

**ONEAC CX Series Power Conditioning Transformer:** Reliable operation of manufacturing control systems is critical despite the harsh electrical environment in which they must operate. ONEAC CX Series power-conditioning transformers protect critical equipment from power disturbances and provide other key power functions.

#### **Handles the harshest electrical environments**

Microprocessors within programmable logic controllers (PLCs) and industrial computers are forced to operate in harsh electrical environments. Reliable performance under these adverse conditions challenges industrial automation systems. ONEAC power conditioners eliminate problems caused by power-line noise and completely isolate critical loads from electrical distribution systems—preventing disruption, degradation and destruction of critical circuitry.

#### **ONEAC's unique solution**

ONEAC CX Series low impedance power conditioners fulfill the requirements of industrial applications. "Low impedance" means that CX Series conditioners are optimized for the high pulsed current-on-demand required by switch mode power supplies without the need to oversize the VA rating. ONEAC CX power conditioners surpass the performance of ferroresonant transformers. They require less space, generate less heat and improve stability to the load during line notches.

#### **Provides multiple "power management" functions**

With voltage conversion, high frequency filtering capabilities and tight surge let-through, the CX series fulfills the need for step down transformers, surge suppressors and power line filters with one efficient product. The CX is available on a plate for mounting within an enclosure or with chassis construction for stand-alone applications—hardwiring allows easy installation.

#### **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 exceptional high mean time between failures (MTBF) backs that up. So do we, with a complete 5-year warranty. ONEAC products we can engineered for site-specific protection schemes that eliminate your power problems entirely.



- **Tight surge let-through:** assures that conducted transient voltages won't damage equipment or compromise accuracy.
- **Low impedance technology:** optimal interface with switching power supplies—handling high crest factors and inrush currents without oversizing.
- **Voltage conversion:** accepting input voltages of 120V, 240V or 480V and providing either 120V, 240V or 240/120V split phase output.
- **Bi-directional filtering of high frequency conducted noise:** assures reliable operation and prevents "noisy" loads from affecting sensitive electronics in the distribution system.
- **5-year warranty:** assurance of product quality and performance.

# ONEAC CX Series Power Conditioning Transformer: Specifications

## Power Conditioning

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

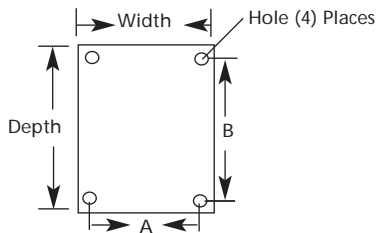
**Full output isolation:** ONEAC's proprietary low impedance transformer design. Completely safeguards against lightning and other high energy surges without creating detrimental side effects.

**Virtual Kelvin Ground®:** Greatly reduces 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

CX Series power conditioners are UL recognized 1012 , 478 CSA 22.2 No. 66.

## Plate Mounting Dimensions



Available as plate mount for mounting within an enclosure.

## Performance Characteristics

**Nominal Input Voltage:** 120, 240, 480 Vac, 50/60 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:** fuse

**Cooling:** convection

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

400 kHz to 4 MHz — 50 dB typical

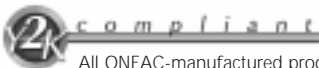
100 kHz to 10 MHz — 40 dB typical

30 kHz to 30 MHz — 30 dB typical

## MODELS\*

	CX140	CX250	CX500	CX750	CX1000
Output Rating	140	250	500	750	1000
Load Current Rating (Amps) @ 120/240V	1.2/0.6	2.0/1.0	4.2/2.0	6.25/3.1	8.3/4.2
Input Voltages @ 50/60 Hz	120, 240, 480	120, 240, 480	120, 240, 480	120, 240, 480	120, 240, 480
Output Voltages @ 50/60 Hz	120/240 split φ	120/240 split φ	120/240 split φ	120/240 split φ	120/240 split φ
1kHz Forward Transfer Impedance (Ohms) @120/240V	<25/<100	<18/<72	<13/<52	<8/<32	<5/<20
Efficiency at Rated Output (% heat loss, 80%)	>97%	>97%	>97%	>97%	>97%
Heat Loss, 80% Load (BTU/hr)	<30	<43	<68	<90	<110
Input/Output terminations	Hardwired	Hardwired	Hardwired	Hardwired	Hardwired'
Maximum Dimensions (H) chassis [plate]	5" [3.2"]	5" [3.8"]	5" [3.8"]	6" [4.4"]	6" [4.4"]
Maximum Dimensions (W) chassis [plate]	6.2" [4.8"]	6.2" [5.5"]	6.2" [5.8"]	7.5" [6.8"]	7.5" [6.8"]
Maximum Dimensions (D) chassis [plate]	11" [6.7"]	11" [6.7"]	11" [8.3"]	13" [9.6"]	13" [11.0"]
Plate Mounting Dimension A	4.34"	5.08"	5.41"	6.40"	6.32"
Plate Mounting Dimension B	6.24"	6.24"	7.86"	9.21"	10.51"
Shipping Weight— lbs.	14	17	23	33	43

\* Also available as plate version with "P" suffix added to model number.



All ONEAC-manufactured products are Y2K compliant.

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



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