Meterman®

EPM3

TRH22

2005

Test Tools Catalog

PM55

38XR

New!
AC75 Clamp Multimeter

AC75

HOLD

COM

CAT III
1000 V
CAT III
600 V

Introducing the New PM Series
The world's smallest full-featured CAT III multimeters

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

What's innovative?

- **Simplified interface** with easy one-touch button control, oversize 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 3/8 inch (.95 cm) thick and weighs less than 3 ounces (85 g).

- **Safety standards** designed in each meter to meet CAT III safety standards and are UL certified.

AutoTect™ feature, automatically measures ac volts, dc volts and resistance

PM55
Automatic Precision Pocket Multimeter

This unique meter has a full complement of features and offers the utmost in shirt pocket portability. The PM55 is fully autoranging with an oversized, easy-to-read digital display.

- AutoTect™ feature detects and displays ac volts, dc volts or resistance
- VolTect™ feature, a built-in ac voltage detector
- Fully safety rated to CAT III and cULus levels
- Extra features of capacitance, frequency and microamp current
- Option of Low Z or Hi Z input impedance
- Transient protected to 4 kV
- Includes protective holster and denier carrying case

VolTect™
Non-contact voltage detector

Intelligent
Auto power off

Hi Z Voltage
DC V and AC V 6 V to 600 V, 3 ranges

Fully Auto-Ranging

6,000 Counts
Large easy-to-read LCD display

Audible Continuity

Diode Test

AutoTect™ Feature
(Automatic DC V, AC V and ohms selection, low Z voltage)

Micro-Amps AC/DC
To 2000 µA for flame sensor testing

AutoTect™ Ohms
to 6 MΩ

Capacitance
to 2000 µF

Frequency
to 30 kHz (Auto-VΩ position)

Easy push button
Function selector

Fire-Retarded Material
Thick wall housing

Transient Protection
Up to 4 kV 1.2/50 µs lightning surge

600 V Input Protection
On all functions

UL Listed
to UL61010B-1 CAT III 300 V and CAT II 600 V

VolTect™
Non-Contact Voltage Detector

PM53

Shirt-Pocket Size Digital Multimeter with AutoTect™

This unique meter is right-sized for portability. Model PM53 is fully autoranging and has a large, easy-to-read digital display. It offers the AutoTect™ feature that guides the meter to display ac volts, dc volts or resistance based on what you are measuring. Also offered is VolTect™, a built-in non-contact voltage detector of ac voltages. Although very small, this meter is fully UL safety rated to CAT III levels. The Meterman PM53 includes measurement extras such as capacitance, frequency and continuity plus safety extras such as transient protection to 4 kV and overload protection to 450 V.

- Non-contact ac voltage detection, VolTect™ feature
- Automatic mode selection between ac volts, dc volts and resistance, AutoTect™ feature
- Frequency measurements to 30 kHz
- Capacitance range to 2000 µF
- Low Z input impedance eliminates ghost voltage readings
- Includes protective holster

Optional accessories
Deluxe carrying case, VC3

PM51

Pocket Size Multimeter w/Frequency and Capacitance

The PM51 meter is a shirt-pocket size meter only 2 inches (5.1 cm) wide and weighing less than 3 oz. (85 g) With a full functionality offering ac and dc voltage to 600 V, resistance to 40 MΩ, capacitance to 300 µF, frequency to 1 MHz, continuity with beeper, and diode test. Fully autoranging, the PM51 offers seven different measurement functions with 27 full ranges of measurement. The digital display is oversized with large digits and icons in the display. In spite of its small size, the PM51 is full safety rated to CAT III 300 V, CAT II 600 V and is UL listed. No other meter offers this size with such performance and high safety ratings.

- Frequency measurements to 1 MHz
- Capacitance range to 3000 µF
- Resistance to 40 MΩ
- Continuity and Diode Test

Optional accessories
Deluxe carrying case, VC3
Protective silicone holster, H-PM

Pick the multimeter that is right for you.

