H HiTRON

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CHASSIS-MOUNT UNIVERSAL INPUT MEDICAL APPLICATION AC-DC GREEN POWER ENCAPSULATED MODULAR POWER SUPPLIES 10 WATTS MULTIPLE OUTPUT HASM10G-S &HASM10-D/T SERIES



FEATURES:

- **CHASSIS-MOUNT AC/DC MODULAR POWER SUPPLIES**
- **UNIVERSAL AC INPUT RANGE**
- **GREEN POWER DESIGN**
- **MEET MEDICAL STANDARD EN60601-1/UL60601-1**
- **EMI MEETS CISPR PUB.22/FCC CLASS B**
- **CE MARKING COMPLIANCE**

SPECIFICATION

INPUT SPECIFICATION

Input Voltage: 90-264Vac typical.
Input Frequency: 47-63 Hz. (Nominal 50/60Hz.).
Input Current: 0.16A @115Vac./0.1A @230Vac typical.
Inrush Current: 4.2Arms@230Vac typical.
Input Fuse: Use external fuse.
Dielectric Withstand: Meet IEC60601-1.
4,000Vac-Output/Input.
2,000Vac-Input/GND.
1,000Vac-Output/GND.
EMI: Meet CISPR PUB. 22/FCC Class B.
Hold-up time: Typ. 22.4 mS @115Vac, 130mS @230Vac.
Green Power: 0.25W@132Vac, 0.51W@230Vac for single.
Earth Leakage: Less than 0.16mA @230Vac.
Remote ON/OFF:
ON(Enable)=Open.
OFF(Disable)=Short.

OUTPUT SPECIFICATION

Output Voltage: See Ratings Chart.
Output Current: See Ratings Chart.
Output Wattage: 10 Watts typical.
Line Regulation: Various with output voltage. Typ.±0.1% .
Load Regulation: Various with output voltage.
Main VO1 ± 0.1-2.0% typical.
Aux.VO2 ± 0.7-1.2% typical.
Aux.VO3 ± 0.1% typical.
Total Regulation: 0.1-1.9% typical.
Noise & ripple: 1.0% typical peak to peak.
Typ. 100mV for 3.3V/5V.
OVP: Built-in on main output VO1.
Adjustability: Available at main output VO1.
Overload Protection (OLP):
Fully protected against output overload and short circuit.
Typical 125-150% of rating output load.
Con2sult the factory for special OLP setting.

GENERAL SPECIFICATION

Efficiency: 70-80% typical various with output voltage.
Switching Frequency: 80K Hz.
Circuit Topology: Fixed Frequency Flyback circuit.
Transient Response: Peak deviation on 70mV,
Recovery time <0.2mSec.@ 25%step load change.
Case: Impact resistant thermo-plastic enclosure.
Safety Standard: EN60601-1/ UL60601-1 Class I.
Power Density: 1.22 Watts. / Cubic inch.

Operating Temperature: 0°C to +50°C range. @ full load without derating.
From+50°C derating linearly to half load @+70°C
(Refer to the Derating Chart).
Storage Temperature: -20°C to +85°C.
Temperature Coefficient: ±0.03% /°C.
Cooling: Convection cooling for +50°C @ full load.
Medical 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.
(3) 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.
HASM10G-S033250	2.50A	+3.3V
HASM10G-S050200	2.00A	+5.0V
HASM10G-S090111	1.11A	+9.0V
HASM10G-S120085	0.85A	+12.0V
HASM10G-S150067	0.67A	+15.0V
HASM10G-S240041	0.41A	+24.0V

DUAL OUTPUT

MODEL NO.	VO1 ★@		VO2●	
	TYP.	VOLT.	TYP	VOLT.
HASM10-D050E	1.00A	+5V	1.00A	-5V
HASM10-D050I	1.00A	+5V	0.42A	+12V
HASM10-D120I	0.42A	+12V	0.42A	-12V
HASM10-D150K	0.34A	+15V	0.34A	-15V
HASM10-D033E	1.51A	+3.3V	1.00A	-5V

TRIPLE OUTPUT

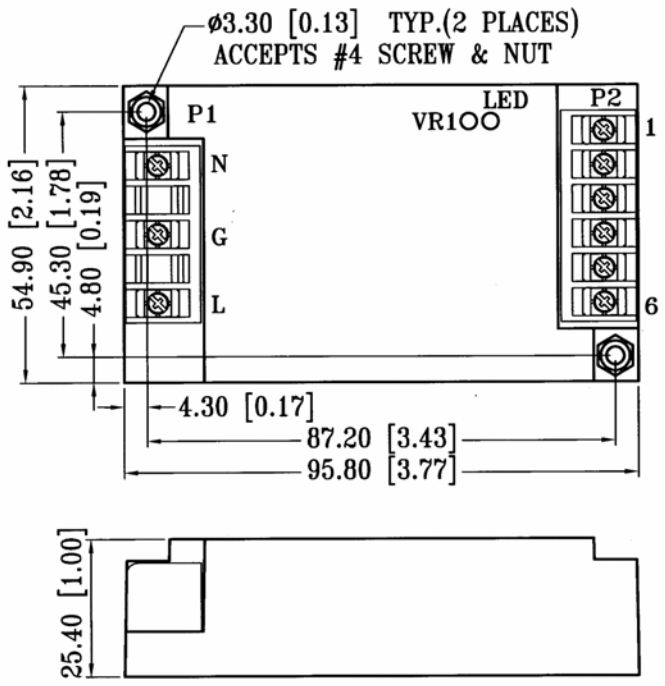
MODEL NO.	VO1 @ ★		VO2 ●		VO3 ●	
	TYP.	VOLT.	TYP.	VOLT.	TYP.	VOLT.
HASM10-T033II	1.51A	+3.3V	0.10A	+12V	0.10A	-12V
HASM10-T050II	1.50A	+5.0V	0.10A	+12V	0.10A	-12V
HASM10-T050KK	1.40A	+5.0V	0.10A	+15V	0.10A	-15V

Symbols: "★" OVP built-in. "@" Adjustable. "●" Installed with Post Regulator (P.R.).

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.

MECHANICAL DIMENSIONS: MM [INCHES]

WEIGHT: 177.5g (6.26Oz.)



PIN ASSIGNMENT

PIN NO.	SINGLE O/P	DUAL O/P(-VO2)	DUAL O/P(+VO2)	TRIPLE O/P
P1-1	L	L	L	L
P1-3	N	N	N	N
P1-2	G	G	G	G
P2-1	REMOTE ON/OFF	REMOTE ON/OFF	REMOTE ON/OFF	REMOTE ON/OFF
P2-2	DC COM	VO2	DC COM	+VO1RET
P2-3	DC COM	DC COM	DC COM	+VO1
P2-4	VO1	DC COM	VO1	+VO3
P2-5	VO1	VO1	VO2	DC COM
P2-6	NC	NC	NC	VO2

DERATING CHART

