

### FEATURES

- Wide Input Range
- High Power DC Outputs
- Efficiency of 87% typical
- Conduction Cooled at Card Edge
- Conformal Coating on PCB
- Remote Sensing on Main Outputs
- Load Sharing on Main Outputs
- Redundancy on Main Outputs
- System Management IAW VITA 46.11



### 6U VITA 62.0 High Power Multi-Output Power Supply

The Behlman VPXtra®1000CM5-IQ1 COTS DC to DC power supply is a rugged, highly reliable, conduction cooled, switchmode unit built for high-end industrial and military applications. The VPXtra®1000CM5-IQ1 is a 6U VPX power supply that operates from a 28 VDC input IAW MIL-STD-704E and delivers 1000 Watts of DC power via five outputs. The main outputs can be paralleled with those of other VPXtra®1000CM5-IQ1 power supplies for higher power and redundancy. The VPXtra®1000CM5-IQ1 also contains a VITA 46.11 Tier 1 IPMC for integration into chassis with system management.

The VPXtra®1000CM5-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®1000CM5-IQ1 is the best choice for your power supply needs.

#### INPUT

**Voltage:** 18 to 36 VDC

#### OUTPUT

**Power:** 1000 Watts †

#### Voltage/Current:

**PO1/PO2** +12 VDC +/- 1.5% @ 45 Amps

**PO3** +5 VDC +/- 1.5% @ 80 Amps

**Auxiliary:** +3.3 VDC +/- 1.5% @ 15 Amps

**Auxiliary:** -12 VDC +/- 2% @ 1 Amp

**Auxiliary:** +12 VDC +/- 2% @ 1 Amp

**Line Regulation:** 0.25% max

**Load Regulation:** 0.25% max (PO1/PO2 and PO3)

0.5% max (Auxiliary outputs)

**PARD-Ripple & Noise:** 120mV p-p (12V Outputs)

50mV p-p (+5V Output)

33mV p-p (3.3V Aux Output)

0 - 20 MHz Bandwidth

**Efficiency:** 87% typical, 84% minimum

#### PROTECTIVE CIRCUITS

**Over Voltage:** 120% typical

**Over Current:** 120% typical

**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 ALERT:** Yellow

**WE:** Yellow

#### SYSTEM MANAGEMENT

**VITA 46.11:** IPMC Tier 1 ‡

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

**Reports:** Input and Output Voltages

Input and Output Currents

Internal Temperatures (3 places)

† Power derating may be required below 20VDC input at high rail temperatures; 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:** 208,185 hrs  $G_F$  @ 55°C,  
IAW MIL HDBK-217F Notice 2

## MECHANICAL (1.0 inch pitch)

See O&C drawing OC94079-12 for connector details and pin assignment

**Dimensions:** 9.19"L x 6.64"W x .97"H

**Weight:** 3.5 lbs

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

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

## ENVIRONMENTAL COMPLIANCE

(IAW VITA 47.1 Class ECC4SL1)

### Temperature

#### Operating:

-40°C to +71°C @ 1050W

-40°C to +85°C @ 790W

#### 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

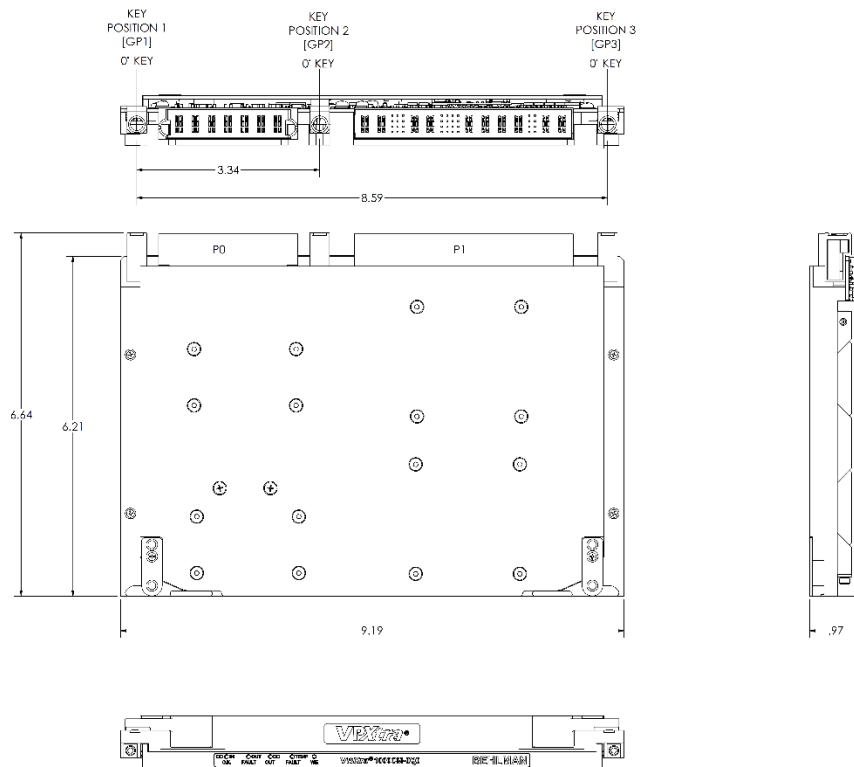
#### Altitude:

-1,500 to +60,000 ft.

#### Salt Fog:

VITA 47.1, Class SL1

For more detail, see VPXtra® 1000CM5-IQI Data Sheet



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