

HiTRON

36-72VDC INPUT RANGE DC-DC CONVERTER HOT-SWAP LOW VOLTAGE CompactPCI PENTA OUTPUT 200 WATTS ACTIVE CURRENT SHARING SWITCHING POWER SUPPLIES HDC203P-48B SERIES



FEATURES:

- 200W 3U X 9HP EUROCARD PACKAGE
- 36-72VDC NOMINAL 48VDC INPUT
- INTERNAL OR-ING DIODES FOR N+1 REDUNDANCY
- HOT-SWAPPABLE
- THIRD-WIRE CURRENT SHARING
- EMI MEET FCC CLASS B
- CE MARKING COMPLIANCE
- FULLY COMPLIANT WITH PICMG

SPECIFICATION

INPUT SPECIFICATION

Input Voltage: Typ. 36-72Vdc, nominal input 48Vdc.
Input Connector: Positronic 47-pin PCIH47M400A1.
Inrush Current: Peak 6.76A @ nominal 48Vdc.
Input Current: 5.9A @ nominal input 48Vdc at full load.
 0.2A @ nominal input 48Vdc at no-load.
Dielectric Withstand: Meet IEC 60950-1 regulation.
EMI: Meet FCC Class B.
Remote ON/OFF: Available at [INH#] & [EN#] pins.
Power Fail Signal: Available at [FAL#] pin.
Status LED: <Green> means valid input voltage.
 <Amber> means a critical fault.
Thermal Protection (OTP): Installed NTC for thermal sensor at [DEG#] pin.

OUTPUT SPECIFICATION

Output Voltage: See Ratings Chart.
Output Current: See Ratings Chart.
Output Wattage: Typ. 200W continuous.
Output Connector: Positronic 47-pin PCIH47M400A1.
Line Regulation: Typ. 0.2%.
Load Regulation: Typ. $\pm 1.0\%$.
Noise & Ripple: Typ 1% Pk.-Pk. or 50mV, whichever is greater.
OVP: Built-in at all outputs.
Adjustability: Available at VO1,2,3 & 4.
Remote Sensing: Available at VO1, VO2, VO3 and VO4.
Hot-Swap: Available.
N+1 Redundancy: Installed with internal OR-ing diodes at all outputs for N+1 redundancy operation.
Current Sharing: Third-wire current sharing at VO1,2&3.
Over Current Protection (OCP): Installed in each rail.
Overload Protection (OLP): Fully protected against output overload or short circuit. Typical 120-150% max. load. Consult the factory for special OLP setting.

GENERAL SPECIFICATION

Efficiency: Typ. 70 %.
Switching Frequency: 120K Hz.
Circuit Topology: Forward circuit.
Transient Response: Peak deviation is 420mV and recovers within 39.6mS for 50% load-change.
Safety Standard: IEC 60950-1 Class I.
Construction: Eurocard 3U X 9HP X 185mm CompactPCI format.
Operating Temperature: -5 to +50 °C at full load with specified air flow.
 Derates linearly to 50% at +70°C.
Storage Temperature: -40 to +85 °C.
Temperature Coefficient: Typ. $\pm 0.02\%$ / °C.
Cooling: At least 14CFM moving air is required to achieve full rating power 200W in a confined area.
Power Density: 2.85 Watts/ Cubic Inch.

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



In application

OUTPUT VOLTAGE / CURRENT RATINGS CHART

PENTA OUTPUT

MODEL NO.	MAIN +VO1★@#≡○				AUX. +VO2★@#≡○▲				AUX. +VO3★@#≡○▲				AUX. +VO4★@#≡○▲				AUX. VO5★○●◇			
	Min.	Typ.	Volt.	Max.	Min.	Typ.	Volt.	Max.	Min.	Typ.	Volt.	Max.	Min.	Typ.	Volt.	Max.	Min.	Typ.	Volt.	Max.
HDC203P-48B-P033BCEI(E)	1A	20A	3.3V	20A	0.5A	9A	5V	9A	0A	12A	2.5V	12A	0A	17A	1.5V	17A	1A	2A	12V	2A

Symbol: "★" OVP built-in. "@#" Adjustable. "#" Remote sensing. "≡" 3rd-wire Load Sharing. "○" Floating.