	PM51	PM53	PM55
Fully Autoranging	Yes	Yes	Yes
Large LCD display w/icons	4000 count	6000 count	6000 count
Basic Accuracy	1 %	0.50 %	0.50 %
AC/DC Voltage	600 V	450 V	600 VΩ
AutoTect Ohms	—	6 MΩ	6 MΩ
Non-AutoTect Ohms	40 MΩ	—	600 Ω
Continuity with Beeper	Yes	Yes	Yes
Diode Test	Yes	No	Yes
Capacitance	3000 µF	100 µF	2000 uF
Frequency	1 MHz	10 kHz	30 kHz
µAmps AC/DC Current	—	—	2000 uA
AutoTect™	—	Yes	Yes
Voltect™	—	Yes	Yes
Safety Ratings	CAT II 600 V CAT III 300V	CAT II 450 V CAT III 300V	CAT II 600 V CAT III 300V
Safety Approvals	cULus, CE	cULus, CE	cULus, CE
Warranty	One-year	One-year	One-year

PM series user selection guide

	PM51	PM53	PM55
Facilities & Building Maintenance	✓	✓	—
Electronics Technicians & Engineers	—	—	✓
Field Service Technician	—	—	✓
Residential/ Commercial Electrician	—	✓	✓
Industrial Electrician	—	—	✓
HVAC Technician	—	—	✓
Plant Maintenance	—	—	✓
Engineering Students	✓	—	✓
Automotive Technician	✓	✓	—
Hobbyist	✓	✓	—
Homeowner	✓	✓	—
Computer Technician	—	✓	✓
Medical Equipment Technician	—	—	✓
Aircraft Service Technicians	—	—	✓

UL and EC ratings

UL and EN61010-1 voltage ratings

EN61010-1 category and voltage ratings on multimeter products

## International Safety Standards for Digital Multimeters

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

CAT II
Appliances, portable tools, single-phase receptacle loads

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.
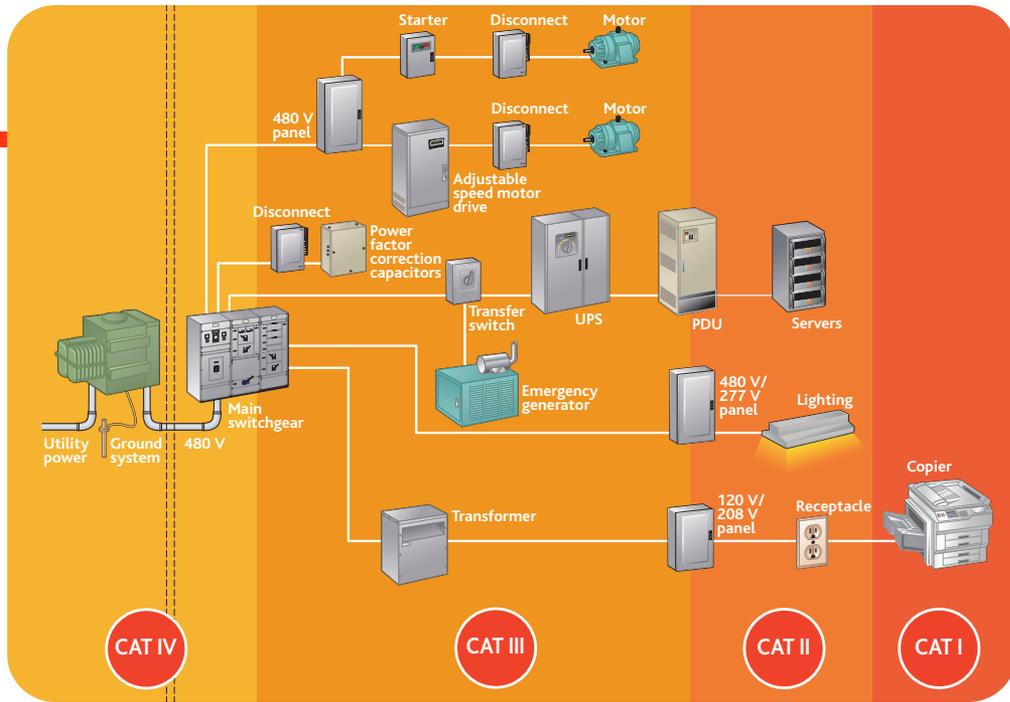
	UL	U-CSA-C	CAT I	CAT II	CAT III	CAT IV
Multimeters						
30XR	Yes	cULus		600 V	300 V	
33XR	Yes	cULus		1000 V	600 V	
34XR	Yes	cULus		1000 V	600 V	
37XR	Yes	Yes		1000 V	600 V	
38XR	Yes	Yes			1000 V	600 V
5XP		Yes	1000 V	600 V	300 V	
15XP		Yes	1000 V	600 V	300 V	
35XP		Yes	1000 V	600 V	300 V	
AM8				300 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		cULus		600 V	300 V	
PM53		cULus		450 V	300 V	
PM55		cULus		600 V	300 V	
Electrical						
ECB50	Yes				150 V	
EPM3		Yes			600 V	
Clamp Meters						
AC40A					600 V	
AC65				600 V	300 V	
AC68	Yes	Yes			600 V	
AC71		Yes		1000 V	600 V	
AC75				1000 V	600 V	
AD105					1000 V	
AD40A					600 V	
Current Clamps						
CT231A					600 V	
CT235					300 V	
CT237					300 V	
CT238					300 V	
Bench Top Meter						
BDM40					1000 V	

