

Key Features:

- **3 phase 115VAC 400Hz** Input Voltage
- **150msec hold time**
- **28V backup input**
- 4000V Isolation Between Input /Output
- Active Input EMI Filtering
- No 3phase input filter inside the power supply
- Transient look ahead/cut-off technology
- 6 Voltage output Rails
- **3 Phase DSP controlled Power Factor Correction**
- 900W Maximum Continuous Power, no derating
- 89% Typical Efficiency
- -40°C to 85°C Operating Temperature
- VITA 62 3U Form Factor
- Patent pending **FourRail** thermal interface
- **Space saving design combines Vita 62 and VITA 62.1 specification**

VITA 62 3U ISOLATED 600W 115 VAC 400Hz POWER SUPPLY

This 3U power supply works with a **115VAC 3phase input** and can be used for input frequencies from **380Hz to 440Hz** and isolates each phase from the input voltage ground to the output voltage ground.

Designed into this power supply is a state of the art 3 Phase DSP controlled Power Factor Correction.

The power supply is **conduction cooled**, uses digital **poly-phase** technology on all output rails and can provide up to **900 watts**. It is suitable for use in **mission critical rugged applications**.

Features:

- Digital On/Off control for low standby power
- Output Voltage rail setting /adjustment
- Power supply history logging and fault management
- Monitoring output voltages, currents and power
- Automatic temperature drift compensation for all outputs
- PMBus™ Compliant Command Set
- Collects data from temperature sensors for over temperature protection
- Precision compensation of all output voltages using integrated 5ppm voltage reference
- No 3 phase input filter inside the power supply, must be integrated into the chassis filtering input stage.

Overview	
P/N	PCI_800.165
Hold Up time	150ms/400W
VITA Compliant	VITA62
Size	3U
Temp. Range	-40 +85 C
Input (AC or DC)	AC with PFC
Input Range (AC)	3x115
Active EMI Filtering	YES
Power (W, max.)	900
Efficiency (% , typ.)	89
# of outputs	6

OUTPUTS (Total output not to exceed 900W)	
VS1, V@A	+12V@40A
VS2, V@A	+3.3V@30A
VS3, V@A	+5V@40A
AUX, V@A	+3.3V@4A
AUX, V@A	+12V@1.5A
AUX, V@A	-12V@1.5A
AUX, V@A	+24V@20A

FEATURES	
Over-current Protection	YES
Over-voltage Protection	YES
Over-temperature Protection	YES
Current Sharing	NO
Remote Sense	YES
Standard Control	YES, VITA62
Extended Control	YES

Designed to meet the following standards, additional circuitry in the chassis may be required	
VITA62	YES
MIL-STD-704 (B-F)	YES
MIL-STD-461	YES
MIL-STD-810G	YES
* ESD Protection	YES
* Shock	YES
* Vibration	YES
* Rapid Decompression	YES
* Corrosion Resistance	YES
* Fungus Resistance	YES
* Altitude	YES
* Humidity	YES

INPUT CHARACTERISTICS					
Parameter	Min.	Typ.	Max.	Units	Notes
Absolute Maximum Ratings					
Input Voltage					
- Non-Operating, Vrms			265	V	Continuous
- Operating, Vrms			140	V	Continuous
- Operating Transient Protection, Vrms			300	V	1ms transient
Isolation Voltage			1500	V	
Operating Temperature	-40		85	C	
Storage Temperature	-55		105	C	
Electrical Characteristics					
Input Voltage					
- Continuous, Vrms	100	115	125	V	
- Transient, Vrms	80		180	V	Transient for 10 ms
Under-Voltage Lockout					
- Turn-On Input Voltage Threshold, Vrms	100		105	V	

INPUT VOLTAGE SPIKES SUPPRESSION (Vin Centered)

Designed to meet the following standards, additional circuitry in the chassis may be required

+/- 450V, 100 us	MIL-STD-1275E
+/- 490V, 10 us	MIL-STD-461C (CS06); DEF-STAN 61-5
+/- 450V, 5 us	MIL-STD-461C (CS06)
+/- 600V, 10 us	RTCA/DO-160E

