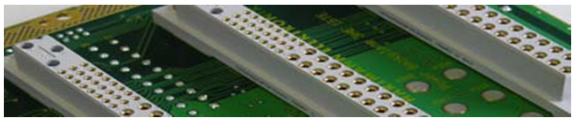
POWER SUPPLY

HARTMANN ELECTRONIC

3U 8HP 250W | CPCI DC/DC



Key figures:

Partnumber: D575.00251

- 250W 3U 8HP Eurocard package
- Input voltage 18-36VDC
- Hot swap and Third-wire current sharing
- Wide operating temperature ramge of - 40° C to +70° C
- Meet IEC 61000-3-2 harmonic correctiion
- Internal or-ing diodes for N+1 redundancy
- EMI meet EN 55022 / FCC class B
- Fully compliant with PIGMG / CE marking compliance
- Coated according to MIL-I-460580

General specification:

- Efficiency: Typ. 74-77 %
- Storage temperature: - 45° C to +85° C
- Operating temperature: - 40° C to +70° C (see note 3),
- Derate linearly from 100% power at +50° C to 60% power at +70° C (refer to derating curve)
- Temperature Coefficient: Typ. ±0.02% / °C
- Cooling: At least 20CFM(600 LFM) moving air is required to achieve full rating power 250W in a confined area
- Power Density: 4.58 Watts/ Cubic Inch.
- Switching Frequency: 120K Hz
- Circuit Topology: Forward circuit
- Transient Response: Peak transient less than 100mV and recovers within 2mS after 25% load change
- Safety Standard: IEC 60950-1 Class I
- Coated pcb with Cramilin 120 Plastic according to MIL-I-460580 „Type Acrylic Resin"
- Construction: Eurocard 3U 8HP 160mm; CompactPCI format, Front Panel with Extractor handle

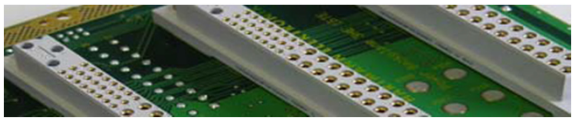
NOTE:

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

2) Tantalum capacitors connected to system is suggested for bettering Ripple&Noise against operating temperature from -40°C to +0°C

3) A warm-up time 3 minutes is required to maintain VO3 +12V within specific spec. After cold start at temperature from -40°C to +0°C

CE

POWER SUPPLY		HARTMANN ELECTRONIC
3U 8HP 250W	CPCI DC/DC	

ELECTRICAL SPECIFICATION

INPUT SPECIFICATION

Input Voltage:	Typ. 18-36VDC
Power Factor Correction:	Meet Harmonic Correction IEC 61000-3-2. Power Factor typ. 0.95-0.97
Input Connector:	Positronic 47-pin PCIH47M400A1
Inrush Current:	Peak 32,6A at nominal 24VDC
Input Current:	13,7A at nominal input 24VDC
Dielectric Withstand:	Meet IEC 60950-1 regulation
EMI:	Meet EN 55022 / FCC Class B
Remote ON/OFF:	Available at [INH#] & [EN#] pins
Power Fail Signal:	Available at [FAL#] pin
Thermal Protection (OTP):	Installed NTC and thermostat for thermal sensor at [DEG#] pin
Status LED:	<Green> means valid input voltage <Amber> means a critical fault

OUTPUT SPECIFICATION

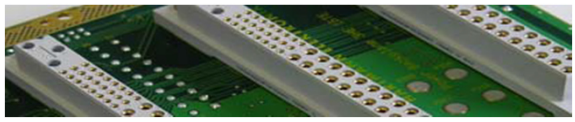
Output Voltage:	See Ratings Chart
Output Current:	See Ratings Chart
Output Wattage:	Typ. 250W continuous
Output Connector:	Positronic 47-pin PCIH47M400A1
Line Regulation:	Typ. 0.1%
Load Regulation:	Typ. ±2%
Noise & Ripple:	Typ. 1% peak to peak or 50mV, whichever is greater
OVP:	Built-in at all outputs
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:	Installed with internal OR-ing diodes, all outputs for N+1 redundancy operation
Current Sharing:	Third-wire current sharing at VO1, VO2 & VO3
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. Typical 120% max. load. Consult the factory for special OLP setting.

