

PFC Series



Power
Factor
Correction

The AZ-PFC Series is a power factor correction module with full range AC input voltage, high power density and high efficiency. Function integration design with no need for any peripheral circuit, simplifies operation, greatly shortening customers' power system development cycle, thermal design and reliability verification cycle. Digital design provides powerful monitoring and alarming functions related to input voltage, output voltage, ambient temperature and fan speed.

FEATURES:

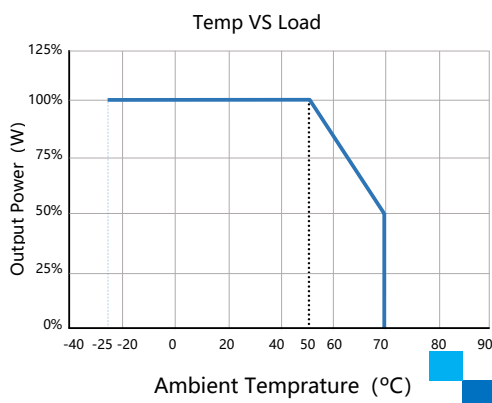
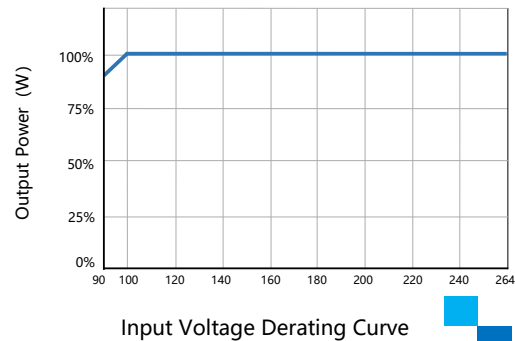
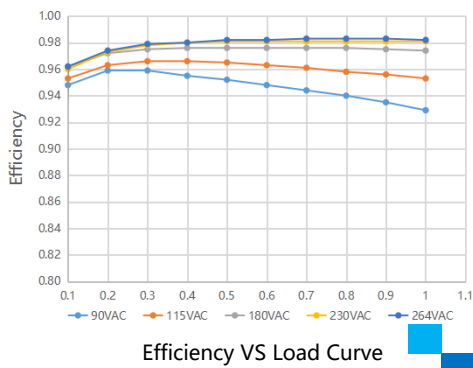
- Universal AC input
- Efficiency up to 97%
- Power density up to 23.8 W/In.³
- Various parameter monitoring
- Modbus-RTU communication protocol
- One external temperature measurement
- Intelligent fan control & Monitor
- Easy to Install & use

MODEL	AZ1200-PFC/E	AZ1500-PFC/E	AZ3000-PFC/E
DC Voltage Rated	382V		
Rated Current	3.51A	4.4A	8.8A
Rated Power (1)	1340W	1680W	3360W
Input Voltage	90~264V AC		
Efficiency(Typ)	97%	97.5%	96.5%
<small>Note</small> All parameters not specially mentioned are measured at 230VAC input, full load, 25°C of ambient temperature. 1.De-rating may apply in low input voltage. Please check the de-rating curve for more details.			

	Min	Typ	Max	Units	Notes & Conditions
Input Specifications					
AC Input	90	-	264	Vac	Normal input 115VRMS/230VRMS
DC Input	120	-	375	Vdc	
Operating Frequency (1)	47	-	63	HZ	50/60HZ Typ
Input Current	8	-	22	A	264/90 VAC
Input Fuse	25			A	Each line, Slow acting
Inrush Current	25			A	115VAC,25°C cold start
	50			A	230VAC,25°C cold start
Power Factor	-	0.98	-		115VAC,full load
	-	0.98	-		230VAC,full load
Static Power consumption	-	-	5	W	25°C
Equipment class	Class I				
Note 1.Contact factory for 400Hz application					
Output Specifications					
Output Voltage Rated	382			Vdc	
Output Voltage Tolerance	±1			%	No Load
Output Ripple&Noise (1)	-	8	-	Vdc	115VAC,Full load,Pk-Pk
	-	9	-	Vdc	230VAC,Full load,Pk-Pk
Efficiency	-	94.5	-	%	115VAC,Full load
	-	97.5	-	%	230VAC,Full load
Hold-up time	-	6	-	ms	115VAC 0°
	-	6	-		230VAC 0°
Fall Time	-	225	-	ms	115VAC 0°
	-	225	-		230VAC 0°
Line Regulation (2)	-	0.5	-	%	90VAC~264VAC,Full load
Load Regulation	-	0.5	-	%	0%~100% load 230VAC
Stand-by Power	-	1.2	-	W	12V,100mA
VPP Output Ripple&Noise (1)	160			mV	
Note. Do not short or reversely connect +V and -V. Doing this can cause damage to the power supply. 1.Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uF & 47uF parallel capacitor 2.De-rating may apply in low input voltage. Please check the de-rating curve for more details.					
Alarm Specifications					
Output UVA	360			Vdc	Under voltage alarm
Output OVA	420			Vdc	Over voltage alarm
Input UVA	85/120			Vac/Vdc	Under voltage alarm
Input OVA	275/389			Vac/Vdc	Over voltage alarm, auto recovery below 260VAC
AC FAIL	50			ms	
Over temperature alarm					
Ambient temp	53			°C	
Heat-Sink temp	95			°C	
Measurement					
AC voltage measurement accuracy	$\leq \pm (V_{in} * 1\% + 0.5V) / V_{in}$			%	
AC voltage measurement resolution	10mV			mV	
AC voltage measurement maximum refresh rate	2.5 Times/Sec				
AC voltage measurement range	80~310V AC/113~450V DC			AC/DC	
Output voltage measurement accuracy	$\leq \pm (V_{out} * 1\% + 0.5V) / V_{out}$			%	
Temperature measurement accuracy	1			°C	
Temperature display resolution	0.1			°C	
Fan speed measurement					
Cooling Specifications (Forced Air)					
Fan Speed	0~9000			RPM	Intelligent fan control
Fan Noise Level	48.7			dB	Fan Independent testing
Mechanical					
Weight	1060			g	
Size (LxWxH)	280*65*63.5			mm	Reference Mechanical Drawing
Warranty	3			Years	

