



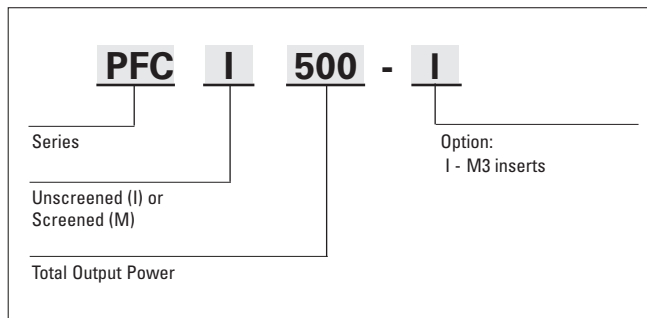
PFC500

500 Watts Output Power

ACTIVE POWER FACTOR CORRECTION & HARMONIC ATTENUATION MODULE



HOW TO ORDER



FEATURES

- Meets Harmonic Requirements of MIL - STD - 1399
- Meets CE01 and CE101 of MIL - STD - 461 without Companion Filter
- Meets EMI Requirements of MIL - STD - 461 with PFF500 Companion Filter
- Meets all requirements of MIL - STD - 704E
- Non-latching Over Temperature Protection
- Non-latching Output Overvoltage Protection
- Isolated Input AC Good TTL Signal (Open collector)
- Isolated Output DC Good TTL Signal (Open collector)
- Full 500 Watts of output power from 85 VAC to 265 VAC and up to 95°C baseplate temperature
- Utilizes non isolated boost topology
- Environmental Screening available

INPUT CHARACTERISTICS

	Min.	Typ.	Max.	Units
Input Voltage (Single Phase)	85		265	VAC
Input Frequency Range	47		440	Hz
Inrush Current				
@115 Vrms			15	A
@240 Vrms			25	A
Power factor at Full Load				
115V _{in} / 60Hz	0.98	0.99		
115V _{in} / 400Hz	0.94	0.96		
230V _{in} / 50Hz	0.97	0.99		
Efficiency at Full Load				
115V _{in} / 60Hz	92	93		%
115V _{in} / 400Hz	91	92		%
230V _{in} / 50Hz	94	95		%

OUTPUT CHARACTERISTICS

	Min.	Typ.	Max.	Units
Nominal No Load Voltage Setting	385		390	V
Output Power (Full Load)			500	W
Load Regulation (No Load - Full Load)			2.2	% V _{out}
Line Regulation (Low Line - High Line)			1	% V _{out}
Ripple P - P (60 Hz/115 VAC input)			3.5	% V _{out}
(1μF/1W)				
Overvoltage Protection	405	410	425	V
Transient Response: 25 - 75 - 25% or 50 - 100 - 50% step load				
Overshoot / Undershoot		±6.3		% V _{out}
Recovery time (to 2% of V _{out})			200	mS
Temperature Drift		0.01	0.02	%/° C
Output (Holdup) Capacitance		495		μF
Holdup Time - Application specific		52		mS
(@P _{out} =500W, V _{out} 380 to 200V)				

All specifications are typical @+25°C with nominal input voltage under full output load conditions and holdup capacitance of 495μF, unless otherwise noted. Specifications subject to change without notice.



PFC500 ACTIVE POWER FACTOR CORRECTION & HARMONIC ATTENUATION MODULE

TEMPERATURE CHARACTERISTICS

	Min.	Typ.	Max.	Units
Operating	-40		+95	° C
Storage - Ambient	-55		+105	° C
Over Temperature Shutdown		+100	+115	° C
Hysteresis		10		° C
Thermal Resistance Case- Ambient		2.2		°C/W

M- GRADE - ENVIRONMENTAL SCREENING

Stabilization Bake	+105°C for 24 hours similar to MIL -STD -883, M1008.2, Condition B
Temperature Cycling	10 cycles at -55°C to +105°C (transition period 5°C / minute) similar to MIL -STD -883, M1010, Condition B
Burn in	160 hours @ 85°C minimum
Final Testing	Full ATP

