

HiTRON

36-72VDC INPUT RANGE DC-DC CONVERTER HOT-SWAP CompactPCI QUAD OUTPUT 400 WATTS ACTIVE CURRENT SHARING SWITCHING POWER SUPPLIES HDC400P-48B-490 SERIES



FEATURES:

- 400W 6U X 8HP EUROCARD PACKAGE
- INTERNAL OR-ING DIODES FOR N+1 REDUNDANCY
- HOT-SWAPPABLE
- THIRD-WIRE CURRENT SHARING
- EMI MEET EN 55032 CLASS A
- CE MARKING COMPLIANCE
- FULLY COMPLIANT WITH PICMG

SPECIFICATION

INPUT SPECIFICATION

Input Voltage: Typ. 36-72Vdc, nominal input 48Vdc.
OVP shutdown at 75Vdc & UVP shutdown at 36Vdc.

Input Connector: Positronic 47-pin PCIH47M400A1.

Soft Start: Installed.

Inrush Current: Typ. 7.2A at 72Vdc.

Input Current: 11.8A at nominal input 48Vdc.

Dielectric Withstand: Meet IEC 60950-1/62368-1 regulation.

Transient Protection: MOV withstands transient as specified by EN 61000-4-4 level 3.

EMI: Meet CISPR EN 55032 Class A.

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. Thermostat will shutdown the PSU if >100°C.

OUTPUT SPECIFICATION

Output Voltage: See Ratings Chart.

Output Current: See Ratings Chart.

Output Power: Typ. 400-450W continuous.

Output Connector: Positronic 47-Pin PCIH47M400A1.

Line Regulation: Typ. 0.1%.

Load Regulation: VO1 typ. $\pm 1.0\%$, VO2 typ. $\pm 1.5\%$.
VO3 & VO4 typ. $\pm 3.0-4.0\%$.

Noise & Ripple: Typ. 1% peak-peak or 50mV, whichever is greater.

OVP: Built-in at all outputs.(Latch).

Adjustability: Available at VO1,VO2 & VO3.

Output Trim: Electrical trim available at VO1/VO2.[ADJ #].

Remote Sensing: Available at VO1,VO2 & VO3.

Hot-Swap: Available.

N+1 Redundancy: Available with OR-ing diodes at all outputs for N+1 redundancy.

Current Sharing: Third-wire current sharing at VO1,2&3.

Power OK Signal: Available for all outputs.

Over Current Protection (OCP): Installed at each rail.

Overload Protection (OLP): Fully protected against output overload or short circuit. Typ. set at 120-150% max. load. Consult the factory for special OLP setting.

GENERAL SPECIFICATION

Efficiency: Typ. 80-82 %.

Switching Frequency: 120K Hz.

Circuit Topology: Forward circuit.

Transient Response: Peak transient less than 250mV and recovers within 1.0mS after 25% load-change.

Safety Standard: IEC 60950-1/IEC 62368-1 Class I.

Construction: Eurocard 6U X 8HP X 160mm CompactPCI format. Front Panel with Extractor handle.

Operating Temperature: 0 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. $\pm 0.02\% / ^\circ\text{C}$.

Cooling: At least 600LFM/20CFM moving air is required to achieve full rating power 400W in a confined area.

Power Density: 4.01 Watts/ Cubic Inch.

NOTE: (1)All measurement are at nominal input, full load and +25°C unless otherwise specifications.

(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.

Edited on Aug. 13, 2020

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.
HDC400P-48B-490	4A	40A	+5V	55A	0A	20A	+3.3V	55A	0A	9A	+12V	14A	15A	0A	2A	-12V	4A	5A

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

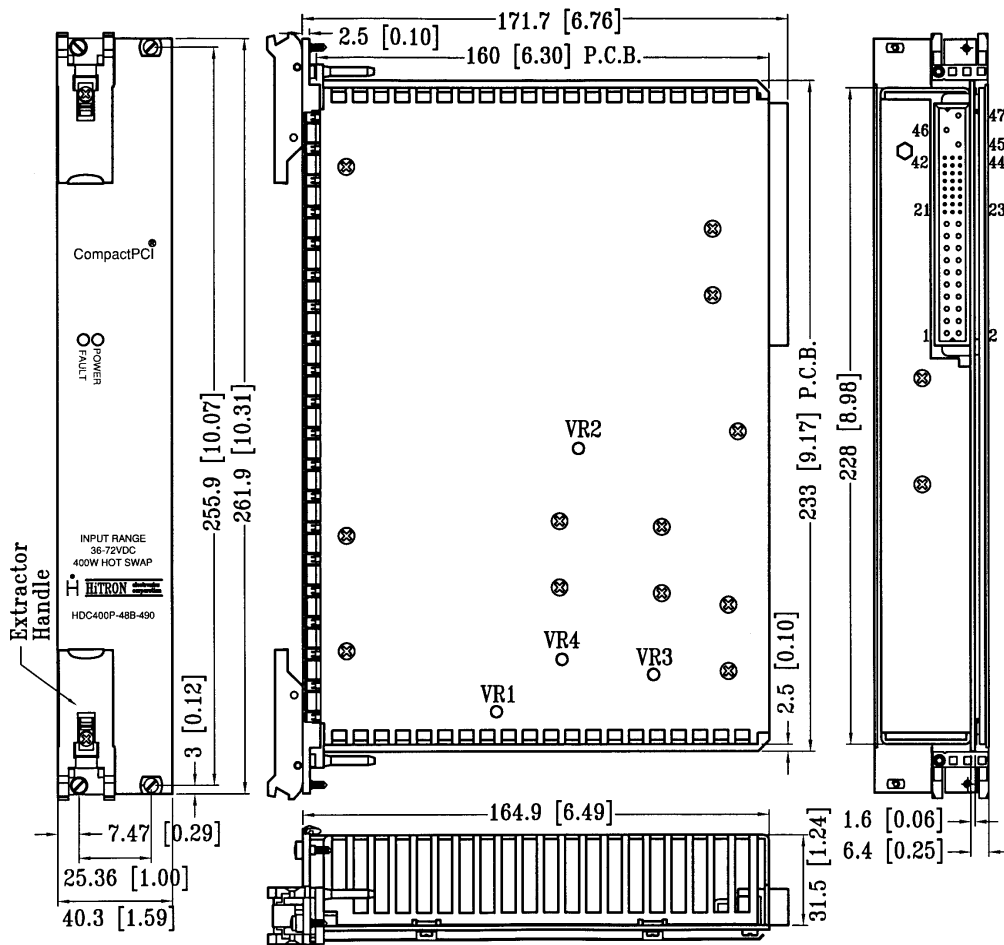
"⊙" Installed with Or-ing diode. "▲" Magnetic Amplifier. "●" Installed with Post-regulator. "■" Common Choke.

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: 1.42kg (3.13 lb.)



INPUT & OUTPUT CONNECTORS PIN ASSIGNMENT

ASSIGNMENT	DC INPUT			QUAD OUTPUT												STATUS/CONTROL					
	+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 #	46	47	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.