

Electrical Test Tools



FLUKE[®]



AMPROBE[®]

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SC Series

Clamp Meters

Clamp Meters

MTR00825 (SC64), MTR00827 (SC66), MTR00830 (SC67), MTR00826 (SC68), MTR00860 (SC76)

The SC line of current clamps is for the field service technician who wants to get the most out of the one meter he carries.

The SC64 is the basic clamp meter. The SC66 is a manual ranger designed for HVAC/R. The SC76 has more ranges and functions plus a bar graph and 4000 counts. The SC68 is perfect for those working with electrical power.

SC66 and SC67-Unique features for HVAC/R

Non-contact Voltage

Loud beeper and bright LED indicate the NCV tab is near ac voltages greater than 24 V.

Temperature

Thermocouple plugs in directly for accurate readings, even in fast-changing environments.

Microamps

For flame rectifier diode tests.

Capacitance

For motor-run and motor-start capacitors.

And More

- Hi-voltage indicator you can't miss—both LED and beeper turn on to indicate you have touched a potentially dangerous voltage.
- Continuity indicated by LED and beeper.
- MAX hold automatically holds reading so you can look at the meter after you have disconnected.
- Low ohms ranges for motor windings and mid range for thermistors.
- Amps ac resolution to 0.01 A for heat anticipator circuit (20 A range). Up to 200 Aac with 0.1 V resolution (200 A range).
- Vdc to 0.01 V resolution (20 V range).
- Auto-power off to extend battery life.

Test Lead Solutions

- Probe storage in the back. Just snap them in.
- Single test-lead holder for easy and safe voltage testing.
- Silicone test leads remain flexible in cold weather, withstand caustic chemicals, and work well in temperatures that will melt vinyl leads.
- Convenient lead storage.
- Wrap test leads through clamp to keep the wires out of the way. You can even leave them right there when you test amps.



SC Series

Clamp Meters

Specifications for SC64, SC66, SC67, and SC68

Function	Range	Accuracy/Resolution	SC64	SC66	SC67	SC68
Ranging			Manual	Manual	Manual	Manual
Counts			2000	2000	2000	2000
Bargraph						
Vac	2000m	1.2%+3/1				X
	200	1.2%+3/0.1	X	X	X	X
	600	2%+5/1	X	X	X	
	750	2%+5/1				X
Vdc	200m	0.5%+1/0.1	X			
	2000m	0.5%+1/1	X			X
	20	0.5%+1/0.01		X		
	200	0.5%+1/0.1	X		X	X
	600	0.5%+1/1	X			
	1000	0.5%+1/1				X
Aac	20	3%+5/0.01		X		
	200	3%+5/0.1	X	X	X	X
µAdc	200	1%+1/0.1		X	X	
°F	200°F	1°F/0.1		X	X	
	1000°F	1%+1.5°F/1			X	
MFD	200	3%+5/0.1		X	X	X
Hi-V indicator	>30 V			L,B	L,B	L,B,S
NCV	>24 Vac			L,B	L,B	L,B
Ohms	200	1%+3/0.1	X	X	X	X
	200k	1%+3/0.1k	X	X	X	X
Hz	40k	0.1%+3/1	X			
Continuity			B	L,B	L,B	L,B
Diode			X	X	X	X
Clean Power						X

L: LED

B: Beeper

S: Shaker

What's Included

The padded ANC7 case is included with every SC series meter. It has a zippered pocket and a belt loop on the back. Also included are silicone test leads, alligator clips (SC76 only), battery (installed), operator's manual, and installed fuse (SC66, SC67, and SC76 only).



SC66, SC67, and SC76 only

SC67 only

SC67 only



SC Series

Clamp Meters

MTR00860 (SC76): Auto Ranging Clamp Meter

The SC76 is your choice if you want the ability to extend the basic capabilities of the clamp meter. Fieldpiece accessory heads attach to the SC76 clamp meter giving you a pool of choices when it comes to customizing your Fieldpiece toolkit.



Specifications for SC76 Clamp Meter

Function	Range	Accuracy/Resolution
Vac (Auto)	3.4-600	2.0% ± 4/0.001
Vdc (Auto)	0.34-600	0.5% ± 1/0.0001
mVdc	340-3400	0.5% ± 1/0.1
Aac (Auto)	34	3.0% ± 5/0.01
	300	5.0% ± 5/0.1
µAdc (Auto)	340-3400	1.0% ± 1/0.1
MFD	340	3.0% ± 5/0.1
Ohms (Auto)	340-340k	1.2% ± 4/0.1
	3.4M	1.5% ± 4/0.001
	34M	3.0% ± 5/0.01
°F	32~120	1°F/0.1
	-4~750	1% ± 1.5°F/0.1
	-30~-4	2% ± 4°F/0.1
	750-1000	2% ± 5°F/1
Hi-V	LED & Beep	
NCV	LED & Beep	
Continuity	LED & Beep	

Data Logger and Electronic Handle



TOL01765 (DL2) Data Logger

Measures and records data from Fieldpiece accessory heads.

- 20,000 data points.
- Real-time clock.
- Span programmable from 1 second to 999 days.
- Period programmable from 1 second to 999 hours.
- 0.01mV resolution.
- LCD output.
- Manually scroll to see measurement, time, and sequence number.
- Press MIN/MAX/AVG button to automatically see min, max, and average of current data set.
- Record multiple data sets.
- Downloadable to computer (software and cable included).
- Seven-day battery life.
- Backlight.
- "Tag" the reading with the PARA(meter) function. Add any three characters to the reading for future identification or sorting.
- Using the RECORD button, you can add a reading at any time.
- Low cost.
- Easy to use.



HLD00886 (EHDL1) Electronic Handle

Converts any Fieldpiece accessory head into a stand-alone instrument.

- MIN/MAX to record highest and lowest reading.
- Ranges: 200 mVac, 2000 mVac, 200 mVdc, 2000 mVdc.
- Resolution: 0.1 mV.
- Accuracy Vdc: $\pm(0.5\% \text{ reading} + 1 \text{ digit})$.
- Accuracy Vac: $\pm(1.2\% \text{ reading} + 3 \text{ digits})$ 50~500Hz.
- Overload protection: 30 Vdc or 24 Vac.



ADP00868 (AHDL1) Accessory Head Adapter

Connects any Fieldpiece accessory head to any digital multimeter with industry-standard jacks.



Heavy Duty for Field Service

Digital Multimeters



TOL00305 (HB74) Heavy Duty Digital Multimeter

Heavy duty and ruggedized with all the necessary features for the field.

- Phase-rotation function for correct connection of three-phase power.
- Capacitance for motor start/run capacitors.
- High-voltage warning (LCD and beeper).
- Microamps for flame rectifier diode circuit.
- Amps to 10 Aac through meter, to 300 Aac with clamp.
- Frequency for variable-frequency motor drives.

Built to withstand use and abuse of the field.

- MOV transient protection.
- Valox housing.
- "O" ring seals and gaskets to keep contamination out.
- High-voltage fuses.
- Rubber holster.



TOL00319 (LT83)–Good Meter, Great Price

- Volts, ohms, amps, continuity.
- Works with all Fieldpiece accessory heads using optional ADLS2 leads or AHDL1 handle adapter.
- Microamps for flame safety diode test.
- MAX hold.



MTR00856 (LT17B)–Biggest "Bang for the Buck" in HVAC/R

Features and functions designed for HVAC/R.

- Temperature: K-type thermocouple plugs directly into meter. No adapter to lose.
- MFD for motor start/run capacitors.
- Microamps for flame rectifier diode tests.
- Low ohm ranges for motor windings.
- Medium ohm ranges for thermistors as well.
- Frequency for variable-frequency drives.



MTR00855 (LT16B)–True RMS Meter For Motor Installation and Service

Has functions and ranges often needed when working with motors.

- Volts, ohms, continuity, and amps.
- Phase-rotation indicator for 3-phase motor connection.
- Frequency for variable-frequency drives.
- MFD for motor start/run capacitors.

Heavy Duty for Field Service

Specifications-HB74, LT16B, LT17B, LT83 HVAC Digital Multi-Meters

Function	Range	Accuracy/ Resolution	HB74	LT16B	LT17B	LT83
Vac	200m, 2000m	1.5%+4/0.1	X	X	X	X
	20	1.2%+4/0.01	X			X
	200, 600	2%+4/0.1	X	X	X	X
Vdc	200m, 2000m	1%+1/0.1	X	X	X	X
	20	1%+1/0.01	X	X	X	X
	200	1%+1/0.1		X	X	X
	600	1%+1/1	X	X	X	X
AAC	200μ	1.5%+3/0.1	X		X	X
	20m	1.5%+3/0.01			X	X
	200m	1.5%+3/0.1	X			X
	2	3%+4/0.001		X		
	10	3.5%+3/0.01	X			X
ADC	20μ	1%+1/0.01	X			
	200μ	1%+1/0.1	X		X	X
	20m	1%+1/0.01			X	X
	200m	1%+1/0.1	X			X
	2	2.5%+1/0.001		X		
	10	2%+3/0.01	X			X
MFD	20	4%+10/0.01	X			
	200	4%+10/0.1	X	X	X	
	2k, 20k	4%+10/0.001	X	X	X	
Ohms	200	1%+4/0.1	X	X	X	X
	2k, 20k	1%+4/0.001	X	X		X
	200k	1%+4/0.1	X	X	X	X
	2M	1%+4/0.001				X
	20M	2%+4/0.01	X	X	X	X
	200M	2%+4/0.1		X		
°F	200	1°F/0.1			X	
	1000	1%+1.5°F/1			X	
Hi-V			X			
PhaseRotation			X	X		
Frequency			X	X	X	



Heavy Duty for Field Service

Stick-Style Multimeters

TOL01910 (HS32) – MTR00881 (HS33) – TOL01912 (HS35) Unique Features for HVAC/R

Just snap the head onto the meter or use deluxe silicone leads for remote connection.

Non-contact Voltage

Loud beeper and bright LED indicate the NCV tab is near ac voltages down to 24 Vac.

Auto-ranging (HS35)

Automatically changes range for best resolution.

Temperature (HS33, HS35)

Thermocouple plugs in directly for accurate readings, even in fast-changing environments.

Microamps (HS35)

For flame rectifier diode tests.

Capacitance

For motor-run and motor-start capacitors.

Frequency (HS35)

For variable-frequency drives.

And More

- Rugged rubberized case with magnetic hanger.
- Hi-voltage indicators you can't miss—both LED and beeper turn on to indicate you have touched a potentially dangerous voltage.
- Continuity indicated by LED and beeper.
- MAX hold automatically holds reading so you can look at the meter after you have disconnected.
- Low ohms ranges for motor windings and mid range for thermistors.
- Auto-power off to extend battery life.
- UL Cat III 600 V pending.

Remote Testing: For hard to reach test points, remove the probe tips and connect to ACH current clamp head.

Hanger: For safe and easy testing, hang the meter using the magnetic hanger. For maximum safety, clip one lead to ground and test with one hand.



Heavy Duty for Field Service



KIT09516 – HS36 Specifications

- Display: 3¾-digit liquid crystal display (LCD) with a maximum reading of 3999.
- Analog bar graph: 41 segments with measurements 20 times per second.
- Range (RNG): Manual ranging mode (HS35)
- Overrange: "OL" mark indication.
- Auto power off: 30 minutes.
- Operating environment: 32° F to 122°F at <70% R.H.
- Storage temperature: -4°F to 140°F, 0 to 80% R.H. with battery removed.
- Accuracy: Specifications good in ambient conditions of 73°F ±9°F, <75% relative humidity.
- Temperature coefficient: 0.1x(specified accuracy) per °F. (32°F to 64°F, 82°F to 122°F).
- Power: Single standard 9-volt battery, NEDA 1604, JIS 006P, IEC 6F22.
- Battery life: 300 hours typical with alkaline.
- Accessories: One pair test leads, one pair alligator clips, k-type thermocouple, 9V battery (installed), and operating instructions.
- Safety: UL, CE, Cat III 600V, UL 3111, IEC1010-1.

Temperature

- Range: -30°F ~1000°F
- Resolution: 0.1°F
- Accuracy: ±(1°F) 32°F ~ 120°F, ±(1% + 1.5°F) -4°F ~ 750°F, ±(2% + 4°F) -30°F ~ 4°F, ±(2% + 4°F) 750°F ~ 1000°F
- Sensor type: k-type thermocouple
- Overload protection: 60 VDC or 30 VAC rms

Continuity

- Audible indication: Less than 40Ω
- Response time: 500ms
- Green LED will be on continuously.
- Overload protection: 500VDC or AC rms

DC volts

- Ranges: 400mV, 4000mV, 40V, 400V, 600V
- Resolution: 0.1mV
- Accuracy: ±(0.5% rdg + 2 dgt)
- Input impedance: 560kΩ on V inputs, 10MΩ on mV input
- Overload protection: 600VDC or AC rms
- Transient protection: 6kV for 10μ sec

AC volts (50Hz–500Hz)

- Ranges: 400mV, 4000mV, 40V, 400V, 600V
- Conversion: True RMS (HS36), average (HS35)
- Crest factor: Less than or equal to 3 (HS36)
- Resolution: 0.1mV
- Accuracy: ±(1.2% rdg + 5 dgts) 50Hz ~ 60Hz on 400mV range ±(1.5% rdg + 5 dgts) ±(2% rdg + 5 dgts) on 600V range
- Input impedance: 560kΩ
- Overload protection: 600V DC or AC rms
- Transient protection: 6kV for 10μ sec

DC current

- Ranges 400μA, 4000μA
- Resolution: 0.1μA
- Accuracy: ±(1.0% rdg + 2 dgt)
- Voltage burden: 200mV, (2V on 4000μA range)
- Input protection: 250mA/600V (6.3x32 mm fast blow ceramic fuse), part number RFM66

Resistance

- Ranges: 400Ω, 4kΩ, 40kΩ, 400kΩ, 4MΩ, 40MΩ
- Resolution: 0.1Ω
- Accuracy: ±(1.0% rdg + 4 dgts) on 400Ω to 400kΩ ranges ±(1.5% rdg + 4 dgts) on 4MΩ range ±(3.0% rdg + 5 dgts) on 40MΩ range
- Open circuit volts: -0.45VDC typical, (-1.2VDC on 400Ω range)
- Overload protection: 500VDC or AC rms

Capacitance

- Range: 400μF
- Resolution: 0.1μF
- Accuracy: ±(0.3% rdg + 5 dgts)
- Input protection: 250mA/600V (6.3x32 mm fast blow ceramic fuse) part number RFM66

Frequency

- Ranges: 4k, 400k, 4M, 40MHz
- Resolution: 1Hz
- Accuracy: ±(0.1% rdg + 3 dgts)
- Sensitivity: 10Hz ~ 4MHz: >1Vrms, 4MHz ~ 40MHz: >2Vrms, >5Vrms
- Minimum pulse width: >25ns
- Duty cycle limits: >30% and <70%
- Overload protection: 500VDC or AC rms



Heavy Duty for Field Service

Stick-Style Multimeters



Test Lead Solutions

- Probe storage in the back. Just snap them in.
- Removable probe tips for connection to most accessory heads.
- Attach detachable probe tip directly into jack for easy and safe voltage testing.
- Silicone wire test leads remain flexible in cold weather, withstand caustic chemicals, and work well in temperatures that will melt vinyl leads.
- Leads conveniently wrap around meter.

