



## **UNIVERSAL INPUT HARMONIC CORRECTION AC-DC MEDICAL AND IEC APPLICATION OPEN FRAME SINGLE & MULTI-OUTPUT 150 WATTS INTERNAL SWITCHING POWER SUPPLIES HIMP151 SERIES**



### **FEATURES:**

- 5" X 3" X 1.38" COMPACT SIZE
- ACCOMMODATE UNIVERSAL AC SOURCES
- MEET IEC 61000-3-2 HARMONIC CORRECTION
- MEET UNIVERSAL SAFETY STANDARDS
- EMI MEET CISPR EN 55022/EN 55011 & FCC CLASS B CONDUCTED
- CE MARKING COMPLIANCE

### **SPECIFICATION**

#### **INPUT SPECIFICATION**

**Input Voltage:** Typ. 90-264Vac with PFC.  
**Input Connector:** V-M connector.  
**Input Frequency:** 47-63Hz.  
**Inrush Current:** 9.3-11.3Arms @230Vac.  
**Input Current:** Typ. 2.2A @115Vac, 0.9A @230Vac.  
**Dielectric Withstand:** Meet IEC 60950-1.  
**EMI:** Meet CISPR EN 55022 & FCC Class B conducted.  
Meet CISPR EN 55011 & FCC Class B conducted.  
**Hold-up Time:** Typ. 90mS @115Vac & 230Vac.  
**Power Factor & Harmonic Correction:**  
Meet IEC 61000-3-2, PF typ. 0.99 @ full load.  
**Over Temperature Protection:** Installed.  
**Leakage Current:** 0.40-0.50mA @230Vac touch current.

#### **OUTPUT SPECIFICATION**

**Output Voltage:** See Ratings Chart.  
**Output Current:** See Ratings Chart.  
**Output Connector:** V-M connector.  
**Output Wattage:** Max. 150 watts.  
**Line Regulation:** Typ. 1.0%.  
**Load Regulation:** Single O/P VO1  $\pm 3.0\%$ .  
Dual O/P VO1  $\pm 3.0\%$  VO2  $\pm 1.0\%$   
Triple O/P VO1  $\pm 3.0\%$  ( $\pm 8\%$  for 3.3V), VO2/VO3  $\pm 3.0\%$ .  
Quad O/P VO1/VO2/VO3/VO4  $\pm 3.0\%$   
**Noise & Ripple:** Typ. 1.0-2.0% peak to peak.  
**OVP:** Built-in at VO1 and VO2.  
**Adjustability:** Available at VO1 and VO2.  
**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:** Typ. 76-80% various with output.  
**Switching Frequency:** 68K Hz.  
**Circuit Topology:** Single Fixed frequency forward circuit.  
Dual/Triple/Quad: Fixed freq. flyback circuit.  
**Transient Response:** Output voltage returns in less than  
14.8-25.2mS 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 30 CFM  
forced air cooling for full load.  
**Storage Temperature:** -20 to +85°C.  
**Temperature Coefficient:** Typ. 0.04% /°C.  
**Cooling:** Requested 30 CFM forced air flow for full load.  
**Construction:** U-bracket format.  
**Power Density:** 6.52-7.24 Watts / Cubic Inch .

Note: Due to requests in market and advances in technology, specifications subject to change without notification.

# OUTPUT VOLTAGE / CURRENT RATINGS CHART

2009/02/27

## SINGLE OUTPUT (Under air cooling)

MODEL NO.	MAIN VO1 ★@		
	Typ.	Volt.	Max.
HIMP151-S050270	27A	5V	30A
HIMP151-S120125	12.5A	12V	12.5A
HIMP151-S150100	10.0A	15V	10.0A
HIMP151-S240063	6.3A	24V	6.3A

## DUAL OUTPUT (Under forced air cooling)

MODEL NO.	MAIN VO1 ★@			AUX. VO2 ★@		
	Typ.	Volt.	Max.	Typ.	Volt.	Max.
HIMP151-D050I	15.00A	+5V	15.00A	6.00A	+12V	6.00A
HIMP151-D050M	15.0A	+5V	15.0A	3.00A	+24V	3.00A
HIMP151-D120I	6.25A	+12V	6.25A	6.25A	+12V	6.25A
HIMP151-D150K	5.0A	+15V	5.00A	5.00A	+15V	5.00A

