

FLUKE®



Fluke. *Keeping your world up and running.™*

Fluke electrical tools – Retail series

2024 edition

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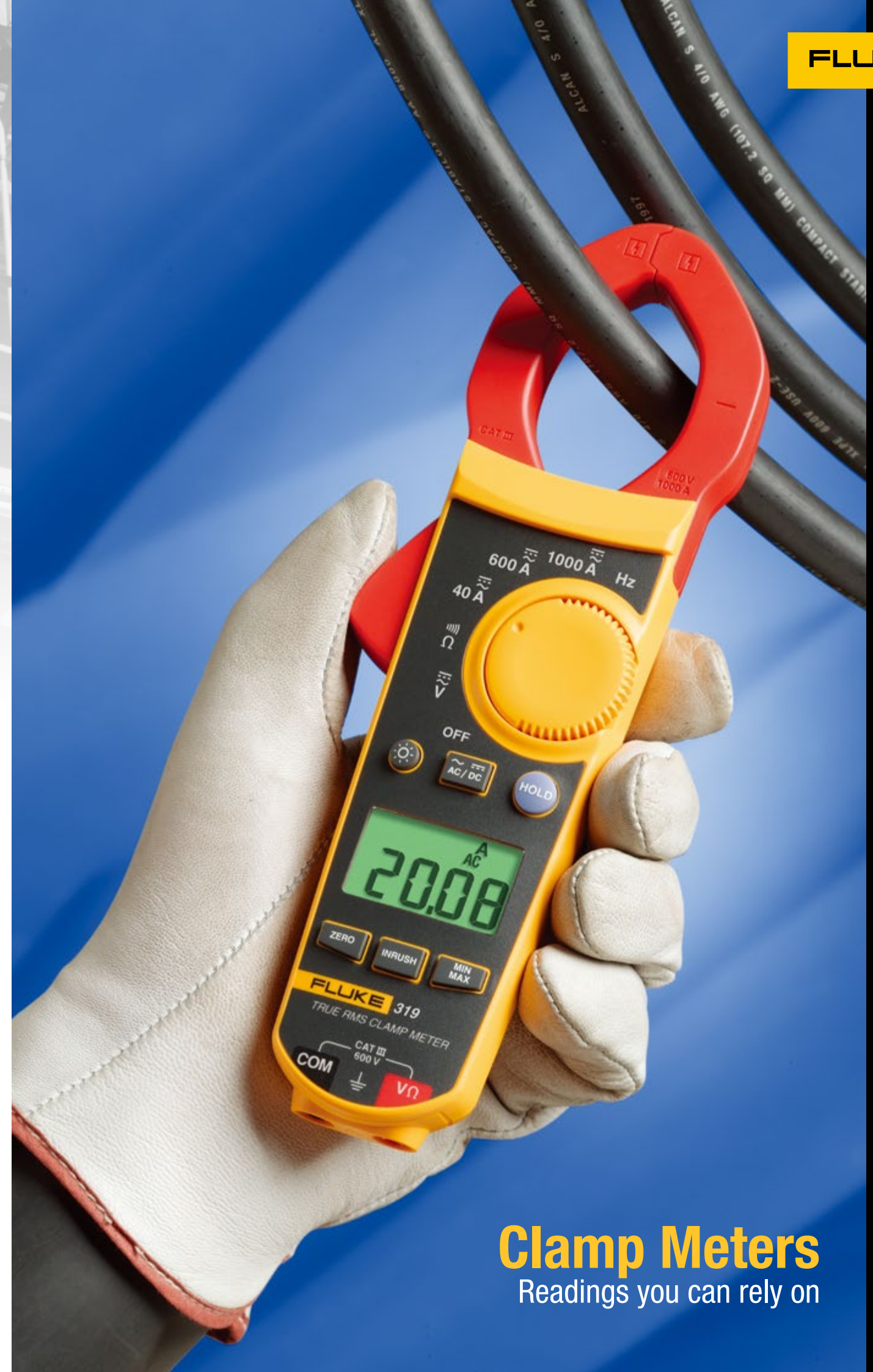
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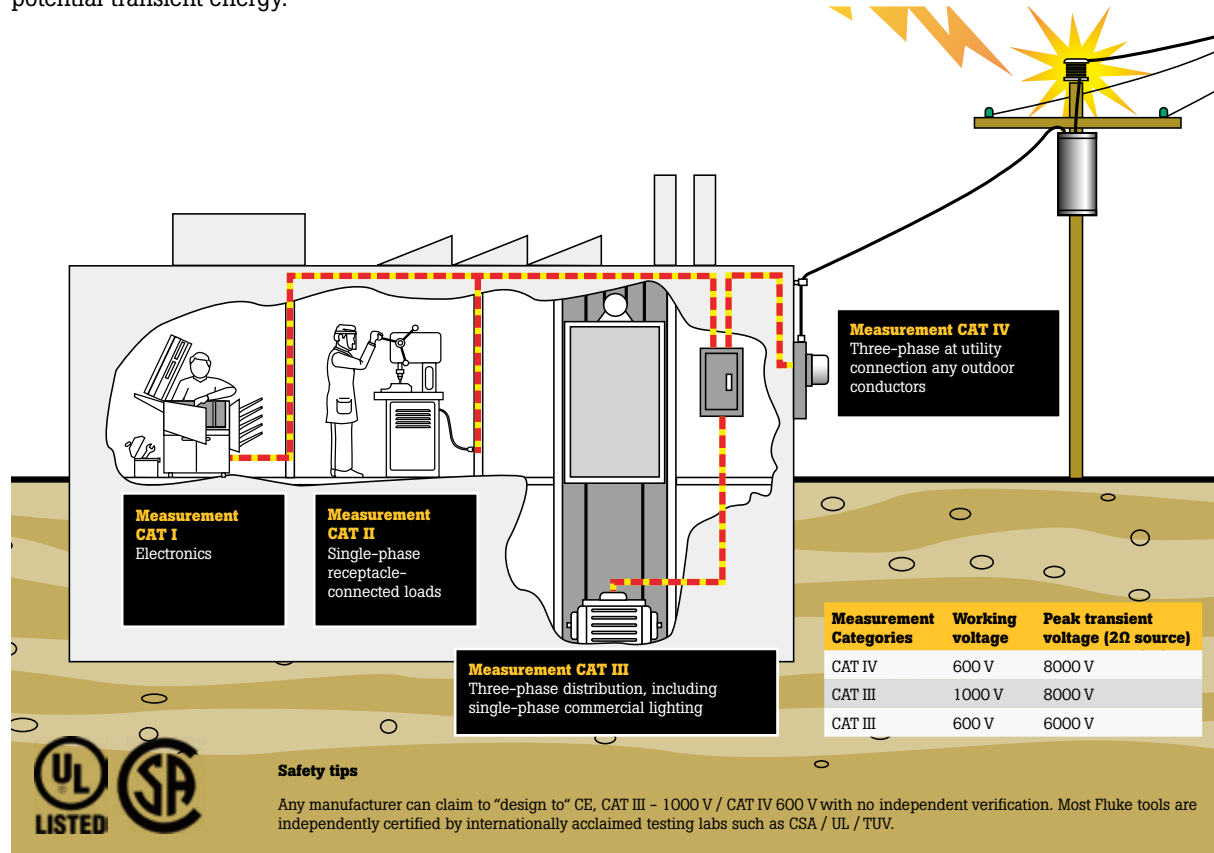


