OMNIA® II
The Most Advanced Electrical Safety Compliance Analyzer in the Industry

Our OMNIA® II Series is a complete line of multi-function electrical safety compliance analyzers designed to satisfy even the most demanding application requirements. We’ve included exclusive productivity-enhancing features and the latest in safety technology to make this product line the envy of the industry. With 6 models to choose from, a multi-language menu system and a variety of automation interfaces available, the OMNIA® II is ready for global deployment.

Find the Model that Fits Your Testing Needs

| Model | AC Hipot | DC Hipot | Ground Bond | Ground Continuity | Insulation Resistance | Leakage Current | Functional Run | Built-in AC Power | Power Source Recommended | 500 VA* | Ground Bond Voltage Drop Monitor | Accredit Cal | Arc Detection | AutoWare®3 Advanced Automation Control Software | Ramp-HI® | Charge-LO® | DualCHEK® Simultaneous Hipot and Ground Bond | Internal Multiplexer Available with optional HV multiplexer (4 or 8 ports) | Modular Multiplexer Compatible with SC6540 multiplexers | PLC Remote Basic PLC relay control | FailCHEK™ Confirms failure detection | Cal-Alert® Tracks and alerts for calibration | My Menu Customize your own shortcut menu |
|-------|----------|----------|-------------|-------------------|--------------------|----------------------|----------------|-------------------|-------------------------|----------|--------------------------|-------------|----------------|--------------------------------|------------|------------|--------------------------------|-------------------------------------------------|-------------------------------------------------|-------------------------------|-----------------------------------------------|-----------------------------------------------|-------------------------------------------------|------------------------------------------------|
| 8204  |          |          |             |                   |                    |                      |                |                   |                         |          |                          |             |               |                                  |            |            |                                              |                                                   |                                             |                                 |                                                |                                              |                                                   |                                                 |                                               |
| 8254  |          |          |             |                   |                    |                      |                |                   |                         |          |                          |             |               |                                  |            |            |                                              |                                                   |                                             |                                 |                                                |                                              |                                                   |                                                 |                                               |
| 8206  |          |          |             |                   |                    |                      |                |                   |                         |          |                          |             |               |                                  |            |            |                                              |                                                   |                                             |                                 |                                                |                                              |                                                   |                                                 |                                               |
| 8256  |          |          |             |                   |                    |                      |                |                   |                         |          |                          |             |               |                                  |            |            |                                              |                                                   |                                             |                                 |                                                |                                              |                                                   |                                                 |                                               |
| 8207  |          |          |             |                   |                    |                      |                |                   |                         |          |                          |             |               |                                  |            |            |                                              |                                                   |                                             |                                 |                                                |                                              |                                                   |                                                 |                                               |
| 8257  |          |          |             |                   |                    |                      |                |                   |                         |          |                          |             |               |                                  |            |            |                                              |                                                   |                                             |                                 |                                                |                                              |                                                   |                                                 |                                               |

*Meets 200 mA short circuit requirements

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### INPUT SPECIFICATIONS

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage</td>
<td>115/230 V Auto Range, ± 15 % Variation</td>
</tr>
<tr>
<td>Frequency</td>
<td>50/60 Hz ± 5 %</td>
</tr>
<tr>
<td>Fuse</td>
<td>115 VAC, 230 VAC – 10 A Slow Blow 250 VAC</td>
</tr>
</tbody>
</table>

### DIELECTRIC WITHSTAND TEST MODE

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output Rating</td>
<td>5 kV @ 50 mAAC (Models 825X) 6 kV @ 20 mA DC</td>
</tr>
<tr>
<td>Voltage Setting</td>
<td>Resolution: 1 V Accuracy: ± (2% of setting + 5 volts)</td>
</tr>
<tr>
<td>Hi and LO-Limit</td>
<td>AC Total: Range: 0.000 – 9.999 mA Resolution: 0.001 mA AC Real: Range: 0.000 – 9.999 mA Resolution: 0.001 mA</td>
</tr>
<tr>
<td></td>
<td>Range: 10.00 – 50.00 mA (100.00 mA, models 825X) Resolution: 0.01 mA Accuracy: ± (2% of setting + 2 counts)</td>
</tr>
</tbody>
</table>