Due to requests in market and advances in technology, specifications subject to change without notification

POWER SUPPLY

HARTMANN ELECTRONIC

3U 8HP 250W | CPCI DC/DC



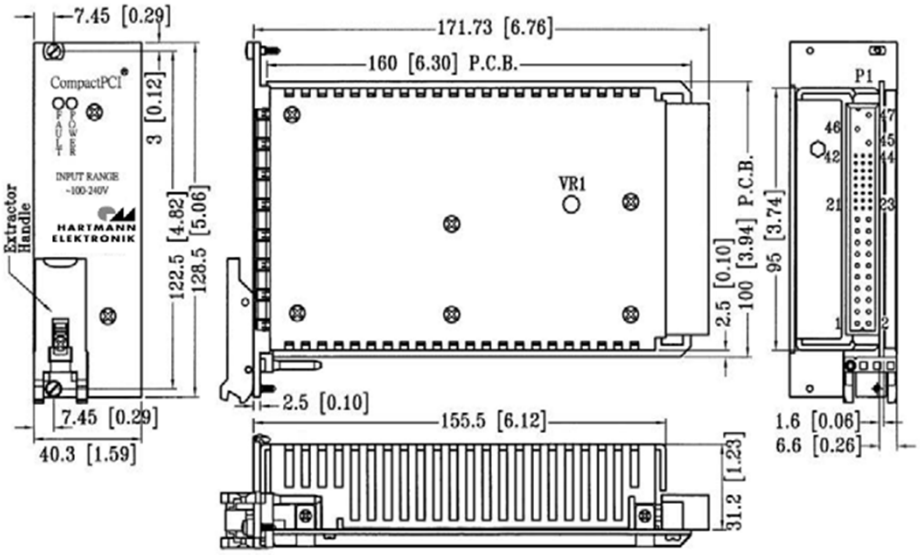
Part. Nr.: D575.00251

Output Voltage / Current Ratings Chart

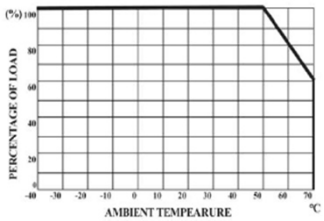
MAIN +VO1 @★#≡⊙				AUX. +VO2 ▲@★#≡⊙				AUX. +VO3 ▲@★#≡⊙					AUX. –VO4 ●⊙⍰★=				
Min	Typ	Volt	Max	Min	Typ	Volt	Max	Min	Typ	Volt	Max	Pk	Min	Typ	Volt	Max	Pk
2A	25A	+5V	33A	0A	18A	+3,3V	33A	0A	5A	+12V	5,5A	6A	0A	0,5A	-12V	1A	1,5A

Symbol: "★" OVP built-in. "@" Adjustable. "#" Remote sensing. "≡" 3rd-wire Load Sharing. "⊙" Installed with Or-ing diode.
"▲" Magnetic Amplifier. "●" Installed with Post-regulator. "⍰" Common Choke. "=" Droop Current Charing
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 should be less than 300W

Mechanical dimensions: mm (inches)



DERATING CURVE



Input & Output connectors pin assignment

ASSIGNMENT	PIN NO.
-Vin	47
+Vin	46
GND	45
VO1	1,2,3,4.
VO1 S+	30
VO1 S-	34
VO1 ADJ.	29
VO1 C.S.	35
VO2	13, 14, 15, 16, 17, 18.
VO2 S+	33
VO2 ADJ	32
VO2 C.S.	41
VO3	20
VO3 S+	36
VO3 C.S.	44
VO4	21
DC COM	5, 6, 7, 8, 9, 10, 11, 12, 19 ,24.
EN#	27
DEG #	38
INH #	39
FAL #	42

Mating connector: PCIH47F400A1

Weight: 666.0 g (23.5 Oz.)

For the details of safety approval, please consult the factory