

### FEATURES

- Developed in Alignment with the SOSA™ Technical Standard
- Accepts 28 VDC Input IAW MIL-STD-1275E and MIL-STD-704A-F as specified by CMFF, CMOSS-Mounted Form Factor
- Wide Input Voltage Range (10.5 - 36VDC) ‡
- Input Reverse Polarity Protection
- High Power DC Outputs  
12V / 30A, 3.3V\_AUX / 10A
- Efficiency of 90% typical
- Conduction Cooled at Card Edge
- Convection Cooled Versions Available
- Conformal Coating on PWA
- Remote Sensing on All Outputs
- Active Load Sharing on All Outputs
- System Management IAW VITA 46.11



### 3U VPX High Power Dual-Output Power Supply (VITA 62.0)

The Behlman VPXtra®400DW-IQ1 COTS DC to DC power supply is a rugged, highly reliable, switch mode unit developed in alignment with the SOSA™ Technical Standard for high-end industrial and military applications. The VPXtra®400DW-IQ1 is a 3U VPX power supply that delivers up to 393 Watts of DC power via two outputs. Both outputs may be paralleled for higher output power and/or redundancy, with active load sharing provided for each. The VPXtra®400DW-IQ1 accepts 28 VDC input IAW MIL-STD-1275E and provides full performance through all transient conditions including initial engagement / cranking and overvoltage surges and spikes as well as MIL-STD-704A-F including operation through both normal and abnormal overvoltage transients; performance through undervoltage transients below 10.5V and power interruptions requires a separate energy storage module. The VPXtra®400DW-IQ1 also contains a VITA 46.11 compatible IPMC for integration with system management functions. This model is available in conduction and convection cooled versions, the latter both air flow-over and air flow-through.

The VPXtra®400DW-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 mobile vehicle, airborne and shipboard applications.

Designed and manufactured with *Xtra-Cooling*, *Xtra-Reliable* Design and *Xtra-Rugged* construction makes the Behlman VPXtra®400DW-IQ1 your best choice.

#### INPUT

**Voltage:** 16 to 36 VDC Continuous  
10.5 VDC for 5 sec ‡

#### OUTPUT

**Power:** 393 Watts

#### Voltage/Current:

PO1, PO3 +12 VDC @ 30 Amps †

PO2 (3.3V\_AUX) +3.3 VDC @ 10 Amps

**Line Regulation:** 0.5% max

**Load Regulation:** 0.5% max

**PARD-Ripple & Noise:** 50mV p-p (3.3V output)  
120mV p-p (12V output)  
(0-20MHz BW)

**Sharing:** Active sharing Including N+1  
Redundancy for both outputs

**Efficiency:** 90% typical, 50-100% load

† PO1 and PO3 are connected in parallel to achieve rated output current  
‡ Meets initial engagement surge (IES) and cranking surge of MIL-STD-1275E

#### PROTECTIVE CIRCUITS

**Over Voltage:** 130% typical

**Over Current:** 130% typical

**Short Circuit:** Automatic Recovery

**Over Temp:** Shutdown

#### CONTROLS (IAW VITA 62)

**INHIBIT\*:** Output Off - Active Low

**ENABLE\*:** Input On - Active Low

#### INDICATOR

**DC STATUS LED:** Bi-Color LED (Red/Green)

#### 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)

Consult product data sheet for more details.

### GENERAL CHARACTERISTICS

#### Isolation:

Input to Output: 500 VDC  
 Input to Case: 500 VDC  
 Output to Case: 500 VDC

MTBF: 132,740 hrs (est.) G<sub>F</sub> @ 55°C,  
 IAW MIL HDBK-217F Notice 2

### MECHANICAL (1.0 inch pitch)

See O&C drawing OC94116 for connector details  
 and pin assignment

Dimensions: 3.94"W x 6.63"L x .97"H

Weight: 1.75 lbs. Maximum  
 (conduction-cooled version)

Mating Connector: TE Connectivity 2309390-1 or  
 similar IAW VITA 62.0

### ENVIRONMENTAL

(IAW VITA 47.1 Class ECC4SL1)

#### Temperature

Operating: -40°C to +85°C (-46°C start-up)  
 Storage: -55°C to +105°C

#### Altitude:

-1,500 to +70,000 ft.

