

HiTRON

18-36VDC INPUT RANGE DC-DC CONVERTER HOT-SWAP CompactPCI 382 WATTS QUAD OUTPUT ACTIVE CURRENT SHARING SWITCHING POWER SUPPLIES HDC350P-24B-490 SERIES



FEATURES:

- 382W 6U X 8HP EUROCARD PACKAGE
- INTERNAL OR-ING DIODES FOR N+1 REDUNDANCY
- HOT-SWAPPABLE
- ACTIVE CURRENT SHARING
- CONSTANT CURRENT LIMIT
- EMI MEET EN 55022 CLASS A
- CE MARKING COMPLIANCE
- FULLY COMPLIANT WITH PICMG

SPECIFICATION

INPUT SPECIFICATION

Input Voltage: Typ. 18-36Vdc, nominal input 24Vdc.
Under Voltage Shutdown: Installed.
Input Connector: Positronic 47-pin PCIH47M400A1.
Soft Start: Installed.
Inrush Current: 56.5A (peak) at 36Vdc.
Input Current: 19.7A at nominal input 24Vdc (Full load).
Dielectric Withstand: Meet IEC 60950-1 regulation.
EMI: Meet CISPR EN 55022 Class A.
Remote ON/OFF: Available at [INH#] & [EN#] pins.
Power Fail Signal: Available at [FAL#] pins.
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 Power: Typ. 382W continuous.
Output Connector: Positronic 47-Pin PCIH47M400A1.
Line Regulation: Typ. 0.5%.
Load Regulation: Typ. VO1/2 $\pm 1.5\%$; VO3 $\pm 3\%$; VO4 $\pm 5\%$.
Total Regulation: Typ. VO1/2 2% , VO3 4%, VO4 5%.
Noise & Ripple: 1% peak-peak or 50mV, whichever is greater.
OVP: Built-in at all outputs.(Latch).
Adjustability: Available for all outputs.
Output Trim: Electrical trim available at VO1/VO2.[ADJ #].
Remote Sensing: Available for VO1, VO2 & VO3.
Hot-Swap: Available.
N+1 Redundancy: Available with OR-ing diodes at all outputs for N+1 redundancy.
Current Sharing: Active current sharing at VO1,2&3.
Constant Current Limit: Available for each outputs & shutdown in 3-8 sec.
Power OK Signal: Available for all outputs.
DC OK Signal: Available for all outputs.
Over Current Protection (OCP): Installed at each rail.
Overload Protection (OLP): Fully protected.

GENERAL SPECIFICATION

Efficiency: Typ. 81.8%.
Switching Frequency: 120K Hz.
Circuit Topology: Forward circuit.
Transient Response: Peak transient less than 250mV and recovers within 3mS 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: -20 °C to +50 °C at full load with 600LFM air flow. Derates linearly to 50% at +70 °C.
Or -20 °C to +70 °C at full load with 800LFM air flow. Derates linearly to 60% at +80 °C.
Storage Temperature: -40 °C to +85 °C.
Cooling: At least 600LFM or 800LFM moving air is required to achieve full rating power 382W in a confined area.
Power Density: 3.45 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.

OUTPUT VOLTAGE / CURRENT RATINGS CHART

QUAD OUTPUT

MODEL NO.	MAIN +VO1 @★○#≡					AUX. +VO2 @★○#≡					AUX. +VO3 ▲@★○#≡					AUX. -VO4 ▲@★○				
	Min.	Typ.	Volt.	Max	Pk.	Min.	Typ.	Volt.	Max	Pk.	Min.	Typ.	Volt.	Max	Pk.	Min.	Typ.	Volt.	Max	Pk.
HDC350P-24B-490	0A	33A	+5V	50A	50A	0A	33A	+3.3V	50A	50A	0A	7A	+12V	9A	10A	0A	2A	-12V	4A	5A

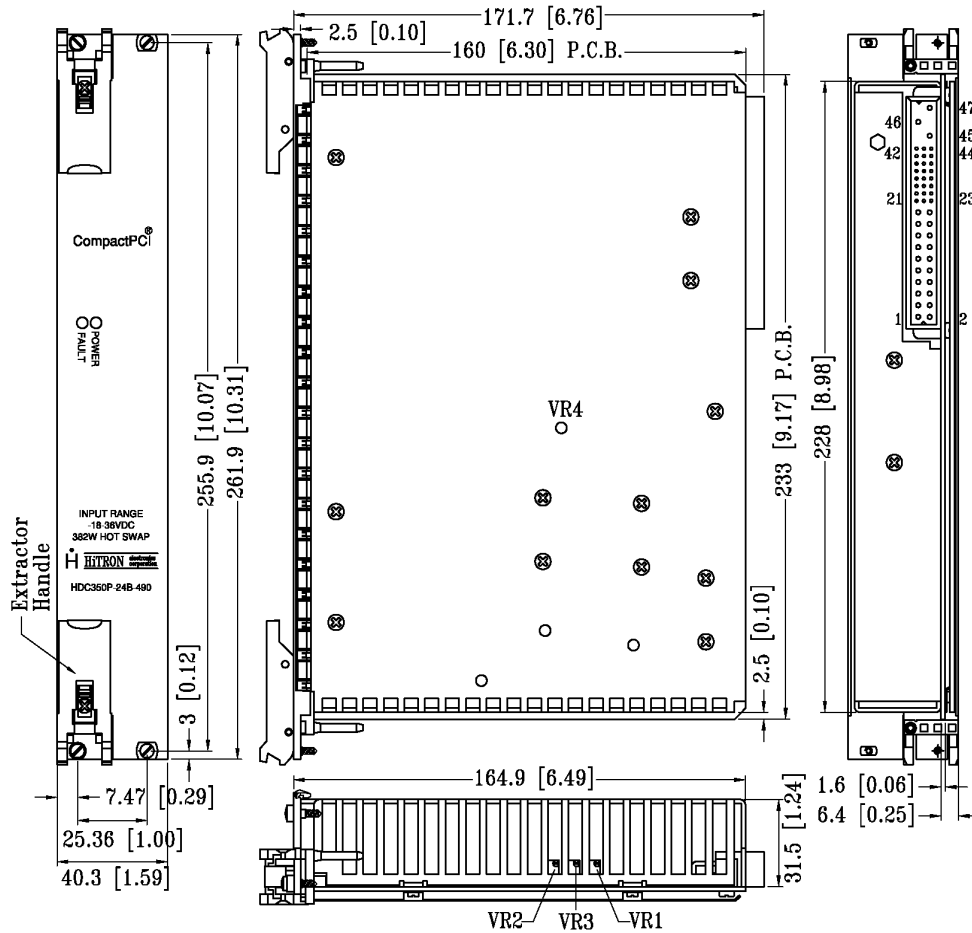
Symbol: "★" OVP built-in. "@" Adjustable. "#" Remote sensing. "≡" Active Load Sharing.
 "○" Installed with Or-ing diode. "▲" Magnetic Amplifier.

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.
 Total Max, Power of VO1 and VO2 must be less than 300Watt.

MECHANICAL DIMENSIONS: MM [INCHES]

WEIGHT: 1.72kg (3.78 lb.)



INPUT & OUTPUT CONNECTORS PIN ASSIGNMENT

ASSIGNMENT	DC INPUT			QUAD OUTPUT													STATUS/CONTROL				
	+Vin	-Vin	G	VO1	VO1 S+	VO1 S-	VO1 Adj.	VO1 C.S.	VO2	VO2 S+	VO2 Adj.	VO2 C.S.	VO3	VO3 S+	VO3 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.