Function	Range	Accuracy/ Resolution	HS32	HS33	HS35
Ranging		Manual	Manual	Auto	
Counts			2000	2000	4000
Bargraph				X	
Vac	200m	1.2%+3/0.1m	X	X	D
	2000m	1.2%+3/1m			D
	40	1.2%+3/0.01			X
	200	1.2%+3/0.1	X	X	D
Vdc	600	2%+5/1	X	X	D
	200m	0.5%+1/0.1m	X	X	D
	2000m	0.5%+1/1m	X	X	D
	20	0.5%+1/0.01		X	D
	200	0.5%+1/0.1	X	X	D
	600	0.5%+1/1			X
	200	2.5%+2	A	A	A
ADC	400μ	1%+1/0.1μ			X
°F	4000μ	1%+1/1 μ			X
	200°F	1°F/0.1		X	D
MFD	1000°F	1°F/1			X
	200	3%+5/0.1m	X	X	D
Hi-V indi	>30 V	C	C	C	
NCV	>24 Vac	C	C	C	
Ohms	200	1%+4/0/1	X	X	D
	4K	1%+4/1			X
	40K	1%+4/10			X
	200K	1%+4/100	X	X	D
	4M	1.5%+4/1K			X
	20M	3%+5/10K			D
Continuity		B	C	C	
Diode			X	X	X
HZ					X

A: With ACH clamp head

B: Beeper

C: LED and beeper

D: Range is 40xx, instead of 20xx

Accessories for Field Service

Accessory Heads

Use your digital multimeter, data logger, or handle to measure parameters needed by HVAC/R technicians. Fieldpiece accessories work with meters that have mV (ac and dc) ranges and industry-standard input jacks. Use the Fieldpiece deluxe test leads or the convenient AHDL1 adapter handle to connect any accessory head to most digital multimeters.

For most heads, set your meter to mVdc and read the LCD directly.

Which temperature head?

For air temperatures only, use the ARH3/ARH4. You can also measure other air parameters with them such as RH% and wet bulb. For comparing input and output temperatures, pipe temperatures, or other contact temperatures, use the ATH4. When it is not practical to touch the test point (a ceiling vent, for example), use the ATIR3 infrared head. Infrared is not recommended for accurate pipe temperatures.



HED00676 (ARH3) Temperature and RH% Head

Measures air temperature and RH%.

- +/-1°F (50°F-113°F).
- +/-2.5% RH, (10% to 90% RH @ 77°F).
- Select °F or °C.
- Auto-off can be disabled for data logging.

HED00661 (ARH4) Wet Bulb and Dew Point Head

Measures air temperature and RH% and displays wet bulb and dew point.

- +/-1°F 32°F-113°F.
- +/-2.5% RH, 10% to 90%RH @ 77°F.
- Select °F or °C.
- Auto-off can be disabled for data logging.

HED00689 (ATH4) Dual Temperature Head

Two k-type thermocouple inputs. Display T1, T2, or T1-T2.

- Field calibration for ±1°F accuracy.
- Displays °F directly at 0.1°F resolution on DMM with 0.1 mVdc resolution.
- Select °F or °C.
- Converts from -50°F to 1800°F (optional thermocouple required)
- Includes two "wrap tab" thermocouples plus velcro straps. Thermocouples insulated to 400°F.
- Auto-off can be disabled for data logging.

HED00681 (ATIR3) Non-contact (Infrared) Surface Temperature Head with Laser Sight

Measures temperature without contact.

- 8:1 field of view.
- Laser sight included.
- Select °F or °C.
- Operating ambient temp: 32°F to 122°F at <75%RH.
- Temperature measurement range: 0°F to 752°F.
- Accuracy: Whichever is greater. At 73°F ± 10°F at <90%RH±2.0% reading or 4°F, 32°F to 160°F±3.0% reading or 5.5°F, 0°F to 31°F, 161°F to 752°F.



Accessories for Field Service

Accessory Heads



HED00696 (AAV3) Air Velocity with Temperature Head

Measures air velocity. Use to estimate CFM. Does not replace a hood for precision CFM measurements.

Air velocity:

- Ft/min, meters/sec, MPH, KM/hr.
- Range: 80 to 5900 ft./min.
- Accuracy: +/-3%fs+1 digit.

Temperature:

- Displays °F and °C.
- Range: -4°F to 140 °F.
- Accuracy: +/-1°F from 32°F to 113°F.
- Resolution: 0.5°F.
- Max operating temp: 120°F.
- Output: 1 mV/unit of measure (1 mV/100 ft/min above 2000 ft/min).



HED00648 (AMN2) Manometer (Pressure) Head

Measures gas pressure and has resolution low enough for static pressure.

- Maximum 20" WC (water column) for gas pressure.
- 0.01" WC resolution for static pressure.
- Manual zero-set for comparing two pressures.
- Includes tube and adapter for gas pressure measurement.
- Auto-off can be disabled for data logging.



HED00780 (AVG2) Vacuum Gauge Accessory Head

- Sensor: Precision thermistor
- Fitting: Standard ¼" flared brass fitting (male)
- Range: 50 to 200 microns of mercury
- Resolution: 1 micron of mercury
- Accuracy: +/-10%, (0 to 1000 microns) @ 73°F ±9°F, <90%RH
- Operating Environment: 32°F to 122°F @ <75%RH
- Battery: 9V



HED00682 (AUA2) Milliamp and Microamp Head

Measures milliamps and microamps for flame diode test. Measures 4 to 20 mA control circuits.

- Includes flame diode adapter kit (AQK3).
- Resolution: 0.1 for meters with 0.1 mVdc.
- Accuracy:
dc: ±(1.0% reading + 1 digit)
ac: ±(1.5% + 2 digits).
- Max current: 200 mA ac or dc.

Accessories for Field Service

Accessory Heads



CMP00821 (ACH) Current Clamp Head

Measures to 300 Aac.

- Current range: 1 A to 300 A rms.
- Accuracy: $\pm 1.5\%$ reading + 1 digit.
- Maximum conductor size: 0.91 inches (23 mm).

HED00495 (ATRMS3) True RMS Head

- Converts digital meter to true RMS meter.
- Cost-effective way to measure RMS.
- Works with current clamps.



HED00678 (AVH1) Voltage Head

Records voltage using DL2 data logger or EHDL1 handle.

- Accuracy: dc: $\pm(0.5\%$ reading + 1 digit); ac: $\pm(1.0\%$ reading + 4 digits).
- Max voltage: 600 V ac or dc.
- Input impedance: 1 MOhm.
- Standard test leads plug in top.



HED00650 (ACM3) Carbon Monoxide Head

Measures CO in air and finds CO sources

- Fast enough to locate CO source in “walk-around” test.
- Three-pin sensor for better performance.
- Long battery life.
- Optional pump PMPO1609 (ACMP3).
- Auto-off can be disabled for data logging.
- Select averaging or normal for smoothing or fast response to change.
- Range: 0 to 1000 ppm (2000 ppm with 5-minute max exposure time).
- Initial accuracy: 0-15 ppm $\pm 5\%$ reading ± 1 ppm after zeroing; 15-35 ppm $\pm 5\%$ reading ± 2 ppm after zeroing; 0-1000 ppm $\pm 5\%$ reading ± 5 ppm after zeroing.
- Response time: <70 sec to 90% of reading.
- Operating temperature: 32°F to 105°F.
- Sensor type: Electrochemical (specific to CO).
- KIT07930 (includes both ACM3 and PMP01609).



HED00695 (ASH2) Superheat Head

Measures refrigerant pressure and temperature and calculates superheat for two refrigerants in English or metric units.

- Display pressure in PSI or kPa.
- Display temperature in °F or °C.
- Display superheat in °F or °C.
- Select R22 or R410A.
- Auto-off can be disabled for data logging.



Accessories for Field Service

Accessory Heads

HED00529 (AMR1) Milliohm Head

Use to catch winding-to-winding shorts on motors and transformers.

- Range: 1 milliohm to 2 ohms.
- Resolution: 1 milliohm.
- Accuracy: +/-2% of reading +/-2 milliohms.
- Test current: 50 m Adc.

HED00489 (AMD1) Microwave Oven Diode Tester Head

Tests high-voltage diodes commonly found to fail in microwave ovens. Diode test on DMM cannot test high-voltage diodes.

- Contains 9 V battery to test high-voltage diodes.
- Identifies opens, shorts, and correct voltage drop.

Accessories for Field Service

Test Leads



WIR03224 (ASLS2) Silicone Test

- High copper stranding, silicone insulated test leads.
- Basket-style strain relief.
- Fit in test-lead holders on back of SC series clamp meters and HS30 series stick meters.



WIR03694 (ADLS2) Deluxe Silicone Test Leads

Exactly like the ASLS2 with the addition of removable probe tips.



KIT06115 (ADK7) Deluxe Test Lead Kit

Silicone test leads, removable probe tips, and alligator clips for grounding.



KIT06114 (ADA2) Dual Alligator Clips

Three feet of red and black vinyl insulated cable with small alligator clips on the end.



KIT06117 (AEK11) Silicone Test Lead Kit

These test leads are unmatched in ruggedness and flexibility.



KIT08153 (AQK3) Flame Diode Test Adapter Kit

- DMM jack to quick-connect for flame diode.
- Quick-connect to miniplug adapter.

ADP00826 (ADB2) Flame Diode Test Adapter Kit

- F to F banana adapter



Accessories for Field Service

Test Leads



K-type Thermocouples

Use Fieldpiece K-type thermocouples with any meter using the K-type design. The new line of thermocouples (ATA1, ATAF1, ATWB1) includes alligator clips so that you can just clip to the spot you are testing. You no longer need three hands to do your job. All three pipe clamps are redesigned to provide faster and more-accurate pipe temperatures.

Wrap-tab plug

Wrap the lead wire around the tab for convenient lead storage.

ServiceFirst Item #	Mfg #	Description	Max °F (tip)
TCP00106	ATA1	Bead type with alligator	400
TCP00107	ATAF1	Bead type with alligator (high temp)	900
SEN00854	ATB1	Bead type	400
FUS01536	ATC1	Pipe clamp (up to 1 1/4")	200
SEN01117	ATC3	Pipe clamp (up to 1 3/8")	300
SEN00858	ATEXT10	Thermocouple 10' extension cable	900
SEN00859	ATF1	6" stainless tip designed for fluids	1500
CAS00814	ATWB1	Wet bulb (sock) with alligator	150

Accessories for Field Service

High Current and High Voltage



High Current and High Voltage Accessories CMP00876 (ACA1000) 1000AAC Current Clamp

Reads amps directly on any Fieldpiece meter so there is no need to mentally move decimal points.

- Accuracy <400 A@60 Hz: +/- (1/5% reading + 2 A).
- Accuracy >400 A@60 Hz: +/- (2% reading + 2 A).
- Jaw opening: 2.25", 2.75 x 0.70" bus bars.



CMP00820 (ACDC6) ac and dc Current Clamp

Connect to any digital multimeter with industry-standard jacks to measure ac or dc current up to 600 A. Reads amps directly on any Fieldpiece meter so there is no need to mentally move decimal points.

- DCA accuracy: +/- (2% reading + 2 A).
- ACA accuracy@60 Hz, <400 A: +/- (2% reading + 2 A).
- ACA accuracy@60 Hz, >400 A: +/- (6% reading + 2 A).



SEN00853 (AHV28) High Voltage Probe

Connect to any digital multimeter with industry-standard jacks to measure up to 40 kVdc or peak ac or 28 kV rms ac.

- Divides voltage measured by 1000.
- DCV accuracy: +/- 1% to 20 KV, +/- 2% to 40 KV.
- ACV accuracy: +/- 5% type at 60 Hz.



Accessories for Field Service

Fieldpacks

Easily carry what you need to the job site. No more “winging it” or long walks back to the truck. Case designs make instrument access fast. If your area does not use gas, just delete the “G” at the end of a Fieldpack’s part number to delete the manometer (AMN2) and carbon monoxide (ACM3) heads.



TOL01919 (DL2K13) **TOL01920 (DL2K13G)**

Includes, along with the DL2 data logger, all appropriate accessory heads, thermocouples, and test leads for comprehensive HVAC/R testing and data logging. Easily gather the complete story of a system, upload to your PC, and print out for hard copies of data.



TOL01921 (HB74K27) **TOL01922 (HB74K27G)**

This is a fully loaded kit with a heavy-duty meter.



TOL01913 (HS33K14) **TOL01914 (HS33K14G)**

Compact kit that contains the most-popular heads along with the manual ranging HS33 “stick” meter in a mid-size, convenient case.



TOL01915 (HS35K19) **TOL01916 (HS35K19G)**

Includes the most-popular heads and accessories along with the autoranging HS35 meter in a briefcase-style case that has plenty of room for hand tools or more instruments.



TOL01917 (HS35K31)

HS35 plus dual alligator clips, premium pipe clamp, ARH4 RH% head, micro/milliamps head with AQK3 flame diode kit, alligator clip thermocouple, wet bulb thermocouple, vacuum gauge, electronic handle, data logger, SMG5 megger, air velocity head, voltage head AVH1, and upgrades to ANC3 briefcase-style bag.

TOL01918 (HS35K31G)

HS3K31 plus ACM3 carbon monoxide and AMN2 manometer heads.

Accessories for Field Service

Fieldpack Selection Guide

Fieldpack Selection Guide

Model Meter (2)	Description	HS33K14	HS35K19	HS35K31	HB74K27	DL2K13
EHDL1	Electronic handle		X	X	X	X
DL2	Data logger (less case)			X		X
HB74(3)	Heavy duty DMM				X	
HS33(4)	Manual ranging stick	X				
HS35(4)	Auto ranging stick		X	X		
SMG5(5)	Megger			X		
Leads/adapters						
ADA2	Dual alligator clips	X	X	X	X	
ASA2	Small alligators (pr)	(4)	(4)	(4)	X	X
AHDL1	Adapter handle				X	X
AQK3	Flame diode kit AQC2+AQP1	(7)	X	(7)	X	(7)
Case						
ANC3	Briefcase		X	X	X	X
ANC8	Mid sized case	X				
Thermocouples						
ATA1	Alligator clip		X	X	X	X
ATWB1	Wet bulb		X	X	X	X
ATC1	Small pipe clamp	X	X			
ATC3	Premium pipe clamp			X	X	X
Heads						
AAV3	Air velocity			X		X
ACH	Amp clamp	(4)	(4)	(4)	X	X
ACM3	Carbon monoxide	(1)	(1)	(1)	(1)	(1)
AMN2	Manometer	(1)	(1)	(1)	(1)	(1)
ARH4	Temp/WB	X	X	X	X	X
ATH4 (6)	Dual temp				X	X
AUA2	Micro/milliamps w/AQK3	X		X		X
AVG1	Vacuum gauge		X	X	X	X
AVH1	Volts			X		X

(1) Add "G" suffix to model number to include ACM3 and AMN2.

(2) Includes all accessories that normally come with meter except the carrying case.

(3) ADLS2 test leads, ASA2 alligators included with meter.

(4) ADLS2 test leads, ASA2 alligators, ATB1 thermocouple, velcro strip, ACH included with meter.

(5) Leads, probe tips, alligator, case included with meter.

(6) Two ATB1s, velcro strips included with meter.

(7) Included with AUA2 head.



Accessories for Field Service

Fieldpacks and Soft-Sided Cases



TOL00307 (HB74K13)

Includes the HB74 meter with rubber holster, the ACH 300AAC accessory clamp, ADLS2 silicone leads, ASA2 alligator clips, AHDL1 adapter handle, and four-pocket carrying case (ANC1).



TOL00913 (LT17)

Includes the LT17B meter, the ACH 300AAC accessory clamp, ATB1 thermocouple, ADLS2 silicone leads, and mailpouch carrying case (ANC5).

Soft-Sided Cases



CAS01302 (ANC8)

4 pockets, 2 meters + 4 heads



CAS00809 (ANC1)

4 pockets, 1 meter + 2 heads



CAS00812 (ANC5)

Flat pouch, 1 meter + 1 head



CAS00810 (ANC3)

Briefcase, 3 meters + 10 heads



CAS01301 (ANC7)

Single-pocket case for clamp meter

Accessories for Field Service

Thermometer, RPM and Megohm Meter

THR00059 (SPK1) Pocketknife Style Thermometer



- Battery LR44 (included)
- Range: -58°F to 392°F
- Accuracy: $\pm 3.6^\circ\text{F}$ (-58°F to -4°F)
 $\pm 1.8^\circ\text{F}$ (-4°F to 302°F)
 $\pm 5.4^\circ\text{F}$ (302°F to 392°F)
- Resolution: 0.1°F
- Operating Environment: 32°F to 122°F

THR00058 (SIR2) Infrared Pocket Thermometer with Laser Sight



- Battery: 2 CR2032 (installed)
- Range: -27°F TO 482°F
- Accuracy: $\pm 2^\circ\text{F}$ or 2%
 @73°F $\pm 10^\circ\text{F}$ in <90%RH
- Resolution: 0.1°F
- Operating Environment: 32°F to 122°F
- Field of View: 3.1

TOL01120 (ST3) Dual-temperature Thermometer



- Great temperature compensation for fast-changing environments.
- Select °F or °C.
- Thermocouples included.