I- GRADE - ENVIRONMENTAL SCREENING

Burn in	16 hours @ 50°C minimum
Final Testing	Full ATP

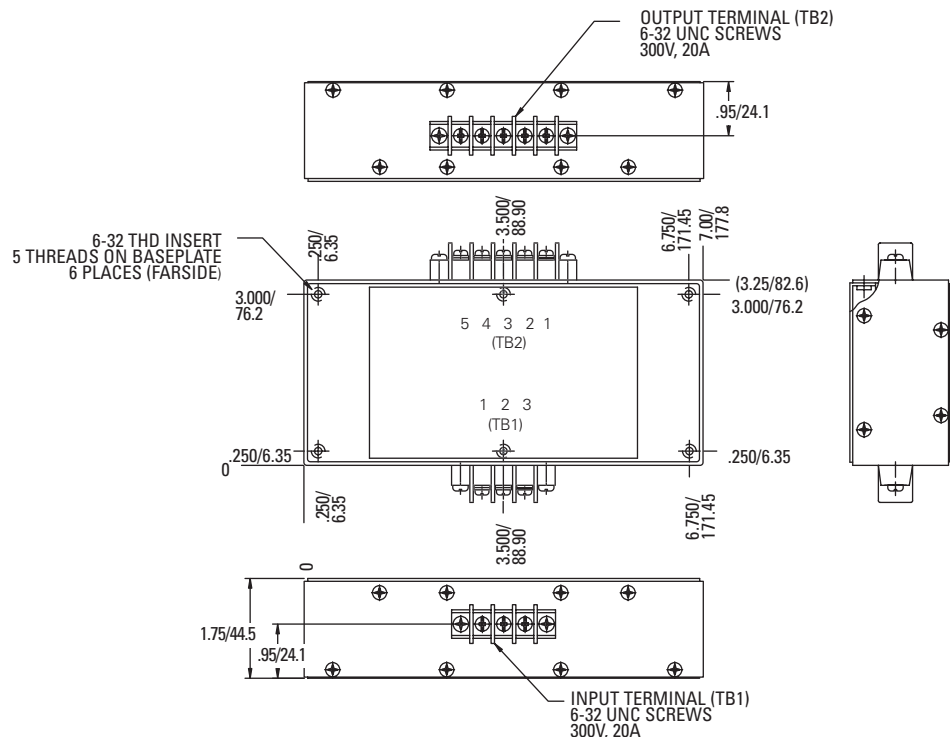
ISOLATION CHARACTERISTICS

	Min.	Units
Isolation:		
Input/Output to Base	1000	VAC
Insulation resistance @ 500 VDC	100	MΩhm

MECHANICAL CHARACTERISTICS

Weight (Max.)	35.5	oz.
	1000	grams
Size	3.25 x 7 x 1.75	inch
	83 x 179 x 45	mm
Volume	39.8	inch³
	653	cm³
Material:		
Lid and Case	Aluminum Alloy	
Baseplate	Aluminum Alloy	
Finish:		
Lid and Case	Black Anodized	
Baseplate	None	
Mounting:		
Standard	6-32 THD Inserts	
Option - I	Metric M4 - 0.7 Inserts	

CASE DRAWINGS



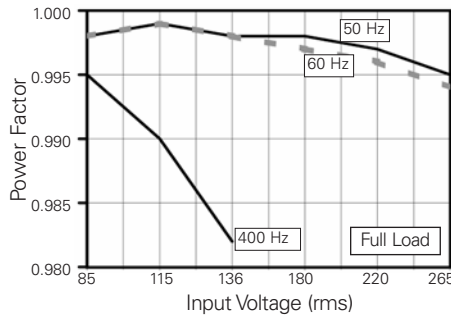
Tolerances: inches - x.xx = ±0.03 mm - x.x = ±0.8
x.xxx = ±0.015 x.xx = ±0.40



