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. ±1.0% , VO2 typ. ±1.5%. VO3 & VO4 typ. ±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. ±0.02% / °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℃ unless otherwise specifications.
(2)Due to requests in market and advances in technology, specifications subject to change without notification.

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For the details of safety approval, please consult the factory.

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OUTPUT VOLTAGE / CURRENT RATINGS CHART

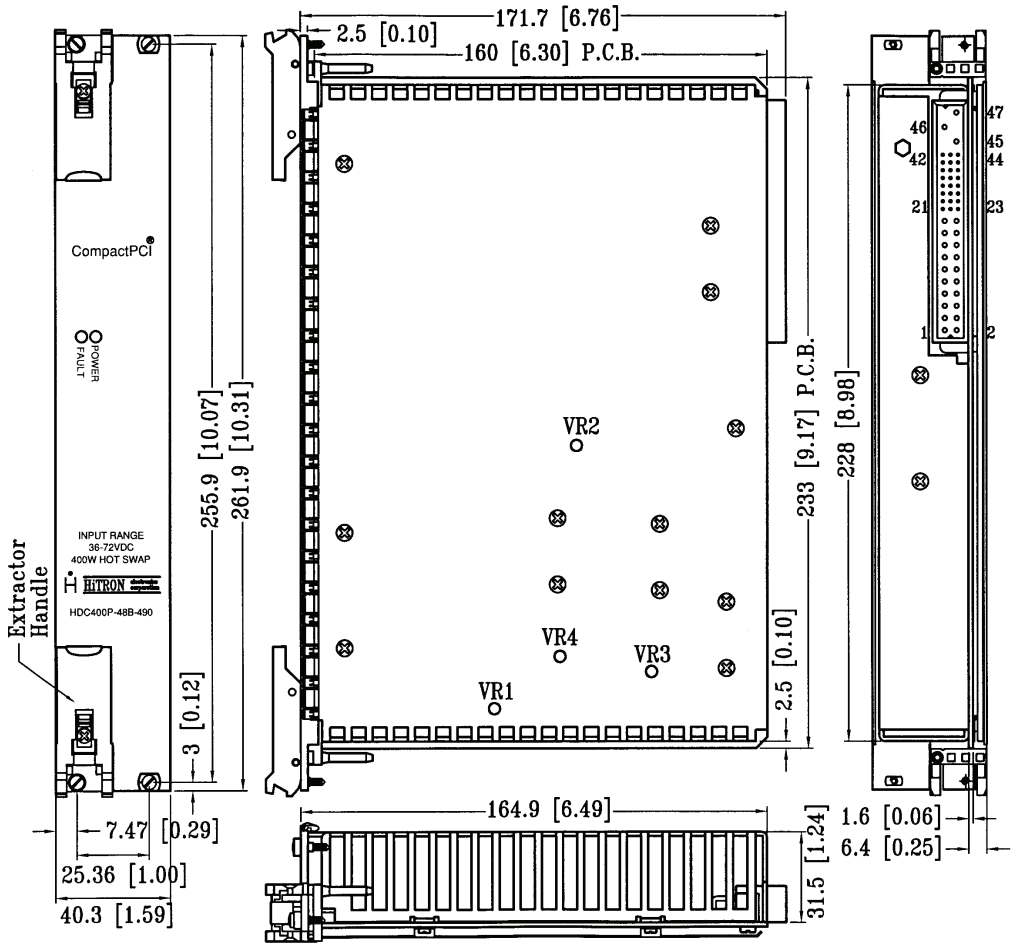
QUAD OUTPUT

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

	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 #	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.