

MM-200 MULTIMETER

TESTING | TROUBLESHOOTING | ACCURACY

Product Features:

Equipped with all the measurement features you're likely to need, the MM-200 from Tempo Communications is a workhorse multimeter for most technicians.

Built to international safety standards, the MM-200 performs all the tests any electrician would want from a multimeter. Features like "BeepJack" help prevent damage when leads are attached to the wrong terminals for the type of test selected. Fully auto-ranging or manual—the choice is yours. The backlit LCD helps when testing in those awkward cupboards.

Supplied with a zipper case and high-quality safety test leads:

1. Fast response 24 segment "bar-graph"
2. 6000 Count large digit LCD
3. Core accuracy better than 0.5%
4. Average responding AC measurements
5. Measurements
 - Voltage (ac or dc)
 - Current (ac or dc)
 - Continuity
 - Resistance
 - Diode
 - Frequency
 - Electric Field (EF) voltage detector



1390 Aspen Way Vista, CA • 92081 TC-MM-200 05/20

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Specifications:

| | |
|--|--|
| Display: | LCD (6000) and 24-segment bar graph |
| Polarity: | Automatic |
| Sampling Rate: | Numeric Display: 5 per second Bar Graph Display: 40 per second |
| Temperature Coefficient: | Nominal 0.15 x (specified accuracy) per °C below 18 °C or above 28 °C |
| Automatic Power Off: | After 34 minutes of inactivity |
| Noise Rejection*: | Normal Mode Rejection Ratio > 60 dB at 50 Hz and 60 Hz when measuring DCV Common Mode Rejection Ratio > 60 dB from 0 Hz to 60 Hz when measuring ACV Common Mode Rejection Ratio > 100 dB at 0 Hz, 50 Hz and 60 Hz when measuring DCV |
| Operation Conditions | 0 °C to 40 °C (32 °F to 104 °F) |
| Relative Humidity (non-condensing): | 80% maximum for temperatures up to 31 °C (88 °F), decreasing linearly to 50% maximum at 40 °C (104 °F) |
| Altitude: | 2000 m (6500') maximum |
| Pollution Degree: | 2 |
| Storage Conditions: | -20 °C to 60 °C (-4 °F to 140 °F) |
| Battery: | Two 1.5 V batteries (AAA, NEDA 24A or IEC LR03) |
| Volts & AutoCheck: | 1100 V DC/AC rms |
| mV, Ω, and Others: | 1000 V DC/AC rms |
| µA and mA: | 0.4A/1000V DC/AC rms, IR 30kA @ 1000V DC/AC rms; Dimension: 6 x 32 mm |
| A: | 11A/1000V DC/AC rms, IR 20kA @ 1000V DC/AC rms; Dimension: 10 x 38 mm |
| V/ohms/mA/A to COM: | Category II 1000V, CAT III 600V and CAT IV 300V AC & DC. |
| E.M.C.: | Meets EN61326-1:2013 |

- *Noise rejection is the ability to reject unwanted signals, or noise.
- Normal mode voltages are AC signals that can cause inaccurate DC measurements
- NMRR (Normal Mode Rejection Ratio) is a measure of the ability to filter out these signals.
- Common mode voltages are signals present at the COM and + input terminals, with respect to ground, that can cause digit rattle or offset in voltage measurements.
- CMRR (Common Mode Rejection Ratio) is a measure of the ability to filter out these signals.

Accuracy:

| AC VOLTAGE | | |
|-------------------------|---------------------|--------------------------|
| Range (50 Hz to 400 Hz) | Accuracy | |
| 60.00 mV | ± (0.12% + 0.02 mV) | |
| 600.0 mV | ± (0.06% + 0.2 mV) | |
| 6.000 V | ± (0.08% + 0.002 V) | |
| 60.00 V | ± (0.08% + 0.02 V) | |
| 600.0 V | ± (0.08% + 0.2 V) | |
| 1000 V | ± (1.0% + 5 V) | |
| DC VOLTAGE | | |
| Range | Accuracy | |
| 60.00 mV | ± (0.4% + 0.05 mV) | |
| 600.0 mV | ± (0.2% + 0.3 mV) | |
| 6.000 V | ± (0.2% + 0.003 V) | |
| 60.00 V | ± (0.2% + 0.03 V) | |
| 600.0 V | ± (0.2% + 0.3 V) | |
| 1000 V | ± (0.2% + 3 V) | |
| AC CURRENT | | |
| Range (50 Hz to 400 Hz) | Accuracy | Burden Voltage (typical) |
| 600.0 µA | ± (1.0% + 0.3 µA) | 0.1 mV/µA |
| 6000 µA | ± (1.0% + 3 µA) | |
| 60.00 mA | ± (1.0% + 0.03 mA) | 1.7 mV/mA |
| 600.0 mA | ± (1.0% + 0.3 mA) | |
| 6.000 A | ± (1.2% + 0.006 A) | 0.03 V/A |
| 10.00 A* | ± (1.8% + 0.006 A) | |
| DC CURRENT | | |
| Range | Accuracy | Burden Voltage (typical) |
| 600.0 µA | ± (0.5% + 0.5 µA) | 0.1 mV/µA |
| 6000 µA | ± (0.5% + 3 µA) | |
| 60.00 mA | ± (0.5% + 0.05 mA) | 1.7 mV/mA |
| 600.0 mA | ± (0.5% + 0.3 mA) | |
| 6.000 A | ± (1.2% + 0.006 A) | 0.03 V/A |
| 10.00 A* | ± (1.8% + 0.006 A) | |

