

## DMM Comparison Table

| MODEL                           | BASIC PERFORMANCE         |                           |  | HIGH SPEED, HIGH ACCURACY                   |   | HIGH ACCURACY             |                                       |                                       | MULTI-CHANNEL MEASUREMENT  |                           |   | MODEL                           |
|---------------------------------|---------------------------|---------------------------|--|---|---|---------------------------|---------------------------------------|---------------------------------------|--|---------------------------|---|---------------------------------|
|                                 | 2110                      | 2100                      | DMM6500  | DMM7510                                     | DMM7512   | 2010                      | 2001                                  | 2002                                  | DAQ6510  | 2750                      | 3706A                                       |                                 |
| <b>Display</b>                  | LCD 2 line                | VFD 2 line                | Touchscreen, 5 in. (12.7 cm)   | Touchscreen, 5 in. (12.7 cm)                | None  | VFD                       | VFD                                   | VFD                                   | Touchscreen, 5 in. (12.7 cm)   | VFD                       | VFD 2 line                                  | <b>Display</b>                  |
| <b>Digits</b>                   | 5½                        | 6½                        | 6½   | 7½  | 7½  | 7½                        | 7½                                    | 8½                                    | 6½   | 6½                        | 7½  | <b>Digits</b>                   |
| <b>No. Measurement Channels</b> | 1                         | 1                         | 10   | 1   | 2   | 10                        | 10                                    | 10                                    | 80   | 200                       | 576   | <b>No. Measurement Channels</b> |
| <b>DC VOLTS</b>                 |                           |                           |  |   |   |                           |                                       |                                       |  |                           |   |                                 |
| <b>Measurement Range</b>        | 1 µV–1000 V               | 0.1 µV–1000 V             | 100 nV–1000 V  | 10 nV–1010 V                                | 10 nV–1010 V  | 10 nV–1000 V              | 10 nV–1100 V                          | 1 nV–1100 V                           | 100 nV–1000 V  | 100 nV–1000 V             | 10 nV–300 V                                 | <b>Measurement Range</b>        |
| <b>Basic Accuracy</b>           | 0.012%                    | 0.0038%                   | 0.0025%  | 0.0014%                                     | 0.0014%   | 0.0024%                   | 0.0024%                               | 0.001%                                | 0.0025%  | 0.003%                    | 0.0025%                                     | <b>Basic Accuracy</b>           |
| <b>Ratio</b>                    |                           | ✓                         | ✓  | ✓   | ✓   | ✓                         | Option                                | Option                                | w/MUX card   | w/MUX card                |   | <b>Ratio</b>                    |
| <b>DC Peak Spikes</b>           |                           |                           |  |   |   |                           | ✓                                     | ✓                                     |  |                           |   | <b>DC Peak Spikes</b>           |
| <b>AC VOLTS (TRMS)</b>          |                           |                           |  |   |   |                           |                                       |                                       |  |                           |   |                                 |
| <b>Measurement Range</b>        | 1 µV–750 V                | 0.1 µV–750 V              | 100 nV–750 V   | 100 nV–707 V                                |   | 100 nV–750 V              | 100 nV–775 V                          | 100 nV–775 V                          | 100 nV–750 V   | 100 nV–750 V              | 100 nV–300 V                                | <b>Measurement Range</b>        |
| <b>Basic Accuracy</b>           | 0.12%                     | 0.08%                     | 0.05%  | 0.06%                                       |   | 0.05%                     | 0.03%                                 | 0.02%                                 | 0.05%  | 0.06%                     | 0.05%                                       | <b>Basic Accuracy</b>           |
| <b>Bandwidth</b>                | 10 Hz–300 kHz             | 3 Hz–300 kHz              | 3 Hz–300 kHz   | 3 Hz to 300 kHz                             |   | 3 Hz–300 kHz              | 1 Hz–2 MHz                            | 1 Hz–2 MHz                            | 3 Hz–300 kHz   | 3 Hz–300 kHz              | 3 Hz–300 kHz                                | <b>Bandwidth</b>                |