Clamp Meters
Readings you can rely on

Keeping you safe while you work

Understanding IEC 61010-1 Overvoltage Categories: Locations

IEC 61010 safety categories (CATs) apply to all electrical testing under 1000 volts. The higher the category, the higher the power available in that environment and the higher your test tools must be rated, to withstand the potential transient energy.



Reliable tools you can trust

Why true-rms?

If we want to check an electrical circuit for overloading, we need to measure the rms current and compare the measured value to the rated value for the component in question. However, the current wave shape can have a drastic effect on a test tool reading. Traditional average responding test tools are designed to use on linear loads, making its reading limited and misleading when measuring non-linear loads.

Comparison of average responding and true-rms measurements.

Wave form shape	Response to sine wave	Response to square wave	Response to single phase diode rectifier	Response to 3 phase diode rectifier
Equipment type	Linear loads such as inductive	Welders, inverters	DC power supply, lighting circuits	Variable speed motor drives
Average responding	Correct	10 % high	40 % low	5 % to 3 % low
True-RMS	Correct	Correct	Correct	Correct

True-rms test tools such as Fluke 317/319 respond accurately to AC voltage values regardless of whether the waveform is linear. If a test tool is labeled and specified to respond to the true-rms value, it means that the tool's internal circuit calculates the heating value according to the rms formula.

Reliability tips

Fluke meters survive like no other test tool even in extreme conditions such as water, humidity, heat drop, shock. The secret lies in tough design, extreme testing and user feedback that helps us make the most rugged tools for you.



Fluke 317 and 319 True-rms Clamp Meters



Fluke 317/319 True-rms Clamp Meters are designed with ergonomic concepts, shaped to fit your hand and packed with a strong feature set including Inrush (starting) current measurement, frequency measurement from jaw, 0.01 A resolution at low ampere range and AC/DC capability. Fluke clamp meters are ideal for electrical engineers / technicians who need to take a wide range of current measurements in industrial and commercial installation and maintenance.

Features:

- Slim clamps, rugged body. Large, backlit display.
- **Shock and vibration: 1m drop test**
- True-rms AC current and voltage: enables accurate measurements on non-linear signals such as motor drives which average clamps are not able to
- Jaw size at 37 mm: versatile for larger conductors and narrow spaces
- Special 40A AC/DC measurement, highly accurate current testing: 0.01 A resolution, 1.6 % accuracy
- Min/max function suitable for current and voltage
- **Inrush current measurement:** measures electrical and lighting equipment start-up currents (Fluke 319)
- **Frequency measurement from jaw:** enables accurate measurement of PWM output signal frequency (Fluke 319)

Specifications			
Function	Parameter	Fluke 317	Fluke 319
AC current	Measurement	40.00 A 600.0A -	40.00 A 600.0A 1000 A
	Resolution	0.01 A 0.1 A -	0.01 A 0.1 A 1 A
	Precision accuracy	1.6 % ± 6 digits (50-60 Hz) [40 A] 2.5 % ± 8 digits (60-500 Hz) [40 A] 1.5 % ± 5 digits (50-60 Hz) [600 A] 2.5 % ± 5 digits (60-500 Hz) [600 A]	1.6 % ± 6 digits (50-60 Hz) [40 A] 2.5 % ± 8 digits (60-500 Hz) [40 A] 1.5 % ± 5 digits (50-60 Hz) [600 A] 2.5 % ± 5 digits (60-500 Hz) [600 A]
	When crest factor CF > 2, increase the specifications by 2 %	For 500 A, maximum 3.0 For 600 A, maximum 2.5	For 500 A, maximum 3.0 For 600 A, maximum 2.5
	AC response	RMS	RMS
DC current	Range	40.00 A 600.0A -	40.00 A 600.0A 1000 A
	Resolution	0.01 A 0.1 A -	0.01 A 0.1 A 1 A
	Accuracy	1.6 % ± 6 digits [40 A] 1.5 % ± 5 digits [600 A]	1.6 % ± 6 digits [40 A] -
AC voltage	Range	600.0 V	
	Resolution	0.1 V	
	Accuracy	1.5 % ± 5 digits [20 - 500 Hz]	
DC voltage	Range	600.0 V	
	Resolution	0.1 V	
	Accuracy	1 % ± 4 digits	
Resistance	Measurement	400.0 Ω / 4000 Ω	
	Resolution	0.1 Ω / 1.0 Ω	
	Accuracy	1 % ± 5 digits	
Continuity		≤ 30 Ω	
Inrush current	Integration time	NA	100 ms
Frequency	Measuring span	NA	5.0 - 500.0 Hz
	Accuracy	NA	0.5 % ± 5 digits
	Power level	NA	10 - 100 Hz ≥ 5 A 5 - 10 Hz, 100 - 500 Hz ≥ 10 A



