

# 1600 Watts

Total Power: 1600 Watts  
 Input Voltages: 85 - 264VAC  
 No. of Outputs: Single

## AIF - PFC Series



### Special Features

- Unity power factor
- High efficiency - up to 95%
- Universal input voltage and frequency range
- Up to 1600W 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 I<sup>2</sup>C Interface
- External inrush current limited protection
- Power Density up to 290W/in<sup>3</sup>

### Environmental

Operating temperature  
 -40°C to +100°C (baseplate temperature)  
 Storage temperature: -40°C to +120°C  
 Overtemperature protection: 120°C max  
 Calculated MTBF: 450K hours

### Safety

UL cUL 60950 Recognized  
 TUV EN60950 Licensed

### Electrical Specs

#### Input

Input range 85 - 264VAC / 120 - 370VDC  
 (Configurable)  
 Input Surge 290VAC / 1s  
 Input Frequency 50/60 Hz  
 Efficiency 95% @230Vac, 1600W (Typ)

Total Harmonic Distortion Less than 10%  
 Power Factor 0.99 typical (Po ≥ 500W);  
 0.97 typical (Po ≥ 1000W)

#### Control

Power Fail Warning Direct drive output to opto-isolator  
 Power Fail Warning Adjust 195 to 355Vdc adjustable  
 LD Enable Direct drive output to opto-isolator  
 PFC Enable TTL compatible (Pos and Neg)  
 Voltage Adjust 76% to 100% Vo  
 DC Input Enable  
 Clock Input (external sync) 6Vp-p typical @ 1MHz ± 5%  
 Clock Output (int. clock) 6Vp-p typical @ 1MHz ± 5%  
 Temperature  
 Monitor Output 10mV/°C  
 Current Monitor Output 0 to 1mA (1mA = 4.2A output)  
 I<sup>2</sup>C Interface

#### Output

Output Voltage 380V typical (Io = 4.2A / Vi > 180Vac)  
 393V typical (Io = 0A)  
 Current Share Accuracy 10% max  
 Overvoltage Protection 430 max  
 Power Limit for AC input Vin = 85Vac, Pmax = 1000W  
 Vin = 230Vac, Pmax = 1600W

for DC input Vin = 370Vdc, Pmax = 1600W

#### Not

Nominal values apply with sense pins connected and other control pin unconnected.

Specifications subject to change without notice.

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## Ordering Information

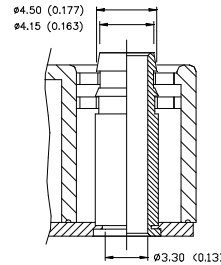
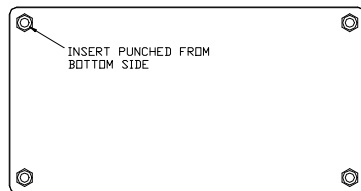
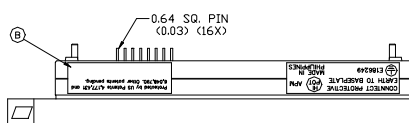
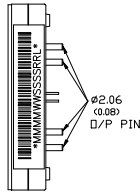
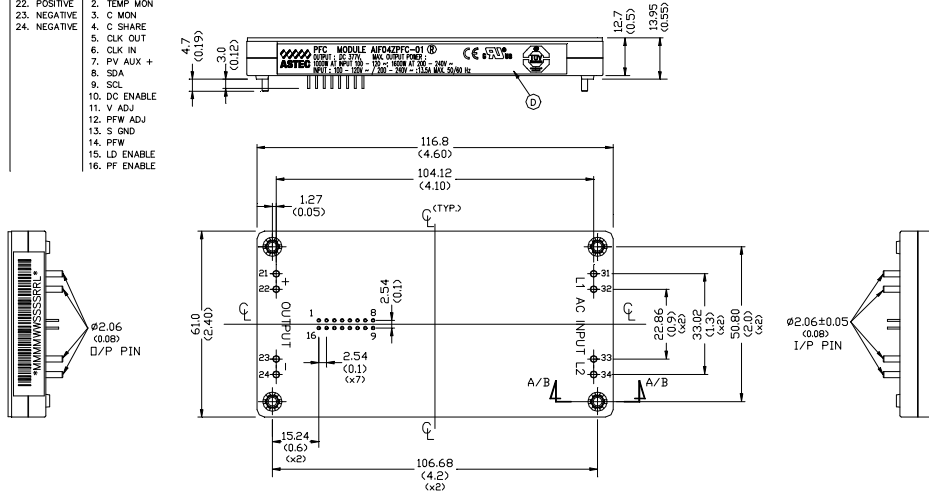
Model Number	Description	Notes
AIF04ZPFC-01	1600W Low Profile PFC Module	For parallel operation the total input current must be < 16Arms. Designed for parallel operation where the total input current >16Arms, requires external rail rectifiers.
AIF04ZPFC-02	1600W Low Profile PFC Module	
AIF04ZPFC-01N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

Note: 1. For Non-thread insert, add suffix "NT"

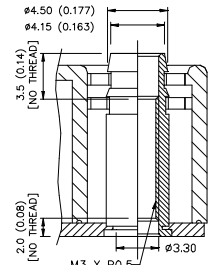
## Pin Assignments

### Pin Assignments

INPUT(AC)	OUTPUT(DC)	CONTROL PIN
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



SECTION A-A  
**AIF04ZPFC-xxxNT**



SECTION B-B  
**AIF04ZPFC-xxx**

AIF-PFC Series

Astec Integrated Standard