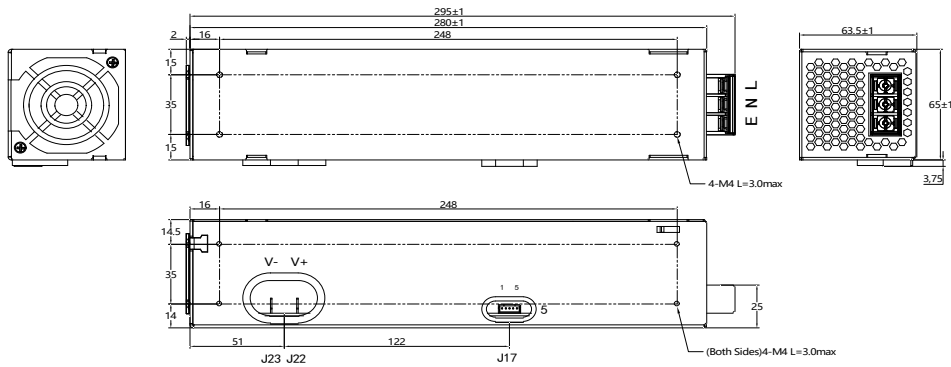
Environmental Specifications			
Temperature			
Operating	-25~70	°C	Contact factory for -40°C application
Storage	-40~85	°C	
Humidity			
Operating	10~90	%	Relative,Non-condensing
Storage	5~95	%	Relative,Non-condensing
Altitude			
Operating	-200~3000	M	
Non-Operating	-200~5000	M	
Communication Specifications			
Communication port	12V TTL, Non-isolation		
Baud rate	1200~19200	Bit/S	Default 2400 Bit/S
Safety			
Leakage Current	1	mA	Vin=264VAC,Fi=50Hz(Input-Output)
Safety Agency	Meet IEC-62368		

DE-Rating Curve



Mechanical Drawings

unit:mm



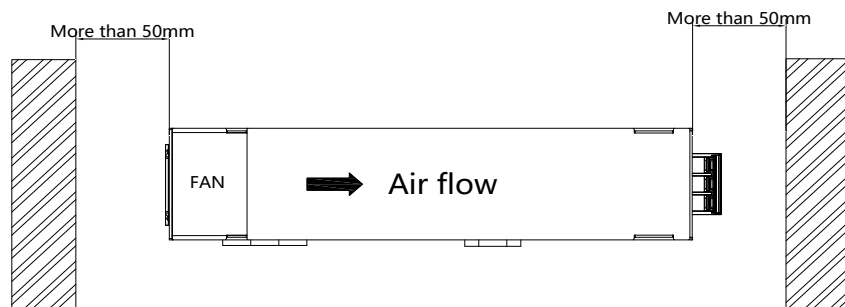
Pin	Function	Manufacture	Housing	Contact	Details
CN1	L	JST	FN2-4 RBC2-4		12-14 AWG
	N				
	E				
J22	+	TE	3-350819-2		TAB SIZE 6.35x0.81mm
J23	-				
J17	1	JST/CJT	PHR-5/A2001H-5P	SPH-002T-P0.5S/A2001-TP	24~28 AWG
	2				
	3				
	4				
	5				

Note

Please connect safety ground to E CN1 the unit.

Mounting Method

1. There are ventilating holes on the front and back side panels, Do not obstruct; allow 50mm at least for air flow.
2. The Maximum allowable penetration of screw is 4mm. Incomplete threading should not be penetrated.
3. Recommended the torque of mounting screw: M4 screw: 1.27N · m (13.0kgf · cm)



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