| <b>dB, dBm</b>                  |                           | ✓                         | ✓  | ✓   |   | ✓                         | ✓                                     | ✓                                     |  |                           | ✓   | <b>dB, dBm</b>                  |
| <b>Frequency, Period</b>        | ✓                         | ✓                         | ✓  | ✓   |   | ✓                         | ✓                                     | ✓                                     | ✓  | ✓                         | ✓   | <b>Frequency, Period</b>        |
| <b>OHMS (2/4 WIRE)</b>          |                           |                           |  |   |   |                           |                                       |                                       |  |                           |   |                                 |
| <b>Measurement Range</b>        | 1 mΩ–100 MΩ               | 100 µΩ–100 MΩ             | 1 µΩ–120 MΩ  | 0.1 µΩ–1.2 GΩ                               | 0.1 µΩ–1.2 GΩ   | 1 µΩ–120 MΩ               | 1 µΩ–1 GΩ                             | 100 nΩ–1 GΩ                           | 1 µΩ–120 MΩ  | 1 µΩ–120 MΩ               | 100 nΩ–100 MΩ                               | <b>Measurement Range</b>        |
| <b>Basic Accuracy</b>           | 0.02%                     | 0.015%                    | 0.0075%  | 0.0024%                                     | 0.0024%   | 0.0032%                   | 0.0032%                               | 0.0007%                               | 0.0075%  | 0.008%                    | 0.004%                                      | <b>Basic Accuracy</b>           |
| <b>Continuity Test</b>          | ✓                         | ✓                         | ✓  | ✓   | ✓   | ✓                         |                                       |                                       | ✓  | ✓                         | ✓   | <b>Continuity Test</b>          |
| <b>Diode Test</b>               | ✓                         | ✓                         | ✓  | ✓   | ✓   | ✓                         |                                       |                                       | ✓  |                           | ✓   | <b>Diode Test</b>               |
| <b>Offset Compensation</b>      |                           |                           | ✓  | ✓   | ✓   | ✓                         | ✓                                     | ✓                                     | ✓  | ✓                         | ✓   | <b>Offset Compensation</b>      |
| <b>Dry Circuit</b>              |                           |                           |  | ✓   | ✓   | ✓                         |                                       |                                       |  | ✓                         | ✓   | <b>Dry Circuit</b>              |
| <b>DC AMPS</b>                  |                           |                           |  |   |   |                           |                                       |                                       |  |                           |   |                                 |
| <b>Measurement Range</b>        | 0.1 µA–10 A               | 10 nA–3 A                 | 10 pA–10 A   | 1pA–10.1 A                                  | 1 pA–3 A  | 1 nA–3 A                  | 10 pA–2 A                             | 10 pA–2 A                             | 10 pA–3 A  | 10 nA–3 A                 | 1 pA–3 A                                    | <b>Measurement Range</b>        |
| <b>Basic Accuracy</b>           | 0.15%                     | 0.055%                    | 0.02%  | 0.006%                                      | 0.006%  | 0.03%                     | 0.03%                                 | 0.027%                                | 0.02%  | 0.03%                     | 0.03%                                       | <b>Basic Accuracy</b>           |
| <b>In Circuit Current</b>       |                           |                           |  |   |   |                           | ✓                                     | ✓                                     |  |                           |   | <b>In Circuit Current</b>       |
| <b>AC AMPS (TRMS)</b>           |                           |                           |  |   |   |                           |                                       |                                       |  |                           |   |                                 |
| <b>Measurement Range</b>        | 10 µA–10 A                | 1 µA–3 A                  | 100 pA–10 A  | 1 nA–10.1 A                                 |   | 1 µA–3 A                  | 100 pA–2 A                            | 100 pA–2 A                            | 100 pA–3 A   | 1 µA–3 A                  | 1 nA–3 A                                    | <b>Measurement Range</b>        |