All of the products shown in this catalog are CE marked and for sale in the EC except: DM2, TP probes, HD110, HD110T, TL246B.

CE N10140

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 and short-finders to meet any 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.

![Meterman logo](M Meterman®)

Table of Contents

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.

www.metermantesttools.com

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

Visit our web site for full data sheets with specifications, application notes and special promotions.

XP Series Compact Multimeters

The XP Series digital multimeters are full-featured, very accurate, and compact in size. Some of the unique features include VolTect™ a built-in non-contact voltage (NCV) detector, temperature measurement, CAT III safety ratings, and our exclusive Magne-Grip™ holster that frees both hands for work. There are three models designed to fit your applications.

Measures temperature. Type K thermocouple included with the 35XP.
(Shown with optional accessories MH101K and TP130K, see page 11)

Available on all XP Series meters.

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

Triple safety rating Protects against line surges and over-voltage conditions.

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

VolTect™
Non-Contact
Voltage Detector

35XP

A compact, full-featured digital multimeter for plant maintenance, HVAC, electrical and electronics applications.

The 35XP is the right choice for HVAC, plant maintenance technicians and residential electricians.

- Temperature measurement capability to 1000 °C/1832 °F (Type K thermocouple included)
- 750 V ac/1000 V dc – highest voltage rating in this class of meter
- Capacitance for motor run/start test
- 0.1 µA resolution for flame sensor testing
- Frequency to 40 MHz
- Resistance to 40 MΩ
- Data Hold freezes display

Optional accessories
Carrying case, VC30
Test lead kit, DL243C

CAT I 1000 V   CAT II 600 V   CAT III 300 V

Product includes:
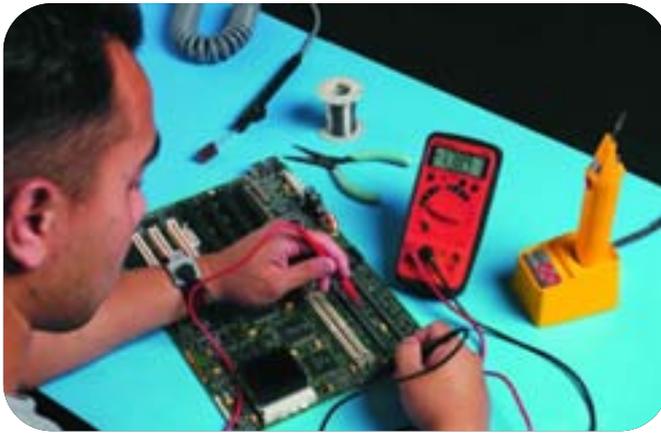
15XP
A compact digital multimeter for electronics and test applications

The 15XP is the right choice 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
- Data Hold freezes display to "hold" measurement reading
- 750 V ac/1000 V dc – highest voltage rating in this class of meter

Optional accessories
Carrying case, VC30
Test lead kit, DL243C

CAT I 1000 V CAT II 600 V CAT III 300 V

5XP
A compact full-purpose multimeter

The 5XP is the right choice for residential, commercial and general troubleshooting applications.

