

## 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/in<sup>3</sup> (6.6W/cm<sup>3</sup>)
- 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 I<sup>2</sup>C 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 $\mu$ 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



## 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

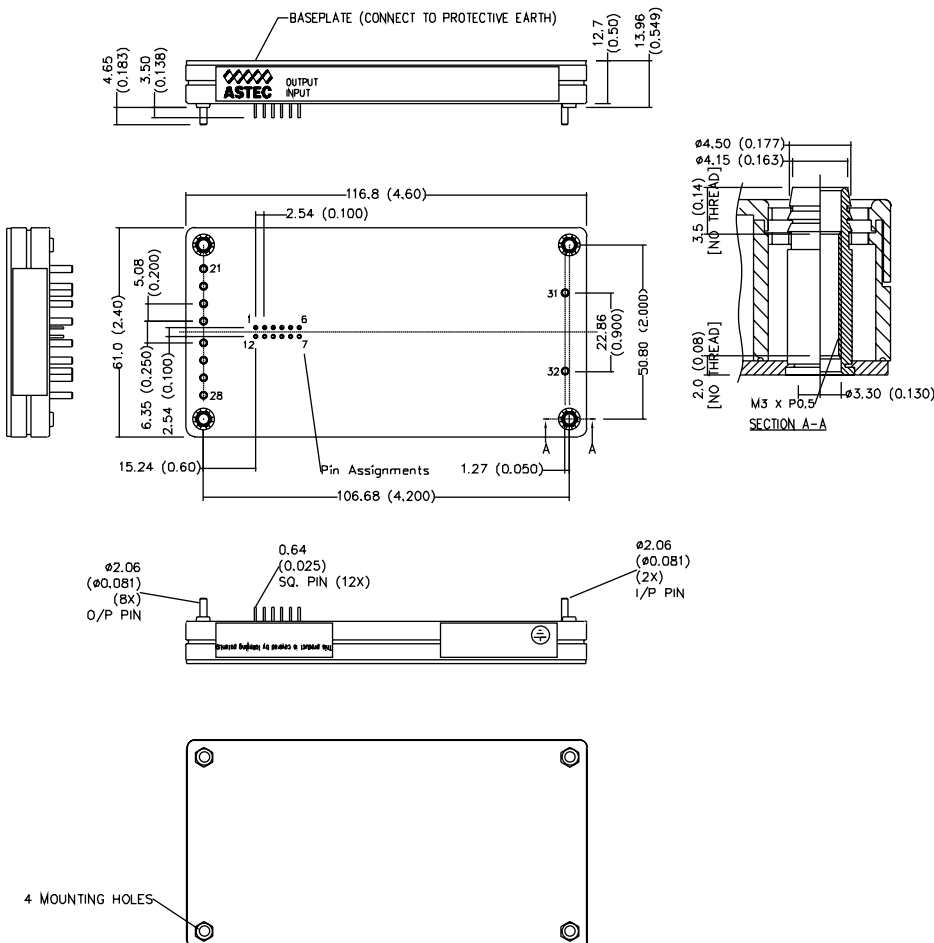
| Input Voltage | Output Voltage | Efficiency | Model Number |
|---------------|----------------|------------|--------------|
| 300V          | 1.8V @ 120A    | 80% (Typ)  | AIF120Y300   |
| 300V          | 3.3V @ 120A    | 87% (Typ)  | AIF120F300   |
| 300V          | 5.0V @ 80A     | 90% (Typ)  | AIF80A300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

### Mechanical Drawing



### Americas

5810 Van Allen Way  
Carlsbad, CA 92008  
USA  
Telephone: +1 760 930 4600  
Facsimile: +1 760 930 0698

### Europe (UK)

Waterfront Business Park  
Merry Hill, Dudley  
West Midlands, DY5 1LX  
United Kingdom  
Telephone: +44 (0) 1384 842 211  
Facsimile: +44 (0) 1384 843 355

### Asia (HK)

16th - 17th Floors, Lu Plaza  
2 Wing Yip Street, Kwun Tong  
Kowloon, Hong Kong  
Telephone: +852 2176 3333  
Facsimile: +852 2176 3888

For global contact, visit:

[www.astecpower.com](http://www.astecpower.com)

[www.artesyn.com](http://www.artesyn.com)

[technicalsupport@astec.com](mailto:technicalsupport@astec.com)

[technicalsupport@artesyn.com](mailto:technicalsupport@artesyn.com)

While every precaution has been taken to ensure accuracy and completeness in this literature, Emerson Network Power assumes no responsibility, and disclaims all liability for damages resulting from use of this information or for any errors or omissions.

### Emerson Network Power.

The global leader in enabling  
business-critical continuity.

- AC Power
- Connectivity
- DC Power
- Embedded Power**
- Inbound Power
- Integrated Cabinet Solutions
- Outside Plant
- Precision Cooling
- Site Monitoring and Services

[EmersonNetworkPower.com](http://EmersonNetworkPower.com)

Emerson Network Power and the Emerson Network Power logo are trademarks and service marks of Emerson Electric Co.  
©2005 Emerson Electric Co.

# Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Emerson Network Power:

[AIF80A300-NTL](#) [AIF80A300-L](#) [AIF80A300N-L](#) [AIF80A300N-NTL](#)