DMM users whose applications demand exceptional resolution, accuracy, and sensitivity combined with high throughput now have two attractive alternatives to high priced, high end DMMs. Keithley’s 7½-digit Model 2001 and 8½-digit Model 2002 High Performance Digital Multimeters not only deliver performance specifications usually associated with instruments that cost thousands more, but they also offer a broad range of functions not typically available from DMMs. The 2002 is based on the same superior measurement technology as the 2001, and the front panels of both instruments have the same look, feel, and response.

True 7½- (or 8½-) Digit Resolution
While other DMMs may claim 7½- or 8½-digit resolution, they must average multiple readings to extend their resolution. The resolution specifications of the 2001 and 2002 are based on a 28-bit A/D converter that provides the resolution needed to discern smaller changes. This higher resolution also provides greater dynamic range, making it possible to measure from 1µV to 20V on a single range, thus avoiding range-shift errors and delays.

Built-In Scanner (Multiplexer) Options
With the addition of a plug-in scanner card, the 2001 or 2002 becomes a complete scan and measure system for applications involving up to ten measurement points. The additional resolution and measurement ranges provided by the 2002 make it an excellent choice for production test, design verification, and metrology applications where high accuracy is critical.

High Accuracy ACV Measurements
A patented circuit design makes the 2001 and 2002’s AC measurements several times more accurate than competitive DMMs. In this circuit, the signal bypasses the prime error-contributing section of conventional rms converters. This increases the accuracy at almost any voltage level, and also increases sensitivity down to a guaranteed 1% of the selected range, compared to 5–10% for most other DMMs. The result is highly accurate measurements over a broad range of inputs.

Applications involving vibration, servo, guidance, shock, and control systems often require accurate low frequency ACV measurements. The 2001 and 2002 maintain very good accuracy (better than 0.1%) down to 1Hz. The wide bandwidth of these DMMs allows for accurate measurements of high frequency AC signals without the need for a special AC meter. Both the 2001 and 2002 feature TRMS AC, average AC, peak AC, AC+DC, and crest factor measurement capability for a wide variety of applications.

High Speed for High Throughput
In applications where high throughput is critical, both the 2001 and 2002 provide more than 2000 readings per second at 4½-digit resolution. At 7½ digits, the 2002 maintains full rated accuracy at reading rates up to 44/second on DCV and ohms.

High Speed, High Precision Resistance Measurements
The Model 2002 uses a unique single-phase method for 4-wire ohms measurements. This makes it twice as fast for a given power line cycle rate. This also eliminates errors due to changing lead resistances that can result from fast test handlers. A built-in open-lead detection circuit also eliminates many production test problems.

Fast, Flexible Triggering
Trigger latency—the delay between trigger and measurement—is often a barrier to higher throughput. Also, variability in latency can complicate predicting measurement timing. The 2001 and 2002 trigger is less than 2µs±1µs, which is much faster than typical system DMMs.
Both the 2001 and 2002 provide exceptional measurement range. In addition, the 2002 offers extended DCV and resistance measurement capabilities.

The unique Trigger-Link feature included in the Model 2001 and 2002 and most Keithley test and measurement products can be used to coordinate the operation of two or more instruments. Trigger-Link combines six independent software selectable trigger lines on a single connector for simple, direct control over all instruments in a system.

**Spot Trends with the Bar-Graph Display**

The ability to track reading trends around a target value easily can be just as important as the absolute readings. A unique bar-graph display function in the 2001 and 2002 indicates data as a percentage of the selected range from ±0.01% to ±100%. Whether adjusting about zero or any other desired value, this display can replace a nulling differential voltmeter.

**Capture Spikes Down to 1µs**

Both the 2001 and 2002 have internal peak detectors that can catch 1µs spikes such as power supply spikes and transients, AC line power surges, and short-duration dropouts on components. These peak detectors operate up to 1MHz for repetitive signals or down to 1µs for single spikes, so there is no need for a separate scope. The DMMs can automatically display and store the highest value or display the maximum and minimum values of spikes.

