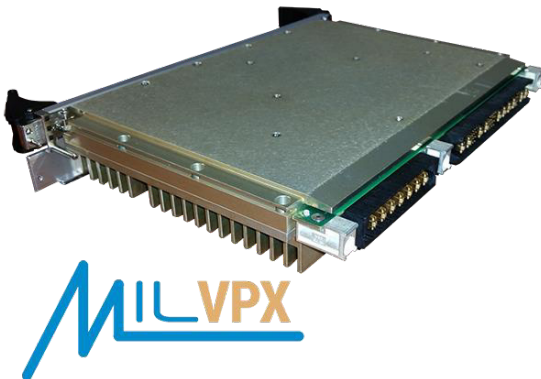


## **M4468 SERIES**

*DC/DC POWER SUPPLY*



### **PRODUCT HIGHLIGHTS**

- 6U VPX VITA 62 COMPLIANT
- HIGH DENSITY
- SIX OUTPUTS
- HEATSINK INCLUDED
- UP TO 900W

## M4468 SERIES VPX VITA 62 POWER SUPPLY

### Applications

Military (Airborne, ground-fix, shipboard), Ruggedized, Telecom, Industrial

### Special Features

- VITA 62 standard compliant
- High power – **up to 900W cont.**
- High density – up to 18W/in<sup>3</sup>
- High efficiency – up to 90%
- Wide input voltage range
- Input / Output isolation
- Remote sense (@ PO# outputs)
- External On/Off Inhibit
- External On/Off Enable
- Fixed switching freq. (250 kHz)
- External sync. capability
- EMI filters included
- I<sup>2</sup>C communication
- PO# outputs parallelable
- Indefinite short-circuit protection with auto-recovery
- Over-voltage protection
- Over-temperature shutdown with auto-recovery
- Reverse input protection
- Conduction cooled via card edge

### Electrical Specifications

#### DC Input

- Steady-State: 18 to 36 V<sub>DC</sub>
- Operates through over-voltage transients IAW MIL-STD-704(A-F) and MIL-STD-1275(A-D)
- No damage due to transients IAW MIL-STD-704(A-F) and MIL-STD-1275(A-D)

#### DC Output\*

- PO1: 12 V up to 40 A
- PO2: 12 V up to 40 A
- PO3: 5 V up to 12 A
- +12V\_Aux: +12 V up to 1 A
- 12V\_Aux: –12 V up to 1 A
- 3.3V\_Aux: 3.3 V up to 12 A

#### Isolation

- Input to Output: 200 V<sub>DC</sub>
- Input to Case: 200 V<sub>DC</sub>
- Output to Case: 100 V<sub>DC</sub>

#### Line/Load regulation

Up to ±1% (Low to high input line voltage, no load to full load, –55 °C to +85 °C).

#### Efficiency

88% - Typical (Nominal line voltage, full loads, room temperature)

#### EMC

Designed to meet MIL-STD-461F (/w 5μH LISN): CE101, CE102, CS101

#### Ripple and Noise

Typically less than 50 mV<sub>p-p</sub> (max. 100 mV<sub>p-p</sub>), measured across a 0.1 μF capacitor, with 10 μF capacitor across 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 1 ms

#### Communication

I<sup>2</sup>C protocol available for voltages, currents and temperature for all positive voltages (GAX, SCL, SDA)

\* All PO# outputs have remote sense lines for voltage drop compensation and current share ability

## M4468 SERIES VPX VITA 62 POWER SUPPLY

### Protections \*

#### Input

- **Reverse Polarity Protection**  
Protection for unlimited time, up to  $-48 V_{DC}$ .
- **Under-Voltage Lockout**  
Unit shuts down if input voltage drops below  $16.5 \pm 1 V$ .  
Automatic restart when input voltage rises above  $19 \pm 1 V$ .  
Minimum hysteresis:  $2 V$ .
- **Over-Voltage Lockout**  
Unit shuts down if input voltage rises above  $55 \pm 2 V$ .  
Automatic restart when input voltage falls below  $38 \pm 2 V$ .  
Lockout is delayed by at least 100ms from the onset of the over-voltage state, to allow operation through normal transients, per MIL-STD-704 and MIL-STD-1275.

#### Output

- **Over-Voltage Protection**
- **Overload / Short-Circuit Protection**  
Continuous protection (10-30% above maximum current) for unlimited time (Hiccup).  
Automatic recovery when overload/short-circuit removed.

