CMOS 20 MHz	
Inductance				40 H	
Battery test	1.5 V, 9 V				
Features					
Basic dc accuracy	1.0 %	0.7 %	0.5 %	0.1 %	0.25 %
Counts	2000	4000	4000	10,000	10,000
Auto power off		•	•	•	•
Analog bar graph		•	•	•	•
Backlight			•	•	•
Min/Max	•	•	•	•	•
Average				•	•
Relative		•		•	•
Data Hold	•	•	•	•	•
Peak Hold		•		•	•
4-20 mA %					•
RS-232 output					•
dBm				•	•
Ships with	Magne-Grip holster, test leads, battery	Magne-Grip holster, test leads, alligator clips, Type K probe, temp adapter, battery	Magne-Grip holster, test leads, alligator clips, Type K probe, temp adapter, battery	Magne-Grip holster, test leads, alligator clips, battery	Magne-Grip holster, test leads, alligator clips, Type K probe, temp adapter, battery
Warranty	One-year	One-year	Three-years	Three-years	Three-years

Optional accessories

- Padded carrying case, VC221A
- Hard carrying case, DC205B
- Silicone heavy duty test leads with threaded alligator clips, TL244A
- Test lead kit, silicone test leads, three different tips, DL243C

Optional RS-232 cable and software, 38-SW

- Real-time data acquisition software logs and displays data from all 38XR measurement functions
- Stores data for retrieval or for further analysis
- Exports data for use in Excel® or other programs
- Supports Windows® 98, NT, XP and their variants





Compact, full-featured multimeters, XP Series

The three XP Series digital multimeters are full-featured, compact in size with two unique extras: VolTect™ and our exclusive Magne-Grip™ Holster.

Every XP DMM includes select features that make your testing safer, easier, and more efficient whether it be in field service, electronic repair, electrical or HVAC applications. Delivering the best performance in a compact instrument, the XP Series is the right choice for your work.

35XP

For HVAC, plant maintenance technicians and residential electricians.

- Temperature measurement capability to 1000 °C (1832 °F) (Type K thermocouple included)
- Capacitance for motor run/start test
- 0.1 µA resolution for flame sensor testing

15XP

For electronics engineers, technicians and field service.

- Autoranging display for faster measurements
- TTL logic test for digital circuits
- Integrated tilt stand for easy bench use
- Diode test for component level troubleshooting

5XP

For residential, commercial and general troubleshooting applications.

- 27 ranges/10 functions: a complete performance, general purpose digital multimeter
- Battery load test with 1.5 volt and 9 volt capabilities
- Min/Max records minimum and maximum values



Available on all XP Series meters.

Magne-Grip™ Holster with magnetic hanging strap frees both hands for work.

VolTect™ non-contact voltage detection lets you instantly detect dangerous ac line voltages.

Triple safety rating Protects against line surges and overvoltage conditions.



Optional accessories

- Carrying case, VC30
- Test lead kit, DL243C

Pick the multimeter that is right for you.

	5XP	15XP	35XP
Measurement			
AC/DC Voltage	750 V/1000 V	750 V/1000 V	750 V/1000 V
AC/DC current	200 mA ac/dc	2 A ac/dc	2 A ac/dc
Resistance	20 MΩ	20 MΩ	40 MΩ
Continuity beeper	•	•	•
Non-contact voltage detect	70 V to 600 V ac	70 V to 600 V ac	70 V to 600 V ac
Capacitance			4000 µF
Frequency			1 MHz
Temperature			1000 °C (1832 °F)
Logic test		20 MHz	
Battery test	1.5 V, 9 V		
Features			
Counts	2000	2000	4000
Autoranging		•	•
Min/Max	•		
Auto power off			•
Data Hold	•	•	•
Ships with	Magne-Grip holster, test leads, battery	Magne-Grip holster, test leads, battery	Magne-Grip holster, test leads, Type K probe, temp adapter, battery
Warranty	One-year	One-year	One-year

Pocket multimeters, PM Series

PM55

Automatic Precision Pocket Multimeter.

- AutoTect™ feature detects and displays ac volts, dc volts or resistance
- VolTect™ feature, a built-in ac voltage detector
- Extra features of capacitance, frequency and microamp current
- Option of Hi Z or Low Z input impedance for ghost voltages



PM55

PM53

Pocket size digital multimeter with AutoTect™.

- Non-contact ac voltage detection, VolTect™ feature
- AutoTect™ feature detects and displays ac volts, dc volts or resistance
- VolTect™ feature, a built-in ac voltage detector
- Low Z input impedance eliminates ghost voltage readings
- Transient protection to 4 kV and overload protection to 450 V



PM53

Optional accessories

- Carrying case, VC3

PM51

Pocket size multimeter w/frequency and capacitance.

- Seven different measurement functions with 27 full ranges of measurement
- Oversized digital display with large digits and icons



PM51

Optional accessories

- Carrying case, VC3
- Protective silicone holster, H-PM



Three multimeters with innovative features in an ultra-compact size.

Simplified interface with easy one-touch button control, oversized digital display screens.

Progressive design with two remarkable features called VolTect™ and AutoTect™. VolTect™ feature is a built-in ac voltage detector. AutoTect™ feature is a function that automatically selects the meter to display between ac volts, dc volts or resistance, depending upon what the meter senses at the probe tips.

