

Embedded Power for
Business-Critical Continuity

AIF12W300

600 Watts

Total Power: 600 Watts
(48 V@12.5 Amps)
Input Voltage: 300 V
of Outputs: Single

Special Features

- 600 W continuous power at 100 °C baseplate temperature
- 108 W/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™
- Paralleable with accurate current sharing

Safety

UL: 60950 Recognized
CE: 60950 Recognized
FULV: 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 / μ s
Current share accuracy: 3% typical, 5% max ($\geq 80\%$ of I_o max)
Overvoltage protection: 125% $\pm$ 5% V_o (nominal) - latch up
Current limit: 105% - 120% I_o maximum - hiccup
Short-circuit protection: 150% maximum - hiccup

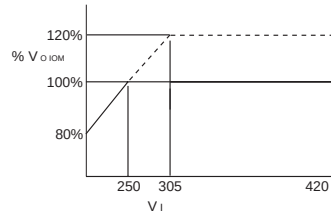
Control

Voltage Adjust*: 80 to 120% V_o linear programming (see page 2 graph)
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/°K (2.73 = 0 °C)
Current monitor output: 0 to 1 mA (1 mA = 100% I_o rated) $\pm$ 0.1 mA
Overvoltage protection adjust: 120 to 150% V_o
Auxiliary power: 12 V $\pm$ 1.5 V, 10 mA

Rev. 06.11.08
AIF12W300
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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
MTBF	TBD hours



***Voltage Adjust**
see chart on page 1

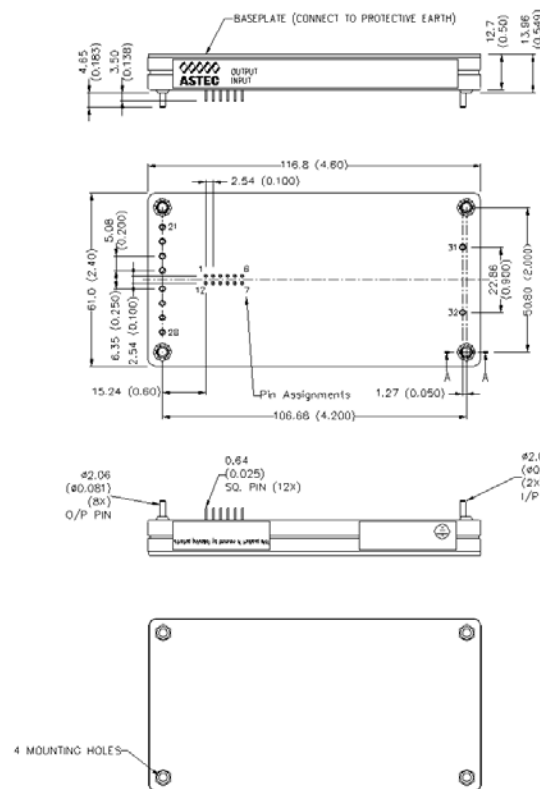
Ordering Information

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

Note:

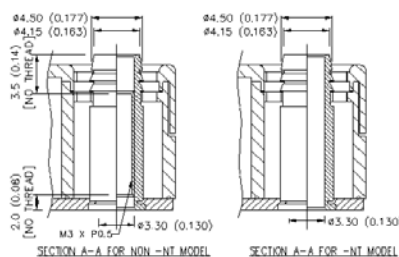
1. For Non-thread hole, add suffix "-NT".

Mechanical Drawing



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/PC CLK
		9. OVP Adj/OCS
		10. V Adj/PC
		11. Enable
		12. -Sense



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