

POWERCORE™ 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

(see inside for dimensions)

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.

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

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

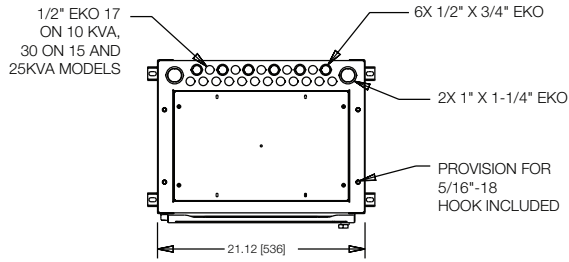
The integrated Power Conditioning module is pre-installed at the factory and filters ALL branch circuits. The conditioner is constructed using efficient passive components to reject high frequency line noise.

Built-in Surge/Spike Protection

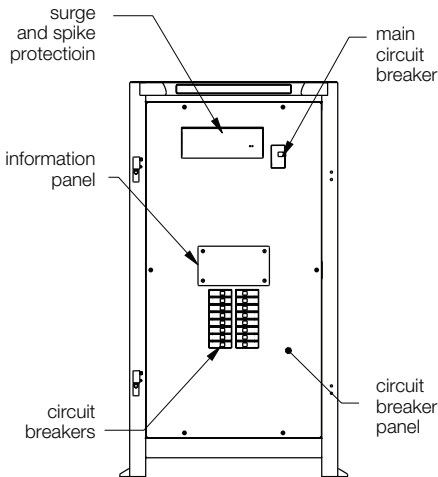
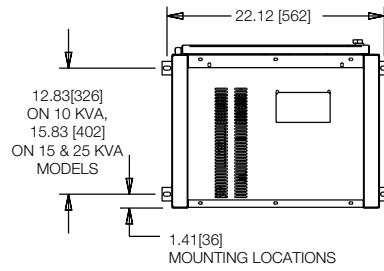
Zone Defender™ surge protection is pre-installed at the factory. Zone Defender™ protects branch circuits and connected equipment from voltage surges, such as power grid switching and house load spikes. LED indicators provide visual notification to indicate proper operation and protection status. Surge alarm notification terminals are provided for interconnection to control systems. Surge capacity current rating is 160,000 Amps.



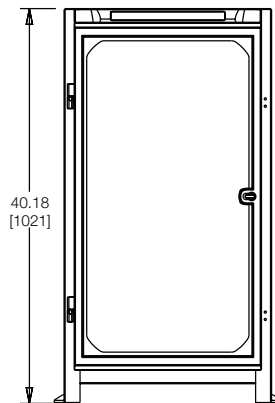
Top View



Bottom View

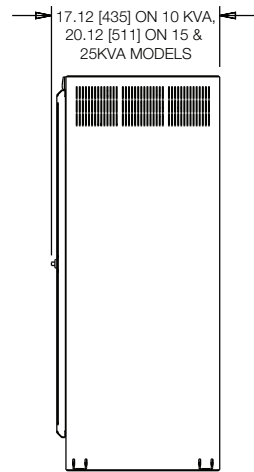


Front View
without Front Door

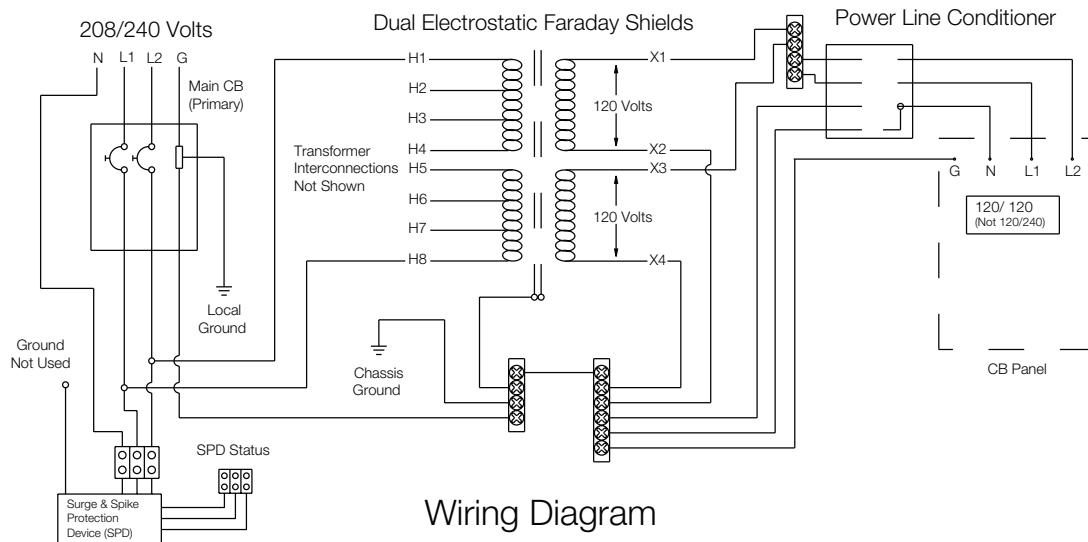
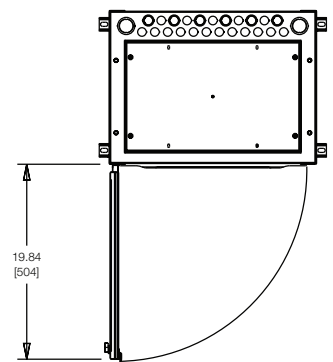


Front View

Side View



Door Swing



Wiring Diagram

All dimensions in inches unless otherwise noted [All dimensions in brackets are in millimeters]

**Industry-Standard SquareD® Breakers
Included and Factory Installed**



Integrated Load Center
Circuit breaker quantity varies
according to size (kVA)



**Main
Disconnect**

**Integrated Surge & Spike Protection
& Power Filter & Conditioner**



**Zone Defender Surge
Protection Device (SPD)**

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.



Exact Power, a Division of Middle Atlantic Products
300 Fairfield Road, Fairfield NJ 07004

Customer Service: 800-266-7225
middleatlantic.com