

**Electrical
Specification for:**

Compact PCI - 6U - AC - 700W

**Telkoor Part
Number:**

900-7802-0000



CUSTOMER: GENERAL	SIZE	CAGE CODE	S5417	DWG. NO.	7802-DOC1-10	REV	A1
	SCALE		RELEASE DATE	11/11/13	SHEET	1	OF 7

VISION HISTORY					
Rev Level	Rev Date	Change Made	Reason for Change	Effective	Approved By
A	11/11/13	Specification Release			S. Sadot
A1	14/01/14	Update operation at -40 °C	Customer request	14/01/14	S. Sadot

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Input:	
Input Voltage:	90 - 264Vac , 47 – 63Hz , auto range, single phase
Inrush Current:	Shall be limited to 2.5 times of the maximum input current at 115VAC for period of max. 20mSec
Power Factor:	0.98 typical at 230Vac, full load 0.99 typical at 115Vac, full load
Efficiency	>80% at 115VAC and full load
Total Harmonic Distortion	<5%
Third Harmonic Distortion	<3%
Brown – Out:	70 to 300Vac for 50Msec

Output Voltages & Currents:

Output	Output Voltage	Tolerance	Output Current	Peak Load
V1	+5V	+5% / -3%	0 to 70A	75A
V2	+3.3V	+5% / -3%	0 to 80A	85A
V3	+12V	+5% / -5%	0 to 7.5A	8.5A
V4	-12V	+5% / -5%	0 to 4A	4A

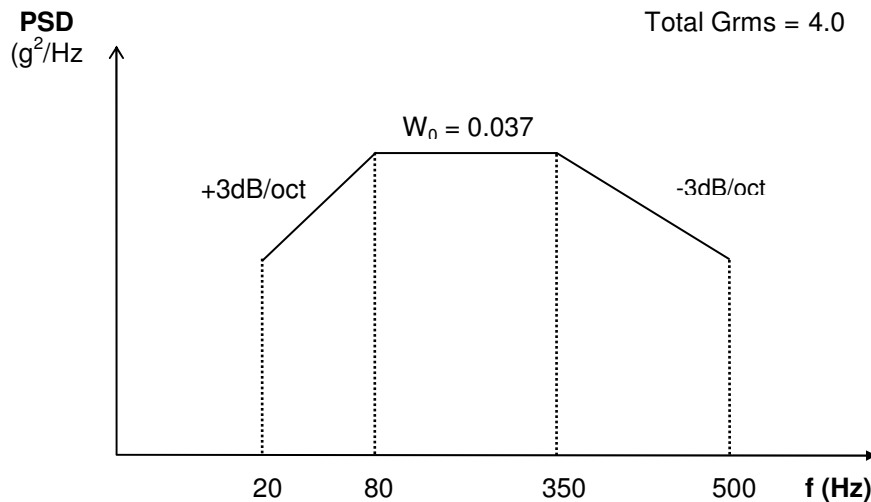
Note: Maximum output power at any combination within this table is 700W

Maximum Output Power	700W with 350LFM forced air cooling , 400W with 250LFM forced air cooling and 100W free convection.
Line Regulation	< 0.5%
Load Regulation from 10% to 90%	±1% Maximum
Ripple & Noise	20 MHz bandwidth measured across 1uF ceramic and 10uF electrolytic capacitor paralleled
V1 , V2	50mV p-p
V3 , V4	100mV p-p
Overload & Short Circuit Protection	Fully protected against output overload and short circuit
V1 & V2	110 to 130% off I Max, constant current limit, automatic recovery.
V3 & V4	110 to 200% off I Max, constant current limit, automatic recovery.
V1,V2 Set Point Tolerance	±1%
Overshoot & Undershoot	0% at turn ON
Turn-On Rise Time	40mSec Max.
Turn-On Rise Time by Inhibit	20mSec Max.
Turn On Delay	1 sec. Max. time required for initial output voltage stabilization
Transient Load Response	± 5% Max. (2% typical) deviation for load change of 50% to 100%, at slew rate of 1A/uSec, recovery time less then 1mSec
Over-voltage Protection	Shut down at 110 to 130% with latched shut down
Temperature Protection	System shutdown due to 100±5°C internal temperature, automatic reset
Hold-UP Time	10mSec
Power Sequencing	5V equal or higher than 3.3V ,The time between 5V and 3.3V reach regulation should be 3mSec max.
Load Start up Current	20A constant current for 3.3V and 10A constant current for 5V
Minimum Load	No minimum load required

