



POWERSTAX FP Series 1000W & 600W Power Factor Correction Modules

Outline Product Specification

FEATURES

- ❑ High Efficiency of >95%
- ❑ Conforming to IEC-1000-3-2
- ❑ Standard “full brick” package (116.8 x 61 x 12.7mm)
- ❑ 1,000W and 600W versions
- ❑ Voltage input range 85Vrms - 264Vrms
- ❑ Typical Power Factor of 0.99
- ❑ External synchronisation facility
- ❑ Enable Signal for downstream converters
- ❑ Operating Temperature -25°C to +100°C
- ❑ Thermal protection & Inrush Current Limiting
- ❑ Overvoltage Protection
- ❑ DC OK signal provides early warning of mains failure

General Specifications

Parameter	Conditions	APC-FP06			APC-FP10			Unit
		Min	Typ	Max	Min	Typ	Max	
Length			116.0			116.0		mm
Width			61			61		mm
Height			12.7			12.7		mm
Thermal resistance	Base to heatsink, fitted with thermal pad		0.1			0.1		°CW
Weight	(Approx)		170			170		gms

Parameter	Conditions	APC-FP06			APC-FP10			Unit
		Min	Typ	Max	Min	Typ	Max	
Overtemperature Shutdown		100	105	110	100	105	110	°C
Isolation voltage (to base)	Complies with basic insulation requirements	1500			1500			Vrms
Isolation capacitance	to base		800			800		pF
Isolation resistance	to base		100M			100M		Ohms
Agency approvals	CE (LVD) , others per customer requirement							

Absolute Maximum Ratings

Parameter	Conditions	APC-FP06			APC-FP10			Unit
		Min	Typ	Max	Min	Typ	Max	
Input voltage		0		264	0		264	Vrms
Input voltage	< 1 sec			300			300	Vrms
SYNC to -Vout		-1.2		7	-1.2		7	V
ENABLE to -Vout		-0.3		16	-0.3		16	V
+Vout to -Vout		-0.5		425	-0.5		425	V
DC OK to -Vout		-0.3		16	-0.3		16	V
Vaux to -Vout		-0.3		16	-0.3		16	V
Isolation voltage (to base)		1500			1500			Vrms
Storage temperature		-40		125	-40		125	°C
Operating temperature		-40		100	-40		100	°C
Pin soldering temperature	< 5 sec wave solder		260			260		°C
Pin soldering temperature	< 7 sec hand solder		390			390		°C

Range

Model Reference	Input Voltage (V)	Output Voltage (V)	Output Power (W)
FP10-230-C38	230Vac	380Vdc	1,000
FP06-110-C38	110/230Vac	380Vdc	600



FULL Approval information upon request.



