FEATURES

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

3U VPX High Power Multi-Output Power Supply

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 into chassis with system management.

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 makes the Behlman VPXtra®700M-IQI your best choice.

INPUT
Voltage: 22 to 36 VDC
(Short-term operation to 18 VDC)
OUTPUT
Power: 698 Watts†
Voltage/Current:
- PO1: +12 VDC +/- 1% @ 30 Amps
- PO2: +3.3 VDC +/- 1% @ 25 Amps
- PO3: +5 VDC +/- 1% @ 40 Amps
- Auxiliary: +3.3 VDC +/- 0.5% @ 6 Amps
- Auxiliary: -12 VDC +/- 1% @ 1.5 Amps
- Auxiliary: +12 VDC +/- 1% @ 1.5 Amps
Line Regulation: 0.25% typical (Main Outputs)
2% typical (AUX Outputs)
Load Regulation: 0.5% max (Main Outputs)
3.5% max (3.3V_AUX) ‡
2.0% max (±12V_AUX Outputs)
PARD-Ripple & Noise: 33mV p-p for all 3.3V outputs
50mV for all 5V outputs
120mV p-p for all +/-12V outputs
Sharing:
Active Sharing for PO1,PO2,PO3
N+1 Redundancy on all outputs
Efficiency: 87% typical, 100% load

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

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:
Internal Temperature (3 places)
Input and Output Currents

Consult product data sheet for more details.

† Power derating may be required at high rail temperatures; consult product data sheet for details.
‡ Due to connector pin current limitations, measured at rated load for all outputs; 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: 132,740 hrs Gf @ 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: 1.8 lbs. maximum
Connector: TE P/N: 2317477-1

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 +60,000 ft.

Shock: VITA 47.1 Class OS2
Vibration: VITA 47.1 Class V3

EMI: MIL-STD-461G (Aircraft) *
* Excludes CS114; contact Behlman Sales for details

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