**Built-in Features and Capabilities**

The 2001 and 2002 offer many built-in measurements that are typically unavailable in instruments of this type, including in-circuit current, temperature with thermocouples or RTDs, and peak spikes. Four separate outputs linked to limits simplify configuring the DMMs for use in binning operations.

The built-in AC crest factor measurement helps ensure the accuracy of AC measurements. Other DMMs typically perform AC measurements for signals without excessive crest factor—the ratio of peak value to rms values. However, when crest factor rises, measurements may not meet specs.
With a 2001 or 2002, there is no need for an oscilloscope to determine if the crest factor is acceptable—the DMM measures it directly. While some DMMs calculate average AC from the rms value, these calculations apply only to sine wave inputs. The 2001 and 2002 measure peak value, average and true rms directly to obtain a complete characterization of the signal. This capability makes these DMMs ideal for AC circuit design or test applications and for verifying test voltages specified only in averages.

When measuring AC or digital signals, frequency is critical. The 2001 and 2002 accurately measure frequency up to 15MHz. Accurate triggering on the signal is critical to measure frequency reliably. The frequency counters in the 2001 and 2002 have a fully adjustable trigger level for good measurements of noisy signals.

### Multiple Measurement Display

The 2001 and 2002 can display DC and AC volts and the AC frequency from a single measurement connection simultaneously. Several other multiple-measurement displays are available, including crest factor and bar graph. By measuring sequentially and displaying simultaneously, the 2001/2002 operates as if three different meters are working together.

### Option Slot Extends DMM Performance

An option slot in the back of the 2001 and 2002 opens the door to a wide range of measurement capabilities. Choose a 10-channel general-purpose scanner card or a 9-channel thermocouple scanner card to make measurements on multiple test points or devices. This can eliminate the need for a separate scanner and significantly reduce programming and setup time.

### ACCESSORIES AVAILABLE

#### TEST LEADS AND PROBES
- 5805 Kelvin Probes, 0.9m (3 ft)
- 5805-12 Kelvin Probes, 3.6m (12 ft)
- 5808 Low Cost, Single Pin, Kelvin Probes
- 5809 Low Cost, Kelvin Clip Lead Set
- 8502 Micro-DIN to 6 BNCs Adapter Box with 8501-1 Cable
- 8530 Centronics Adapter
- 8605 High Performance 2-Wire Modular Test Leads
- 8606 High Performance Modular Probe Kit
- 8610 Low Thermal Shorting Plug
- 8680 RTD Probe Adapter
- 8681 Low Cost RTD

#### CABLES/ADAPTERS
- 7007-1 Shielded GPIB Cable, 1m (3.3 ft)
- 7007-2 Shielded GPIB Cable, 2m (6.6 ft)
- 7009-5 RS-232 Cable
- 8501-1 Trigger Link Cable, 1m (3.3 ft)
- 8501-2 Trigger Link Cable, 2m (6.6 ft)
- 8502 Trigger Link Adapter Box
- 8610 Low Thermal Shorting Plug
- 8620 4-Wire DMM Shorting Plug

#### RACK MOUNT KITS
- 4288-1 Single Fixed Rack Mount Kit
- 4288-4 Side-by-Side Rack Mount Kit

#### GPIB INTERFACES
- KPCI-488LPA IEEE-488 Interface Controller for the PCI Bus
- KUSB-488B IEEE-488 USB-to-GPIB Interface Adapter

