## **AIF Series**

600 Watts

**Total Power: 600 Watts** 

(12V@50Amps)

Input Voltage: 300V # of Outputs: Single

## **Special Features**

- 600W Continuous power at 100°C baseplate temperature
- 108W/in³ (6.6W/cm³)
- High efficiency up to 90%
- Low output ripple and noise
- Positive and Negative enable function
- Excellent transient response
- OVP, OCP, V Adj control with ALP<sup>TM</sup> analog mode linear control, or through I<sup>2</sup>C bus with digital mode control.
- Paralleable with accurate current sharing
- EU Directive 2002/95/EC

## Safety

UL 60950 Recognized cUL 60950 Recognized TUV EN60950 Licensed





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# **Electrical Specifications**

· ·			
Input			
Input range	250 - 420 VDC		
Input surge	450V / 100ms		
Efficiency	90%@5.0V (Typical)		
Output			
Load Regulation	0.2% typical down to no load		
Line Regulation	0.2% typical		
Noise / Ripple	100mV typical (below 5V); 2% typical (5V and above)		
Remote sense	Up to 0.5V		
Output voltage adjust range	+/-20% for 5V and above; +10%/ -50% for below 5V		
Transient Response	$5\%$ max for 3.3V and above, 150mV for 1.8V, deviation with 25% to 75% full load 250 $\mu S$ (max) recovery		
Current Share Accuracy	3% typical		
Overvoltage Protection	115% Vo (nominal)		
Current Limit	115% lo maximum		
Control			
Voltage Adjust	80 to 120% Vo linear programming for 12V, 15V, 24V, 48V 50% to 110% for 1.8V - 5.0V		
Enable	TTL compatible (positive & negative enable options)		

20 to 100% lo linear programming or digital mode control

Clock Input (external sync) 3.3 to 5.5Vp-p @ 800KHz ±10%

Clock Output (internal clock) 4.5Vp-p typical@  $800 \text{KHz} \pm 5\%$ Power Good Identification High (Vo) = power good Temperature Monitor Output 10 mV/°K (2.73 =  $0 ^{\circ}$ C)

Current Monitor Output 0 to 1mA (1mA = 100% I<sub>o rated</sub>)

Over Voltage Protection 110 to 150% Vo linear programming by voltage or resistor,

Adjust or digital mode control

Notes

Nominal values apply with sense pins connected and other control pin unconnected. ALP: Astec Linear Programming



Current Limit Adjust



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# **Environmental Specifications**

Operating temperature -20°C to +100°C (case temperature)
Start up temperature -40°C to +100°C (case temperature)

Storage temperature -40°C to +125°C Overtemperature protection 110°C max

Ordering Information			
Input Voltage	Output Voltage	Efficiency	Model Number
300V	1.8V @ 120A	80% (Typ)	AIF120Y300
300V	3.3V @ 120A	87% (Typ)	AIF120F300
300V	5.0V @ 80A	90% (Typ)	AIF80A300
300V	12V @ 50A	90% (Typ)	AIF50B300
300V	15V @ 40A	90% (Typ)	AIF40C300
300V	24V @ 25A	90% (Typ)	AIF25H300

- 1. For Negative enable, add suffix "-N".
- 2. For Non-thread hole, add suffix "-NT".
- 3. For RoHS 6, add suffix "-L". Default is RoHS 5.

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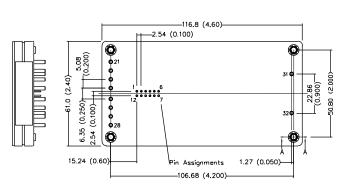
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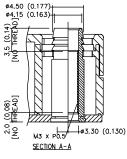
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# BASEPLATE (CONNECT TO PROTECTIVE EARTH)





Pin Assignments

32. Negative 22. Positive

12.7 (0.50) 13.96 (0.549)

Input (AC) Output (DC) Control Pins

2. Temp Mon

3. C Mon

4 C Share

9. OVP Adj

10, V Adi

11 Enable

12. -Sense

31. Positive 21. Positive 1. +Sense

23. Positive

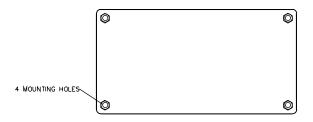
24. Positive

25. Negative 5. Clk Out

28. Negative 8. C Lim Adj

26. Negative 6. Clk In 27. Negative 7. PG/ID





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