Compact size offers a meter that is only .95 cm (.375 in) thick and weighs less than 85 g (3 oz).

Low Z input impedance to eliminate ghost voltages.

Hi Z input impedance for electronic circuitry.

Pick the multimeter that is right for you.

	PM51	PM53	PM55
Measurement			
AC/DC voltage	600 V	450 V	600 V
Basic accuracy	1 %	0.50 %	0.50 %
AutoTect ohms		6 MΩ	6 MΩ
Non-AutoTect ohms	40 MW		600 W
Continuity beeper	•	•	•
Capacitance	3000 μF	100 μF	2000 μF
Frequency	1 MHz	10 kHz	30 kHz
Diode test	•		•
μAmps ac/dc current			2000 μA
Battery test	1.5 V, 9 V		
Features			
Large LCD display	4000-count	6000-count	6000-count
Autorangeing	•	•	•
AutoTect™		•	•
VolTect™		•	•
Auto power off		•	•
Ships with	Attached test leads, battery, manual	Protective silicone holster, attached test leads, battery, manual	Deluxe zippered carrying case, protective silicone holster, attached test leads, battery, manual
Warranty	One-year	One-year	One-year



The HD Series of DMMs is designed for professional use in harsh environments.

Three rugged DMMs constructed for **IP67 water proofing** and harsh environments with a MIL-PRF-28800 rating.

Each meter in the HD line has an **extended voltage measurement capability** of 1500 V dc and 1000 V ac, unmatched by any other line of digital multimeters. The extended voltage ranges can withstand transients up to 6 kV.



Heavy-duty meters, HD series

Choose from three heavy-duty digital multimeters that are designed for rugged use with extra features that make them better suited for field work. They offer extensive protection that will resist harsh and even abusive environments.

Thicker case walls made from specialty plastics resistant to grease and chemical spills, rubber holsters, sealed and gasketed openings, shock-dampened mountings, extensive fusing and superior protection from overloads.

- IP67 rated for protection against dust and immersion
- Drop proof to eight feet
- Highest input voltage in meter to 1500 V dc, 1000 V ac
- Digi-Glo™ backlight (excluding HD110B)
- Oversized character displays for easy reading
- 30-minute auto-off to preserve battery
- MIL-PRF-28800F

HD160B

Autorange True-rms heavy-duty meter.

- True-rms, 10,000-count
- Menu selectable Max/Min and relative
- Digi-Glo™ backlight

HD115B

Heavy-duty meter with capacitance.

- Digi-Glo™ backlight
- Capacitance
- Peak Hold™

HD110B

General purpose heavy-duty meter.

- Data Hold
- Unique live voltage safety tester



Pick the heavy-duty meter that is right for you.

	HD110B	HD115B	HD160B
Measurement			
AC/DC voltage	1000 V/1500 V	1000 V/1500 V	1000 V/1500 V
AC/DC current	10 A ac/dc	10 A ac/dc	10 A ac/dc
Resistance	20 MΩ	20 MΩ	40 MΩ
Continuity beeper	•	•	•
Capacitance		20 mF	
Features			
Counts	2000	2000	10,000
Autorange			•
Analog bar graph			•
Min/Max			•
Auto power off	•	•	•
Data Hold	•	•	•
Peak Hold		•	
Ships with	Holster, test leads, battery	Holster, test leads, battery	Holster, test leads, battery
Warranty	One-year	One-year	One-year

Bench-top instruments

Three different low-cost/high-feature test instruments.

All are housed in an attractive custom case with a cushion grip, non-skid, tilt-stand handle, rear power cord wrap and grooved channels to allow stacking.

3 MHz Function Generator, FG2C-U

Supplies all the basic test waveforms for depot service, design engineering, production or QC.

- Fast, easy push-button selection of square, triangle and sine waves plus TTL or CMOS pulse output through low impedance, low distortion output
- Easy push-button selection for power, range and waveform
- Square, triangle, sine wave and TTL/CMOS outputs
- Duty cycle and dc offset control VCF input



FG2C-U

3 MHz Sweep/Function Generator, FG3C-U

Provides sine, square, triangle waves and TL or CMOS pulse outputs. With a built-in frequency counter, this unit is great for heavy day-to-day usage in electronic troubleshooting, production manufacturing test or as a breadboarding signal source.

- 150 MHz frequency counter
- Best value combination generator
- Amplitude or frequency modulation
- Linear and logarithmic sweep modes
- Duty cycle, VCF and dc offset control
- Switchable 20 dB attenuator for low level signals



FG3C-U



BDM40

Note: all three models are capable of 220 V and 117 V operation. They include both sets of line cords and fuses.

Pick the function generator that is right for you.