MTR00894 (SRPM1) Optical Laser Tachometer-rpm Meter



- Measures rpm without contact.
- Laser light.
- Works to four feet.
- Range: 2.5 to 99,999 rpm.

MTR00819 (SMG5) Megohm Meter

Low cost meter for checking compressor insulation.



- Predict compressor failure.
- 1000 Vdc stresses insulation to measure up to 2000 Mohms.
- Backlit LCD display.
- Auto-off to extend battery life.
- Case, alligator clip, leads with removable tips.



Accessories for Field Service

Thermometer, RPM and Megohm Meter

Description and Application

The SMG5 provides a 1000 V voltage source, monitors current, and displays the resistance between the test points. Maximum current output is <1 mA. It can be used to determine the condition of insulation from winding to ground in a motor, compressor, or transformer.

Disconnect the windings and measure the resistance between the windings and ground through the insulation. Determine what a "good" reading is by comparing your reading to values supplied by the manufacturer of the equipment or from your own experience.

Noticing decreasing insulation resistance levels can forecast problems before catastrophic failure.

Why a DMM often is not enough

To test resistance, a DMM supplies low voltage (<1 V) to the test points and is capable of delivering only a few milliamps. It is not a high enough voltage to detect high resistance problems that might indicate moisture and other contaminants, and it is not enough current to measure lower values of resistance.

Accessories for Field Service

Fuses

Fuses

ServiceFirst Item #	Mfg #	Description
FUS01137	RFL701(1)	Fuses: 20 A/600 V (10 x 38 mm) -HB74
FUS01514	RFM66(4)	Fuses: (4) 0.25 A/700 V (6 x 32 mm)-SC66, SC76
KIT06118	RFM74(4)	Fuses: (4) 0.5 A/500 V (6.35 x 32 mm) -HB74, LT17
KIT06119	RF16(4)	Fuses: (4) 0.1 A/250 V (5 x 20 mm)-LT16, LT17
KIT06120	RFL83(4)	Fuses: (4) 10 A/600 V (6.35 x 25.4 mm) -LT83
KIT06121	RFM70(4)	Fuses: (4) 2 A/600 V (6.35 x 25.4 mm) -LT6, LT16
KIT06122	RFS74(4)	Fuses: (4) 0.5 A/250 V (5 x 20 mm) -HB74, LT83

Cross Reference

Fieldpiece

ServiceFirst Item # to Fieldpiece #			ServiceFirst Item # to Fieldpiece #		
SF #	MFG #	PAGE	SF #	MFG #	PAGE
ADP00826	ADBF2	17	MTR00830	SC67	4
ADP00868	AHDL1	7	MTR00855	LT16B	8
CAS00809	ANC1	22	MTR00856	LT17B	8
CAS00810	ANC3	22	MTR00860	SC76	4, 6
CAS00812	ANC5	22	MTR00881	HS33	10
CAS00814	ATWB1	18	MTR00894	SRPM1	23
CAS01301	ANC7	22	SEN00853	AHV28	19
CAS01302	ANC8	22	SEN00854	ATB1	18
CMP00820	ACDC6	19	SEN00858	ATEXT10	18
CMP00821	ACH	15	SEN00859	ATF1	18
CMP00876	ACA1000	19	SEN01117	ATC3	18
FUS01137	RFL701(1)	24	TCP00106	ATA1	18
FUS01514	RFM66(4)	24	TCP00107	ATAF1	18
FUS01536	ATC1	18	THR00058	SIR2	23
HED00489	AMD1	16	THR00059	SPK1	23
HED00495	ATRMS3	15	TOL00305	HB74	8
HED00529	AMR1	16	TOL00307	HB74K13	22
HED00648	AMN2	14	TOL00319	LT83	8
HED00650	ACM3	15	TOL00913	LT17	22
HED00661	ARH4	13	TOL01120	ST3	23
HED00676	ARH3	13	TOL01765	DL2	7
HED00678	AVH1	15	TOL01910	HS32	10
HED00681	ATIR3	13	TOL01912	HS35	10
HED00682	AUA2	14	TOL01913	HS33K14	20
HED00689	ATH4	13	TOL01914	HS33K14G	20
HED00695	ASH2	15	TOL01915	HS35K19	20
HED00696	AAV3	14	TOL01916	HS35K19G	20
HED00780	AVG2	14	TOL01917	HS35K31	20
HLD00886	EHDL1	7	TOL01918	HS35K31G	20
KIT06114	ADA2	17	TOL01919	DL2K13	20
KIT06115	ADK7	17	TOL01920	DL2K13G	20
KIT06117	AEK11	17	TOL01921	HB74K27	20
KIT06118	RFM74(4)	24	TOL01922	HB74K27G	20
KIT06119	RF16(4)	24	WIR03224	ASLS2	17
KIT06120	RFL83(4)	24	WIR03694	ADLS2	17
KIT06121	RFM70(4)	24			
KIT06122	RFS74(4)	24			
KIT08153	AQK3	17			
MTR00819	SMG5	23			
MTR00825	SC64	4			
MTR00826	SC68	4			
MTR00827	SC66	4			



Cross Reference

Fieldpiece

Fieldpiece # to ServiceFirst Item #			Fieldpiece # to ServiceFirst Item #		
MFG #	SF #	PAGE	MFG#	SF #	PAGE
AAV3	HED00696	14	DL2K13G	TOL01920	20
ACA1000	CMP00876	19	EHDL1	HLD00886	7
ACDC6	CMP00820	19	HB74	TOL00305	8
ACH	CMP00821	15	HB74K13	TOL00307	22
ACM3	HED00650	15	HB74K27	TOL01921	20
ADA2	KIT06114	17	HB74K27G	TOL01922	20
ADBF2	ADP00826	17	HS32	TOL01910	10
ADK7	KIT06115	17	HS33	MTR00881	10
ADLS2	WIR03694	17	HS33K14	TOL01913	20
AEK11	KIT06117	17	HS33K14G	TOL01914	20
AHDL1	ADP00868	7	HS35	TOL01912	10
AHV28	SEN00853	19	HS35K19G	TOL01916	20
AMD1	HED00489	16	HS35K31	TOL01917	20
AMN2	HED00648	14	HS35K31G	TOL01918	20
AMR1	HED00529	16	LT16B	MTR00855	8
ANC1	CAS00809	22	LT17B	MTR00856	8
ANC3	CAS00810	22	LT17	TOL00913	22
ANC5	CAS00812	22	LT83	TOL00319	8
ANC7	CAS01301	22	RF16(4)	KIT06119	24
ANC8	CAS01302	22	RFL701(1)	FUS01137	24
AQK3	KIT08153	17	RFL83(4)	KIT06120	24
ARH3	HED00676	13	RFM66(4)	FUS01514	24
ARH4	HED00661	13	RFM70(4)	KIT06121	24
ASH2	HED00695	15	RFM74(4)	KIT06118	24
ASLS2	WIR03224	17	RFS74(4)	KIT06122	24
ATA1	TCP00106	18	SC64	MTR00825	4
ATAF1	TCP00107	18	SC66	MTR00827	4
ATB1	SEN00854	18	SC67	MTR00830	4
ATC1	FUS01536	18	SC68	MTR00826	4
ATC3	SEN01117	18	SC76	MTR00860	4, 6
ATEXT10	SEN00858	18	SMG5	MTR00819	23
ATF1	SEN00859	18	SIR2	THR00058	23
ATH4	HED00689	13	SPK1	THR00059	23
ATIR3	HED00681	13	SRPM1	MTR00894	23
ATRMS3	HED00495	15	ST3	TOL01120	23
ATWB1	CAS00814	18			
AUA2	HED00682	14			
AVG2	HED00780	14			
AVH1	HED00678	15			
DL2	TOL01765	7			
DL2K13	TOL01919	20			

What's New From Fluke



KIT08266 (Fluke-112/322 KIT) Electrician's Multimeter and Clamp Meter Combo Kit*

- Fluke 112 tru-rms digital multimeter
- Fluke 322 clamp meter
- TL75 hard point test lead set
- C800 durable carrying case



KIT08168 (Fluke179/EDA KIT) Electronics Multimeter and Deluxe Accessory Kit*

- Fluke 179 true-rms digital multimeter
- TL224 SureGrip™ silicone test leads
- TL910 electronic test probes
- AC280 SureGrip™ heavy duty hooks clips
- 80BK integrated temperature probe
- C800 durable carrying case



KIT08169 (Fluke-16/322 KIT) HVAC Multimeter and Clamp Meter Combo Kit*

- Fluke 16 multimeter with temperature
- Fluke 322 clamp meter
- TL75 hard point test lead set
- 80BK integrated temperature probe
- C800 durable carrying case



KIT09555 87-Retrofit Kit for 83, 85, 87-3, 787 meters

- C80Y replacement holster
- DR80 LCD display upgrade kit
- TL71 premium DMM test leads
- AC72 slide-on style alligator clips
- F1 and F2 replacement fuses
- MeterCleaner Wipes



MTR00919 (Fluke 189) Logging Digital Multimeter and FlukeView® Forms Combo Pack

- Fluke 189 logging digital multimeter plus, FlukeView® VVF-SC2 Forms Documentation and Analysis Software
- Create custom forms or reports to record test procedures and results
- Documentation can establish long term analyses and troubleshooting data of various processes for use in preventative maintenance schedules
- Includes software, infrared adapter, cable, and connector



MTR00884 (Fluke 179/TPAK) and ToolPak™ Magnetic Meter Hanging Strap Combo Pack

- Fluke 179 true-rms digital multimeter plus a ToolPak Magnetic Meter Hanging Strap
- ToolPak to hang your meter almost anywhere on a nail, hook, pipe, or other object
- Strong magnet will attach to an electrical panel, metal doorjamb, or any other ferrous-type metal
- Includes a universal hanger, a magnet, and a 17-inch (23 cm) "hook-and-loop" strap

*Kit content may vary by country

Digital Multimeters



Fluke 180 Series Digital Multimeter

The Fluke 180 Series DMMs deliver breakthrough features and performance in an easy-to-use format to help you solve the toughest problems.

- 0.025% basic dc accuracy.
- Duty cycle/pulse width.
- Battery and fuse access door.
- 50,000-count resolution with instant readings for detailed analyses.
- 100 kHz ac bandwidth for troubleshooting modern electronics.
- True-rms, ac, and dc.
- dBm, dBv.
- Internal memory for up to three days of stand-alone logging of measurement changes and manually storing of up to 100 different measurements (189 only).
- Min Max to record and timestamp values in elapsed time. Fast MIN MAX captures peaks to 250 μ s.
- Temperature readings in $^{\circ}$ C or $^{\circ}$ F using optional K-type thermocouple.
- Enhanced ranges, such as dc voltage measurements down to 10 μ V, ohms up to 500 MW, and capacitance up to 50,000 μ F.
- Multiple reading display with bargraph and two-level backlight.

Safety conformance

All inputs are protected to IEC 1010-1 category III 1000 V rating and category IV 600 V rating. All meters have been independently tested and approved for UL3111, CSA C22.2 No. 1010 and TÜV to EN61010 listing.

Accessories and Ordering Information

Included accessories

Every 180 Series comes packaged with TL71 Silicone test leads, probe holder, two AC72A alligator clips, four AA batteries (installed), CD-ROM (user's manual and technical notes) and operator's guide.

Ordering information

ServiceFirst Item #	Mfg #	Description
MTR00844	Fluke-187	Digital multimeter
MTR00840	Fluke-189	Logging multimeter

Recommended Accessories – 180 Series DMMs

ServiceFirst Item #	Mfg #	Description
KIT07904	TPAK	Meter-hanging kit with magnet
CAS01286	C125	Soft carrying case with removable outside pocket
CMP00969	i410	ac/dc current clamp
ADP00977	80AK	Thermocouple adapter and bead probe
TCP00096	80PK-1	Thermocouple adapter and bead probe
TCP00100	80BK	Thermocouple adapter and bead probe
KIT07902	TL20	Industrial test lead set
TOL01801	FVF-SC2	FlukeView forms software

FlukeView® Forms documentation and analysis software

- Form generating software for PCs.
- Places measured data from the Fluke 187 or 189 into professional-looking documents that may be customized.
- Allows meter and PC to communicate via infrared port.
- FVF-SC2 includes software, infrared adapter, cable, and connector.



Digital Multimeters



Fluke 110, 111, 112 Digital Multimeters

Compact meters for installers and contractors

In the case of Fluke's new 110, 111, and 112, smaller is definitely better. These little meters pack more features than some DMMs twice their size:

- True-rms ac voltage and current measurement for accurate readings on all waveforms.
- 6000-count display provides improved resolution.
- Min/Max/Average feature captures irregular activity.
- Frequency, capacitance, and resistance capabilities.
- The 112 has a backlight to illuminate the screen in dark workspaces.
- Easy-access battery door to change the battery without breaking the calibration seal.
- Drop protected to 1 meter.
- Holster with probe holders for two-hand operation and probe storage.
- Compatible with ToolPak™ meter-hanging kit.
- Compact and lightweight for use on the go.
- IEC CAT III 600 V safety rating.

Function	Range and resolution	Best accuracy
V dc	6000 mV, 6.000 V, 60.00 V, 600.0 V	±0.7% of reading
V ac ¹	6000 mV, 6.000 V, 60.00 V, 600.0 V	±1.0% of reading
A dc (models 111 and 112 only)	6.000 A, 10.00 A ²	±1.0% of reading
A ac ² (models 111 and 112 only)	10.00 A ²	±1.5% of reading
Resistance	600.0 Ω, 6.000 kΩ, 60.00 kΩ, 600.0 kΩ 6.000 MΩ, 40.00 MΩ	±1.5% of reading
Capacitance	1000 nF, 10.00 μF, 100.0 μF, 9999 μF	±1.9% of reading
Frequency ³	99.99 Hz, 999.9 Hz, 9.999 Hz, 50.00 kHz	±0.1% of reading

¹ Specified from 5% of range to 100% of range. For Aac, 5% of range is relative to 60 A.

² 10 A continuous, 20 A for up to 30 seconds, and not specified below 3 amps.

³ Voltage frequency is specified from 5 Hz to 50 kHz. Current frequency is specified from 50 Hz to 5 kHz.

Battery life: 300 hours typical for alkaline.

Size (with holster) (H x W x L): 4.6 cm x 9.6 cm x 10.0 cm.

Three-year limited warranty.

Accessories and Ordering Information

Included accessories

Every Fluke 110 Series meter comes packaged with a H110 protective holster and TL75 test leads, 9 V battery (installed) and manual.

Ordering information

ServiceFirst Item #	Mfg #
MTR00862	Fluke-110
MTR00853	Fluke-111
MTR00838	Fluke-112

Recommended Accessories – 110 Series DMMs

ServiceFirst Item #	Mfg #	Description
KIT07904	TPAK	Meter-hanging kit with magnet
CAS01263	C12A	Soft vinyl carrying case
CLP00983	AC72	Alligator clips that push onto test lead probes
LED00358	TL23F	Electrical test-lead set
MOD01261	80TK	Thermocouple module converts a DMM into a thermometer

Digital Multimeters



Fluke 73, 77, 175, 177, and 179 Digital Multimeters

The 170 Series delivers three new, feature-packed DMMs to Fluke's world-class product line. The 175, 177, and 179 are designed tough to withstand the harshest work environments, and are accurate enough to rival most bench meters.

170 Series Features include:

- 6000-count display provides better resolution.
- True-RMS ac voltage and current measurement for accurate readings on all waveforms.
- A backlight to illuminate the screen in dark workspaces (177 and 179)
- Easy-access battery door to change the battery without breaking the calibration seal.
- Drop protected to 1 meter.
- Overmolded case features integrated probe holders.
- Min/max records irregular activity.
- Auto and manual hold .
- Compatible with ToolPak™ meter-hanging kit.