Ordering information

Models

Fluke 317 True-rms ac/dc Clamp Meter
Fluke 319 True-rms ac/dc Clamp Meter

Fluke 302+, 303 and 305 Clamp Meters

Compact. Easy to use. Fluke tested.



Fluke 302+, 303 and 305 come with all the rugged, reliable and accurate features you have come to trust, in a small, ergonomic design. The innovative body design offers a more compact tool to meet your needs.

With features of AC current measurements up to 400 A / 600 A / 1000A, a large 30 mm jaw opening and CAT IV 300 V / CAT III 600 V safety rating, it is an easy-to-use tool that handles your everyday electrical maintenance needs.

Specifications				
Function	Parameter	Fluke 302+	Fluke 303	Fluke 305
AC current	Range	400.0 A	600.0 A	999.9 A
	Accuracy	1.8 % ± 5	1.8 % ± 5	1.5 % ± 5
AC voltage	Range	600.0 V	600.0 V	600.0 V
	Accuracy	1.5 % ± 5	1.5 % ± 5	1.5 % ± 5
DC voltage	Range	600.0 V	600.0 V	600.0 V
	Accuracy	1.0 % ± 5	1.0 % ± 5	1.0 % ± 5
Resistance	Range	400.0 / 4000 Ω	400.0 / 4000 Ω	400.0 / 4000 Ω
	Accuracy	1 % ± 5	1 % ± 5	1 % ± 5
Continuity		≤ 70 Ω	≤ 70 Ω	≤ 70 Ω
Backlight display		Yes	Yes	Yes
Data hold		Yes	Yes	Yes
Size	H × W × D (mm)	207 × 75 × 34	207 × 75 × 34	207 × 75 × 34
	Jaw size	30 mm	30 mm	30 mm
Safety rating		CAT III 600 V/ CAT IV 300 V	CAT III 600 V/ CAT IV 300 V	CAT III 600 V/ CAT IV 300 V
Operating temperature		0 - 40 °C	0 - 40 °C	0 - 40 °C
Screen refresh rate		> 2 times / sec	> 2 times / sec	> 2 times / sec
Test leads		TL75	TL75	TL75
Battery		2 AAA batteries	2 AAA batteries	2 AAA batteries

High safety ratings:
CAT III 600 V, CAT IV 300 V,
withstand peak voltage transient 6000 V



Shock and vibration:
1 m drop resistant
per IEC 61010-1

Beeper alert and
voltage protection
in resistance/
continuity mode



Large display and better
view with backlight



Ordering information

Models	
Fluke 302+	Clamp Meter
Fluke 303	Clamp Meter
Fluke 305	Clamp Meter

Fluke 301D/E AC/DC Clamp Meters



FLUKE®

The Fluke F301 weighs only 132g and is just 16mm thick. The lightweight and slim body is designed to fit in your pocket, allowing you to carry it around for easier field testing for low ampere range with AC/DC measurements. The unique 10mm thin jaws make it possible to easily clamp onto tightly packed wires and small spaces to cover common residential and commercial testing use.

Features:

- Slim 10mm Jaws for narrow tight space measurement of AC/DC current
- **Pocket size and light-weight up to 132g**
- Eight test functions in one tool
- Added Diode, Capacitance, Current and voltage frequency modes to support wider field testing needs
- Min/max function suitable for current and voltage
- **Frequency measurement from jaw:** Detects presence of high frequency voltage or current

Specifications						
Model		Fluke 301D		Fluke 301E		
AC Current (45 to 400 Hz)	Range	60.00 A	600.0 A	60.00 A	600.0 A	1000 A
	Resolution	0.01A	0.1 A	0.01 A	0.1 A	1 A
	Accuracy	2 % + 10	2 % + 5	2 % + 10	2 % + 5	2 % + 5
DC Current	Range	60.00 A	600.0 A	60.00 A	600.0 A	1000 A
	Resolution	0.0 1A	0.1 A	0.01 A	0.1 A	1A
	Accuracy	2 % + 10	2 % + 5	2 % + 10	2 % + 5	2 % + 5
AC Voltage (45 to 400 Hz)	Range	600.0 V		600.0 V		
	Resolution	0.1 V		0.1 V		
	Accuracy	1.5 % + 5		1.5 % + 5		
DC Voltage	Range	600.0 V		600.0 V		
	Resolution	0.1 V		0.1 V		
	Accuracy	1 % + 5		1 % + 5		
Resistance	Range	600.0 Ω 6.000 kΩ 60.00 kΩ		600.0 Ω 6.000 kΩ 60.00 kΩ		
	Accuracy	1 % + 5		1 % + 5		
Voltage Frequency	Range	9.999 Hz 99.9 9Hz 999.9 Hz 9.999 kHz 99.99 kHz		9.999 Hz 99.9 9Hz 999.9 Hz 9.999 kHz 99.99 kHz		
		0.1 % + 3		0.1 % + 3		
		45.0 - 400.0 Hz		45.0 - 400.0 Hz		
		0.1 % + 3		0.1 % + 3		
		9.999 uF 999.9 uF		9.999 uF 999.9 uF		
	Accuracy	2 % + 5 5 % + 5		2 % + 5 5 % + 5		
Capacitance	Range	3.000 V		3.000 V		
	Accuracy	10 %		10 %		



Ordering information

Models
Fluke 301D AC/DC Clamp Meter
Fluke 301E AC/DC Clamp Meter

Fluke 301A+/B/C AC Clamp Meters

Compact. Lightweight. Slim Jaw.