	FG3C-U	FG2C-U
Measurement		
Frequency ranges	7 Ranges, 0.3 MHz to 3 MHz	7 Ranges, 0.3 MHz to 3 MHz
Output amplitude	20 Vp-p open circuit	20 Vp-p open circuit
Sine wave distortion	<1 %, 0.3 to 200 kHz	<1 %, 0.3 to 200 kHz
AM: Depth	0 to 100 %	
AM: Mod. frequency	400 Hz (int), dc to 1 MHz ext	
Carrier bandwidth	100 Hz to 3 MHz (-3 dB)	
FM: Deviation	0 to +/- 5 %	
FM: Mod. frequency	400 Hz (int) dc to 20 kHz (ext)	
Features		
Display, freq. adj.	6 digit, 0.3 in. high LED	Dial control
Power supply	115 V ac or 230 V ac, 60 Hz or 50 Hz	115 V ac or 230 V ac, 60 Hz or 50 Hz
Ships with	Test cables, spare fuses and manual	Test cable, spare fuses and manual
Warranty	One-year	One-year

Benchtop Meter with True-rms, BDM40

High resolution and ranges for a low cost makes this benchtop multimeter ideal for production test, QA test, depot service and university or school labs.

- True-rms, 4-1/2 digit, 20,000-count
- AC or ac + dc input coupling
- High accuracy, basic V dc 0.03 %
- Voltage to 1200 V dc, 1000 V ac
- Current from 10 nA to 20 A
- Resistance from 10 Ω to 20 M Ω
- Interlocking push-button control for easy selection
- One-year warranty



Clamp meters and amp clamps



AC40A

Compact clamp multimeter measures up to 400 A ac plus voltage, resistance and continuity.

- Measures low ac current in 40 A
- 10 mA resolution in 40 A range
- 600 V ac and dc range
- 4000-count display with bargraph
- Autoranging, Data Hold and auto-off

Note: Also available as the AD40A as a mini clamp ammeter, See chart for performance details.



AC40A

AC65

Rugged true-rms ac clamp multimeter measures non-linear load current.

- Professional's 600 A ac DMM
- Voltage to 600 V ac
- Resistance and continuity
- Autoranging, Data Hold and 4000-count



AC65

AC68

True-rms clamp with extended features such as frequency combine with an ac/dc current measurement for our most versatile clamp meter.

- Top-of-the-line professional clamp DMM
- AC and dc current to 600 A
- AC and dc voltage to 600 V
- Resistance
- Continuity
- Data and ac peak hold



AC68

AD105

Our top true-rms clamp delivers the widest range of current measurement with ability to measure non-linear loads to 1000 amps.

- Broad range 1000 A, ac and dc ammeter
- 4000-count, true-rms, autoranging and frequency
- Peak hold and dc auto zero
- Belt-clip sleeve case included



AD105

New!

AC50

Current clamp multimeter with leakage current capability.

Current clamp multimeter for measuring low ac current in the microamps.

Great for applications requiring measurement of leakage and fault currents.

- AC current measurement to 60 A
- Leakage current measurements with resolution of 0.01 mA
- AC voltage to 400 V
- Resistance measurement and continuity beeper
- Min/Max control to see largest and smallest values



AC50





AC71

Automatic ac clamp multimeter with backlight.

- Automatic bright blue backlight
- AutoTect™ function selector for ac V, dc V and Ω detection
- Simple one button control
- AC current to 600 A
- AC/DC volts to 750 V/1000 V



AC75

AC clamp multimeter for electrical and HVAC applications.

- Three tools in one: clamp meter, multimeter, thermometer
- Digital thermometer 400 °C (1000 °F), with Type K probe
- AC/DC volts 750 V/1000 V
- 40 M Ω resistance
- Low dc μ Amps for flame rod detector testing
- Capacitance to 4000 μ F for motor run/start testing
- Continuity beeper
- 4000-count large digit display
- Auto power off
- Full overload protection
- Carrying case and heavy duty test leads



Optional accessories

- AC Line Splitter, ELS2
- Test lead kit, DL243C
- Temperature probes, see page 13



AC75

Current transformers

Current clamp transformers are available from Meterman. Use one of these to allow your DMM the capability to measure high ac or dc current. See Accessory page 18 for complete product details.



Pick the clamp that is right for you.

	AD40A	AC40A	AC50	AC65	AC68	AC71	AC75	AD105
Measurement								
DC current					400/600 A		400/4000 μ A	400/1000 A
AC current	40/400 A	40/400 A	60 A	400/600 A	400/600 A	60/400/600 A	400/600 A	400/1000 A
True-rms				•	•			•
DC voltage		600 V			600 V	1000 V	1000 V	
AC voltage		600 V	400 V	600 V	600 V	750 V	750 V	
Resistance		400 Ω	400 Ω	40 k Ω	40 k Ω	2000 k Ω	40 M Ω	
Continuity		•	•	•	•	•	•	
AutoTect™						•		
Capacitance							4000 μ F	
Frequency					20 kHz			10 kHz
Temperature							1300 °C (2372 °F)	
Features								
Counts	4000	4000	4000	4000	4000	6000	4000	4000
Auto power off	•	•	•				•	
Analog bar graph	•	•	•					
Backlight						•	•	
Min/Max			•					
Data Hold	•	•	•	•	•	•	•	
Jaw size	1 in (2.54 cm)	1 in (2.54 cm)	1.3 in (3.3 cm)	1.6 in (4.06 cm)	1.6 in (4.06 cm)	1.3 in (3.3 cm)	1.3 in (3.3 cm)	2 in (5.08 cm)
Ships with	Carry case	Carry case, test leads	Heavy-duty test leads, carry case	Carry case, test leads	Carry case, test leads	Carry case, test leads	Type K temp. probe, temp. adapter, carry case, test leads	Carry case
Safety rating	CAT III 600 V	CAT III 600 V	CAT II 600 V	CAT II 600 V, CAT III 300 V	CAT III 600 V	CAT II 1000 V, CAT III 600 V	CAT II 1000 V, CAT III 600 V	CAT III 1000 V
Warranty	One-year	One-year	One-year	One-year	One-year	One-year	One-year	One-year



TPP1-F/TPP1-C Immersion probe pocket thermometer.

