



Key Features:

- **3 phase 115VAC 400Hz** Continuous Input Voltage
- **5msec hold time at 300W**
- **1500V Isolation** Between Input /Output
- **Active Input EMI Filtering**, no LC stage
- **SOSA compatible**
- **Transient look ahead/cut-off technology**
- **2 Voltage output Rails: +12V and +3.3Vaux**
- **600W Maximum Continuous Power**
- **92% Typical Efficiency**
- **-40°C to 85°C Operating Temperature**
- **VITA 62 3U Form Factor**
- Patent pending **FourRail** thermal interface

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

This 3U power supply works with **115VAC 3phase input** and can be used for input frequencies from **380Hz to 440Hz** and isolates the input voltage ground from the output voltage ground. The power supply is **conduction cooled**, uses **poly-phase** technology and can provide up to **600 watts**. It is suitable for use in **mission critical rugged applications**.

Features:

- Parallel operating with multiple power supplies
- Load sharing and balancing
- Digital On/Off control for low standby power
- Output Voltage rail setting /adjustment
- Power supply history logging and fault management
- Monitoring all output voltages, currents and power
- Automatic temperature drift compensation for all outputs
- 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_800.160
Hold Up time	5ms/300W
VITA Compliant	VITA62
Size	3U
Temp. Range	-40 +85 C
Input (AC or DC)	AC
Input Range (AC)	115
Active EMI Filtering	YES
Power (W, max.)	600
Efficiency (% , typ.)	92
# of outputs	2

OUTPUTS (Total output not to exceed 600W)	
VS1, VS2 V@A	+12V@50A
VS3, V@A	
AUX, V@A	+3.3V@4A
AUX, V@A	
AUX, V@A	

FEATURES	
Over-current Protection	YES
Over-voltage Protection	YES
Over-temperature Protection	YES
Current Sharing	VS1, VS2
Remote Sense	YES
Standard Control	YES, VITA62
Extended Control	YES

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 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) COMPLIANCE

Designed to meet the following standards, additional filter 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 aux	Notes
Output Voltage Set Point, V	12	3.3	Vin = 115Vrms
- Drift -40 deg.C to 85degC +/- %	0.1	0.1	Vin = 115Vrms
Output Voltage Trim Range, V	+/- 10%	+/- 10%	Over Line/load/temp.
			Over Line/load/temp.
Output Voltage Ripple (pk-pk), mV	160	40	Full load with 1 uF + 10 uF tantalum capacitor Each rail, each slot
Operating Current Range, A	0-50	0-4	600W Total, combined Output
Over-Voltage Protection, V	13	3.6	
Current Limit Inception, A	50	4.5	
Maximum Output Capacitance, mF	10	0.5	

MODULE QUALIFICATION COMPLIANCE

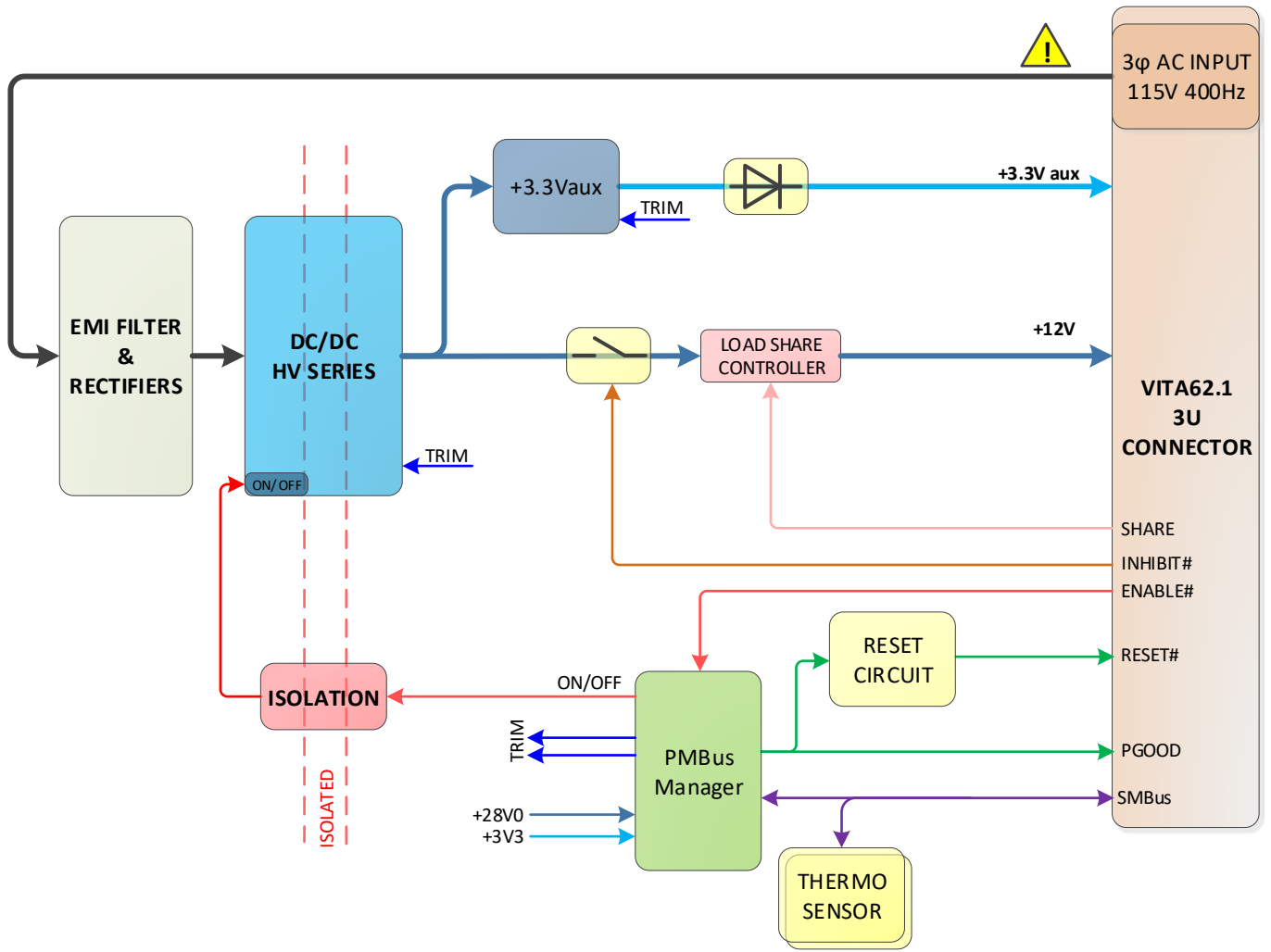
Designed to meet the following standards, additional filter circuitry in the chassis may be required