### SERVICES AVAILABLE

- 2000-SCAN-3Y-EW 1-year factory warranty extended to 3 years from date of shipment
- 2001/MEM1-3Y-EW 1-year factory warranty extended to 3 years from date of shipment
- 2001/MEM2-3Y-EW 1-year factory warranty extended to 3 years from date of shipment
- 2001-SCAN-3Y-EW 1-year factory warranty extended to 3 years from date of shipment
- 2001-TCSCAN-3Y-EW 1-year factory warranty extended to 3 years from date of shipment
- 2001-3Y-EW 1-year factory warranty extended to 3 years from date of shipment
- 2002/MEM1-3Y-EW 1-year factory warranty extended to 3 years from date of shipment
- 2002/MEM2-3Y-EW 1-year factory warranty extended to 3 years from date of shipment
- 2002-3Y-EW 1-year factory warranty extended to 3 years from date of shipment
- C/2000-3Y-ISO 3 (ISO-17025 accredited) calibrations within 3 years of purchase for Model 2000-SCAN*

*Not available in all countries

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DIgIT aL M ULTIMETE rS & SYSTEMS

A GREATER MEASURE OF CONFIDENCE
### DC VOLTS

#### DCV INPUT CHARACTERISTICS AND ACCURACY

<table>
<thead>
<tr>
<th>Range</th>
<th>Full Scale</th>
<th>Resolution</th>
<th>Default</th>
<th>Current Source</th>
<th>24 Hours</th>
<th>90 Days</th>
<th>1 Year</th>
<th>2 Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>200 mV</td>
<td>±210.0000</td>
<td>10 mV</td>
<td>10 mV</td>
<td>±0.1%</td>
<td>±(ppm of reading + ppm of range)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 V</td>
<td>±210.0000</td>
<td>100 mV</td>
<td>1 mV</td>
<td>±0.05%</td>
<td>±(ppm of reading + ppm of range)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20 V</td>
<td>±210.0000</td>
<td>1000 mV</td>
<td>10 mV</td>
<td>±0.025%</td>
<td>±(ppm of reading + ppm of range)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>200 V</td>
<td>±210.0000</td>
<td>10000 mV</td>
<td>100 mV</td>
<td>±0.001%</td>
<td>±(ppm of reading + ppm of range)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1000 V</td>
<td>±1100.0000</td>
<td>100000 mV</td>
<td>1000 mV</td>
<td>±0.0001%</td>
<td>±(ppm of reading + ppm of range)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### DC VOLTS NOTES

1. Specifications apply for sinewave input, AC + DC coupling, 1 power line cycle, digital filter off, following 55 minute warm-up.
2. For TCAL ±1°C, following 55-minute warm-up.
3. Specifications include factory traceability to US NIST.
4. When properly zeroed using REL function.
5. DCV Transfer Stability typical applications are standard cell comparisons and relative accuracy measurements. Specs apply for 10 power line cycles, 20-reading digital filter, Autozero on with type synchronous, fixed range following 2-hour warm-up at full scale to 10% of full scale, at 1%/°C (Tc) in the ambient temperature.
6. Specifications on the 1000V range are for measurements within 5% of the initial measurement value and following measurement settling.

### AC VOLTS

#### AC VOLTS NOTES

1. Specifications apply for sinewave input, AC + DC coupling, 1 power line cycle, digital filter off, following 55 minute warm-up.
2. For TCAL ±1°C, following 55 minute warm-up.
3. For TCAL ±5°C, following 55-minute warm-up. Specifications include factory traceability to US NIST.
4. Typical values.

### OHMS

#### OHMS NOTES

1. Current source is typically ±0.5% absolute accuracy.
2. For 2-wire mode.
3. Specifications for 1 power line cycle, 10 reading digital filter, Auto Zero on, 4-wire mode, offset compensation on (for 20kΩ ranges).
4. When properly zeroed using REL function.
5. OHMS Transfer Stability typical applications are standard cell comparisons and relative accuracy measurements. Specs apply for 10 power line cycles, 20-reading digital filter, autozero on with type synchronous, 10 reading digital filter, fixed range following 2-hour warm-up at full scale to 10% of full scale, at 1%/°C (Tc), 20–50Hz (Tc), 60–100Hz (Tc) in the ambient temperature.
6. Specifications on the 1000V range are for measurements within 5% of the initial measurement value and following measurement settling.