- Fahrenheit and Celsius versions
- 0.1 °C (0.1 °F) resolution
- Easy-to-read digital display
- Data Hold to freeze display
- Long battery life, 200 hours typical
- Temperature ranges -50 °C to 250 °C (-50 °F to 480 °F)
- Protective probe sleeve with pocket clip (TPP1 only)



TPP2-F/TPP2-C Same features as TPP1 but with a surface probe for flat surface contact.



HVAC testers and infrared thermometers

TMD90

Dual input digital thermometer with triple display.

- Triple display of T1, T2, T1 - T2, and relative time stamp
- Ideal for HVAC/R technicians, electricians, research, industrial process and quality control
- Dual inputs for easy super-heat and sub-cool temperature measurements
- Dual channel real time data acquisition with RS-232 output with optional software and cable, Model TM-SW
- Backlight
- Deluxe hard carrying case, two Type K probes

Thermocouple	Temperature Ranges	Accuracy
Type K	200 °C to 1370 °C (328 °F to 2498 °F)	0.1 % rdg + 0.7 °C (0.1 % rdg + 1.4 °F)
Type J	-200 °C to 760 °C (-328 °F to 1400 °F)	0.1 % rdg + 0.7 °C (0.1 % rdg + 1.4 °F)
Type T	-200 °C to 390 °C (-328 °F to 730 °F)	0.1 % rdg + 0.7 °C (0.1 % rdg + 1.4 °F)
Type R and S	0 °C to 1760 °C (32 °F to 3200 °F)	0.3 % rdg + 0.7 °C (0.1 % rdg + 1.4 °F)
Type E	-200 °C to 736 °C (-328 °F to 1832 °F)	0.3 % rdg + 0.7 °C (0.1 % rdg + 1.4 °F)

TMA10

Anemometer with flexible precision vane.

- Measure air velocity FPM or air volume CFM
- Input the surface area for accurate air flow measurements
- Flexible vane sensor
- Precise thermistor for temperature measurements
- Continuous moving average results for up to two hours
- MIN/MAX/AVG readings
- Air velocity average for eight multiple points
- Data hold to freeze measurement display of both readings
- Deluxe hard carrying case

Optional accessories

- RS-232 interface output with optional software and cable, TM-SW

Measurement	Range	Resolution	Accuracy
Air velocity	0.40 to 25.00 m/s	0.01 m/s	± 2 % of full scale
Air flow	125 to 4900 ft/min	1 ft/min	± 2 % of full scale
Air flow	0.01 to 99.99 m ³ /sec Area: 0 to 9.999 m	0.01	± 2 % of full scale
Air flow	1 to 9999 ft ³ /min Area: 0 to 9.999 ft	1.0	± 2 % of full scale
Air temperature °C (°F)	0 °C to 50 °C (32 °F to 122 °F)	0.1 °C/(°F)	± 0.8 °C (1.5 °F)

TRH22

Relative humidity and temperature meter.

- Precision capacitance sensor to deliver accurate performance
- Large dual display of RH and temperature
- Complete with carrying case, battery and wet bulb chart
- Min/Max/Data Hold

Measurement	Ranges	Accuracy	Resolution
Relative humidity	0 to 100 %	5 % RH to 95 % RH ± 3 % RH	0.1 % RH
Ambient temperature	-20 °C to 60 °C (-4 °F to 140 °F)	± 0.8 °C (± 1.6 °F)	0.1 °C (0.1 °F)



New! IR608

Compact infrared thermometer with a laser pointer for easy targeting

A quick and effective diagnostic tool for identifying problems in a wide variety of applications like HVAC/R, fire safety and protection, industrial maintenance automotive and quality control.

- "Pistol grip design" for comfortable grip
- Display Hold
- Backlit display

Range	-18 °C to 400 °C (0 °F to 750 °F)
Distance to spot size	8:1 ratio
Accuracy	± 2 % of reading or ± 3.5 °F (± 2 °C), whichever is greater
Response time	500 mSec, 95 % response
Emissivity	Pre-set 0.95



IR610

Infrared Thermometer.

- Laser pointer for accurate targeting
- Measures to 260 °C (500 °F), front panel switchable
- Narrow 10:1 field of view measures 1 in. at 10 in. distance
- Large 3-1/2 digit display with backlight
- Data Hold, low battery indicator
- Fixed emissivity at 0.95
- Rugged Valox® case
- Shipped with carrying case and batteries

Range	-20 °C to 260 °C (0 °F to 500 °F)
Resolution	1 °C (1 °F)
Accuracy	± 3 % of rdg or ± 3 °C (± 6 °F)

IR610



TM45

Type K single input thermometer for HVAC/R contractor, plant maintenance, commercial building service.

