H HiTRON

36-72VDC INPUT RANGE DC-DC CONVERTER HOT-SWAP CompactPCI QUAD OUTPUT 250 WATTS ACTIVE CURRENT SHARING SWITCHING POWER SUPPLIES HDC250P-48B SERIES

FEATURES:

- **250W 3U X 8HP EUROCARD PACKAGE**
- **36-72VDC NOMINAL 48VDC INPUT**
- **INTERNAL OR-ING DIODES FOR N+1 REDUNDANCY**
- **HOT-SWAPPABLE**
- **THIRD-WIRE CURRENT SHARING**
- **EMI MEET EN 55022 / 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: Typ. 20A @ nominal 48Vdc.

Input Current: 6.6A @ nominal input 48Vdc.

Dielectric Withstand: Meet IEC 60950-1 regulation.

EMI: Meet EN 55022 / 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. 250W continuous.
Output Connector: Positronic 47-pin PCIH47M400A1.
Line Regulation: Typ. 0.1%.
Load Regulation: Typ. ±2.0%.
Noise & Ripple: Typ.1% Pk.-Pk. or 50mV, whichever is greater.
OVP: Built-in at all outputs.
Adjustability: Available at VO1,2&3.
Output Trim: Electrical trim available at VO1/2.[ADJ #]
Remote Sensing: Available at VO1,VO2 & VO3.
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.
Power OK Signal: Available for all outputs.
Over Current Protection (OCP): Installed in each rail.
Overload Protection (OLP): Fully protected against output overload or short circuit. Typical 120% max. load. Consult the factory for special OLP setting.

GENERAL SPECIFICATION

Efficiency: Typ. 79 %.
Switching Frequency: 120K Hz.
Circuit Topology: Forward circuit.
Transient Response: Peak transient less than 100mV and recovers within 2mS for 25% load-change.
Safety Standard: IEC 60950-1 Class I.
Construction: Eurocard 3U X 8HP X 160mm CompactPCI format. Front panel with either Ordinary handle or Extractor handle.
Operating Temperature: 0 to +50 °C at full load with specified air flow. Deraes linearly to 50% at +70°C.
Storage Temperature: -40 to +85 °C.
Temperature Coefficient: Typ. ±0.02% / °C.
Cooling: At least 16 cfm (500 lfm) moving air is required to achieve full rating power 250W in a confined area.
Power Density: 4.58 Watts/ Cubic Inch.

Note: 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

QUAD OUTPUT

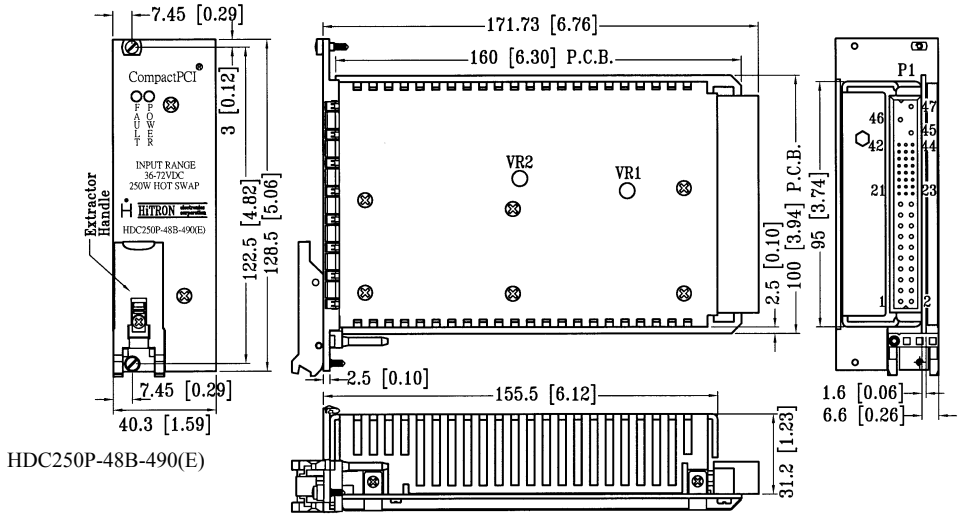
MODEL NO.	MAIN +VO1 @★#≡⊙				AUX. +VO2 ▲@★#≡⊙				AUX. +VO3 ▲@★#≡⊙					AUX. -VO4 ●⊙■★=				
	Min.	Typ.	**Volt.**	Max.	Min	Typ.	**Volt.**	Max.	Min.	Typ	**Volt.**	Max	Pk.	Min.	Typ.	**Volt.**	Max.	Pk.
HDC250P-48B-490(E)	0A	25A	**+5V**	33A	0A	18A	**+3.3V**	33A	0A	5A	**+12V**	5.5A	6A	0A	0.5A	**-12V**	1A	1.5A
HDC250P-48B-490(O)	0A	25A	**+5V**	33A	0A	18A	**+3.3V**	33A	0A	5A	**+12V**	5.5A	6A	0A	0.5A	**-12V**	1A	1.5A

