



Key Features:

- **3 phase 115VAC 400Hz** Continuous Input Voltage
- **10msec** hold time at **1200W**
- **1500V** Isolation Between Input /Output
- Active Input EMI Filtering
- Transient look ahead/cut-off technology
- 2 Voltage output Rails: +28V and +3.3Vaux
 - +12V optional instead of 28V
- **1200W** 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 1200W 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 **1200 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_800.161
Hold Up time	10ms/600W 5ms at +85 deg C.
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.)	1200
Efficiency (% , typ.)	92
# of outputs	2

OUTPUTS (Total output not to exceed 600W)	
VS1, VS2 V@A	+28V@40A
	Or 12V@80A
VS3, V@A	
AUX, V@A	+3.3V@2A
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	
VITA62	YES
MIL-STD-704 (B-F)	YES
MIL-STD-461	YES
MIL-STD-810G	YES
* ESD Protection	YES
* Shock	YES
* Vibration	YES
	YES
* Rapid Decompression	
* 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)	
+/- 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

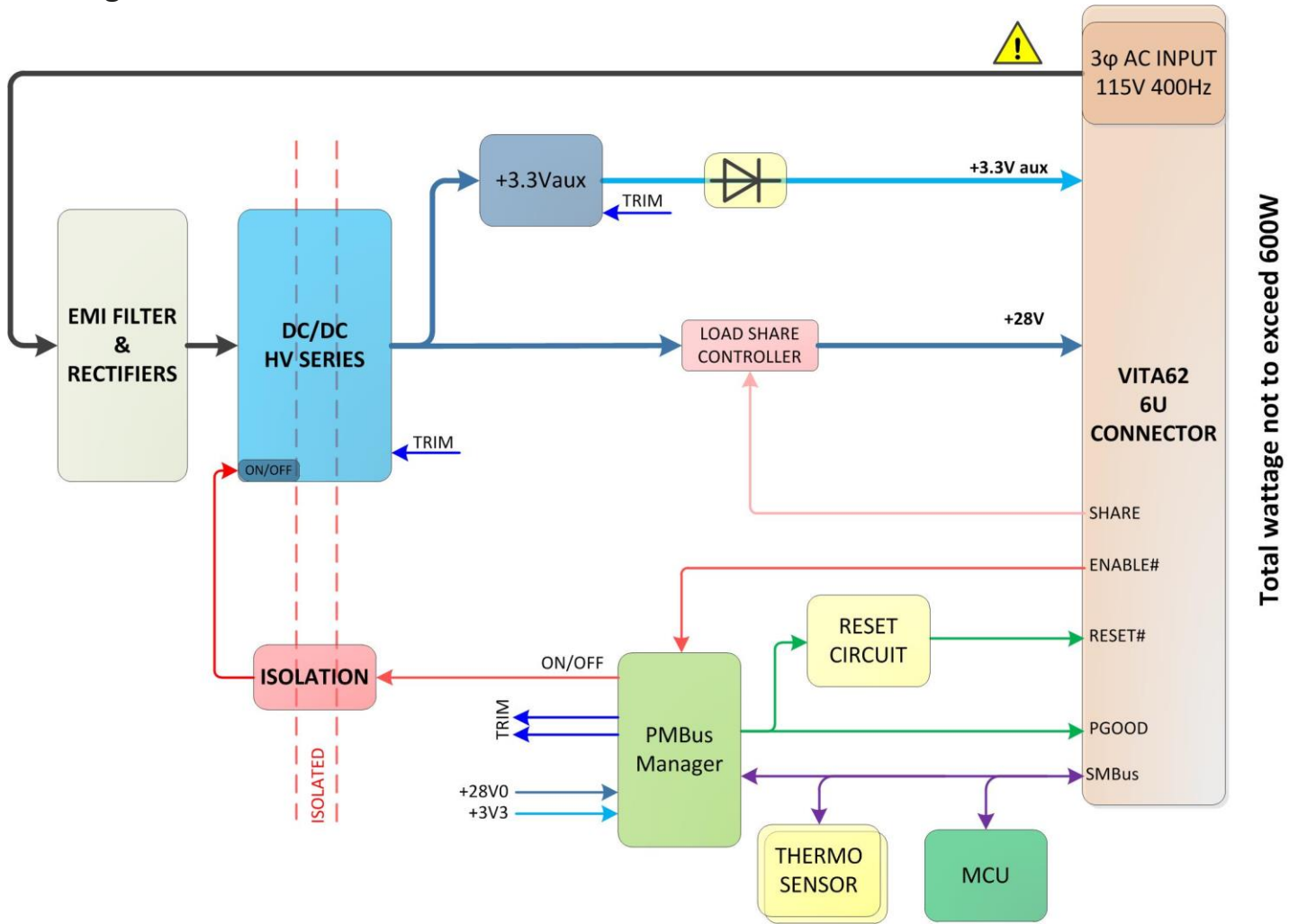
OUTPUT CHARACTERISTICS					
Parameter	+28V	+12V option	+3.3V aux		Notes
Output Voltage Set Point, V	28	12	3.3		Vin = 115Vrms
- Drift -40 deg.C to 85degC +/- %	0.01		0.01		Vin = 115Vrms
Output Voltage Trim Range, V	12	12	3.3		Over Line/load/temp.
	+/- 10%	+/- 10%	+/- 10%		Over Line/load/temp.
Output Voltage Ripple (pk-pk), mV	360	160	40		Full load with 1 uF + 10 uF tantalum capacitor
Operating Current Range, A	0-22	0-80	0-2		1200W Total, combined Output
Over-Voltage Protection, V	32	13	3.6		
Current Limit Inception, A	23.5	81	2.5		
Maximum Output Capacitance, mF	10	10	0.5		

MODULE QUALIFICATION	
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.

