

## Fluke 17B+ Digital Multimeter



### Accuracy 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:  $\pm\%$  of Reading + Number of Least Significant Digits).

Function	Range	Resolution	Accuracy
AC volts (40 Hz to 500Hz) <sup>1</sup>	4.000 V	0.001 V	1.0 % + 3
	40.00 V	0.01 V	
	400.0 V	0.1 V	
	1000 V	1 V	
DC volts	4.000 V	0.001 V	0.5 % + 3
	40.00 V	0.01 V	
	400.0 V	0.1 V	
	1000 V	1 V	
AC millivolts	400.0 mV	0.1 mV	3.0 % + 3
DC millivolts	400.0 mV	0.1 mV	1.0 % + 10
Diode test <sup>2</sup>	2.000 V	0.001 V	10%
Resistance (Ohms)	400.0 $\Omega$	0.1 $\Omega$	0.5 % + 3
	4.000 k $\Omega$	0.001 k $\Omega$	0.5 % + 2
	40.00 k $\Omega$	0.01 k $\Omega$	0.5 % + 2
	400.0 k $\Omega$	0.1 k $\Omega$	0.5 % + 2
	4.000 M $\Omega$	0.001 M $\Omega$	0.5 % + 2
	40.00 M $\Omega$	0.01 M $\Omega$	1.5 % + 3
Capacitance <sup>3</sup>	40.00 nF	0.01 nF	2 % + 5
	400.0 nF	0.1 nF	2 % + 5
	4.000 $\mu$ F	0.001 $\mu$ F	5 % + 5
	40.00 $\mu$ F	0.01 $\mu$ F	5 % + 5
	400.0 $\mu$ F	0.1 $\mu$ F	5 % + 5
	1000 $\mu$ F	1 $\mu$ F	5 % + 5
Frequency <sup>1</sup> Hz (10 Hz - 100 kHz)	50.00 Hz	0.01 Hz	0.1 % + 3
	500.0 Hz	0.1 Hz	
	5.000 kHz	0.001 kHz	
	50.00 kHz	0.01 kHz	
	100.0 kHz	0.1 kHz	
Duty Cycle <sup>1</sup>	1 % to 99 %	0.1 %	1 % typical <sup>4</sup>
AC current $\mu$ A (40 Hz to 400 Hz)	400.0 $\mu$ A	0.1 $\mu$ A	1.5 % + 3
	4000 $\mu$ A	1 $\mu$ A	
AC current mA (40 Hz to 400 Hz)	40.00 mA	0.01 mA	1.5 % + 3
	400.0 mA	0.1 mA	
AC current A (40 Hz to 400 Hz)	4.000 A	0.001 A	1.5 % + 3
	10.00 A	0.01 A	

<b>DC current <math>\mu</math>A</b>	400.0 $\mu$ A 4000 $\mu$ A	0.1 $\mu$ A 1 $\mu$ A	1.5 % + 3
<b>DC current mA</b>	40.00 mA 400.0 mA	0.01 mA 0.1 mA	1.5 % + 3
<b>DC current A</b>	4.000 A 10.00 A	0.001 A 0.01 A	1.5 % + 3
<b>Temperature</b>	50 °C- 400 °C 0 °C- 50 °C -55 °C- 0 °C	0.1 C	2 % $\pm$ 1 °C $\pm$ 2 °C 9 % $\pm$ 2 °C
<b>Backlight</b>	-	-	Yes

1All ac, Hz, and duty cycle are specified from 1 % to 100 % of range. Inputs below 1 % of range are not specified.  
2Typically, open circuit test voltage is 2.0 V and short circuit current is <0.6 mA.  
3Specifications do not include errors due to test lead capacitance and capacitance floor (may be up to 1.5 nF in the 40 nF range).  
4Typical 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
<b>AC volts</b>	1000 V 1	>10 M $\Omega$ <100 pF	>60 dB at dc, 50 Hz or 60 Hz	-
<b>AC millivolts</b>	400 mV	>1M $\Omega$ , <100 pF	>80 dB at 50 Hz or 60 Hz	-
<b>DC volts</b>	1000 V 1	>10 M $\Omega$ <100 pF	>100 dB at dc, 50 Hz or 60 Hz	>60 dB at 50 Hz or 60 Hz
<b>DC millivolts</b>	400 mV	>1M $\Omega$ , <100 pF	>80 dB at 50 Hz or 60 Hz	-

1 106 V Hz Max

General Specifications	
<b>Maximum voltage between any terminal and earth ground</b>	1000 V
<b>Display (LCD)</b>	4000 counts, updates 3/sec
<b>Battery type</b>	2 AA, NEDA 15A, IEC LR6
<b>Battery life</b>	500 hours minimum (50 hours in LED Test mode without load. The hours with load depends on the type of LED under test.)
<b>Temperature</b>	
<b>Operating</b>	0 °C to 40 °C
<b>Storage</b>	-30 °C to 60 °C
<b>Relative Humidity</b>	
<b>Operating humidity</b>	Non-condensing (<10°C) $\leq$ 90% RH at 10 °C to 30 °C; $\leq$ 75% RH at 30 °C to 40 °C  40 M $\Omega$ range $\leq$ 80% RH at 10 °C to 30 °C; $\leq$ 70% RH at 30 °C to 40 °C
<b>Altitude</b>	
<b>Operating</b>	2000 m
<b>Storage</b>	12,000 m
<b>Temperature coefficient</b>	0.1 X (specified accuracy) /°C (<18 °C or >28 °C)
<b>Fuse protection for current inputs</b>	440 mA, 1000 V Fast Fuse, Fluke specified part only. 11A, 1000V Fast Fuse, Fluke specified part only.
<b>Size (HxWxL)</b>	183 x 91 x 49.5 mm
<b>Weight</b>	455 g
<b>IP rating</b>	IP 40
<b>Safety</b>	IEC 61010-1, IEC61010-2-030 CAT III 600 V, CAT II 1000 V, Pollution Degree 2
<b>Electromagnetic environment</b>	IEC 61326-1: Portable
<b>Electromagnetic compatibility</b>	Applies to use in Korea only

Class A equipment (industrial broadcasting & communication equipment)  
1 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.