#### Shock:

VITA 47.1 Class OS2

#### Vibration:

VITA 47.1 Class V3

#### EMI:

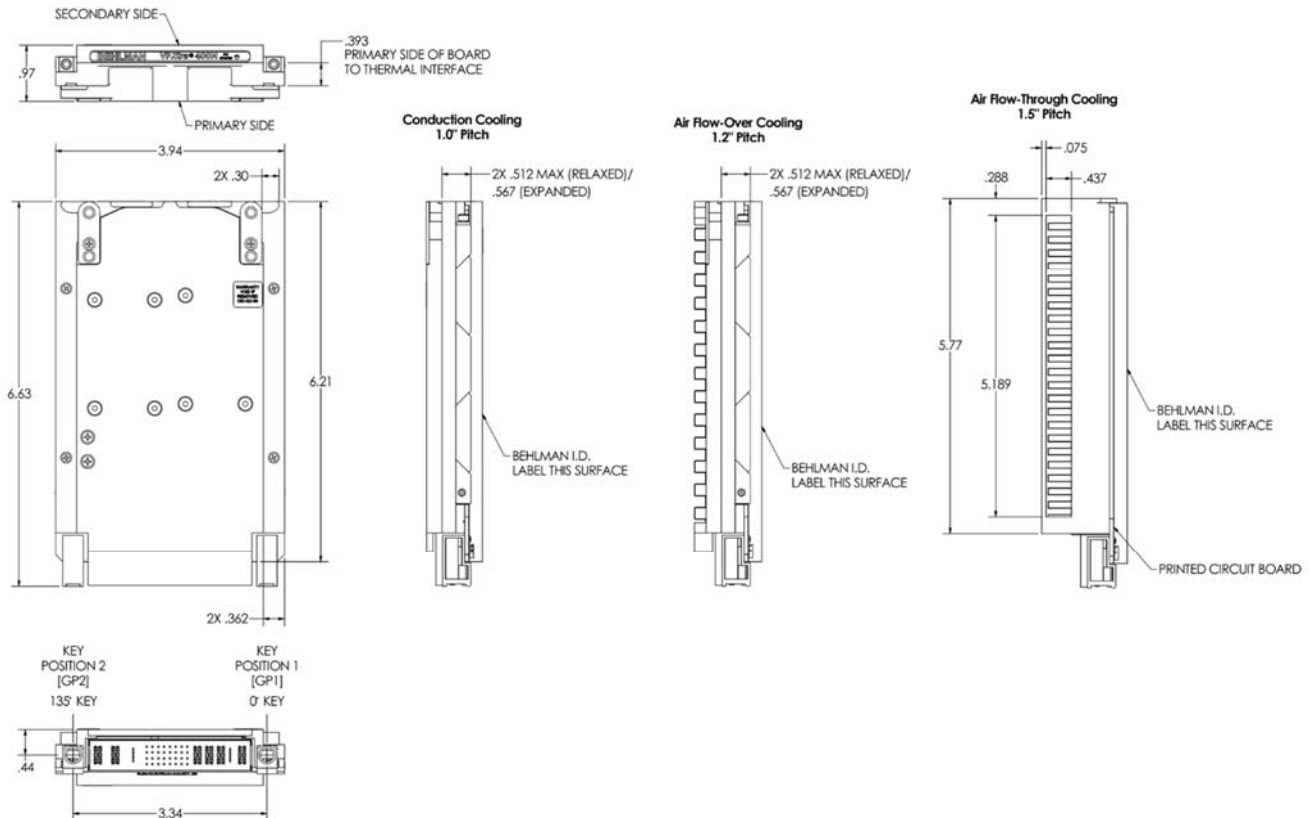
MIL-STD-461G:  
 CE102, CS101, CS115, CS116

### Designed to meet the following:

Humidity: VITA 47.1, up to 95% RH

Salt Fog: VITA 47.1, Class SL1

For more detail see *VPXtra®400DW-IQI Data Sheet*



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VITA Member

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