

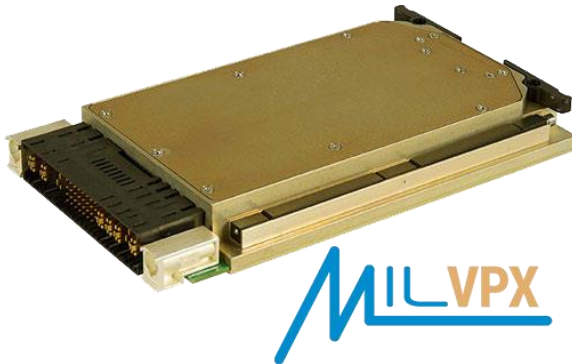


VPX DC/DC POWER SUPPLY

DPM4365 SERIES

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DC/DC POWER SUPPLY



PRODUCT HIGHLIGHTS

- VITA 62 COMPLIANT
- 3U VPX FORM FACTOR
- DC/DC CONVERTER
- 6 OUTPUTS
- 600W (700W PEAK)
- Current Share for VS# Outputs
- Input Options:
 - MIL-STD-704
 - MIL-STD-1275
- System Management Protocol - VITA 46.11
- Cyber secure

For quotes and customization requests, please contact us at (877) 634-0982 or sales@digipwr.com



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Ver. 1.0

Electrical Specifications

DC Input

18 to 48 V_{DC}

Max Non-Operating 100V

Options:

- 1) MIL-STD-704 (A-F)
Normal and Abnormal
Steady State
- 2) MIL-STD-704(A-F)
transients Up to 50V, 80V
- 3) MIL-STD-1275 Surge
- 4) Def Stan 61-5 170V Load
dump.

DC Output

VS1: 12V up to 30A

VS2: 3.3V up to 20A

VS3: 5V up to 30A

12V_Aux: 12V up to 1A

-12V_Aux: -12V up to 1A

3.3V_Aux: 3.3V up to 5A

Peak power option:

VS1: 12V up to 40A

VS3: 5V up to 35A

Isolation

Over 20 MΩ at test voltage:
200V between Input and Output
200V between Input and Case
100V between Output and Case

Line/Load regulation

See Table 2 on page 7

Efficiency

Up to 88%

85.5 % @ Full Load

(See Para. 4)

EMC

Complies with MIL-STD-461F
(5μH LISN): CE101, CE102,
CS101, CS114, CS115, CS116

Ripple and Noise

Typically, less than 50mV_{p-p}

(max.1%_p). Measured across a 0.1μF
capacitor and 10μF capacitor on load
at Input Voltage of 18V-36V, all
Temperature Range.

Load Transient Overshoot and Undershoot

Output dynamic response of less
than 5% at load Step of 30%-60%.
Output returns to regulation in less
than 1mSec

System Management

VITA 46.11 Tier 2 IPMC

Data Available:

- Output voltages and currents
- Input voltage
- Card Temperature
- Card Status

About Digital Power

Digital Power Corporation designs and manufactures full custom, value-added, and standard comprehensive power solutions for the most demanding applications in the defense, healthcare, telecom, and industrial markets.

Environmental¹

Design to Meet MIL-STD-810G

Temperature

Operating: -55 °C to +85 °C at unit edge
Storage: -55 °C to +125 °C
Designed to meet 600 thermal cycles durability test

Fungus

Does not support fungus growth, in accordance with the guidelines of MIL-STD-454, Requirement 4.

Vibration

Vibration: Figure 514.6E-1. General minimum integrity exposure. (1 hour per axis.)

Reliability: 305,000 Hours, calculated IAW MIL-HDBK-217F Notice 2 at +65°C, GF.

Note 1: **Environmental Stress Screening (ESS)** Including random vibration and thermal cycles is also available. **Please consult factory for details.**

Altitude

Method 500.5, Procedure I & II
Storage/Air Transport: 40 kft
Operation/Air carriage: 70 kft

Salt Fog:

Method 509.5

Humidity

Method 507.5, Up to 95% RH

Shock

Method 516.6
40g, 11msec saw-tooth
(all directions)

Protections^{*}

Input

Input Reverse Polarity:

Protection for unlimited time

Inrush Current Limiter

Peak value of $5 \times I_{IN}$ for initial inrush currents lasting more than 50 μ Sec.

Under Voltage

Unit shuts down when input voltage drops below
 17 ± 0.5 VDC.
Automatic restart when input voltage returns to nominal range.

Over Voltage Lock-Out

Unit shuts down when input steady state voltage rise above 55 ± 2 VDC. Automatic restart when input voltage returns to nominal range.

Output

Passive over voltage protection on Aux outputs

Zener selected at $25\% \pm 5\%$ above nominal voltage, is placed across the output for passive voltage limit.

Active over voltage protection on VS# outputs

$20\% \pm 5\%$ above nominal voltage.
Automatic recovery when output voltage drops below threshold.