The Fluke 301 Clamp Meter due to its slim and compact body, can be carried around in your pocket. The slim and thin jaw can easily fit into tightly packed wires. Multi-function integrated tool; one clamp meter can meet many testing needs.

With features of AC current measurements up to 400 A/600 A/1000A, a large 10 mm jaw opening and CAT III 300 V safety rating, you get an easy-to-use tool that handles your everyday electrical maintenance needs.

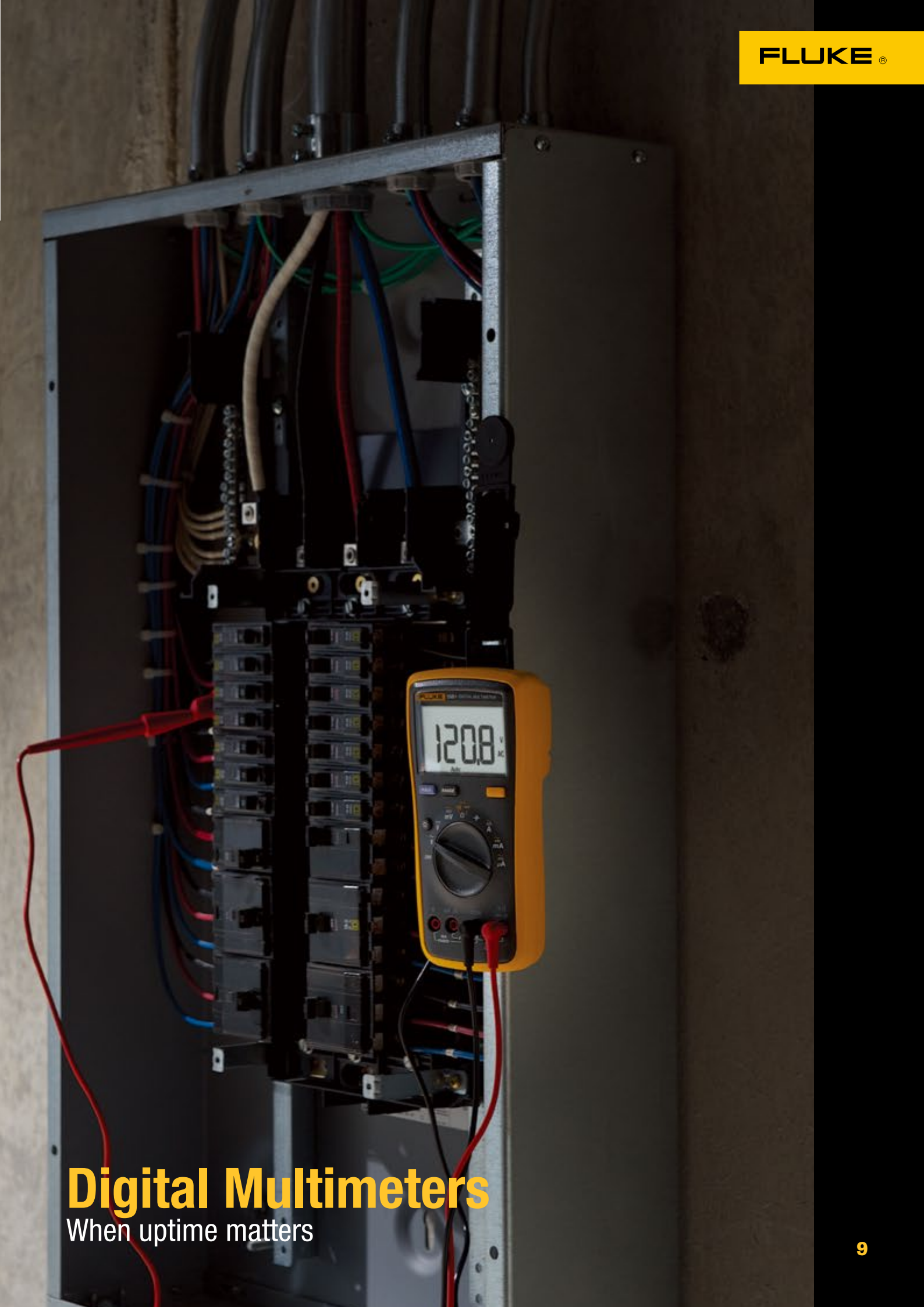
Features:

- Slim 10mm Jaws for narrow tight space measurement
- **Pocket size and light-weight up to 132g**
- Eight test functions in one tool
- Added Diode, Capacitance, Current and voltage frequency modes to support wider field testing needs
- Frequency measurement from jaw: Enables accurate measurement of PWM output signal frequency (Fluke 301C)

