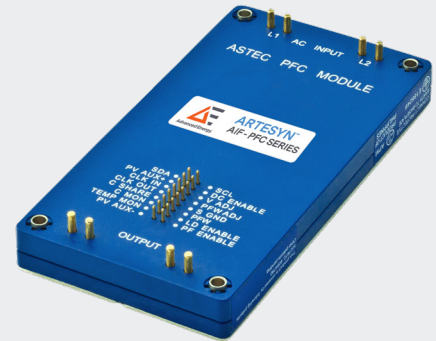


ARTESYN AIF-PFC SERIES

1600 Watts



Advanced Energy's Artesyn AIF04ZPFC series full-brick power factor correction module accepts a wide 85 to 264 VAC input and presents a unity power factor. It can also be configured to accept a DC input within the range 120 to 370 VDC. Rated at 1,600 watts, the module has a high conversion efficiency of 95% and provides a nominal non-isolated output voltage of 380 Vdc. Featuring an industry-standard 2.4 x 4.6 full-brick form factor and a height of only 0.5 inch, they have a power density of 290 watts per cubic inch.

AT A GLANCE

Total Power:

1600 Watts
120 to 370 VDC (Configurable)

Input Voltage:

85 to 264 VAC

of Outputs:

Single

SPECIAL FEATURES

- Unity power factor
- High efficiency - up to 95%
- Universal input voltage and frequency range
- Up to 1600 W output power
- Positive and Negative enable function
- Parallelable with accurate current sharing
- <10% harmonic distortion conforming to IEC1000-3-2 Compliance
- 100°C baseplate operating temperature
- DC Input option

- Power fail warning signal
- Enable output to control DC-DC Converter
- EEPROM data storage via I2C Interface
- External inrush current limited protection
- Power density up to 290 W/in³
- Two year warranty

SAFETY

- UL 62368 Recognized
- cUL 62368 Recognized
- TUV EN62368 Licensed
- UKCA Mark



ELECTRICAL SPECIFICATIONS

Input	
Input range	85 to 264 VAC / 120 to 370 VDC (configurable)
Input surge	290 Vac / 1s
Input Frequency	50/60 Hz
Efficiency	95% @ 230 VAC, 1600 W (typical)
Total Harmonic Distortion	Less than 10%
Power Factor	0.99 typical (Po $\pm$ 500 W); 0.97 typical (Po $\pm$ 1000 W)
Output	
Output Voltage	380V typical (Io = 4.2 A / Vi > 180 Vac); 393 V typical (Io = 0A) Note: Vin peak must always be lower than Vout
Current Share Accuracy	10% max
Overvoltage Protection	430 max
Power Limit for AC input for DC input	Vin = 85 VAC, Pmax = 1000W; Vin = 230 VAC, Pmax = 1600W Case; Vin = 370 VDC, Pmax = 1600W
Isolation	
Power Fail Warning	Direct drive output to opto-isolator
Power Fail Warning Adjust	195 to 355 VDC adjustable
LD Enable	Direct drive output to opto-isolator
PFC Enable	TTL compatible
Voltage Adjust	76% to 100% Vo
DC Input Enable	
Clock Input (external sync)	6 Vp-p typical @ 1 MHz $\pm$ 5%
Clock Output (int. clock)	6 Vp-p typical @ 1 MHz $\pm$ 5%
Temperature Monitor Output	10 mV/°C
Current Monitor Output	0 to 1 mA (1 mA = 4.2 A output)
I ² C Interface	

Notes: Nominal values apply with sense pins disconnected and other control pin unconnected.

ENVIRONMENTAL SPECIFICATIONS

Operating temperature	-20 °C to +100 °C (baseplate temperature)
Startup temperature	-40 °C to +100 °C (baseplate temperature)
Storage temperature	-40 °C to +120 °C
Overtemperature protection	120 °C max
MTBF	1million hours

ORDERING INFORMATION

Model Number	Description	Notes
AIF04ZPFC-01L	1600 W Low Profile PC Module	For parallel operation the total input current must be <16Arms.
AIF04ZPFC-02L	1600 W Low Profile PC Module	Designed for parallel operation where the total input current >16Arms, requires external rail rectifiers.
AIF04ZPFC-01NL		Negative Enable
AIF04ZPFC-02NL		Negative Enable

1. For Non-thread hole, add suffix "-NT".

PIN ASSIGNMENTS

Input (AC)	Output	Control Pins
31. L1	21. Positive	1. PV Aux -
32. L1	22. Positive	2. Temp Mon
33. L2	23. Negative	3. C Mon
34. L2	24. Negative	4. C Share
		5. Clk Out
		6. Clk In
		7. PV Aux +
		8. SDA
		9. SCL
		10. DC Enable
		11. V Adj
		12. PFW Adj
		13. S Gnd
		14. PFW
		15. LD Enable
		16. PF Enable

MECHANICAL DRAWINGS

