

## AIH Series

250 Watts

**Total Power:** 250 Watts  
(12V @ 20.8A)  
**Input Voltage:** 300V  
**# of Outputs:** Single

### Special Features

- 250W Continuous power at 100°C baseplate temperature
- High efficiency - up to 88%
- Low output ripple and noise
- Positive and Negative enable function
- Excellent transient response
- Safety isolated low voltage control and monitoring
- High reliability
- Wide input voltage range
- Paralleable with accurate current sharing
- Adjustable output voltage
- Regulation to zero load
- Temperature monitor output
- 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  
AIH Series  
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## Electrical Specifications

### Input

Input range	250 - 420 VDC
Input surge	450V / 100ms
Efficiency	88% @ 5.0V (typical)

### Output

Load Regulation	0.2% typical (5V and above); 10mV for below 5V
Line Regulation	0.2% typical (5V and above); 10mV for below 5V
Noise / ripple	100mV typical (below 5V); 2% typical (5V and above)
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	130% $V_o$ (3.3 $V_o$ and 5 $V_o$ ); 125% $V_o$ (other $V_o$ )
Current limit	120% $I_o$ maximum

### Control

Voltage adjust	80 to 120% for 5V and above; +10%/-50% for below 5V
Enable	TTL compatible (positive & negative enable options)
Clock input (external sync)	3.3 to 5.5Vp-p @800 MHz $\pm$ 5%
Temperature monitor output	10mV/ $^{\circ}$ K (2.73 = 0 $^{\circ}$ C)
Current monitor output	0 to 1mA (1mA = 100% $I_o$ rated)

### Notes

Nominal values apply with sense pins disconnected and other control pin unconnected.



## Environmental Specifications

Operating temperature	-20°C to +100°C (case temperature)
Startup temperature	-40°C to +100°C (case temperature)
Storage temperature	-40°C to +100°C
Overtemperature protection	120°C max
MTBF	1M hours (Demonstrated)

### Ordering Information

Input Voltage	Output Voltage	Efficiency	Model Number
300V	1.8V @ 50A	80% (Typ)	AIH50Y300
300V	3.3V @ 50A	82% (Typ)	AIH50F300
300V	5.0V @ 40A	88% (Typ)	AIH40A300
300V	12V @ 20.8A	86% (Typ)	AIH20B300
300V	15V @ 16.6A	90% (Typ)	AIH16C300
300V	24V @ 10.4A	90% (Typ)	AIH10H300

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	Output	Control Pins
31. Positive	22. Positive	1. +Sense
32. Negative	23. Positive	2. Temp Mon
	24. Positive	3. C Mon
	27. Negative	4. C Share
	28. Negative	5. SDA
	29. Negative	6. SCL
		7. CLK IN
		8. V Adj
		9. Enable
		10. -Sense

### 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)

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### Mechanical Drawing

