

Service and Parts

This meter should be serviced only by a qualified service technician. To order the service manual (PN 900824) and other parts or for service information, in the USA call 1-800-825-9810. Outside the USA, contact the nearest Fluke service center.

Accessories

When using accessories, put the slide-switch in the volts position, and manually select the 4000 mV range for ease of reading.

SPECIFICATIONS

This meter complies with Part 15 of FCC Rules. Operation is subject to the following conditions: (1) This meter may not cause harmful interference, and (2) this meter must accept any interference received, including interference that may cause undesired operation.

Accuracy is specified for a period of one year after calibration, at 18 °C to 28 °C (64 °F to 82 °F) with relative humidity to 90 %. AC conversions are ac-coupled, average responding, and calibrated to the rms value of a sine wave input. Accuracy Specifications are given as:

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

12 Multimeter SPECIFICATIONS

Maximum Voltage Between any Terminal and Earth Ground	600 V rms
Display	3 3/4-digits, 4000 counts, updates 4/sec
Operating Temperature	-10 °C to 50 °C
Storage Temperature	-30 °C to 60 °C indefinitely (to -40 °C for 100 hrs)
Temperature Coefficient	0.1 x (specified accuracy)/°C (<18 °C or >28 °C)
Relative Humidity	0 % to 90 % (-10 °C to 35 °C) 0 % to 70 % (35 °C to 50 °C)
Battery Type	9 V, NEDA 1604 or IEC 6F22
Battery Life	650 continuous hours with alkaline 450 continuous hours with carbon-zinc
Shock, Vibration	1 meter shock. Per MIL-T-28800D for a Class 3 Instrument
Size (HxWxL)	1.35 in x 2.75 in x 5.55 in (3.46 cm x 7.05 cm x 14.23 cm)
Weight	10 oz (286 g)
Safety	Designed to Protection Class II requirement of UL 3111, ANSI/ISA-S82, CSA C22.2 No 231, and VDE 0411, and IEC 1010 overvoltage category III.
EMI Regulations	Complies with FCC Part 15, Class B, and VDE 0871B.

12 Multimeter Users Manual

Function	Range	Resolution	Accuracy (50 to 400 Hz)
V_{\sim}	4000 mV*	1 mV	$\pm(1.9 \%+3)$
	4.000 V	0.001 V	$\pm(1.9 \%+3)$
	40.00 V	0.01 V	$\pm(1.9 \%+3)$
	400.0 V	0.1 V	$\pm(1.9 \%+3)$
	600 V	1 V	$\pm(1.9 \%+3)$
	$V_{\text{---}}$	4000 mV*	1 mV
4.000 V		0.001 V	$\pm(0.9 \%+2)$
40.00 V		0.01 V	$\pm(0.9 \%+1)$
400.0 V		0.1 V	$\pm(0.9 \%+1)$
600 V		1 V	$\pm(0.9 \%+1)$
Ω		400.0 Ω	0.1 Ω
	4.000 k Ω	0.001 k Ω	$\pm(0.9 \%+1)$
	40.00 k Ω	0.01 k Ω	$\pm(0.9 \%+1)$
	400.0 k Ω	0.1 k Ω	$\pm(0.9 \%+1)$
	4.000 M Ω	0.001 M Ω	$\pm(0.9 \%+1)$
	40.00 M Ω	0.01 M Ω	$\pm(1.5 \%+3)$
	1.000 μF	0.001 μF	$\pm(1.9 \%+2)$
	10.00 μF	0.01 μF	$\pm(1.9 \%+2)$
	100.0 μF	0.1 μF	$\pm(1.9 \%+2)$
	10000 μF	1.0 μF	$\leq 1000 \mu\text{F} \pm(1.9 \%+2)$ $> 1000 \mu\text{F} \pm(10 \% + 90)$ Typical
\rightarrow	2.000 V	0.001 V	$\pm(0.9 \%+2)$ †

* The 4000 mV range can only be entered in manual range mode. Use the 4000 mV range with accessories.

† The beeper is guaranteed to come on at $< 25 \Omega$ and turn off at $> 250 \Omega$. The meter detects opens or shorts of 250 μs or longer.

12 Multimeter SPECIFICATIONS

Function	Overload Protection*	Input Impedance (Nominal)	Common Mode Rejection Ratio (1 k Ω Unbalance)	Normal Mode Rejection
V$\overline{=}$	600 V dc	>10 M Ω <100 pF † \mathcal{C}_{CHECK} & LoZ = >2 k Ω <200 pF	>100 dB at dc, 50 Hz or 60 Hz	>50 dB at 50 Hz or 60 Hz
V\sim	600 V rms	>5 M Ω <100 pF † \mathcal{C}_{CHECK} & LoZ = >2 k Ω <200 pF	>60 dB at dc 50 Hz or 60 Hz	
Ω				
		Open Circuit	Full Scale Voltage	Short Circuit
		Test Voltage	To 4.0 MΩ	40 MΩ
→†	600 V rms	<1.5 V dc	<450 mV dc	<1.5 V dc
	600 V rms	2.4-3.0 V dc	2.400 V dc	0.95 mA (Typical)
*3 x 10 ⁶ V Hz Maximum				
† \approx 2 k Ω with input voltage up to 50 V. Impedance will increase with input voltage to >300 k Ω at 600 V.				
MIN MAX Recording Accuracy and Response Time				
Specified accuracy of measurement function \pm 12 digits for changes > 200 ms in duration (\pm 40 digits in ac). Typical 100 ms response to 80 %.				
MIN MAX Recording with Elapsed Time				
Elapsed Time	Resolution	Accuracy		
0 to 100 hours (99:59)	1 minute	0.3 % Typical		
Continuity Capture				
Detects opens or shorts of 250 μ s or longer				