

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

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 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 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 ±10% |
| Clock Output (internal clock) | 4.5Vp-p typical@ 800KHz ±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



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

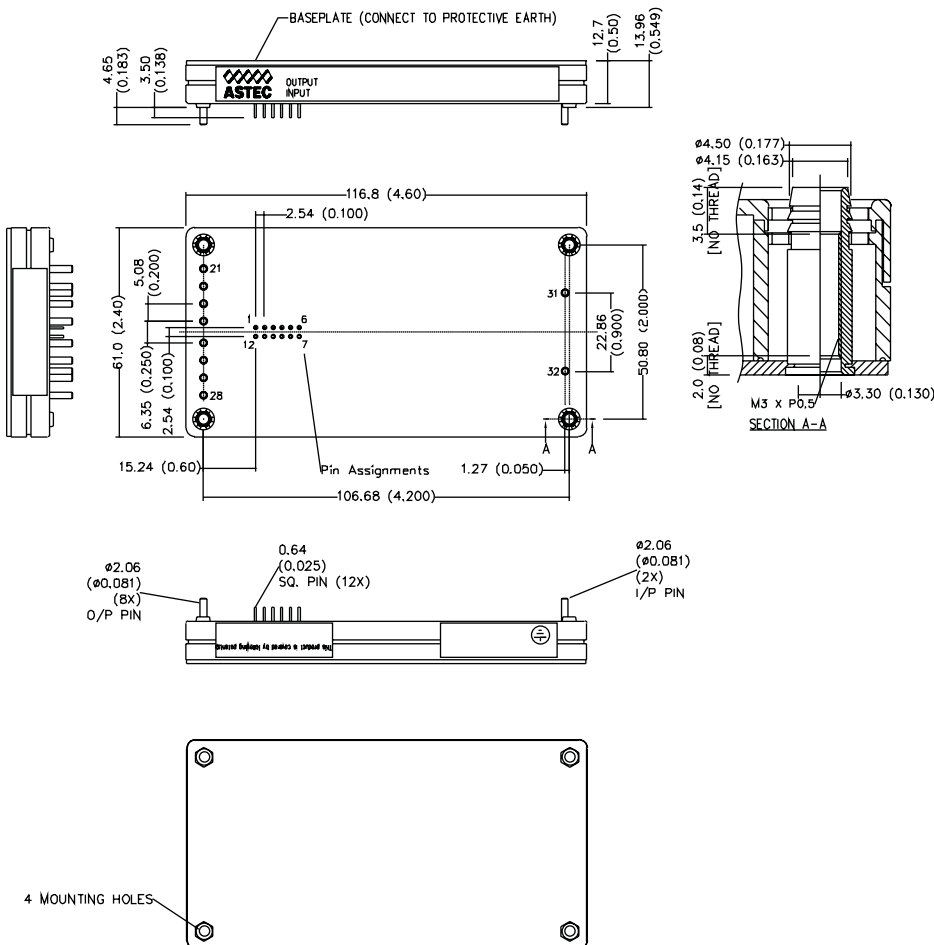
| Input Voltage | Output Voltage | Efficiency | Model Number |
|---------------|----------------|------------|--------------|
| 300V | 1.8V @ 120A | 80% (Typ) | AIF120Y300 |
| 300V | 3.3V @ 120A | 87% (Typ) | AIF120F300 |
| 300V | 5.0V @ 80A | 90% (Typ) | AIF80A300 |
| 300V | 12V @ 50A | 90% (Typ) | 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.

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 |

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