- Unique, mini-stick design thermometer
- Small, go-anywhere size
- Type K thermocouple compatible
- °F/°C and 1°/0.1° selectable
- Data and max hold
- Type K probe and carrying case included

1 °F range	-58 to 1999; ± 0.3 % ± 2 °F
0.1 °F range	-58.0 to 199.9; ± 0.3 % ± 2 °F
1 °C range	-50 to 1300; ± 0.3 % ± 1 °C
0.1 °C range	-50.0 to 199.9; ± 0.3 % ± 1 °C

TM45



TC253A

Adds thermometer function to any DMM.

- °C/°F switchable
- Uses type K thermocouple sensor
- Includes TP255 Type K probe

Range	-50 °C to 1000 °C (-58 °F to 1832 °F)
Output	1 mV/°



MH101K

Thermocouple

- Master probe handle for probes below
- Concept saves money when
 - two or more probe styles are used
 - replace only probes if damaged
- 5:1 expandable coiled extension wire



TP110K

- Immersion probe tip
- 650 °C (1200 °F)
- Use with MH101K handle



TP120K

- Surface probe tip
- Specially designed to get true surface temperatures
- 650 °C (1200 °F)
- Use with MH101K handle



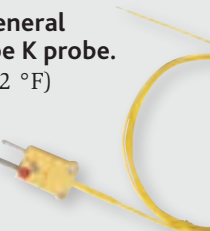
TP130K

- Air/gas probe tip
- Specially designed with radiation sheath
- 650 °C (1200 °F)
- Use with MH101K handle



TP255

- Low-cost, general purpose Type K probe.
- 200 °C (392 °F)



TP254

Higher-temperature immersion probe.

- Attached handle
- 1100 °C (2012 °F)



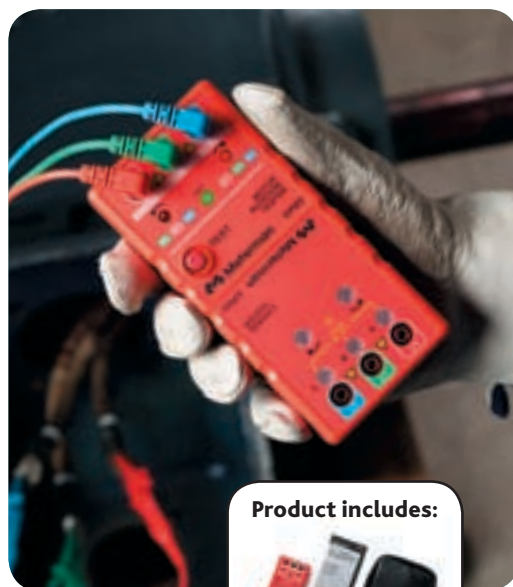
Electrical testers

EPM3

Phase Sequence and Motor Rotation Tester.

Compact three function tester.

- Identify proper phase sequencing of live three phase line voltages
- Determine three phase motor rotation direction
- Check for open phase status
- Bright LED illuminators to clearly indicate test results
- Includes three color coded test leads with large alligator clips
- Convenient carrying case for portability and storage
- CE, IEC1010, EN61557-7, TUV, cCSAus and CAT III 600 V rated



Product includes:



ECB50

Circuit Breaker Finder.

Three testers in one: identify circuit breaker to an electrical socket, trace ac cables in walls and sort wires in a bundle.

- Microprocessor controlled
- Coded transmission allows easy separation of transmitter signal
- Audible and visual indicators
- Low battery indicator
- Cable tracing depth up to 40 cm (16 in)
- NEMA 5-15 plug
- One-year warranty



*Shuko CEE 7/4 version available, CAT III 300 V, sold as Model ECB50-FGIS.
British standard BS 1363 version available, CAT III 300 V, sold as Model ECB50-E.*

LM631

Digital Light Meter.

- Measures wide range of light up to 20,000 fc or lux, front panel switchable
- Sensor dome has 114 cm (45 in) attached cord
- Built-in CIE spectrum curve for accurate human eye response
- Peak Hold and Data Hold
- Large 3-1/2 digit display with backlight
- Rugged Valox® case
- Shipped with carrying case, extra lens cover and batteries

Four Ranges	Accuracy	Resolution
20, 200, 2000, 20000 lux	± (3 % rdg + 10 dgts)	0.01 lux; 0.01 fc
20, 200, 2000, 20000 fc		



ST101

Socket Tester.

- Fast and easy socket test
- Easy-to-read light indicators
- Confirm proper wiring and operation of ac socket
- For use on 110 V to 125 V ac
- cULus listed

Not available in all countries.

ST102

GFCI Socket Tester.

- Test 110 V to 125 V ac GFCI breakers for proper wiring and operation
- GFCI circuit trips to confirm tester is working
- cULus listed

Not available in all countries.

VT101

Voltage Tester.

- Bright neon light indicates ac voltage
- Identify ac voltage from 90 V to 500 V ac
- Tests two wire and three wire ac outlets
- cULus listed

Not available in all countries.

VT102

Voltage Tester.

- Four bright neon lights indicate ac voltage
- Four ranges indicated from 110 V to 460 V ac
- Tests two wire and three wire ac outlets
- cULus listed

Not available in all countries.