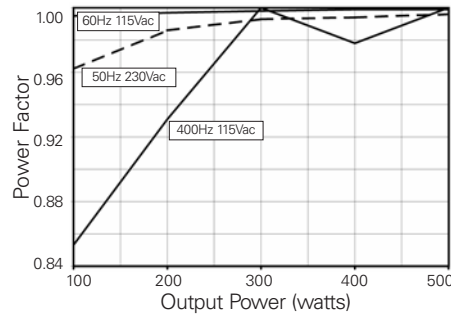
PERFORMANCE CHARACTERISTICS

PF500 / PFC500

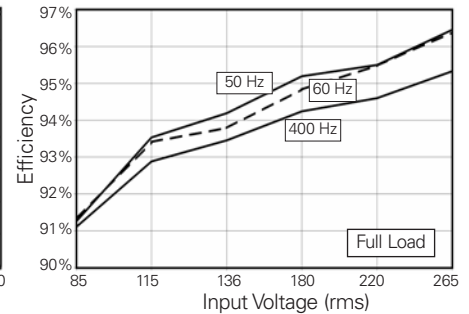
I. Power Factor vs. Input Voltage



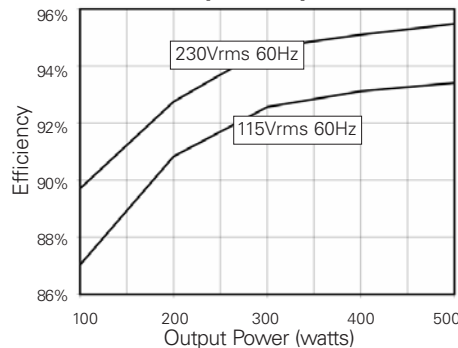
II. Power Factor vs. Output Power



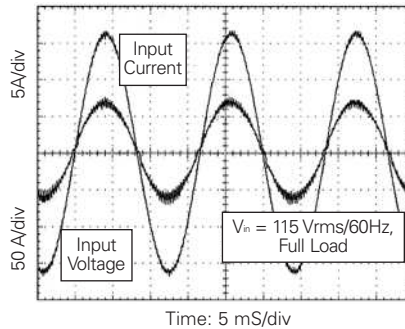
III. Efficiency vs. Input Voltage



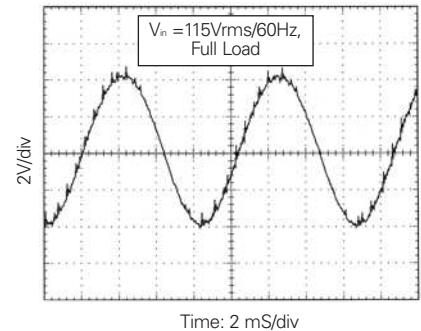
IV. Efficiency vs. Output Power



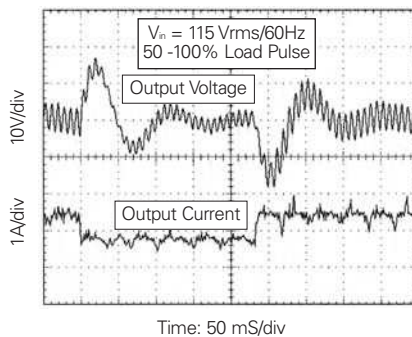
V. AC Input Voltage & Current



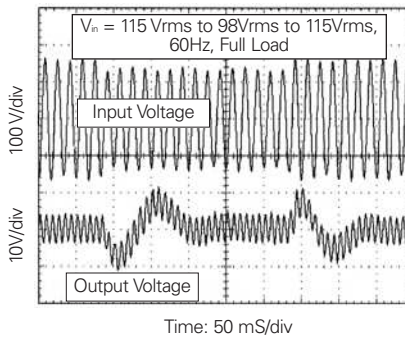
VI. Output Ripple



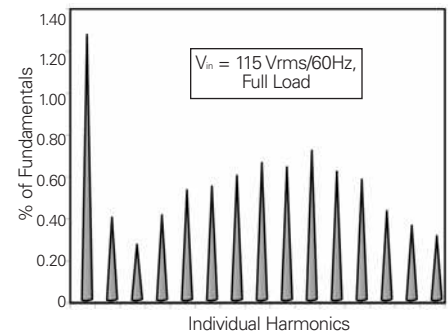
VII. Load Transient Response



