

Key Features:

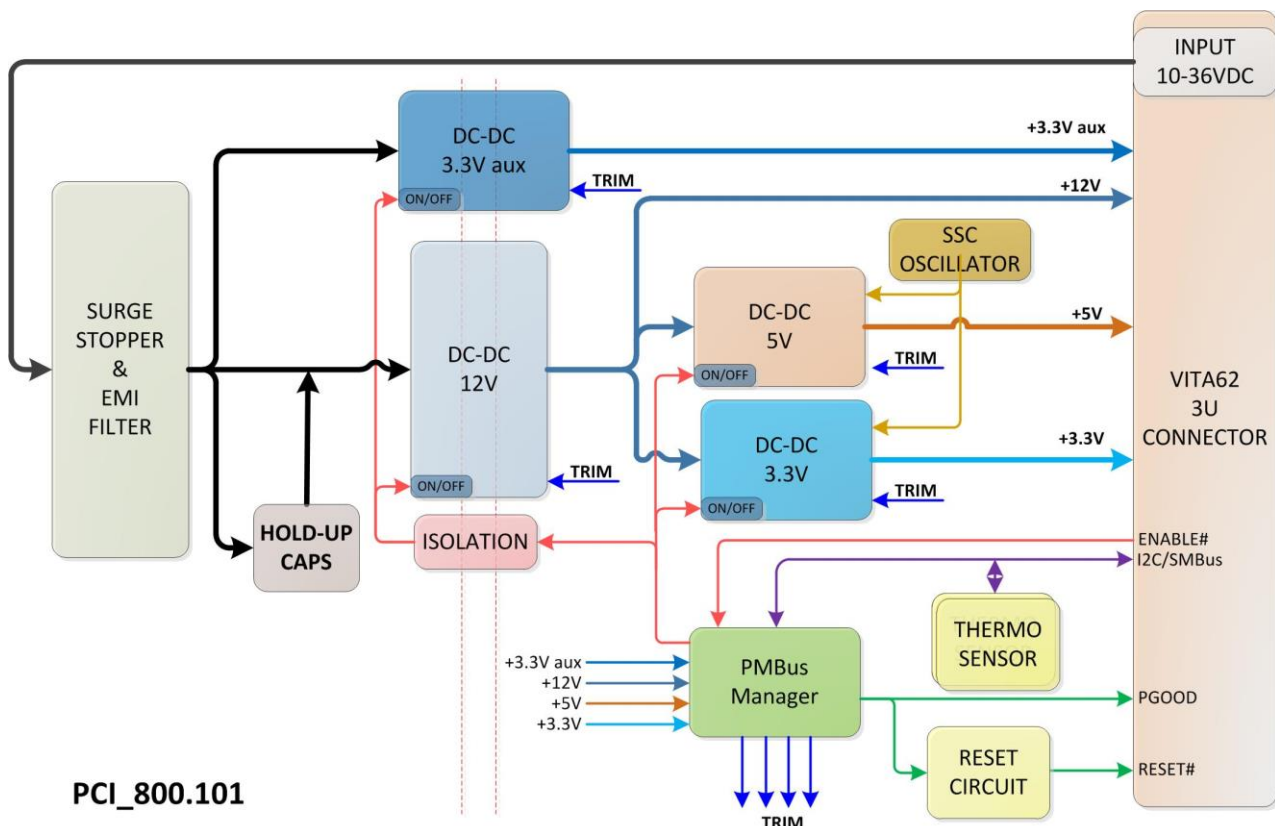
- 10-36V Continuous Input Voltage
- 2250V Isolation Between Input /Output
- Input Holdup time 50msec min. at 200W
- Active Input EMI Filtering
- Transient look ahead/cut-off technology
- 4 Voltage output Rails
- 250W Maximum Power
- 93% Typical Efficiency
- -40°C to 85°C Operating Temperature
- VITA 62 3U Form Factor
- Patent pending **FourRail** thermal interface

VITA 62 3U ISOLATED 250W 28VDC POWER SUPPLY

This 3U power supply works with **10 to 36 VDC (28VDC nominal) input voltage**.

The power supply is **conduction cooled**, uses **poly-phase** technology on all voltage rails and can provide up to **250watts**. It is suitable for use in **mission critical rugged applications**.

[**SMART.PSU**]PCI-Systems Inc. intelligent power supplies integrate digital polyphase controllers 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**.



PCI_800.101

Overview	
P/N	PCI_800.101
VITA Compliant	VITA62
Size	3U
Temp. Range	-40 +85 C
Input (AC or DC)	DC
Input Range (VDC)	10-36
Active EMI Filtering	YES
Power (W, max.)	250
Efficiency (% , typ.)	93
# of outputs	4

OUTPUTS (Total output not to exceed 250W)	
VS1, V@A	+12@20A
VS2, V@A	+3.3@20A
VS3, V@A	+5@20A
AUX, V@A	+3.3@2.5A

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

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	-60		60	V	Continuous
- Operating	-40		40	V	Continuous- Reverse input Protection
- Operating Transient Protection			50	V	100ms transient, square wave
Isolation Voltage			-	V	
Operating Temperature	-40		85	C	
Storage Temperature	-55		105	C	
Electrical Characteristics					
Input Voltage					
- Continuous	10		36	V	
- Transient			50	V	50V Transient for 100 ms
Under-Voltage Lockout					
- Turn-On Input Voltage Threshold	9	9.5	10	V	

