TECHNICAL DATA

Fluke 113 Utility Multimeter



APPLICATIONS

- Designed for basic electrical tests
- Electrical testing where ghost voltage may be present

True-rms utility multimeter designed for basic electrical tests

The new 113 Utility Multimeter has the features needed to repair most electrical problems. This meter is simple to use and has significant improvements over other utility multimeters. With features such as Fluke's VCHEK™, added measurement functions, backlight, conformance to the latest safety standards, and a much larger display that's easier to view, this new meter is a must have for the utility users toolbox.

Features

- VCHEK™ LoZ low impedance measurement function to simultaneously test for voltage and continuity
- True-rms for accurate ac measurements on non-linear loads
- A large backlit display allows for easy visibility in low-lit areas
- Record signal fluctuations using the Min/Max function
- Diode test for testing general-purpose germanium, silicon, and power diodes
- Integral holster with probe holders for easy storage
- Auto and Manual ranging for added user functionality
- Meets Measurement Category CAT IV 600 V standards for a higher level of safety
- The optional TPAK magnetic hanger allows the user hands-free flexibility

Specifications

Accuracy is specified for 1 year after calibration, at operating temperatures of 18 °C to 28 °C, with relative humidity at 0 % to 95 %. Accuracy specifications are given as follows:

Function	Range	Resolution	Accuracy	
			DC, 45 to 500 Hz	500 Hz to 1 kHz
Chek[1,2]	6.000 V 60.00 V 600.0 V	0.001 V 0.01 V 0.1 V	2.0 % + 3	4.0 % + 3
[3]	2.000 V	0.001 V	2.0 % + 3	
[3]			Beeper on < 20 Ω, off > 250 Ω; detects opens or shorts of 500 µs or longer	
Ω[3]	600.0 Ω 6.000 kΩ 60.00 kΩ	0.1 Ω 0.001 kΩ 0.01 kΩ	0.9 % + 2 0.9 % + 1 0.9 % + 1	
[3]	1000 nF 10.00 µF 100.0 µF 9999 µF	1 nF 0.01 µF 0.1 µF 1 µF	1.9 % + 2 1.9 % + 2 1.9 % + 2 100 µF – 1000 µF: 1.9 % + 2 > 1000 µF: 5 % + 20	

1 All 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.
2 Crest factor of ≤ 3 at 4000 counts, decreasing linearly to 1.5 at full scale.
3 After measuring voltage, a wait time of 1 minute is required to maintain accuracy of ohms, capacitance, diode test, and continuity.
Note: Specifications are subject to change without notice. ± ([% of reading] + [number of least significant digits])

General specifications	
Maximum voltage (between any terminal and earth ground)	600 V
Display	3 3/4-digits, 6000 counts, updates 4/sec
Operating temperature	-10 °C to 50 °C (14 °F to 122 °F)
Storage temperature	-40 °C to 60 °C (-22 °F to 140 °F)
Temperature coefficient	0.1 x (specified accuracy)/°C (< 18 °C or > 28 °C)
Operating altitude	2,000 m
Storage altitude	10,000 m
Relative humidity	95 % to 30 °C 75 % to 40 °C 45 % to 50 °C
Battery type	9 Volt Alkaline, IEC 6LR61
Battery life	Alkaline: 300 hours typical, without backlight
Size (HxWxL)	167.1 mm X 85.1 mm X 46.0 mm (6.58 in X 3.35 in X 1.81 in)
Weight	13.0 oz (404 g)
Safety	IEC 61010-1, Pollution Degree 2 IEC 61010-2-033 CAT IV 600 V
EMC	61326-1:Portable

Specifications (continued)

Function	Input impedance (nominal)	
Chek	~3 kΩ < 300 pF	
	Common Mode Rejection Ratio (1 kΩ Unbalanced)	
	> 60 dB at dc, 50 or 60 Hz	
	Open circuit test voltage	**Full scale voltage**
Ω	< 2.7 V dc	< 0.7 V dc
→|←	< 2.7 V dc	2.000 V dc
	Short circuit current	
Ω	< 350 µA	
→|←	< 1.0 mA	

Ordering information

Fluke 113 Utility Multimeter

Included
Fluke 113 Utility Multimeter
TL75 Test Leads
One 9 V battery
User documentation

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