

# TOTAL POWER INT'L

## 36-72VDC INPUT RANGE DC-DC CONVERTER HOT-SWAP CompactPCI QUAD OUTPUT 400 WATTS ACTIVE CURRENT SHARING SWITCHING POWER SUPPLIES TPDC400P-48B SERIES



### FEATURES:

- 400W 6U 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 CLASS B
- 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 @ 72Vdc.(Active).  
**Input Current:** 11.8A @ nominal input 48Vdc.  
**Dielectric Withstand:** Meet IEC950 regulation.  
**Transient Protection:** MOV withstands transient as specified by EN61000-4-4 level 3.  
**EMI:** Meet CISPR EN55022 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. Thermostat will shutdown the PSU if >100°C.  
**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.

#### 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 & VO2 typ.  $\pm 0.5-1.0\%$ .  
VO3 & VO4 typ.  $\pm 1.0-4.0\%$ .  
**Noise & Ripple:** Typ. 1% peak-peak or 50mV, which 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.

#### GENERAL SPECIFICATION

**Efficiency:** Typ. 81-82 %.  
**Switching Frequency:** 120K Hz.  
**Circuit Topology:** Forward circuit.  
**Transient Response:** Peak transient less than 220mV and recovers within 0.1mS after 25% load-change.  
**Safety Standard:** IEC60950.  
**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 400lfm/20cfm moving air is required to achieve full rating power 400W in a confined area.  
**Power Density:** 4.01 Watts/ Cubic Inch.

Remark: All measurements are at nominal input, full load and +25°C unless otherwise specifications.

**TOTAL POWER, INT. Tel: 877-646-0900 Fax: 978-453-7395**  
**Email: sales@total-power.com http://www.total-power.com**

# 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	30A	+3.3V	55A	0A	10A	+12V	14A	15A	0A	2A	-12V	4A	5A

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

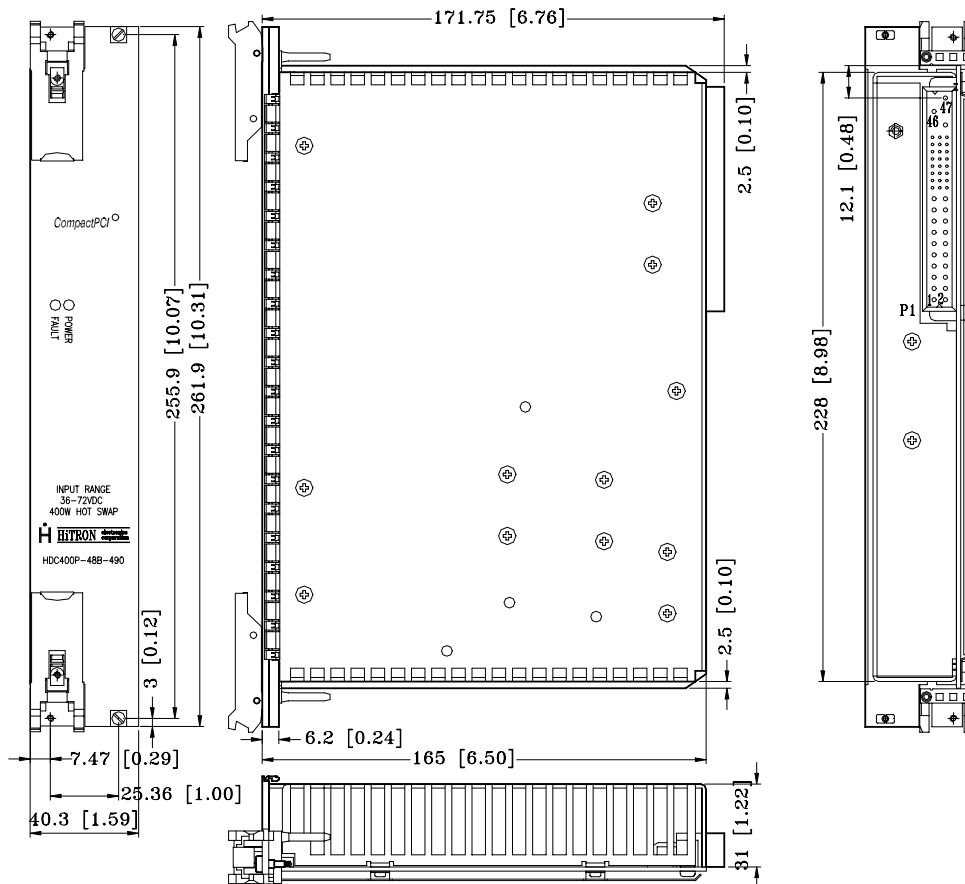
"○" Installed with Or-ing diode. "▲" Magnetic Amplifier. "●" Installed with Post-regulator. "■" Common Choke.

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.

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