



# Digital Multimeter HDM3000 Series

6 ½ Digit, 35 ppm Basic DCV Accuracy

Digital  
Multimeters



## Product Features

- 6 ½ digit digital DMM with 0.1μV resolution;
- Front and rear input terminals provide ideal connection space for bend and system test;
- Fast reading speed up to 30,000 readings per second;
- Dual display allows clear and quick view of voltage and frequency measurements at the same time;
- Various measurements: ACV, DCV, ACI, DCI, 2-wire and 4-wire resistance, capacitance, frequency, period, diode, continuity, temperature;
- 4.3 inch 64K LCD display;
- True RMS AC (voltage & current) measurement;
- SCPI commands standard;
- Multiple connectivity options: USB2.0, serial interface RS-232/485, and LAN optional, GPIB optional.

## Specification

| Function                                                   | Range/Frequency                    | Test Current or Burden Voltage | 24 Hours Tcal±1°C      | 90 Days Tcal±5°C | 1 Year Tcal±5°C | Temperature Coefficient/°C |
|------------------------------------------------------------|------------------------------------|--------------------------------|------------------------|------------------|-----------------|----------------------------|
| DC Voltage                                                 | 100 mV                             | –                              | 0.0030+0.0030          | 0.0040+0.0035    | 0.0050+0.0035   | 0.0005+0.0005              |
|                                                            | 1 V                                | –                              | 0.0020+0.0006          | 0.0030+0.0007    | 0.0040+0.0007   | 0.0005+0.0001              |
|                                                            | 10 V                               | –                              | 0.0015+0.0004          | 0.0020+0.0005    | 0.0035+0.0005   | 0.0005+0.0001              |
|                                                            | 100 V                              | –                              | 0.0020+0.0006          | 0.0035+0.0006    | 0.0045+0.0006   | 0.0005+0.0001              |
|                                                            | 1000 V                             | –                              | 0.0020+0.0006          | 0.0035+0.0010    | 0.0045+0.0010   | 0.0005+0.0001              |
| True RMS AC Voltage (100mV, 1V, 10V, 100V and 750V ranges) | 5 Hz-10 Hz                         | –                              | 0.35+0.02              | 0.35+0.03        | 0.35+0.03       | 0.35+0.03                  |
|                                                            | 10 Hz-20 KHz                       | –                              | 0.04+0.02              | 0.05+0.03        | 0.06+0.03       | 0.005+0.003                |
|                                                            | 20 KHz-50 KHz                      | –                              | 0.10+0.04              | 0.11+0.05        | 0.12+0.05       | 0.011+0.005                |
|                                                            | 50 KHz-100 KHz                     | –                              | 0.55+0.08              | 0.60+0.08        | 0.60+0.08       | 0.060+0.008                |
|                                                            | 100 KHz-300 KHz                    | –                              | 4.00+0.50              | 4.00+0.50        | 4.00+0.50       | 0.200+0.020                |
| Resistance                                                 | 100 Ω                              | 1 mA                           | 0.0030+0.0030          | 0.008+0.004      | 0.010+0.004     | 0.0006+0.0005              |
|                                                            | 1 KΩ                               | 1 mA                           | 0.0020+0.0005          | 0.008+0.001      | 0.010+0.001     | 0.0006+0.0001              |
|                                                            | 10 KΩ                              | 100 μA                         | 0.0020+0.0005          | 0.008+0.001      | 0.010+0.001     | 0.0006+0.0001              |
|                                                            | 100 KΩ                             | 10 μA                          | 0.0020+0.0005          | 0.008+0.001      | 0.010+0.001     | 0.0006+0.0001              |
|                                                            | 1 MΩ                               | 5 μA                           | 0.002+0.001            | 0.008+0.001      | 0.010+0.001     | 0.0010+0.0002              |
|                                                            | 10 MΩ                              | 500 nA                         | 0.015+0.001            | 0.020+0.001      | 0.040+0.001     | 0.0030+0.0004              |
|                                                            | 100 MΩ                             | 500 nA    10 MΩ                | 0.300+0.010            | 0.800+0.010      | 0.800+0.010     | 0.1500+0.0002              |
| DC Current                                                 | 100 μA                             | <0.11 V                        | 0.010+0.020            | 0.040+0.025      | 0.050+0.025     | 0.0020+0.0030              |
|                                                            | 1 mA                               | <0.11 V                        | 0.007+0.006            | 0.030+0.006      | 0.050+0.006     | 0.0020+0.0005              |
|                                                            | 10 mA                              | <0.05 V                        | 0.007+0.020            | 0.030+0.020      | 0.050+0.020     | 0.0020+0.0020              |
|                                                            | 100 mA                             | <0.5 V                         | 0.010+0.004            | 0.030+0.005      | 0.050+0.005     | 0.0020+0.0005              |
|                                                            | 1 A                                | <0.7 V                         | 0.050+0.006            | 0.080+0.010      | 0.100+0.010     | 0.0050+0.0010              |
|                                                            | 3 A                                | <2.0 V                         | 0.180+0.020            | 0.200+0.020      | 0.200+0.020     | 0.0050+0.0020              |
|                                                            | 10 A                               | <0.5 V                         | 0.050+0.010            | 0.120+0.010      | 0.120+0.010     | 0.0050+0.0010              |
| Capacitance                                                | 1.0000 nF                          |                                | 0.50+0.50              | 0.50+0.50        | 0.50+0.50       | 0.05+0.05                  |
|                                                            | 10.000 nF, 100.00 nF, 1.0000 μF    |                                | 0.40+0.10              | 0.40+0.10        | 0.40+0.10       | 0.05+0.01                  |
|                                                            | 100.00 μF                          |                                | 0.40+0.10              | 0.40+0.10        | 0.40+0.10       | 0.05+0.01                  |
| True RMS AC Current                                        | 100 μA, 1 mA, 10 mA, 100 mA Ranges | 3 Hz-5 KHz                     | <0.11, <0.11           | 0.10+0.04        | 0.10+0.04       | 0.015+0.006                |
|                                                            |                                    | 5 KHz-10 KHz                   | <0.05, <0.5 V          | 0.10+0.04        | 0.10+0.04       | 0.030+0.006                |
|                                                            | 1 A Range                          | 3 Hz-5 KHz                     | <0.7V                  | 0.10+0.04        | 0.10+0.04       | 0.015+0.006                |
|                                                            |                                    | 5 KHz-10 KHz                   | <0.7V                  | 0.10+0.04        | 0.10+0.04       | 0.030+0.006                |
|                                                            | 3 A Range                          | 3 Hz-5 KHz                     | <5V                    | 0.23+0.04        | 0.23+0.04       | 0.015+0.006                |
|                                                            |                                    | 5 KHz-10 KHz                   | <5V                    | 0.23+0.04        | 0.23+0.04       | 0.030+0.006                |
|                                                            | 10 A Range                         | 3 Hz-5 KHz                     | <0.5V                  | 0.15+0.04        | 0.15+0.04       | 0.015+0.006                |
|                                                            |                                    | 5 KHz-10 KHz                   | <0.5V                  | 0.15+0.04        | 0.15+0.04       | 0.030+0.006                |
| Continuity                                                 | 1 KΩ                               | –                              | 0.002+0.030            | 0.008+0.030      | 0.010+0.030     | 0.0010+0.0020              |
| Diode Test                                                 | 5V                                 | –                              | 0.002+0.030            | 0.008+0.030      | 0.010+0.030     | 0.0010+0.0020              |
| Temperature                                                | PT100 (DIN/IEC751)                 |                                | Probe accuracy+0.05 °C |                  |                 |                            |
|                                                            | 5 K Ω thermistor                   |                                | Probe accuracy+0.1 °C  |                  |                 |                            |