- 27 ranges/10 functions – a complete performance, general purpose digital multimeter
- 750 V ac/ 1000 V dc – highest voltage rating in this class of meter
- Battery load test with 1.5 volt and 9 volt capabilities
- Min/Max records minimum and maximum values
- Data Hold freezes display to "hold" measurement reading

Optional accessories
Carrying case, VC30
Test lead kit, DL243C

CAT I 1000 V CAT II 600 V CAT III 300 V

Product includes:

Product includes:

Pick the multimeter that is right for you.

	5XP	15XP	35XP
Display	Large digit 2000-count display	Autoranging, large digit 2000-count display	Autoranging, large digit 4000-count display
Basic Accuracy	1 %	0.5 %	0.5 %
AC/DC Volts	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	Yes	Yes	Yes
VolTect™	70 V to 600 V ac	70 V to 600 V ac	70 V to 600 V ac
Special Features	Data Hold and MIN/MAX 1.5 V, 9 V battery test (with load for accurate reading)	TTL Logic test to 20 MHz 0.1 mV AC/DC voltage resolution 0.1 mA AC/DC current resolution	Temperature to 1000 °C (1832 °F) Type K Probe included Frequency to 40 MHz Capacitance to 4,000 µF Auto Power Off
Warranty	One-year	One-year	One-year

See the larger, more feature-rich multimeters— the XR Series on pages 8 and 9

XR Series

38XR

True RMS digital multimeter with optical PC interface
- 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 2372 °F/1300 °C, 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

CLASSIFIED ⓊL 54CJ   CE   CSA   CAT III 1000 V   CAT IV 600 V

38XR

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

C ⓊL US   CE   CSA   CAT II 1000 V   CAT III 600 V

37XR

34XR

True RMS with temperature and backlight

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 1832 °F/1000 °C with a type K thermocouple included
- Magne-Grip™ Holster with magnetic hanging strap
- Data Hold, Min/Max and bar graph

Three-year warranty

C ⓊL US   CE   CAT II 1000 V   CAT III 600 V

34XR

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.

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

DMM with 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 MΩ	4 MΩ	40 MΩ	40 MΩ	40 MΩ
Continuity	•	•	•	•	•
Diode	•	•	•	•	•
Non-contact voltage detect	•				
Capacitance		4000 µF	4000 µF	400 µF	400 µF
Frequency		40 MHz	40 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 RS232 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

HVAC Testers

TMD90

Dual input digital thermometer with triple display
- High accuracy, multiple type input thermometer
- Ideal for HVAC/R technicians, electricians, research, industrial process, quality control
- Dual inputs for easy super-heat and sub-cool temperature measurements
- Dual channel real time data acquisition with RS232 output with optional software and cable, Model TM-SW
- Triple display of T1, T2, T1 – T2, and relative time stamp
- Backlight
- Deluxe hard carrying case, two Type K probes

TMD90

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 surface area for accurate air flow measurements
- Flexible vane sensor
- Precise Thermistor for temperature measurements
- Continuous moving average results for up to 2 hours
- MIN/MAX/AVG readings
- Air velocity average for multiple point
- Data hold to freeze measurement display of both readings
- RS232 interface output with optional software and cable, Model TM-SW
- Deluxe hard carrying case

TMA10

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 m3 /sec Area: 0 to 9.999 m	0.01	± 2 % of full scale
Air Flow	1 to 9999 ft3 /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

TRH22

Relative humidity and temperature meter
- Relative function monitors humidity and temperature changes
- 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

TPP2-F/TPP2-C

Surface probe pocket thermometers with flat surface contact
- Fahrenheit and Celsius versions
- 0.1 °F / 0.1 °C resolution
- Easy-to-read digital display
- Data hold to freeze display
- Long battery life, 200 hours typical
- Temperature ranges -50 °F to 480 °F (-50 °C to 250 °C)

TPP1-F/TPP1-C

Same features as TPP2 but with an immersion probe tip
- Protective probe sleeve with pocket clip

TM-SW

Optional RS232 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

IR610

Infrared Thermometer

- Laser pointer for accurate targeting
- Measures to 500 °F (260 °C), 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	Resolution	Accuracy
-20 °C to 260 °C (0 °F to 500 °F)	1 °C (1 °F)	± 3% of rdg or ± 3 °C (± 6 °F)