OUTPUT CHARACTERISTICS

Parameter	+12V	+3.3V	+5V	+3.3V aux	+12V aux*	-12V aux*	+24V aux*	Notes
Output Voltage Set Point, V	12	3.3	5	3.3	12	-12	24	Vin = 115Vrms
- Drift -40 deg.C to 85degC +/- %	0.01	0.01	0.01	0.01	N/A	N/A	N/A	Over Line/load/temp.
Output Voltage Trim Range, V	+/- 10%	+/- 10%	+/- 10%	+/- 10%	N/A	N/A	N/A	Digitally adjustable
Output Voltage Ripple (pk-pk), mV	80	40	50	40	80	80	240	Full load with 1 uF + 10 uF tantalum capacitor on each slot
Operating Current Range, A	0-40	0-30	0-40	0-4	0-1.5	0-1.5	0-30	900W Total, combined Output
Over-Voltage Protection, V	12.6	3.5	5.4	3.5	12.6	-12.6	30	Digitally adjustable
Current Limit Inception, A	45	35	45	4.5	2.5	2.5	35	Digitally adjustable
Maximum Output Capacitance, mF	10	10	10	5	1	1	10	

* Rails without digital metering/adjustment

Designed to meet the following test standards, additional circuitry in the chassis may be required

Test Name	Method
Random Vibration	MIL-STD-810, 514.6 - Procedure I, Class V3
Shock	MIL-STD-810, 516.6 - Procedure I, VI, Class OS2
Altitude	MIL-STD-810, 500.5 - Procedure I, II, III
Fungus Resistance	MIL-STD-810, 508.6
Corrosion Resistance	ASTM G85, Annex A4
Humidity	MIL-STD-810, 507.5 - Procedure II
High Temperature	MIL-STD-810, 501.5 - Procedure I, II
Low Temperature	MIL-STD-810, 502.5 - Procedure I, II
Temperature Cycling	MIL-STD-202, 107 - Class C4
ESD	EN61000-4-2, Level 4; 15kV Air Discharge

