TECHNICAL DATA

Fluke 15B+/17B+ Digital Multimeters



Fluke quality and reliability within your reach

The Fluke 15B+ and 17B+ digital multimeters are compact, reliable tools for electricians and DIY enthusiasts who want quality, accuracy, and safety. These easy-to-use digital multimeters measure AC/DC voltage up to 1000 V, AC/DC current up to 10 A, and feature resistance, continuity, diode, and capacitance testing capabilities, ensuring accurate readings for a wide range of electrical applications. The 17B+ allows you to tackle even more applications with the addition of frequency and temperature measurement capabilities.

With CAT III 600 V ratings, and overload protection (17B+) these meters give you confidence in your safety, and their large backlit displays, small size, and ruggedness make them ideal for on-the-go electrical system testing.

Product highlights

- CAT III 600 V safety rating
- Large, easy-to-read display with bright white backlight
- Over-voltage indicator (17B+)
- Frequency and temperature measurement (17B+)
- Voltage, resistance, continuity, capacitance
- Input terminal for ac and dc current measurements to 10 A current
- Diode test, data hold

AC/DC VOLTAGE UP TO 1000 V

Suitable for a wide range of applications with a CAT III 600 V safety rating, and a maximum voltage of 1000 V

AC/DC CURRENT MEASUREMENT UP TO 10 A

Measure AC and DC current up to 10 A for diagnosing electrical problems such as overloading, short circuits, and faulty wiring

ESSENTIAL MEASUREMENT FUNCTIONS

Troubleshoot electrical issues in a wide range of systems with voltage, resistance, continuity, capacitance, frequency (17B+) and temperature (17B+) functions



Specifications

Accuracy is specified for 1 year after calibration, at operating temperatures of 18 °C to 28 °C, relative humidity at 0 % to 75 %. Accuracy specifications take the form of: ± ([% of Reading] + [Number of Least Significant Digits]).

Function	Range	Resolution	Accuracy	
			15B+	17B+
AC volts (40 Hz to 500 Hz)[1]	4.000 V 40.00 V 400.0 V 1000 V	0.001 V 0.01 V 0.1 V 1 V	1.0 % + 3	1.0 % + 3
DC volts	4.000 V 40.00 V 400.0 V 1000 V	0.001 V 0.01 V 0.1 V 1 V	0.5 % + 3	0.5 % + 3
AC millivolts	400.0 mV	0.1 mV	3.0 % + 3	3.0 % + 3
DC millivolts	400.0 mV	0.1 mV	1.0 % + 10	1.0 % + 10
Diode test[2]	2.000 V	0.001 V	10 %	10 %
Resistance (Ohms)	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	0.5 % + 3 0.5 % + 2 0.5 % + 2 0.5 % + 2 0.5 % + 2 1.5 % + 3
Capacitance[3]	40.00 nF 400.0 nF 4.000 µF 40.00 µF 400.0 µF 1000 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	2 % + 5 2 % + 5 5 % + 5 5 % + 5 5 % + 5 5 % + 5
Frequency[1] Hz (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	NA	0.1 % + 3
Duty cycle[1]	1 % to 99 %	0.1 %	NA	1 % typical4
AC current µA (40 Hz to 400 Hz)	400.0 µA 4000 µA	0.1 µA 1 µA	1.5 % + 3	1.5 % + 3
AC current mA (40 Hz to 400 Hz)	40.00 mA 400.0 mA	0.01 mA 0.1 mA	1.5 % + 3	1.5 % + 3
AC current A (40 Hz to 400 Hz)	4.000 A 10.00 A	0.001 A 0.01 A	1.5 % + 3	1.5 % + 3
DC current µA	400.0 µA 4000 µA	0.1 µA 1 µA	1.5 % + 3	1.5 % + 3

Function	Range	Resolution	Accuracy	
			15B+	17B+
DC current A	4.000 A 10.00 A	0.001 A 0.01 A	1.5 % + 3	1.5 % + 3
Temperature	50 °C to 400 °C 0 °C to 50 °C -55 °C to 0 °C	0.1 °C	NA	2 % ± 1 °C ± 2 °C 9 % ± 2 °C
Backlight	—	—	Yes	Yes

[1] All ac, Hz, and duty cycle are specified from 1 % to 100 % of range. Inputs below 1 % of range are not specified.
[2] Typically, open circuit test voltage is 2.0 V and short circuit current is <0.6 mA.
[3] 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).
[4] Typical means when the frequency is at 50 Hz or 60 Hz and the duty cycle is between 10 % and 90 %.

Function	Overload Protection	Input Impedance (Nominal)	Common Mode Rejection Ratio	Normal Mode Rejection Ratio
AC volts	1000 V[1]	>10 MΩ, <100 pF	>60 dB at dc, 50 Hz or 60 Hz	—
AC millivolts	400 mV	>1 MΩ, <100 pF	>80 dB at 50 Hz or 60 Hz	—
DC volts	1000 V[1]	>10 MΩ, <100 pF	>100 dB at dc, 50 Hz or 60 Hz	>60 dB at 50 Hz or 60 Hz
DC millivolts	400 mV	>1 MΩ, <100 pF	>80 dB at 50 Hz or 60 Hz	—

[1] 10^6 V Hz max.

General Specifications

Maximum voltage between any terminal and earth ground	1000 V
Display (LCD)	4000 counts, updates 3/sec
Battery type	2 AA, NEDA 15 A, IEC LR6
Battery life	500 hours minimum
Temperature	Operating: 0 °C to 40 °C; Storage: -30 °C to 60 °C
Relative humidity	Operating humidity: ≤ 90 % RH at 10 °C to 30 °C; ≤ 75 % RH 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: 12,000 m
Temperature coefficient	0.1 X (specified accuracy) /°C (<18 °C or >28 °C)
Fuse protection for current inputs	440 mA, 1000 V fast fuse, Fluke specified part only. 11 A, 1000 V fast fuse, Fluke specified part only
Size (HxWxL)	183 mm x 91 mm x 49.5 mm
Weight	455 g
IP rating	IP40
Safety	IEC 61010-1, IEC61010-2-030 CAT III 600 V, Pollution Degree 2
Electromagnetic environment	IEC 61326-1: Portable
Electromagnetic compatibility	Yes

[1] Class A Equipment (Industrial Broadcasting & Communication Equipment)[1]
[2] This product meets requirements for industrial (Class A) electromagnetic wave equipment and seller or user should take notice of it. This equipment is intended for use in business environments and is not to be used in homes.

Ordering Information

FLUKE-15B+ Digital Multimeter
FLUKE-17B+ Digital Multimeter

Included
Test leads with caps, thermocouple temperature probe (17B+), 2 AA batteries, users manual.

Optional accessories
TPAK Meter Hanging Kit
TL175 TwistGuard™ Test Leads



FLK-FLUKE-15B+ Digital Multimeter



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