ONEAC MCU Series Power Conditioners Performance and reliability of all electronic systems depend upon the quality of the mains supply and earth connection. ONEAC's MCU power conditioners provide protection from mains power contamination and lightning damage while ensuring a pure connection to ground.

Semiconductor-based systems need clean power

Key systems, PBX equipment and LANs rely on semiconductors to perform their critical functions.

Semiconductors perform by processing electrical 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 failures.

ONEAC's unique solution

ONEAC power conditioners assure reliable electronic performance of critical telecommunication equipment by isolating semiconductors from the outside electrical worlds they connect to. They differ from surge suppression 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 telecom systems they protect. Field tests confirm it. Those who use ONEAC power conditioners in place of surge suppressor-based products, 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

Designed and manufactured under ISO9001:2000 quality procedures, ONEAC power conditioners have no parts that wear out. They last far longer than surge suppressors. And are highly reliable even in the harshest electrical environment. The MCU features a country specific socket for supplying power to critical telecom equipment. The MCU also features additional IEC sockets to support auxiliary equipment and connect to a common ground.

- **Plug and play:** easy installation saves money and adds flexibility.
- **Clean portable ground reference:** eliminates the need for a dedicated power line.
- **Reliable transformer-based protection:** provides constant and consistent protection against voltage spikes.
- **Tight surge let-through:** highest possible assurance that conducted transient voltages won't damage or degrade hardware components.
- **Low impedance technology:** handles high crest factors and inrush currents without oversizing.
- **Virtual Kelvin Ground:** maximizes system reliability by preventing "soft errors" and other symptoms of logic disruption caused by high-frequency noise.
- **Maintenance-free:** no parts that wear out so total lifetime cost is limited to the original purchase price.
- **ERG terminal:** provides pristine connection to ground that eliminates earth loops.
- **Global variations:** simple country-specific installation.
- **Designed and manufactured under ISO9001:2000:** assures consistent quality and performance.
- **5-year warranty:** the best assurance of product quality and performance in the industry.

ONEAC MCU Series 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

Designed and manufactured under ISO9001:2000 to IEC60950. All models are externally tested to IEC60950 and carry the CE mark.

Warranty

5-year return to base warranty.

Performance Characteristics

Nominal input voltage: 230 VAC, 50/60 Hz

Surge voltage withstand capability: ANSI/IEEE C62.41 Category A&B, 6k V/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 10 V normal mode and less than 0.5 V 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: 2-pole circuit protection (fuses or circuit breakers)

Cooling: convection

Earth Leakage: typically <100 µA

Operating Temperature: -20º to +30ºC without derating

PART NUMBER	MODEL NUMBER	MAX. OUTPUT LOAD (V)	OUTPUT CURRENT (Amps)	FREQUENCY (Hz)	PHYSICAL DIMENSIONS Height mm (in)	Width mm (in)	Depth mm (in)	SHIPPING WEIGHT kg (lbs)
ONC036482	MCU150	0.5	150	50/60	120 (4.7)	190 (7.5)	190 (7.5)	5.2 (12)
ONC036483	MCU250	1	250	50/60	190 (7.5)	255 (10.0)	140 (5.5)	6 (13)
ONC036484	MCU500	2	500	50/60	155 (6.1)	265 (10.4)	200 (7.9)	8 (18)
ONC036486	MCU1000	4	1000	50/60	167 (6.7)	250 (9.8)	285 (11.2)	15 (33)

750 and 1500 to 2100 VA models are manufacture discontinued.

ONEAC is a UL/BSI registered corporation — Certification No. A2900

A Chloride Power Protection Company

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