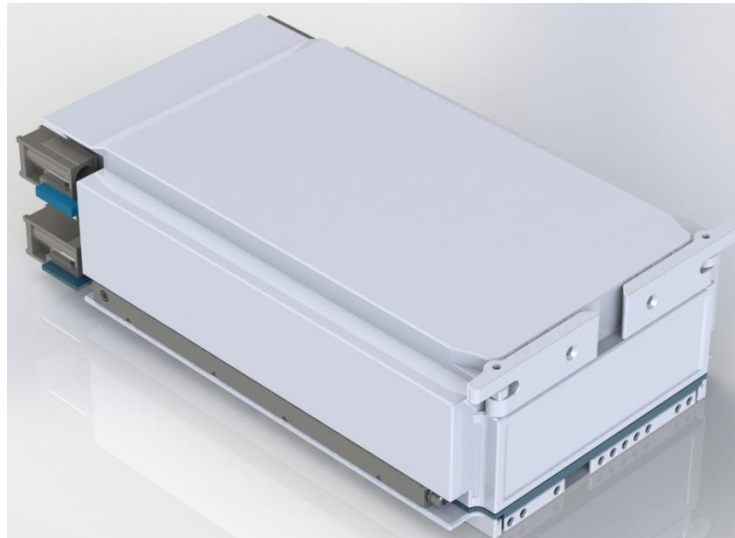
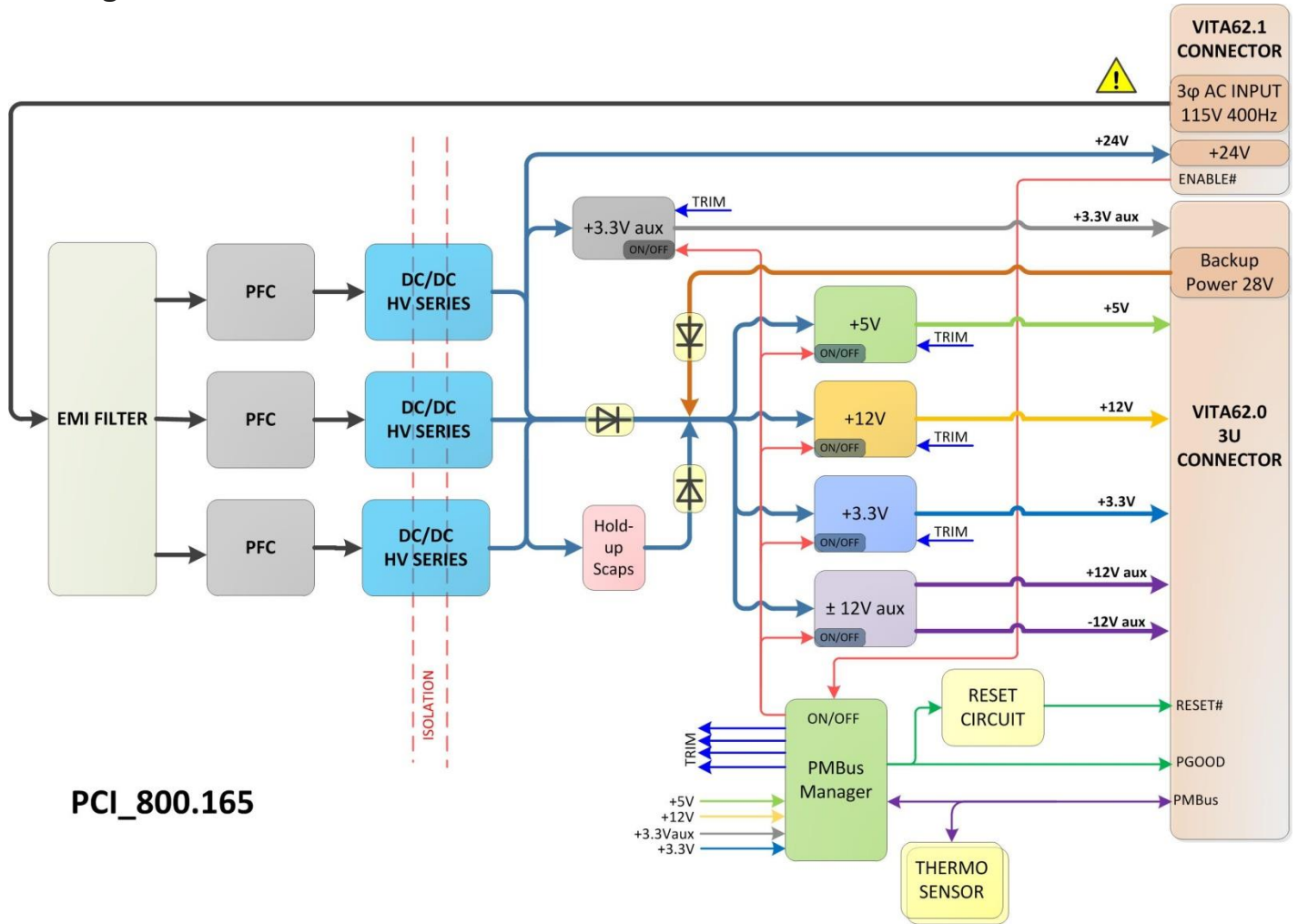
RELIABILITY CHARACTERISTICS

Calculated MTBF per MIL-HDBK-217F (GB) at 70 deg C. 4.1 280.000 Hrs.
Estimated MTBF in Airborne application 250.000 hours

Power factor is better than 0.95.



