

# The new Fluke 319

Portable, accurate and True RMS Clamp Meter

Unique 40 milli-amps measurement precision testing functionality

## Technical data

The new 319 clamp meter is designed based on detailed research into the requirements of electrical engineers. It can be used to test both starting current (inrush) and frequency. A small clamp head and compact, lightweight body make it perfect for use in confined spaces. 40A range low current measurement (0.01A resolution) is a unique design allowing users to measure small currents more easily. At the same time, the clamp also offers features such as True RMS, maximum/minimum, zeroing, backlight display and display hold. The 319 clamp meter is therefore a powerful tool for use in the daily maintenance and installation of electronics.

### Functionality

- The unique new features\* of the 40 milli-amps measurement  
High-precision electric current measurement--0.01A
- High-resolution, 1.6% high-precision measurements. (many engineers take small measurements more often than large current measurements)
- The new clamp head is narrow and the body is compact and portable, making it ideal for use in confined spaces
- The new starting current feature\* offers starting current measurement of appliances and lights for instance with an integration time of 100 ms
- The new frequency test feature\* offers precise measurement of VFD pulse width modulation Output signal frequency
- Large 1000A AC/DC current testing; AC/DC voltage testing
- Min Max (minimum value / maximum value) feature Current and voltage modes
- The new zeroing feature\* returns the display to zero to perform (dc) testing
- True RMS
- Large back light screen, convenient viewing
- Screen save function to save measurement results on the screen
- Automatic off function prolongs battery life and ensures the instrument's continued availability.
- 6000 character display
- 4000Ω resistance measurement
- Continuity testing  $\leq 30 \Omega$
- Clamp opening: 37mm



**Fluke 319 Electrical Specifications**

Function	Parameter	Fluke 319
AC Current	Range	40.00 A 600.0 A 1000 A
	Resolution	0.01 A 0.1 A 1 A
	Accuracy	1.6 % ± 6 digit (50–60 Hz) [40 A] 2.5 % ± 8 digit (60–500 Hz) [40 A] 1.5 % ± 5 digit (50–60 Hz) [600/1000 A] 2.5 % ± 5 digit (60–500 Hz) [600/1000 A]
	Crest factor add 2 % into spec for CF > 2	3.0 Max@ 500 A 2.5 Max@600 A 1.4 Max@1000 A
	AC response	RMS
DC Current	Range	40.00 A 600.0 A 1000 A
	Resolution	0.01 A 0.1 A 1 A
	Accuracy	1.6 % ± 6 digit [40 A] 1.5 % ± 5 digit [600 A]
AC voltage	Range	600.0 V
	Resolution	0.1 V
	Accuracy	1.5 % ± 5 digit (20–500 Hz)
	AC response	RMS
DC voltage	Range	600.0 V
	Resolution	0.1 V
	Accuracy	1 % ± 4 digit
Ω	Range	400.0 Ω 4000 Ω
	Resolution	0.1 Ω 1 Ω
	Accuracy	1% ± 5 digits
Continuity		≤ 30 Ω
Inrush	Integration Time	100ms
HZ	Range	5.0 – 500.0 Hz
	Resolution	0.5 % ± 5 digit
	Trigger Level	10 – 100 Hz ≥ 5 A, 5 – 10 Hz, 100 – 500 Hz ≥ 10 A

**General technical specifications**

- Precision specifications apply within the temperature range of 23 °C ± 5 °C (73 °F ± 41 °F).
- Less than 18 °C and greater than 28 °C (64 °F and greater than 82 °F), precision decreases with °C by 0.1 litres of the specified values.
- AC voltage and AC current RMS measurements are set from 5 % to 100 %.

**General specifications**

- Digital display: 6000 digit resolution
- Safety rating: CE
- EN/IEC 61010-1 and IEC 61010-2-032
- Measurement types:600 V CAT III (Type 3)
- Power supply three AAA IEC LRO3 batteries
- Clip opening maximum 37 mm (1.45 in)
- Jaw diameter 37 mm (1.45 in)
- Dimensions (length x width x height) 234 x 74 x 34.8 mm
- Weight: Approximately 384 g (13.5 oz) (including batteries)
- Calibrated and tested completely by hand
- Calibrated for one year

**Environmental specifications**

- Operating temperature -10 °C to 50 °C (14 °F to 122 °F)
- Storage temperature -40 °C to 60 °C (-40 °F to 140 °F)
- IP rating: IP40
- Drop test requirements 1 m (3 ft) dropped from height, six sides all tested on oak flooring

**Optional accessories**

- TL223 SureGrip electronics testing package
- AC285 SureGrip alligator clips
- L206 luxury LED cap lamp

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