IR610

LM631

Digital Light Meter

- Measures wide range of light up to 20,000 fc or lux, front panel switchable
- Sensor dome has 45 in. (114 cm) 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 20, 200, 2000, 20000 fc	± (3 % rdg + 10 dgts)	0.01 lux; 0.01 fc

LM631

TM45

Ideal 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 DMM

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

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

TC253A

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
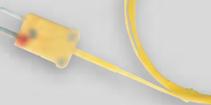
TP255

Low-cost, general purpose Type K probe

- 200 °C/392 °F

TP254

Higher-temperature immersion probe

- Attached handle
- 1100 °C/2012 °F

Clamp Meters and Amp Clamps

AC75
AC clamp multimeter for electrical and HVAC applications

- Three tools in one: clamp meter, multimeter, thermometer
- Digital thermometer 1000 °F (400 °C), with Type K probe
- AC/DC volts 750 V/1000 V
- 40 MΩ resistance
- Low dc µAmps for flame rod detector testing
- Capacitance to 4000 µF for motor run/start testing
- Continuity beeper
- 4000-count large digit display
- Auto power off
- Full overload protection
- CAT II 1000 V, CAT III 600 V safety rated
- One-year warranty
- Carrying case

Product includes:

New!
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
- CAT II 1000 V, CAT III 600 V safety rated

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)

Pick the clamp meter that is right for you.

	AD40A	AC40A	AC65	AC68	AC71	AC75	AD105
AC Current	40/400 A	40/400 A	400/600 A	400/600 A	60/400/600 A	400/600 A	400/1000 A
True RMS	–	–	Yes	–	–	–	Yes
AC Voltage	–	600 V	600 V	600 V	750 V	750 V	–
DC Current	–	–	–	400/600 A	–	400/4000 µA	400/1000 A
DC Voltage	–	600 V	–	600V	1000V	1000 V	–
Resistance	–	400 Ω	40 kΩ	40 kΩ	2000 kΩ	40 MΩ	–
Frequency	–	–	–	20 kHz	–	–	10 kHz
Continuity	–	Yes	Yes	Yes	Yes	Yes	–
Jaw Size	1 in (2.54 cm)	1 in (2.54 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)
Carry Case	Included	Included	Included	Included	Included	Included	Included
Warranty	One-year	One-year	One-year	One-year	One-year	One-year	One-year

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
- CAT II 600 V, CAT III 300 V rated

AC68
Extended DMM 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
- CAT III 600 V rated

AD105
Our best 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
- CAT III 1000 V rated

AC40A
Compact clamp multimeter measures up to 400 A ac plus voltage, resistance and continuity. Measures low ac current in 40 A range
- 40 and 400 A ranges
- 600 V ac and dc range
- 10 mA resolution in 40 A range
- 4000-count display with bargraph
- Autoranging, Data Hold and auto-off
- CAT III 600 V rated

AD40A
Compact clamp meter measures up to 400 A ac in tight spaces. Measures low ac current in 40 A range
- 40 and 400 A ac ranges
- 10 mA resolution in 40 A range
- 4000-count display with bar graph
- Autoranging, Data Hold and auto-off
- CAT III 600 V rated

AC40A

AD40A

AC65

AC68

AD105

Current Transformers
CT231A
- AC current clamp, 200 A (50/60 Hz)

Wide ac bandwidths
CT235
- AC/DC current clamp, 1000 A (50/10 kHz)

CT237
- AC/DC current clamp, 200 A (50/10 kHz)

CT238
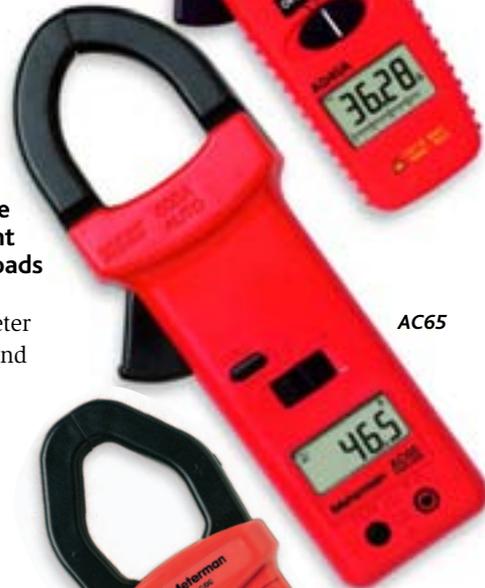- AC/DC current clamp, 20 A (50/20 kHz)
- Low Current version

