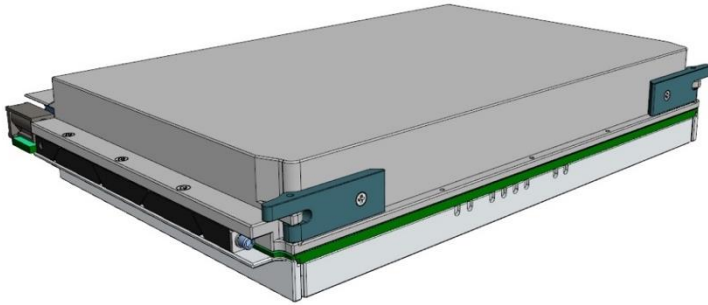


Datasheet PRELIMINARY

VITA 62 1 Inch-wide POWER SUPPLY LINE

PCI_800.323



Key Features:

- 3 Phase 115Vrms 47-440Hz Continuous Input Voltage
- DSP based 3phase PFC input stages
- Vita 62.2 High Voltage Input Connector
- 1500V Isolation Between Input /Output
- Needs external input filtering
- Transient look ahead/cut-off technology
- 5 Voltage output Rails
- Provision for external hold-up capacitor
- Isolated 3.3V aux standby feature
- 1.400W Maximum Continuous Power
- 90% Typical Efficiency
- -40°C to 85°C Operating Temperature
- VITA 62 6U Form Factor
- VITA 46.11 ready with extra software
- Patent pending **FourRail** thermal interface
- [SMART.PSU] Technology

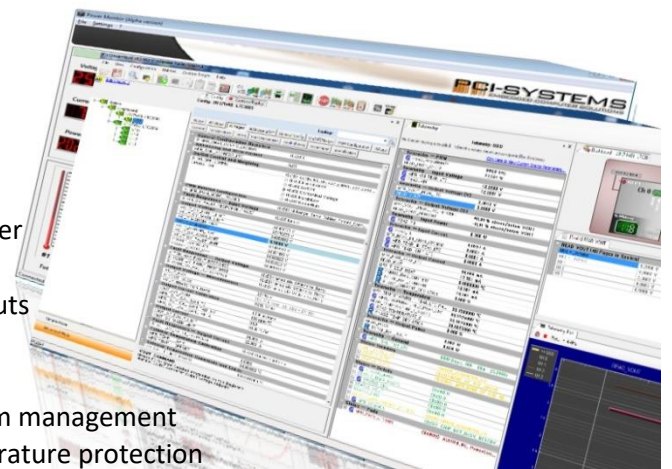
VITA 62 1" wide 6U ISOLATED 1.400W 3Phase 115VAC 47-440Hz POWER SUPPLY

This 6U power supply works with **115Vrms L-N 3Phase Input** and can be used for input frequencies from **47Hz to 440Hz** and isolates the input voltage ground from the output voltage ground. The power supply is **conduction cooled**, uses **poly-phase** technology on all voltage rails and can provide up to **1.400 watts**. It is suitable for use in **mission critical rugged applications**.

[SMART.PSU]PCI-Systems Inc. intelligent power supplies integrate a **microcontroller (MCU)** for a fully programmable and flexible solution. Intelligent power conversion allows **configuration and reconfiguration** for different applications. With intelligent power conversion, the power supply becomes a platform solution for Vita 46.11 system management based systems. The power supply can easily be **reprogrammed** to support different **operating limits and control inputs**.

Features:

- Parallel operating with multiple power supplies, all rails
- Load sharing and balancing
- Digital On/Off control for low standby power
- Input / Output Voltage rail setting /adjustment
- Spread Spectrum Clocking of power supply stages
- Possibility of external synchronization
- Power supply sequencing and hot-swap control
- Power supply history logging and fault management
- Monitoring all input/output voltages, currents and power
- Current fold back control
- Automatic temperature drift compensation for all outputs
- Total-Elapsed-Time Recorder
- Efficiency calculations at any time
- Communication via SMB/I2C (PMB)for Vita 46.11 system management
- Collects data from temperature sensors for over temperature protection
- Precision compensation of all output voltages using integrated 5ppm voltage reference



Overview	
P/N	PCI_800.323
Hold Up time	TBD
VITA Compliant	VITA 62 Vita 62.2
Size	6U
Temp. Range	-40 +85 C
Input (AC or DC)	AC
Input Range (AC)	3x115Vrms L-N
Active EMI Filtering	YES
Power (W, max.)	1.400
Efficiency (% , typ.)	90
# of outputs	5

OUTPUTS (Total output not to exceed 1.400W)	
VS1,VS2 V@A	+12@100A
VS3, V@A	+5@40A
AUX, V@A	+3.3@15A
AUX, V@A	+12@3A
AUX, V@A	-12@3A

