

# ARCTIC FOX EMS



## Single Split-Phase Energy Management System 120/240V (EMS1PN)

### Arctic Fox EMS1PN Accreditations



### Description /Code

Made in Montana • Made in USA • UL/CSA – E363874 - 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

### Arctic Fox EMS1PN 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 3X Indoor/Outdoor
- Electrical Harmonics Elimination (THD Reduction)
- Three-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 8" x 8" x 4"
- EMF/EMR Reduction
- Voltage Moderation
- Power Factor Compensation
- Surge Suppression

### Arctic Fox EMS1PN Characteristics

Max AC Voltage (Charge Potential)	300 Volts
Single Split-Phase Voltages Available	120/240, 120/208 Volts (300 Volt L1 to L2 MAX)
Input Power Frequency	50/60 Hz
Wire Rating	600 Volts, MTW/THHN/THWN-2
Current Requirements @ 120/208 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 EMS1PN 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 & L2-N)	20 µF
Reactive Bank Composition		18 PFC Modules

### Harmonic Dissipations - PFC Module Specs.

Tangent of Loss Angle: C > 1 µF at 1 kHz	(Cut-off Current 10 mA)	$\leq 30 * 10^{-4}$
Rated Voltage Pulse Slope (dV/dt) P=22.5mm		150 V/µs
RC Between Leads		>5000 s
Withstanding(DC) Voltage		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)	250	Volts <sub>RMS</sub>
		424	Volts <sub>DC</sub>
	(Max Clamping)	650	Volts <sub>RMS</sub>
Current	(Peak Surge)	6.5	kAmps
	(Rating)	6500	Amps
Transient Dissipation Potential Each Circuit	(Surge Energy)	130	Joules/µs
	Protection Modes	(Tri-Circuit Integration)	(L1-L2 & L1-N & L2-N)



ARCTIC FOX™

