

FEATURES

- Developed in Alignment with the SOSA™ Technical Standard
- Accepts 28 VDC Input IAW MIL-STD-1275E and MIL-STD-704F as specified by CMFF, CMOSS-Mounted Form Factor
- Wide Input Voltage Range (10.5 - 36VDC) ‡
- Input Reverse Polarity Protection
- High Power DC Outputs
12V / 36A, 3.3V_AUX / 15A
- Efficiency of 90% typical
- Conduction Cooled at Card Edge
- 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®500DW-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®500DW-IQ1 is a 3U VPX power supply that delivers up to 482 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®500DW-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-704F 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®500DW-IQ1 also contains a VITA 46.11 compatible IPMC for integration with system management functions.

The VPXtra®500DW-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®500DW-IQ1 your best choice.

INPUT

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

OUTPUT

Power: 482 Watts

Voltage/Current:

PO1, PO3 +12 VDC @ 36 Amps †

PO2 (3.3V_AUX) +3.3 VDC @ 15 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_F @ 55°C,
 IAW MIL HDBK-217F Notice 2

MECHANICAL (1.0 inch pitch)

See O&C drawing OC94116-1 for connector details
 and pin assignment

Dimensions: 3.94"W x 6.63"L x .97"H
 Weight: 1.75 lbs. Maximum
 Mating Connector: TE Connectivity 2309390-1 or
 similar IAW VITA 62.0
 Power Supply Connector: TE Connectivity 2317477-1 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:

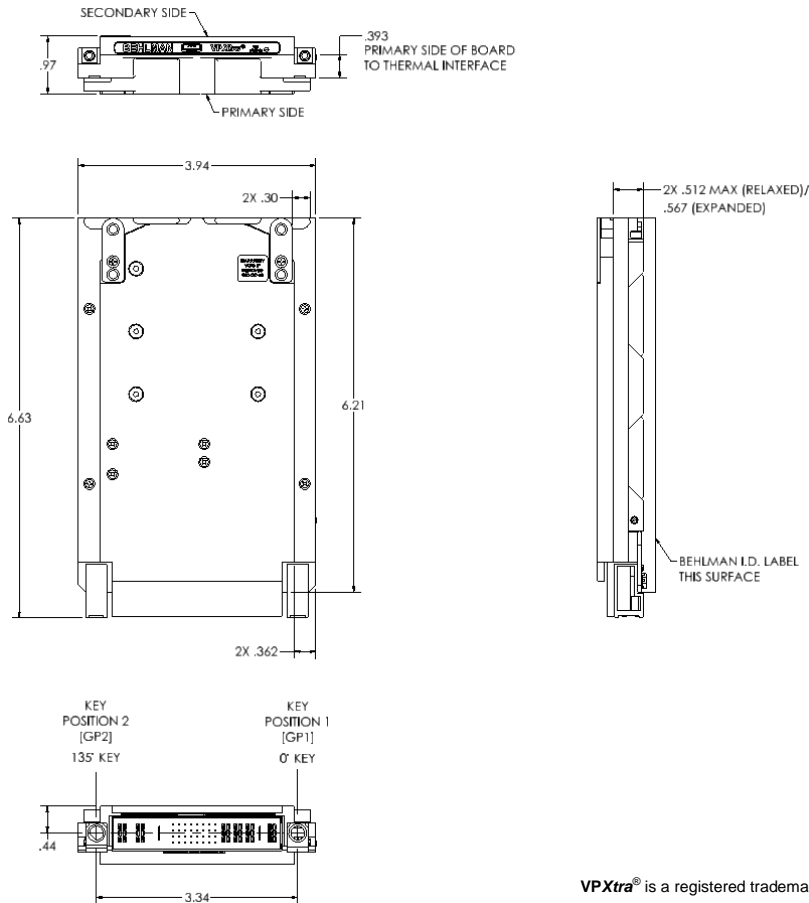
CE102, CS101, CS115, CS116

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®500DW-IQI Data Sheet*



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