ONEAC Power Conditioners: For many, conventional approaches to power protection are “good enough.” But some find that surge suppressors or special electrical circuits are inadequate. Others face performance expectations with no room for errors. ONEAC power conditioners are engineered to satisfy these demanding applications.

Semiconductor-based systems need clean power

Computers, medical instrumentation, telecommunications and manufacturing systems all rely on semiconductors. And the way semiconductors perform is by processing electric signals of less than a few volts each. Transient voltage disturbances confuse that process. Data may be lost or corrupted. Instructions garbled. Processes stop. Systems need to be reset. Worse, electrical overstress can destroy or degrade semiconductor material. The results are increasingly unreliable operation or seemingly random, sudden failures.

ONEAC’s unique solution

ONEAC power conditioners assure reliable electronic performance by isolating semiconductors from the outside electrical worlds they connect to. They differ from surge suppressors in that they limit not only peak voltage (amplitude), but also edge-speed (frequency) of electrical transients. ONEAC’s low impedance transformer and Virtual Kelvin Ground® remove the full spectrum of conducted power line noise in all modes. More, they convert a noisy safety ground to a noise-free signal ground. It’s an approach that has proven uniquely effective against all conducted electrical disturbances.

For increased productivity

By any technical measure — surge voltage let-through, frequency control, stability, predictability, load responsiveness, durability, reliability — ONEAC power conditioners meet a far higher performance standard than conventional protection products. That translates into more reliable performance from the systems they protect. Field tests confirm it. Those who use ONEAC power conditioners in place of surge suppressor-based products, with or without a dedicated I/G circuit, dramatically reduce system crashes, unexplained system errors and other “soft” failures as well as hardware failures. So they enjoy major decreases in downtime and fewer service calls.

Robust design, proven durability

Designed and manufactured under ISO 9001 quality procedures, ONEAC power conditioners have no parts that wear out. They last far longer than surge suppressors. And are highly reliable, even in harsh electrical environments. Their exceptionally high mean time between failures (MTBF) backs that up. So do we with a complete 5-year warranty. Plus our willingness and ability to engineer site-specific protection schemes that eliminate your power problems entirely.

- Tight surge let-through: highest possible assurance that conducted transient voltages won’t damage or degrade hardware components.
- Virtual Kelvin Ground: maximizes system reliability by preventing “soft errors” and other symptoms of logic disruption caused by high frequency noise.
- Low impedance technology: handles high crest factors and inrush currents without oversizing.
- High efficiency transformer: generates less heat and reduces operating cost.
- Maintenance-free: no parts that wear out so total lifetime cost is limited to the original purchase price.
- Small footprint, quiet operation: unobtrusively fits into any environment.
- Plug and play: pluhs and receptacles meet NEMA standards.
- Designed & manufactured under ISO 9001: assures consistent quality and performance.
- 5 year warranty: the best assurance of product quality and performance in the industry.
ONEAC Power Conditioners: Specifications

### Power Conditioning

ONEAC’s unique power conditioning architecture provides unmatched protection against the full range of power line disturbances. Components include:

- **Full output isolation**: ONEAC’s proprietary low impedance transformer design. Completely safeguards against lightning and other high energy surges without creating detrimental side effects.

- **Virtual Kelvin Ground**: Eliminates the full spectrum of conducted power line noise (from 50 kHz to 10 MHz) in all modes, reduces the effects of electrostatic discharge (ESD), and provides an exceptionally clean signal reference ground for electronic systems.

### Approvals

Units which use a 5-20R connector meet UL1012. All other North American Models are C-UL approved.

### Performance Characteristics

- **Nominal input voltage**: 120 Vac, 60 Hz
- **Surge voltage withstand capability**: ANSI/IEEE C62.41 Category A&B, 6 kV/200 & 500 Amp, 100 kHz ringwave
- **Surge and Noise Rejection-Isolation**: with unit under power, and ANSI/IEEE C62.41 Category A pulse applied either normal mode (L-N) or common mode (N-G) at the input, the noise output voltage will be less than 10V normal mode and less than 0.5V common mode in all four quadrants using a Keytek 711A/J (or equivalent) surge generator and a low-voltage, high sensitivity probe.
- **Load Power Factor**: 0.3 leading to 0.3 lagging
- **Load Regulation Response Time**: <2 msec for a 50% change in load
- **Interruption Response Time**: output voltage will track input voltage in less than 2 msec at power-off and power-on for a single-cycle asynchronous notch
- **Distortion**: <1% THD added into a resistive load
- **Overload Protection**: units greater than 385VA feature an external current breaker switch.
- **CL1102 is protected with a replaceable fuse, other models incorporate an automatic resetting internal thermal cutout.

### Cooling

Convection

### RF Insertion Loss (line to load and load to line)

<table>
<thead>
<tr>
<th>Series</th>
<th>Frequency Range</th>
<th>Insertion Loss (Typical)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CL Series</td>
<td>40 kHz to 2 MHz</td>
<td>50 dB typical</td>
</tr>
<tr>
<td></td>
<td>20 kHz to 3 MHz</td>
<td>40 dB typical</td>
</tr>
<tr>
<td></td>
<td>10 kHz to 5 MHz</td>
<td>30 dB typical</td>
</tr>
<tr>
<td>CP Series</td>
<td>400 kHz to 4 MHz</td>
<td>50 dB typical</td>
</tr>
<tr>
<td></td>
<td>100 kHz to 10 MHz</td>
<td>40 dB typical</td>
</tr>
<tr>
<td></td>
<td>30 kHz to 30 MHz</td>
<td>35 dB typical</td>
</tr>
<tr>
<td>All Other</td>
<td>400 kHz to 4 MHz</td>
<td>50 dB typical</td>
</tr>
<tr>
<td></td>
<td>100 kHz to 10 MHz</td>
<td>40 dB typical</td>
</tr>
<tr>
<td></td>
<td>30 kHz to 30 MHz</td>
<td>30 dB typical</td>
</tr>
</tbody>
</table>

### NOTE:
The items listed in the table above represent the standard configuration for each specific model. Hardwired, wall mount and extra receptacle configurations are also available. Refer to our Product Selection Guide or contact ONEAC Customer Support at 800-327-8801 for details.

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ONEAC is a UL/BSI registered corporation — Certification No. A29000

(800) 327 8801 EXT. 2 in USA AND CANADA  +44 0 1235 534721 in UK AND EUROPE

27944 N. Bradley Road, Libertyville, IL 60048  Phone 847 816-6000  FAX 847 680-5124

18 & 20 Blacklands Way, Abingdon Business Park, Abingdon, Oxfordshire OX14 1DY, UK  FAX +44 0 1235 534197

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