POWER

AIF Series

600 Watts

Data Sheet

Total Power: 600 Watts (12 V @ 50 A)
Input Voltage: 300 V
# of Outputs: Single

SPECIAL FEATURES

- 600 W continuous power at 100 °C baseplate temperature
- 108 W/in³ (6.6 W/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
- Two year warranty

SAFETY

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

Electrical Specifications

Input	
Input range	250 - 420 Vdc
Input surge	450 V / 100 ms
Efficiency	90% @ 5.0 V (Typical)
Output	
Load regulation	0.2% typical down to no load
Line regulation	0.2% typical
Noise ripple	100 mV typical (below 5 V); 2% typical (5 V and above)
Remote sense	Up to 0.5 V
Output voltage adjust range	+/-20% for 5V and above; +10%/-50% for below 5 V
Transient response	5% max for 3.3 V and above, 150 mV for 1.8V , deviation with 25% to 75% full load 250 µS (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 12 V, 15 V, 24 V, 48 V 50% to 110% for 1.8 V - 5.0 V
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 5.5 Vp-p @ 800 KHz ±10%
Clock output (internal clock)	4.5 Vp-p typical@ 800 KHz ±5%
Power good identification	High (Vo) = power good
Temperature monitor output	10 mV/°K (2.73 = 0°C)
Current monitor output	0 to 1 mA (1 mA = 100% Io rated)
Overvoltage 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

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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

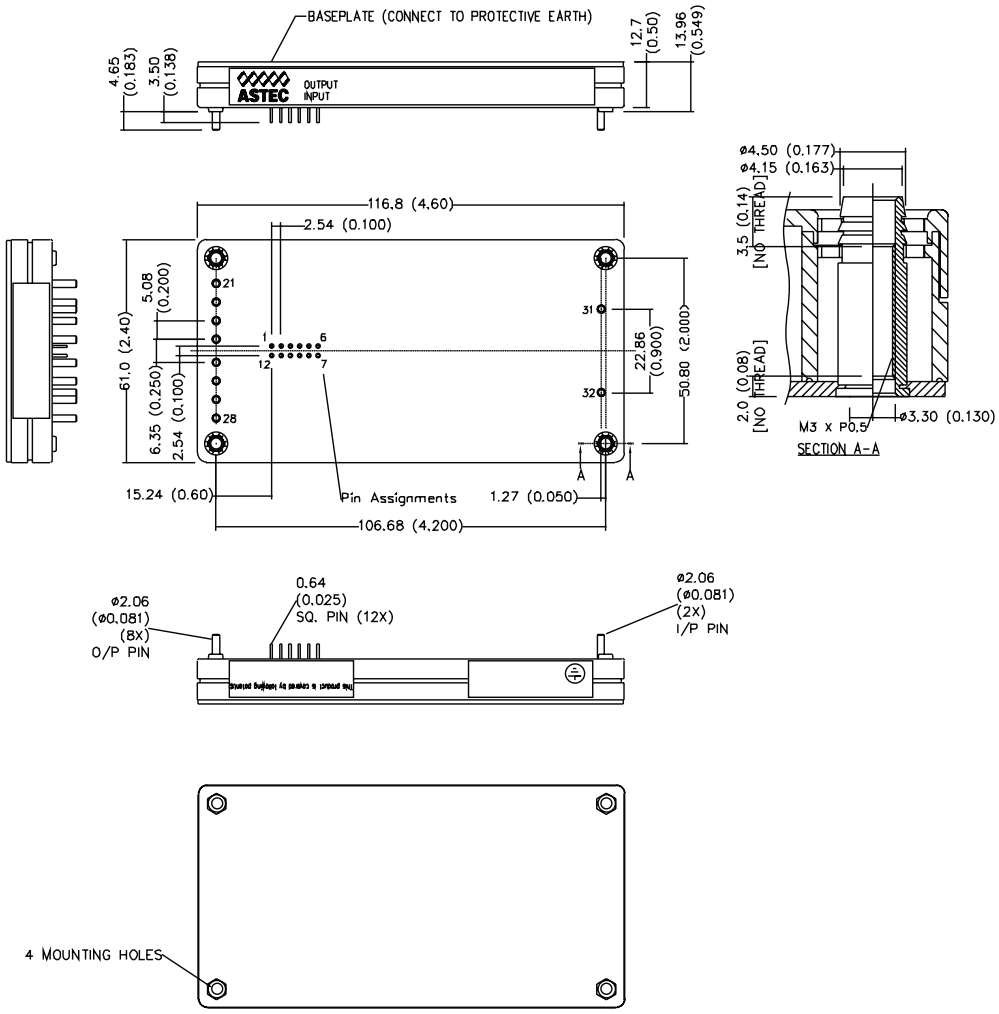
Input Voltage	Output Voltage	Efficiency	Model Number
300 V	1.8 V @ 120 A	80% (Typ)	AIF120Y300
300 V	3.3 V @ 120 A	87% (Typ)	AIF120F300
300 V	5.0 V @ 80 A	90% (Typ)	AIF80A300
300 V	12 V @ 50 A	90% (Typ)	AIF50B300
300 V	15 V @ 40 A	90% (Typ)	AIF40C300
300 V	24 V @ 25 A	90% (Typ)	AIF25H300

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.

Pin Assignments

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

Mechanical Drawings



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