* 10 A continuous, > 10 A to 20 A for 30 second max with 5 minutes cool down interval

Frequency — Hz (Line) at ACV, DCV, Current, AutoCheck™ Mode

| Function | Sensitivity (Sine RMS) | Range |
|----------|------------------------|-----------------|
| 6 V | 0.4 V | 10 Hz to 10 kHz |
| 60 V | 4 V | 10 Hz to 50 kHz |
| 600 V | 40 V | 10 Hz to 50 kHz |
| 1000 V | 400 V | 45 Hz to 1 kHz |
| 600 µA | 40 µA | 10 Hz to 10 kHz |
| 6000 µA | 400 µA | 10 Hz to 10 kHz |
| 60 mA | 4 mA | 10 Hz to 10 kHz |
| 600 mA | 40 mA | 10 Hz to 10 kHz |
| 6 A | 1 A | 10 Hz to 1 kHz |
| 10 A | 6 A | 10 Hz to 1 kHz |

| RESISTANCE | |
|------------------------------|-----------------------|
| Range | Accuracy |
| 600.0 Ω | ± (0.5% + 0.4 Ω) |
| 6.000 kΩ | ± (0.5% + 0.004 kΩ) |
| 60.00 kΩ | ± (0.5% + 0.04 kΩ) |
| 600.0 kΩ | ± (0.5% + 0.4 kΩ) |
| 6.000 MΩ | ± (0.7% + 0.004 MΩ) |
| 60.00 MΩ | ± (1.2% + 0.04 MΩ) |
| ACCURACY OF FREQUENCY RANGES | |
| Display Range | Accuracy |
| 10.00 Hz to 65.53 Hz | ± (0.03% + 0.03 Hz) |
| 65.5 Hz to 655.3 Hz | ± (0.03% + 0.3 Hz) |
| 0.655 kHz to 6.553 kHz | ± (0.03% + 0.003 kHz) |
| 6.55 kHz to 50.00 kHz | ± (0.03% + 0.03 kHz) |
| 6.000 A | ± (1.2% + 0.006 A) |
| 8.00 A* | ± (1.8% + 0.006 A) |

| FREQUENCY — LOGIC LEVEL Hz (mV FUNCTION) | | |
|---|-----------------------|---------------------------|
| Range | Accuracy | Sensitivity (square wave) |
| 5.0 Hz to 6.553 Hz | ± (0.03% + 0.002 Hz) | 3 V peak |
| 6.55 Hz to 65.53 Hz | ± (0.03% + 0.02 Hz) | |
| 65.5 Hz to 655.3 Hz | ± (0.03% + 0.2 Hz) | |
| 0.655 kHz to 6.553 kHz | ± (0.03% + 0.002 kHz) | |
| 6.55 kHz to 65.53 kHz | ± (0.03% + 0.02 kHz) | 5 V peak |
| 65.5 kHz to 500.0 kHz | ± (0.03% + 0.2 kHz) | |
| 500.0 kHz to 655.3 kHz | ± (0.03% + 0.2 kHz) | |
| 0.655 MHz to 1.000 MHz | ± (0.03% + 0.002 MHz) | |
| NON-CONTACT ELECTRIC FIELD DETECTION (EF) | | |
| Typical Voltage | Bar Graph Indication | Frequency Range |
| 10 V to 36 V | - | 50 Hz to 60 Hz |
| 23 V to 83 V | -- | |
| 59 V to 165 V | --- | |
| 124 V to 330 V | ---- | |
| 250 V to 1000 V | ----- | |

* Bar graph indication and tone are proportional to signal strength

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