	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	0.78 in (1.98 cm)	1.2 in (3.05 cm)	0.75 in (1.91 cm)	0.75 in (1.91 cm)
Warranty	One-year	One-year	One-year	One-year

HD Series Heavy-Duty DMMs

HD110/HD110T

Completely sealed and environment proof meters
- V dc accuracy of 0.1 %
- Superior 1500-hour battery life

HD110T
- All the features of the HD110 plus temperature measurement to 1093 °C (2000 °F)
- Type K probe included

Not for sale in EC

HD110B, HD115B, HD160B

Three rugged DMMs constructed for IP67 water proofing and harsh environments
- MIL-PRF-28800 rated
- Drop proof special housing and PCB mounting
- Extra fusing and protection from accidental overloads
- Highest voltage measuring to 1500 V dc and 1000 V ac
- Oversized shock mounted LCD display
- Auto power off
- Unique live voltage safety tester

HD115B also includes
- Digi-Glo™ backlight
- Capacitance

HD160B also includes
- True RMS
- Autoranging, 10,000 count
- Menu Selectable Max/Min, Relative, Probe Hold

HD Series

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

The meters are unusually rugged and reliable in everyday heavy use applications. Each meter is made using waterproof construction to prevent dirt, grime and moisture from entering the case and causing inaccurate readings or damaging shorts.

They are built of tough, fire-retardant thermoplastic resistant to grease and chemical spills, with all sensitive components shock-mounted for a drop resistant to at least eight feet.

Every 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.

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

	HD110	HD110T	HD110B	HD115B	HD160B
Volts	1500 V dc/1000 ac	1500 V dc/1000 ac	1500 V dc/1000 ac	1500 V dc/1000 ac	1500 V dc/1000 ac
Ranging	Manual	Manual	Manual	Manual	Auto
Basic Accuracy	0.1 %	0.1 %	0.1 %	0.1 %	0.1 %
AC Conversion	Average	Average	Average	Average	True RMS
AC/DC Current	10 A, Fused	10 A, Fused	10 A, Fused	10 A, Fused	10 A, Fused
Resistance	20 MΩ	20 MΩ	20 MΩ	20 MΩ	40 MΩ
Capacitance	–	–	–	20 mF	–
Diode/Continuity	Yes	Yes	Yes	Yes	Yes
Display	2000-count	2000-count	2000-count	2000-count	10,000-count
Holster	–	–	Magne-Grip™	Magne-Grip™	Magne-Grip™
Extra Features	1500 hour battery life, high input transient protection	Temperature to 2000 °F (1093 °C), type K probe included, high input transient protection	Data Hold, test leads	Probe Hold Peak Hold Min/Max Digi-Glo™ backlight, test leads	Probe Hold™ Range Lock Min/Max Digi-Glo™ backlight Rel Mode analog bar graph, test leads
Safety Rating	MIL-T-28800	MIL-T-28800	CAT III 1000V IP67 MIL-PRF-28800F	CAT III 1000V IP67 MIL-PRF-28800F	CAT III 1000V IP67 MIL-PRF-28800F

General Purpose Testers

AM8   *DM2*   *DM7*   *DM9*   *DM78A*   *DM73B*

AM8
Analog multimeter for the home, car or workshop
- High sensitivity taut band movement
- 5 functions/15 ranges
- Battery test
- Ohms zero adjust
- Holster included
- Compact size

DM2
Compact multimeter with detachable test leads for the home, car or workshop
- Replaceable, plug-in test leads
- 5 functions/17 ranges
- 2000-count
- Small enough for any tool kit

Not for sale in EC

DM7
Compact multimeter with attached test leads for the home, school or workshop
- 6 functions/14 ranges
- Special loading to test household batteries
- 2000-count
- Holster included

DM9
Compact autoranging meter with battery test function for home office or workshop
- Higher resolution, 4000-count autoranger
- 8 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
- 5 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 0.5 in. (1.27 cm) and 3 in. (7.62 cm)
- Allows one-hand operation
- 3400-count display with analog bar graph
- Data hold, Auto-off

TP73B
Replacement probe tips for DM73B meter
- 0.5 in. (1.27 cm) and 3 (7.62 cm) in. probe tip lengths

Pick the Pocket Size meter that is right for you.