Features

ServiceFirst Item #	MTR00859	MTR00851	MTR00898	MTR00850	MTR00834	MTR00884
Mfg #	73-III	77-III	175	177	179	179/TPK
Max voltage	600	1000	1000	1000	1000	1000
True-rms			•	•	•	•
Temperature					•	•
Basic dc accuracy	0.3%	0.3%	0.15%	0.09%	0.09%	0.06%
Backlight				•	•	•
Min/max/avg			•	•	•	•
Toolpak meter hanging kit with magnet			Opt	Opt	Opt	Included

Function	Range and resolution	Best accuracy
V dc	600.0 mV, 6.000 V, 60.00 V, 600.0 V, 1000 V	±0.9% (models 177 and 179) ±0.15% (model 175)
V ac ¹	600.0 mV, 6.000 V, 60.00 V, 600.0 V, 1000 V	±1.0% of reading
A dc	60.00 mA, 400.0 mA, 6.000 A, 10.00 A ²	±1.0% of reading
A ac ²	60.00 mA, 400.0 mA, 6.000 A, 10.00 A ²	±1.5% of reading
Resistance	600.0 Ω, 6.000 kΩ, 60.00 kΩ, 600.0 kΩ 6.000 MΩ, 50.00 MΩ	±0.9% of reading
Capacitance	1000 nF, 10.00 μF 100.0 μF, 9999 μF	±1.2% of reading
Frequency ³	99.99 Hz, 999.9 Hz, 9.999 Hz, 99.99 kHz	±0.1% of reading
Temperature (model 179)	-40°C to +400°C, -40°F to +752°F	1.0% of reading

¹ All ac voltage and ac current ranges are specified from 5% of range to 100% of range.

² 10 A continuous, 20 A for up to 30 seconds.

³ Voltage frequency is specified from 2 Hz to 100 kHz. Current frequency is specified from 2 Hz to 30 kHz.

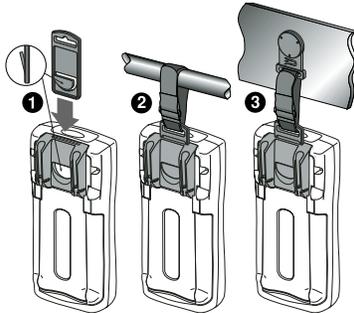
MTR00859 (Fluke 73-III) Series Multimeter

The Fluke 73 III is a basic autoranging multimeter with TouchHold® to freeze the measurement display. Includes holster and test leads.

Digital Multimeters

For Combo kits, see page 24

- Electricians 179 multimeter and voltage tester combo kit.
- Electronics 179 multimeter and deluxe accessory combo kit.



ToolPak

The meter-hanging solution

- Kit includes universal hanger clips (2), hook and loop straps (2 lengths), adapter, and strong magnet.
- Combine components to meet most hanging needs.

Accessories and Ordering Information

Included accessories

Every Fluke 170 Series meter comes packaged with TL75 test leads, 9 V battery (installed), and manual. The Fluke 179 comes with an 80BK temperature probe.

Ordering information

ServiceFirst Item #	Mfg #	Description
MTR00850	Fluke-177	Digital Multimeter
MTR00834	Fluke-179	Digital Multimeter

Recommended Accessories – 170 Series DMMs

ServiceFirst Item #	Mfg #	Description
KIT07904	TPAK	Meter-hanging kit with magnet
CAS01261	C25	Soft-vinyl carrying case
CAS01262	C510	Top-grain leather carrying case
CMP00956	i200	ac current clamp
LED00358	TL23F	Electrical test lead set



Fluke 16 and 12 Series Multimeters

The Fluke 10 Series models are designed to support basic electrical and electronic troubleshooting. Their compact design, slide switch, and push-button controls allow true, one-handed operation. In addition to the features and functionality of the Fluke 12, the Fluke 16 incorporates temperature and microamps for flame sensor measurements.

Features

ServiceFirst Item #	MTR00858	MTR00872	MTR00831
Mfg #	Fluke-7-600	Fluke-12	Fluke-16
4000 Count Digital Display	•	•	•
VCheck™	•	•	•
Capacitance			1.000 - 10,000 µF
Temperature			•
Microamps			•
Min/Max Record w/Elapsed Time Clock		•	•
Continuity Capture		•	•
Diode Test		•	•
Fast Continuity Beeper	•	•	•

VCheck™ (12 and 16 only) simplifies safe power source and supply measurement. When measuring ohms/continuity with more than 4.5 volts present across the input jacks (intentional or not), the meter automatically switches to measuring ac or dc volts, whichever is the greater. Input impedance is approximately 2 kW, helping determine if voltage is from leakage or a hard connection. Overload protection is provided if the circuit is checked in the ohms mode.

Accessories and Ordering Information

Included accessories

Each model includes TL75 test leads, 9 V battery (installed), and operator's manual. In addition, the Fluke 16 includes the 80BK temperature accessory and C10 holster.

Digital Multimeters

Fluke 87V Digital Multimeter

The new Fluke 87V has improved measurement functions, troubleshooting features, resolution and accuracy to solve more problems on motor drives, in plant automation, power distribution and electro-mechanical equipment.



Accessories

Fluke 87V/E Industrial Electrician Combo Kit

Includes special accessories to make industrial troubleshooting even more productive. Save more than \$50 compared with the individual purchase price.

- A. 1.5 m heat resistant silicone test leads
- B. Removable test probes with 4 mm of exposed metal for use on industrial circuits
- C. Retractable long reach alligator clips
- D. Magnetic hanger to position and hold meter to steel surfaces
- E. Temperature probe

Included Accessories

Every Fluke 80 Series V meter comes packaged with TL75 Test Leads, AC72 Alligator Clips, holster, 9 V battery (installed), temperature probe (87V only) CD-ROM (user's manual and technical notes) and operator's guide.

New Features for Maximum Productivity

- Unique function for accurate voltage and frequency measurements on adjustable speed motor drives and other electrically noisy equipment
- Built in thermometer conveniently allows you to take temperature readings without having to carry a separate instrument
- Optional magnetic hanger for easy setup and viewing while freeing your hands for other tasks
- Large digit display with bright two level backlight makes the 87V significantly easier to read than older models

Ordering Information

ServiceFirst Item #	Mfg #
MTR00942	Fluke-83-5
MTR00940	Fluke-87-5
MTR00941	Fluke-87-5/E

Electrical Safety

All inputs are protected to Category III, 1000 V and Category IV 600 V. They can withstand impulses in excess of 8,000 V and reduce risks related to surges and spikes.

Features

True-rms ac voltage and current for accurate measurements on non linear signals
Selectable filter for accurate voltage and frequency measurements on motor drives
0.05% dc accuracy
4-1/2 digit mode for precise measurements
Built-in thermometer lets you carry one less tool
Large display digits and 2 level bright white backlight for increased visibility
10,000µF capacitance range for components and motor caps
Peak capture to record transients as fast as 250µs
Measure up to 1000 V ac and dc
Measure up to 10 A, 20 A for up to 30 seconds
Auto and manual ranging for maximum flexibility
Analog bargraph
Resistance, continuity and diode test
Frequency to 200 kHz and % duty cycle
Min/Max and average recording to capture variations automatically
Relative mode to remove test lead resistance from low ohms measurements
Improved sleep mode for long battery life
Access door for fast battery changes without breaking the calibration seal

Specifications

Function	Range and resolution	Basic accuracy	
		83V	87V
DC Volts	600.0 mV, 6.000 V, 60.00 V, 600.0 V, 1000 V	0.08%	0.05%
AC Volts	600.0 mV, 6.000 V, 60.00 V, 600.0 V, 1000 V	0.5%	0.7% (True-rms)
DC Current	600.0 µA, 6000 µA, 60.00 µA, 600.0 mA, 6.000 A, 10.00 A	0.4%	0.2%
AC Current	600.0 µA, 6000 µA, 60.00 µA, 600.0 mA, 6.000 A, 10.00 A	1.2%	1.0% (True-rms)
Temperature (excl. probe)	-200 to 1090 °C (-328 to 1994 °F)	-	1.0%
80BK Temperature Probe	-40 to 260 °C (-40 to 500 °F)	-	2.2 C or 2%
Resistance	600.0 Ω, 6.000 kΩ, 60.00 kΩ, 600.0 kΩ, 6.000 MΩ, 50 MΩ	0.4%	0.2%
Capacitance	10.00 nF, 100.0 nF, 1.000 µF, 10.00 µF, 100.0 µF, 9,999 µF	1.0%	1.0%
Frequency	199.99 Hz, 1.9999 kHz, 19.999 kHz, 199.99 kHz	0.0005%	0.005%

Digital Multimeters

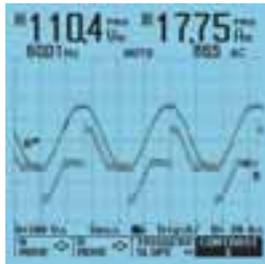


MTR00905 (Fluke 123) Industrial ScopeMeter® Test Tool

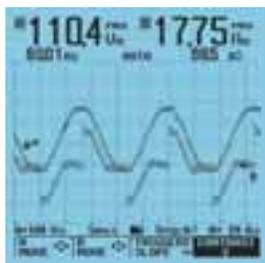
ScopeMeter 123: Three-in-one simplicity

The compact ScopeMeter 123 is the rugged solution for industrial troubleshooting and installation applications. It is a truly integrated test tool, with oscilloscope, multimeter, and “paperless” recorder in one affordable, easy-to-use instrument. Find fast answers to problems in machinery, instrumentation, control, and power systems.

- A dual-input 20 MHz digital oscilloscope
- Two 5,000 count True-rms digital multimeters
- A dual-input TrendPlot recorder
- Connect-and-View trigger simplicity for hands-off operation
- Shielded test leads for oscilloscope, resistance, and continuity measurements
- Up to five hours battery operation
- 600 V CAT III safety certified
- Optically isolated RS-232 interface
- Rugged compact case



Dual-input measurement shows both meter reading and waveform at the same time.



You can use the ScopeMeter 123 to check capacitance of a starting capacitor for a single-phase motor.



Cursors and zoom featured by the 190 Series help you to analyze the captured TrendPlot.

One test lead measures all

High-frequency waveform, meter, capacitance and resistance measurements, and continuity checks are all covered by the shielded test leads. No time wasted finding or swapping leads.

Battery-powered mobility

Five hours of battery operation frees you from mains outlets for true on-the-move working. Its handheld format (weighing just 1.2 kg) is easy to carry, and it fits comfortably in your hand. The rugged and drip-proof case ensures long life and reliable operation in the harshest industrial environments.

Use TrendPlot™ to help find intermittents, fast (found in 123 and 190)

The toughest faults to find are those that happen only once in a while—intermittents. They can be caused by bad connections, dust, dirt, corrosion, or simply broken wiring or connectors. Other factors, like line outages and sags, or the starting and stopping of a motor, can also cause a machine to stop.

You may not be around to see it—Fluke’s ScopeMeter 123 will. In this “paperless recorder” mode, you can plot the minimum and maximum peak values and average over time—up to 16 days. The two inputs can plot any combination of volts, amps, temperature, frequency, and phase—with time and date stamp—to help lead you to the cause of those faults quickly.

Safety conformance

The ScopeMeter 123 and the included shielded test leads are safety-certified for measurements on 600 V CAT III industrial power systems. Via the optically-isolated RS-232 interface, the ScopeMeter 123 can be safely connected to a printer for direct printout or a PC for later analysis and documentation with FlukeView software.

FLUKE®

Digital Multimeters

MTR00914 (Fluke 88) Deluxe Automotive Multimeter

The Fluke 88 is a complete automotive diagnostic package. It offers virtually everything you need in an automotive multimeter:

- Volts, ohms, amps, continuity, and diode test
- Milliseconds pulse-width measurements
- rpm measurements with inductive pickup
- Min/max/avg recording
- Frequency and duty-cycle measurements
- Lo Ohms function
- Change Alert™
- Smoothing™
- Bright white backlit display
- Rugged, hard-shell carrying case
- Deluxe test leads with interchangeable test probes and wide jaw alligator clips
- Sleep mode
- 10 Megohm input impedance
- Lifetime warranty
- Cat II 300 V

Multimeter Transition Guide

Replace the old with the new

Move up to superior safety and technology.



MTR00840 (Fluke 189)

Full-featured meter for the most demanding users.

Features	Old Fluke 8060A/8062A	NEW Fluke 189	Benefits
ServiceFirst Item #		MTR00840	
Maximum display digits	20,000	50,000	More resolution for more sensitive measurements
Backlight	No	Yes, 2 levels	Usable in dark workspaces
Best basic accuracy	0.040%	0.025%	More accurate
Maximum current input	2 amps	10 amps	Extended range
Frequency range	700 kHz	1 MHz	Extended range
Maximum ac voltage	750	1000	Extended ac range
Dual display	No	Yes	Display 2 readings at once
PC interface	No	Yes	Transfer readings for analysis
Built-in memory	No	Yes	Store readings internally
Warranty	1 year	Limited lifetime	Lower cost of ownership
Latest safety standards**	No	Yes	1,000 V CAT III, 600 V CAT IV
Capacitance	No	Yes	More functionality
Duty cycle	No	Yes	More troubleshooting capabilities
Temperature	No	Yes	Built-in thermometer
Min/max/avg	No	Yes	Capture intermittent events
Fast min/max	No	Yes	Capture fast intermittent events
ac + dc measurements	No	Yes	Measure composite signals
Logging	No	Yes	Stand alone data recording
Optional ToolPak magnetic hanging strap	No	Yes	Hang meter for hands-free usage

**For more information on safety ratings, please see application note *ABCs of Multimeter Safety* available for viewing or download from www.fluke.com



MTR00834 (Fluke 179)

Designed to meet the demands of the industrial professional.

Features	Old Fluke 23/27	NEW Fluke 179	Benefits
ServiceFirst Item #		MTR00834	
Maximum display digits	3,200	6,000	Greater resolution
Display digit size	Standard	20% larger	Easier to read
Backlight	No	Yes	Usable in dark workspaces
Fused current inputs	No	Yes	Better protection
Best basic accuracy	0.30%	0.09%	Three times more accurate
Frequency	No	Yes	More functionality
Capacitance	No	Yes	More functionality
Temperature	No	Yes	Built-in thermometer
Maximum ac voltage	750	1000	Extended ac range
Warranty	3 years	Limited lifetime	Lower cost of ownership
Latest safety standards**	No	Yes	1,000 V CAT III, 600 V CAT IV
Optional ToolPak magnetic hanging strap	No	Yes	Hang meter for hands-free usage

**For more information on safety ratings, please see application note *ABCs of Multimeter Safety* available for viewing or download from www.fluke.com

Multimeter Transition Guide



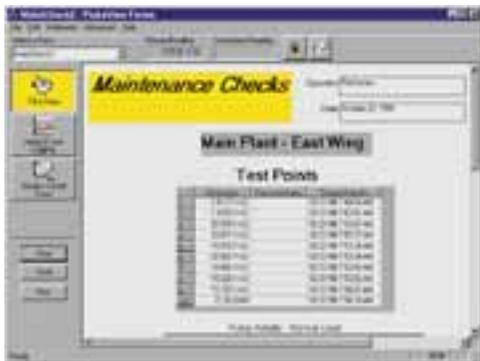
MTR00838 (Fluke 112)

Durable, compact meter for installers and contractors.

