

## Technical Data

# Fluke 17B MAX Non True-RMS Digital Multimeter



The Fluke 17B MAX Digital Multimeters provide the safety, accuracy, durability, and ease of use you need for reliable measurements.

## Key Features

- **NEW**<sup>1</sup> - Input Alert™ alarm for wrong operation
- **NEW** - One-Key Wake-Up
- **NEW** - Voltage reading up to 6000 counts
- **NEW** - Capacitance improved to 2000 uF
- CAT III 600V safety rating
- Frequency and temperature measurement (17B MAX)

## Input Alert™ Audible and Visual Alarm—Increased Safety

It's a common mistake to switch to voltage or other functions while the test leads are connected to the current terminals. Doing so can cause the multimeter fuse to blow if a measurement is taken.

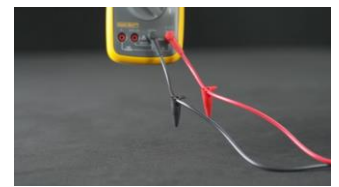
The 17B MAX includes Input Alert™, which provides both audible and visual warnings to notify users of incorrect operation, helping to prevent blown fuses, reduce productivity loss, and enhance safety.



Wrong Operation Scenario

## Standard Test Leads - Overview

Standard test leads with 1mm tips allow users to make precise measurements on circuit boards and in tight spaces. These leads have a textured grip for better handling, and the durable tip material ensures long-lasting use. The cap covers the sharp tip to prevent injury and can be clipped onto the lead during use to avoid misplacement. The leads meet safety standards of 10A and 1000V, and are rated for CAT III 600V testing, ensuring safe and reliable performance.



## One-Key Wake-Up — High Efficiency

In Sleep mode, pressing any key can wake up the multimeter and restore to the default function of the rotary switch.



<sup>1</sup> NEW stands for the features upgraded from 17B+ products

## Specifications

Accuracy is specified for 1 year after calibration, at operating temperatures of 18 °C to 28 °C with relative humidity at 0 % to 75 %. Accuracy specifications take the form of:

± [(% of Reading) + [Number of Least Significant Digits)].

Function	Range	Resolution	Accuracy
AC Volts (40 Hz to 500 Hz) <sup>1</sup>	6.000 V 60.00 V 600.0 V 1000 V	0.001 V 0.01 V 0.1 V 1 V	1.0 % + 3
AC Millivolts	600.0 mV	0.1 mV	3.0 % + 3
DC Volts	6.000 V 60.00 V 600.0 V 1000 V	0.001 V 0.01 V 0.1 V 1 V	0.5 % + 3
DC Millivolts	600.0 mV	0.1 mV	1.0 % + 10
AC Current µA (40 Hz to 400 Hz) <sup>2</sup>	400.0 µA 4000 µA	0.1 µA 1 µA	1.5 % + 3
AC Current mA (40 Hz to 400 Hz) <sup>2</sup>	40.00 mA 400.0 mA	0.01 mA 0.1 mA	1.5 % + 3
AC Current A (40 Hz to 400 Hz) <sup>2</sup>	4.000 A 10.00 A	0.001 A 0.01 A	1.5 % + 3
DC Current µA <sup>2</sup>	400.0 µA 4000 µA	0.1 µA 1 µA	1.5 % + 3
DC Current mA <sup>2</sup>	40.00 mA 400.0 mA	0.01 mA 0.1 mA	1.5 % + 3
DC Current A <sup>2</sup>	4.000 A 10.00 A	0.001 A 0.01 A	1.5 % + 3
Diode Test <sup>3</sup>	2.000 V	0.001 V	10 %
Temperature <sup>4</sup>	50.0 °C to 400.0 °C 0 °C to 50.0 °C -55.0 °C to 0 °C	0.1 °C	2 % + 1 °C 2 °C 9 % + 2 °C
Resistance (ohm) <sup>5</sup>	400.0 Ω 4.000 kΩ 40.00 kΩ 400.0 kΩ 4.000 MΩ 40.00 MΩ	0.1 Ω 0.001 kΩ 0.01 kΩ 0.1 kΩ 0.001 MΩ 0.01 MΩ	0.5 % + 3 0.5 % + 2 0.5 % + 2 0.5 % + 2 0.5 % + 2 1.5 % + 3
Capacitance <sup>6</sup>	40.00 nF 400.0 nF 4.000 µF 40.00 µF 400.0 µF 2000 µF	0.01 nF 0.1 nF 0.001 µF 0.01 µF 0.1 µF 1 µF	2 % + 5 2 % + 5 5 % + 5 5 % + 5 5 % + 5 5 % + 5
Frequency <sup>1</sup> (10 Hz to 100 kHz)	50.00 Hz 500.0 Hz 5.000 kHz 50.00 kHz 100.0 kHz	0.01 Hz 0.1 Hz 0.001 kHz 0.01 kHz 0.1 kHz	0.1 % + 3
Duty Cycle <sup>1</sup>	1% to 99%	0.1 %	1 % typical <sup>7</sup>
Continuity Threshold	—	—	70 Ω
Backlight	—	—	Yes