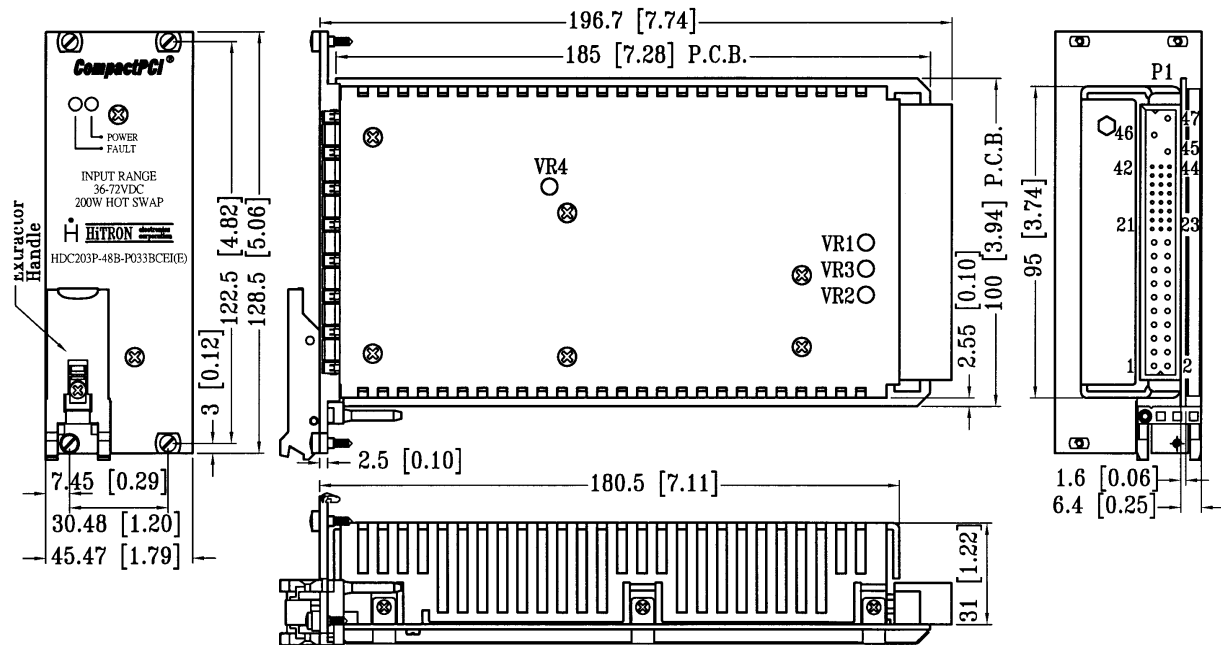
"○" Installed with Or-ing diode. "▲" Magnetic Amplifier. "●" Installed with Post Regulator.

Remark: Peak load less than 60sec. with duty cycle <10%.

Max. load is the continuous operating load of each rail. But the max. load of each rail can't be drawn from all outputs at the same time.

MECHANICAL DIMENSIONS: MM [INCHES]

WEIGHT: 666.0 g (23.5 Oz.)



INPUT & OUTPUT CONNECTORS PIN ASSIGNMENT

ASSIGNMENT	DC INPUT			PENTA OUTPUT															
	+V	-V	G	V1	V2	V3	V4	DC COM	+V5	-V5	V1 S	V2 S	V3S	V4 S	-S	V1 CS	V2 CS	V3 CS	V4 CS
CNTR & PIN #	46	47	45	13,14,15,16,17,18	1	2	3,4	5,6,7,8,9,10,11,12,22,24	20	19	33	30	35	37	34	28	29	25	26
STATUS/CONTROL																			
ASSIGNMENT	EN	DEG	INH	FAL	CRD-EXEISIT 1	CRD-EXEISIT 0	SLOT_ID0	SLOT_ID1	I ² C_SDA	I ² C_SCL	NC								
CNTR & PIN #	27	38	39	42	31	32	40	41	43	44	21,23,36								

Mating connector: PCIH47F400A1.