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Fluke 113

Basic Multimeter

Technical Data



True RMS Basic Multimeter designed for basic electrical tests

The new 113 Basic Multimeter has the features needed to repair most electrical problems. This meter is simple to use and has significant improvements over Fluke's original 7-600, and 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.

Include:

- LoZ low impedance measurement function to easily test for voltage and continuity
- accurate ac measurements on non-linear loads
- lit display allows for easy visibility in low-lit areas
- l fluctuations using the Min/Max function
- r testing general-purpose germanium, silicon, diodes
- ter with probe holders for easy storage
- annual ranging for added user functionality
- measurement Category CAT III 600 V and CAT II 300 V standards for a higher level of safety
- TPAK magnetic hanger allows the user hands-free








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:


Note:

Specifications are subject to change without notice.

± ([% of reading] + [number of least significant digits])

Function	Range	Resolution	Accuracy	
			DC, 45 to 500 Hz	500 Hz to 1 kHz
 Chek ^{1,2}	6.000 V	0.001 V	2.0 % + 3	4.0 % + 3
	60.00 V	0.01 V		
	600.0 V	0.1 V		
Function	Range	Resolution	Accuracy	
 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	
 ³	600.0 Ω	0.1 Ω	0.9 % + 2	
	6.000 kΩ	0.001 kΩ	0.9 % + 1	
	60.00 kΩ	0.01 kΩ	0.9 % + 1	
 ³	1000 nF	1 nF	1.9 % + 2	
	10.00 μF	0.01 μF	1.9 % + 2	
	100.0 μF	0.1 μF	1.9 % + 2	
	9999 μF	1 μF	100 μF - 1000 μF: 1.9 % + 2 >	
			1000 μF: 5 % + 20	

Notes:







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.

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, ANSI 1604A / IEC 6F22
Battery life	Alkaline: 300 hours typical, without backlight
Shock	1 Meter drop per IEC 61010-1-2001
Vibration	Per MIL-PRF-28800 for Class 2 instrument
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	Complies with ANSI/ISA 82.02.01 (61010-1) 2004, CAN/CSA-C22.2 No 61010-1-04, UL 61010-1 (2004) and IEC/EN 61010-1 2nd Edition for measurement Category III, 600 V, Pollution Degree 2, EMC EN61326-1
EMI regulations	Complies with FCC Part 15, Class B

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Function	Input Impedance (Nominal)	
 Chek	~3 kΩ < 300 pF	
	Common Mode Rejection Ratio (1 kΩ Unbalanced)	
	> 60 dB at dc, 50 or 60 Hz	
	pen Circuit Test Voltage	Full Scale Voltage
	< 2.7 V dc	< 0.7 V dc
	< 2.7 V dc	2,000 V dc
	Short Circuit Current	
	< 350 μA	
	< 1.0 mA	



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