

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™ analog mode linear control, or through I²C bus with digital mode control.
- Paralleable with accurate current sharing
- EU Directive 2002/95/EC compliant for RoHS

Safety

UL 60950 Recognized
cUL 60950 Recognized
TUV EN60950 Licensed
CE CE Mark



Rev. 05.23.07
AIF Series
1 of 2

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 μ S (max) recovery
Current Share Accuracy	3% typical
Overvoltage Protection	115% Vo (nominal)
Current Limit	115% Io 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)
Current Limit Adjust	20 to 100% Io linear programming or digital mode control
Clock Input (external sync)	3.3 to 5.5Vp-p @ 800KHz $\pm$ 10%
Clock Output (internal clock)	4.5Vp-p typical@ 800KHz $\pm$ 5%
Power Good Identification	High (Vo) = power good
Temperature Monitor Output	10mV/°K (2.73 = 0°C)
Current Monitor Output	0 to 1mA (1mA = 100% Io rated)
Over Voltage Protection Adjust	110 to 150% Vo linear programming by voltage or resistor, or digital mode control

Notes

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



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

Input Voltage	Output Voltage	Efficiency	Model Number
300V	1.8V @ 120A	80% (Typ)	A1F120Y300
300V	3.3V @ 120A	87% (Typ)	A1F120F300
300V	5.0V @ 80A	90% (Typ)	A1F80A300
300V	12V @ 50A	90% (Typ)	A1F50B300
300V	15V @ 40A	90% (Typ)	A1F40C300
300V	24V @ 25A	90% (Typ)	A1F25H300

- | Input (AC) | Output (DC) | Control Pins |
|--------------|--------------|--------------|
| 31. Positive | 21. Positive | 1. +Sense |
| 32. Negative | 22. Positive | 2. Temp Mon |
| | 23. Positive | 3. C Mon |
| | 24. Positive | 4. C Share |
| | 25. Negative | 5. Clk Out |
| | 26. Negative | 6. Clk In |
| | 27. Negative | 7. PG/ID |
| | 28. Negative | 8. C Lim Adj |
| | | 9. OVP Adj |
| | | 10. V Adj |
| | | 11. Enable |
| | | 12. -Sense |

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