



Total Power International, Inc.

36-72VDC INPUT RANGE DC-DC CONVERTER HOT-SWAP CompactPCI QUAD OUTPUT 400 WATTS ACTIVE CURRENT SHARING SWITCHING POWER SUPPLIES TPDC400P-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 55022 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 regulation.

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

EMI: Meet CISPR EN 55022 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 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.



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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.
TPDC400P-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.

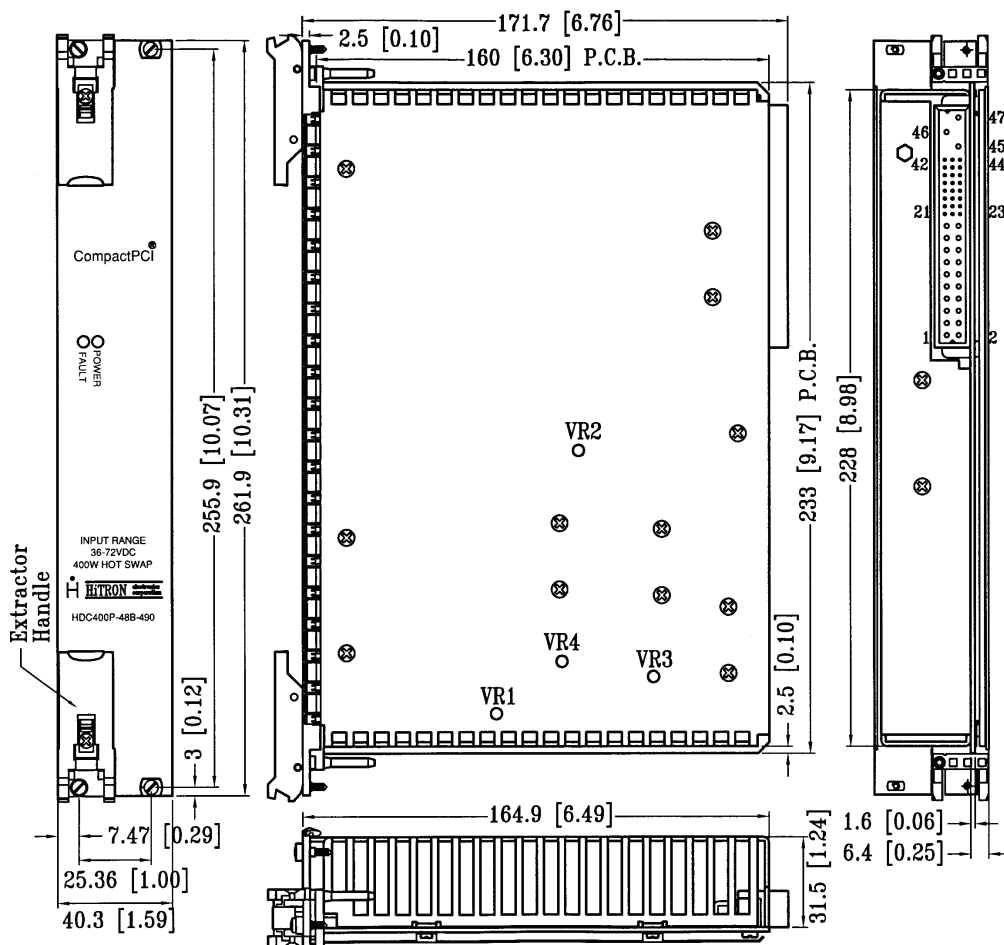
"⊙" Installed with Or-ing diode. "▲" Magnetic Amplifier. "●" Installed with Post-regulator. "■" Common Choke.

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	5,6,7,8,9,10,11,12,19,24	27	38	39	42

Mating connector: PCIH47F400A1.