<sup>1</sup> All ac, Hz, and duty cycle are specified from 1 % to 100 % of range. Inputs below 1 % of range are not specified.

<sup>2</sup> Typical burden voltage DC/AC current µA: 100 µV / µA, DC/AC current mA: 2 mV/mA, DC/AC current A: 0.03 V/A

<sup>3</sup> Typically, open circuit test voltage is 2.0 V and short circuit current is <0.6 mA.

<sup>4</sup> Use K-type thermocouples

<sup>5</sup> Typically, open circuit test voltage is 0.54 V, maximum short circuit current is 1.8 mA

<sup>6</sup> Specifications do not include errors due to test lead capacitance and capacitance floor (may be up to 1.5 nF in the 40 nF range).

<sup>7</sup> Typical means when the frequency is at 50 Hz or 60 Hz and the duty cycle is between 10 % and 90 %.

# Input Characteristics

Function	Overload Protection	Input Impedance (Nominal)	Common Mode Rejection Ratio	Normal Mode Rejection Ratio
AC Volts	1000 V <sup>1</sup>	>10 MΩ, <100 pF	>60 dB, at 50 Hz or 60 Hz	—
AC Millivolts	1000 V <sup>1</sup>	>1 MΩ, <100 pF	>80 dB, at 50 Hz or 60 Hz	—
DC Volts	1000 V <sup>1</sup>	>10 MΩ, <100 pF	>100 dB, at 50 Hz or 60 Hz	>60 dB, at 50 Hz or 60 Hz
DC Millivolts	1000 V <sup>1</sup>	>1 MΩ, <100 pF	>80 dB, at 50 Hz or 60 Hz	—

<sup>1</sup> 10<sup>6</sup> V Hz Max

# General Specifications

Maximum Voltage between any Terminal and Earth Ground:	600 V
Maximum Differential Voltage between V and COM Terminals	1000V
Display (LCD)	6000 counts, updates 3 times per second
Battery Type	2 AA, IEC LR6
Battery Life	500 hours minimum
Temperature	Operating: 0 °C to 40 °C; Storage: -30 °C to 60 °C
Operating Humidity	≤ 90 % RH at 10 °C to 30 °C; ≤ 75 % at 30 °C to 40 °C; non-condensing (<10 °C)
Operating Humidity, 40 MΩ range	≤ 80 % RH at 10 °C to 30 °C; ≤ 70 % RH 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	440 mA, 1000 V IR 10 kA, fast-fuse, use only Fluke specified parts. 11 A, 1000 V IR 20 kA, fast-fuse, use only Fluke specified parts
Dimensions (H x W x L)	183 mm x 91 mm x 49.5 mm
Weight	455 g
Ingress Protection	IP40
Safety	IEC 61010-1, IEC61010-2-033 CAT III 600 V, Pollution Degree 2
Electromagnetic Environment	IEC 61326-1: Portable
Electromagnetic Compatibility	Only applicable in Korea

Class A Equipment (Industrial Broadcasting & Communication Equipment)<sup>1</sup>

<sup>1</sup> Equipment meets requirements for industrial electromagnetic wave equipment and the seller or user should take notice of it. This equipment is intended for use in business environments and not to be used in homes.



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