General Specifications

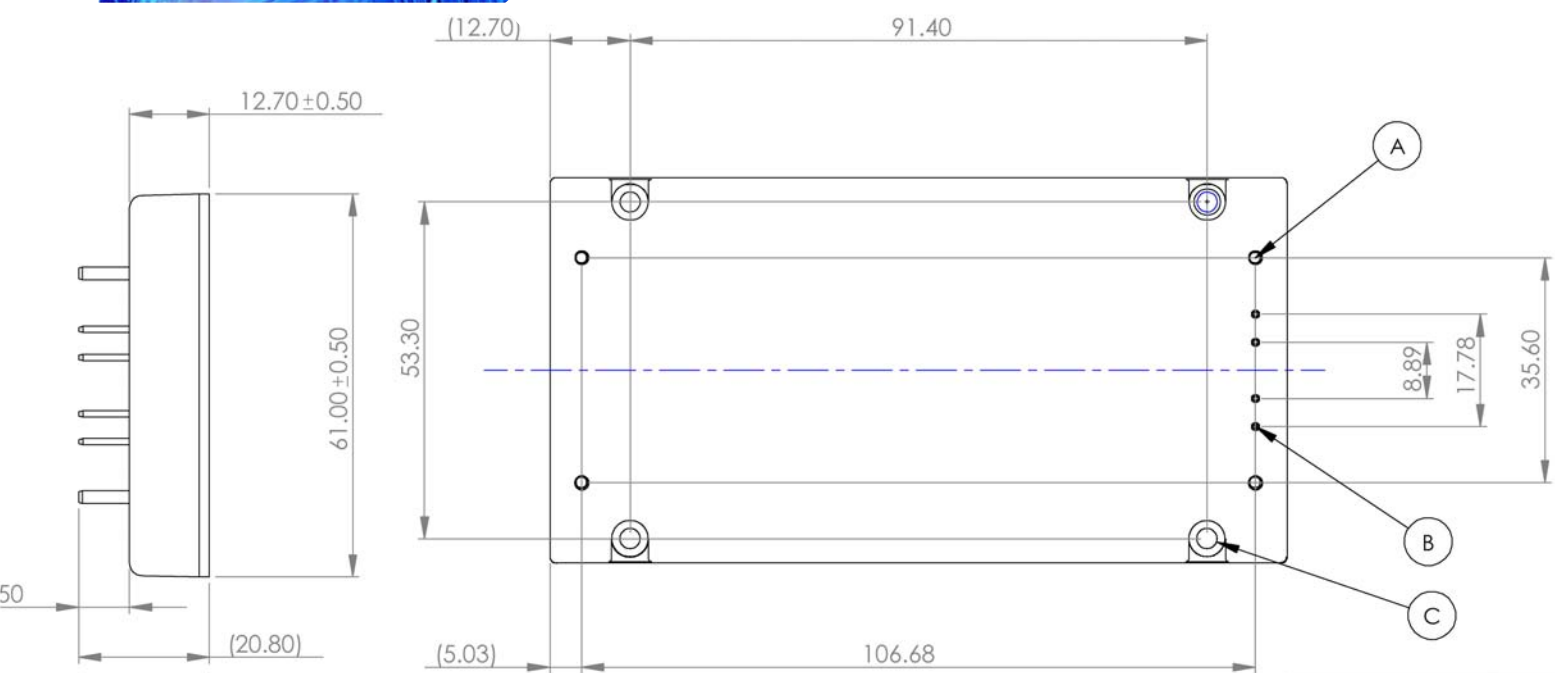
Parameter	Conditions	FP06			FP10			Unit
		Min	Typ	Max	Min	Typ	Max	
Operating input voltage		85		264	170		264	Vrms
Input surge Limiting				20			20	A
Operating input current	110Vrms			6.2				Arms
	230Vrms			2.9			4.9	
Output voltage setpoint	230Vrms, full load	372.4	380	387.6	372.4	380	387.6	V
Output OVP setpoint				425			425	V
Output current	At 100°C baseplate temperature	0		1.58	0		2.63	A
Switching Frequency			150			150		KHz
Efficiency	110V Nominal input, 25°C base		90			-		%
	230V Nominal input, 25°C base		95			95		

Parameter	Conditions	FP06			FP10			Unit
		Min	Typ	Max	Min	Typ	Max	
Undervoltage turn-on	Increasing input voltage		85			170		Vrms
Undervoltage turn-off	Decreasing input voltage		78			156		Vrms
Synchronisation Frequency		165		180	165		180	KHz

Parameter	Conditions	FP06			FP10			Unit
		Min	Typ	Max	Min	Typ	Max	
Output Power	FP10 (max power de-rated at 6.7WV from 200V input to 800W at 170Vrms) FP06 (max power de-rated at 6.7WV from 100V input to 500W at 85Vrms) Low to high input voltage, and	0		600	0		1000	W
Line regulation & Load regulation	10% load to full load	370		400	370		400	V
Ripple	1000uF load capacitor		6	10		10	15	Vp-p
Enable Threshold	Vout rising		360			360		V
	Vout falling		225			225		
DC OK Threshold	Vout rising		360			360		V
	Vout falling		350			350		
Vaux output		13.5	14.5	15.5	13.5	14.5	15.5	V
Vaux current		0		10	0		10	mA

Note: This power module can be used in a wide variety of applications. To preserve maximum flexibility, internal fusing is not included. However, to achieve maximum safety and system protection, an inline fuse must be used. The safety agencies require a normal-blow, DC fuse with a maximum rating of 20A. The same type fuse with a lower rating can be used in practice.

Mechanical Outline



Exceeding absolute maximum ratings may cause permanent damage and may reduce reliability. Information and specifications contained in this data sheet are believed to be correct at the time of publication. However, Powerstax accept no responsibility for consequences arising from printing errors or inaccuracies. Specifications are subject to change without notice.



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May 2005