Specifications								
Model		Fluke 301A+		Fluke 301B		Fluke 301C		
AC Current (45 to 400 Hz)	Range	40.00 A	400.0 A	60.00 A	600.0 A	60.00 A	600.0 A	1000 A
	Resolution	0.01A	0.1 A	0.0 1A	0.1 A	0.01 A	0.1 A	1 A
	Accuracy	2 % + 10	2 % + 5	2 % + 10	2 % + 5	2 % + 10	2 % + 5	2 % + 5
AC Voltage (45 to 400 Hz)	Range	600.0 V		600.0 V		600.0 V		
	Resolution	0.1 V		0.1 V		0.1 V		
	Accuracy	1.5 % + 5		1.5 % + 5		1.5% + 5		
DC Voltage	Range	600.0 V		600.0 V		600.0 V		
	Resolution	0.1 V		0.1 V		0.1 V		
	Accuracy	1 % + 5		1 % + 5		1 % + 5		
Resistance	Range	600.0 Ω 6.000 kΩ 60.00 kΩ		600.0 Ω 6.000 kΩ 60.00 kΩ		600.0 Ω 6.000 kΩ 60.00 kΩ		
	Accuracy	1 % + 5		1 % + 5		1 % + 5		
Voltage Fre- quency	Range	9.999 Hz 99.9 9Hz 999.9 Hz 9.999 kHz 99.99 kHz		9.999 Hz 99.9 9Hz 999.9 Hz 9.999 kHz 99.99 kHz		9.999 Hz 99.9 9Hz 999.9 Hz 9.999 kHz 99.99 kHz		
	Accuracy	0.1 % + 3		0.1 % + 3		0.1 % + 3		
Current Fre- quency	Range	45.0 - 400.0 Hz		45.0 - 400.0 Hz		45.0 - 400.0 Hz		
	Accuracy	0.1 % + 3		0.1 % + 3		0.1 % + 3		
Capacitance	Range	9.999 uF	99.99 uF 999.9 uF	9.999 uF	99.99 uF 999.9 uF	9.999 uF	99.99 uF 999.9 uF	
	Accuracy	2 % + 5	5 % + 5	2 % + 5	5 % + 5	2 % + 5	5 % + 5	
Diode	Range	3.000 V		3.000 V		3.000 V		
	Accuracy	10 %		10 %		10 %		



Ordering information
Models
Fluke 301A+/APC AC Clamp Meter
Fluke 301B/APC AC Clamp Meter
Fluke 301C/APC AC TRMS Clamp Meter



Digital Multimeters
When uptime matters

Fluke 106/107 Palm-sized Digital Multimeter



Fluke 106 and 107 are compact, easy-to-use tools. These palm-sized digital multimeters deliver safe, reliable measurements time after time.

The Fluke 106 and 107 are great products made to fit the way you work!

Features:

- Measure voltage, resistance, continuity, capacitance
- Input terminal for AC and DC current measurements up to 10 A
- Data hold
- Backlit display (Fluke 107 only)
- Diode test, plus frequency and duty cycle measurements (Fluke 107 only)



Specifications				
Function	Range	Resolution	Accuracy	
			Fluke 106	Fluke 107
AC volts (40 Hz to 500 Hz) ¹	6.000 V 60.00 V 600.0 V	0.001 V 0.01 V 0.1 V	1.0 % ± 3 digit	1.0 % ± 3 digit
DC volts	6.000 V 60.00 V 600.0 V	0.001 V 0.01 V 0.1 V	0.5 % ± 3 digit	0.5 % ± 3 digit
AC millivolts	600.0 mV	0.1 mV	3.0 % ± 3 digit	3.0 % ± 3 digit
Diode test ²	2.000 V	0.001 V	10 %	10 %
Resistance ohms	400.0 Ω	0.1 Ω	0.5 % ± 3 digit	0.5 % ± 3 digit
	4.000 kΩ	0.001 kΩ	0.5 % ± 2 digit	0.5 % ± 2 digit
	40.00 kΩ	0.01 kΩ	0.5 % ± 2 digit	0.5 % ± 2 digit
	400.0 kΩ	0.1 kΩ	0.5 % ± 2 digit	0.5 % ± 2 digit
	4.000 MΩ	0.001 MΩ	0.5 % ± 2 digit	0.5 % ± 2 digit
	40.00 MΩ	0.01 MΩ	1.5 % ± 3 digit	1.5 % ± 3 digit
Capacitance ³	50.00 nF	0.01 nF	2 % ± 5 digit	2 % ± 5 digit
	500.0 nF	0.1 nF	2 % ± 5 digit	2 % ± 5 digit
	5.000 μF	0.001 μF	5 % ± 5 digit	5 % ± 5 digit
	50.00 μF	0.01 μF	5 % ± 5 digit	5 % ± 5 digit
	500.0 μF	0.1 μF	5 % ± 5 digit	5 % ± 5 digit
	1000 μF	1 μF	5 % ± 5 digit	5 % ± 5 digit
Frequency ⁴ (10 Hz to 100 kHz)	50.00 Hz	0.01 Hz	NA	0.1 % ± 3 digit
	500.0 Hz	0.1 Hz		
	5.000 kHz	0.001 kHz		
	50.00 kHz	0.01 kHz		
	100 kHz	0.1 kHz		
Duty cycle ⁵	0.1 % to 99.9 %	0.1 %	NA	1 % typical
AC current (40 Hz to 200 Hz)	4.000 A 10.00 A	0.001 A 0.01 A	1.5 % ± 3 digit	1.5 % ± 3 digit
DC current	4.000 A 10.00 A	0.001 A 0.01 A	1.5 % ± 3 digit	1.5 % ± 3 digit
Backlight	NA	NA	No	Yes

Accuracy is specified for 1 year after calibration, at operating temperatures of 18 ° C to 28 ° C, relative humidity at 0 % to 75 %. Accuracy specifications take the form of: ±1[% of reading] + [Number of least significant digits]

1 All ac, Hz, an d duty cycle are specified from 1 % to 100 % of range . Inputs below 1 % of range are not specified.

2 Typically, open circuit test voltage is 2.0 V and short circuit current is < 0.6 mA.

3 Specifications do not include errors due to test lead capacitance and capacitance floor [may be up to 1.5 nF in the 50 nF range].

