

# POWER

## AIF12W300

600 Watts

### Data Sheet

**Total Power: 600 Watts**  
**(48 V @ 12.5 Amps)**  
**Input Voltage: 300 V**  
**No. of Outputs: Single**

### SPECIAL FEATURES

- 600 W continuous power at 100 °C baseplate temperature
- 108 W/in<sup>3</sup> (6.6 W/cm<sup>3</sup>)
- High efficiency - 90% typical
- Low output ripple and noise
- Positive and Negative enable function
- Excellent transient response
- OVP, OCP, V Adj control with ALP™
- Paralleable with accurate current sharing
- Two year warranty

### ENVIRONMENTAL

- 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
- MTBF: TBD hours

### SAFETY

- UL cUL 60950 Recognized
- TUV EN60950 Licensed



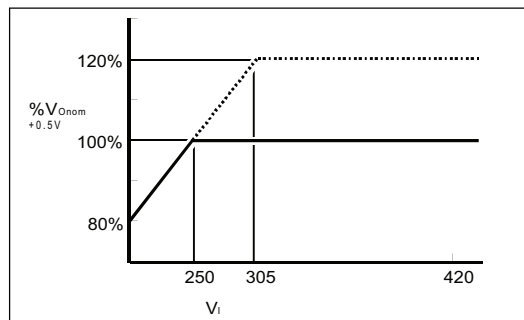
### Electrical Specifications

Input	
Input Range	250 - 420 VDC
Input Surge	500 V / 100 ms
Efficiency	90% typical
Output	
Load Regulation	400 mV typical down to no load
Line Regulation	200 mV typical
Noise / Ripple	480 mV typical
Transient Response	5% max, deviation with 25% to 75% full load, slew = 1 A/uS
Current Share Accuracy	3% typical, 5% max (± 80% of I <sub>o</sub> max)
Overtoltage Protection	125% +/-5% V <sub>o</sub> (nominal) - latch up
Current Limit	105% - 120% I <sub>o</sub> maximum - hiccup
Short Circuit Protection	150% maximum - hiccup

## Electrical Specifications

### Control

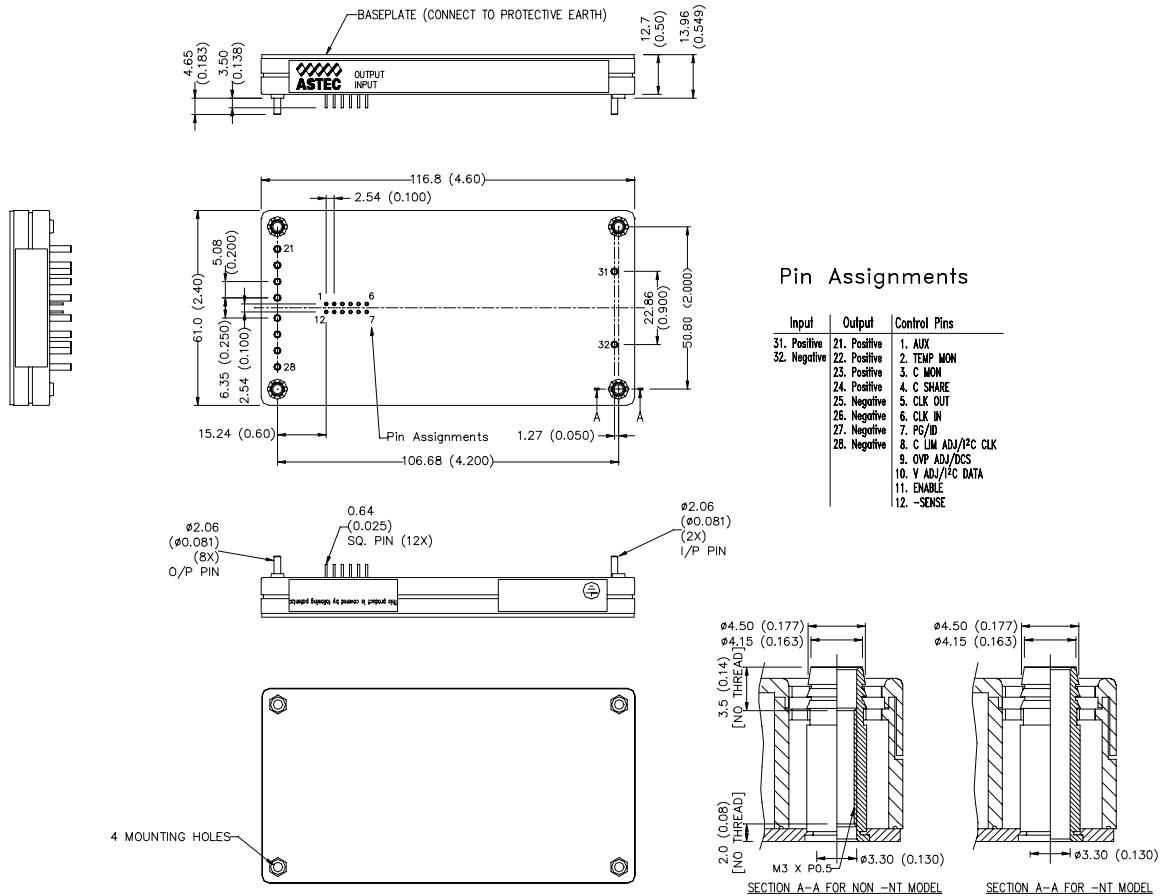
Voltage Adjust*	80 to 120% $V_o$ linear programming
Enable	TTL compatible (positive & negative enable options)
Current Limit Adjust	20 to 100% $I_o$ linear programming
Clock Input (external sync)	3.3 to 5.5 Vp-p @ 800 KHz $\pm$ 10%
Clock Output (internal clock)	4.5 Vp-p typical @ 800 KHz $\pm$ 5%
Power Good Identification	High ( $V_o$ ) = power good
Temperature Monitor Output	10 mV/ $^{\circ}$ K (2.73 = 0 $^{\circ}$ C)
Current Monitor Output	0 to 1 mA (1 mA = 100% $I_{o \text{ rated}}$ ) $\pm$ 0.1mA
Over Voltage Protection Adjust	120 to 150% $V_o$
Auxiliary power	1.2 V $\pm$ 1.5 V, 10 mA
Isolation	
I/O	3000 Vac (20 mA) for 1 min
I/B	2500 Vac
O/B	500 Vdc for 1 min



Ordering Information

Input Voltage	Output Voltage	Efficiency	Model Number	Notes
300 V	48 V @ 12.5 A	90% (Typ)	AIF12W300	Positive Enable
300 V	48 V @ 12.5 A	90% (Typ)	AIF12W300N	Negative Enable

Pin Assignments



Notes

1. Astec reserves the right to make changes to the information contained herein without notice and assumes no liability of its use and application.
2. -SENSE pin has to be connected to -Vo in parallel application, and is recommended to be connected to -Vo in stand alone application.

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