### DC AMPS

#### DC AMPs NOTES

1. Specifications are for 1 power line cycle, Auto Zero on, 10 reading digital filter.
2. For TCAL ±1°C, following 55 minute warm-up.
3. For TCAL ±5°C, following 55 minute warm-up. Specifications include traceability to US NIST.
4. Add 50 ppm of range for current above 0.5A for self heating.
5. Actual current range is [IMEASURED / IFULL SCALE].
**2001 Condensed Specifications (continued)**

### AC AMPS

<table>
<thead>
<tr>
<th>RANGE</th>
<th>20Hz–50Hz</th>
<th>50Hz–200Hz</th>
<th>200Hz–1kHz</th>
<th>1kHz–10kHz</th>
<th>10kHz–30kHz</th>
<th>30kHz–50kHz</th>
<th>50kHz–100kHz</th>
</tr>
</thead>
<tbody>
<tr>
<td>200 µA</td>
<td>0.35 ± 0.015</td>
<td>0.2 ± 0.015</td>
<td>0.12 ± 0.015</td>
<td>0.12 ± 0.015</td>
<td>0.15 ± 0.015</td>
<td>0.5 ± 0.015</td>
<td>0.5 ± 0.015</td>
</tr>
<tr>
<td>2 mA</td>
<td>0.3 ± 0.015</td>
<td>0.15 ± 0.015</td>
<td>0.12 ± 0.015</td>
<td>0.12 ± 0.015</td>
<td>0.15 ± 0.015</td>
<td>0.5 ± 0.015</td>
<td>0.5 ± 0.015</td>
</tr>
<tr>
<td>20 mA</td>
<td>0.5 ± 0.015</td>
<td>0.15 ± 0.015</td>
<td>0.12 ± 0.015</td>
<td>0.12 ± 0.015</td>
<td>0.15 ± 0.015</td>
<td>0.5 ± 0.015</td>
<td>0.5 ± 0.015</td>
</tr>
<tr>
<td>200 mA</td>
<td>0.5 ± 0.015</td>
<td>0.15 ± 0.015</td>
<td>0.12 ± 0.015</td>
<td>0.12 ± 0.015</td>
<td>0.15 ± 0.015</td>
<td>0.5 ± 0.015</td>
<td>0.5 ± 0.015</td>
</tr>
</tbody>
</table>

### FREQUENCY COUNTER

**AC Voltage Input:** 1 Hz–15MHz.

**Accuracy:** ±0.05% of reading.

### DC IN-CIRCUIT CURRENT

**Typical Ranges:**
- Current: 100µA to 12A.
- Trace Resistance: 1mΩ to 10Ω typical.

**Accuracy:** ±5% (±2 counts). For 1 power line cycle, Auto Zero on, 10 reading digital filter, Tcal ±5°C, after being properly zeroed: 90 days, 1 year or 2 years.

### TEMPERATURE


## 2002 Condensed Specifications

### DC VOLTS

**DCV Input Characteristics and Accuracy**

<table>
<thead>
<tr>
<th>Enhanced Accuracy</th>
<th>10-PLC, DFilt 10</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Range</strong></td>
<td><strong>Full Scale</strong></td>
</tr>
<tr>
<td>200mV</td>
<td>±210.000000</td>
</tr>
<tr>
<td>2 V</td>
<td>±2100.00000</td>
</tr>
<tr>
<td>20 V</td>
<td>±21000.0000</td>
</tr>
<tr>
<td>100 V</td>
<td>±11000.0000</td>
</tr>
</tbody>
</table>

