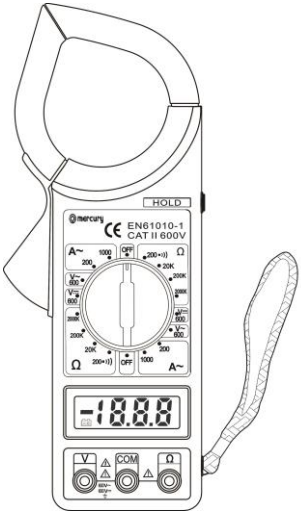



Item ref: 600.103UK

# **CMT01**
# DIGITAL CLAMP MULTITESTER

## User Manual

**Please read this manual thoroughly and ensure all contents are fully understood before using the apparatus.**

**Warning**

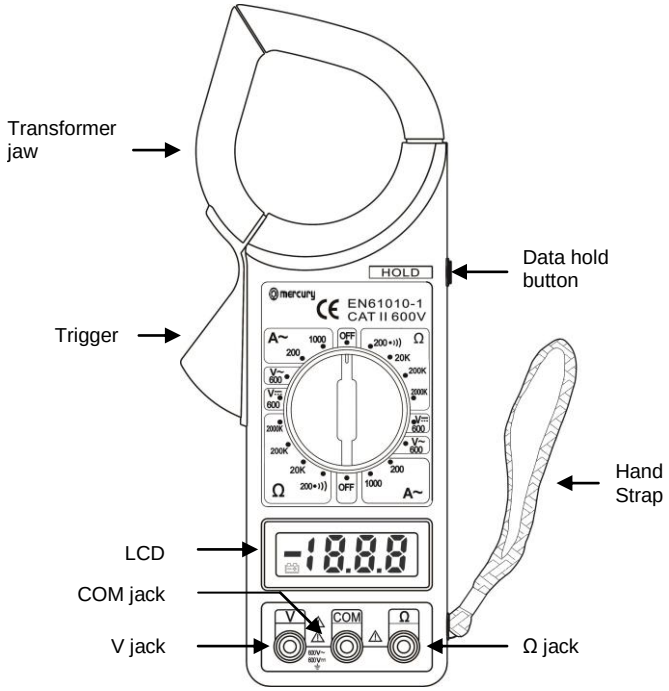
To avoid possible electric shock or personal injury, and to avoid possible damage to the tester or to the equipment under test, adhere to these following rules:

- Before using the tester inspect the case. Do not use the tester if it is damaged or the case (or part of the case) is removed. Look for cracks or missing plastic. Pay attention to the insulation around the connectors.
- Inspect the test leads for damaged insulation or exposed metal. Check the test leads for continuity.
- Do not apply more than the rated voltage, as marked on the tester, between the terminals or between any terminal and grounding.
- The rotary switch should be in the right position and no changeover of range shall be made during measurement is conducted to prevent damage.
- When the tester is working at an effective voltage over 60V in DC or 30Vrms in AC, special care should be taken for there is danger of electric shock.
- Use the proper terminals, function, and range for your measurements.
- Do not use or store the tester in an environment of high temperature, humidity, explosive, flammable, damp or of a strong magnetic field. The performance of the tester may deteriorate after being exposed to any of these elements.
- When using the test leads, keep your fingers behind the finger guards.
- Disconnect circuit power and discharge all high-voltage capacitors before testing resistance, continuity, diodes.

- Replace the battery as soon as the battery indicator appears. With a low battery, the meter may produce false readings that can lead to electric shock and personal injury.
- Remove the connection between the testing leads and the circuit being tested, and turn the meter power off before opening the meter case.
- The internal circuit of the meter shall not be altered at will to avoid damage of the meter and any accident.
- A soft cloth and mild detergent should be used to clean the surface of the tester on a regular basis. No abrasive and solvent should be used to prevent the surface of the tester from corrosion or damage.
- The tester is suitable for indoor use only.
- Turn the tester power off when it is not in use and take out the battery when not using for a long time. Check the battery regularly; replace the battery immediately if any signs of leaking appear. Battery acid will damage the tester.

**General Specifications**

| | |
|---|---|
| Max display: | LCD (1999 count) 46 x 15mm |
| Polarity: | Automatic, indicated minus, assumed plus |
| Measure method: | double integral A/D switch implement |
| Sampling speed: | 2 times per second |
| Over-load indication: | "1" is displayed |
| Operating Environment: | 0ºC-40ºC, at <80%RH |
| Storage Environment: | -10ºC-50ºC, at <85%RH |
| Power: | 9Vdc (1 x PP3 battery supplied) |
| Low battery indication: | " " |
| Dimensions: | 230 x 68 x 37mm |
| Weight: | 203g |




**Multitester compatible table**

| Model | DCV | ACV | ACA | Ω | •)) |
|---|---|---|---|---|---|
| CMT01 | Y | Y | Y | Y | Y |

**Technical Specifications**

Accuracies are guaranteed for 1 year, 23ºC ± 5ºC, less than 80% RH.

