

AK80A

240 Watts

AK80A Economy Series

Total Power	240 Watts
Input Voltages	24V, 48V
# of Outputs	Single



SPECIAL FEATURES

- High efficiency - up to 87%
- 500 KHz 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
- Parallelable
- Adjustable output voltage and current limit
- Temperature monitor output
- Overtemperature and short circuit protection
- Regulation to zero load

ENVIRONMENTAL

Operating temperature (baseplate):
0°C to +85°C

Storage temperature: -40°C to +105°C

Overtemperature protection: 90°C typical

MTBF: > 1 million hours (50°C baseplate)

SAFETY

UL	UL 1950	E132002
CSA	CSA22.2-234 CSA22.2-950	LR53982C
VDE	IEC950	20366-3336-1002 & 1008
EN	60950	
CE	CEMark (LVD)	

ELECTRICAL SPECIFICATIONS

Input

Input Range 36 to 72 VDC
or 18 to 36 VDC

Efficiency 83% typical (5V @ 40A);
87% typical (12V @ 18A);
87% typical (15V @ 16A)

Control

Voltage Adjust 90 to 110% V_o

Enable TTL compatible (low to enable)

Current Limit Adjust 20 to 100% I_o rated

Clock Input (external sync) 3.5 to 5Vp-p @ 1MHz $\pm$ 10%

Clock Output (internal clock) . 4.4 to 5.5Vp-p @ 1MHz $\pm$ 0.5%

Power Good/Identification High (V_o) = power good

Temperature Monitor Output . 10 mV/°K (2.73V = 0°C)

Output

Load Regulation 0.3% typical down to no load

Line Regulation 0.1% typical

Noise/Ripple 100 mV typical (output below 5V)
2% typical (output 5V and over)

Remote sense Up to 0.5V

Output Voltage

Adjust Range $\pm$ 10% of nominal output

Transient Response 10% typical deviation with 300 μ s
recovery (25-75% full load)

Current Share Accuracy 5% typical

Overvoltage Protection 130% nominal V_o

Current Limit 115% I_o max

NOTES

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

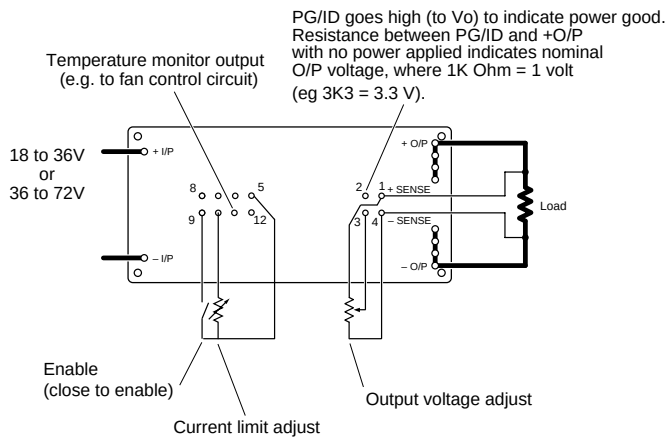
Specifications subject to change without notice.

ORDERING INFORMATION

Input Voltage	Output Voltage	Output Current	Model Number	Input Voltage	Output Voltage	Output Current	Model Number
48V	3.3V	50A	AK80A-048L-033F50	24V	3.3V	40A	AK80A-024L-033F40
48V	5V	40A	AK80A-048L-050F40	24V	5V	30A	AK80A-024L-050F30
48V	12V	18A	AK80A-048L-120F18	24V	12V	14A	AK80A-024L-120F14
48V	15V	16A	AK80A-048L-150F16	24V	15V	12A	AK80A-024L-150F12
48V	24V	10A	AK80A-048L-240F10	24V	24V	8A	AK80A-024L-240F08

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

CONNECTIONS



PIN ASSIGNMENTS

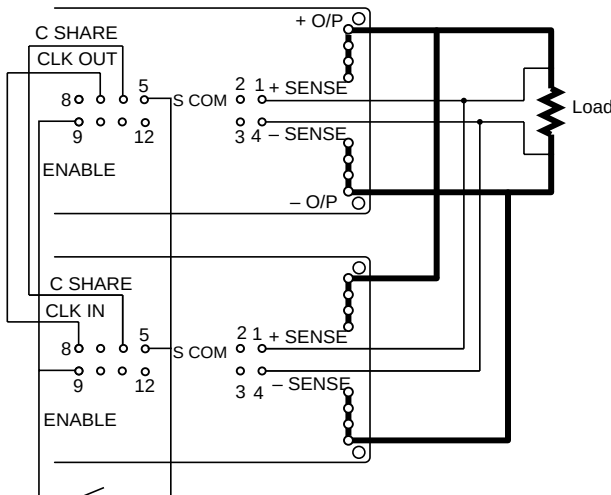
Input	Output	Control Pins
31. +ve	21. } +ve	1. +SENSE
32. -ve	22. }	2. PG/ID
	23. }	3. V ADJ
	24. }	4. -SENSE
	26. }	5. S COM
	27. }	6. C SHARE
	28. }	7. CLK OUT
	29. }	8. CLK IN
		9. ENABLE
		10. C LIM ADJ
		11. TEMP MON
		12. PRI AUX

Secondary side controls

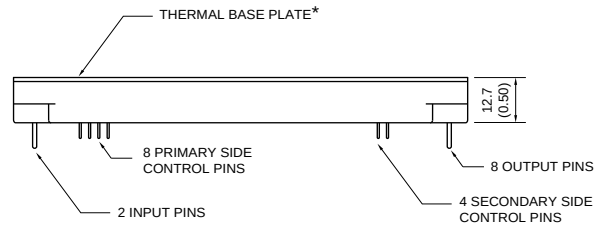
Primary side controls

DIMENSIONS

Connection example



Parallel connections



*Must be connected to protective earth