Features	Old Fluke 10/11/12B	NEW Fluke 112	Benefits
ServiceFirst Item #		MTR00838	
True-rms	No	Yes	More accurate ac measurement
Maximum display counts	4,000	6,000	Greater resolution
Backlight	No	Yes	Usable in dark workspaces
Current inputs	No	Yes	Measures current to 10 A
Best basic accuracy	1.5%/0.9%	0.70%	More accurate
Maximum Ohms	40 Megohms	50 Megohms	Extended range
Capacitance	11/12B only	Yes	More functionality
Frequency measurement	None	Yes, to 50 kHz	More functionality
Holster	10/11 optional	Included	Better protection
Probe holder	No	Yes	Easy lead storage
Battery door	No	Yes	Change battery without breaking calibration seal
Optional ToolPak magnetic hanging strap	No	Yes	Hang meter for hands-free usage

**For more informaion on safety ratings, please see application note *ABCs of Multimeter Safety* available for viewing or download from www.fluke.com

FlukeView[®] Forms Software



Fast and easy documentation and analysis

Maximize the power of your Fluke digital multimeter with FlukeView Forms Documenting Software.

Now you can get the professional-looking documents you need and data analysis that is much more in-depth than from a meter alone. FlukeView Forms records, charts, and graphs data to help you perform in-depth analysis.

And it is so easy to use. FlukeView Forms comes with both standard and customizable forms. You can use them immediately or customize the format to fit your specific applications.

With the Fluke 189, 89 Series-IV, and 53/54 Series-II meters, you do not have to have the meter and computer running together to take your measurements. These meters can measure and store hundreds of logged and saved reading measurements as stand-alone units, and then later download the information to FlukeView Forms when you connect to your computer.

Operating system requirements:

Windows[®] 95 or later, Windows NT[®] 4.0 or later, or Windows[®] 2000 and Windows[®] XP.

Minimum recommended PC hardware:

Pentium-class microprocessor, 32 MB RAM, 70 MB hard disk space (100 MB to install).

ServiceFirst Item #	Mfg #	Description
TOL01801	FVF-SC2	FlukeView Forms 1.6 Software with cable for Fluke 180 Series

TOL01671 VoltAlert[™] (1AC) is for detecting line voltage from 90 V ac to 600 V ac*.

Test voltage with easy-to-use detectors

VoltAlert[™] ac voltage testers from Fluke are easy to use—just touch the tip to a control wire, conductor, or outlet. When it glows red, you know there's voltage in the line. Electricians, maintenance, service, safety personnel, and homeowners can quickly test for energized circuits and defective grounds on the factory floor, in the shop, or at home.



TOL01693 (1LAC)

The new VoltAlert[™] 1LAC is for detecting control voltage from 24 V ac to 90 V ac*.

- Fits in a shirt pocket for convenience.
- All outer surfaces are nonconductive for safety.
- Detects voltage without metallic contact.
- Manufactured, printed, and packaged in the U.S.

CAT III-600 V

*US and North America. Other models available to accommodate various line voltages and wall outlets. Not available in Australia and Sweden.

Fluke T Series Electrical Testers



Now you can get more from a tester. Fluke T3 and T5 Voltage, Continuity, and Current Testers.

Fluke T3 Voltage and Continuity Tester

Tests ac/dc voltage and continuity. Seven different voltage indicators clearly differentiate between key voltage levels. Automatically switches to continuity beeper or ac/dc voltage measurement mode. Fits the optional H5 holster that clips onto your belt.

- Auto-On light lets you know that it is working.
- Dc polarity indicator.
- Auto-Off conserves battery power.
- Protected to 1000 V for use in CAT III environments, and to 600 V for use in CAT IV environments.

Fluke T5 Voltage, Continuity, and Current Testers

Available in 600 V and 1000 V models to test ac/dc voltage, continuity, and ac current. The OpenJaw™ lets you check ac current to 100 A without breaking the circuit. Fits the optional H5 holster that clips onto your belt.

- Detachable Slim-Reach™ probe tips customized for national electrical standards.
- Displays resistance to 1000 ohms.
- Auto-Off to conserve battery life.
- Protected to 1000 V for use in CAT III environments, and to 600 V for use in CAT IV environments (T5-1000 only).

Accessories and Ordering Information

Included accessories

The T5-1000 and T5-600 come with detachable probes and instruction sheet. The T3 has fixed test leads.

Optional accessories

H5 Custom Holster (for T5 and T3 models).

AC85A Large Jaw Alligator Clips (T5 only).

AC20 Industrial Test Clips (T5 only).

Ordering information

ServiceFirst Item #	Mfg #	Description
MTR00854	T5-1000	1000 V voltage, continuity, and current tester
TOL01669	T5-600	600 V voltage, continuity, and current tester
TOL01689	T3	Tester
LED00389	648029	Replacement lead assembly for Fluke T5 meter

Fluke 1520 MegOhmMeter



MTR00849 (Fluke 1520) MegOhmMeter

It takes a display this big to show you all the features.

The Fluke 1520 MegOhmMeter is a handy insulation-resistance tester that also measures voltage and checks connections with its Lo-Ohms function.

- Large, backlit LCD with analog bar graph and digital display.
- Three output voltages for insulation resistance testing: 250 V, 500 V, 1000 V.
- Insulation resistance testing up to 4000 MW; switches automatically to voltage measurement when voltage is greater than 30 Vac or 30 Vdc.
- ac/dc voltage measurement up to 600 V.
- Lo-Ohms function for testing connections.
- Last reading memory display.
- Four C-cell batteries for up to 5,000 tests per EN61557-2, with battery-life indicator and auto shutoff.
- Autodischarge of capacitive voltage charges.
- Heavy-duty test leads, alligator clips, and test probes.
- Rugged, splash-proof case with impact-absorbing holster.

Safety conformance

Electrical safety: Meets IEC 1010-1 and EN 61557

Protection class: Pollution degree II

Overvoltage category: IEC 1010-1 CAT III 600 V



Optional ToolPak
Meter Strap and
Magnet Hanging Kit

Environmental specifications

- Operating temperature: -10°C to +50°C
- Storage temperature: -40°C to +70°C
- Humidity (without condensation): 75% RH (40°C)
- Dust/water resistance: IP42 per IEC 529
- Operating Altitude: 2,500 meters.

Accessories and Ordering Information

Included accessories

TL27 heavy-duty test leads, TP74 lantern-tip test probes, AC86 large-jaw alligator clips, protective holster with hand strap, carrying case with accessory storage, four C-cell alkaline batteries, instruction manual, instruction manual on CD-ROM.

Ordering information

ServiceFirst Item #	Mfg #	Description
MTR00849	Fluke 1520	MegOhmMeter

Fluke 1550B MegOhmMeter



MTR00932 (Fluke 1550B) Digital Insulation Testing up to 5000 V

The Fluke 1550B is a digital megohmmeter capable of testing switchgear, motors, generators, and cables at up to 5000 V dc. It can be used for a wide range of tests: from simple spot checks to timed tests and breakdown tests. Measurement storage and PC interface software make it ideal for preventive maintenance. Heavy-duty leads, probes, and alligator clips fit in the custom carrying case, for a rugged field testing kit.

- Standard test voltages of 250V, 500V, 2500V and 5000V
- Programmable test voltages available in 50-volt steps from 250 to 1000 volts and 100 volt steps from 1000 to 5000 volts
- Automatic calculation of Dielectric Absorption and Polarization Index with no additional setup
- Improved ramp function (0 to 5000V dc) for breakdown testing
- Measures resistances up to one teraohm
- Measures cable or insulation capacitance and leakage current
- Warning voltage function alerts the user that voltage is present and gives the voltage reading up to 600V ac or dc
- Guard system eliminates the effect of surface leakage current on high resistance measurements
- Measurements can now be stored in up to 99 memory locations with each location assigned a unique user defined, four character (alpha-numeric) label for easy recall
- Improves improved Quicklink 1550B Software and Optical Interface cable for easier downloading to a Windows® PC
- Runs off of high-capacity rechargeable batteries
- Two-year warranty

Specifications

Electrical Specifications

The meter's accuracy is specified for one year after calibration at operating temperatures of 0°C to 35°C. For operating temperatures outside the range (-20°C to 0°C and 35°C TO 50°C), add +/- .25% per °C, except on the 20% bands add +/- 1% per °C.

Insulation Resistance Measurement

Test Voltage (dc)	Range	Accuracy (± reading)
250V	200 kΩ to 5 GΩ	5%
	5 GΩ to 50 GΩ	20%
500 V	200 kΩ to 10 GΩ	5%
	10 GΩ to 100 GΩ	20%
1000 V	200 kΩ to 20 GΩ	5%
	20 GΩ to 200 GΩ	20%
2500 V	200 kΩ to 50 GΩ	5%
	50 GΩ to 500 GΩ	20%
5000 V	200 kΩ to 100 GΩ	5%
	100 GΩ to 1 TΩ	20%

Short-circuit current	Greater than 1 mA and less than 2 mA
Bar graph range	0 to 1 TΩ
Insulation test voltage accuracy	-0% to + 10% at 1 mA load current
Induced ac mains current rejection	2 mA maximum
Charging rate for capacitive load	5 seconds per μF

Fluke 1550B MegOhmMeter

Function	Range	Accuracy
Leakage current	1 nA to 2 mA	±(5% + 2 nA)
Capacitance measurement	0.01 µF to 15.00 µF	± (15% reading + 0.03 µF)
Live circuit indicator	30 V to 600 V ac/dc, 50/60 Hz	± (5% + 2 V)

Timer	0 to 99 minutes; settable in 1 minute increments; indicated to within 1 second
Ramp	0% to 100% of selected test voltage, or until breakdown

Mechanical Specifications

Dimensions (H x W x L)	330 mm x 242 mm x 170 mm (13 in x 9.5 in x 6.7 in)
Weight (with battery)	4 kg (8.8 lb)

Power

Battery type	12 volt, lead-acid, rechargeable
Charger input (ac)	85 to 250 V ac 50/60 Hz 50 VA
Charger input	10 to 15 V dc, 30 VA

Environmental Specifications

Operating temperature	-20°C to 50°C (-4°F to 122°F)
Storage temperature	-20°C to 65°C (-4°F to 149°F)
Relative humidity	80% at 31°C decreasing linearly to 50% at 40°C
Operating altitude	0 to 2000 meters
Enclosure sealing	IP-40
Safety	EN 61010-1, CAT III, 600 V, EN61557, PARTS 1 and 2
Input overload protection	600 V ac continuous

Software Specifications

Quicklink 1550 software requires a PC running Windows® 95, 98, Me, 2000, NT4.0

Included Accessories

- Test leads and 5000 V-rated probes
- Alligator clips
- Interface adapter and cable
- Quicklink 1550 PC software
- Line cord
- Soft carrying case
- User's manual

Fluke 320/330 Series Clamp Meters



Choose from several new models to get the right combination of features and functions. Fluke 320 and 330 Series Clamp Meters offer an impressive array of innovative features with current ranges up to 1000 A. Choose the model that matches the jobs you do.

- Small body and jaws fit perfectly in your hand and into tight places.
- Backlight available on most models.
- Controls positioned for one-hand operation.
- New inrush-current feature measures motor-starting current the way a circuit breaker or overload unit sees it (selected models).
- Accurate low-current measurements.
- Auto shutoff.
- Display hold.
- Includes batteries, test leads, instruction card, safety sheet, and carrying case.
- Safety rating: IEC 1010-2-031, 600 V CAT III.

Specifications (@ 23°C ± 5°C RH 0-90%)

ServiceFirst Item #	MTR00832	MTR00842	MTR00847	MTR00846	MTR00836	MTR00843	
Mfg #	Fluke 322	Fluke 333	Fluke 334	Fluke 335	Fluke 336	Fluke 337	
A	Range	0 – 40.00 A 40.0 – 400.0 A	0 - 400.0 A	0 - 600.0 A	0 - 600.0 A	0 - 600.0 A	0 - 999.9 A
	Accuracy	1.8% + 5 counts (50 - 60 Hz)	2% + 5 counts (50 - 60 Hz)	2% + 5 counts (50 - 60 Hz)	2% + 5 counts (50 - 60 Hz)	2% + 5 counts (10 – 100 Hz)	2% + 5 counts (10 – 100 Hz)
	ac Response	Averaging	Averaging	Averaging	True-rms	True-rms	True-rms
Inrush	Integration Time	-	-	100 mS	100 mS	100 mS	100 mS
A	Range	-	-	-	-	0 - 600.0 A	0 - 999.9 A
	Accuracy	-	-	-	-	2% + 3 counts	2% + 3 counts
V	Range	0-400.0 V 400 – 600 V	0 – 600.0 V	0 – 600.0 V	0 – 600.0 V	0 – 600.0 V	0 – 600.0 V
	Accuracy	1.2% + 5 counts (50 - 400 Hz)	1% + 5 counts (50/60 Hz)	1% + 5 counts (50/60 Hz)	1% + 5 counts (50/60 Hz)	1% + 5 counts (20 – 100 Hz)	1% + 5 counts (20 – 100 Hz)
	ac Response	Averaging	Averaging	Averaging	True-rms	True-rms	True-rms
V	Range	0-400.0 V 400 – 600 V	0 - 600.0 V	0 - 600.0 V	0 - 600.0 V	0 - 600.0 V	0 - 600.0 V
	Accuracy	1% + 5 counts	1% + 5 counts	1% + 5 counts	1% + 5 counts	1% + 5 counts	1% + 5 counts
Ω	Range	0 – 400.0 Ω	0 – 600.0 Ω	0 – 600.0 Ω 601 – 6000 •	0 – 600.0 Ω 601 – 6000 Ω	0 – 600.0 Ω 601 – 6000 Ω	0 – 600.0 Ω 601 – 6000 Ω
	Accuracy	1% + 5 counts	1.5% + 5 counts	1.5% + 5 counts	1.5% + 5 counts	1.5% + 5 counts	1.5% + 5 counts
	Continuity	< 30 Ω	< 30 Ω	< 30 Ω	< 30 Ω	< 30 Ω	< 30 Ω
Hz	Range	-	-	-	-	-	5 - 400 Hz
	Accuracy	-	-	-	-	-	0.5% + 5 counts
	MIN/MAX	-	-	-No	No	No	Yes
	Backlight	-	-	No	Yes	Yes	Yes
	Display Hold	Yes	Yes	Yes	Yes	Yes	Yes
Size	H x W x D	7.5" x 2.5" x 1.4"	9.4" x 3.1" x 1.6"	9.4" x 3.1" x 1.6"	9.4" x 3.1" x 1.6"	9.9" x 3.1" x 1.6"	9.9" x 3.1" x 1.6"
	Jaw Opening	1"	1.2"	1.2"	1.2"	1.7"	1.7"

Models 321 & 322. Operating temperature: -14°F to 122°F (-10°C to 50°C) **Altitude:** 2,000 meters **Battery life:** (2) AAA carbon zinc approximately 100 hours continuous, automatic low-battery indicator **Safety rating:** IEC 1010-2-031, 600 V CAT III **Temperature de-rating:** < 18°C, > 28°C add 0.1 x specified accuracy /°C **Storage temperature:** -22°F to 140°F (-30°C to 60°C)

Models 333, 334, 335, 336 & 337. Operating temperature: -14°F to 122°F (-10°C to 50°C) **Altitude:** 2,500 meters **Battery life:** (2) AA alkaline approximately 150 hours continuous, automatic low-battery indicator **Safety rating:** IEC 1010-2-031, 600 V CAT III **Temperature de-rating:** Add 0.1 x specified accuracy for each °C above 28°C or below 18°C **Storage temperature:** -40°F to 140°F (-40°C to 60°C)

Carbon Monoxide Gas Measurement



MTR00837 (CO-220) Carbon Monoxide Meter

The CO-220 Carbon Monoxide Meter makes it easy to take quick and accurate measurements of CO levels. A large, backlit LCD display shows CO levels from 0 to 1000 ppm. The MAX hold function stores and displays the maximum CO level. 1-year warranty.

TOL01692 (CO-210) Carbon Monoxide Probe

As an accessory to a digital multimeter with dc mV inputs, the Fluke CO-210 measures CO levels from 0 to 1000 ppm. As a stand-alone device, the LED indicator and beeper trigger with increasing frequency as the CO level rises. 1-year warranty. Includes DMM cable.

KIT07921 (CO-205) Aspirator Kit

Allows flue gas samples up to 370°C (700°F) to be drawn with the CO-210 or CO-220 for carbon monoxide measurement. 1-year warranty.