FEATURES	
Over-current Protection	YES
Over-voltage Protection	YES
Over-temperature Protection	YES
Current Sharing	VS1, VS2, VS3
Remote Sense	YES
Standard Control	YES, VITA 62.2
Extended Control	YES, PCI Systems

COMPLIANCE	
Designed to meet the following standards, additional filter 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 VOLTAGE SPIKES SUPPRESSION (Vin Centered)					
Designed to meet the following standards, additional filter circuitry in the chassis may be required					
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	-55 to +85 deg C optional
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 filter circuitry in the chassis may be required

+/- 450V, 100 us	MIL-STD-1275 N.A.
+/- 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	+5V	+3.3V aux	+12V aux	-12V aux	Notes
Output Voltage Set Point, V	12	5	3.3	12	-12	Vin = 115Vrms
- Drift -40 deg.C to 85degC +/- %	0.01	0.01	0.01	0.01	0.01	Vin = 115Vrms
Output Voltage Trim Range, V	12	5	3.3	12	-12	Over Line/load/temp.
	+/- 10%	+/- 10%	+/- 10%	+/- 10%	+/- 10%	Over Line/load/temp.
Output Voltage Ripple (pk-pk), mV	120	50	50	80	80	Full load with 1 uF + 10 uF tantalum capacitor on each slot
Operating Current Range, A	0-100	0-40	0-15	0-3	0-3	1.400W Total, combined Output , at 40 deg C.
Over-Voltage Protection, V	13.6	6	3.6	13.6	13.6	programmable
Current Limit Inception, A	110	45	16	3.5	3.5	programmable
Maximum Output Capacitance, mF	10	10	10	1	1	