**Relative Accuracy (±ppm of reading + % of range):**

<table>
<thead>
<tr>
<th>Transfer</th>
<th>24 Hours</th>
<th>90 Days</th>
<th>1 Year</th>
<th>2 Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.4 ± 1.5</td>
<td>5.5 ± 5</td>
<td>15 ± 8</td>
<td>19 ± 9</td>
<td>25 ± 10</td>
</tr>
<tr>
<td>0.2 ± 0.15</td>
<td>1.2 ± 0.3</td>
<td>6 ± 0.8</td>
<td>10 ± 0.9</td>
<td>14 ± 1</td>
</tr>
<tr>
<td>0.1 ± 0.05</td>
<td>1.2 ± 0.1</td>
<td>6 ± 0.4</td>
<td>10 ± 0.5</td>
<td>14 ± 0.5</td>
</tr>
<tr>
<td>0.5 ± 0.08</td>
<td>5 ± 0.4</td>
<td>14 ± 2</td>
<td>22 ± 2</td>
<td>30 ± 2</td>
</tr>
<tr>
<td>1 ± 0.05</td>
<td>5 ± 0.8</td>
<td>14 ± 0.4</td>
<td>22 ± 0.4</td>
<td>30 ± 0.4</td>
</tr>
</tbody>
</table>

**Normal Accuracy**

<table>
<thead>
<tr>
<th>Normal Accuracy</th>
<th>1-PLC, DFilt off</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Range</strong></td>
<td><strong>Full Scale</strong></td>
</tr>
<tr>
<td>200mV</td>
<td>±210.000000</td>
</tr>
<tr>
<td>2 V</td>
<td>±2100.00000</td>
</tr>
<tr>
<td>20 V</td>
<td>±21000.0000</td>
</tr>
<tr>
<td>100 V</td>
<td>±11000.0000</td>
</tr>
</tbody>
</table>

**Relative Accuracy (±ppm of reading + ppm of range):**

<table>
<thead>
<tr>
<th>24 Hours</th>
<th>90 Days</th>
<th>1 Year</th>
<th>2 Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.5 ± 6</td>
<td>15 ± 11</td>
<td>19 ± 12</td>
<td>23 ± 13</td>
</tr>
<tr>
<td>1.2 ± 0.6</td>
<td>6 ± 1.1</td>
<td>10 ± 1.2</td>
<td>14 ± 1.3</td>
</tr>
<tr>
<td>3 ± 0.35</td>
<td>8 ± 0.6</td>
<td>12 ± 0.4</td>
<td>16 ± 0.4</td>
</tr>
<tr>
<td>5 ± 1.2</td>
<td>14 ± 2.8</td>
<td>22 ± 2.8</td>
<td>30 ± 2.8</td>
</tr>
<tr>
<td>5 ± 0.4</td>
<td>14 ± 0.7</td>
<td>22 ± 0.7</td>
<td>30 ± 0.7</td>
</tr>
</tbody>
</table>

### AC VOLTS

**Normal Mode RMS**

| 90 Days, 1 Year or 2 Years, ±2°C from last AC self-cal, for 1% to 100% of range |
|-----------------------------|-------------|-------------|
| **Range** | **20–50Hz** | **50–100Hz** | **0.1–2kHz** | **2–10kHz** | **10–30kHz** | **30–50kHz** | **50–100kHz** | **100–200kHz** | **0.2–1MHz** | **1–2MHz** |
| 200 mV | 0.25 ± 0.015 | 0.07 ± 0.015 | 0.02 ± 0.01 | 0.02 ± 0.01 | 0.02 ± 0.01 | 0.025 ± 0.005 | 0.05 ± 0.015 | 0.03 ± 0.015 | 0.75 ± 0.025 | 2 ± 0.1 | 5 ± 0.2 |
| 2 V | 0.25 ± 0.015 | 0.07 ± 0.015 | 0.02 ± 0.01 | 0.02 ± 0.01 | 0.02 ± 0.01 | 0.02 ± 0.01 | 0.05 ± 0.015 | 0.05 ± 0.015 | 0.75 ± 0.025 | 2 ± 0.1 | 5 ± 0.2 |
| 20 V | 0.25 ± 0.015 | 0.07 ± 0.015 | 0.02 ± 0.01 | 0.02 ± 0.01 | 0.02 ± 0.01 | 0.02 ± 0.01 | 0.05 ± 0.015 | 0.05 ± 0.015 | 0.75 ± 0.025 | 2 ± 0.1 | 5 ± 0.2 |
| 200 V | 0.25 ± 0.015 | 0.07 ± 0.015 | 0.02 ± 0.01 | 0.02 ± 0.01 | 0.02 ± 0.01 | 0.02 ± 0.01 | 0.05 ± 0.015 | 0.05 ± 0.015 | 0.75 ± 0.025 | 2 ± 0.1 | 5 ± 0.2 |