Overload / Short-Circuit Protection

Continuous Hiccup protection (110-130%) for VS#.
Aux Typical:
3.3Vaux / 8A
12Vaux. 1.5A-2A
-12Vaux. 2.5A-3A

General

Over Temperature Protection

Automatic shutdown at temperature of 95 ± 5 °C (at unit edge)
Automatic recovery when temperature drops below 90 ± 5 °C.

Note 1: Thresholds and protections can be modified / removed (please consult factory)

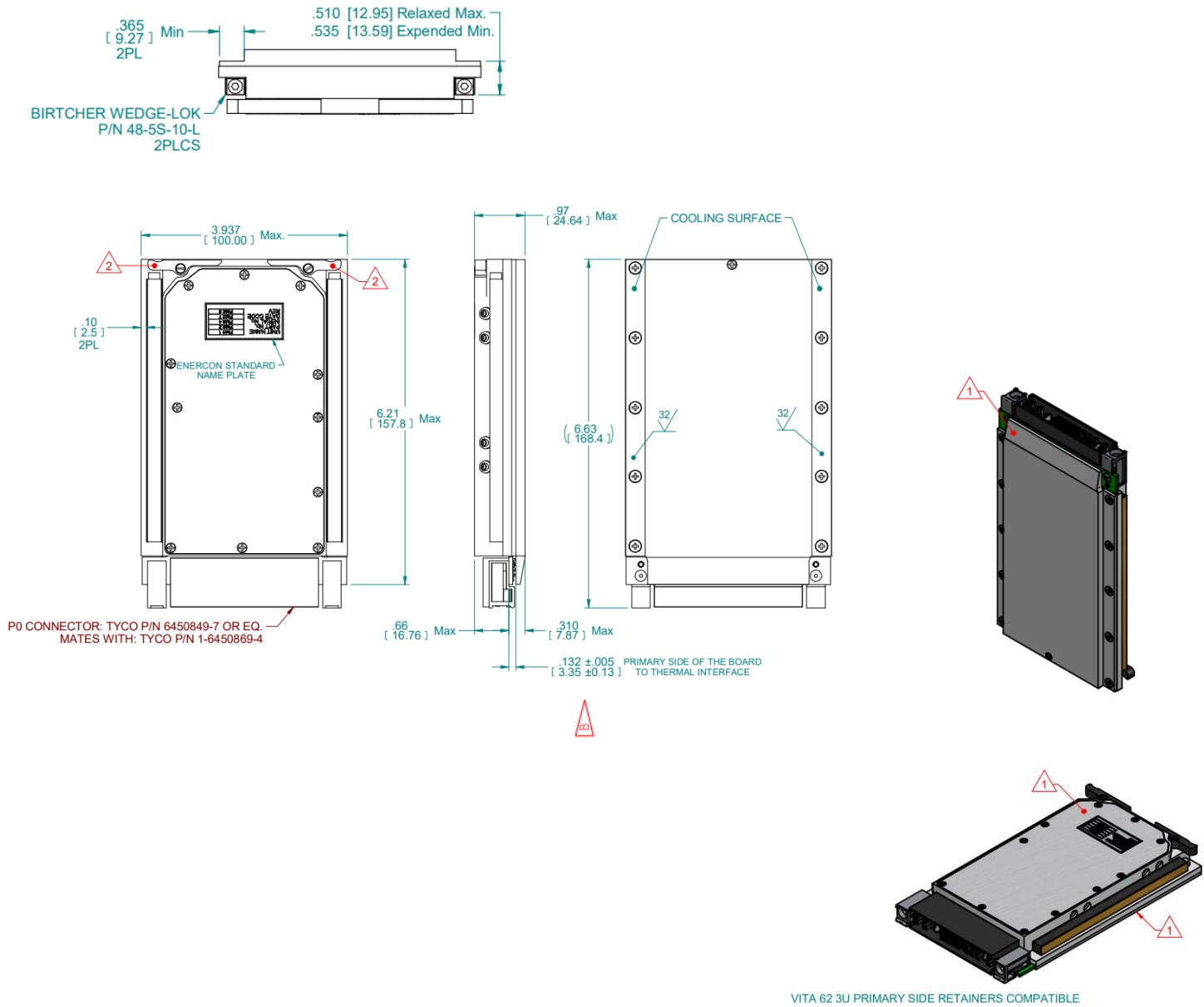
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Outline Drawing



Notes

1. Weight: Approx. 796 g (28.08 oz)

UNLESS OTHERWISE SPECIFIED
 DIMENSIONS ARE IN INCH (MM).
 TOLERANCES ARE:
 DECIMALS ANGLES
 $.XX \pm$ ± 1
 $.XXX \pm$ ± 1
 DO NOT SCALE DRAWING

Note: Specifications are subject to change without prior notice by the manufacturer.

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