	AM8	DM2	DM7	DM9	DM78A	DM73B
Style	Analog	Digital with manual range	Digital with manual range	Digital with auto range	Digital with auto range	Digital with auto range
Volts ac/dc	500 V	500 V/1000 V	600 V	600 V	600 V	600 V
Current	250 mA dc	200 mA dc	200 mA dc	400 mA ac/dc	N/A	N/A
Resistance	2 MΩ	2 MΩ	2 MΩ	40 MΩ	32 MΩ	34 MΩ
Battery Test	1.5 V, 9 V	N/A	1.5 V, 9 V	1.5 V, 9 V	N/A	N/A
Continuity Beeper	N/A	N/A	N/A	Yes	Yes	Yes
Special Features	Holster	Small tool kit DMM	Holster	Holster	Analog bar graph, Auto Power Off, Data Hold	Analog bar graph, Auto Power Off, Data Hold
Safety Ratings	CE, CAT II 300 V	N/A	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	One-year

Electrical Testers

ECB50
Circuit Breaker Finder

Three testers in one: identify circuit breaker to an electrical socket, trace ac cables in walls, 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 16 inch (40 cm)
- NEMA 5-15 plug
- UL Listed
- CAT III 150 V rated
- 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 300V, sold as Model ECB50-E

ST101
Socket Tester

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

not available in all countries

ST102
GFCI Socket Tester

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

not available in all countries

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

Product includes:

New!
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, CAT III 600V rated
- Highest safety rated tester available

VT102
Voltage Tester

- 4 bright neon lights indicate ac voltage
- 4 ranges indicated from 110 V to 460 V ac
- Tests 2 wire and 3 wire ac outlets
- cULus listed

VT101
Voltage Tester

- Bright neon light indicates ac voltage
- Identify ac voltage from 90-500 V ac
- Tests 2 wire and 3 wire ac outlets
- cULus listed

Bench-top Instruments

FG2C

- 3 MHz function generator
- High feature and low cost
- 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
- Includes test cables and spare fuses

FG3C

- 3 MHz sweep/function generator
- Built-in, 6-digit display 150 MHz frequency counter
- Best value combination generator
- Square, triangle, sine wave and TTL/CMOS outputs
- Amplitude or frequency modulation
- Linear and logarithmic sweep modes
- Duty cycle, VCF and dc offset control
- Includes test cables and spare fuses

BDM40

- True RMS, 4-1/2 digit and 20,000-count multimeter
- 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 MΩ
- Interlocking push-button control for easy selection
- CAT I 1000 V rated
- One-year warranty

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

When your applications are best suited to bench-top style meters, look to Meterman for solutions. For depot service, design engineer's, production or QC benches, school labs and more, Meterman offers 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.

Pick the function generator that is right for you.

	FG3C	FG2C
Frequency Ranges	7 Ranges, 0.3 to 3 MHz	7 Ranges, 0.3 to 3 MHz
Output Amplitude	20Vp-p open circuit	20Vp-p open circuit
Sine Wave distortion	≤1 %, 0.3 to 200 kHz	≤1 %, 0.3 to 200 kHz
AM - Depth	0-100 %	N/A
AM - Mod. Frequency	400 Hz (int), dc to 1 MHz ext	N/A
Carrier Bandwidth	100 Hz to 3 MHz (-3dB)	N/A
FM - Deviation	0 to +/- 5 %	N/A
FM - Mod. Frequency	400 Hz (int) dc to 20 kHz (ext)	N/A
Display, Freq. Adj.	6 digit, 0.3 in. high LED	Dial Control
Power Supply	115 V ac or 230 V ac, 60 or 50 Hz	115 V ac or 230 V ac, 60 or 50 Hz
Warranty	One-year	One-year

Specialty handheld probes

LP10A/LP25A
- Pen-size logic probes
- Troubleshoot and analyze digital logic circuits

LP10A: Good value for 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

LP10A/LP25A

HV231-10
- High voltage probe
- Extended voltage measuring to 40 kV
- Use with standard multimeters with 10 MΩ input impedance

SF10

Exclusive patented technology provides the fastest and easiest method of finding shorts and tracing circuits on PCBs