VT201

Non-Contact Voltage Detector.

- Quickly check for the presence of ac voltages, with no electrical contact
- Safe non-contact detection of voltages from 70 V to 440 V ac
- Both visible and audible indicators
- Detector emits loud audible chirping
- Bright flashing LED
- Batteries included
- UL and CE listed

ST101

ST102

VT101

VT102

VT201



New!

VT500

Two pole voltage tester.

Meterman's VT500 is a two-pole tester that uses six LEDs to indicate voltages from 12 V to 400 V, either ac or dc. No battery is required; it is powered from the unit under test. The VT500 is an inexpensive way to measure voltage presence either ac or dc and display amplitude thresholds.

- One-year warranty

Voltage	12 V to 400 V ac/dc
Frequency	0 to 60 Hz
Display	Six LEDs, 12 V, 50 V, 120 V, 230 V, 400 V ac or dc
Polarity indication	All ranges ac/dc
Overvoltage category	CAT III 300 V



Specialty handheld testers

LP10A/LP25A

- Pen-size logic probes
- Troubleshoot and analyze digital logic circuits

LP10A: Evaluates most common circuits

Detects pulses > 30 ns up to 17 MHz, TTL, CMOS levels and dual LEDs indicate hi/lo state

LP25A: Increased frequency range

Detects Pulses > 30 ns up to 25 MHz, TTL, CMOS, DTL, RTL, NMOS, MOS Logic, dual LEDs and tone indicate hi/lo state

HV231-10

- High voltage probe
- Extended voltage measuring to 40 kV
- Use with standard multimeters with 10 M Ω input impedance

Handheld component testers

CR50

Capacitor and resistor tester.

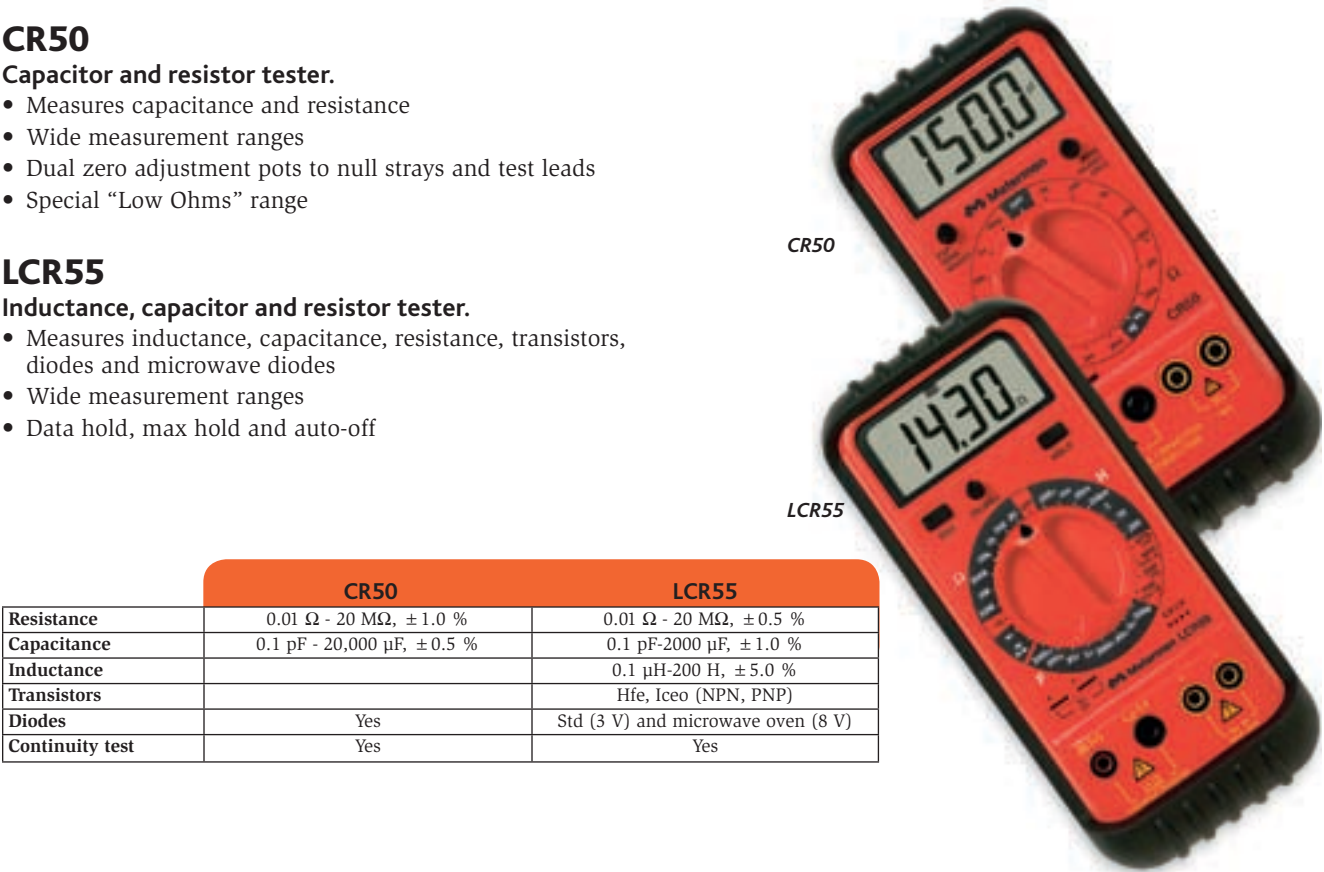
- Measures capacitance and resistance
- Wide measurement ranges
- Dual zero adjustment pots to null strays and test leads
- Special “Low Ohms” range

LCR55

Inductance, capacitor and resistor tester.

