Isolation Transformer System

This multifunctional unit provides protected and conditioned “same-phase” power, a new neutral-ground bond, and a new separately derived reference ground for residential home theaters and AV systems. PowerCore™ Systems eliminate most common causes of hum and buzz—including lighting system dimming noise, removes ground loop problems and prevents most control system reboots and lockups. Properly installed, PowerCore Systems eliminate the need for expensive rackmount surge/spike protection and power conditioners while providing dedicated power circuits for not only AV in the rack, but also for phone and security systems and TV’s in bedrooms.

Key Features

- 160,000 Amps of surge and spike protection with remote notification
- True single-phase output – not “center tapped split-single phase”
- Creates new reference single-point ground (SPG)
- All circuits on same phase, eliminating cross phase interference
- Double electrostatic (Faraday) shields for voltage spike and noise attenuation
- Advanced transformer winding techniques compensate for harmonic voltage distortion
- Proprietary core minimizes eddy currents and stray losses, reducing heat
- Wound with flat-ribbon wire for high energy efficiency
- High common-mode noise rejection with filtering and conditioning
- Passively vented – no fans required
- Heavy-duty components and construction for long life
- UL Listed in USA and Canada

Basic Operation

A standard 240VAC or 208VAC feed is transformed into all in-phase 120VAC outputs with a new reference ground. PowerCore comes with an integrated main breaker/disconnect, and integrated branch circuit load center. Zone Defender™ surge protection and integrated power conditioning filter are pre-installed at the factory. Three standard sizes are available: 83A, 125A and 208A output at 120VAC. Prewired, this compact unit is ready to be quickly installed.

NOTE

The technology used in this system is more effective than “balanced” power systems, which are prohibited in residential installations by the 2008 National Electrical Code. (Article 647.3).
Installation Location
PowerCore™ is compact in size and flexible in installation. The unit is housed in a magnetically shielded steel NEMA Type I enclosure that is floor mounted.

For optimal performance, it is desirable to locate the unit as closely as practical (80’ typical effective range; the closer the better) to the equipment rack in a dry, ventilated area.

Electrical Requirements and Weights
The PowerCore™ unit requires a 240VAC or 208VAC feeder circuit from the house main panel.

<table>
<thead>
<tr>
<th>Part #</th>
<th>PowerCore™ Size</th>
<th>Voltage Feed</th>
<th>Feeder 2 Pole CB</th>
<th>Feeder Conductor Sizes</th>
<th>Total Max Primary Load @ Feed Voltage</th>
<th>Total Max Secondary Load @ 120VAC</th>
<th>Qty Branch Circuit Breakers Included</th>
<th>Shipping/Net Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>EP-CORE-10-240</td>
<td>10 KVA</td>
<td>240 VAC</td>
<td>60 Amps</td>
<td>#4 AWG</td>
<td>41.6 Amps</td>
<td>83.3 Amps</td>
<td>16/24 max</td>
<td>350/240 lbs</td>
</tr>
<tr>
<td>EP-CORE-10-208</td>
<td>10 KVA</td>
<td>208 VAC</td>
<td>60 Amps</td>
<td>#4 AWG</td>
<td>48 Amps</td>
<td>83.3 Amps</td>
<td>16/24 max</td>
<td>350/240 lbs</td>
</tr>
<tr>
<td>EP-CORE-15-240</td>
<td>15 KVA</td>
<td>240 VAC</td>
<td>80 Amps</td>
<td>#3 AWG</td>
<td>62.5 Amps</td>
<td>125 Amps</td>
<td>24</td>
<td>400/285 lbs</td>
</tr>
<tr>
<td>EP-CORE-15-208</td>
<td>15 KVA</td>
<td>208 VAC</td>
<td>90 Amps</td>
<td>#2 AWG</td>
<td>72 Amps</td>
<td>125 Amps</td>
<td>24</td>
<td>400/285 lbs</td>
</tr>
<tr>
<td>EP-CORE-25-240</td>
<td>25 KVA</td>
<td>240 VAC</td>
<td>150 Amps</td>
<td>#1/0 AWG</td>
<td>104.1 Amps</td>
<td>208.3 Amps</td>
<td>30/40 max</td>
<td>500/380 lbs</td>
</tr>
<tr>
<td>EP-CORE-25-208</td>
<td>25 KVA</td>
<td>208 VAC</td>
<td>150 Amps</td>
<td>#1/0 AWG</td>
<td>120 Amps</td>
<td>208.3 Amps</td>
<td>30/40 max</td>
<td>500/380 lbs</td>
</tr>
</tbody>
</table>

Notes: National and local codes and field conditions must take precedence over these guidelines.

Feeder Hookup
Connect the 240VAC or 208VAC feeder using the appropriate wiring method and connector, using the combination knockouts provided. Cable management tie points have been provided for easy and effective conductor routing. There is also a separate knockout for a local grounding electrode conductor.

Branch Circuit Hookups
Because all the hot legs are in-phase, this unit cannot be used with 3-wire branch circuits that share a neutral. 1/2” & 3/4” branch circuit knockouts are provided. Inside the unit, cable management tie points provide a means of separation between the feeder line and load conductors.

Integrated Power Conditioner
The integrated Power Conditioning module is pre-installed at the factory and filters ALL branch circuits. The conditioner is constructed using efficient passive components to reject high frequency line noise.

Built-in Surge/Spike Protection
Zone Defender™ surge protection is pre-installed at the factory. Zone Defender™ protects branch circuits and connected equipment from voltage surges, such as power grid switching and house load spikes. LED indicators provide visual notification to indicate proper operation and protection status. Surge alarm notification terminals are provided for interconnection to control systems. Surge capacity current rating is 160,000 Amps.
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All dimensions in inches unless otherwise noted [All dimensions in brackets are in millimeters]

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96-01103 Rev. b 5/28/15
WARRANTY INFORMATION

All PowerCore™ systems are backed by a 5 (five) year transferable warranty. Exact Power warrants these products to be free of any defects in parts or labor in manufacture and fully functional for their intended purpose. Exact Power cannot be responsible for errors in installation or misuse. PowerCore™ systems must be installed by qualified electrical contractors to secure warranty coverage.