## MARTINDALE MM45 Digital Multimeter ELECTRIC



## SPECIFICATIONS

Display: $3 ½$ digit liquid crystal display (LCD) with a maximum reading of 3200 .
Analogue bar graph: 34 segments with measurements 12 times per second.
Polarity: Automatic, (-) negative polarity indication.
Overrange: "OL" mark indication.
Zero: automatic.
Low Battery Indication: The " ${ }^{+-}$" " is displayed when the battery voltage drops below the operating level.
Measurement rate: 2 times per second, nominal.
Operating environment: $0^{\circ} \mathrm{C}$ to $50^{\circ} \mathrm{C}$ at $<70 \%$ R.H.
Storage temperature: $-20^{\circ} \mathrm{C}$ to $60^{\circ} \mathrm{C}$, 0 to $80 \%$ R.H. with battery removed from meter.
Battery life: 200 hours typical with carbon-zinc.
Installation Categories: Category III: Fixed wiring and installations within a building.
Power: Single standard 9-volt battery, NEDA 1604, JIS 006P, IEC 6F22, PP3.
Dimensions: $147 \mathrm{~mm}(\mathrm{H}) \times 70 \mathrm{~mm}(\mathrm{~W}) \times 39 \mathrm{~mm}(\mathrm{D})$.
Weight: Approx. 340g including battery and holster.
Auto power off: Meter automatically shuts down after approx. 10 minutes of inactivity.
Accessories: F1-20 x 5mm 500mA 250V Ceramic FUSE500250 (pack of 3).
F2-1.25 x 0.25" 10A 600V Ceramic - FUSE10600 (pack of 3). Fused test leads to GS38 specification - TL55. Soft foam lined carry case - TC55.
Calibration: £27.

| Voltage (50/60Hz) | Range | DC Accuracy | AC Accuracy | Input Impedance | Maximum Input |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | 320 mV | $\pm 1.2 \%$ rdg+1d | N / A | > 1000M $\Omega$ | 600VDC or 600VAC rms |
|  | 3.2 V | $\pm 0.8 \% \mathrm{rdg}+1 \mathrm{~d}$ | $\pm 2.0 \% \mathrm{rdg}+4 \mathrm{~d}$ | $11 \mathrm{M} \Omega$ |  |
|  | 32 V | $\pm 1.2 \% \mathrm{rdg}+1 \mathrm{~d}$ |  | $10 \mathrm{M} \Omega$ |  |
|  | 320 V |  |  |  |  |
|  | 600 V |  |  |  |  |
| $\begin{aligned} & \text { Current } \\ & (50 / 60 \mathrm{~Hz}) \end{aligned}$ | Range | DC Accuracy | AC Accuracy | Voltage Burden | Input Protection |
|  | $320 \mu \mathrm{~A}$ | $\pm 2.0 \%$ rdg +1 d | $\pm 2.5 \% \mathrm{rdg}+4 \mathrm{~d}$ | 0.2V | 0.5A/250V fuse |
|  | $3200 \mu \mathrm{~A}$ |  |  | 2 V |  |
|  | 32 mA |  |  | 0.2V |  |
|  | 320 mA |  |  | 2 V |  |
|  | 10A | $\pm 3.0 \%$ rdg+3d | $\pm 3.5 \%$ rdg+4d | 2 V | 10A/250V fuse |
| OHM | Range | Resolution | Accuracy | Test Current | Input Protection |
|  | $320 \Omega$ | $100 \mathrm{~m} \Omega$ | $\pm 2.0 \% \mathrm{rdg}+3 \mathrm{~d}$ | $<0.7 \mathrm{~mA}$ | 500VDC or 500VAC rms |
|  | $3.2 \mathrm{k} \Omega$ | $1 \Omega$ | $\pm 1.5 \% \mathrm{rdg}+3 \mathrm{~d}$ | $<0.13 \mathrm{~mA}$ |  |
|  | $32 \mathrm{k} \Omega$ | $10 \Omega$ |  | $<13 \mu \mathrm{~A}$ |  |
|  | $320 \mathrm{k} \Omega$ | $100 \Omega$ |  | $<1.3 \mu \mathrm{~A}$ |  |
|  | $3.2 \mathrm{M} \Omega$ | $1 \mathrm{k} \Omega$ | $\pm 2.5 \%$ rdg +3 d | $<0.13 \mu \mathrm{~A}$ |  |
|  | $32 \mathrm{M} \Omega$ | $10 \mathrm{k} \Omega$ | $\pm 5.0 \%$ rdg+5d |  |  |
| Diode Test | 0-2000 | 1 mV | $\pm 10 \% \mathrm{rdg}+2 \mathrm{~d}$ | $0.5 \mathrm{~mA}(\mathrm{Vf}=0.6 \mathrm{~V})$ | 500 V DC or AC rms |
| Continuity Check | Range | Resolution | Audible Indication | Test Current | Input Protection |
|  | $320 \Omega$ | $100 \mathrm{~m} \Omega$ | < approx. $20 \Omega$ | $<0.7 \mathrm{~mA}$ | 500 V DC or AC rms |

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[^0]:    Due to policy of continuous development, Martindale Electric reserves the right to alter equipment specification and description outlined in this document without prior notice. No part of this document shall be deemed to be part of any contract for the equipment unless specifically referred to as an inclusion within such contract.