- Measures inductance, capacitance, resistance, transistors, diodes and microwave diodes
- Wide measurement ranges
- Data hold, max hold and auto-off

	CR50	LCR55
Resistance	0.01 Ω - 20 M Ω , \pm 1.0 %	0.01 Ω - 20 M Ω , \pm 0.5 %
Capacitance	0.1 pF - 20,000 μ F, \pm 0.5 %	0.1 pF-2000 μ F, \pm 1.0 %
Inductance		0.1 μ H-200 H, \pm 5.0 %
Transistors		Hfe, I _{ceo} (NPN, PNP)
Diodes	Yes	Std (3 V) and microwave oven (8 V)
Continuity test	Yes	Yes



General purpose testers

AM8B

Analog multimeter for the home, car or workshop.

- High sensitivity taut band movement
- Five functions/15 ranges
- Battery test
- Ohms zero adjust
- Holster included
- Compact size

DM7

Compact multimeter for field service.

- Six functions/14 ranges
- Special loading to test household batteries
- 2000-count
- Holster included

DM9

Compact autoranging meter for general purpose testing.

- Higher resolution, 4000-count autoranger
- Eight functions/19 ranges
- Continuity beeper
- Special loading to test household batteries
- Holster included

DM78A

Voltage, continuity, diode and resistance in a credit card size meter.

- Five functions/16 ranges
- Auto power off, Data Hold
- Protective case included
- 3200-count display with analog bar graph



DM73B

Meter with built-in test probe for one-hand operation.

- Unique pen shape autoranger
- Two probe tip lengths 1.27 cm (0.5 in) and 7.62 cm (3 in)
- One hand operation with ground alligator clip
- 3400-count display with analog bar graph
- Data hold, Auto-off

Optional accessories

- Replacement probe tips for DM73B meter, TP73B



Pick the pocket size meter that is right for you.

	AM8B	DM7	DM9	DM78A	DM73B
Measurement					
Volts ac/dc	300 V	600 V	600 V	600 V	600 V
Current	250 mA dc	200 mA dc	400 mA ac/dc	N/A	N/A
Resistance	2 MΩ	2 MΩ	40 MΩ	32 MΩ	34 MΩ
Continuity beeper			•	•	•
Battery test	1.5 V, 9 V	1.5 V, 9 V	1.5 V, 9 V		
Features					
Style	Analog	Digital with manual range	Digital with auto range	Digital with auto range	Digital with auto range
Counts	N/A	2000	4000	3200	3400
Auto power off				•	•
Analog bar graph				•	•
Data Hold				•	•
Ships with	Holster	Holster	Holster	Protective case	Alligator clip, ground test lead, three probe tips and installed batteries
Safety rating	CE, CAT II 300 V	CE, CAT II 600 V	CE, CAT II 600 V	CE, UL, CAT II 300 V	cULus, CAT III 300 V, CAT II 600 V
Warranty	One-year	One-year	One-year	One-year	One-year

Accessories and fuses

Accessories cross-reference guide

Model	Description	XR Series	HD Series	XP Series	PM Series	DM73B	LCR55/CR50	DM7/DM9	AM88/DM2
Carrying Cases									
VC3	Zippered denier				•				
VC11	Vinyl					•			
VC20	Padded vinyl, zipper								•
VC30	Padded vinyl, zipper, belt loop			•			CR50	•	
VC221A	Padded vinyl, zipper, belt loop	•	•				LCR55		
DC205B	Deluxe case, shoulder strap	•	•						
DC207B	Deluxe case with clamp pocket	•	•						
Test Leads and Probe Tips									
TL35A	Standard leads with alligator clips, .15 cm (0.6 in) jaw	•	•	•			•		
TL36	Standard leads with alligator clips, .1 cm (0.4 in) jaw	A	•	•			A		
TL244A	Heavy duty leads, silicone, 121.9 cm (48 in) long, Ever Sharp™ tips, alligator clips	•	•	•			•		
TL245	Standard leads, shrouded 90° banana plugs	•	A	A			•		
TL246B	Silicone leads with large alligator clips	•	•	•			•		
TL73B	Replaceable ground test lead with alligator clip					•			
TP73B	Replacement probe tips					•			
DL243C	Basic test lead kit, silicone	•	•	•			•		
DL248C	Deluxe test lead kit, silicone	•	•	•			•		
Other Accessories									
H-PM	Silicone holster				•				
TC253A	Temperature converter	B	B	B					
XR-TA	Temperature adapter	C							
38-SW	RS-232 cable and software, DMM	D							
TM-SW	RS-232 cable and software, HVAC	E							