### GROUND BOND TEST MODE

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output Voltage</td>
<td>Range: 3.00 – 8.00 VAC</td>
</tr>
<tr>
<td>Hi and LO-Limit</td>
<td>Range: 0 – 150 mΩ for 30.01 – 40.00 A Resolution: 1 mΩ Accuracy: ± (2% of reading + 2 mΩ)</td>
</tr>
<tr>
<td>Dwell Timer</td>
<td>Range: 0.5 – 99.99 sec (0=Continuous)</td>
</tr>
</tbody>
</table>

### INSULATION RESISTANCE TEST MODE

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage Setting</td>
<td>Range: 30 – 1000 VDC</td>
</tr>
<tr>
<td>Hi and LO-Limit</td>
<td>Range: 0.05 MΩ – 99.99 MΩ Resolution: 0.01 MΩ 100.0 MΩ – 999.9 MΩ 0.1 MΩ 1,000 MΩ – 50,000 MΩ 1 MΩ (Hi-Limit: 0=OFF)</td>
</tr>
<tr>
<td>Ramp Timer</td>
<td>Ramp-up: AC 0.1 – 999.9 sec DC 0.4 – 999.9 sec Ramp-Down: AC 0.0 – 999.9 sec DC 0.0, 1.0 – 999.9 sec 1.0 – 999.9 sec</td>
</tr>
<tr>
<td>Delay Timer</td>
<td>Range: 0.5 – 999.9 sec (0=Continuous)</td>
</tr>
</tbody>
</table>

### ARC DETECTION

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Range</td>
<td>1 – 9 (9 is most sensitive)</td>
</tr>
</tbody>
</table>

### GROUND CONTINUITY TEST MODE

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output Current</td>
<td>DC 0.01 A ± 0.000001 A</td>
</tr>
<tr>
<td>Hi and LO-Limit</td>
<td>Range: 0.00 – 10000 Ω Resolution: 1.00 – 10.00 Ω 1.0 Ω 10.1 – 100.0 Ω 0.1 Ω 101 – 1,000 Ω 1 Ω 1,001 – 10,000 Ω 1 Ω ± (1% of reading + 3 counts) 1,001 – 10,000 Ω 1 Ω ± (1% of reading + 10 counts) (Max Limit: 0=OFF)</td>
</tr>
<tr>
<td>Dwell Timer</td>
<td>Range: 0.0, 0.3 – 999.9 sec (0=Continuous)</td>
</tr>
<tr>
<td>Milliohm Offset</td>
<td>Range: 0.00 – 10.00 Ω</td>
</tr>
</tbody>
</table>

### RUN TEST MODE (Models 82X6 & 82X7 only)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>DUT Power Voltage</td>
<td>0 – 277 VAC single phase unbalanced 0.0 – 277.0 VAC Full Scale</td>
</tr>
<tr>
<td>Dwell Timer Setting</td>
<td>Range: 0.2 – 999.9 seconds 0.1 – 999 seconds (0=Continuous)</td>
</tr>
</tbody>
</table>

**Call +1-847-367-4077**
**OMNIA® II Series**

**RUN TEST MODE CONTINUED (Models 82X6 & 82X7 only)**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Voltage</strong></td>
<td>Range: 30.0 – 277.0 VAC, Resolution: 0.1 V, Accuracy: ± (1.5% of setting + 0.2 V), 30.0 – 277 VAC</td>
</tr>
<tr>
<td><strong>Current</strong></td>
<td>Range: 0.0 – 16.00 AAC, Resolution: 0.01 A, Accuracy: ± (2.0% of setting + 2 counts)</td>
</tr>
<tr>
<td><strong>Watts</strong></td>
<td>Range: 0.0 – 16.00 AAC, Resolution: 0.01 A, Accuracy: ± (2.0% of setting + 2 counts)</td>
</tr>
<tr>
<td><strong>Power Factor</strong></td>
<td>Range: 0.000 – 1.000, Resolution: 0.001, Accuracy: ± (8% of setting + 2 counts)</td>
</tr>
<tr>
<td><strong>Leakage Current</strong></td>
<td>Range: 0.00 – 10.00 mA (0=OFF), Resolution: 0.01 mA, Accuracy: ± (2% of setting + 2 counts)</td>
</tr>
<tr>
<td><strong>Timer Display</strong></td>
<td>Range: 0.0 – 999.9 seconds, Resolution: 0.1 second, Accuracy: ± (0.1% of reading + 0.05 seconds)</td>
</tr>
</tbody>
</table>

