CPCI-3U-DC-24-300W

Electrical Specification for: 300W 24V DC Input 3U CompactPCI Power Supply

With Coating and Gluing

Telkoor Part Number: 900-4011-10-C

CUSTOMER	SIZE		CAGE CODE	S5417	DWG. NO.	4011-DOC1-10-C	REV	A1
GENERAL	SCALE			RELEASE DATE	1/2/06	SHEET 1	OF	6

REVISION HISTORY				
Rev Level	**Rev Date**	**Change Made**	**Reason for Change**	**Effective**
A	31/01/06	Product Release		31/01/06
A1	17/11/08	Update Specification	Vin change from 18Vdc to 20Vdc	17/11/08

Approvals		
	Name	**Date**
Written by:	**S. Sadot**	**31/01/06**
Engineering:	**S. Sadot**	**31/01/06**
Sales & Marketing:	**M. Allon**	**31/01/06**
Management:	**Y. Ben-Ami**	**01/02/06**

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INPUT SPECIFICATIONS

Parameter	Conditions/Description	Min	Nom	Max	Units
Input Voltage - DC	Continuous input range	20	24	36	VDC
Input Protection	Non-user serviceable, internally-located input fuse				
Inrush Surge Current	Internally limited by thermistor			20	A @ 24V
Operating Frequency	Switching frequency of main output transformer	70		90	KHz

Output Specifications

Output	Output Voltage	Adjustment Range	Output Current	Line Regulation	Load Regulation	Ripple & noise %pk-pk (Note 1)
V1	+5V	4.8 ÷5.2	30A	0.5%	± 1%	60mV
V2	+3.3V	3.1 ÷ 3.5	40A	0.5%	± 1%	60mV
V3	+12V	N/A	5.0A	0.5%	± 4%	120mV
V4	-12V	N/A	1.0A	0.5%	± 4%	120mV

Notes: 1) maximum peak-to-peak expressed in mV @ 20MHz bandwidth.
2) Maximum power on V1 + V3 not to exceed 185W
3) Maximum power on V2 + V4 not to exceed 140W

Parameter	Conditions/Description	Min	Nom	Max	Units
Efficiency	Full rated load @ 24 VDC	82			%
Minimum Load V1, V2, V3, V4	Minimum load required to maintain regulation	None			
Ripple and Noise	Full load, 20 MHz bandwidth		See above table		
Output Power	40CFM			300	W
Overshoot/Undershoot	Output voltage overshoot/undershoot at turn-on.			0	%
Regulation	Varies by output. Total regulation includes: line changes over the specified input range, changes in load starting at 50% load and changing to 100%		See above table		
Turn-on Delay	Time required for initial output voltage stabilization		< 2		Sec
Output voltage rise time after Turn-on delay	Rise time of output voltage from 10% to 90% of its final value after initial turn-on delay		20		mSec
Initial Setting Accuracy for V1 & V2			± 1		%

Fully compliant with the PICMG 2.11 CompactPCI specifications

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INTERFACE SIGNALS AND INTERNAL PROTECTION

Parameter	Conditions/Description	Min	Nom	Max	Units
Over-voltage Protection	Latch style over-voltage protection (V1, V2 & V3)	110		130	% Vnom.
Overload Protection	Fully protected against output overload and short circuit. Automatic recovery upon removal of overload condition				
Over temperature Protection	System shutdown due to excessive internal temperature measured on the internal base plate, automatic restart.		90		° C
Power Fail (FAIL#)	TTL compatible signal. Open collector. Active low signal. Indicates outputs below 90% for V1 and/or V2 and/or V3				
Current Share	Accuracy of shared current with up to 6 parallel units. Single wire current share on V1 & V2.			10	%
Remote Sense	Available on V1 & V2. Total voltage compensation for cable losses with respect to the main output			200	mV
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) during normal operation pulled up to +5V internally.				
Over temperature Warning (DEG#)	Provides a warning window when power supply temperature exceeds rating and before over temperature protection shuts the unit off. TTL-compatible open				
Front Panel LED Status Indicator	Input OK (Green), Output Failure (Red)				

(*) Tested with an external TBD line filter

SAFETY, REGULATION AND EMI SPECIFICATION

Parameter	Conditions/Description	Min	Nom	Max	Units
Agency Approvals	UL 60950, cUL 60950, EN60950		Approved		
Dielectric Withstand Voltage	Input to Output per EN60950	3000			VDC
Electromagnetic Interference	EN55022/CISPR22 – Conducted & Radiated	B (*)			Class
ESD Susceptibility	Per EN61000-4-2, level 4	8			KV
Radiated Susceptibility	Per EN61000-4-3, level 3	10			V/M
EFT/Burst	Per EN61000-4-4, level 3	±2	kV		
Input Surge	Per EN61000-4-5, level 3. Line to Line Line to Ground	1 2			KV
Conducted Disturbance	Per EN61000-4-6, level 2			3	V
Insulation Resistance	Input to Output		10		MΩ

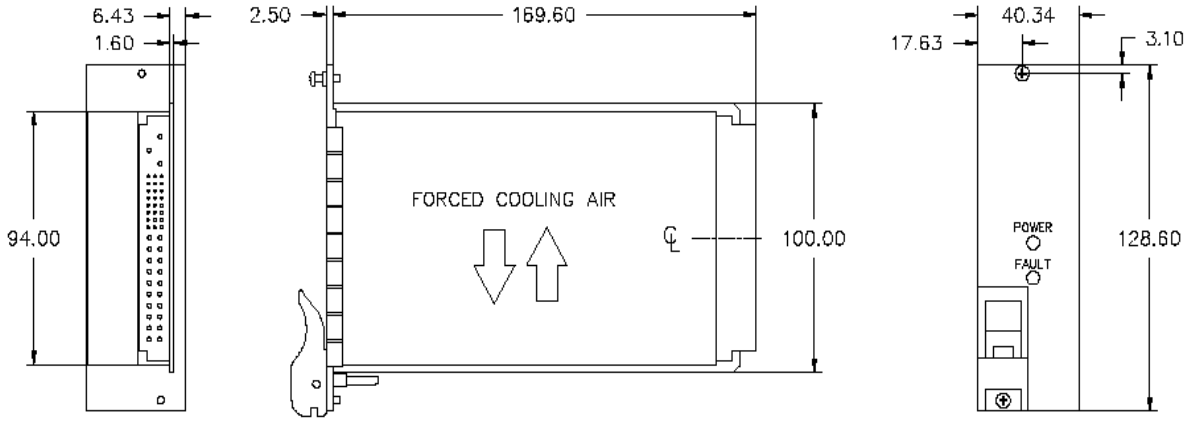
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ENVIRONMENTAL SPECIFICATIONS

Parameter	Conditions/Description	Min	Nom	Max	Units
Altitude	Operating Non-Operating			10K 50K	Feet Feet
Operating Temperature	With 40CFM forced-air cooling At 100% load De-rated linearly above 55°C by 2.5% per°C power supply turns to ON at -40ºC and will operate according the Spec after few minutes of operation (ripples)	-20		55	°C
Storage Temperature		-40		85	°C
Relative Humidity	Non-Condensing	5		95	%RH
Shock	Peak acceleration			20	GPK
Vibration	Random vibration, 10Hz to 500 KHz, 3 axis			1	GRMS

OVERALL SIZE: 5.07"H x 1.60"W x 6.40"D (128.7mm x 40.6mm x 162.5mm)
WEIGHT: 800 gr.

Outline Drawing:



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Connector Pin Out

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

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