Power Perfect HD AU

Three-Phase 230/400V Electricity Conditioner

ES3PN + ES3PP Series Accreditations

Description /Code

Made in Montana • Made in USA • UL - 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 {3PN + 3PP} Highlights

- 230/400 Volt Three 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)
- Six-Way Electrical Protection
- Self-healing metalized Harmonic Rectifiers
- Robust Tri-circuit Integrated Surge Protection
- EMI/RFI Noise Reduction 0-50 dB
- Wire Rating: 600 Volts, THHN/ MTW/ THWN-2
- Box Size 14" x 7.25" x 4"
- EMF/EMR Reduction
- Voltage Moderation
- Power Factor Compensation
- Surge Suppression

Power Perfect Box {ES3PN + ES3PP} Characteristics

Max AC Voltage (Charge Potential)		300 Volts
Three Phase Voltages Available		120/208 (300 Volt line-to-line MAX)
Input Power Frequency		50/60 Hz
Wire Rating		600 Volts, MTW/ THHN/ THWN-2
Current Requirements @ 230/400 Volts	(Each L1, L2, L3)	3.52 Amps
(Terminated to a Triple Pole 15A Breaker)	N	0.34 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 {3PN + 3PP} Circuit Qualities

Total Unit Reactive Power @ 300 V	(L1-L2 + L2-L3 + L3-L1) + (L1-N + L2-N + L3-N)	120 µF
Per Circuit Reactive Power @ 300 V	(L1-L2, L2-L3, L3-L1), (L1-N, L2-N, L3-N)	20 µF
Reactive Bank Composition		36 PFC Modules

Harmonic Dissipations - PFC Module Specs.

Tangent of Loss Angle: C > 1 µF at 1 kHz		<= 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 + L2-L3 + L3-L1) + (L1-N + L2-N + L3-N)

Surge Suppression

Voltage	(Continuous)	150 MOV L1-N, L2-N, L3-N	$Volts_{RMS}$
		250 MOV L1-l2, L2-L3, L3-L1	$Volts_{RMS}$
		424	$Volts_{DC}$
	(Max Clamping)	650	$Volts_{RMS}$
Current	(Peak Surge)	6500	Amps
	(Rating)	6500	Amps
Transient Dissipation Potential Each Circuit	(Surge Energy)	1300	Joules/µs
Protection Modes	(Hexa-Circuit Integration)	(L1-L2, L2-L3, L3-L1), (L1-N, L2-N, L3-N)	