**DC Voltage**

| RANGE | RESOLUTION | ACCURACY |
|---|---|---|
| 200mV | 100uV | ±(0.5% of rdg + 3D) |
| 2V | 1mV | ±(0.8% of rdg + 5D) |
| 20V | 10mV | |
| 200V | 100mV | |
| 600V | 1V | ±(1.0% of rdg + 5D) |

OVERLOAD PROTECTION: 600Vrms.

**AC Voltage**

| RANGE | RESOLUTION | ACCURACY |
|---|---|---|
| 200V | 100mV | ±(1.0% of rdg + 5D) |
| 600V | 1V | ±(1.2% of rdg + 5D) |

Frequency Range: 45Hz ~ 450Hz
Overload Protection: 250Vrms AC
Response: Average, calibrated in rms of sine wave

## Audible Continuity

| RANGE | DESCRIPTION |
|---|---|
| •)) | Built-in buzzer sounds if resistance is less than 30±20Ω |

Overload Protection: 250V DC/AC rms

**AC Current**

| RANGE | RESOLUTION | ACCURACY (50Hz ~ 60Hz) |
|---|---|---|
| 20A | 10mA | ±(2.5% + 13) |
| 200A | 100mA | |
| 1000A | 1A | ±(2.5% + 8) @ <800A |
| | | For reference only @>800A |

Overload Protection: 1200A within 60 seconds.
Jaw Opening: 2.09" (53mm)

**Resistance**

| RANGE | RESOLUTION | ACCURACY |
|---|---|---|
| 200Ω | 0.1Ω | ±(1.0% of rdg + 10D) |
| 20kΩ | 10Ω | ±(1.0% of rdg + 4D) |
| 200kΩ | 100Ω | |
| 2MΩ | 1kΩ | |

Open Circuit Voltage: about 3V
Overload Protection: 250Vrms DC/AC for 15 sec max

## OPERATING INSTRUCTIONS

### VOLTAGE MEASUREMENT

1. Connect red test lead to "V" jack, black lead to "COM" jack.
2. Set RANGE switch to desired VOLTAGE position, if the voltage to be measured is not known beforehand, set switch to the highest range and reduce it until satisfactory reading is obtained.
3. Connect test leads to device or circuit being measured.
4. Turn on power of the device or circuit being measured voltage value will appear on Digital Display along with the voltage polarity.

**CURRENT MEASUREMENT**

1. Ensure that "Data Hold" button is not in pressed position.
2. Set range switch to the ACA 1000A range. If the display indicates one or more leading zeros. Shift to the 200A range to improve the resolution of the measurement.
3. Press the trigger to open the transformer jaws and clamp one conductor only, measurements can't be obtained when two or more cables are clamped at the same time.
4. Display reading is flow the conductor AC current.

**RESISTANCE MEASUREMENT**

1. Connect red lead to "Ω", black lead to "COM".
2. Set the range switch to desired Ω range.
3. If the resistance being measured is connected to a circuit, turn off power and discharge all capacitors before measurement.
4. Connect test leads to circuit being measured.
5. Read resistance value on Digital Display.

**CONTINUITY TEST**

1. Connect the BLACK test lead to the "COM" jack and the RED to the "VΩ" jack (Note: The polarity of the red test lead is positive "+").
2. Set the range switch to •)) range
3. Connect the test leads across the load to be measured.
4. If the circuit resistance is lower than about 30±20Ω, the built-in buzzer will sound.

**BATTERY REPLACEMENT**

1) Battery and fuse replacement should only be done after the test leads have been disconnected and power is off.
2) Loosen screw with suitable screwdriver and remove case.

3) The meter is powered by a single 9V PP3 battery. Snap the battery connector leads to the terminals of a new battery and reinsert the battery into the case top. Dress the battery leads so that they will not be pinched between the case bottom and case top.

Replace the case bottom and reinstall the screw. Never operate the meter unless the case bottom is fully closed.

**ACCESSORIES**

- Instruction manual
- Set of test leads (red and black)
- 9V PP3 battery

**CE EN61010–1:2010**

This product is classed as Electrical or Electronic equipment and should not be disposed with other household or commercial waste at the end of its useful life. The goods must be disposed of according to your local council guidelines.