H HiTRON

UNIVERSAL INPUT AC-DC MEDICAL & ITE APPLICATION INTERNAL OPEN FRAME SWITCHING POWER SUPPLIES 100 WATTS SINGLE & MULTI-OUTPUT HMI100 SERIES

FEATURES:

- **ACCOMMODATE UNIVERSAL AC INPUT**
- **COMPACT 4.5”x 2.5”x1.2” PCB FORMAT**
- **MEET MEDICAL STANDARD IEC 60601-1**
- **EMI MEET EN55011/EN55022 FCC CLASS B**
- **CE MARKING COMPLIANCE**

SPECIFICATION

INPUT SPECIFICATION

Input Voltage: 90-264Vac.

Input Connector: Molex connector or equivalent.

Input Frequency: 47-63Hz.

Inrush Current: Typical 9.68Arms at 230Vac.

Input Current: Typical 1.8A at 115Vac, 0.9A at 230Vac.

Dielectric Withstand: Meet IEC 60601-1/IEC60950-1.

EMI: Meet EN55011 & EN55022 / CISPR Class B.

Hold-up Time: Typical 12.8mS at 115Vac,
Typical 76mS at 230Vac.

Earth Leakage Current: Less than 0.189mA at 230Vac.

OUTPUT SPECIFICATION

Output Voltage: See Ratings Chart.
Output Current: See Ratings Chart.
Output Connector: Molex connector or equivalent.
Output Wattage: Max. 100 Watts.
Line Regulation: Typical ±0.5%.
Load Regulation: Main VO1 typical ±1%.
Aux. VO2 typical ±1%.
Aux. VO3/VO4 typical ±5%.
Noise & Ripple: Typical 1.0% peak to peak.
OVP: Built-in at main output (Latch).
Adjustability: Available at VO1 and VO2.
Overload Protection (OLP):
Fully protected against outputs overload and short circuit.
Typical OLP set at 110-150% of rating output power.
Consult the factory for OLP setting.

GENERAL SPECIFICATION

Efficiency: Typical 74-80% (various with output voltage).
Switching Frequency: 68 KHz.
Circuit Topology: Single-Forward circuit.
Multiple-Fixed freq. Flyback circuit.
Transient Response: Output voltage returns in less than 14-44mS following a 25% load change.
Safety Standard: IEC 60950-1 Class I for IEC use.
IEC 60601-1 Class I for Medical use.
Operating Temperature: 0 to +50 °C under forced air flow for full load.(Various with output voltage).
Storage Temperature: -20 to +85°C.
Cooling: Requested 24CFM/600LFM cooling fan for full rating load.
Power Density: 7.4 Watts / Cubic Inch.
Construction: 4.5”x2.5“x1.2” PCB format.

NOTE: (1) All measurements are at nominal input, full load, and +25°C unless otherwise specified.
(2) Due to requests in market and advances in technology, specifications subject to change without notification.

For the details of safety approval, please consult the factory.

OUTPUT VOLTAGE / CURRENT RATINGS CHART

SINGLE OUTPUT (under forced air cooling)

MODEL NO.	MAIN +VO1 ★@	
	Typ.	Volt.
HMI100-S033160	16.0A	+3.3V
HMI100-S050200	20.0A	+5.0V
HMI100-S070143	14.3A	+7.0V
HMI100-S090111	11.1A	+9.0V
HMI100-S120075	7.5A	+12.0V
HMI100-S150060	6.0A	+15.0V
HMI100-S180050	5.0A	+18.0V
HMI100-S240041	4.1A	+24.0V
HMI100-S330030	3.0A	+33.0V
HMI100-S480021	2.1A	+48.0V

DUAL OUTPUT (under forced air cooling)

MODEL NO.	MAIN +VO1 ★@		AUX. +VO2@	
	Typ.	Volt.	Typ.	Volt.
HMI100-D050I	12.0A	+ 5.0V	3.0A	+12.0V
HMI100-D050K	12.0A	+5.0V	3.0A	+15.0V

Symbol: "★" OVP built-in "@" Adjustable

TRIPLE OUTPUT (under forced air cooling)