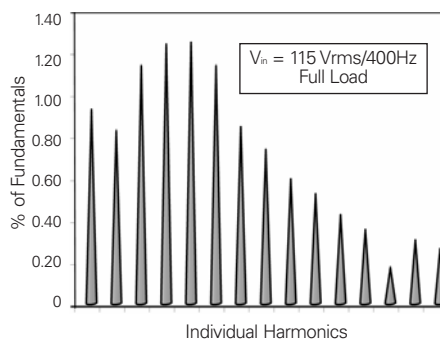
VIII. Line Transient



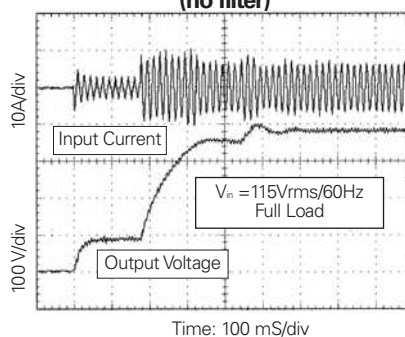
IX. Harmonic Distortion



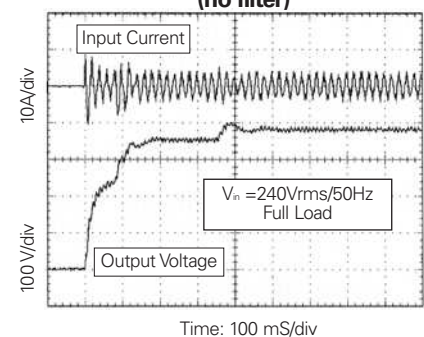
X. Inrush Current & Turn-on Time



XI. Inrush Current vs. Output Voltage (no filter)



XII. Inrush Current vs. Output Voltage (no filter)

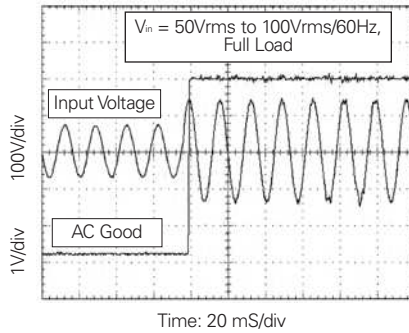




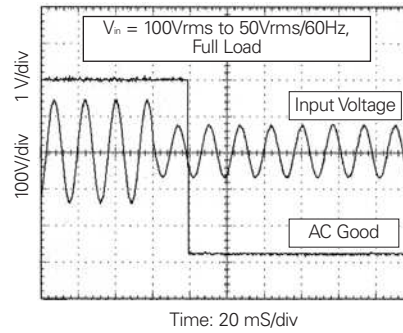
PERFORMANCE CHARACTERISTICS

PF500 / PFC500

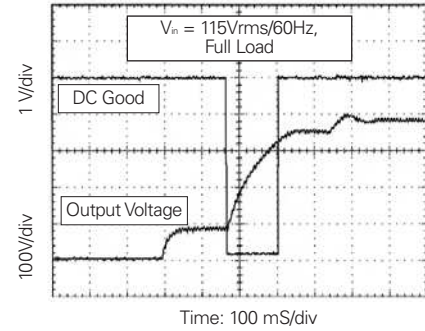
XIII. AC Good (Turn on)



XIV. AC Good (Turn off)



XV. DC Good (Turn on)



XVI. DC Good (Turn off)

