

# AMPSS<sup>®</sup> POWER MODULES

AK60A-100 Economy Series  
100W max  
24V or 48V or 300V inputs  
5V to 15V single outputs



The AK60A DC-DC converter series is part of Astec's family of advanced high density modular power supply components. Featuring high reliability and convenient control functions, these modules are designed to reduce product development time and enhance system performance. The AK60A is ideal for cost-conscious designs which also require all the advantages of high power density and wide input voltage range. The AK60A provides a fast and economical route to complete power supply solutions for demanding Industrial, Telecommunication and Computer applications.

## SPECIAL FEATURES

- High Efficiency - up to 87%
- 500KHz fixed frequency
- 85°C baseplate operating temperature (with no derating)
- Low output ripple and noise
- Excellent transient response
- High Reliability - over 1 million hours MTBF
- Wide input voltage range
- TTL compatible enable control
- Adjustable output voltage
- Overtemperature and short circuit protection

## SAFETY

UL	UL 1950
CSA	CSA22.2-234 CSA22.2-950
VDE	VDE0805
EN	60950
CE	Mark

## ENVIRONMENTAL

Operating Temperature (baseplate)	-20 to +85°C
Storage Temperature	-40 to +105°C
Overtemp. Shutdown	90°C typical
MTBF	> 1 million hours (50°C baseplate)

## ELECTRICAL SPECIFICATIONS

### Input

Input Range	180 to 400 VDC or 36 to 72 VDC or 18 to 36 VDC
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Efficiency	82% typical (5V @ 20A) 84% typical (12V @ 8.3A)
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### Control

Voltage Adjust Input	90 to 110% V <sub>o</sub> using trim pot or single programming resistor
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Enable	TTL compatible (low to enable)
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### Output

Load Regulation	0.3% typical down to 10% load
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Line Regulation	0.1% typical
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Noise/Ripple	100 mV typical (output below 5V) 2% typical (output 5V and over)
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Remote sense	Up to 0.5V
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Output Voltage Adjust Range	±10% of nominal output
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Transient Response (25-75% full load)	10% t <sub>max</sub> deviation with 500µs (max) recovery
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Overvoltage Protection	130% nominal V <sub>o</sub>
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Current Limit (nominal)	115% I <sub>o</sub> typical
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## NOTES

Nominal values apply with sense pins connected and other control pins unconnected.

Specifications subject to change without notice.

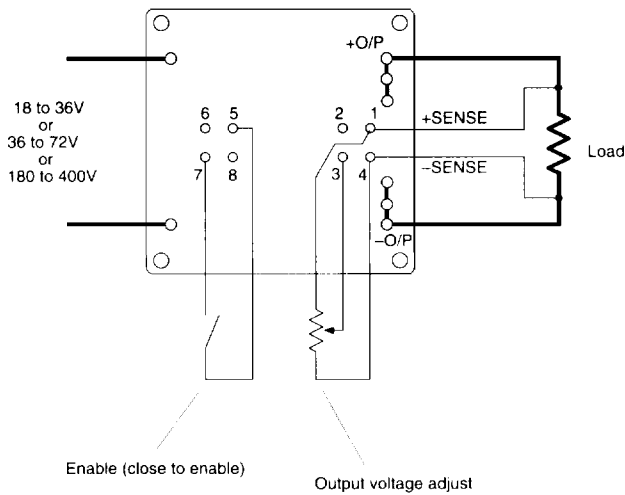


## ORDERING INFORMATION

Input Voltage	Output Voltage	Output Current	Model Number	Input Voltage	Output Voltage	Output Current	Model Number
300V	5V	20A	AK60A-300L-050F20	24V	5V	20A	AK60A-024L-050F20
300V	12V	8.3A	AK60A-300L-120F08	24V	12V	8.3A	AK60A-024L-120F08
300V	15V	6.7A	AK60A-300L-150F07	24V	15V	6.7A	AK60A-024L-150F07
48V	5V	20A	AK60A-048L-050F20				
48V	12V	8.3A	AK60A-048L-120F08				
48V	15V	6.7A	AK60A-048L-150F07				

Please contact Astec for information on other output voltages, power ranges and configurations.

## CONNECTIONS

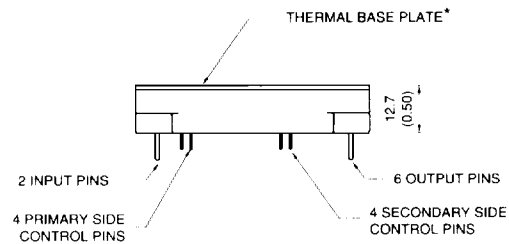


Input	Output	Control Pins
31. +ve	22. } +ve	1. +SENSE
32. -ve	23. }	2. RSV
	24. }	3. V ADJ
	26. }	4. -SENSE
	27. } -ve	5. S COM
	28. }	6. RSV
		7. ENABLE
		8. RSV

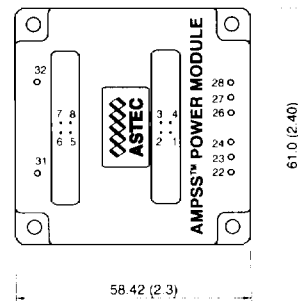
Secondary side controls (pins 1-4)  
Primary side controls (pins 5-8)

Connection example

## DIMENSIONS



\*Must be connected to protective earth



Viewed from pins side. Dimensions in mm (inches)

AMPSS® AK60A 100W max Single Output APM