INPUT VOLTAGE SPIKES SUPPRESSION (Vin Centered)	
Designed to meet the following standards, additional filter circuitry in the chassis may be required	
+/- 250V, 100 us	MIL-STD-1275F
+/- 200V, 10 us	MIL-STD-461C (CS06); DEF-STAN 61-5
+/- 400V, 5 us	MIL-STD-461C (CS06)
+/- 600V, 10 us	RTCA/DO-160E

OUTPUT CHARACTERISTICS						
Parameter	+12V	+5V	+3.3V	+3.3V aux		Notes
Output Voltage Set Point, V	12	5	3.3	3.3		Vin = 28V
- Drift -40 deg.C to 85degC +/- %	0.1	0.1	0.1	0.1		Vin = 28V
Output Voltage Ripple (pk-pk), mV	80	50	40	40		Full load, measured with 1 uF + 10 uF tantalum capacitor per rail
Operating Current Range, A	0-20	0-20	0-20	0-4		250W Total, combined Output
Over-Voltage Protection, V	13	6	3.6	3.6		
Current Limit Inception, A	22	22	22	2.6		Software changeable
Maximum Output Capacitance, mF	2	2	2	0.2		

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

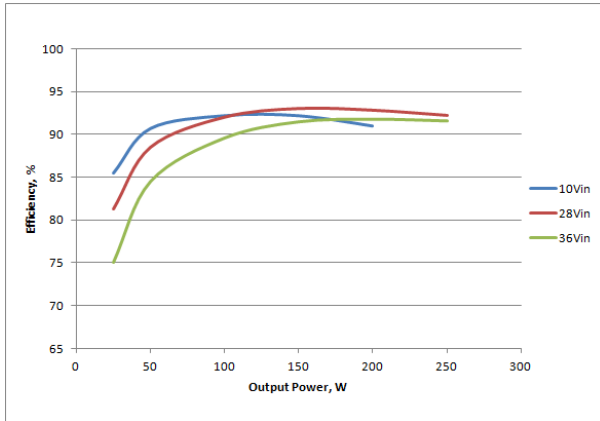
RELIABILITY CHARACTERISTICS

Calculated MTBF per MIL-HDBK-217F (GB) at 70 deg C. 2.500.000 Hrs.
 Calculated MTBF per MIL-HDBK-217F (GM) at 70 deg C. 480.000 Hrs.

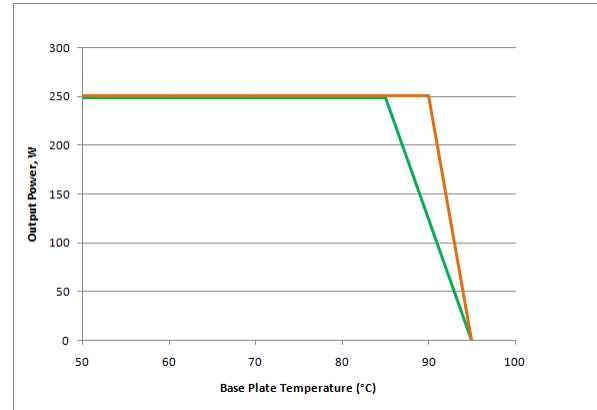


Pinout: As per VITA 62 specification

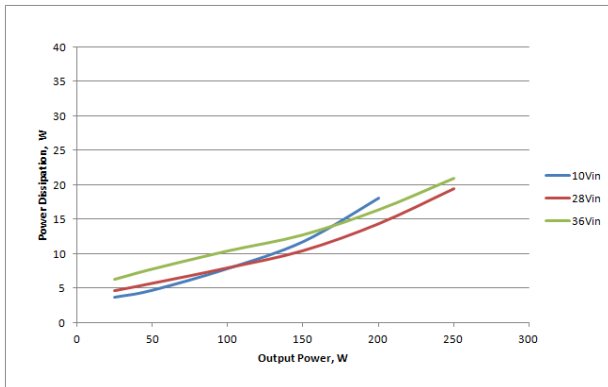
Mechanical Dimensions: As per VITA 62 specification (1" pitch)



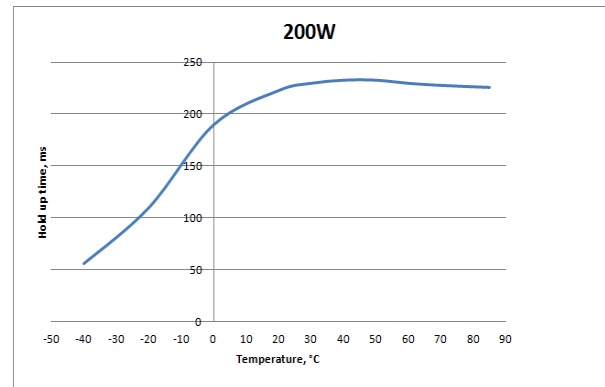
Efficiency vs. Output Power for min, nom, max input V at 25°C



Thermal derating Output Power vs. Temp at module cover (Delta T to wedgelock 7°C)



Power Dissipation vs. Output Power for min, nom, max input V at 25°C



The Hold-up time vs. Temperature



ORDERING INFORMATION:

PCI_800.101 3U VITA 62 28VDC 250W Hold-up Isolated Rugged Power Supply
PCI_800.101._C Version with Conformal Coating

Release_February_08_2021