

THE PowerwoRx™ CLEAN POWER SYSTEM

EcoTrust Energy's **PowerwoRx™** provides businesses with the electrical power conditioning capabilities previously available only to the largest facilities and installations. The **PowerwoRx™ Clean Power System** is easy to install and provides immediate benefits for the user. In one cost-effective and maintenance-free package, **PowerwoRx™** provides:

- **Power factor correction**
- **Surge and spike suppression**
- **Noise reduction**

PowerwoRx™ also protects the environment. Each Year, a typical industrial **PowerwoRx™** unit can save up to 17,250 kilowatt hours of electricity, achieving saved natural resources, lower atmospheric emissions and reduced hazardous waste.



What does the market offer to solve electrical distribution system issues?

| Electrical Characteristics | Currently Available Equipment |
|----------------------------------|-----------------------------------|
| Power Factor Improvement | Capacitors |
| Harmonics (Non-linear waveforms) | Shunt filters |
| Voltage Surge/Droop Protection | Voltage Regulator |
| Voltage Spike Protection | Lightning Arrestor |
| Reduce KW Demand | Timers, Energy Management Systems |
| Reduce KWh usage | Timers, Energy Management Systems |
| Reduce Line Noise | Filters or Line Strips |

So why buy multiple solutions when the PowerwoRx™ *Clean Power System* accomplishes all of the above!!!

The many benefits of a fully engineered PowerwoRx™ “Clean Power System” are the protection of electrical equipment from surges and spikes, reduction of line noise, reduction in maintenance and replacement costs of electrical equipment, improved power factor and reduction in the energy demand and consumption from your electrical utility company. Protection includes damage from most lightning strikes and the effects of most short duration brownouts, including those experienced from starting equipment within the facility.

THE PowerwoRx™ CLEAN POWER SYSTEM BENEFITS

The PowerwoRx™ Clean Power System is designed to provide the following benefits for the commercial/industrial user:

- **Protection of sensitive office equipment (such as computers, printers, copiers and fax machines)**
- **Energy savings to inductive loads (such as pumps, compressors, fans and motors)**
- **Power factor correction**
- **Lower operating temperatures for motors**
- **Lower maintenance costs of electrical equipment**
- **Reduces machine downtime and increases productivity**
- **Prolonged life of electrical equipment**
- **Reduced electricity (kilowatt) demand and energy costs**
- **Protects the environment (reduces electrical generation demand thus reducing fuel usage, plant emissions and hazardous waste)**
- **Minimal investment**

ELECTRICAL AND ENCLOSURE SPECIFICATIONS

| | CPS-3Y208/240 | CPS-3D208/240 | CPS-3Y480 | CPS-3D480 |
|---|---------------|---------------|------------|------------|
| Power Line Voltage (VAC) | 120/208/240 | 120/208/240 | 277/480 | 277/480 |
| Phase Configuration | 3 Wye | 3 Delta | 3 Wye | 3 Delta |
| Frequency (Hz) | 50 - 60 | 50 – 60 | 50 - 60 | 50 - 60 |
| Power Dissipation (J) 2ms current wave | 2220 | 2220 | 4620 | 4620 |
| Peak Pulse Current (A) 8/20 μ s current wave | 40k -120k | 40k -120k | 40k -120k | 40k -120k |
| Maximum Clamping (V) @ 200A, 8/20 microsecond current wave | 630 | 630 | 1480 | 1480 |
| Total Kvar | 3.3 | 9.8 | 10.4 | 30 |
| Operating Temperature (°C) | -40 to +70 | -40 to +70 | -40 to +70 | -40 to +70 |
| Line Wires (AWG) | 10 | 10 | 8 | 8 |
| Circuit Breaker Required (A) | 40 | 40 | 50 | 50 |
| Dimensions (WxDxH) | 12"x12"x6" | 12"x12"x6" | 12"x14"x8" | 12"x14"x8" |
| Weight (lbs.) | 28 | 28 | 40 | 40 |

Enclosure Specifications

- NEMA 12 Rating – interior mount only (Moisture, dust and tamper resistant)
- Surface Mount
- Conduit Knockout 1¼"

The EcoTrust Energy's PowerwoRx™ Units are installed at main panels and therefore come in a NEMA 12 enclosure which is not suitable for external mounting.

INSTALLATION CONSIDERATIONS

PowerwoRx™ 3 Phase Commercial models share the following characteristics:

- Placed in parallel into AC systems, either at the main power panel for a facility or at some sub-panel within the distribution system.
- Typically installs in under an hour using readily available industry standard circuit breakers or fuse disconnect.
- For whole-facility protection, install at the main. Connects to the panel via conduit and a dedicated circuit breaker.
- For point-of-use protection, install at the subpanel upstream of major inductive loads such as motors, driving pumps and HVAC units.
- Maintenance-free, solid-state devices with no moving parts; not meant to be opened or serviced during their operating life.
- 10-year limited warranty
- Recognized by Underwriters Laboratories (UL) in the Industrial Control Equipment category of products: http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/showpage.html?name=NMTR.E320259&ccnshorttitle=Power+Circuit+and+Motor-mounted+Apparatus&objid=1079441548&cfgid=1073741824&version=versionless&parent_id=1073990288&sequence=1

THE PowerwoRx CLEAN POWER SYSTEM ORDERING INFORMATION

The EcoTrust Energy PowerwoRx™ Units are available in 4 different 3 phase configurations and one residential single phase unit.

| PART NO. | MODEL | Std Panel Mount | VOLTAGE |
|----------|------------------------|--------------------------|--------------|
| US40792 | CPS-3Y208/240 | 200A 'Y' 3 Φ (NEMA 12) | 120/208/240V |
| US40793 | CPS-3D208/240 | 200A Delta 3 Φ (NEMA 12) | 120/208/240V |
| US40794 | CPS-3Y480 | 200A 'Y' 3 Φ (NEMA 12) | 440/480V |
| US40795 | CPS-3D480 | 200A Delta 3 Φ (NEMA 12) | 440/480V |
| US40718B | PowerwoRx™ e3 (NEMA 1) | 200A single Φ (NEMA 1) | 120/240V |
| US40771 | PowerwoRx™ e3 (NEMA 3) | 200A single Φ (NEMA 3) | 120/240V |

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