Accessories and Ordering Information

Carbon monoxide gas measurement Included accessories:

CO-210: C50 case, battery, cord to plug into digital meter, and instruction sheet

CO-220: C50 case, battery, and instruction sheet



Ordering information

ServiceFirst Item #	Mfg #	Description
TOL01692	CO-210	Carbon Monoxide Probe
MTR00837	CO-220	Carbon Monoxide Meter
KIT07921	CO-205	Aspirator kit

FLUKE®

The Fluke 50 Series II

Laboratory accuracy in rugged handheld thermometers

Fluke 50 Series II features

- Laboratory accuracy: $\pm[0.05\% + 0.3^{\circ}\text{C}]$.
- Large backlit dual display presents all the information you need at a glance.
- MIN, MAX, and AVG— with time references— captures major events.
- Electronic Offset function maximizes overall accuracy by allowing you to compensate for thermocouple errors.
- Supports a wide range of thermocouple types.
- Temperatures displayed in $^{\circ}\text{C}$, $^{\circ}\text{F}$, or Kelvin (K).
- Splash- and dust-resistant case design.
- Holster enhances ruggedness.
- Thermometers tested to withstand a one-meter drop.
- User-friendly front panel that is easy to set-up and operate.
- Sleep mode to increase battery life (typical 1000-hour life).
- Battery door allows easy battery replacement without breaking the calibration seal.



Fluke 54 Series III



Fluke 52 Series III

Powerful data logging capabilities

The Fluke 54 Series II can log up to 500 points of data to internal memory.

- User-adjustable recording intervals.
- Real-time clock captures the exact time-of-day of events.
- Recall function allows logged data to be easily reviewed on the meter display.
- For further analysis and graphing, data can be exported to optional FlukeView PC software using the thermometer's IR communication port.

Accessories and Ordering Information

Included accessories

The Fluke 50 Series II thermometers come with 80PK-1 bead thermocouple(s), batteries, overview manual, and instructional guide on CD-ROM.



Ordering information

ServiceFirst Item #	Mfg #	Description
MTR00833	52-2	Digital thermometer, dual input
MTR00852	54-2	Datalogging thermometer, dual input

FlukeView® Forms for Temperature

Documentation and analysis software for Fluke 53 and 54 Series II thermometers

Here's a fast and easy way to document, store, and analyze temperature measurements from Fluke's newest digital thermometers.

- Produce professional-looking documents.
- In-depth analysis with records, charts, and graphs.
- Standard and customizable forms.
- Export data to other measurement analysis programs.
- Infrared interface between thermometer and PC makes data transfer fast and easy.
- Optional IR adapter and cable for PCs without an IR port.

Digital Thermometers



Fluke 50D

MTR00848 (Fluke 65) Infrared Thermometer

Laser quick. Fluke tough.

The Fluke 65 Infrared Thermometer is ideal for quick, non-contact, surface-temperature measurement of rotating, hard-to-reach, electrically live, or dangerously hot targets. Targeting objects is easy with the bright laser beam. The large, backlit display is easy to read, even in the dark. Most importantly, the shock-absorbing holster helps to create one of the most rugged IR thermometers in the industry.

Fluke 65 Infrared Thermometer Specifications

Range	-40 to 500°C (-40 to 932°F)
Response time	Less than 1 second
Resolution	0.1° up to 200°, 1° over 200°
Repeatability	±1° or ±1%, whichever is greater
Accuracy	Above 0°C (32°F): ± 2°C (± 4°F) Below 0°C (32°F): ± 5°C (± 9°F) (with instrument stable at 23°C ± 3°C)
Optical resolution	8:1 distance to spot size ratio
Emissivity	Fixed at 0.95
Battery life	Approximately 4000 measurements (2xAA)

MTR00841 (Fluke 50D) Dual input

Great for measuring input/output changes and differential trends.

- Dual channel with differential output (T1-T2).
- Min/Max recording to capture events.
- Scan function continuously scans through measurement sequence (T1, T2, T1-T2).

Features

Thermocouple types	K, J
Number of inputs	Dual
Rugged design with holster	•
Differential (T1-T2) readout	•

Specifications

Temperature measurement accuracy (For temperatures above -100°C)	Type K: ±[0.1% + 0.7°C (1.3 °F)] Type J: ±[0.1% + 0.8°C (1.4 °F)]
Measurement range (depending on thermocouple type)	-200°C (-328°F) to 1370°C (2498°F)
Display resolution	0.1°C (0.2°F) over full range
Battery life (typical)	800 hours (9 V)
Weight	280 g (10 oz.)



Loop Calibrator

MTR00907 (Fluke 707) Loop Calibrator

- Innovative output adjustment dial on 707 provides 1 μ A and 100 μ A resolution and one-hand operation
- Large display and simple interface for ease of use
- Simultaneous mA and % readout for quick, easy interpretation of readings
- mA accuracy of 0.015% on the Fluke 707 and 0.02% on the 705
- HART™ mode on 707 connects 250 ohm resistor in series with 24 V loop for compatibility with HART communicators
- Push button 25% steps for fast, easy linearity checks
- “Span Check” for fast confirmation of zero and span
- Selectable slow ramp, fast ramp, and step to provide smooth outputs for valve slewing and loop functional tests
- 24 V internal loop supply, so you can power and read a transmitter at the same time without carrying a DMM
- 0-20 mA or 4-20 mA default start up modes.

Functions	Fluke 707
Voltage measurement	
Range	0-28 V
Resolution	1 mV
Accuracy	0.015% reading + 2 LSD
Current measurement	
Range	0-24 mA
Resolution	0.001 mA
Accuracy	0.015% reading + 2 LSD
Current sourcing	
Range	0-20 mA or 4-20 mA ¹⁾
Accuracy	0.015% reading + 2 LSD
Drive capability	1200 Ω @ 24 mA
Loop power while measuring mA	24 V
Voltage sourcing	N/A
Resistance measurement	N/A
Frequency	N/A
Diode test	N/A
Continuity	N/A
Display current and % of span	Yes
Auto step, auto ramp	Yes
Span check	Yes
Battery life	18 hours typical at 12 mA

1) Will over-range to 24 mA

Accessories and Ordering Information

Included accessories:

C-10 Protective Yellow Holster, TL75 Test Leads, AC70 Test Clips, Instruction Sheet (14 languages).

Test Leads, Probes, and Clips

Modular leads and probes



LED00363 (TL21A) Test-Lead Extension Kit

- 1.5-meter-long silicone insulated test leads with shrouded male connectors on both ends.
- Separate female couplers convert the test leads into lead extensions.
- CAT III, 1000 V, 10 A; CAT IV, 600 V, 10 A.

LED00359 (TL22) Silicone Test Leads

- Flexible silicone insulation is heat and cold resistant.
- 1.5-meter-long leads have shrouded, right-angle connectors on both ends.
- CAT III, 1000 V, 10 A; CAT IV, 600 V, 10 A.

KIT07903 (TL24) Silicone Test Leads

- Flexible silicone insulation is heat and cold resistant.
- 1.5-meter-long leads have a shrouded, right-angle connector on one end and a shrouded straight connector on the other.
- CAT III, 1000 V, 10 A; CAT IV, 600 V, 10 A.

LED00364 (TL27) Heavy-Duty Test Leads

- Rugged EPDM insulation.
- 1.5 meters long with shrouded, straight connectors and excellent strain reliefs on each end.
- CAT III, 1000 V, 10 A; CAT IV, 600 V, 10 A.

Modular Test Probes

(for use with modular test leads)

TOL01685 (TP1), TOL01743 (TP2) Slim Reach™ Test Probes

- Slender probe bodies for probing closely spaced or recessed points.
- TP1 has a flat blade ideal for electrical wall sockets.
- TP2 has 2-mm-diameter tip for precise electronic probing.
- CAT III, 1000 V, 10 A; CAT IV, 600 V, 10 A.

TOL01670 (TP20) Industrial Test Probes

- Extra long tip ideal for probing recessed points.
- Sharp tip useful for piercing insulation.
- CAT III, 1000 V, 10 A; CAT IV, 600 V, 10 A.

Test Leads, Probes, and Clips

Modular Clips

(for use with modular test leads)



CLP00954 (AC20) Heavy-Duty Alligator Clips

- Plunger style, safety-grip operation.
- Insulated jaws open to 20 mm.
- CAT III, 1000 V, 10 A; CAT IV, 600 V, 10 A.



CLP00955 (AC80) Heavy-Duty Hook Clips

- Plunger style, safety-grip operation.
- Hook opening is 10 mm x 2 mm.
- CAT III, 1000 V, 3 A; CAT IV, 600 V, 3 A.



CLP00963 (AC83) Heavy-Duty Pincer Clips

- Plunger style, safety-grip operation.
- Flexible shaft is 100 mm long.
- CAT III, 1000 V, 1 A; CAT IV, 600 V, 1 A.



CLP00964 (AC85A) Large Alligator Clips

- Insulated banana jack-style.
- Curved jaw opens to 20 mm.
- CAT III, 600 V, 10 A.



CLP00965 (AC89) Heavy-Duty Insulation Piercing Clip

- Plunger style, safety-grip operation with insulated jaws.
- Small pin pierces 30- to 14-AWG insulated wire.
- CAT III, 1000 V, 5 A; CAT IV, 600 V, 5 A.



CLP00966 (AC87) Heavy-Duty Bus Bar Clips

- Plunger style, safety-grip operation with insulated, right-angle jaws.
- Adjustable jaws open to grip flat bus bars or round conductors.
- CAT III, 600 V, 5 A.

Test Leads, Probes, and Clips

Push-on Clips

(for use with TL71 and TL75 test lead and probe sets)



CLP00983 (AC72) Alligator Clips

- Slide-on style for test probes.
- Gold-plated jaws open to 8 mm.
- CAT III, 600 V, 10 A.

Test Lead Sets

LED00360 (TL71) Premium DMM Test-Lead Set



- Flexible silicone-insulated leads are heat and cold resistant.
- Distinctive comfort-grip probes.
- Recommended for μV measurements.
- CAT III, 1000 V, 10 A; CAT IV, 600 V, 10 A.

KIT07901 (TL75) Hard Point Test-Lead Set



- Extremely hard alloy tips resist wear.
- Distinctive comfort grip probes.
- Economical PVC insulated leads.
- CAT III, 1000 V, 10 A; CAT IV, 600 V, 10 A.

LED00361 (TL81A) Deluxe Electronic Test-Lead Set



- 22-piece set with quadfold pouch.
- Everything in the TL80A plus pincers, clips, leads, and adapters for virtually every electronic need.
- CAT II, 300 V.

KIT07902 (TL20) Industrial Test-Lead Set



- Great for general-purpose industrial applications.
- One pair each of TL22 test leads.

LED00358 (TL23F), LED00387 (TL23R) Electrical Test-Lead Set



- Great for general-purpose electrical applications.
- One pair each of TL24 test leads, AC20 alligator clips, and TP1 test probes (TL23F) or TP4 test probes (TL23R).
- CAT III, 1000 V, 10 A; CAT IV, 600 V, 10 A.

Current Clamps


ac Current Clamps Specifications

ServiceFirst Item #	CMP00956	CMP00974	CMP00952	CMP00966	CMP01025	CMP00968
Mfg #	i200	i200s	80i-400	80i-600A	80i-1000s	i2000flex
ac Current Range	1 A to 200 A	1 A to 200 A	1 A to 400 A	1 A to 600 A	0.1 A to 1000 A	2 A to 2000 A
Accuracy	Less than or equal to 3%+0.5 A	Less than or equal to 3.5%+0.5 A	3%+ 0.4 A	2%	0.5-1000 A: 2% 0.1-10 A: 3% +/- 100 mA	+/- 1% of full scale
Frequency Response (-3dB)	40 Hz to 40 kHz	40 Hz to 40 kHz	5 kHz	10 Hz to 50 kHz	5 Hz to 100 kHz	1 Hz to 20 kHz
Maximum Conductor Diameter	0.8" (20mm)	0.8" (20mm)	1.18" (30 mm)	1.98" (50mm)	2.13" (54mm)	2.44" (62mm)
Maximum Conductor Size	300 MCM	300 MCM	750 MCM or 2-500 MCM	2-500 MCM or 1-1000 MCM	2-500 MCM or 1-1000 MCM	24.4" circumference
Output Levels	1 mA/A	10 mV/A, 100 mV/A	1 mA/A	1 mA/A	1 mV/A, 10 mV/A, 100 mV/A	10 mV/A, 1 mv/A
Output Cable	1.5 m Shrouded Dual Banana Plugs	2 meter to BNC termination	1.5 m Shrouded Banana Plugs	1.2 m Shrouded BNC termination	1.6 meter to BNC termination	2.3 meter to BNC termination
Warranty	1 year	1 year	1 year	1 year	1 year	1 year
Safety Rating	CATIII, 600 V	CATIII, 600 V			CATIII, 600 V	CATIII, 600 V
Meter Compatibility	Range Limitations					
10/11/12/12B/16/18		1 A to 200 A			0.1 A to 1000 A*	2 A to 2000 A
21/23/73/75/77 Series 3	1 A to 200 A	1 A to 200 A	1 A to 400 A	1 A to 600 A	0.1 A to 1000 A*	2 A to 2000 A
26/79 Series 3	1 A to 40 A	1 A to 200 A	1 A to 40 A and 200 A to 400 A	1 A to 40 A and 200 A to 600 A	0.2 A to 1000 A*	2 A to 2000 A
27	1 A to 200 A	1 A to 200 A	1 A to 400 A	1 A to 600 A	0.1 A to 1000 A*	2 A to 2000 A
70 Series III		1 A to 200 A			0.1 A to 1000 s*	2 A to 2000 A
83 Series III	1 A to 200 A	1 A to 200 A	1 A to 400 A	1 A to 600 A	0.1 A to 1000 A*	2 A to 2000 A
85/87 Series III	1 A to 200 A	1 A to 200 A	1 A to 400 A	1 A to 600 A	0.2 A to 1000 A*	2 A to 2000 A
87/89 Series IV 187/189	1 A to 200 A	1 A to 200 A	1 A to 400 A	1 A to 600 A	0.1 A to 1000 A*	2 A to 2000 A
8060A/8062A DMMs	1 A to 200 A	1 A to 200 A	1 A to 400 A	1 A to 600 A	0.2 A to 1000 A*	2 A to 2000 A
860 Series Graphical Multimeter	1 A to 200 A	1 A to 200 A	1 A to 400 A	1 A to 600 A	0.3 A to 1000 A*	3 A to 2000 A
39/41B Power Meter		1 A to 200 A			0.1 A to 1000 A	2 A to 1000 A
9X Series B ScopeMeter		1 A to 200 A			0.1 A to 1000 A	2 A to 2000 A
123 ScopeMeter		1 A to 200 A			0.25 A to 1000 A	2.5 A to 2000 A
190 Series ScopeMeters		1 A to 200 A			0.1 A to 1000 A	2 A to 2000 A
45 DMM	1.5 A to 100 A	1 A to 200 A	1.5 A to 100 A	1.5 A to 100 A and 500 A to 600 A	0.15 A to 1000 A*	2 A to 2000 A
74X Series Process Meters		1.1 A to 200 A			1.1 A to 1000 A*	11 A to 2000 A
787 Process Meter	50 A to 200 A	1 A to 200 A	50 A to 440 A	50 A to 440 A	0.2 A to 1000 A*	2 A to 2000 A

*Requires PM9081/001 Adapter

Current Clamps



Included accessories

The Fluke 50 Series II thermometers come with 80PK-1 bead thermocouple(s), batteries, overview manual, and instructional guide on CD-ROM.