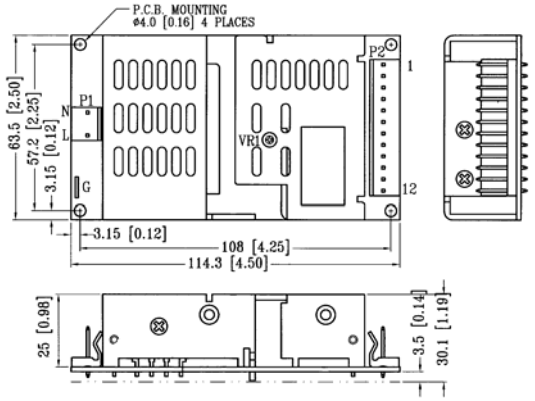
MODEL NO.	MAIN +VO1 ★@		AUX. +VO2@		AUX. +/-VO3	
	Typ.	Volt.	Typ.	Volt.	Typ.	Volt.
HMI100-T033EI	8.0A	+3.3V	7.0A	+5.0V	0.8A	+12.0V
HMI100-T050DI	8.0A	+5.0V	6.0A	+3.3V	0.8A	+12.0V
HMI100-T050II	10.0A	+5.0V	3.0A	+12.0V	0.8A	-12.0V
HMI100-T050IE	10.0A	+5.0V	3.0A	+12.0V	0.8A	-5.0V
HMI100-T050KK	10.0A	+5.0V	2.5A	+15.0V	0.8A	-15.0V
HMI100-T050KE	10.0A	+5.0V	3.0A	+15.0V	0.8A	- 5.0V
HMI100-T050MI	10.0A	+5.0V	1.5A	+24.0V	0.8A	-12.0V

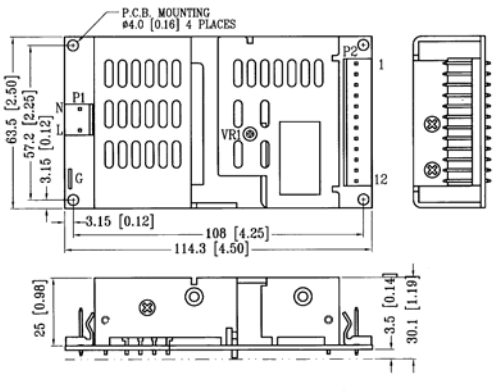
QUAD OUTPUT (under forced air cooling)

MODEL NO.	MAIN +VO1 ★@		AUX. +VO2@		AUX. VO3		AUX. -VO4	
	Typ.	Volt.	Typ.	Volt.	Typ.	Volt.	Typ.	Volt.
HMI100-Q033EII	7.0A	+3.3V	8.0A	+5.0V	0.5A	+12.0V	0.5A	-12.0V
HMI100-Q050DII	8.0A	+5.0V	7.0A	+3.3V	0.5A	+12.0V	0.5A	-12.0V
HMI100-Q050IIE	10.0A	+5.0V	3.0A	+12.0V	0.8A	-12.0V	0.5A	-5.0V
HMI100-Q050KKE	10.0A	+5.0V	3.0A	+15.0V	0.8A	-15.0V	0.5A	-5.0V
HMI100-Q050MII	10.0A	+5.0V	1.5A	+24.0V	0.8A	+12.0V	0.5A	-12.0V
HMI100-Q050MKK	10.0A	+5.0V	1.5A	+24.0V	0.8A	+15.0V	0.5A	-15.0V

MECHANICAL DIMENSIONS: MM [INCHES]

WEIGHT: 240g (8.11 Oz.)





INPUT & OUTPUT CONNECTORS PIN ASSIGNMENT

	AC INPUT			SINGLE		DUAL			TRIPLE				QUAD				
ASSIGNMENT	AC-L	AC-N	AC-G	VO1	DC COM	VO1	VO2	DC COM	VO1	VO2	VO3	DC COM	VO1	VO2	VO3	VO4	DC COM
CNTR/PIN#	P1-L	P1-N	G	P2-1,2 P2-3,4	P2-5,6 P2-7,8	P2-1,2 P2-3,4	P2-9,10	P2-5,6 P2-7,8	P2-1,2 P2-3,4	P2-9,10	P2-12	P2-5,6 P2-7,8	P2-1,2 P2-3,4	P2-9,10	P2-11	P2-12	P2-5,6 P2-7,8

Mating connector: P1,2 Molex # 5195 or 5239 series.