H HiTRON

ON-BOARD UNIVERSAL INPUT AC-DC ENCAPSULATED MODULAR POWER SUPPLIES 16 WATTS SINGLE & DUAL OUTPUT HAM16S & HAM16D SERIES



FEATURES:

- **ON-BOARD AC/DC MODULAR POWER SUPPLIES**
- **UNIVERSAL AC INPUT RANGE**
- **COMPACT IN SIZE**
- **MEET UNIVERSAL SAFETY STANDARDS**
- **EMI MEET CISPR PUB.22/ FCC CLASS B**
- **CE MARKING COMPLIANCE**

SPECIFICATION

INPUT SPECIFICATION

Input Voltage: 90-264Vac.
Input Frequency: 47-63 Hz. (50/60 Hz. Nom.).
Input Current: 0.33A @115Vac/0.16A @230Vac typical.
Inrush Current: 32.5A typical peak @ 230Vac.
Input Fuse: Use external fuse. 1.0A/250Vac. for the primary fuse is suggested.
Dielectric Withstand: Meet IEC950.
3,000Vac-Output/Input.
1,500Vac-Input/GND.
500Vac-Output/GND.
EMI: Meet CISPR PUB.22 / FCC Class B.
Hold-up time: 20mS @115Vac, 120mS @230Vac typical.
Earth Leakage: Less than 3.5mA @230Vac typical.
Remote On/Off: TTL/CMOS-Compatible Output Control.
Positive Logic version for Standard set up:
ON(Enable)=Open(or 2.5-5.0Vdc above Com)
OFF(Disable)=Short(or 0-0.8Vdc above Com)
Negative Logic version option available by adding a **"N"**suffix to the end of Model #.

OUTPUT SPECIFICATION

Output Voltage: See Ratings Chart.
Output Current: See Ratings Chart.
Output Wattage: 12-17 Watts typical.
Output Indicator: LED.
Line Regulation: Various with output voltage.
HAM16S ±0.1% typical.
HAM16D ±0.5% typical.
Load Regulation: Various with output voltage.
HAM16S ±1.0% typical.
HAM16D ±2.0-4.0% typical.
Noise & ripple: 1.0% typical peak to peak.
OVP: Built-in on main output.
Adjustability: From -10% of main output till OVP.
Overload Protection (OLP):
Fully protected against output overload and short circuit.
OLP set at about 125-150% rating output wattage.
Consult the factory for OLP setting.

GENERAL SPECIFICATION

Efficiency: 70-82% typical. (Various with output voltage).
Switching Frequency: 83K Hz.
Circuit Topology: Fixed Frequency Flyback circuit.
Transient Response: Typical peak deviation 250mV, Recovery time < 3mS for a 25% load change.
Case: Impact resistant thermo-plastic enclosure.
Power Density: 3.10Watts. / Cubic inch.
Safety Standard: EN60950/ UL1950 Class I.
MTBF: 110,000 hours. Mil Std 217, 25°C.

Operating Temperature: -10 to +70°C range.
-10°C to +50°C full load without derating.
From +50°C, derating linearly to half load @+70°C.
(Refer to Derating Chart.)
Storage Temperature: -20°C to +85°C.
Temperature Coefficient: 0.02% /°C.
Humidity: Up to 95%RH, Non-condensing.
Cooling: Convection cooling for +50°C @ full load.
At least 100LFM moving air is recommended for full load >+50°C in a confined area.
Commercial Grade only.

NOTE: (1) All measurements are at nominal input, full load, and +25°C unless otherwise specified.
(2) Load Regulation measured from Full-Load (F-L) to Half-Load (H-L) at nominal input and others loaded at half load.

Due to requests in market and advances in technology, specifications subject to change without notice.

OUTPUT VOLTAGE/ CURRENT RATINGS CHART

SINGLE OUTPUT

MODEL NO.	VO1 ★ @		
	TYP.	**VOLT.**	PEAK
HAM16S-033370	3.70A	**3.3V**	4.44A
HAM16S-050300	3.00A	**5.0V**	3.60A
HAM16S-090170	1.70A	**9.0V**	2.04A
HAM16S-120135	1.35A	**12.0V**	1.62A
HAM16S-150110	1.10A	**15.0V**	1.32A
HAM16S-240070	0.70A	**24.0V**	0.84A
HAM16S-480035	0.35A	**48.0V**	0.42A

DUAL OUTPUT

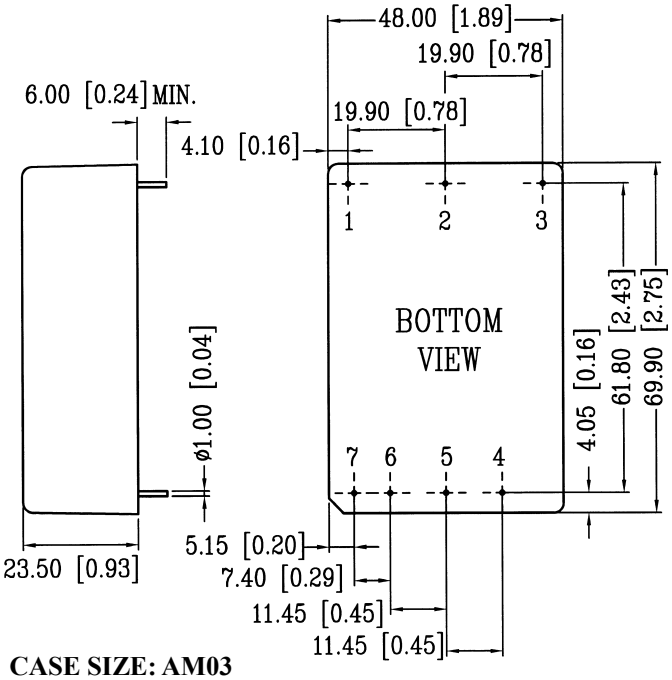
MODEL NO.	+VO1 ★ @			-VO2 ‖		
	TYP.	**VOLT.**	MAX.	TYP	**VOLT.**	MAX.
HAM16D-033180	1.80A	**+3.3V**	2.07A	1.80A	**-3.3V**	2.07A
HAM16D-050150	1.50A	**+5.0V**	1.72A	1.50A	**-5.0V**	1.72A
HAM16D-120068	0.68A	**+12.0V**	0.78A	0.68A	**-12.0V**	0.78A
HAM16D-150055	0.55A	**+15.0V**	0.63A	0.55A	**-15.0V**	0.63A

Symbols: "★" OVP built-in. "@" Adjustable. " ‖ " Double Feedback.

Note: (1) Max. (maximum load) is the continuous operating load of each rail, but the max. load of each rail can not be drawn from all outputs at the same time.
(2) Peak output, less than 60 Sec. with duty cycle <10%.

MECHANICAL DIMENSIONS: MM [INCHES]

WEIGHT: 145.0g(5.11Oz)



CASE SIZE: AM03

PIN ASSIGNMENT

PIN NO.	SINGLE	DUAL
PIN #1.	AC-GROUND	AC-GROUND
PIN #2.	AC-NEUTRAL	AC-NEUTRAL
PIN #3.	AC-LINE	AC-LINE
PIN #4.	+VO1	+VO1
PIN #5.	NO PIN	DC-COM
PIN #6.	DC COM	-VO2
PIN #7.	Remote ON/OFF	Remote ON/OFF

DERATING CHART

