

### FEATURES

- Developed in Alignment with the SOSA™ Technical Standard
- Wide Input Range
- High Power DC Outputs
- High Efficiency
- Air Cooled
- Conformal Coating on PCB
- Remote Sensing on Main Output
- Load Sharing on Main Output
- Redundancy on All Outputs
- VITA 46.11 Compatible IPMC for System Management

VPXtra AIR FLOWOVER



### 6U VITA 62.0 High Power Dual Output Power Supply

The Behlman VPXtra®1000BD5-IQ1 COTS DC to DC power supply is a rugged, highly reliable, switchmode unit built for high-end industrial and military applications. The VPXtra®1000BD5-IQ1 is a 6U VPX power supply that operates from a 28 VDC input IAW MIL-STD-704E and delivers up to 1050 Watts of DC power via two outputs. Cooling is achieved via Behlman's VPXtra® Air Flow-Over design technique that directs cooling air over the finned primary cover, thus avoiding direct contact of cooling airflow with components. The +12V output can be paralleled with other VPXtra®1000BD5-IQ1 power supplies for higher power and redundancy. The VPXtra®1000BD5-IQ1 also contains a VITA 46.11 compatible IPMC for integration with system management functions.

The VPXtra®1000BD5-IQ1 power supply has no minimum load requirement and has overvoltage and short circuit protection as well as over current and thermal protection. The power supply is designed to support the rigors of mission critical airborne, shipboard, vehicle and mobile applications.

Designed and manufactured with *Xtra-Cooling* technology, *Xtra-Reliable* design and *Xtra-Rugged* construction, Behlman's VPXtra®1000BD5-IQ1 is the best choice for your power supply needs.

#### INPUT

**Voltage:** 18 to 36 VDC

#### OUTPUT

**Power:** 1050 Watts maximum †

**Voltage/Current:**

**PO1/PO2/PO3:** +12 VDC @ 83.3 Amps

**Auxiliary:** +3.3 VDC @ 15 Amps

**Line Regulation:** 0.25% max

**Load Regulation:** 0.25% max (+12V output)  
0.75% max (3.3V\_AUX output)

**PARD-Ripple & Noise:** 120 mV p-p (+12V output)  
50 mV p-p (3.3V\_AUX output)  
20 MHz Bandwidth

**Efficiency:** 90% typical,  
50 – 100% of Load Power

#### PROTECTIVE CIRCUITS

**Over Voltage:** 125% typical

**Over Current:** 150% typical (+12V output)  
120% typical (3.3V\_AUX output)

**Short Circuit:** Automatic Recovery

**Over Temperature:** Shutdown w/Auto Recovery

#### CONTROLS

**INHIBIT\*:** (IAW VITA 62.0) Output Off - active low

**ENABLE\*:** Input On - active low

#### INDICATORS

**DC IN OK:** Green

**DC OUT:** Green

**OUT FAULT:** Red

**TEMP FAULT:** Yellow

**WE:** Yellow

#### SYSTEM MANAGEMENT

**VITA 46.11:** IPMC ‡

**I2C Reporting:** Dual Bus (IPMB-A, IPMB-B)

**Reports:** Input and Output Voltages  
Input and Output Currents  
Internal Temperature (3 places)

† Power derating may be required based on cooling air temperature and volume; consult product data sheet for details.

‡ Consult product data sheet for details.

## GENERAL CHARACTERISTICS

### Isolation:

**Input to Output:** 500 VDC

**Input to Case:** 500 VDC

**Output to Case:** 500 VDC

**MTBF:** 273,939 hrs  $G_F$  @ 50°C,  
IAW MIL-HDBK-217F Notice 2

## MECHANICAL (1.2 inch pitch)

See O&C drawing [OC94114-1] for connector details and pin assignment

**Dimensions:** 9.19"L x 6.64"W x 1.17"H

**Weight:** 4.0 lbs. maximum

**Input Connector:** P0, TE P/N: 6450833-7

**Output Connector:** P1, TE P/N: 6450839-6

## ENVIRONMENTAL COMPLIANCE

(IAW VITA 47.1 Class EFC3SL1)

### Temperature

**Operating:** -40°C to +50°C

(Inlet air temperature, assumes 8 CFM at 120 Pa;  
consult data sheet for additional airflow details)

**Storage:** -55°C to +105°C

### Designed to meet the following:

**EMI:** MIL-STD-461G (Aircraft)  
external filter required

**Shock:** VITA 47.1 Class OS2

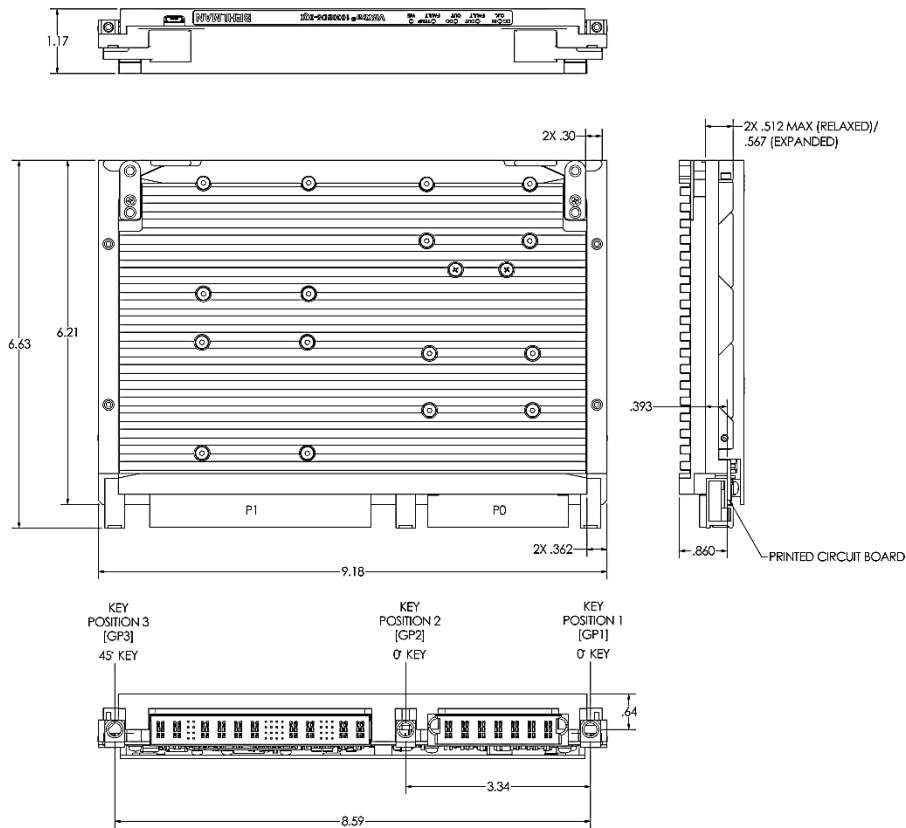
**Vibration:** VITA 47.1 Class V3

**Humidity:** VITA 47.1, up to 95% RH

**Altitude:** -1,500 to +15,000 ft.

**Salt Fog:** VITA 47.1, Class SL1

For more detail, see VPXtra® 1000BD5-IQI Data Sheet



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VITA Member

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