**LEAKAGE CURRENT TEST MODE CONTINUED (Models 82X6 & 82X7 only)**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Touch Current Display (rms)</strong></td>
<td>Range 1: 0.0 μA – 32.0 μA, frequency DC, 15 Hz – 1 MHz</td>
</tr>
<tr>
<td></td>
<td>Range 2: 28.0 μA – 130.0 μA, frequency DC, 15 Hz – 1 MHz</td>
</tr>
<tr>
<td></td>
<td>Range 3: 120.0 μA – 550.0 μA, frequency DC, 15 Hz – 1 MHz</td>
</tr>
<tr>
<td></td>
<td>Resolution: 0.1 μA</td>
</tr>
<tr>
<td></td>
<td>Accuracy for Ranges 1, 2, 3: DC: 15 Hz &lt; f &lt; 100 kHz: ± (2% of reading + 3 counts)</td>
</tr>
<tr>
<td></td>
<td>100 kHz &lt; f &lt; 1 MHz: ± 5% of reading (10.0 μA – 999.9 μA)</td>
</tr>
<tr>
<td></td>
<td>Range 4: 400 μA – 2100 μA, frequency DC, 15 Hz – 1 MHz</td>
</tr>
<tr>
<td></td>
<td>Range 5: 800 μA – 8500 μA, frequency DC, 15 Hz – 1 MHz</td>
</tr>
<tr>
<td></td>
<td>Resolution: 1 μA</td>
</tr>
<tr>
<td></td>
<td>Accuracy for Ranges 4 &amp; 5: DC: 15 Hz &lt; f &lt; 100 kHz: ± 5% of reading (0.01 mA – 10.00 mA)</td>
</tr>
<tr>
<td><strong>Touch Current Display (Peak)</strong></td>
<td>Range 1: 0.0 μA – 32.0 μA, frequency DC – 1 MHz</td>
</tr>
<tr>
<td></td>
<td>Range 2: 28.0 μA – 130.0 μA, frequency DC – 1 MHz</td>
</tr>
<tr>
<td></td>
<td>Range 3: 120.0 μA – 550.0 μA, frequency DC – 1 MHz</td>
</tr>
<tr>
<td></td>
<td>Resolution: 1 μA</td>
</tr>
<tr>
<td></td>
<td>Accuracy for Ranges 1, 2, 3: DC: ± (2% of reading + 2 μA)</td>
</tr>
<tr>
<td></td>
<td>Range 4: 400 μA – 2100 μA, frequency DC – 1 MHz</td>
</tr>
<tr>
<td></td>
<td>Range 5: 1800 μA – 8500 μA, frequency DC – 1 MHz</td>
</tr>
<tr>
<td></td>
<td>Resolution: 1 μA</td>
</tr>
<tr>
<td></td>
<td>Accuracy for Ranges 4 &amp; 5: DC: ± (2% of reading + 2 μA)</td>
</tr>
<tr>
<td></td>
<td>Range 6: 8.0 mA – 10.00 mA, frequency DC – 100 kHz</td>
</tr>
<tr>
<td></td>
<td>Resolution: 0.01 mA</td>
</tr>
<tr>
<td></td>
<td>Accuracy: DC: ± (2% of reading + 3 counts)</td>
</tr>
<tr>
<td></td>
<td>15 Hz &lt; f &lt; 100 kHz: ± (10% of setting + 2 counts)</td>
</tr>
</tbody>
</table>

**MD Circuit Module**

- MD1: UL544N, UL484, UL923, UL471, UL687, UL697
- MD2: UL544P
- MD3: IEC 60601-1
- MD4: UL1563
- MD5: IEC60990 Fig4 U2, IEC 60950-1, IEC60335-1, IEC60598-1, IEC60665, IEC61010
- MD6: IEC60990 Fig5 U3, IEC60950-1
- MD7: IEC60950, IEC61010-1 FigA.2 (2K ohm) for Run function
- MD8: IEC60990/60950 Fig4 U1