Notes

A: Originally supplied with instrument

B: TC253A not required for 35XP, 33XR, 34XR and 38XR

C: Models 35XP, 33XR, 34XR, 38XR and AC75

D: Model 38XR Only

E: Models TMA10 and TMD90 only

Current transformers

CT231A

- AC current clamp, 200 A (50/60 Hz)

CT237

- AC/DC current clamp, 200 A (50/10 kHz)

Wide ac bandwidths

CT235

- AC/DC current clamp, 1000 A (50/10 kHz)

CT238

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



	CT231A	CT235	CT237	CT238
Current range	200 A ac	1000 A ac/dc	200 A ac/dc	20 A ac/dc
Output	mA	mV	mV	mV
Conductor max	1.98 cm (0.78 in)	3.05 cm (1.2 in)	1.91 cm (0.75 in)	1.91 cm (0.75 in)
Warranty	One-year	One-year	One-year	One-year

ELS2

AC Line Splitter.

- Measures load current without splitting line cord
- Two measurement points, X1 and X10 for increased sensitivity
- Built-in voltage measurement jacks
- One-year warranty

(not available in all countries)





H-PM Silocon Holster



VC3 Rugged Zippered Carrying case



TL245 PVC Insulated Lead Wires



**DC205B Deluxe Case
DC207B Heavy Duty Case**



DL243C Basic Test Lead Kit



TL246B Silicone Leads



VC11 Vinyl Case



DL248C Deluxe Test Lead Kit



TL35A Standard Leads



**VC20 Vinyl Carrying Case
VC30 Vinyl Case
VC221A Vinyl Carrying Case**



TL244A Heavy-Duty Silicone Leads



TL36 Test Leads with threaded alligator clips



TL73B Replaceable Ground Test Lead

TM-SW

Optional RS-232 cable and software for TMA10 and TMD90.

- Record two channels simultaneously
 - T1 and T2 with TMD90
 - Air flow and temperature with TMA10
- Store results for further analysis



TP73B

Replacement probe tips for DM73B meter.

- 1.27 cm (0.5 in) and 7.62 cm (3 in) probe tip lengths

Fuse replacement chart

Model Noun	FP100	FP125	FP150	FP160	FP200	FP225	FP260	FP300	FP375	FP425	FP500	FP600	FP900
Current/Volt Rating	10 A 1000 V	0.1 A 250 V	0.20 A 250 V	10 A 600 V	2 A 1000 V	0.5 A 250 V	2 A 600 V	0.315 A 1000 V	0.25 A 700 V	20 A 600 V	0.5 A 1000 V	15 A 600 V	0.2 A 700 V
30XR				•					•				
33XR/34XR	•							•					
37XR/38XR	•										•		
HD110B/HD115B		•(Cap) (HD115)					•					•	
HD160B									•	•			
5XP								•					
15XP/35XP					•								
CR50/LCR55		•(Cap)											
AM8/AM8B			•										
DM7			•										
DM9						•							
EPM3													•

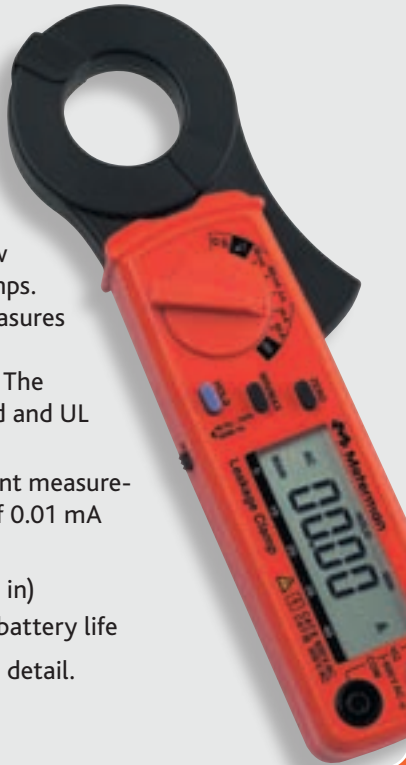
Current clamp multimeter designed for leakage current

Model AC50

A meter for measuring low AC current in the microamps. Plus this versatile unit measures up to 60 A ac, ac voltage, resistance and continuity. The AC50 is CAT II 600 V rated and UL listed.

- MicroAmp leakage current measurements with resolution of 0.01 mA
- AC voltage to 400 V
- Jaw opening 30 mm (1.2 in)
- Auto-power-off to save battery life

See page 10 for additional detail.



Two pole voltage tester

Model VT500

Meterman's VT500 is a two-pole tester that uses six LEDs to indicate voltages from 12 V to 400 V, either ac or dc. No battery needed as it is powered from the unit under test. An inexpensive way to measure voltage presence either ac or dc. Cat III rated and UL listed.

- Voltage 12 V to 400 V ac/dc
- Frequency 0 to 60 Hz

See page 15 for additional detail.



www.metermantesttools.com

Find the distributor closest to you with our "Where to Buy" distributor listing.

Our web site contains full data sheets with specifications, application notes, special promotions and much more.



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website: www.metermantesttools.com
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6920 Seaway Blvd.
Everett, WA 98203
fax: 425-446-4882
tel: 877-596-2680

Meterman Test Tools Europe
P.O. Box 1186
5602 BD Eindhoven
The Netherlands

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