

80 Series V

Digital Multimeter

Safety Information



Limited Lifetime Warranty.
See the Users Manual for the full warranty.

Go to www.fluke.com to register your product and find more information.

A **Warning** identifies conditions and procedures that are dangerous to the user.

Warning

To prevent possible electrical shock, fire, or personal injury:

- **Use this Meter only as specified in the manual or the protection provided by the Meter might be impaired.**
- **Do not use the Meter if it is damaged. Before you use the Meter, inspect the case. Look for cracks or missing plastic. Pay particular attention to the insulation surrounding the connectors.**
- **Make sure the battery door is closed and latched before operating the Meter.**
- **Replace the battery as soon as the battery indicator (+) appears.**
- **Remove test leads from the Meter before opening the battery door.**
- **Inspect the test leads for damaged insulation or exposed metal. Check the test leads for continuity. Replace damaged test leads before you use the Meter.**

PN 4271753

August 2012 Rev.1, 11/18

© 2012-2018 Fluke Corporation. All rights reserved.

Product specifications are subject to change without notification.

All product names are trademarks of their respective companies.

| | | |
|-------------------|-------------------|--------------------------------|
| Fluke Corporation | Fluke Europe B.V. | ООО «Флюк СИАЙЭС» |
| P.O. Box 9090 | P.O. Box 1186 | 125167, г. Москва, |
| Everett, WA | 5602 BD Eindhoven | Ленинградский проспект дом 37, |
| 98206-9090 U.S.A. | The Netherlands | корпус 9, подъезд 4, 1 этаж |

- Do not apply more than the rated voltage, as marked on the Meter, between the terminals or between any terminal and earth ground.
- Never operate the Meter with the cover removed or the case open.
- Use caution when working with voltages above 30 V ac rms, 42 V ac peak, or 60 V dc. These voltages pose a shock hazard.
- Use only the replacement fuses specified by the manual.
- Use the proper terminals, function, and range for measurements.
- Avoid working alone.
- When measuring current, turn off circuit power before connecting the Meter in the circuit. Remember to place the Meter in series with the circuit.
- When making electrical connections, connect the common test lead before connecting the live test lead; when disconnecting, disconnect the live test lead before disconnecting the common test lead.
- Do not use the Meter if it operates abnormally. Protection may be impaired. When in doubt, have the Meter serviced.
- Do not operate the Meter around explosive gas, vapor, or dust.
- Use only a single 9 V battery, properly installed in the Meter case, to power the Meter.
- When servicing the Meter, use only specified replacement parts.
- When using probes, keep fingers behind the finger guards on the probes.
- Do not use the Low Pass Filter option to verify the presence of hazardous voltages. Voltages greater than what is indicated may be present. First, make a voltage measurement without the filter to detect the possible presence of hazardous voltage. Then select the filter function.
- Never attempt an in-circuit current measurement where the open-circuit potential to earth is greater than 1000 V. You may damage the Meter or be injured if the fuse blows during such a measurement.

- Do not use AutoHOLD mode to determine that circuits are without power. The AutoHOLD mode will not capture unstable or noisy readings.
- Repairs or servicing not covered in this manual should be performed only by qualified personnel as described in the 80 Series V Service Information.
- Remove the test leads and any input signals before replacing the battery or fuses. Install ONLY specified replacement fuses.
- To avoid false readings, which could lead to possible electric shock or personal injury, replace the battery as soon as the battery indicator () appears. If the display shows **batt** the Meter will not function until the battery is replaced.
- Do not exceed the Measurement Category (CAT) rating of the lowest rated individual component of a Product, probe, or accessory.
- Do not use the TL175 or TP175 test probes in CAT III or CAT IV environments without the probe tip fully extended and correct category rating visible in the window.
- When the TL175 is used with instruments or other accessories, the lowest category rating of the combination applies. One exception is when the probe is used with the AC172 or AC175.