**AC VOLTS NOTES**

1. Specifications apply for sinewave input, AC + DC coupling, 1 power line cycle, autorange on, digital filter off, following 55-minute warm-up.
2. For AC + DC coupling: 0.01% of range uncertainty. For inputs from 2MHz to 10MHz, specifications apply above 10% of range.
3. For AC + DC coupling: 0.01% of range uncertainty. For inputs from 2MHz to 10MHz, specifications apply above 10% of range.
4. Add 0.005% of reading × (V_in/1000V)2 additional uncertainty above 100V rms.
5. Typical values.

**DC VOLTS NOTES**

1. Specifications are for 10 power line cycles, synchronous autotzero, 10-reading repeat digital filter, autorange off, except as noted.
2. For Tcal ±2°C, following 4-hour warm-up: Tcal is ambient temperature at calibration (2°C at the factory). Add 0.5ppm of reading uncertainty if the unit is power cycled during this interval.
3. For Tcal ±5°C, following 4-hour warm-up.
4. Care must be taken to minimize thermal offsets due to operator cables.
5. Typical values.

For complete specifications, refer to the 2001 Technical Data Book.
2002 Condensed Specifications (continued)

### OHMS

#### TWO-WIRE AND FOUR-WIRE OHMS

<table>
<thead>
<tr>
<th>Range</th>
<th>Full Scale</th>
<th>Resolution</th>
<th>DC IN-CIRCUIT SOURCE</th>
<th>Transfer</th>
<th>24 Hours</th>
<th>1 Year</th>
<th>2 Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 Ω</td>
<td>21.000000</td>
<td>100 mΩ</td>
<td>7.2 mA</td>
<td>25 + 3</td>
<td>5 + 4</td>
<td>15 + 6</td>
<td>20 + 6</td>
</tr>
<tr>
<td>200 Ω</td>
<td>210.000000</td>
<td>1 μΩ</td>
<td>960 μA</td>
<td>25 + 2</td>
<td>5 + 3</td>
<td>15 + 4</td>
<td>20 + 4</td>
</tr>
<tr>
<td>2 kΩ</td>
<td>2100.0000</td>
<td>10 μΩ</td>
<td>960 μA</td>
<td>1.5 + 0.2</td>
<td>2.5 + 0.3</td>
<td>7 + 0.4</td>
<td>9 + 0.4</td>
</tr>
<tr>
<td>20 kΩ</td>
<td>21000.0000</td>
<td>100 μΩ</td>
<td>960 μA</td>
<td>1.5 + 0.2</td>
<td>2.5 + 0.3</td>
<td>7 + 0.4</td>
<td>9 + 0.4</td>
</tr>
</tbody>
</table>

