

**Electrical
Specification for:**

CPCI-3U-DC-300W RL

300W Railway DC Input 3U CompactPCI
Power Supply

**Telkoor Part
Number:**

900-4703-0000

CUSTOMER: GENERAL	SIZE	CAGE CODE	S5417	DWG. NO.	4703-DOC1-10	REV	B
	SCALE		RELEASE DATE	07/08/12	SHEET	1	OF 7

REVISION HISTORY					
Rev Level	Rev Date	Change Made	Reason for Change	Effective	Approved By
A	07/08/2012	Specification Release		07/08/2012	S. SADOT

Approvals		
	Name	Date
Written by:	S. Sadot	07/08/2012
Sales & Marketing:	H.LIBER	07/08/2012

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Input:

Input Voltage: 66-160Vdc
 Inrush Current: 50A max. @ 110Vdc
 Efficiency: Full rated load @ 81% Typical at 48Vdc
 Input Protection: Non-User Serviceable Fuse

Output Voltages & Currents:

Output	Output Voltage	Adjustment Range	Output Current	Min Load
V1	+5V	4.8 ± 5.4	30A	0
V2	+3.3V	3.1 ± 3.5	40A	0
V3	+12V	0	5A	0
V4	-12V	0	0.5	0

Note: 1) Maximum output power at any combination within this table is 300W
 2) Maximum output power on V1+V3 not exceed 185W
 3) Maximum output power on V2+V4 not exceed 140W

Output Power: 300W with 250LFM forced air cooling
 Line Regulation: ±0.5%
 Load Regulation:
 V1, V2 ±1%
 V3, V4 ±4%
 Ripple & Noise 20 MHz bandwidth measured across 1uF ceramic and 120uF electrolytic.
 Capacitor in paralleled
 V1= 75mVp-p V2= 60mVp-p
 V3 & V4 120mV p-p
 Overload & Short Circuit Protection Fully protected against output overload and short circuit. Automatic recovery upon removal of overload condition
 V1 & V2 135% max
 V3 & V4 150% max
 Initial Set Point Tolerance: ±1%
 Overshoot & Undershoot: 0% at turn ON
 Turn On Delay: 1 sec. Maximum.
 Rise Time 30mSec from 10% to 90% of its final value.
 Over-voltage Protection: 110% to 130% with latched shut down (V1, V2, V3)
 Temperature Protection: System shutdown due to excessive internal temperature, automatic reset

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Monitoring Command & Control

Remote Sense	Available on V1 & V2. Maximum voltage compensation for cable losses 200mV
Inhibit (INH#)	TTL –compatible signal inhibited with GND or TTL “0”
Enable (EN#)	Contact closure to external ground to start unit. On shortest pin (last make, first break)
Power Fail (FAL#)	TTL compatible signal, open collector active low signal. Indicates one or more outputs below 90% of specified rate.
Current Share	Accuracy of current share $\pm 10\%$ between units with up to 6 parallel units. Single wire current share on V1 & V2 for 50% to 100% load.
Hot Swap	Internal O-ring Diode
Over Temperature Warning (DEG#)	Open collector active low 10°C before power supply shut down.
I2C - 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 90% of specified rate.

Environmental Specification:

Operating Temperature	Operation: -40°C to +70°C full load with 250LFM Forced Air Cooling and de-rating linearly above 55°C by 2.5% per °C
Storage Temperature	-40°C to +85°C
Humidity	Up to 95% RH -condensing. Conformal coating .
Shock:	Peak acceleration 20GPK max.
Vibration	Random vibration, 10Hz to 500Hz, 3 axis 1.9GRMS max.
Altitude	Operation 6K ft. Non operation 40K ft.
MTBF	500,000 hours per Bellcore standard B332 Gb 30°C

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Safety Regulatory & EMC Specifications:

Fully compliance to PICMG 2.11 CompactPCI Specification

Safety Agency Compliance	UL 60950, EN-60950, CE - MARK
ESD susceptibility	EN61000-4-2 level 4 8KV air
Conducted & radiated emission	EN55022/CISPR22 Class B with an external TBD line filter
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
Power frequency magnetic field	EN61000-4-8 3A/m

Dielectric Withstand

Input to Case:	1500VDC.
Input to Output:	1500VDC
Output to Case:	100VDC.

Mechanical Dimensions

Size	5.07"H X 1.60"W X 6.40"D 128.7mm x 40.6mm x 162.5mm)
Weight	800 gr.