- Brush probe quickly troubleshoots printed circuits, multi-conductor cables, mass terminations, backplanes, connectors and IC sockets
- Low-test voltage protects sensitive circuitry

Output Voltage	0.5 V dc
Max Current	100 uA
Continuity	< 10 Ω
Brush Material	Stainless Steel

SF10

HV231-10

Handheld Component Testers

CR50
Compact component checker
- Measures capacitance and resistance
- Wide measurement ranges
- Dual zero adjustment pots to null strays and test leads
- Special "Low Ohms" range

LCR55
Full-size component checker
- 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 MΩ, ±1.0 %	0.01 Ω - 20 MΩ, ±0.5 %
Capacitance	0.1 pF - 20,000 µF, ±0.5 %	0.1 pF-2000 µF, ±1.0 %
Inductance		0.1 µH-200 H, ±5.0 %
Transistors		Hfe, Iceo (NPN, PNP)
Diodes	Yes	Std (3 V) and microwave oven (8 V)
Continuity Test	Yes	Yes

Multimeter Accessories

Accessories Cross-Reference Guide

Model	Description	XR Series	HD Series	XP Series	PM Series	DM73B	LCR55 CR50	DM7 DM9	AM8 DM2
Carrying Cases									
VC3	Zippered Denier				X				
VC11	Vinyl					X			
VC20	Padded vinyl, zipper								X
VC30	Padded vinyl, zipper, belt loop			X			CR50	X	
VC221A	Padded vinyl, zipper, belt loop	X	X				LCR55		
DC205B	Deluxe case, shoulder strap	X	X						
DC207B	Deluxe case with clamp pocket	X	X						
Test Leads and Probe Tips									
RTL25	Replacement test leads, non-shrouded plugs								DM2
TL35A	Standard leads with alligator clips, 0.6 in. (.15 cm) jaw	X	X	X			X		
TL36	Standard leads with alligator clips, 0.4 in. (.1 cm) jaw	A	X	X			A		
TL244A	Heavy duty leads, silicone, 48 in. (121.9 cm) long, Ever Sharp™ tips	X	X	X			X		
TL245	Standard leads, shrouded 90° banana plugs		A	A			X		
TL246B	Silicone leads with large alligator clips	X	X	X			X		
TL73B	Replaceable ground test lead with alligator clip					X			
DL243C	Basic Test Lead Kit, silicone	X	X	X			X		
DL248C	Deluxe Test Lead Kit, silicone	X	X	X			X		
Other Accessories									
H-PM	Silicone Holster				X				
H-XP	Magne-Grip Holster, compact size			X					
H1-XR	Magne-Grip Holster, full size	30XR 38XR							
H2-XR	Magne-Grip Holster, full size	33XR 34XR 37XR							
TC253A	Temperature Converter	B	B	B					
XR-TA	Temperature Adapter	C							
38-SW	RS232 Cable and Software, DMM	D							
TM-SW	RS232 Cable and Software, HVAC	E							

TL244A

TL245

TL246B

TL35A

Notes

A: Originally supplied with instrument
B: TC253A not required for HD110T, 35XP, 33XR, 34XR, 38XR

C: Models 35XP, 33XR, 34XR, 38XR, AC75
D: Model 38XR Only
E: Models TMA10 and TMD90 only

VC11

H-PM

VC20
VC30
VC221A

DL243C

TL36

DC205B
DC207B

VC3

DL248C

TL73B

Meterman®

EPM3 Safe and simple go-no-go testing for phase sequence and motor rotation, see page 16

AC71 Easy, one button operation with this automatic clamp multimeter and bright backlight, see page 12

Small Package
Big Performance

Introducing the new PM Series
Compact multimeter designed for industrial

- Ultimate shirt-pocket size for portability
- AutoTect™ feature directs the meter to automatically measure ac or dc volts or resistance
- VolTect™, a built-in ac volt detector
- Measures ac/dc microamp current
- Capacitance, frequency and continuity
- Large oversize display
- Full safety ratings of CAT III 300 V and UL

PM55
The world's smallest full-featured CAT III multimeter—portability at its best,
see pages 2 and 3

Meterman®
The right tool everyday.™

Meterman Test Tools

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Specifications subject to change without notice.