

# VPX-1000S-3P-28V

1000 Watts  
Conduction Cooled  
OpenVPX VITA 62 Compliant



## KEY FEATURES:

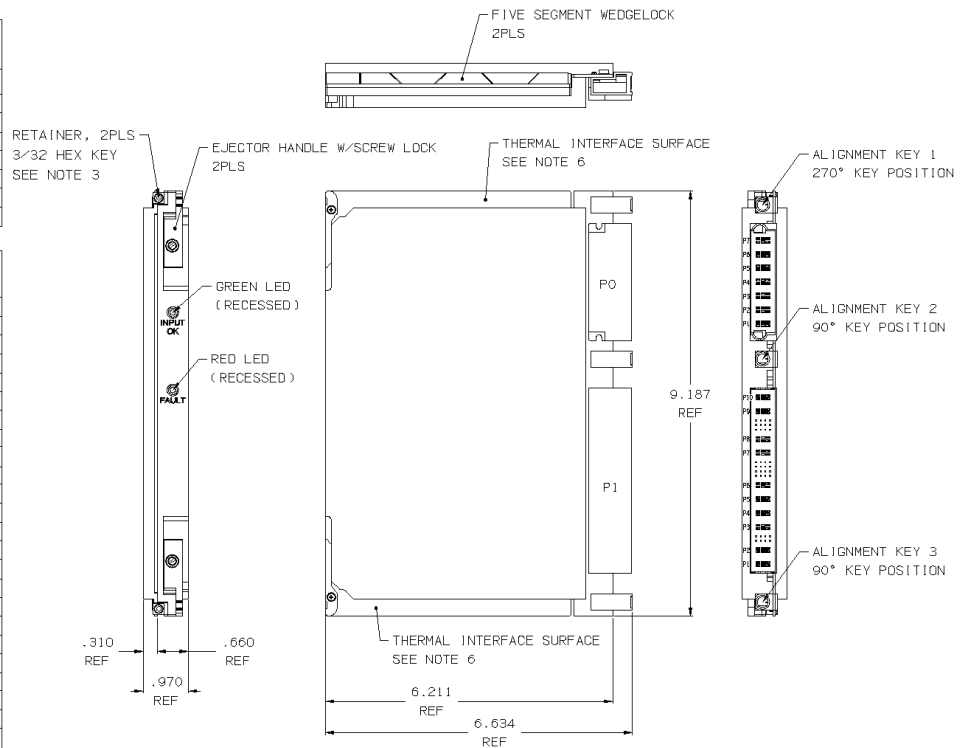
- 1000 Watts in a 6U x 5 HP (1") x 160mm Modular Design
- 3-Phase 115Vac 60Hz Input with Active Power Factor Correction (>0.98)
- Input Current THD not Exceeding 4%
- Meets MIL-STD-1399, Section 300A (Type 1) Ungrounded for the Voltage Range Specified
- VITA 62 Outputs; +28V/35A, Aux\_ +3.3V/4A
- Custom Input/Output Configurations Available
- N+1 Redundant with Internal Oring FET's/Diodes
- VITA 62 Card Guide Style Conduction Cooled
- 1 Inch Pitch Form Factor with Wedge Lock Retainers
- Side Covers Support Two-Level Military Maintenance Requirements
- Specifically Designed for Submarine and Shipboard Applications in Compliance to MIL-STD-1399, MIL-STD-461F and MIL-STD-810G
- Ruggedized Mechanical Design
- One Year Warranty
- Greater than 150,000 Hrs MTBF



# VPX-1000S-3P-28V

| P0 - AC/DC INPUT CONNECTOR<br>TE CONNECTIVITY P/N 6450843-6 |             |
|---|-------------|
| PIN NO.   | SIGNAL      |
| P7  | ØA          |
| P6  | ØB          |
| P5  | ØC          |
| P4  | N/C         |
| P3  | N/C         |
| P2  | N/C         |
| P1  | CHASSIS GND |

| P1 - DC OUTPUT CONNECTOR<br>TE CONNECTIVITY P/N 6450849-6 |                |         |              |
|---|----------------|---------|--------------|
| PIN NO.   | SIGNAL         | PIN NO. | SIGNAL       |
| P10   | +28V/35A       | D5      | SDA          |
| P9  | +28V/35A       | A4      | GA3*         |
| A9  | +28V SENSE     | B4      | GA2*         |
| B9  | +28V SENSE     | C4      | GA1*         |
| C9  | N/C            | D4      | GA0*         |
| D9  | N/C            | A3      | N/C          |
| A8  | +28V SENSE RTN | B3      | N/C          |
| B8  | +28V SENSE RTN | C3      | NED          |
| C8  | N/C            | D3      | NED RTN      |
| D8  | N/C            | P6      | N/C          |
| A7  | N/C            | P5      | N/C          |
| B7  | N/C            | P4      | N/C          |
| C7  | N/C            | P3      | N/C          |
| D7  | SIGNAL RTN     | A2      | VBAT         |
| P8  | POWER RTN      | B2      | FAIL*        |
| P7  | POWER RTN      | C2      | INHIBIT*     |
| A6  | N/C            | D2      | ENABLE*      |
| B6  | N/C            | A1      | N/C          |
| C6  | N/C            | B1      | N/C          |
| D6  | SYSRESET*      | C1      | N/C          |
| A5  | GAP*           | D1      | N/C          |
| B5  | GA4*           | P2      | +3.3V_AUX/4A |
| C5  | SCLK           | P1      | POWER RTN    |



