

TECHNICAL DATA

Fluke 113 Digital Multimeter





Key features

- VCHEK™ LoZ low impedance measurement function to test for either AC or DC voltage, or show continuity if voltage is not detected.
- Large backlit display
- CAT IV 600 V safety rated

Product overview: Fluke 113 Digital Multimeter

The Fluke 113 Digital Multimeter gives users the means to quickly and easily do basic testing. It is easy to use and is packed with the features needed to repair most electrical problems. The 113 features a large, backlit display for easy visibility in low-lit work environments. Plus, the integrated holster includes probe holders on the back, so your test leads can always be kept organized and where you need them.

Make measurements quickly with the 113

Whether you're a utility worker, linesman, electrician, technician, anyone else working with basic electrical testing, the Fluke 113 includes the measurement features you need to tackle your job. The Fluke VCHEK™ LoZ low impedance measurement function lets users perform tests for voltage or continuity from the same dial position.

Please note that low impedance LoZ measurements will cause a low load on a circuit protected by a RCD, which will trip powered GFCI and RCD circuits when measuring Phase to Earth.

The meter also displays AC or DC voltage, depending on what was detected, while also rejecting ghost voltages from

adjacent wires. If no voltage is detected, a continuity test is performed. The Min/Max function lets you record signal fluctuations.

The Fluke 113 digital multimeter can perform diode tests, and also provides both auto and manual ranging capabilities. With features such as conformance to the latest safety standards, backlight, and a much larger display that's easier to view, this meter is a must have for every toolbox.

Specifications: Fluke 113 Digital Multimeter

Specifications		
V _{CHEK} ^{1 2 3}	Range	6.000 V / 60.00 V / 600.0 V
	Resolution	0.001 V / 0.01 V / 0.1 V
	Accuracy	DC, 45 to 500 Hz: 2.0% + 3 tt500 Hz to 1 kHz: 4.0% + 3
Diode test ⁴	Range	2.000 V
	Resolution	0.001 V
	Accuracy	2.0% + 3
Continuity ⁴	Accuracy	Beeper on < 20 Ω , off > 250 Ω detects opens or shorts of 500 Ω or longer
Ω ⁴	Range	600.0 Ω / 6.000 k Ω / 60.00 k Ω
	Resolution	0.1 Ω / 0.001 k Ω / 0.01 k Ω
	Accuracy	0.9% + 2 / 0.9% + 1 / 0.9% + 1
Capacitance ⁴	Range	1000 nF / 10.00 μ F / 100.0 μ F / 9999 μ F
	Resolution	1 nF / 0.01 μ F / 0.1 μ F / 1 μ F
	Accuracy	1.9% + 2 tt100 μ F - 1000 μ F: 1.9% + 2 tt1000 μ F: 5% + 20

1. All V_{CHEK} voltage ranges are specified from 60 counts to 100% of range. Because inputs below 60 counts are not specified, it is possible and normal for this and other true-rms meters to display non-zero readings when the test leads are disconnected from a circuit or are shorted together.

tt2. Crest factor of $\sqrt{2}$ at 4000 counts, decreasing linearly to 1.5 at full scale.

tt3. Minimum measurable input in V_{CHEK} autorange is 3 VDC. For measurements below 3 VDC, push Range button twice to get to 6 VDC manual range.

tt4. After measuring voltage, a wait time of 1 minute is required to maintain accuracy of ohms, capacitance, diode test, and continuity.

Specifications	
Maximum voltage between any terminal and earth ground	600 V
Display	3 3/4-digits, 6000 counts, updates 4/sec
Operating temperature	-10 $^{\circ}$ C to 50 $^{\circ}$ C (14 $^{\circ}$ F to 122 $^{\circ}$ F)
Storage temperature	-40 $^{\circ}$ C to 60 $^{\circ}$ C (-22 $^{\circ}$ F to 140 $^{\circ}$ F)
Temperature coefficient	0.1 x (specified accuracy) / $^{\circ}$ C (< 18 $^{\circ}$ C or > 28 $^{\circ}$ C)

Operating altitude	2,000 m	
Storage altitude	10,000 m	
Relative humidity	95% to 30u00b0C tt75% to 40u00b0C tt45% to 50u00b0C	
Baery type	9 Volt Alkaline, IEC 6F22	
Baery life	Alkaline: 300 hours typical, without backlight	
Size (H x W x L)	167.1 x 85.1 x 46.0 mm (6.58 x 3.35 x 1.81 in)	
Weight	13.0 oz (404 g)	
Safety	IEC 61010-1: Pollution Degree 2 ttIEC 61010-2-033: CAT IV 600V	
EMI regulations	Complies with FCC Part 15, Class B	
Specifications		
VCHEK	Input impedance (nominal)	~3 ku03a9 < 300 pF
VCHEK	Common mode rejection ratio (1 ku03a9 unbalanced)	> 60 dB at DC, 50 or 60 Hz
u03a9	Open circuit test voltage	< 2.7 VDC
	Full scale voltage	< 0.7 VDC
Diode test	Open circuit test voltage	2.7 VDC
	Full scale voltage	2.000 VDC
u03a9	Short circuit current	< 350 u03bcA
Diode test	Short circuit current	< 1.0 mA



Ordering information

Fluke 113

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

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