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Monitoring Command & Control:	
Remote Sense	Available on V1 & V2. Total voltage compensation for cable losses with respect to the main output 400mV
Inhibit (INH#)	Turn the output to On and Off by electrical signal or dry contact 0-0.6V or Short : On 2-15V or Open : Off The maximum sink current is 15mA
Enable (EN#)	Contact closure to external ground to start unit. On shortest pin (last make, first break) Open – turn off, not exceed 5V while OFF, GND – turn on , maximum sink current is 15mA
Power Fail (FAL#)	Open collector logic "1" TTL signal which goes low signal whenever one or more outputs below 80% of nominal rate.
Current Share	Option – Active for V1 & V2, Single-Wire Link.
Hot Swap	Internal O-ring Diode FET's
Parallel Operation	Maximum eight converters can be in parallel
Over Temperature Warning (DEG#)	Open collector logic "1" TTL signal which goes low signal about 10°C before over temperature shut down.
I ² C	Option - I ² C Passive data: s/n, model no., revision, and/or user defined data
Operation Status Indicators	
Input Voltage OK	Green LED - Indicates when mains input voltage is present.
Output Failure	Red LED - Indicates one or more outputs below 80% of nominal rate.
Environmental Specification:	
Operating Temperature:	Operation: -40°C to +55°C full load with 350LFM Forced Air Cooling. De-rating 2.5%/°C up to 70°C
Storage Temperature	-45°C to +85°C
Humidity:	Up to 95% RH non-condensing,(Conformal coating is option).
Shock:	20g ±3g 20mSec (17-23mSec) half sine duration of shock pulse
Vibration:	Random vibration, 20Hz to 500Hz, 3 axis 4GRMS max. See figure 1.
Altitude	Operation 6K feet Non operation 40K feet.
MTBF	250,000 hours minimum per RIAC-HDBK-217 at AUF. Ground fix and 50°C base plate.
Conformal Coating - Option	In Accordance to IPC-CC-830 for PCB only

Figure 1



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Safety Regulatory & EMC Specifications:	
Fully compliance to PICMG 2.11 R1.0 CompactPCI Specification	
Safety Agency Compliance	UL 60950 , EN-60950, CE - MARK
Harmonics	EN61000-3-2
Voltage Fluctuation	EN61000-4-3
ESD susceptibility	EN61000-4-2 level 4 8KV air
Conducted & radiated emission	EN55022 Level B /FCC Class B conducted (with external line filter) , MIL -STD- 461F option.
Surge	EN6100 -4-5 level 3 line-to-line 1KV line to chassis 2KV
Radiated susceptibility	EN61000-4-3 level 3 10V/m
EFT/Burst	EN61000-4-4 level 3 ±2KV
Conducted disturbance	EN61000-4-6 level 2 3Vrms
RoHS	In full compliance with the RoHS directive # 2002/69/EC
Dielectric Withstand:	
Input to Case:	2200Vdc
Input to Output:	2200Vdc
Output to Case:	100Vdc
Leakage Current	Less than 1mA at 230VAC
Insulation Resistance	50M Ohm at 100VDC
Physical & Mechanical Characteristics:	
SIZE	8HP 6U (40.34mm x 233.35mm x 162.5mm)
Weight	Less than 2Kg
Metals	All metal surfaces shall be corrosion resistant or plated to resist corrosion. Outer surface texture and finish shall be in accordance with AMIL-STD-1568. Surface mating shall be conductive coated, smooth finish and smooth surface DC resistance of less than 2.5mOhm under all environmental conditions.
PCB	The PCB shall be done as per IPC610 standard , option for all the PCB will have conformal coating