#### General

- **Over Temperature Protection**  
Automatic shutdown in case internal temperature (communicated via I<sup>2</sup>C) rises above  $105 \pm 5 ^\circ C$ .  
Operation *guaranteed* at card edge temperature up to  $+85 ^\circ C$  under full load conditions.

### Environmental Conditions

Designed to meet MIL-STD-810G

#### Temperature

Operating:  $-55 ^\circ C$  to  $+85 ^\circ C$  at unit edge (consult factory)  
Storage:  $-55 ^\circ C$  to  $+125 ^\circ C$

#### 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

40 g, 11 ms saw-tooth (all directions)

#### Vibration

Shock: Saw-tooth, 20 g peak, 11 ms.

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

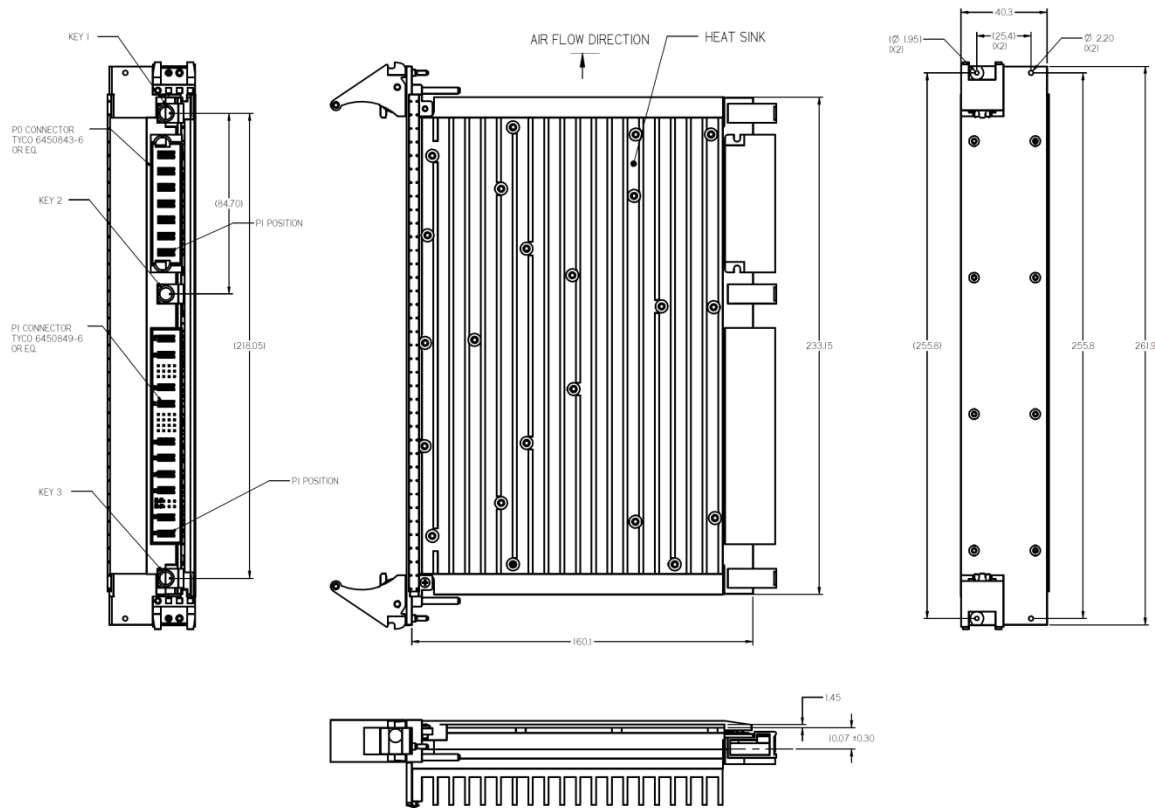
### Environmental Stress Screening (ESS)

Including random vibration and thermal cycles is also available. **Please consult factory for details.**

\* Thresholds and protections can be modified / removed – please consult factory.

## M4468 SERIES VPX VITA 62 POWER SUPPLY

### Outline Drawing



### Notes

1. Dimensions are in Inches [mm]
2. Tolerance is:  
 $.XX \pm 0.01 \text{ IN}$   
 $.XXX \pm 0.005 \text{ IN}$
3. Weight: Approx. 3 lbs (1.36 kg)

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