



POWER PERFECT BOX

Proprietary Design

American Made

Quality Components

Electromagnetic Field Reduction



Harmonics Filtering Technology

Robust Surge Protection

Residential and Commercial

Single Phase and Three Phase
Clean Your Power and Save

Satic, Inc.
1500 Clark Fork Lane, Missoula MT 59808
406-493-1861 • 1-866-99-SATIC

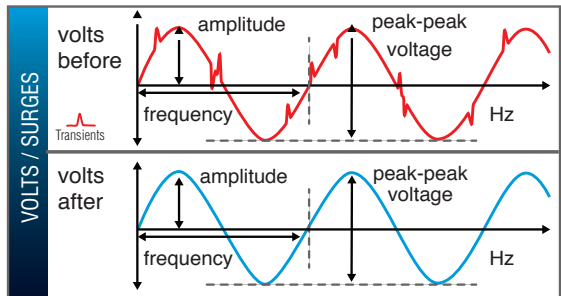
www.saticshield.com

Satic's wire-in product line installs easily at the breaker panel or at point of use to filter dirty electricity providing line conditioning, surge protection, phase correction and harmonics reduction for total system protection.

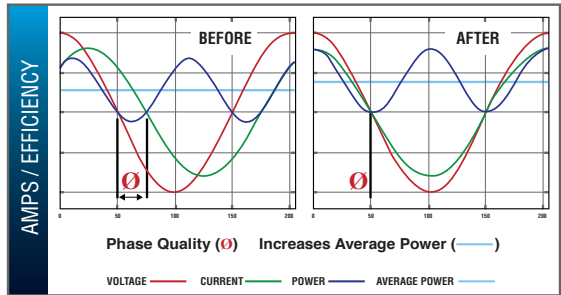
Safeguard your electronics • extend the life of equipment
eliminate voltage distortions

The Power Perfect Box will do all this and lower your electric bill!

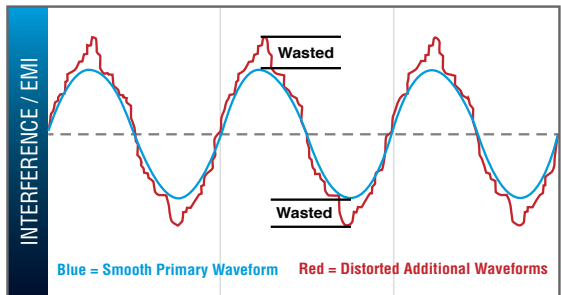
Robust Surge
Protection for
your appliance



Energy Savings
for your wallet



EMF Protection
for your health



Powering Tomorrow's Change . . . Today

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POWER PERFECT BOX



SINGLE SPLIT-PHASE ELECTRICITY CONDITIONER

ES1PN Series Accreditations



Description /Code

Made in Montana • Made in USA • UL / CSA - E337361 - Open 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

- 120/208, 120/240 Volt Single Split-Phase Electricity Conditioner
- Low Power Losses, < 0.5 Watts per 1000 VAR
- Operating Temperature Range of -55°C to +90°C
- General Enclosure: NEMA 4X Indoor/Outdoor
- Electrical Harmonics Elimination (THD Reduction)
- Three-Way Electrical Protection
- Self-healing metalized Harmonic Rectifiers ("Smarter" Capacitors)
- Robust Tri-circuit Integrated Surge Protection
- EMI/RFI Noise Reduction 0-50 dB
- Wire Rating: 600 Volts, THHN/ MTW/ THWN-2
- Box Size 7.75" x 7.25" x 4"
- EMF/EMR Reduction
- Voltage Moderation
- Power Factor Compensation
- Surge Suppression

Power Perfect Box {ES1PN} Characteristics

Max AC Voltage (Charge Potential)		300 Volts
Single Split-Phase Voltages Available		120 / 240, 120 / 208 Volts (300 Volt line-to-line MAX)
Input Power Frequency		50/60 Hz
Wire Rating		600 Volts, MTW/ THHN/ THWN-2
Current Requirements @ 120/240 Volts	L1	2.45 Amps
(Terminated to a Double Pole 15A Breaker)	L2	2.45 Amps
	N	0.95 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-L2 + L1-N + L2-N)	60 μF
Per Circuit Reactive Power @ 300 V	(L1-L2, L1-N, L1-N)	20 μF
Reactive Bank Composition		18 PFC Self-healing Harmonic Rectifier Modules

Harmonic Dissipations - PFC Module Specs.

Tangent of Loss Angle: C > 1 μF at 1 kHz		$\leq 30 * 10^{-4}$
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-L2, L1-N, L2-N

Surge Suppression

Voltage	(Continuous)	150V L1-N, L2-N 250V L1-L2	Volts _{RMS}
	(Max Clamping)	424	Volts _{DC}
Current	(Peak Surge)	650	Volts _{RMS}
	(Rating)	6500	Amps
Transient Dissipation Potential	(Surge Energy)	6500	Amps
	(Tri-Circuit Integration)	1300	Joules/s
Protection Modes		L1-L2, L1-N, L2-N	