## TRIPLE OUTPUT (Under forced air cooling)

MODEL NO.	MAIN VO1 ★@			AUX. VO2 ★@			AUX. VO3 ●		
	Typ.	Volt.	Max.	Typ.	Volt.	Max.	Typ.	Volt.	Max.
HIMP151-T033EI	18A	+3.3V	20A	13.5A	+5V	15A	0.8A	+12V	0.8A
HIMP151-T050II	15A	+5.0V	15A	5.5A	+12V	5.5A	0.8A	+12V	0.8A
HIMP151-T050KK	15A	+5.0V	15A	4.5A	+15V	4.5A	0.5A	+15V	0.5A

## QUAD OUTPUT (Under forced air cooling)

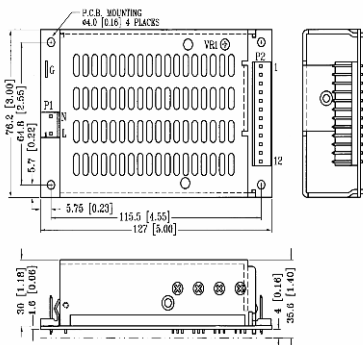
MODEL NO.	MAIN VO1 ★@			AUX. VO2 ★@			AUX. VO3 ●			AUX. VO4 ●		
	Typ.	Volt.	Max.	Typ.	Volt.	Max.	Typ.	Volt.	Max.	Typ.	Volt.	Max.
HIMP151-Q050KKE	15A	+5V	15A	4A	+15V	4A	0.8A	-15V	0.8A	0.5A	-5V	0.5A

Symbol: "★" OVP built-in. "@" Adjustable. "●" Post-Regulated

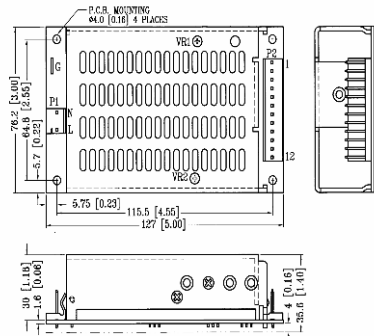
Remark: Please refer to the derating chart depending on ambient temperature and fan cooling.

## MECHANICAL DIMENSIONS: MM [INCHES]

WEIGHT: 385.0g (13.4 Oz.)



SINGLE



DUAL/TRIPLE/QUAD

## INPUT & OUTPUT CONNECTORS PIN ASSIGNMENT

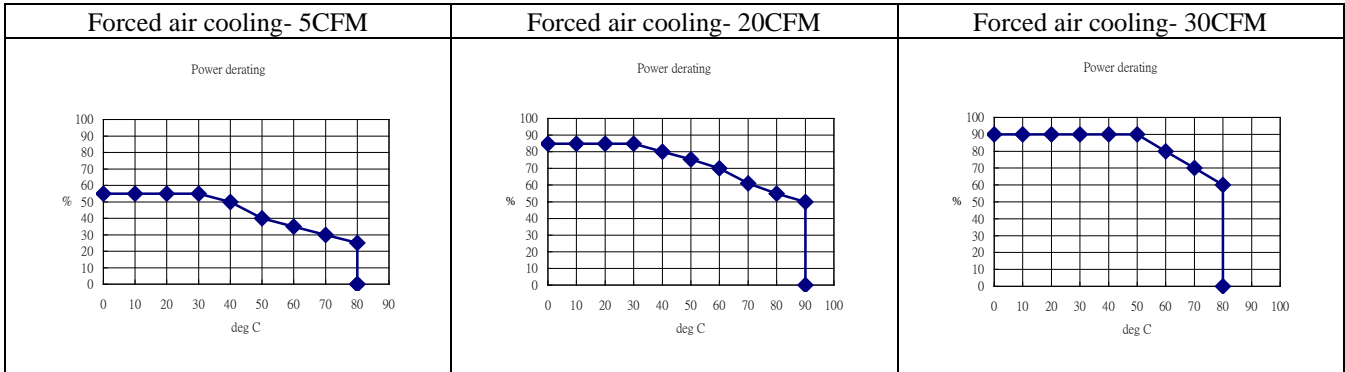
ASSIGNMENT	AC INPUT			SINGLE O/P				DUAL O/P				TRIPLE O/P				QUAD O/P				
	AC-L	AC-N	AC-G	VO1	DC-COM	VO1	VO2	DC-COM	VO1	VO2	VO3	DC-COM	VO1	VO2	VO3	+VO4	DC COM			
CNTR & PIN #	P1-L	P1-N	P1-G	P2-1,2,3,4,5,6	P2-7,8,9,10,11,12	P2-1,2,3,4	P2-9,10	P2-5,6,7,8	P2-1,2,3,4	P2-9,10	P2-11	P2-5,6,7,8	P2-1,2,3,4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

