POWER

AIF12W300

600 Watts

Data Sheet

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



RoHS 6/6 COMPLIANT

SPECIAL FEATURES

- 600 W continuous power at 100 °C baseplate temperature
- 108 W/in³ (6.6 W/cm³)
- 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

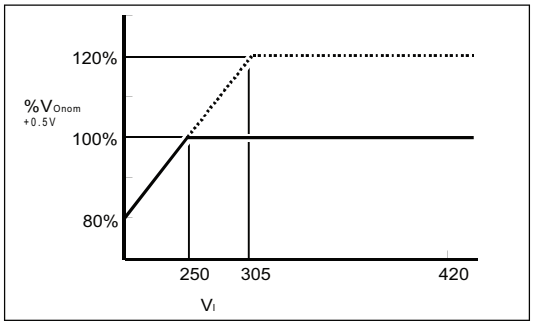
Electrical Specifications

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 (³ 80% of Io max)
Overvoltage Protection	125% +/-5% Vo (nominal) - latch up
Current Limit	105% - 120% Io maximum - hiccup
Short Circuit Protection	150% maximum - hiccup

ARTESYN™
EMBEDDED TECHNOLOGIES

Electrical Specifications

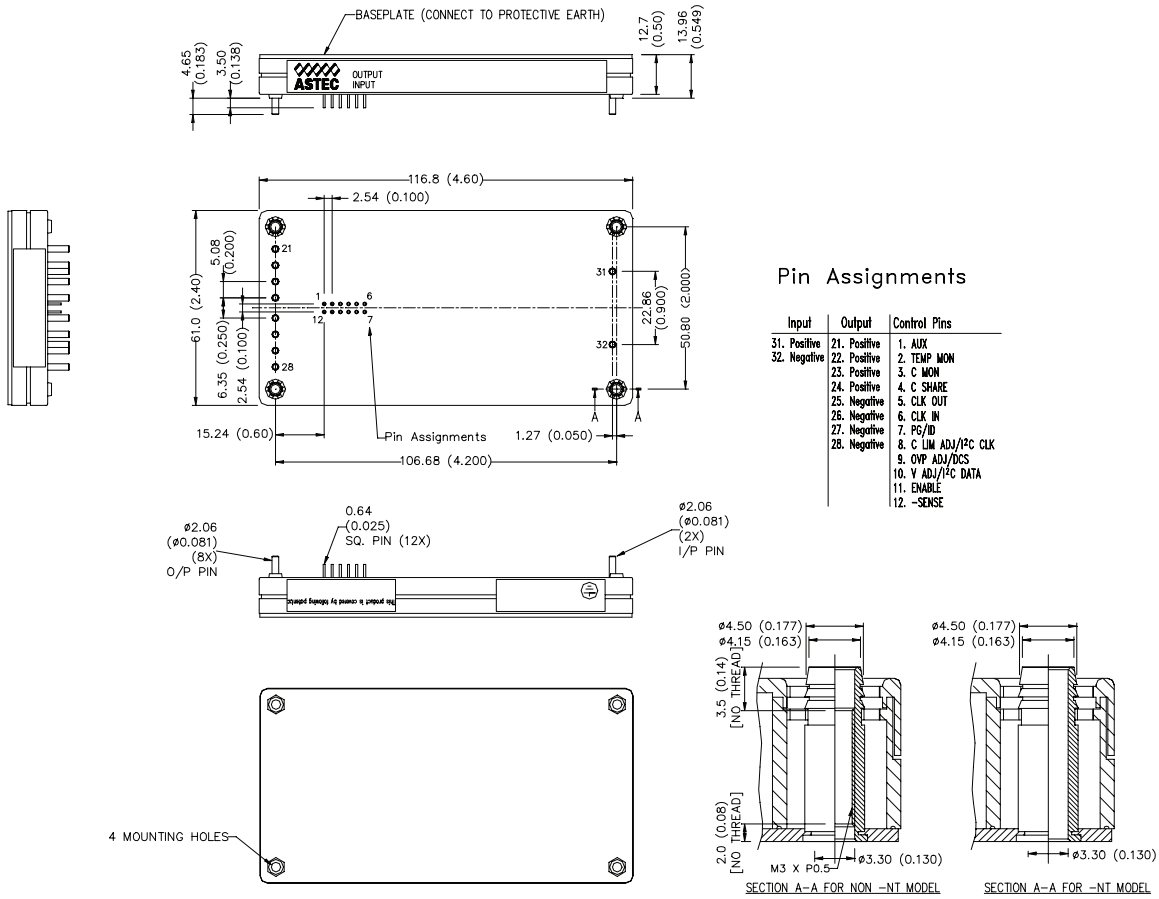
Control	
Voltage Adjust*	80 to 120% Vo linear programming
Enable	TTL compatible (positive & negative enable options)
Current Limit Adjust	20 to 100% Io linear programming
Clock Input (external sync)	3.3 to 5.5 Vp-p @ 800 KHz ± 10%
Clock Output (internal clock)	4.5 Vp-p typical @ 800 KHz ± 5%
Power Good 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% $I_{o\ rated}$) ± 0.1mA
Over Voltage Protection Adjust	120 to 150% Vo
Auxiliary power	1 2 V ± 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



Pin Assignments

Input	Output	Control Pins
31. Positive	21. Positive	1. AUX
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/I²C CLK
		9. OVP ADJ/DCS
		10. V ADJ/I²C DATA
		11. ENABLE
		12. -SENSE

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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