**External MD**

- Basic measuring element 1 kΩ

**Scope Output Interface**

- BNC type connector on rear panel for Oscilloscope connection
<table>
<thead>
<tr>
<th>Output</th>
<th>Power: 630 VA and 500 W Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage: 0 – 150.0 V / 0 – 277.0 V</td>
<td></td>
</tr>
<tr>
<td>Current: 4.20 A maximum for 0 – 150 V range</td>
<td></td>
</tr>
<tr>
<td>2.10 A maximum 0 – 277 V range</td>
<td></td>
</tr>
<tr>
<td>Distortion: ≤ 1% at 45-500 Hz and output voltage within the 80 – 140 VAC at Low Range or the 160 – 277 VAC at High Range (Resistive Load)</td>
<td></td>
</tr>
<tr>
<td>Regulation: ≤ 0.5% + 5 V (resistive load), from no load to full load and Low Line to High Line (combined regulation)</td>
<td></td>
</tr>
<tr>
<td>Crest Factor: &gt; 3</td>
<td></td>
</tr>
<tr>
<td>Test Timing: &lt; 350 ms at start and between Limit: Steps when internal AC source is ON</td>
<td></td>
</tr>
<tr>
<td>Settings</td>
<td>Voltage</td>
</tr>
<tr>
<td></td>
<td>High Range: 0.0 – 277.0 V</td>
</tr>
<tr>
<td></td>
<td>Resolution: 0.1 V</td>
</tr>
<tr>
<td></td>
<td>Accuracy: ± (1.5% of setting + 2 counts)</td>
</tr>
<tr>
<td>Frequency</td>
<td>Range: 45.0 Hz – 99.9 Hz</td>
</tr>
<tr>
<td></td>
<td>Resolution: 0.1 Hz</td>
</tr>
<tr>
<td></td>
<td>Accuracy: ± 0.1% of setting</td>
</tr>
<tr>
<td></td>
<td>Range: 100 Hz – 500 Hz</td>
</tr>
<tr>
<td></td>
<td>Resolution: 1 Hz</td>
</tr>
<tr>
<td></td>
<td>Accuracy: ± 0.1% of setting</td>
</tr>
<tr>
<td>A-Hi-Limit</td>
<td>Range: 4.20 A / 2.10 A</td>
</tr>
<tr>
<td></td>
<td>Resolution: 0.01 A</td>
</tr>
<tr>
<td></td>
<td>Accuracy: ± (2% of reading + 2 counts)</td>
</tr>
<tr>
<td>Measurement</td>
<td>Voltage</td>
</tr>
<tr>
<td>Current</td>
<td>Resolution: 0.1 V</td>
</tr>
<tr>
<td></td>
<td>Accuracy: ± (1.5% of reading + 2 counts)</td>
</tr>
<tr>
<td>Power</td>
<td>Resolution: 0.000 – 1.000</td>
</tr>
<tr>
<td></td>
<td>Accuracy: ± (8% of reading + 5 counts)</td>
</tr>
<tr>
<td>Frequency</td>
<td>Resolution: 45 – 500 Hz</td>
</tr>
<tr>
<td></td>
<td>Accuracy: ± 0.1 Hz</td>
</tr>
</tbody>
</table>

**GENERAL SPECIFICATIONS**

| PLC Remote | Control | Input: Test, Reset, Interlock, Recall File 1 through 3 |
| Safety | Built-in SmartGFI circuit |
| Memory | 10,000 Steps |
| Interface | Standard: USB/RS-232 |
|          | Optional: Ethernet or GPIB |
| Security | Advanced security system with access levels and username/password requirements |
| Dimensions | (W x H x D) |
|          | 16.93” x 5.24” x 19.69” (430 x 133 x 500 mm) |
| Weight | 8204: 82 lbs (37 kg) |
|          | 8254: 92 lbs (42 kg) |
|          | 8206/8207: 83 lbs (38 kg) |
|          | 8256/8257: 103 lbs (47 kg) |

**Why We Use Counts**

Associated Research publishes some specifications using "counts" which allows us to provide a better indication of the instrument's capabilities across measurement ranges. A count refers to the lowest resolution of the display for a given measurement range. For example, if the resolution for voltage is 1V then 2 counts = 2 V.

**Specifications subject to change without notice.**