|  |   |
|--|---|
| <b>Nominal Input Voltage</b>           | 115 Vac 3-Phase, 6A nominal.  |
| <b>Frequency</b>                       | 60Hz per MIL-STD-1399 Ungrounded.   |
| <b>Operational Input Voltage Range</b> | +20%, -15% and transients ±25%.<br>Input Power Factor exceeding 0.98 at full load.  |
| <b>Input Load Balance</b>              | Current loading for any phase does not exceed the average of the currents in all 3 phases by more than 5%.  |
| <b>Inrush Current</b>                  | Less than 4 msec. 40 amperes @ 115 Vac.   |
| <b>Fusing</b>                          | (3 X 8 Ampere)/250 Vac, Very fast acting. Internal ceramic body fuses.  |
| <b>Hold up time</b>                    | 20msec minimum after loss of AC Input at full load  |
| <b>Efficiency</b>                      | 88% typical.  |
| <b>Turn on time</b>                    | 1 sec max. from power up.   |
| <b>Line and Load Regulation</b>        | ±2% over AC input range and<br>0 to 100% load change.   |
| <b>Minimum Load</b>                    | No minimum load required.   |
| <b>Ripple &amp; Noise</b>              | Through 20MHz 0.5% max. or 50mv whichever is greater for both outputs, peak to peak, with coaxial probe and 0.1uF/10uF capacitors at the connector. |
| <b>Transient Response</b>              | Output maximum excursion of ± 5% for 25% load step. Recovery less than 500 µsec.  |
| <b>Overshoot</b>                       | No turn-on or turn-off overshoot.   |
| <b>Output Isolation</b>                | Isolated from chassis ground, 100Vdc.   |
| <b>Input/Output Isolation</b>          | 1500Vdc from input to both chassis/outputs.   |
| <b>Reverse Voltage</b>                 | Protected against reverse voltage to supply current rating.   |
| <b>Overvoltage Protection</b>          | Shutdown at 130% of nominal Vout.<br>Recycle input power to reset.  |
| <b>Overtemperature Protection</b>      | Unit shuts down if overheated. Recycle input.   |
| <b>Leakage Current</b>                 | 1mA max at 115Vac.  |
| <b>Current Limiting</b>                | All outputs protected with current limit.<br>Automatic recovery when overload or short is removed.  |
| <b>Paralleling</b>                     | Two or more supplies can be operated in parallel and will share load current within 10% of each other.  |

|                                |  |
|--------------------------------|--|
| <b>Redundant</b>               | Full power N+1 redundant with integral Oring FET's/Diodes.   |
| <b>Remote Sense</b>            | Compensates for up to 0.5V total distribution voltage drop on the +28V output.   |
| <b>Enable*</b>                 | VITA 62 compliant. Reference SPI's VPX Signal data sheet for more details.   |
| <b>INHIBIT*</b>                | VITA 62 compliant. Reference SPI's VPX Signal data sheet for more details.   |
| <b>SYSRESET*</b>               | VITA 62 compliant. Reference SPI's VPX Signal data sheet for more details.   |
| <b>FAIL*</b>                   | VITA 62 compliant. Reference SPI's VPX Signal data sheet for more details.   |
| <b>NED</b>                     | VITA 62 compliant. Reference SPI's VPX Signal data sheet for more details.   |
| <b>VBAT</b>                    | VITA 62 compliant. Reference SPI's VPX Signal data sheet for more details.   |
| <b>Geographical Addressing</b> | VITA 62 compliant. Reference SPI's VPX Signal data sheet for more details.   |
| <b>Protocol (I²C)</b>          | VITA 62 compliant. Reference SPI's VPX Signal data sheet for more details.   |
| <b>Indicators</b>              | Green LED indicating Input OK, Red LED indicating a power supply fault.  |
| <b>Cooling</b>                 | Conduction cooled via wedge lock retainers.  |
| <b>Operating Temperature</b>   | -40°C to 71°C (at wedge lock edge) 1000W   |
| <b>Stability</b>               | All outputs 0.1% for 8 hrs. after 30 minute warm-up.   |
| <b>Humidity</b>                | Up to 95% non-condensing.  |
| <b>Storage Temperature</b>     | -55°C to 105°C.  |
| <b>Connectors</b>              | VITA 62 compliant  |
| <b>Size</b>                    | 6U x 5HP (1") x 160mm <b>Weight:</b> 3.5 lbs.  |
| <b>EMC</b>                     | Designed to meet Mil-Std-461F with SPI's external filter, Top Assembly 25930, or equivalent.   |
| <b>Common Options</b>          | Conformal coating with Paylene & special output configurations. Consult factory for more details on a tailored solution which meets your requirements. |