#### DC AMPs

#### DCI INPUT CHARACTERISTICS AND ACCURACY

<table>
<thead>
<tr>
<th>Range</th>
<th>Full Scale</th>
<th>Resolution</th>
<th>Maximum Burden Voltage</th>
<th>24 Hours</th>
<th>1 Year</th>
<th>2 Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>200 μA</td>
<td>210.000000</td>
<td>10 μA</td>
<td>0.25 V</td>
<td>50 + 6</td>
<td>275 + 25</td>
<td>350 + 25</td>
</tr>
<tr>
<td>2 μA</td>
<td>2100.0000</td>
<td>100 μA</td>
<td>0.3 V</td>
<td>50 + 5</td>
<td>275 + 20</td>
<td>350 + 20</td>
</tr>
<tr>
<td>20 mA</td>
<td>21000.0000</td>
<td>1 nA</td>
<td>0.35 V</td>
<td>50 + 5</td>
<td>275 + 20</td>
<td>350 + 20</td>
</tr>
<tr>
<td>200 mA</td>
<td>210000.000</td>
<td>10 nA</td>
<td>0.35 V</td>
<td>75 + 5</td>
<td>350 + 20</td>
<td>375 + 20</td>
</tr>
<tr>
<td>2 A</td>
<td>2100000.000</td>
<td>100 nA</td>
<td>1.1 V</td>
<td>350 + 5</td>
<td>600 + 20</td>
<td>750 + 20</td>
</tr>
</tbody>
</table>

#### AC AMPs

ACI Accuracy

<table>
<thead>
<tr>
<th>Range</th>
<th>20Hz–50Hz</th>
<th>50Hz–200Hz</th>
<th>200Hz–1kHz</th>
<th>1kHz–10kHz</th>
<th>10kHz–30kHz</th>
<th>30kHz–50kHz</th>
<th>50kHz–100kHz</th>
</tr>
</thead>
<tbody>
<tr>
<td>200 μA</td>
<td>±0.35%</td>
<td>±0.2%</td>
<td>±0.015</td>
<td>±0.04%</td>
<td>±0.02%</td>
<td>±0.04%</td>
<td>±0.02%</td>
</tr>
<tr>
<td>2 μA</td>
<td>±0.35%</td>
<td>±0.15%</td>
<td>±0.015</td>
<td>±0.04%</td>
<td>±0.015</td>
<td>±0.04%</td>
<td>±0.015</td>
</tr>
<tr>
<td>20 mA</td>
<td>±0.35%</td>
<td>±0.15%</td>
<td>±0.015</td>
<td>±0.04%</td>
<td>±0.015</td>
<td>±0.04%</td>
<td>±0.015</td>
</tr>
<tr>
<td>200 mA</td>
<td>±0.35%</td>
<td>±0.15%</td>
<td>±0.015</td>
<td>±0.04%</td>
<td>±0.015</td>
<td>±0.04%</td>
<td>±0.015</td>
</tr>
</tbody>
</table>

#### FREQUENCY COUNTER

AC Voltage Input: 110V–120V
Accuracy: ±0.03% of reading

#### DC IN-CIRCUIT CURRENT

Typical Ranges: Current: 100μA to 12A
Trace Resistance: 1mΩ to 104Ω
Accuracy: ±5% ± 50μA

#### TEMPERATURE

Built-in linearization for J, K, N, T, E, R, S, B thermocouple types to ITS-90 and 100Ω platinum RTDs DIN 43760, ITPS-68, ITS-90, and SRTs to ITS-90

#### GENERAL

POWER: Voltage: 90–134V and 180–250V; universal self-selecting. Frequency: 50Hz, 60Hz, or 400Hz self-identifying at power-up. Consumption: <55VA.

ENVIRONMENTAL: Operating Temperature: 0° to 50°C. Storage Temperature: −40° to 70°C. Humidity: 80% R.H., 0° to 35°C, per MIL-T-28808E Para 4.5.1.2.

PHYSICAL: Case Dimensions: 90mm high × 214mm wide × 369mm deep (3½ in. × 8½ in. × 14 in.). Net Weight: <4.2kg (<9.2 lbs). Shipping Weight: <5.5kg (<12 lbs). Standards:
Safety: Conforms to IEC348, CAN/CSA-C22.2 No. 231, MIL-T-28808E. Designed to UL1244.
Note 1: For MIL-T-28808E, applies to Type III, Class 5, Style E.