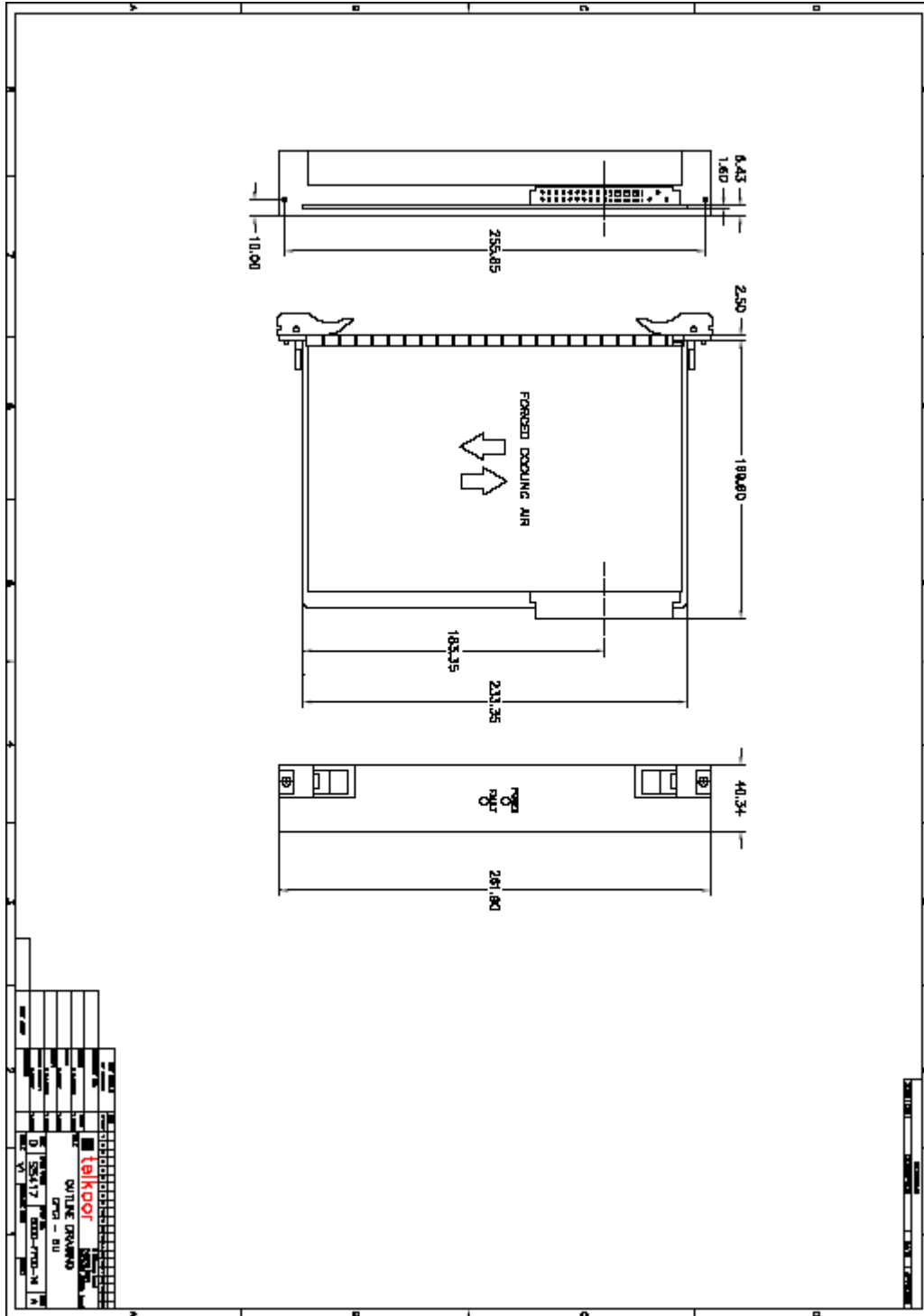
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OUTPUT CONNECTOR – 47 PIN ASSIGNMENT

Pin	Pin Type	Signal Name.	Description
1-4	Normal	V1	V1 Output
5-12	Normal	RTN	V1 and V2 Return
13-18	Normal	V2	V2 Output
19	Normal	RTN	V3 Return
20	Normal	V3	V3 Output
21	Normal	V4	V4 Output
22	Normal	RTN	Signal Return
23	Normal	Reverse	Not Used
24	Normal	RTN	V4 Return
25	Normal	GA-0	Not Used - Geographic ADD-0
26	Normal	Reverse	Not Used
27	Short	EN#	Enable, Hot Warm
28	Normal	GA-1	Not Used - Geographic ADD-1
29	Normal	V1 ADJ	Not Used- Adjust from cover using trim-pot
30	Normal	V1 Sense	V1 Remote Sense
31	Normal	GA-2	Not Used - Geographic ADD-2
32	Normal	V2 ADJ	Not Used, Adjust from cover using trim-pot
33	Normal	V2 Sense	V2 Remote Sense
34	Normal	S RTN	V1 Sense Return
35	Normal	V1 Share	V1 Current Share
36	Normal	V3 Sense	Not Connected
37	Normal	IPMB_SCL	Reserved for Management Bus
38	Normal	DEG#	Degrade Signal
39	Normal	INH#	Turn ON and OFF the power supply
40	Normal	IPMB_SDA	Reserved for System Management Bus
41	Normal	V2 Share	V2 Current Share
42	Normal	FAL#	Fail Signal
43	Normal	IPMB_PWR	Reserved for System Management Bus
44	Normal	V3 SHARE	Not Used
45	Long	Chassis GND	Chassis GND(Safety Ground)
46	Long	ACN/+DC IN	AC input - Neutral
47	Long	ACL/-DC IN	AC Input - Line

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Outline Drawing:



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