Ordering information

ServiceFirst Item #	Mfg #	Description
MTR00833	52-2	Digital thermometer, dual input
MTR00852	54-2	Datalogging thermometer, dual input

Current Clamps Specifications

ServiceFirst Item #	CMP00969	CMP00967
Mfg #	I410	I1010
dc Range	1-400 A	1-1000 A
ac Range	1-400 A	1-600 A
Accuracy	3.5% + 0.5 A	2% + 0.5 A
Frequency Response (-3dB)	3 kHz	10 kHz
Zero Error Adjustment	Yes	Yes
Maximum Conductor Diameter	1.18" (30mm)	1.18" (30mm)
Maximum Conductor Size	750 MCM or 2-500 MCM	750 MCM or 2-500 MCM
Output Levels	1 mV/A	1 mV/A
Output Cable	1.2 meter with shrouded banana plugs	1.2 meter with shrouded banana plugs
Battery Life	60 Hrs	60 Hrs
Warranty	1 year	1 year
Safety	CATIII, 600 V	CATIII, 600 V

Meter Compatibility

Range Limitations

10/11/12/12B/16/18	1 A to 400 A dc and 1 A to 400 A ac	1 A to 1000 A dc and 1 A to 600 A ac
21/23/70/73/75/77	1 A to 400 A dc and 1 A to 400 A ac	1 A to 1000 A dc and 1 A to 600 A ac
Series III	1 A to 400 A dc and 20 A to 400 A ac	1 A to 1000 A dc and 20 A to 600 A ac
26/79 Series III	1 A to 400 A dc and 1 A to 400 A ac	1 A to 1000 A dc and 1 A to 600 A ac
27	1 A to 400 A dc and 1 A to 400 A ac	1 A to 1000 A dc and 1 A to 600 A ac
83 Series III	1 A to 400 A dc and 1 A to 400 A ac	1 A to 1000 A dc and 1 A to 600 A ac
85/87 Series III	1 A to 400 A dc and 20 A to 400 A ac	1 A to 1000 A dc and 20 A to 600 A ac
87/89 Series IV	1 A to 400 A dc and 2.5 A to 400 A ac	1 A to 1000 A dc and 2.5 A to 600 A ac
187/189	1 A to 400 A dc and 20 A to 400 A ac	1 A to 1000 A dc and 20 A to 600 A ac
8060A/8062A DMMs	1 A to 400 A dc and 20 A to 400 A ac	1 A to 1000 A dc and 20 A to 600 A ac
860 Series	1 A to 400 A dc and 30 A to 400 A ac	1 A to 1000 A dc and 30 A to 600 A ac
Graphical Multimeter	1 A to 400 A ac**	1 A to 600 A ac**
39/41B Power Meter	1 A to 400 A dc and 5 A to 400 A ac**	1 A to 1000 A dc and 5 A to 600 A ac**
9X Series B ScopeMeter	1 A to 400 A dc and 25 A to 400 A ac**	1 A to 1000 A dc and 25 A to 600 A ac**
123 ScopeMeter	1 A to 400 A dc and 1 A to 400 A ac	1 A to 1000 A dc and 1 A to 600 A ac
190 Series ScopeMeter	1 A to 400 A dc and 5 A to 400 A ac**	1 A to 1000 A dc and 5 A to 600 A ac**
Test Tools	1 A to 400 A dc and 15 A to 400 A ac	1 A to 1000 A dc and 15 A to 600 A ac
45 DMM	4 A to 400 A dc, No ac 4 A to 400 A dc, No ac	4 A to 1000 A dc, No ac 4 A to 1000 A dc, No ac
705/707 Process Calibrators	1 A to 400 A dc and 110 A to 400 A ac	1 A to 1000 A dc and 110 A to 600 A ac
715/724/725 Process Calibrators	1 A to 400 A dc and 20 A to 400 A ac	1 A to 1000 A dc and 20 A to 600 A ac
74X Series Process Meters	1 A to 400 A dc and 20 A to 400 A ac	1 A to 1000 A dc and 20 A to 600 A ac
787 Process Meter	1 A to 400 A dc and 20 A to 400 A ac	1 A to 1000 A dc and 20 A to 600 A ac

*Requires PM9081/001 Adapter

**Requires PM9082/001 Adapter

Temperature Accessories

Hot Probes and Cool probes

Contact Probes

TCP00096 (80PK-1) Bead Probes

This basic, inexpensive thermocouple offers good accuracy and fast response. (Not suitable for liquid immersion).

- 80PK-1 is compatible with K-type thermometers.
- Measurement range: -40 to 260°C (-40 to 500°F).

TOL01687 (80PK-2A) Immersion Probe

Use as a general-purpose probe including liquids and gels.

- Compatible with K-Type temperature measuring instruments.
- Measurement range: -40 to 982 °C (-40 to 1,800°F).

TOL01686 (80PK-3A) Surface Probe

Designed for measuring the temperature of flat or slightly convex surfaces, this K-type probe is ideal for hot rollers and plates.

- Exposed junction allows direct contact with the surface being measured.
- Measurement range: 0 to 260°C (32 to 500°F).

TCP00099 (80PK-4A) Air Probe

For air and non-caustic gas applications.

- Probe constructed of 304 stainless steel with a perforated baffle around the measurement bead.
- Measurement range: -40 to 816°C (-40 to 1,500°F).

TOL01688 (80PK-5A) Piercing Probes

Designed for foods, liquids and gels.

- Probe made of 304 stainless steel
- 80PK-5A is compatible with K-Type instruments.
- Measurement range: -40 to 260°C (-40 to 500°F).

TOL01691 (80PK-7) Industrial Surface Probe

For flat or slightly curved surfaces.

- Exposed junction allows direct contact with the surface being measured.
- Robust design for extended service life.
- Measurement range: -127 to 600°C (-196 to 1,112°F).

Temperature Accessories

Temperature Probe



TCP00111 (80PK-6A) Exposed Probe

Use both as a surface probe and for insertion into air and non-corrosive gases.

- Probe constructed of 304 stainless steel.
- Measurement range: -40°C to 816°C (-40°F to 500°F).



TCP00097 (80PK-8) Pipe Clamp

Designed for pipe surfaces from 6.4 mm (1/4") diameter to 34.9 mm (1-3/8") diameter.

- Spring-action jaw will not loosen over time, ensuring repeatable measurements.
- Robust design for extended service life.
- Measurement range: -29°C to 149°C (-20°F to 300°F).
- Repeatability: 0.56°C (1°F).



TOL01694 (80PK-9) General Purpose Probes

Use as surface probe and for insertion into air and non-caustic gases.

- Probe constructed of 304 stainless steel.
- 80PK-9 is compatible with K-type thermometers.
- Measurement range: -40 to 260°C (-40 to 500°F).



TOL01695 (80T-150U) Universal Temperature Probe

For highly accurate measurement of air, surface, and noncorrosive materials.

- Measurement range: -50°C to 150°C (-58°F to 302°F).
- Output: 1 mV/°C or 1 mV/°F (switch selectable).



TCP00100 (80BK) Integrated DMM Temperature Probe

Compatible with the Fluke 16 and Fluke 89 Series IV and other DMMs with temperature measurement functions.

- K-type thermocouple with standard banana jack
- Convenient one-piece construction
- Measurement range: -40°C to 260°C (-40°F to 500°F)

Temperature Accessories

Non-Contact Probes

TOL01690 (80T-IR)

For quick, non-contact temperature measurement in less than one second.

- Instantly measures temperatures from -18°C to 260°C (0 to 500°F).
- Highly repeatable readings displayed in °C or °F.
- Optical resolution 4:1.
- Output 1 mV/°C or 1 mV/°F (switch selectable).



Other Temperature Accessories

TCP00101 (80CK-M) and K-Type Mini-Connectors

- Isothermal screw terminal for K or J
- Suitable for up to 20 gauge thermocouple wire
- Color coded to industry standards (K-yellow, J-black)
- Two per package



ADP00977 (80AK)

Adapts Type-K thermocouple mini-connector to dual banana-plug inputs.

- Allows the Fluke 89 IV or Fluke 16 multimeters to be used with any K-type thermocouple accessory
- Measurement range and accuracy is not affected by the 80AK adapter



Cases and Holsters

Meter Cases

A premium meter deserves a premium case



CAS01262 (C510) Leather Meter Case

- Genuine top-grain cowhide
- Oil tanned for long life
- Rugged construction with heavy-duty stitching and reinforced rivets
- Large tool-belt loop and top flap to secure meter
- Holds most Fluke DMMs, thermometers, and process calibrators



CAS01285 (C520A) Leather Tester Case

- Genuine top-grain cowhide
- Oil tanned for long life
- Rugged construction with heavy-duty stitching and reinforced rivets
- Large tool-belt loop
- Enlarged case compartment to safely secure tester and leads
- Holds Fluke electrical testers



CAS01266 (C550) Tool Bag

- Steel-reinforced frame
- Rugged ballistic cloth with heavy-duty hardware
- Large zippered storage compartment with 25 pockets
- Weather resistant
- Carries all your tools to the job



CAS01263 (C12A) Meter Case

- Zippered carrying case with inside pockets and belt loop



CAS01309 (C20) Meter Case

- Heavy-duty case with carrying handle and accessories storage compartment
- Top cover snaps onto back to serve as tilt stand



CAS01261 (C25) Meter Case

- Zippered carrying case with padding and inside pocket



CAS01268 (C50) Meter Case

- Zippered carrying case with inside pocket, belt loop, and inside meter strap



CAS01273 (C90) Meter Case

- Zippered carrying case with inside pocket and belt loop.



CAS01271/CAS01286 (C781/C125) Meter Case

- Zippered carrying case with detachable external pouch.

FLUKE®



Cases and Holsters

CAS01272 (C789) Meter and Accessory Case

- Large fabric carrying case with three compartments, removable handle, and shoulder strap.

CAS01270 (C100) Meter and Accessory Case

- Tough polypropylene case.
- Holds any Fluke DMM or digital thermometer and most accessories.

CAS01281 (C800) Meter and Accessory Case

- Tough polypropylene case.
- Holds many of the Fluke DMMs or digital thermometers.
- Accessories and manual compartments.
- Detachable lid.

Holsters

CAS01267 (C10) Meter Holster

- Snap-on yellow holster absorbs shocks and protects meter from rough handling.
- Includes built-in stand and hanger loop .

CAS01265 (H5) Electrical Tester Holster

- Rugged fabric holster includes flap for lead storage and built-in belt loop.
- Fits Fluke T2 and T5 testers.

CAS01297 (H3) Clamp Meter Holster

- Rugged fabric holster includes flap for lead storage and built-in belt loop.
- Fits Fluke T2 and T5 testers.

Fuse Selection Chart

ServiceFirst Item #	Fluke Model #	Mfg Fuse #	Fuse Requirements
FUS01578	21/23/75/77-II	P/N 892583	630 mA 250 V in series with either 871202; 3A 600 V fuse or fusible resistor; R20 - DO NOT SUBSTITUTE FOR R20. 15A 600 V fuse. Also recommended replacement for units with a fused 10 A input using a 20 A fuse.
FUS01560	21-III/75-III	P/N 803293	630 mA 250 V and 11 A 1000 V fuse
FUS01574	76/29/79-II	P/N 871207	1A 600 V fuse and
FUS01578	83/85/87 (S/N<65650001)	P/N 892583	15A 600 V fuse
FUS01570	25/27	P/N 871173	630 mA 250 V fuse in series with P/N 871202; 3A 600 V fuse. For units with 10 A input using a 20 A fuse, use P/N 892583; 15A 600 V fuse. 27 CAT III S/N>7247001; P/N 943121 440 mA; 1000 V fuse and P/N 803293; 11A1000 V fuse.
FUS01578	45 (S/N<7211001)	P/N 892583	550mA 250 V fuse and P/N 892583;15A600 V fuse
FUS01578	73-II and 73-III	P/N 892583	15 A 600 V fuse
FUS01546	863/865/867/867B	P/N 943121	440 mA 1000 V fuse and 11 A 1000 V fuse
FUS01560	83/85/87 (S/N>65650001) 87-IV/89-IV/187/189 83-III/85-III/87-III/87E-III 23-III/77-III/26-III/79-III 175/177/179	P/N 803293	
FUS01560	111/112	P/N 803293	11 A 1000 V fuse

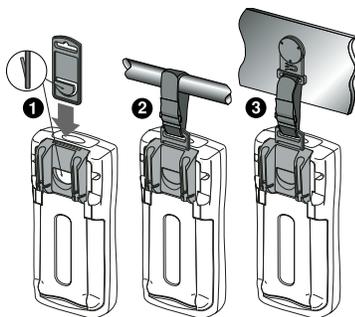
Miscellaneous Accessories

Pressure, Vacuum and Gas



MOD00268 (PV 350) Pressure Vacuum Module

- Digital pressure and vacuum measurements in a single module.
- Measures HVAC/R, hydraulic, and pneumatic pressures to 500 psig/3447 kPa.
- Measures to 29.9" Hg/76 cm Hg vacuum (not intended for measuring microns of vacuum).
- Compatible with most popular digital multimeters.



Hanging and Locking Kits

KIT07904 (ToolPak)

The meter-hanging solution

- Kit includes universal hanger clips (2), hook and loop straps (2 lengths), adapter, and strong magnet.
- Combine components to meet most hanging needs.
- Attaches to back of many Fluke meters, including 110, 170, 180 Series, 80 Series IV DMMs, 725 Process Calibrator, 70 Series III DMMs, and 50 Series II Digital Thermometers.

Cross Reference

Fluke

ServiceFirst Item # to Fluke

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ADP00977	80AK	28, 54
CAS01261	C25	31, 55
CAS01262	C510	31, 55
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CAS01267	C10	56
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CAS01270	C100	56
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CAS01272	C789	56
CAS01273	C90	55
CAS01281	C800	56
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CAS01286	C125	28, 55
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CMP00968	i200flex	50
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CMP00974	i200s	50
CMP01025	80i-1000s	50
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FUS01560	P/N 803293	56
FUS01570	P/N 871173	56
FUS01574	P/N 871207	56
FUS01578	P/N 892583	56
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KIT07902	TL20	28, 49
KIT07903	TL24	47
KIT07904	TPAK	28, 29, 31, 57
KIT07921	CO-205	43
KIT08168	FLUKE179/EDAKIT	27

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KIT08266	FLUKE112/322 KIT	27
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LED00360	TL71	49
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LED00363	TL21A	47
LED00364	TL27	47
LED00387	TL23R	49
LED00389	648029	38
MOD00268	PV 350	57
MOD01261	80TK	29
MTR00831	FLUKE 16	31
MTR00832	FLUKE 322	42
MTR00833	52-2	44, 51
MTR00834	FLUKE-179	30, 31, 35
MTR00836	FLUKE 336	42
MTR00837	CO-220	43
MTR00838	FLUKE 112	36
MTR00840	FLUKE-189	28, 35
MTR00841	FLUKE 50D	45
MTR00842	FLUKE 333	42
MTR00843	FLUKE 337	42
MTR00844	FLUKE-187	28
MTR00846	FLUKE 335	42
MTR00847	FLUKE 334	42
MTR00848	FLUKE 65	45
MTR00849	FLUKE 1520	39
MTR00850	FLUKE-177	30, 31
MTR00851	FLUKE 77-111	30
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MTR00854	T5-1000	38
MTR00858	FLUKE-7-600	29, 31
MTR00859	73-III	30
MTR00862	FLUKE-110	29
MTR00872	FLUKE 12	31
MTR00884	FLUKE179/TPK	27, 30
MTR00898	FLUKE 175	30
MTR00905	FLUKE-123	33
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TOL01670	TP20	47
TOL01671	1AC	37
TOL01685	TP1	47
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Cross Reference