4 All ac, Hz, and duty cycle are specified from 1 % to 100 % of range . Inputs below 1 % of range aie not specified.

5 Typical means when the frequency is at 50 Hz or 60 Hz and the duty cyrie is between 10 % and 90 %

Function	Overload protection	Input impedance (nominal)	Common mode rejection ratio	Normal mode rejection retio
AC volts	600 V ¹	> 10 MΩ < 100 pF ²	>60 dB at dc, 50 Hz or 60 Hz	NA
AC millivolts	600 mV	> 1 M < 100 pF	>80 dB at dc, 50 Hz or 60 Hz	NA
DC volts	600 V ¹	> 10 MΩ < 100 pF	>100 dB at dc, 50 Hz or 60 Hz	>45 dB at dc, 50 Hz or 60 Hz

1 6 × 105 V Hz Max.

2 For mV(ac), input impedance is approximately 1 MΩ.

General specifications	
Maximum voltage between any terminal and earth ground	600 V
Display (LCD)	6000 counts, updates 3/sec
Battery type	2 AAA, NEDA 24 A, IEC LR03
Battery life	200 hours minimum
Temperature	Operating: 0 ° C to 40 ° C Storage: - 30° C to 60 ° C
Relative humidity	Operating humidity: Non-condensing when < 10 ° C ≤ 90 % at 0 ° C to 30 ° C ≤ 75 % at 30 ° C to 40 ° C; Operating humidity, 40 MΩ range: ≤ 80 % at 0 ° C to 30 ° C ≤ 70 % at 30 ° C to 40 ° C;
Altitude	Operating: 2000 m Storage: 12000 m
Temperature coefficient	0.1 X (specified accuracy) / ° C (< 18 ° C or > 28 ° C)
Fuse protection for current inputs	11 A, 1000 V fast fuse, Fluke specified part only
Size (H × W × L)	142 mm × 69 mm × 28 mm
Weight	200 g
IP rating	IEC 60529: IP 40 IEC 61010-1: 600 V CAT III, pollution degree 2
Electromagnetic environment	IEC 61326-1: protable
Electromagnetic conpatibility	Applies to use the Korea only. Class A equipment (Industrial broadcasting and communication equipment)1
Warranty	One year

1 This product meets requirements for industrial (Class A) electromagnetic wave equipment and seller or user should take notice of it. This equipment is intended for use in business environments and is not to be used in homes .



Ordering information
Models
Fluke 106 Digital Multimeter
Fluke 107 Digital Multimeter

Fluke 101 Digital Multimeter

Designed for basic electrical tests, the Fluke 101 Digital Multimeter offers reliable measurements for residential/commercial electricians as well as heating and air conditioning technicians. This small, lightweight multimeter fits comfortably in your hand but is rugged enough to withstand daily use for years to come.

When it comes to professional-grade affordable multimeters, the Fluke 101 Digital Multimeter is your best choice.

Features:

- Basic DC accuracy 0.5 %
- CAT III 600 V safety rated
- Diode and continuity test with buzzer
- Small lightweight design for one handed use
- Rugged, durable design
- Automatic shutdown
- Battery is easy to replace

Specifications			
Function	Range	Resolution	Accuracy
V AC (40-500Hz)	600.0 mV	0.1 mV	3.0 % ± 3 digit
	6.000 V	0.001 V	1.0 % ± 3 digit
	60.00 V	0.01 V	1.0 % ± 3 digit
	600.0 V	0.1 V	1.0 % ± 3 digit
V DC	6.000 V	0.001 V	
	60.00 V	0.01 V	0.5 % ± 3 digit
	600.0 V	0.1 V	
Resistance ohms	400.0 Ω	0.1 Ω	0.5 % ± 3 digit
	4.000 kΩ	0.001 kΩ	0.5 % ± 2 digit
	40.00 kΩ	0.01 kΩ	0.5 % ± 2 digit
	400.0 kΩ	0.1 kΩ	0.5 % ± 2 digit
	4.000 MΩ	0.001 MΩ	0.5 % ± 2 digit
	40.00 MΩ	0.01 MΩ	1.5 % ± 3 digit
Capacitance	50.00 nF	0.01 nF	2.0 % ± 5 digit
	500.0 nF	0.1 nF	2.0 % ± 5 digit
	5.000 μF	0.001 μF	5.0 % ± 5 digit
	50.00 μF	0.01 μF	5.0 % ± 5 digit
	500.0 μF	0.1 μF	5.0 % ± 5 digit
	1000.0 μF	1 μF	5.0 % ± 5 digit
Frequency(10 Hz to 100 kHz)	50.00 Hz	0.01 Hz	
	500.0 Hz	0.1 Hz	
	5.000 kHz	0.001 kHz	0.1 % ± 3 digit
	50.00 kHz	0.01 kHz	
	100.0 kHz	0.1 kHz	
Duty cycle	1 % to 99.9 %	0.1 %	1 % typical
General specifications			
CAT Rating	CAT III 600 V		
V AC Range	600.0 V		
V DC Range	600.0 V		
Ohms Range	40.00 MΩ		
Auto Shutoff	Y		
Continuity	Y		
Capacitor	100.0 μF		
Frequency	100.0 kHz		
Hold	No		
Duty Cycle	Yes		
Size	130 mm x 65 mm x 27mm		
Weight	160 g		
Battery	Two AAA		
Warranty	1 year		



Ordering information

Models

Fluke 101 Digital Multimeter

NEW Fluke 15/17B MAX Series Digital Multimeter

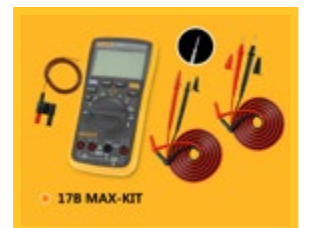
It is a common wrong operation to select voltage and other functions while the test lead is inserted into the current terminals. In this case, taking a measurement directly may blow the fuse in the multimeter. The 15B MAX and 17B MAX feature Input Alert™, an audible and visual alarm to alert users in the event of wrong operation, avoiding productivity loss and safety issues caused by fuse blown.