Symbol: "★" OVP built-in. "@" Adjustable. "#" Remote sensing. "≡" 3rd wire Load Sharing. "⊙" Installed with Or-ing diode.
"▲" Magnetic Amplifier. "●" Installed with Post-regulator. "■" Common Choke.

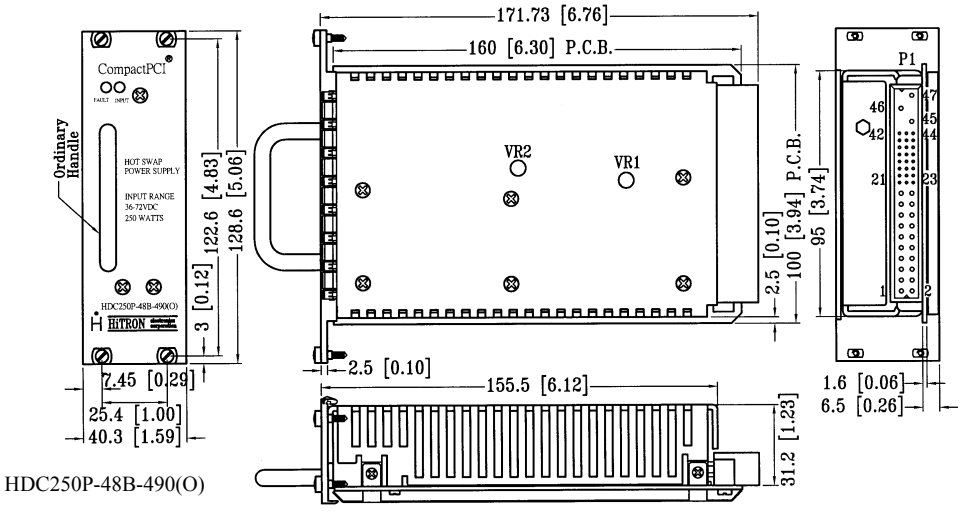
Remark: Peak load less than 60sec. with duty cycle <10%.
Max. load is the continuous operating load of each rail. But the max. load of each rail can't be drawn from all outputs at the same time.

MECHANICAL DIMENSIONS: MM [INCHES]

WEIGHT: 666.0 g (23.5 Oz.)



HDC250P-48B-490(E)



HDC250P-48B-490(O)

INPUT & OUTPUT CONNECTORS PIN ASSIGNMENT

	DC INPUT			QUAD OUTPUT														STATUS/CONTROL			
ASSIGNMENT	**-Vin**	**+Vin**	**G**	**VO1**	**S+**	**S-**	**Adj.**	**C.S.**	**VO2**	**S+**	**Adj.**	**C.S.**	**VO3**	**S+**	**C.S**	**VO4**	**DC COM**	**EN#**	**DEG#**	**INH#**	**FAL#**
CNTR &PIN #	47	46	45	1,2, 3,4	30	34	29	35	13,14, 15,16, 17,18	33	32	41	20	36	44	21	5,6,7,8,9, 10,11,12, 19,22,24	27	38	39	42

Mating connector: PCIH47F400A1.