

VPXtra® 705M

FEATURES

- Wide Input Range
- High Power DC Outputs
- High Efficiency
- Conduction Cooled at Card Edge
- Conformal Coating on PWA
- Active Load Sharing on Main Outputs
- Redundancy on All Outputs



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

The Behlman VPXtra®705M 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®705M is a 3U VPX power supply that delivers up to 538 watts of DC power via six outputs. All outputs may be paralleled for redundancy, with the +3.3V and +5V main outputs offering active load sharing for higher power. The VPXtra®705M accepts 28 VDC input, IAW MIL-STD-704F, and supplies high-power DC output at various power levels.

The VPXtra®705M 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®705M is your best choice.

INPUT

Voltage: 18 to 36 VDC †

OUTPUT

Power: 538 Watts maximum †

Voltage/Current:

PO1 +5 VDC @ 40 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: 0.10% typical (Main Outputs)
0.25% typical (3.3V_AUX Output)
2% typical ($\pm 12V_AUX$ Outputs)

Load Regulation: 0.25% max (+5V Outputs)
0.75% max (+3.3V Output)
3.5% max (3.3V_AUX Output)
3.0% max ($\pm 12V_AUX$ Outputs)

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

Sharing: Active Sharing PO1, PO2, PO3 including N+1

Efficiency: 87% typical, 50% load

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)

† Thermal and connector pin current limitations restrict available output power and input voltage range; contact Behlman for details.

‡ PO1 and PO3 may be connected in parallel externally on the system backplane to create a single +5V output; contact Behlman for details.

GENERAL CHARACTERISTICS

Isolation:

Input to Output: 500 VDC

Input to Case: 500 VDC

Output to Case: 500 VDC

MTBF: 176,817 hrs G_F @ 55°C,
IAW MIL HDBK-217F Notice 2

MECHANICAL (1.0 inch pitch)

See O&C drawing OC94105 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

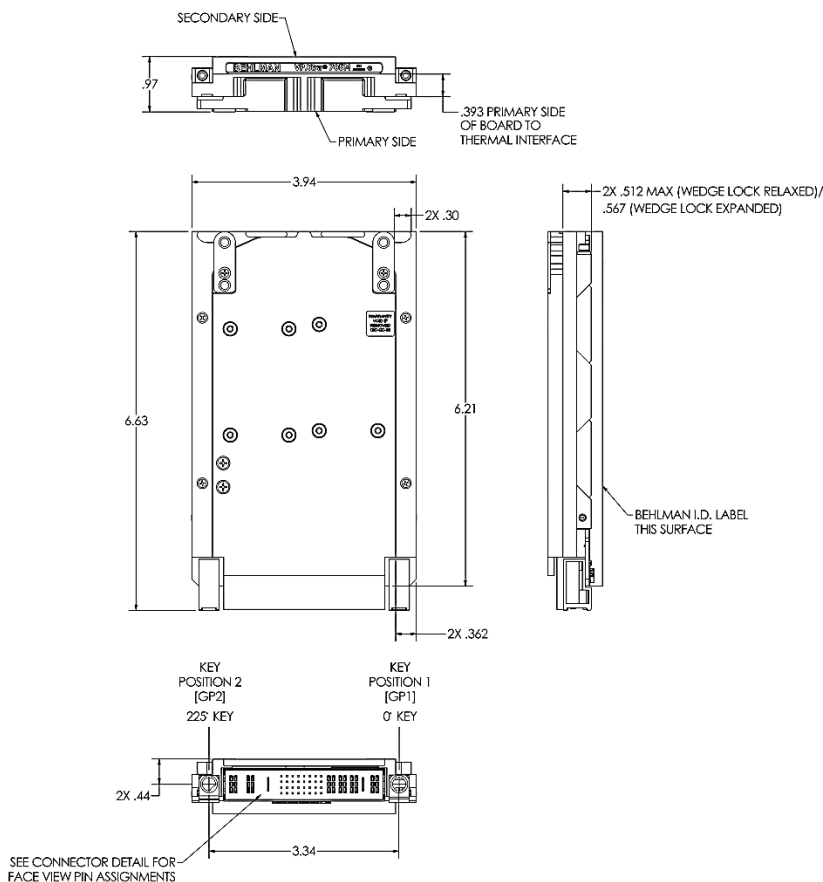
Designed to meet the following:

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®705M Data Sheet



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VITA Member

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