

### VPXtra® 700M-IQI

#### FEATURES

- Wide Input Range
- High Power DC Outputs
- High Efficiency
- Conduction Cooled at Card Edge
  - Convection-Cooled Versions Available
- Conformal Coating on PWA
- Active Load Sharing on Main Outputs
- Redundancy on All Outputs
- VITA 46.11 Compatible IPMC for System Management



#### 3U VPX High Power Multi-Output Power Supply [VITA 62.0]

The Behlman VPXtra®700M-IQI 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®700M-IQI is a 3U VPX power supply that accepts 28 VDC input IAW MIL-STD-704F and delivers up to 698 Watts of DC power via six outputs. All outputs may be paralleled for redundancy, with the +12V, +3.3V and +5V main outputs offering active load sharing for higher power. The VPXtra®700M-IQI 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 (AFO) and air flow-through (AFT).

The VPXtra®700M-IQI 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*, *Xtra-Reliable* Design and *Xtra-Rugged* construction, the Behlman VPXtra®700M-IQI is the best choice for your power supply needs.

#### INPUT

**Voltage:** 18 to 36 VDC †

#### OUTPUT

**Power:** 698 Watts maximum †

#### Voltage/Current:

**PO1** +12 VDC @ 30 Amps  
**PO2** +3.3 VDC @ 25 Amps  
**PO3** +5 VDC @ 40 Amps  
**Auxiliary:** +3.3 VDC @ 6 Amps  
**Auxiliary:** -12 VDC @ 1.5 Amps  
**Auxiliary:** +12 VDC @ 1.5 Amps

**Line Regulation:** 0.25% typical (main outputs)  
 2% typical (AUX outputs)

**Load Regulation:** 0.5% max (+12V, +5V outputs)  
 0.75% max (+3.3V output)  
 3.5% max (3.3V\_AUX output)  
 2.0% max (±12V\_AUX outputs)

**PARD-Ripple & Noise:** 33 mV p-p for all 3.3V outputs  
 50 mV p-p for 5V output  
 120 mV p-p for all +/-12V outputs  
 20 MHz Bandwidth

**Sharing:** Active Sharing for PO1,PO2,PO3  
 N+1 Redundancy on all outputs

**Efficiency:** 88% typical,  
 50% of Load Power

#### PROTECTIVE CIRCUITS

**Overvoltage:** 120% typical  
**Overcurrent:** 120% typical  
**Short Circuit:** Automatic Recovery  
**Overtemperature:** Shutdown w/Auto Recovery

#### CONTROLS (IAW VITA 62.0)

**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 details.

† Thermal and connector pin current limitations restrict available output power and input voltage range; 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: 167,146 hrs G<sub>F</sub> @ 55°C,  
IAW MIL-HDBK-217F Notice 2

### MECHANICAL (1.0 inch pitch)

See O&C drawing OC94104-1 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

### ENVIRONMENTAL COMPLIANCE

(IAW VITA 47.1 Class ECC4SL1)

#### Temperature

Operating: -40°C to +85°C

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

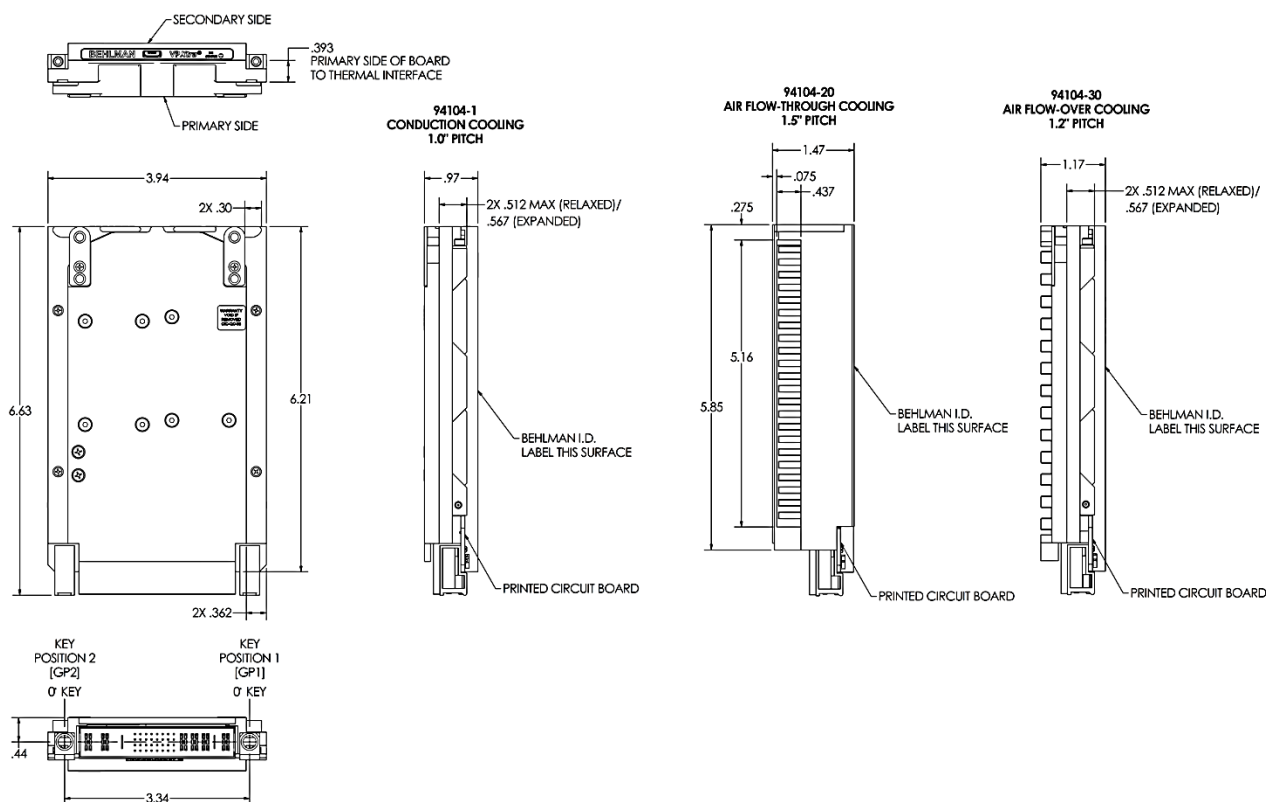
### Designed to meet the following:

Humidity: VITA 47.1, up to 95% RH

Salt Fog: VITA 47.1, Class SL1

MIL-STD-704F: Including operation through normal transients

For more details see VPXtra®700M-IQI Data Sheet



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VITA Member

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