



3 PHASE 3U VPX VITA 62 AC-DC POWER MODULE

EFFICIENT AND RELIABLE PERFORMANCE

Delivering mission-critical power conversion

As platform power systems continue to evolve from traditional 28 VDC busses to 3-phase AC, mission hardware and avionics systems must pack more functionality into less volume and adapt to the new requirements. Efficient, reliable and modular power conversion is critical to achieve maximum system performance in extreme conditions.

Collins Aerospace meets this challenge with our 3 Phase 3U VPX VITA 62 AC-DC power module. The 3U VPX product line meets or exceeds VITA standards for embedded computing and open architecture applications, as well as electromagnetic interference (EMI) compliance.

Designed for mission success, our products deliver power conversion for 3-phase AC systems which require a variety of regulated DC VITA outputs.

Our 3U VPX converts 3-phase MIL-STD-704E/F prime power to isolated and regulated high power 12V, 28V and 3.3 VDC outputs, delivering up to 800W of total output power – the ultimate overall solution in performance, reliability and protection.

Collins 3 Phase 3U VPX power modules offer state-of-the-art health monitoring, status reporting and communication features to support and protect the most complex mission capabilities. When mission-critical performance is a must, Collins 3-phase 3U VPX power converters deliver.



KEY FEATURES AND BENEFITS

- Single slot 3 Phase 3U VITA 62 VPX 1.0" pitch
- Available in 5 different load configurations
- EMI compliant without external filter
- Outstanding output voltage regulation
- Overcurrent, overvoltage and overtemperature protection with auto-recovery

SPECIFICATIONS

- Input: 115/200VAC, +/- 20%; 47 - 800HZ per MIL-STD-704E/F
- Output voltages: 28 VDC @ 504W; 12V @ 300W; 3.3V @ 6.6W
- Efficiency: 91.5% typical
- Power Factor: > 0.93 @ 800W
- Operating temperature at rails: -40 to 85° C
- EMI: Embedded filter meets: MIL-STD-461F
- Indicator DC status LED
- Isolation: 1500 VDC input to chassis, 1500 VDC input to outputs, 500 VDC output to chassis
- Power supply derating and manufacturing guidelines: NAVSO P-3641A

PROTECTION

- I²C communications and reporting
- Redundant I²C channels (IPMB-A, IPMB-B)
- I²C slave device
- Current and voltage for each individual output
- DC input voltage
- Temperature
- Faults for each individual output (OV, OC, UV, bit status)
- Addressable via geographical addressing pins (GAPs)
- Discrete I/O
- VITA 62 Discrete I/O
- SYSRESET
- ENABLE
- INHIBIT

ENVIRONMENTAL

- Single slot conduction cooled model: -55 to 85° C
- Storage: 55 to 125° C
- Humidity: 0 to 95% non-condensing
- Operating acceleration: 3g, in any direction
- Operating vibration: Sinusoidal vibration 0.05g cont. 10 to 2000 Hz

MECHANICAL

- Size and weight: VITA 62 compliant ruggedized size package with internal conduction cooling and maximum weight not to exceed 1.8 lbs
- I/O connector: VITA 62 MULTI-BEAM XLE high speed connector P/N 1-6450839-4

**ELECTROMAGNETIC INTERFERENCE/
ELECTROMAGNETIC COMPATIBILITY**

- Conducted emissions: MIL-STD-461E CE102
- Conducted susceptibility: MIL-STD-461E CS101, CS102, CS114, CS115, CS116
- Radiated emissions: MIL-STD-461E RE102
- Radiated susceptibility: MIL-STD-461E RS103

ISOLATION

- Input to output: 1000 VDC
- Input to chassis: 500 VDC
- Output to chassis: 250 VDC

Specifications subject to change without notice.



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