Fluke

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1AC	TOL01671	37	C90	CAS01273	55
1LAC	TOL01693	37	CO-205	KIT07921	43
52-2	MTR00833	44, 51	CO-210	TOL01692	43
54-2	MTR00852	44, 51	CO-220	MTR00837	43
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80AK	ADP00977	28, 54	FLUKE 1520	MTR00849	39
80BK	TCP00100	28, 53	FLUKE1550B	MTR00932	40
80CK-M	TCP00101	54	FLUKE 16	MTR00831	31
80i-1000s	CMP01025	50	FLUKE 83-5	MTR00942	32
80i-400	CMP00952	50	FLUKE 87-5	MTR00940	32
80i-600A	CMP00966	50	FLUKE 87-5/E	MTR00941	32
80PK-1	TCP00096	28, 52	FLUKE 175	MTR00898	30
80PK-2A	TOL01687	52	FLUKE 189	MTR00919	27
80PK-3A	TOL01686	52	FLUKE 322	MTR00832	42
80PK-4A	TCP00099	52	FLUKE 333	MTR00842	42
80PK-5A	TOL01688	52	FLUKE 334	MTR00847	42
80PK-6A	TCP00111	53	FLUKE 335	MTR00846	42
80PK-7	TOL01691	52	FLUKE 336	MTR00836	42
80PK-8	TCP00097	53	FLUKE 337	MTR00843	42
80PK-9	TOL01694	53	FLUKE 50D	MTR00841	45
80T-150U	TOL01695	53	FLUKE 65	MTR00848	45
80T-IR	TOL01690	54	FLUKE 707	MTR00907	46
80TK	MOD01261	29	FLUKE 77-111	MTR00851	30
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AC72	CLP00983	29, 49	FLUKE-110	MTR00862	29
AC80	CLP00955	48	FLUKE-111	MTR00853	29
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AC87	CLP00966	48	FLUKE-123	MTR00905	33
AC89	CLP00965	48	FLUKE16/322 KIT	KIT08169	27
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C100	CAS01270	56	FLUKE-179	MTR00834	30,31,35
C125	CAS01286	28, 55	FLUKE179/EDA KIT	KIT08169	27
C12A	CAS01263	29, 55	FLUKE 179/TPK	MTR00884	27, 30
C20	CAS01309	55	FLUKE-187	MTR00844	28
C25	CAS01261	31, 55	FLUKE-189	MTR00840	28, 35
C50	CAS01268	55	FLUKE-7-600	MTR00858	31
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P/N 892583	FUS01578	56
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TL27	LED00364	47
TL75	KIT07901	49
TL81A	LED00361	49
TP1	TOL01685	47
TP2	TOL01743	47
TP20	TOL01670	47
TPAK	KIT07904	28, 29, 31, 57



TIF Instruments, Inc



Refrigerant Leak Detectors

ServiceFirst Item #	Mfg #	Description
SEN01162	TIF XP-1	Sensor, TIF XP-1 refrigerant leak detector, detects all halogenated refrigerants
SEN01163	TIF ZX-1	Sensor, TIF ZX-1 heated pentode refrigerant leak detector, detects all halogenated refrigerants
KIT08170	TIF XP-2	Kit, maintenance kit for TIF XL, RX and XP leak detectors, includes 3 tips and 3 protectors
SEN01164	TIF ZX-2	Sensor, replacement heated pentode sensor for TIF ZX-1 leak detector
ELM03209	TIF ZX-8	Element, filter element for TIF ZX-1 leak detector, 10 pack
TOL01960	TIF 4000A	Tool, TIF 4000a electronic sightglass
TOL01957	TIF 5201	Tool, leaksource for TIF H10A leak detector
KIT08224	TIF 555	Kit, maintenance kit for TIF refrigerant leak detectors, includes 3 tips and 3 protectors
TOL01961	TIF 5750A	Tool, TIF 5750A super scanner refrigerant leak detector, includes case and spare sensing tip
TOL01956	TIF H10A	Tool, TIF H10A pump style refrigerant leak detector, works on all cfc, hfc, and hfc leaks
TOL02144	TIF RX-1A	Tool, TIF RX-1A leak detector, includes molded carrying case



Carbon Monoxide and Combustible Gas Detectors

ServiceFirst Item #	Mfg #	Description
SEN01167	TIF 8500A	Sensor, TIF 8500A carbon monoxide analyzer
SEN01169	TIF 8501	Sensor, replacement filter for TIF 8500a
SEN01168	TIF 8505	Sensor, replacement sensor for TIF 8500a
SEN01165	TIF 8800	Sensor, TIF 8800 combustible gas detector
SEN01166	TIF 8800A	Sensor, TIF 8800A combustible gas detector
TIP00130	TIF 8801	Tip, sensing tip for TIF 8800 combustible gas detector



Refrigerant Scales and Meters

ServiceFirst Item #	Mfg #	Description
TOL01952	TIF 9010A	Tool, TIF 9010A slimline refrigerant scale
TOL01958	TIF 9020	Tool, Promax ADS-100 slimline refrigerant scale, 200 lb capacity



Micron Gauge

ServiceFirst Item #	Mfg #	Description
TOL01965	TIF 9450D	Tool, TIF 9450D digital micron gauge, reads 500,000 to 200 microns
SEN01174	TIF 9453	Sensor, sensing probe assembly for TIF 9450D micron gauge
HSE01393	TIF 9454	Hose, connector hose with filter for TIF 9450D micron gauge



Capacitor Tester

ServiceFirst Item #	Mfg #	Description
TOL01964	TIF 660	Tool, TIF 660 capacitor tester, range 1-2000 mfd



Cross Reference

TIF

ServiceFirst Item # to TIF #			TIF # to ServiceFirst Item #		
SF #	MFG #	PAGE	MFG #	SF #	PAGE
ELM03209	TIF ZX-8	63	TIF 555	KIT08224	63
HSE01393	TIF 9454	63	TIF 660	TOL01964	63
KIT08170	TIF XP-2	63	TIF 4000A	TOL01960	63
KIT08224	TIF 555	63	TIF 5201	TOL01957	63
SEN01162	TIF XP-1	63	TIF 5750A	TOL01961	63
SEN01163	TIF ZX-1	63	TIF 8500A	SEN01167	63
SEN01164	TIF ZX-2	63	TIF 8501	SEN01169	63
SEN01165	TIF 8800	63	TIF 8505	SEN01168	63
SEN01166	TIF 8800A	63	TIF 8800	SEN01165	63
SEN01167	TIF 8500A	63	TIF 8800A	SEN01166	63
SEN01168	TIF 8505	63	TIF 8801	TIP00130	63
SEN01169	TIF 8501	63	TIF 9010A	TOL01952	63
SEN01174	TIF 9453	63	TIF 9020	TOL01958	63
TIP00130	TIF 8801	63	TIF 9450D	TOL01965	63
TOL01952	TIF 9010A	63	TIF 9453	SEN01174	63
TOL01956	TIF H10A	63	TIF 9454	HSE01393	63
TOL01957	TIF 5201	63	TIF H10A	TOL01956	63
TOL01958	TIF 9020	63	TIF RX-1A	TOL02144	63
TOL01960	TIF 4000A	63	TIF XP-1	SEN01162	63
TOL01961	TIF 5750A	63	TIF XP-2	KIT08170	63
TOL02144	TIF RX-1A	63	TIF ZX-1	SEN01163	63
TOL01964	TIF 660	63	TIF ZX-2	SEN01164	63
TOL01965	TIF 9450D	63	TIF ZX-8	ELM03209	63



Amprobe



TOL01948 (TMULD-300) Ultrasonic Leak Detector

Features

- Detects any pressurized gas leak due to a non-gas-specific design
- Ultrasonic sensor is unaffected by contaminant for reliable testing
- Windy rooftop conditions do not affect sensor's ability to detect leak
- The PB-1 Parabola improves directionality and sensitivity for longer-range testing
- High sensitivity allows detection of arcing electrical switchgear from a safe distance

Specifications

Weight	5.6 oz (160 grams) with battery
Height	2½"
Length	7¼"
Frequency response	35 KHz to 45 KHz+6dB
Power consumption	22 mA at 9 volts dc
Battery life	9-volt alkaline batteries. 33 hours
Performance	Meets the A.S.T.M. standard
Battery test	LED color, green indicating good, red indicating replace
LED	High intensity for outdoor visibility
Case	High impact ABS

ServiceFirst Item #	Mfg #	Description
TOL01948	TMULD-300	Tool, amprobe tmuld-300 ultrasonic leak detector kit

MTR00886 (AM-33) Intelligent Digital Multimeter



- Auto selection of voltage or resistance prevents meter's misuse
- Autoranging
- Audible continuity check
- Auto power off
- Data hold
- Diode check
- Safety; CAT III 600 V

Features	Range and Resolution*
dc Volts	4.000 V - 40.00 V, 400.0 V, 600 V
ac Volts	4.000 V - 40.00 V, 400.0 V, 600 V
Resistance	400.0 Ω

*We use a special notation to indicate range and resolution using a single number. For example, number 40.00 indicates range of 40 and resolution 0.01 (two digits after the point with the 1 as an increment, unless otherwise specified).

Optional Accessories	Part Number
Alligator clips (for test leads)	VRC-320

Replacement Parts (supplied with number)	Part Number
Test leads with set of alligator clips (alligator clips not supplied with product)	MTL-90B
Instruction manual	www.amprobe.com

ServiceFirst Item #	Mfg #	Description
MTR00886	AM-33	Meter, amprobe am-33 intelligent digital meter, 600 V ac/dc, 400 ohms



Amprobe

MTR00918 (ACD-10 Pro), MTR00915 (ACD-14), MTR00925 (ACD-10RMS) Tech Clamp Digital Clamp-on Multimeters

- ACD-14 tech clamp specifically designed for HVAC/R applications
- ac and dc voltage to 600 V
- ac current to 400 A
- Resistance to 40 MΩ with continuity buzzer
- Capacitance to 3000 μF
- Dual display (ACD-14 only)
- Micro amps for testing flame sensors (ACD-14 only)
- Temperature —Type-K thermocouple (ACD-14 only)
- Frequency measurement
- Diode test
- Hold and maximum reading functions
- Accommodates conductors up to 1.02" (26mm) in diameter
- Auto ranging
- Auto power off and low battery indication
- Rubber over-molded case
- Overload protected
- Safety: Cat II 600 V and Cat III 300 V
- Cat III 600 V (ACD-14 only)
- CE approved, UL listed

Features	ACD-10 Pro	ACD-10 TRMS Pro
ac voltage	4.000 V, 40.00 V, 400.0 V, 600 V	4.000 V, 40.000 V, 400.0 V 600 V
dc voltage	0-400.0 mV, 4.000 V, 40.00 V, 400.0 V 600 V	0-400.0 mV, 4.000 V, 40.00 V, 400.0 V 600 V
ac current	0-40.00 A, 400.0 A	0-40.00 A, 400.0 A
Resistance with continuity buzzer	0-400.0 Ω, 4.000 kΩ, 40.00 kΩ, 400.0 kΩ, 4.000 MΩ, 40.00 MΩ	0-400.0 Ω, 4.000 kΩ, 40.00 kΩ, 400.0 kΩ, 4.000 MΩ, 40.00 MΩ
Capacitance	500.0 nF, 5.000 μF, 50.00 μF, 500.0 μF, 3000 μF	500.0 nF, 5.000 μF, 50.00 μF, 500.0 μF, 3000 μF
Frequency (Using jaw or test leads)	40-400 Hz with jaw, 10 Hz to 2 kHz with test leads	40-400 Hz with jaw, 10 Hz to 2 kHz with test leads
TRMS Measurement	NA	Yes

Features	ACD-10 Pro	ACD-14 Accuracy
TRMS measurement	N/A	N/A
ac voltage	4.000 V, 40.00 V, 400.0 V, 600 V	4.000 V, 40.000 V, 400.0 V 600 V ±1.5% of reading + 5 LSD @ (4.000 V, 40.00 V, 400.0 V)**
dc voltage	0-400.0 mV, 4.000 V, 40.00 V, 400.0 V 600 V	0-400.0 mV, 4.000 V, 40.00 V, 400.0 V 600 V ±0.5% of reading + 3 LSD @ (4.000 V, 40.00 V, 400.0 V)**
ac current	0-40.00 A, 400.0 A	0-40.00 A, 400.0 A ±1.9% of reading + 8 LSD**
ac/dc micro amps (using test leads)	N/A	400.0 μA, 2000 μA dc: ±1.5% of reading + 4 LSD** ac: ±2.0% of reading + 5 LSD**
Resistance with continuity buzzer	0-400.0 Ω, 4.000 kΩ, 40.00 kΩ, 400.0 kΩ, 4.000 MΩ, 40.00 MΩ	0-400.0 Ω, 4.000 kΩ, 40.00 kΩ, 400.0 kΩ, 4.000 MΩ, 40.00 MΩ ±0.6% of reading + 4 LSD @ (4.000kΩ, 40.00kΩ, 400.0kΩ)**
Capacitance	500.0 nF, 5.000 μF, 50.00 μF, 500.0 μF, 3000 μF	500.0 nF, 5.000 μF, 50.00 μF, 500.0 μF, 3000 μF ±3.5% of reading + 6 LSD
Frequency (Using jaw or test leads)	40-400 Hz with jaw, 10 Hz to 2 kHz with test leads	10 Hz to 100 kHz with test leads ±0.5% of reading + 4 LSD
Temperature	N/A	-4°F to 572°F (-20°C to 300°F) ±2.0% of reading + 6°F

* We use a special notation to indicate range and resolution using a single number. For example: number 40.00 indicates a range of 40 and resolution 0.01 (two digits after the point with the 1 as an increment, unless otherwise specified).

**For other ranges see Website at www.advancedtestproducts.com

Amprobe

MTR00909 (AMB-1A)

Analog Megohmmeters – Insulation Testers

- Tests insulation of wires, cable, transformers, and electrical motors
- Battery powered
- Helps cut unscheduled downtime and reduce shock hazards
- Sensitive ohmmeter for checking resistance of motor windings (AMB-1A and AMB-2)
- Built-in voltmeter
- Battery OK test
- Mirror scale
- Automatic discharge of equipment capacitance for safe removal of test leads

Features

Insulation resistance with 250 Vdc test voltage	N/A
Insulation resistance with 500 Vdc test voltage	0-100M Ω
Voltmeter	0-600 V ac/dc
Low resistance	0-100 Ω



Non-Contact Volt Probe

MTR00933 (VP-600), MTR00934 (VP-600B), MTR00935 (VP-600SB)

- Detect AC Voltage (100–600V)
- Use non-contact method of Voltage testing
- Totally insulated, no exposed metal or conductive parts
- Check for AC Voltages without necessity of disconnecting the electrical system
- Test for AC Voltage cables, circuit breakers, wall sockets, junction boxes, fuses, etc.

Features	VP-600	VP-600B	VP-600SB
AC Voltage Detection		100–600V	
Voltage Light	•	•	•
Voltage Buzzer		•	•
Voltage Shaker			•



TOL01953 (PRM-1) Phase Sequence and Motor Rotation Tester

Features

- Low-cost tester identifies 3-phase line sequence and motor rotation
- Wide operating voltage and frequency ensures compatibility with most 3-phase circuits
- Built-in phase-loss indicator prevents incorrect reading

Specifications

Operating voltage	20 to 60 VRMS
Operating frequency	50/60/70 Hz
Isolation	3000 Vac
Operating temperature	32°F to 113°F (0°C to 45°C)
Storage temperature	-40°F to 140°F (-40°C to 60°C)
Power	9 V alkaline - Amprobe model MN-1604 (included)
Integrated test leads	18" (45.72cm), color coded
Dimensions	3.75" x 2.625" x 1.5" (9.53cm x 6.67cm x 3.81cm)
Instruction sheet	Part number 921751 (included)

ServiceFirst Item # Mfg # Description

TOL01953	PRM-1	Tool, amprobe prm-1 phase sequence and motor rotation tester
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Cross Reference



ServiceFirst Item # to Amprobe #			Amprobe # to ServiceFirst Item #		
SF #	MFG #	PAGE	MFG #	SF #	PAGE
MTR00886	AM-33	65	ACD-14	MTR00915	66
MTR00909	AMB-1A	67	ACD-10 Pro	MTR00918	66
MTR00915	ACD-14	66	ACD-10 TRMS	MTR00925	66
MTR00918	ACD-10 Pro	66	AM-33	MTR00886	65
MTR00925	ACD-10TRMS	66	AMB-1A	MTR00909	67
MTR00933	VP-600	67	PRM-1	TOL01953	67
MTR00934	VP-600B	67	TMULD-300	TOL01948	65
MTR00935	VP-600SB	67	VP-600	MTR00933	
TOL01948	TMULD-300	65	VP-600B	MTR00934	
TOL01953	PRM-1	67	VP-600SB	MTR00935	



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