HiTRON

ON-BOARD UNIVERSAL INPUT AC-DC ENCAPSULATED MODULAR POWER SUPPLIES 50 WATTS SINGLE & MULTIPLE OUTPUT HAM50-S, HAM50-D & HAM50-T SERIES

FEATURES:

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

SPECIFICATION

INPUT SPECIFICATION

Input Voltage: 90-264Vac.
Input Frequency: 47-63Hz, 50/60Hz.Nom.
Input Current: 0.4-0.6A@115Vac typical.
0.22-0.3A@230Vac typical.
Inrush Current: 7.6-8.0A (rms) typical or
40-45A(Peak-Peak) @230Vac typical.
Input Fuse: Use internal fuse.
Dielectric Withstand: Meet IEC950.
3,000Vac-Output/Input.
EMI: Meet CISPR PUB.22/ FCC Class B.
Hold-up time: 37-54mS @115Vac typical.
180-260mS @230Vac typical.
Earth Leakage: Less than 0.25mA @230Vac.
Remote ON/OFF:
ON(Enable)=Open.
OFF(Disable)=Short.

OUTPUT SPECIFICATION

Output Voltage: See Ratings Chart.
Output Current: See Ratings Chart.
Output Wattage: 50 Watts typical.
Output Indicator: LED.
Line Regulation: Various with output voltage.
HAM50S: ±0.1% typical.
HAM50D/T: ±0.1%-0.5% typical.
Load Regulation: Various with output voltage.
VO1 ±1.0-2.0% typical.
VO2 ±3-5% typical. (Stacked On).
VO3 ±2%-3% typical. (P.R).
Noise & ripple: 1.0% typical peak to peak.
OVP: Built-in on main output.
Adjustability: Available at main output VO1.
Overload Protection (OLP):
Fully protected against output overload and short circuit.
OLP set at about 120-150% of rating output wattage.
Consult the factory for special OLP setting.

GENERAL SPECIFICATION

Efficiency: 72-85% typical .(Various with output voltage)
Switching Frequency: 65KHz.
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: 5.0 Watts. / Cubic inch.
Safety Standard: EN60950/ UL1950 Class II.
MTBF: 110,000 hours. Mil Std 217, 25°C.

Operating Temperature: -10°C to +75°C range.
–10°C to +50°C @ full load without derating.
From+50°C, derating linearly to half load @+75°C.
(Refer to the Derating Chart).
Storage Temperature: -20°C to +85°C.
Temperature Coefficient: ± 0.02% /°C.
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.

In application

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.
HAM50-S033075	7.5A	3.3V
HAM50-S050060	6.0A	5.0V
HAM50-S120042	4.2A	12.0V
HAM50-S150035	3.5A	15.0V
HAM50-S240021	2.1A	24.0V

DUAL OUTPUT

MODEL NO.	VO1 ★@		VO2●	
	TYP.	VOLT.	TYP	VOLT.
HAM50-D050E	3.0A	+5.0V	3.0A	-5.0V
HAM50-D050I	3.5A	+5.0V	2.0A	+12.0V
HAM50-D120I	2.0A	+12.0V	2.0A	-12.0V
HAM50-D150K	1.7A	+15.0V	1.7A	-15.0V
HAM50-D033E	3.5A	+3.3V	3.0A	-5.0V

TRIPLE OUTPUT

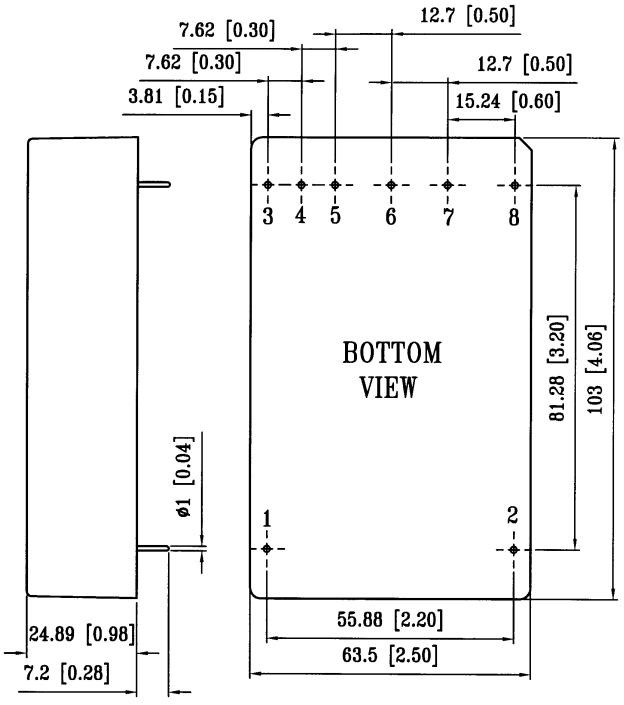
MODEL NO.	VO1 @ ★		VO2 †		VO3 ●	
	TYP.	VOLT.	TYP.	VOLT.	TYP.	VOLT.
HAM50-T033EE	4.0A	+3.3V	2.0A	+5V	0.5A	-5V
HAM50-T033II	4.0A	+3.3V	1.0A	+12V	0.5A	-12V
HAM50-T033KK	4.0A	+3.3V	0.8A	+15V	0.5A	-15V
HAM50-T050II	3.5A	+5.0V	1.0A	+12V	0.5A	-12V
HAM50-T050KK	3.5A	+5.0V	0.8A	+15V	0.5A	-15V
HAM50-T050IE	3.5A	+5.0V	1.0A	+12V	0.5A	-5V
HAM50-T050MI	3.5A	+5.0V	0.5A	+24V	0.5A	-12V

Symbols: "★" OVP built-in. "@" Adjustable. "●" Installed with Post Regulator (P.R.)
"†" Stacked on main O/P.

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: 378.0g(13.3Oz)



PIN ASSIGNMENT

PIN NO.	SINGLE O/P	DUAL O/P	DUAL O/P (+5V/+12V)	TRIPLE O/P
1	AC-L	AC-L	AC-L	AC-L
2	AC-N	AC-N	AC-N	AC-N
3	Remote On/Off	-VO2	DC COM	-VO3
4	No Pin	Remote On/Off	Remote On/Off	Remote On/Off
5	No Pin	No Pin	No Pin	DC COM
6	DC COM	DC COM	+5V	DC COM
7	No Pin	No Pin	No Pin	+VO1
8	+VO1	+VO1	+12V	+VO2

DERATING CHART