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, Ground pressure only
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.

Block Diagram:



Pin-out: **As per VITA 62.1 specification**

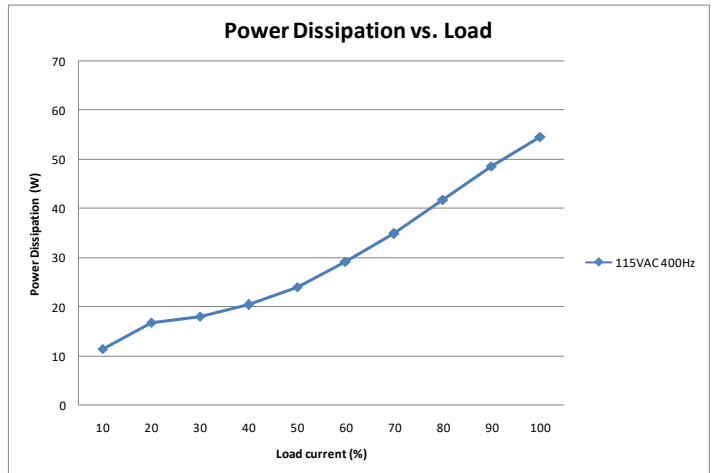
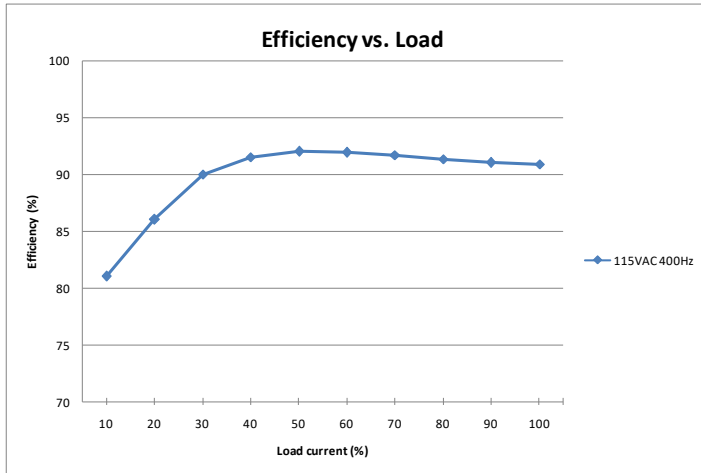
Mechanical Dimensions: **As per VITA 62 specification (1" pitch)**

Weight: **approx. 680g approx.**

P0 CONNECTOR		
Pin#	Name	Comment
LP1	Phase A	
LP3	Phase B	
LP5	Phase C	
LP7	Neutral	
LP9	Hold Up+	(Optional)
LP11	Hold Up-	(Optional)
LP13	Chassis	
A1	GA0*	
A2	GA1*	
A3	UD0	Provides +3.3V aux (Optional)
B1	SM0	I2C Clock
B2	SM1	I2C Data
B3	SM2	Provides +3.3V aux (Optional)
C1	SM3	Provides +3.3V aux (Optional)
C2	INHIBIT*	Use to turn OFF the Main Output Power; Leaves +3.3V_Aux ON
C3	FAIL*	Active Low, Open Drain *If the input power is below threshold you will get a FAIL* active, at that time the PS uses the hold up power.
D1	SIGNAL_RETURN	
D2	ENABLE*	Use to turn OFF the Main Output Power and +3.3V_Aux
D3	+3.3V_Aux	Provides +3.3V aux
P1	+12V OUT	
P2	POWER_RETURN	

Keying for Alignment Key 1 and Key 2		
Key	Key Position	Comment
Key 1	90°	
Key 2	USED DEFINED	

Characteristic curves:



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

ORDERING INFORMATION:

PCI_800.160_C 3U VITA 62.1 SOSA 600W 115VAC 380-440Hz Isolated Power Supply 12V out, with Conformal Coating
No input LC stage on power supply, customer must add relevant filter unit into the chassis.

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