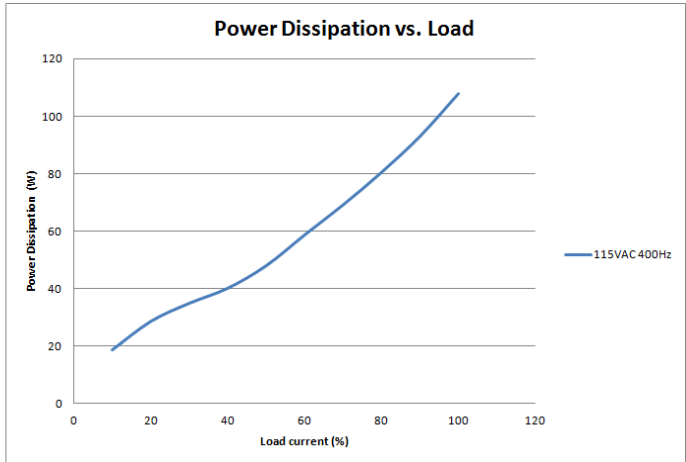
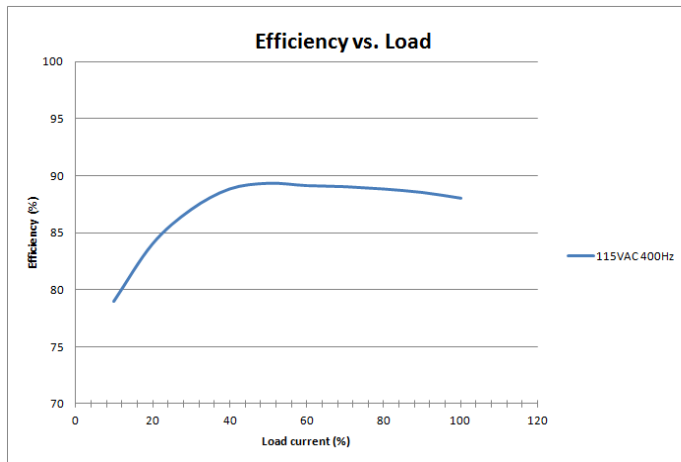
Block Diagram:



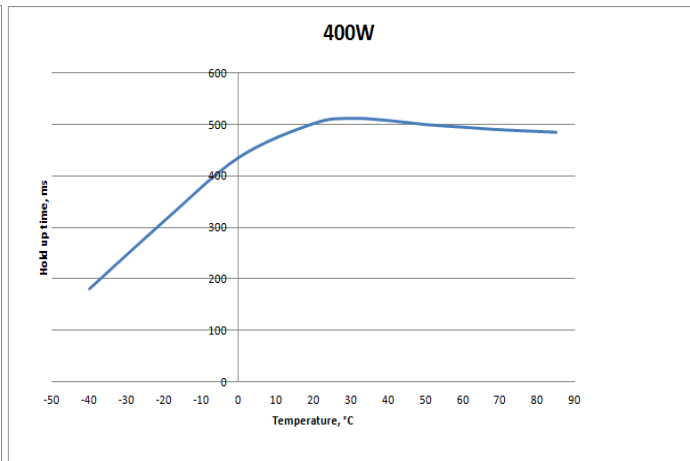
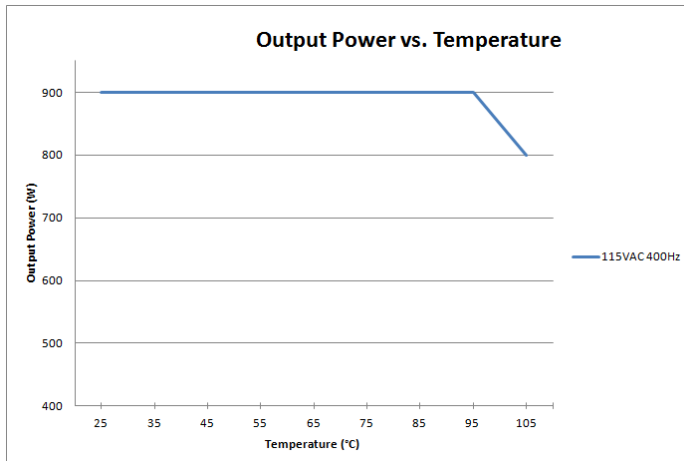
Pin-out: Based on VITA 62 and VITA 61.1 specification

Mechanical Dimensions: Based on VITA 62 specification (2" pitch)

Characteristic curves:



Efficiency and Power Dissipation at nominal output voltage vs. load current at 25°C



Thermal derating

Max. Output Power vs. temperature at thermal interface.

(Delta T to wedgelock 7°C)

Hold-up time vs. temperature at 400W load

ORDERING INFORMATION:

PCI_800.165_C

3U VITA 62 900W 115VAC 400Hz 3 Phase Isolated Rugged Power Supply with Conformal Coating

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