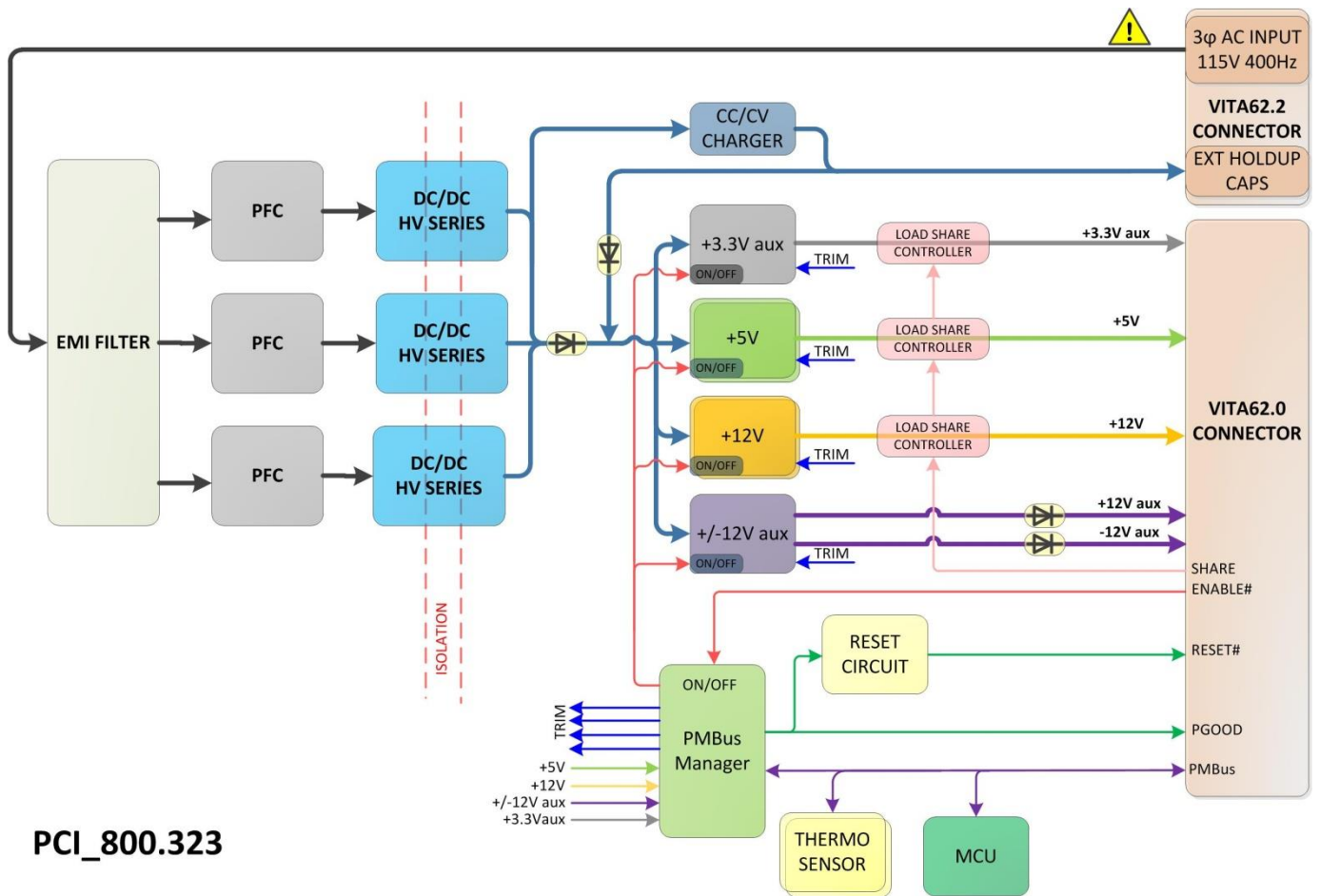
MODULE QUALIFICATION

Designed to meet the following standards, additional filter 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

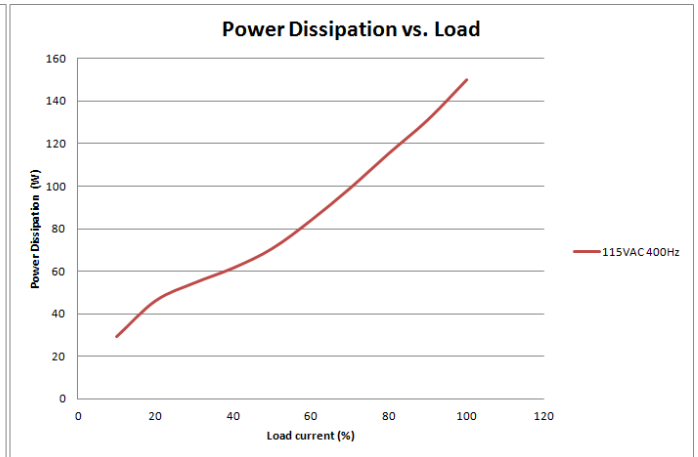
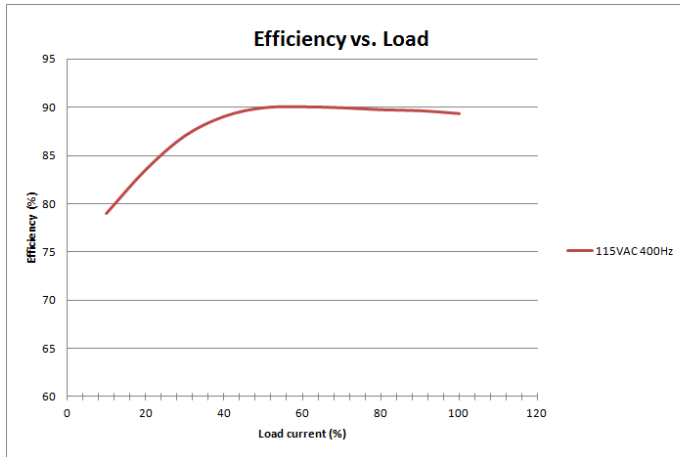
RELIABILITY CHARACTERISTICS

Calculated MTBF per MIL-HDBK-217F (GB) at 70 deg C. 1.600.000 Hrs.
Calculated MTBF per MIL-HDBK-217F (GM) at 70 deg C. 1.25.000 Hrs.

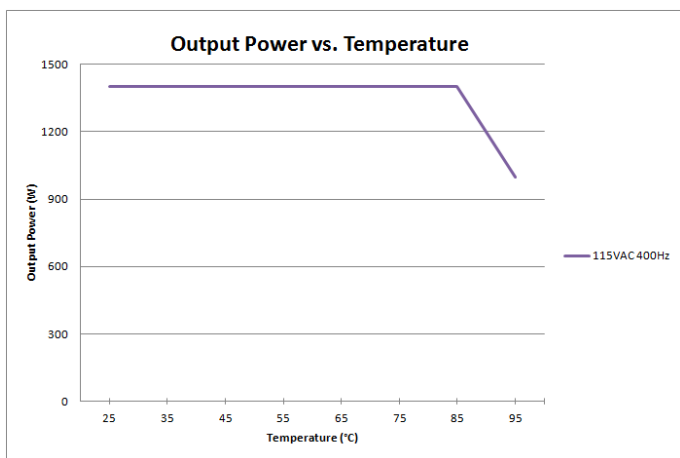


Pin-out: As per VITA 62 specification

Mechanical Dimensions: As per VITA 62 specification (1" pitch)



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)

ORDERING INFORMATION:

PCI_800.323_C 6U VITA 62 1.400W 3Phase 115VAC 50Hz-400Hz Isolated Rugged Power Supply

Release January 18 2021