Mating connector: Moles 5195 or 5239 series.

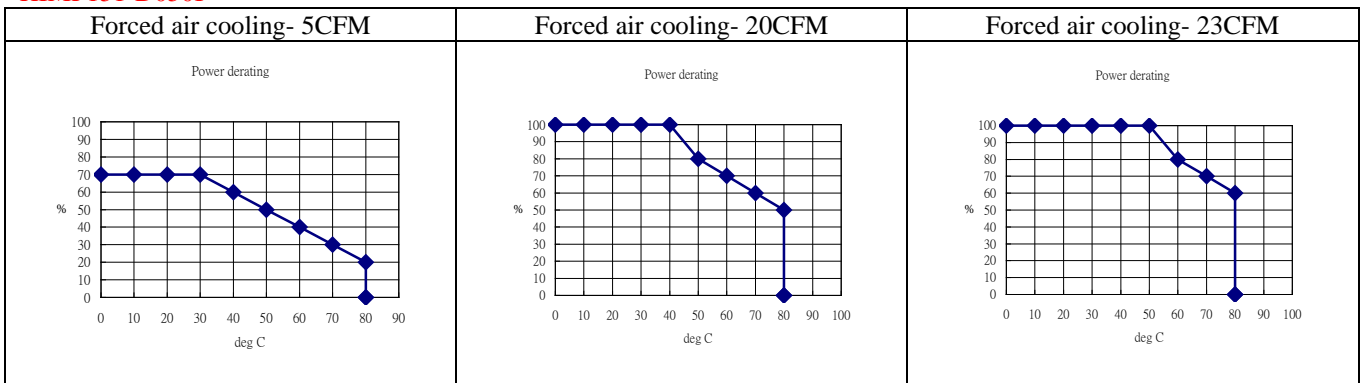
# DERATING CHART

2009/2/27

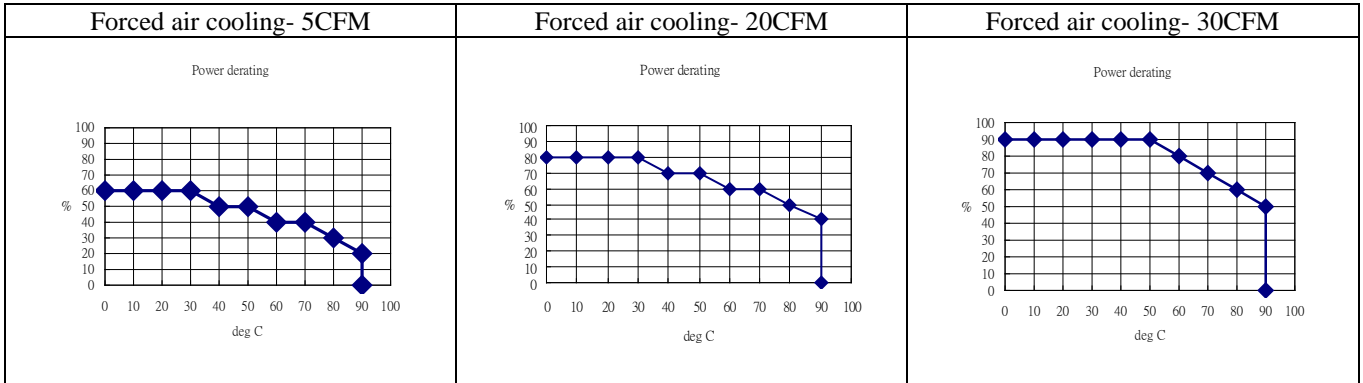
## HIMP151-S050270



## HIMP151-D050I



## HIMP151-T033EI



## HIMP151-Q050KKE