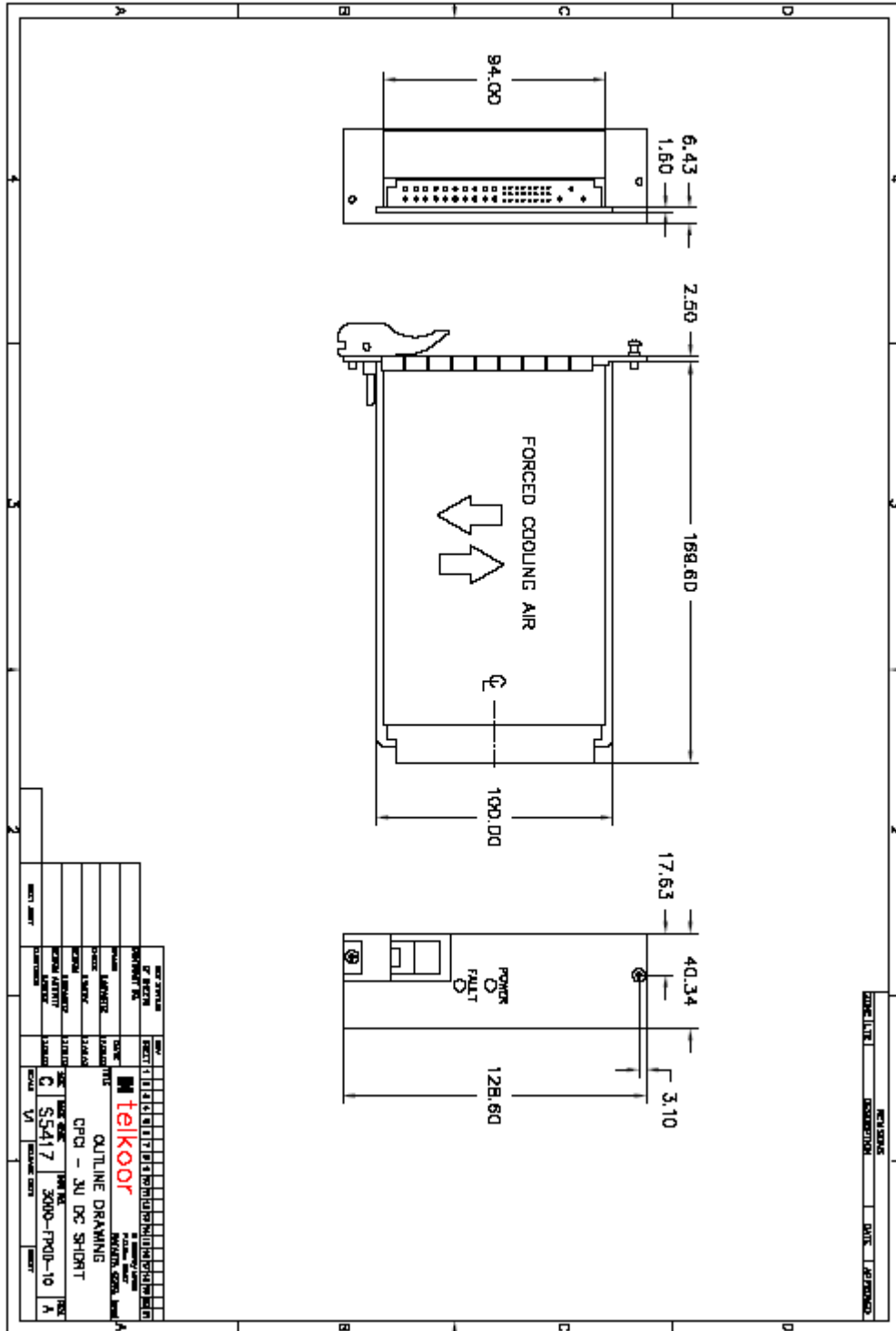
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INPUT/OUTPUT CONNECTOR - Positronic-PCIH47M400A1/AA
PIN ASSIGNMENT

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	RTN	Signal Return
24	Normal	RTN	V4 Return
25	Normal	GA-0	Geographic ADD-0 (option)
26	Normal	Reverse	Reverse
27	Short	EN#	Enable
28	Normal	GA-1	Geographic ADD-1 (option)
29	Normal	NC	Not Connected
30	Normal	V1 Sense	V1 Remote Sense
31	Normal	GA-2	Geographic ADD-2 (option)
32	Normal	NC	Not Connected
33	Normal	V2 Sense	V2 Remote Sense
34	Normal	S RTN	Sense Return
35	Normal	V1 Share	V1 Current Share
36	Normal	NC	Not Connected
37	Normal	IPMB_SCL	System Manager Bus (option)
38	Normal	DEG#	Degrade Signal
39	Normal	INH#	Open – ON Low - OFF
40	Normal	IPMB_SDA	System Manager Bus (option)
41	Normal	V2 Share	V2 Current Share
42	Normal	FAL#	Fail Signal
43	Normal	IPMB_PWR	Power–System Manager (option)
44	Normal	NC	Not Connected
45	Long	Chassis GND	Chassis GND
46	Long	DC Positive	DC Input
47	Long	DC Negative	DC Input

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Outline Drawing:



REV	DATE	BY	CHK	APP	DESCRIPTION
01	11/11/12	WJ	WJ	WJ	INITIAL DRAWING
02	12/11/12	WJ	WJ	WJ	REVISED DRAWING
03	12/11/12	WJ	WJ	WJ	REVISED DRAWING
04	12/11/12	WJ	WJ	WJ	REVISED DRAWING
05	12/11/12	WJ	WJ	WJ	REVISED DRAWING
06	12/11/12	WJ	WJ	WJ	REVISED DRAWING
07	12/11/12	WJ	WJ	WJ	REVISED DRAWING
08	12/11/12	WJ	WJ	WJ	REVISED DRAWING
09	12/11/12	WJ	WJ	WJ	REVISED DRAWING
10	12/11/12	WJ	WJ	WJ	REVISED DRAWING
11	12/11/12	WJ	WJ	WJ	REVISED DRAWING
12	12/11/12	WJ	WJ	WJ	REVISED DRAWING
13	12/11/12	WJ	WJ	WJ	REVISED DRAWING
14	12/11/12	WJ	WJ	WJ	REVISED DRAWING
15	12/11/12	WJ	WJ	WJ	REVISED DRAWING
16	12/11/12	WJ	WJ	WJ	REVISED DRAWING
17	12/11/12	WJ	WJ	WJ	REVISED DRAWING
18	12/11/12	WJ	WJ	WJ	REVISED DRAWING
19	12/11/12	WJ	WJ	WJ	REVISED DRAWING
20	12/11/12	WJ	WJ	WJ	REVISED DRAWING

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