

## TECHNICAL DATA

# Fluke 107 Palm-sized, CAT III Digital Multimeter



**SIZE (H X W X L)**  
142 mm x 69 mm x 28mm

**WARRANTY**  
1-year

### FLUKE 107 COMPLETE TEST FUNCTIONS

- Including AC and DC voltage measurement
- AC and DC current measurement
- Resistance measurement
- Capacitance measurement
- Diode measurement
- Frequency and duty cycle test and other functions to meet basic electrical maintenance, electrical measurement, and electronic measurement applications

## Professional measurements in the palm of your hand

The Fluke 107 is a compact, easy-to-use multimeter made to fit the way you work. It is the perfect first-pass troubleshooting tool: small enough to fit in a shirt pocket or work bag, tough enough to withstand daily use, and extremely simple to use. All without compromising safety. For everyday applications, where true-rms accuracy isn't needed, the Fluke 107 delivers reliable measurements time after time.

## Product highlights

- AC/DC voltage to 600 V
- AC/DC current to 10 A
- Resistance and Continuity to check for broken wires
- Data hold and backlit display to keep you working safe and fast

## Electrical 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<br>(40 Hz to 500 Hz) <sup>1</sup>   | 6.000 V          | 0.001 V          | 1.0 % + 3                |
|  | 60.00 V          | 0.01 V           |                          |
|  | 600.0 V          | 0.1 V            |                          |
| DC volts                                     | 6.000 V          | 0.001 V          | 0.5 % + 3                |
|  | 60.00 V          | 0.01 V           |                          |
|  | 600.0 V          | 0.1 V            |                          |
| AC millivolts                                | 600.0 mV         | 0.1 mV           | 3.0 % + 3                |
| 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>                     | 50.00 nF         | 0.01 nF          | 2 % + 5                  |
|  | 500.0 nF         | 0.1 nF           | 2 % + 5                  |
|  | 5.000 $\mu$ F    | 0.001 $\mu$ F    | 5 % + 5                  |
|  | 50.00 $\mu$ F    | 0.01 $\mu$ F     | 5 % + 5                  |
|  | 500.0 $\mu$ F    | 0.1 $\mu$ F      | 5 % + 5                  |
|  | 1000 $\mu$ F     | 1 $\mu$ F        | 5 % + 5                  |
| Frequency <sup>4</sup><br>(10 Hz to 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>4</sup>                      | 0.1 % to 99.9 %  | 0.1 %            | 1 % typical <sup>5</sup> |
| AC current<br>(40 Hz to 200 Hz)              | 4.000 A          | 0.001 A          | 1.5 % + 3                |
|  | 10.00 A          | 0.01 A           |                          |
| DC current                                   | 4.000 A          | 0.001 A          | 1.5 % + 3                |
|  | 10.00 A          | 0.01 A           |                          |
| 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> Typically, open circuit test voltage is 2.0 V and short circuit current is < 0.6 mA.

<sup>3</sup> Specifications do not include errors due to test lead capacitance and capacitance floor (may be up to 1.5 nF in the 50 nF range).

<sup>4</sup> All AC, Hz, and duty cycle are specified from 1 % to 100 % of range. Inputs below 1 % of range are not specified.

<sup>5</sup> Typical means when the frequency is at 50 Hz or 60 Hz and the duty cycle is between 10 % and 90 %.

## Specifications continued

| Electrical specifications |                     |                                  |                                |                             |
|---------------------------|---------------------|----------------------------------|--------------------------------|-----------------------------|
| Function                  | Overload protection | Input impedance (nominal)        | Common mode rejection ratio    | Normal mode rejection ratio |
| AC volts                  | 600 V <sup>1</sup>  | > 10 MΩ<br>< 100 pF <sup>2</sup> | > 60 dB at dc, 50 Hz or 60 Hz  | —                           |
| AC millivolts             | 600 mV              | > 1M<br>< 100 pF                 | > 80 dB at 50 Hz or 60 Hz      | —                           |
| DC volts                  | 600 V <sup>2</sup>  | > 10 MΩ<br>< 100 pF              | > 100 dB at dc, 50 Hz or 60 Hz | > 45 dB at 50 Hz or 60 Hz   |

<sup>1</sup> 6 x 105 V Hz Max

<sup>2</sup> For mV (AC), input impedance is approximately 1 MΩ.

| General specifications                                |  |
|---|--|
| Maximum voltage between any terminal and earth ground | 600 V  |
| Display (LCD)   | 6000 counts, updates 3/sec   |
| Battery type  | 2 AAA, NEDA 24A, IEC LR03  |
| Battery life  | 200 hours minimum  |
| Temperature   | Operating: 0 °C to 40 °C<br>Storage: -30 °C to 60 °C   |
| Relative humidity                                     | Operating Humidity: Non-condensing when < 10°C<br>≤ 90 % at 10 °C to 30 °C;<br>≤ 75 % at 30 °C to 40 °C<br><br>Operating Humidity, 40 MΩ Range:<br>≤ 80 % at 10 °C to 30 °C;<br>≤ 70 % at 30 °C to 40 °C |
| Altitude  | Operating: 2000 m<br>Storage: 12,000 m   |
| Temperature coefficient                               | 0.1 X (specified accuracy)/°C<br>(< 18 °C or > 28 °C)  |
| Fuse protection for current inputs                    | 11 A, 1000 V Fast Fuse, Fluke specified part only  |
| Size (HxWxL)  | 142 mm x 69 mm x 28mm  |
| Weight  | 200 g  |
| IP rating   | IEC 60529: IP 40   |
| Safety  | IEC 61010-1: 600 V CAT III, Pollution Degree 2   |
| Electromagnetic environment                           | IEC 61326-1: portable  |
| Electromagnetic compatibility                         | Applies to use the Korea only.<br>Class A Equipment<br>(Industrial broadcasting and communication equipment) <sup>1</sup>  |
| Warranty  | One year   |

<sup>1</sup> 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 home.

## Ordering information

**FLUKE-107 ESP** Palm-sized, CAT III Digital Multimeter

### Included equipment

**TL75** Hard Point™ Test Lead Set

**Two AAA Batteries** (installed)

**SmartStrap™** Intelligent Magnetic

Multi-purpose Lanyard

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