Features:

- **New** - Input Alert alarm for safe operation
- **New** - Standard test leads TL31 with robust fine tips
- **New** - One-touch Wake-Up mode
- **New** - Voltage reading up to 6000 counts
- **New** - Capacitance reading up to 2000uF
- Frequency and temperature measurement (17B Max only)
- Voltage, resistance, continuity, capacitance, Duty cycle
- Input terminal for ac and de current measurements to 10 A current
- Diode test, data hold



Specifications				
Function	Range	Resolution	Accuracy	
			Fluke 15B+	Fluke 17B+
AC volts (40 Hz to 500 Hz) ¹	6.000 V	0.001 V		
	60.00 V	0.01 V		
	600.0 V	0.1 V	1.0 % ± 3 digit	1.0 % ± 3 digit
	1000 V	1 V		
AC millivolts	600.0 mV	0.1 mV	3.0 % ± 3 digit	3.0 % ± 3 digit
DC volts	6.000 V	0.001 V		
	60.00 V	0.01 V		
	600.0 V	0.1 V	0.5 % ± 3 digit	0.5 % ± 3 digit
	1000 V	1 V		
DC millivolts	600.0 mV	0.1 mV	1.0 % ± 10 digit	1.0 % ± 10 digit
AC current μA (40 Hz to 400 Hz) ²	400 μA	0.1 μA		
	4000 μA	1 μA	1.5 % ± 3 digit	1.5 % ± 3 digit
AC current mA (40 Hz to 400 Hz) ²	40.00 mA	0.01 mA		
	400.0 mA	0.1 mA	1.5 % ± 3 digit	1.5 % ± 3 digit
AC current A (40 Hz to 400 Hz) ²	4.000 A	0.001 A		
	10.00 A	0.01 A	1.5 % ± 3 digit	1.5 % ± 3 digit
DC current μA ²	400 μA	0.1 μA		
	4000 μA	1 μA	1.5 % ± 3 digit	1.5 % ± 3 digit
DC current mA ²	40.00 mA	0.01 mA		
	400.0 mA	0.1 mA	1.5 % ± 3 digit	1.5 % ± 3 digit
DC current A ²	4.000 A	0.001 A		
	10.00 A	0.01 A	1.5 % ± 3 digit	1.5 % ± 3 digit
Diode test ³	2.000 V	0.001 V	10 %	10 %
Temperature ⁴	50 °C to 400 °C			
	0 °C to 50 °C	0.1 °C	NA	2 % ± 1 °C
	-55 °C to 0 °C			2 % ± 2 °C
Resistance (ohms) ⁵	400.0 Ω	0.1 Ω		
	4.000 kΩ	0.001 kΩ	0.5 % ± 3 digit	0.5 % ± 3 digit
	40.00 kΩ	0.01 kΩ	0.5 % ± 2 digit	0.5 % ± 2 digit
	400.0 kΩ	0.1 kΩ	0.5 % ± 2 digit	0.5 % ± 2 digit
	4.000 MΩ	0.001 MΩ	0.5 % ± 2 digit	0.5 % ± 2 digit
	40.00 MΩ	0.01 MΩ	1.5 % ± 3 digit	1.5 % ± 3 digit
Capacitance ⁶	40.00 nF	0.01 nF		
	400.0 nF	0.1 nF	2 % ± 5 digit	2 % ± 5 digit
	4.000 μF	0.001 μF	2 % ± 5 digit	2 % ± 5 digit
	40.00 μF	0.01 μF	5 % ± 5 digit	5 % ± 5 digit
	400.0 μF	0.1 μF	5 % ± 5 digit	5 % ± 5 digit
	1000 μF	1 μF	5 % ± 5 digit	5 % ± 5 digit
Frequency ¹ (10 Hz to 100 kHz)	50.00 Hz	0.01 Hz		
	500.0 Hz	0.1 Hz		
	5.000 kHz	0.001 kHz	NA	0.1 % ± 3 digit
	50.00 kHz	0.01 kHz		
	100 kHz	0.1 kHz		
Duty cycle ¹	1 % to 99 %	0.1 %	NA	1 % typical ⁷
Continuity Threshold	NA	NA	70 Ω	70 Ω
Backlight	NA	NA	Yes	Yes



Ordering information

Models

Fluke 15B MAX Digital Multimeter

Fluke 17B MAX Digital Multimeter

Fluke 59 MAX/59 MAX+
Infrared Thermometer



NEW



With 65 years of expertise as the leader in the test tools industry, Fluke has built the 59 MAX and 59 MAX+ IR thermometers with the precision you need to do your job accurately and within your budget. Designed to withstand a 1 meter drop, you can count on these lightweight, compact IR thermometers to work when you need them.

