



PURE POWER PLUG-IN

Indicator  
Light

Convenience  
Outlet

EFM  
Filtration



Made  
in USA

Robust  
Design

## Residential and Commercial

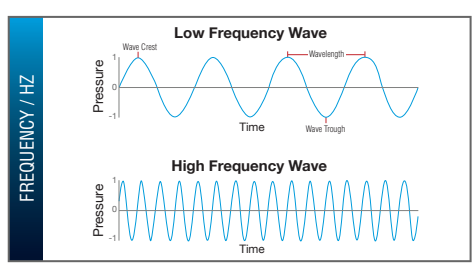
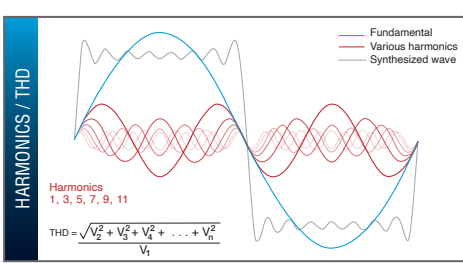
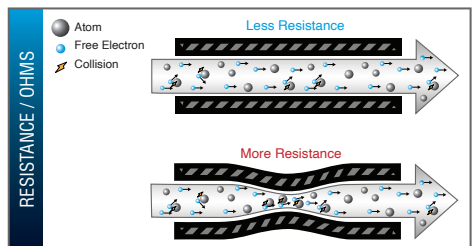
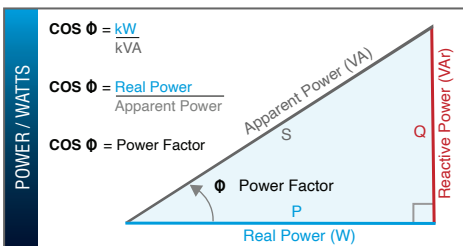
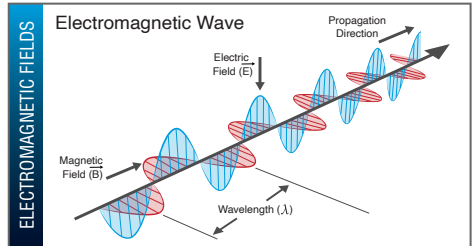
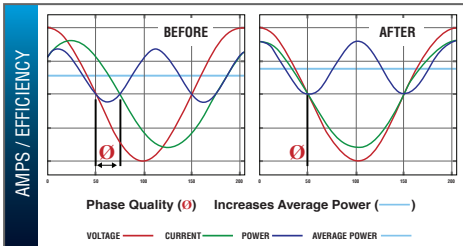
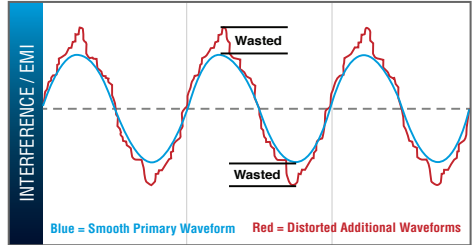
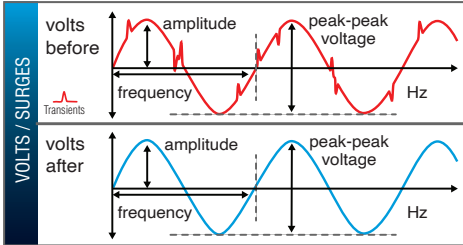
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# PURE POWER PLUG-IN

## ES120V PLUG-IN ELECTRICITY CONDITIONER



### ES120V Plug-in Series Accreditations



### Description /Code

Made in Montana • Made in USA • UL - E337361 - Closed Energy Management Equipment 3ZJ9 • FCC - Approved (UL Tested for Compliance) • CE - Low Voltage Directive 2006/95/EC • CE - Electromagnetic Compatibility (EMC) 2004/108/EC • RoHS - Lead Free - Restriction of Hazardous Substances

### Power Perfect Box {ES1PN} Highlights

- 120 Volt Single Phase Electricity Conditioner
- Unit Size 5.25" x 3.75" x 2"
- Low Power Losses, < 0.5 Watts per 1000 VAR
- Operating Temperature Range of -55°C to +90°C
- General Enclosure: Plug-in Unit
- Circuit Zone Electrical Protection
- Self-healing metalized Harmonic Rectifiers
- NEMA 5-15 plug (two flat parallel blades w/ground pin)
- EMI/RFI Noise Reduction 0-50 dB
- Power Factor Compensation
- Voltage Moderation
- Robust Integrated Surge Suppression
- Electrical Harmonics Elimination (THD Reduction)
- EMF/EMR Elimination

### Power Perfect Box {ES1PN} Characteristics

Max AC Voltage (Charge Potential)	300 Volts
Single Phase Voltages Available	120 Volts, USA (300 Volt line-to-neutral MAX)
Input Power Frequency	50/60 Hz
Current Requirements @ 120 Volts	0.85 Amps
Operating Temperature	-55°C to +90°C
Operating Humidity	5% to 95%, Noncondensing
Operating Altitude	Up to 16,000 ft (5000m)
Seismic Withstand Capability	(Meet or Exceed Specifications) IBC 2006, CBC 2007, UBC Zone 4

### Harmonic Rectifier {ES1PN} Circuit Qualities

Total Unit Reactive Power @ 300 V (L1-N)	20 μF
Per Circuit Reactive Power @ 300 V (L1-N)	20 μF
Reactive Bank Composition	6 PFC Modules

### Harmonic Dissipations - PFC Module Specs.

Tangent of Loss Angle: C > 1 μF at 1 kHz	<= 30 * 10 <sup>-4</sup>
Rated Voltage Pulse Slope (dV/dt)	150 V/ μs
RC Between Leads	>5000 s
Withstanding (DC) Voltage (Cut-off Current 10 mA)	1850 V
EMI/RMI Filtering Attenuation	Up to 50 dB from 10 kHz to 100 MHz
Protection Modes	L1-N

### Surge Suppression

Voltage	(Continuous)	150	Volts <sub>RMS</sub>
		424	Volts <sub>DC</sub>
	(Max Clamping)	650	Volts <sub>RMS</sub>
Current	(Peak Surge)	6500	Amps
	(Rating)	6500	Amps
Transient Dissipation Potential Each Circuit	(Surge Energy)	1300	Joules/μs
Protection Modes	(Single Circuit)	L1-N	



\*NEMA 5-15 plug two flat parallel blades w/ ground pin