ONEAC CMK Series Power Conditioners: For some, conventional approaches to power protection are "good enough." But many find 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

POS terminals, scanners, printers and other key retail equipment rely on semiconductors to perform their critical applications. Semiconductors perform 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

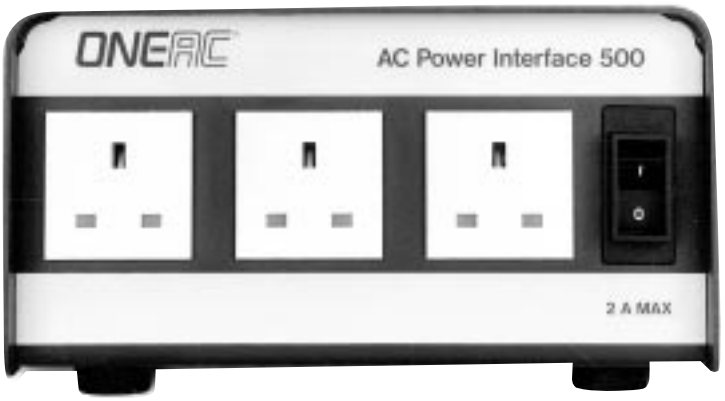
ONEAC power conditioners assure reliable electronic performance by isolating semiconductors from the outside electrical worlds they connect to. They differ from surge suppressors in that they limit not only peak voltage (amplitude), but also edge-speed (frequency) of electrical transients. ONEAC's low 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 9002 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.
- **Clean, portable ground reference:** eliminates the need for a dedicated power line.
- **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.
- **National connectors:** simple country specific installation.
- **Low impedance technology:** handles high crest factors and inrush currents without oversizing.
- **High efficiency transformer:** generates less heat and reduces operating cost.
- **Designed & manufactured under ISO 9002:** assures consistent quality and performance.
- **5 year warranty:** the best assurance of product quality and performance in the industry.

ONEAC CMK 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

Certified to BS-EN60950 by BSI and VDE. All units are CE Marked.

Warranty

Five years on parts and labor.

Plugs and Receptacles

Appropriate plug and receptacle must be specified by adding suffix for country of application: UK=1, Germany=2, France=3, Australia=4, Italy=7 and Switzerland=8.

Performance Characteristics

Nominal input voltage: 200-250 Vac, 50/60 Hz

Surge voltage withstand capability: ANSI/IEEE C62.41 Category A, 6 kV/200 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: manual reset two pole thermal circuit breaker

Cooling: convection

Earth Leakage: typically <100 µA

Operating Temperature Range: -20ºC to +35ºC without derating

Voltage Transient Response Time: <5 nanoseconds

RFΩ Insertion Loss (line to load and load to line)

All Other Models	Typically
400 kHz to 4 MHz	50 dB
100 kHz to 10 MHz	40 dB
30 kHz to 30 MHz	30 dB

MODELS*	CMK2202	CMK2205	CMK2207	CMK2210	CMK2215	CMK2220
Nominal Output Rating (VA)	250	500	750	1000	1500	2000
Max Load Current Rating (Amps RMS)	1.0	2.0	3.0	4.0	6.0	8.0
Input Voltages (Volts)	200-250	200-250	200-250	200-250	200-250	200-250
Output Voltages (Volts)	As input	As input	As input	As input	As input	As input
Frequency (Hz)	50/60	50/60	50/60	50/60	50/60	50/60
Input/Output Connectors	See ordering information for your national plug/receptacle requirements					
Number of Output Receptacles	3	3	4	4	5	5
Load Regulation (%)	±3	±2.5	±2.5	±2.5	±2.5	±2.5
Inrush 1/2-cycle Capability (Amps)	15	30	45	60	90	120
Surge Capability						
1 second typical (Amps)	5	10	15	20	30	40
5 second typical (Amps)	2.5	5	7.5	10	15	20
Output Current Crest Factor for						
10% drop in peak voltage	3.0	3.0	3.0	3.0	5.0	5.0
1 kHz Forward Transfer Impedance (Ohms)	<50	<25	<16	<13	<7	<4.5
Heat Loss, 80% Load (BTU/hr)	<50	<80	<105	<120	<165	<235
Efficiency at Full Load (%)	>92	>93	>94	>95	>96	>96
Maximum Dimensions (W) mm [in]	248[9.7]	248[9.7]	314[12.4]	314[12.4]	377[14.8]	377[14.8]
Maximum Dimensions (H) mm [in]	136[5.4]	136[5.4]	170[6.7]	170[6.7]	202[8.0]	202[8.0]
Maximum Dimensions (D) mm [in]	225 [8.9]	225 [8.9]	275[10.8]	275[10.8]	290[15.4]	290[15.4]
Shipping Weight— kg (lb)	7 (15.4)	9.5 (20.9)	14(30.9)	16.5(36.4)	25.5(56.2)	31(68.3)

Note: Other configurations available, contact factory.

ONEAC is a UL/BSI registered corporation — Certification No. FM1333

All ONEAC-manufactured products are Y2K compliant.

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