Features:

- Precise laser technology for more accurate and repeatable measurements
- Large, easy-to-read backlit LCD display for easy viewing
- Small and lightweight design fits easily into your tool box
- IP40 rated for extra protection
- 10:1 Distance to Spot ratio for 59 MAX+
- 8:1 Distance to Spot ratio for 59 MAX
- Displays the minimum, maximum or average temperature or the difference between two measurements
- High and low alarms for rapid display of measurements outside the limits
- Powered by one (1) AA battery
- One year warranty

Specifications				
	59 MAX		59 MAX+	
Temperature range	- 30 ° C to 350 ° C (- 22 ° F to 662 ° F)		- 30 ° C to 500 ° C (- 22 ° F to 932 ° F)	
Accuracy (Calibration geometry with ambient temperature 23 ° C ± 2 ° C)	≥ 0 ° C (32 ° F)	± 2.0 ° C (4.0 ° F) or ± 2.0 % of reading, whichever is greater	≥ 0 ° C (32 ° F)	± 1.5 ° C (3.0 ° F) or ± 1.5 % of reading, whichever is greater
	≥ - 10 ° C to < 0 ° C (≥ 14 ° F to < 32 ° F)	± 2.0 ° C (4.0 ° F)	≥ - 10 ° C to < 0 ° C (≥ 14 ° F to < 32 ° F)	± 2.0 ° C (4.0 ° F)
	< 14 ° C	± 3.0 ° C (6.0 ° F)	< 14 ° C	± 3.0 ° C (6.0 ° F)
Response rime (95 %)	< 500 ms (95 % of reading)		< 500 ms (95 % of reading)	
Distance to spot ratio	8:1 (calculated at 90 % energy)		10:1 (calculated at 90 % energy)	
Display resolution	0.1 ° C (0.2 ° F)		0.1 ° C (0.2 ° F)	
Repeatability (% of reading)	± 1.0 % of reading or ± 1.0 ° C (± 2.0 ° F), whichever is greater		± 0.8 % of reading or ± 1.0 ° C (± 2.0 ° F), whichever is greater	
General specifications				
Power	1 AA IEC LR06 battery			
Batter life	12 hours with laser and backlight on			
Operating temperature	0 ° C to 50 ° C (32 ° F to 122 ° F)			
Storage temperature	- 20 ° C to 60 ° C (- 4 ° F to 140 ° F), without battery			
Operating humidity	10 % to 90 % RH non-condensing @ 30 ° C (86 ° F)			
Drop test	1 m			
Safety specifications				
Ingress protection rating	IP40 per IEC 60529			
Vibration and shock	IEC 68-2-6 22.5 g, 10 to 200 Hz,IEC 68-2-27, 50 g, 11 ms			
Compliance	EN/IEC 61010-1			
Laser safety	FDA and EN 60825-1 Class II			
Electromagnetic compatibility	61326-1 EN 61326-2			

Ordering information	
Models	
Fluke 59 MAX Infrared Thermometer	
Fluke 59 MAX+ Infrared Thermometer	

Infrared Thermometers

Built for the toughest industrial environment

Fluke 404E/406E Laser Distance Meter

Just point and click to instantly measure up to 60 meters range. The Fluke Laser Distance Meters are fast, accurate, durable, and easy to use.

These Laser Distance Meters have the Fluke's core value you can expect of. The simple design and easy-to-use button operation allow you to operate with one hand, minimize the time spent in measuring, also maximize the reliability of measurements.

Features:

- Quickly measure distance, calculate area / volume / Pythagoras
- Auto level and height
- Built to withstand rainy or dusty conditions : 1-meter drop tested with IP54 rated (FLUKE 404E / 406E)
- Electronic angle display, auxiliary level measurement
- Up to 30 sets of data storage
- The battery life up to 5000 single measurements
- Automatically power off after 3 minutes of inactivity

Specifications		
	Fluke 404E	Fluke 406E
Range	0.2 to 40 m	0.2 to 60 m
Accuracy* in favorable condition**	±(2.0 mm + 5 x 10 ⁻⁵ D)	
Accuracy in unfavorable condition***	±(3.0 mm + 29 x 10 ⁻⁵ D)	
Angle accuracy	±(0.3°+0.1°+0.01°*A), A is up to ±45° in each quadrant	
Angel measurement method	Electronic	
Measurement unit	m / ft / in / ft+in	
Display	1.6 inch, segment alphanumeric display	
* Temperature for specified accuracy: 25°C		
** Favorable conditions: white and diffuse reflection objects (white painted walls) ,low background illumination and moderate temperature		
*** Unfavorable conditions: objects with low or high reflectivity, high background illumination or the temperature is at the upper or lower limit of the specified temperature range		
Measurements		
Single measurement	•	•
Continuous measurement	•	•
Area measurement	•	•
Volume measurement	•	•
Auto Leveling	•	•
Auto Vertical	•	•
Pythagoras 1	•	•
Pythagoras 2	•	•
Plus-minus method	•	•
Measurement reference	Front / Back	
Auto-off	3 minutes after inactivity	
Data Storage	30 sets	



Ordering information

Models

Fluke 404E Laser Distance Meter
Fluke 406E Laser Distance Meter

Electrical measurement safety

IEC 61010 defines four category locations

- **CAT IV** "Origin of installation" – Utility level and any outside cabin run. E.g.: three phase at utility connection
- **CAT III** Distribution wiring, including "mains" bus, feeders and branch circuits; permanently installed loads. E.g.: MC panels
- **CAT II** Receptacle outlet circuit; plug-in loads. E.g.: TV, home appliances
- **CAT I** Protected electronic circuits. E.g.: electronic equipment

True RMS:

RMS = root mean square. Though its formula can be challenging to grasp, RMS essentially calculates the equivalent direct current (dc) value of an ac waveform. More technically, it determines the "effective," or dc heating value, of any ac wave shape.

An average-responding meter uses averaging mathematical formulas to accurately measure pure sinusoidal waves. It can measure non-sinusoidal waves, but with uncertain accuracy.

True-RMS meter can accurately measure both pure waves and the more complex non-sinusoidal waves. Waveforms can be distorted by nonlinear loads such as variable speed drives or computers. An averaging meter attempting to measure distorted waves can be up to 40% low or 10% high in its calculations.

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