## Model

| Model    | Digits of Resolution | Basic DCV Accuracy | Max. Reading Rate | Memory          | Statistical Graphics              | Input Terminals         | Computer Interfaces       |
|----------|----------------------|--------------------|-------------------|-----------------|-----------------------------------|-------------------------|---------------------------|
| HDM3055  | 5 ½                  | 75ppm              | 30,000 rdgs/s     | 10,000 readings | Histogram, bar chart, trend graph | Front-panel             | USB, RS232/485            |
| HDM3055S | 5 ½                  | 75ppm              |                   |                 |                                   | Rear-panel              | USB, RS232/485            |
| HDM3055A | 5 ½                  | 75ppm              |                   |                 |                                   | Front-panel, rear-panel | USB, RS232/485            |
| HDM3055B | 5 ½                  | 75ppm              |                   |                 |                                   | Front-panel, rear-panel | USB, RS232/485, LAN       |
| HDM3055H | 5 ½                  | 75ppm              |                   |                 |                                   | Front-panel, rear-panel | USB, RS232/485, LAN, GPIB |
| HDM3065  | 6 ½                  | 35ppm              |                   |                 |                                   | Front-panel             | USB, RS232/485            |
| HDM3065S | 6 ½                  | 35ppm              |                   |                 |                                   | Rear-panel              | USB, RS232/485            |
| HDM3065A | 6 ½                  | 35ppm              |                   |                 |                                   | Front-panel, rear-panel | USB, RS232/485            |
| HDM3065B | 6 ½                  | 35ppm              |                   |                 |                                   | Front-panel, rear-panel | USB, RS232/485, LAN       |
| HDM3065H | 6 ½                  | 35ppm              |                   |                 |                                   | Front-panel, rear-panel | USB, RS232/485, LAN, GPIB |