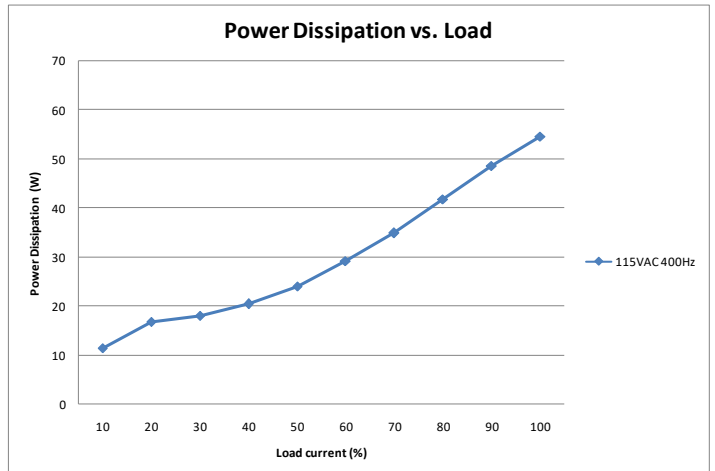
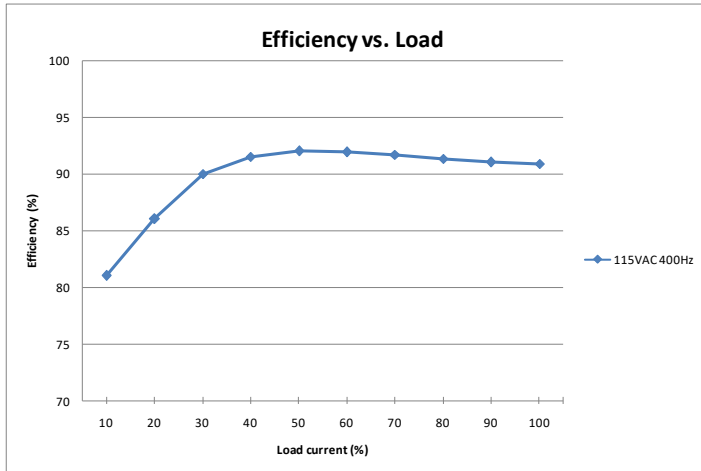
Block Diagram:



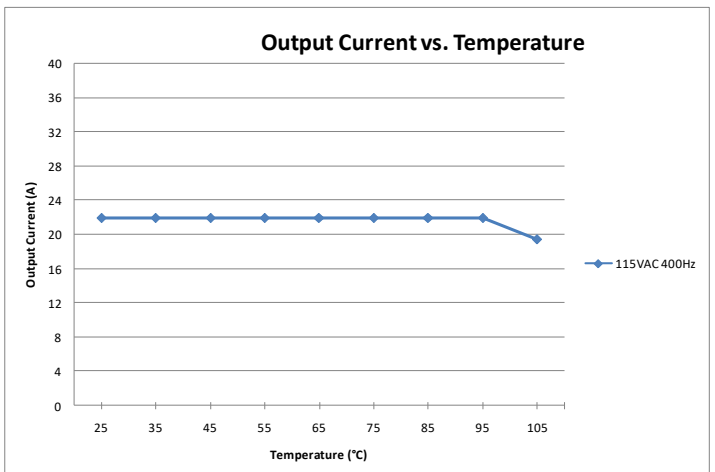
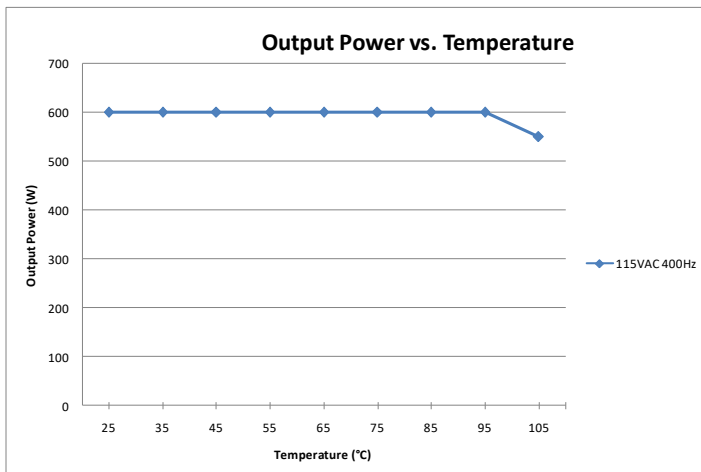
Pin-out: As per VITA 62 specification

Mechanical Dimensions: As per VITA 62 specification (1.6" pitch)

Characteristic curves:



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



Thermal derating max Output Power and Output Current vs. temp at module cover. (Delta T to wedgelock 7°C)

ORDERING INFORMATION:

- PCI_800.161_C_28 3U VITA 62 1200W 115VAC 380-440Hz Isolated Rugged Power Supply 28V out, with Conformal Coating
- PCI_800.161_C_12 3U VITA 62 1200W 115VAC 380-440Hz Isolated Rugged Power Supply 12V out, with Conformal Coating

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