| <b>Basic Accuracy</b>           | 0.3%                      | 0.15%                     | 0.1%   | 0.08%                                       |   | 0.1%                      | 0.1%                                  | 0.1%                                  | 0.10%  | 0.15%                     | 0.08%                                       | <b>Basic Accuracy</b>           |
| <b>Bandwidth</b>                | 10 Hz–5 kHz               | 3 Hz–5 kHz                | 3 Hz–10 kHz  | 3 Hz to 10 kHz                              |   | 3 Hz–5 kHz                | 20 Hz–100 kHz                         | 20 Hz–100 kHz                         | 3 Hz–10 kHz  | 3 Hz–5 kHz                | 3 Hz–10 kHz                                 | <b>Bandwidth</b>                |
| <b>OTHER MEASUREMENTS</b>       |                           |                           |  |   |   |                           |                                       |                                       |  |                           |   |                                 |
| <b>Capacitance</b>              |                           |                           | 0.1 pF–100 µF  | 0.1 pF–100 µF                               |   |                           |                                       |                                       | 0.1 pF–100 µF  |                           |   | <b>Capacitance</b>              |
| <b>Temperature Measurement</b>  | TC, RTD, Thermistor       | RTD                       | TC, RTD, Thermistor  | TC, RTD, Thermistor                         | TC, RTD, Thermistor                                       | TC, RTD                   | TC, RTD                               | TC, RTD                               | TC, RTD, Thermistor  | TC, RTD, Thermistor       | TC, RTD, Thermistor                         | <b>Temperature Measurement</b>  |
| <b>GENERAL FEATURES</b>         |                           |                           |  |   |   |                           |                                       |                                       |  |                           |   |                                 |
| <b>Interface</b>                | USB, GPIB (opt.)          | USB                       | LAN/LXI, USB, GPIB (opt.), RS-232 (opt.)   | GPIB, USB, LAN/LXI                          | USB, LAN/LXI  | GPIB, RS-232              | GPIB                                  | GPIB                                  | LAN/LXI, USB, GPIB (opt.), RS-232 (opt.)   | GPIB, RS-232              | GPIB, LAN/LXI, USB                          | <b>Interface</b>                |
| <b>Reading Hold</b>             | ✓                         | ✓                         |  |   |   | ✓                         |                                       |                                       |  |                           |   | <b>Reading Hold</b>             |
| <b>Digital I/O</b>              | Trigger In Meter Complete | Trigger In Meter Complete | Trigger In Meter Complete  | Trigger In Meter Complete 6 General I/O     | Trigger In Meter Complete 6 General I/O                   | Trigger In Meter Complete | Trigger In Meter Complete 1 In, 4 Out | Trigger In Meter Complete 1 In, 4 Out | Trigger In Meter Complete  | 2 Trigger In, 5 Limit Out | 14 General I/O                              | <b>Digital I/O</b>              |
| <b>Reading Memory</b>           | 2000 rdg.                 | 2000 rdg.                 | 7 M rdg.   | 27.5 M rdg.                                 | 27.5 M rdg./channel                                       | 1024 rdg.                 | Opt to 30,000                         | Opt to 30,000                         | 7 M rdg.   | 110,000 rdg.              | 650,000 rdg.                                | <b>Reading Memory</b>           |
| <b>Maximum Speed</b>            | 50K rdg/s                 | 2000 rdg/s                | 1 M rdg/s (16-bit digitizing)  | 1 M rdg/s (18-bit digitizing)               | 1 M rdg/s (18-bit digitizing)                             | 2000 rdg/s                | 2000 rdg/s                            | 2000 r dg/s                           | 1 M rdg/s (16-bit digitizing)  | 2500 rdg/s                | >14,000 rdg/s                               | <b>Maximum Speed</b>            |
| <b>Other</b>                    |                           |                           | Embedded Test Script Processor and optional TSP-Link, 6 Digital I/O with Interface Options, Dual Measurement Display | Embedded Test Script Processor and TSP-LINK | Embedded Test Script Processor and TSP-LINK, 2 Digitizers |                           |                                       |                                       | Embedded Test Script Processor and optional TSP-Link, 6 Digital I/O with Interface Options |                           | Embedded Test Script Processor and TSP-LINK |                                 |

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