For the Model 88 V only:

- Make sure that the engine is off before connecting or removing the pickup. The ignition system can create a potential shock hazard.
- To prevent possible electric shock or damage to the Meter, turn off engine before making measurements.
- When isolating a circuit to cause a current drain, do not attempt this test on a lead-acid battery that has recently been recharged.

Symbols

| Symbol | Description |
|---|--|
|  | WARNING. RISK OF DANGER. |
|  | WARNING. HAZARDOUS VOLTAGE. Risk of electric shock. |
|  | Consult user documentation. |
|  | Conforms to European Union directives |
|  | Certified by CSA Group to North American safety standards. |
|  | Conforms to relevant South Korean EMC Standards. |
|  | Battery. Low battery when displayed. |
|  | Conforms to relevant Australian Safety and EMC standards. |
|  | Fuse |
| CAT II | Measurement Category II is applicable to test and measuring circuits connected directly to utilization points (socket outlets and similar points) of the low-voltage MAINS installation. |
| CAT III | Measurement Category III is applicable to test and measuring circuits connected to the distribution part of the building's low-voltage MAINS installation. |
| CAT IV | Measurement Category IV is applicable to test and measuring circuits connected at the source of the building's low-voltage MAINS installation. |
|  | Double insulated |
|  | This product complies with the WEEE Directive marking requirements. The affixed label indicates that you must not discard this electrical/electronic product in domestic household waste. Product Category: With reference to the equipment types in the WEEE Directive Annex I, this product is classed as category 9 "Monitoring and Control Instrumentation" product. Do not dispose of this product as unsorted municipal waste. |
|  | AC (Alternating Current) |
|  | DC (Direct Current) |
|  | Continuity test or continuity beeper tone. |
|  | Earth |
|  | Capacitance |
|  | Diode |

Safety Specifications

| | |
|--|--|
| Maximum voltage between any Terminal and Earth Ground | 1000 V |
| Frequency Overload Protection | $\leq 10^6$ V-Hz |
| Fuse Protection for mA or μA inputs | 0.44 A, 1000 V, IR 10 kA |
| Fuse Protection for A input | 11 A, 1000 V, IR 17 kA |
| Battery Type | 9V, IEC 6LR61 |
| Temperature | |
| Operating | -20 °C to 55 °C |
| Storage..... | -40 °C to 60 °C |
| Operating Relative Humidity | 0 % to 90 % (0 °C to 35 °C), 0 % to 75 % (35 °C to 40 °C), 0 % to 45 % (40 °C to 50 °C) |
| Altitude | |
| Operating | $\leq 2,000$ m |
| Storage..... | $\leq 12,000$ m |
| Safety | IEC 61010-1: Pollution Degree 2 IEC 61010-2-033: Measurement CAT III 1000 V / CATIV 600 V |

Electromagnetic Compatibility

International: IEC 61326-1: Portable Electromagnetic

Environment: IEC 61326-2-1 CISPR 11: Group 1, Class A

Group 1: Equipment has intentionally generated and/or uses conductively-coupled radio frequency energy that is necessary for the internal function of the equipment itself.

Class A: Equipment is suitable for use in all establishments other than domestic and those directly connected to a low-voltage power supply network that supplies buildings used for domestic purposes. There may be potential difficulties in ensuring electromagnetic compatibility in other environments due to conducted and radiated disturbances.

Emissions that exceed the levels required by CISPR 11 can occur when the equipment is connected to a test object.

The equipment may not meet the immunity requirements of this standard when test leads and/or test probes are connected.

Korea (KCC): Class A Equipment (Industrial Broadcasting & Communication Equipment)

Class A: 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.

USA (FCC): 47 CFR 15 subpart B. This product is considered an exempt device per clause 15.103.

In an RF field of 3 V/m total accuracy = specified accuracy + 20 counts.

Except: 600 UA dc range total accuracy = specified accuracy + 60 counts. Temperature not specified.