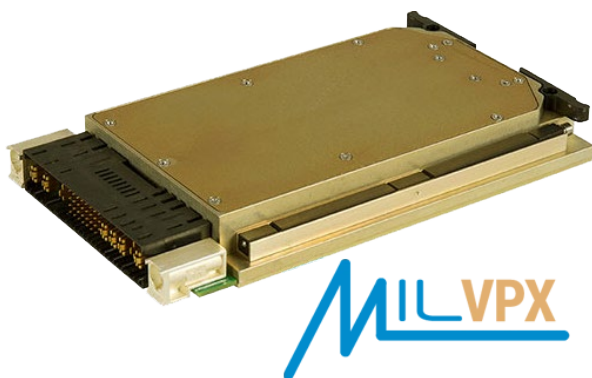


## M4165 SERIES

DC/DC POWER SUPPLY



### PRODUCT HIGHLIGHTS

- VITA 62 COMPLIANT
- 3U VPX FORM FACTOR
- DC/DC CONVERTER
- 6 OUTPUTS
- UP TO 700W



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**Electrical Specifications**

**DC Input**

18 to 48 VDC  
 No damage <sup>1</sup>  
 MIL-STD-704 Transients  
 MIL-STD-1275 Surges

**DC Output<sup>2</sup>**

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

**Isolation**

200V between Input and Output  
 200V between Input and Case  
 100V between Output and Case

**Line/Load regulation**

Less than 1% for 12V & 5V Outputs  
 1.5% for 3.3V outputs  
 (No load to full load, -55°C to 85 °C)

**Efficiency**

Up to 87 %  
 (Full load room temperature)

**EMC**

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

**Ripple and Noise**

Typically less than 50mV<sub>p-p</sub> (max. 1%p).  
 Measured across a 0.1µF capacitor and 10µF capacitor on load.

**Load Transient Overshoot and Undershoot**

Output dynamic response of less than 5%  
 at load Step of 30%-90%.  
 Output returns to regulation in less than 1mSec

**Communication**

I2C protocol available for voltages, currents and temperature for all positive voltages (GAX, SCL, SDA)

Note 1: for continuous work during 80V/100V transients contact factory  
 Note 2: all VS outputs have remote sense line for voltage drop compensation

**Environmental <sup>1</sup>**

Design to Meet MIL-STD-810G

**Temperature**

Operating: -55°C to +85°C at unit edge  
 Storage: -55°C to +125°C

**Altitude**

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

**Salt Fog:**

Method 509.5

**Fungus**

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

**Humidity**

Method 507.5, Up to 95% RH

**Shock**

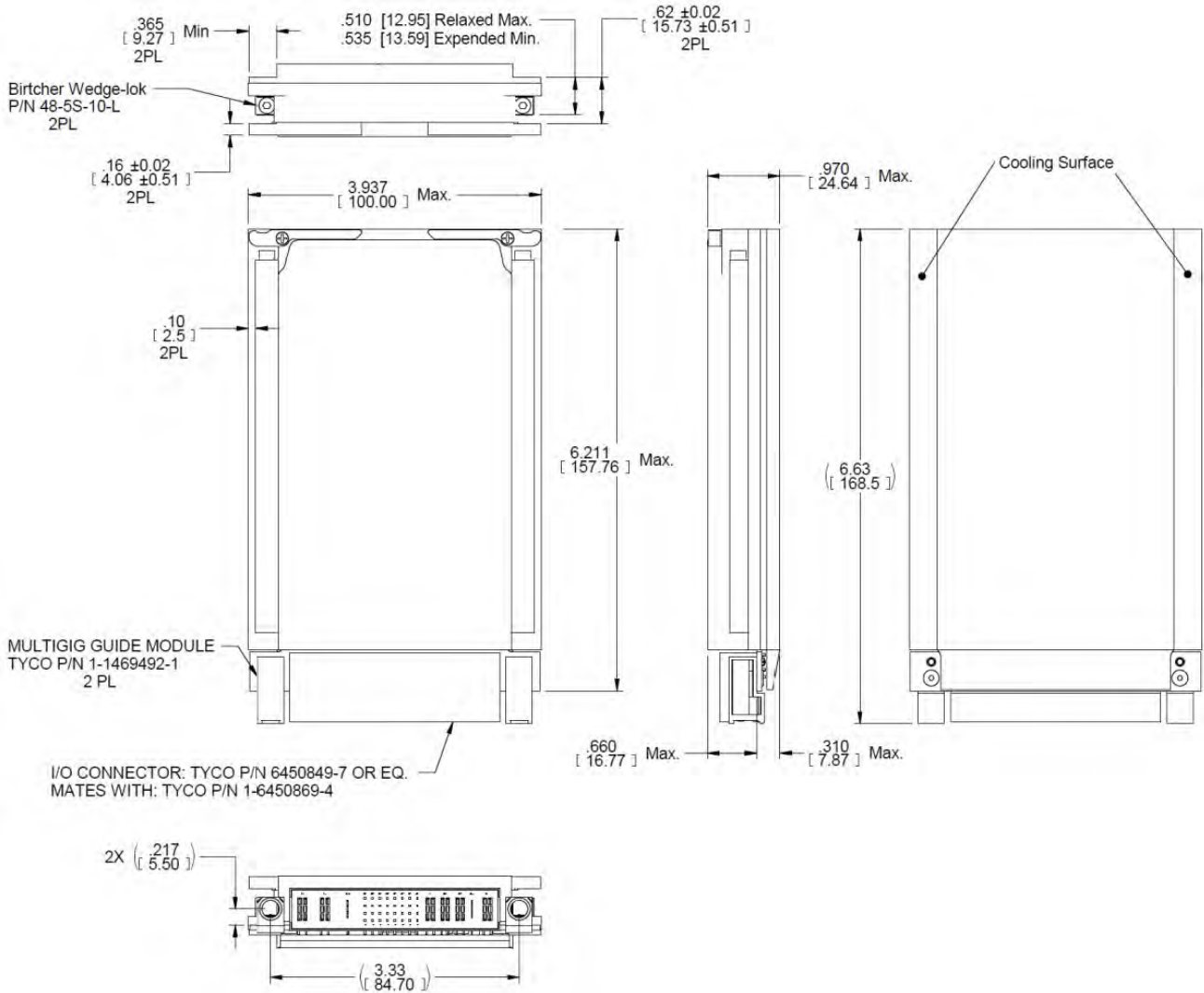
Method 516.6  
 40g, 11msec saw-tooth (all directions)

**Vibration**

Shock: Saw-tooth, 20g peak, 11mS.  
 Vibration: Figure 514.6E-1. General minimum integrity exposure. (1 hour per axis.)

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

**Outline Drawing**



**Notes**

1. Dimensions are in Inches [mm]
2. Tolerance is:  
 $.XX \pm 0.02$  IN  
 $.XXX \pm 0.008$  IN
3. Weight: Approx. 690 gr (24.34) Oz
4. 3D model available

\* Specifications are subject to change without prior notice by the manufacturer