

# VPX-400-DC-270

400 Watts

Conduction Cooled

OpenVPX VITA 62 Compliant

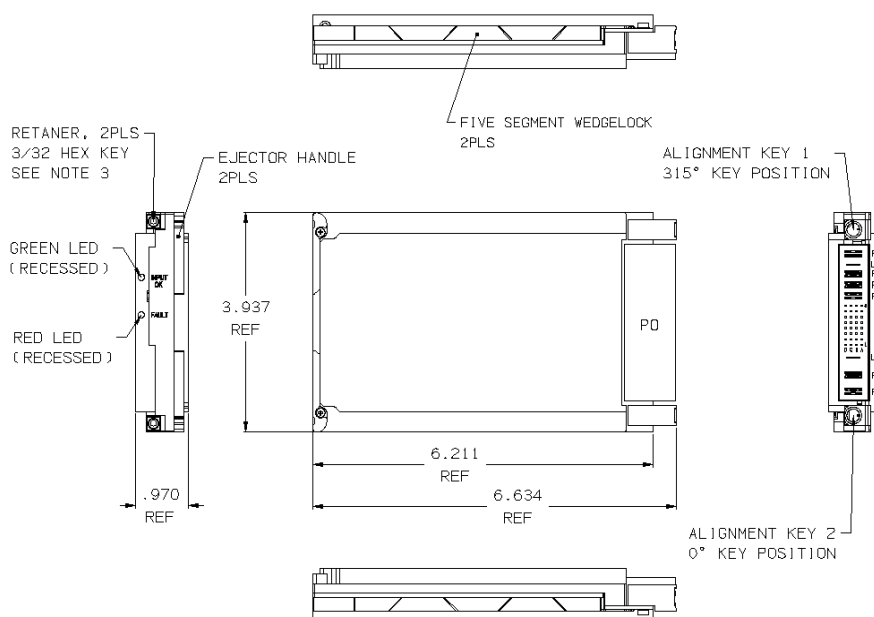


## KEY FEATURES:

- 400 Watts in a 3U x 5 HP (1") x 160mm Modular Design
- 270Vdc Input per MIL-STD-704 Versions E & F
- VITA 62 Outputs; +12V/17A, +3.3V/20A, +5V/20A, Aux\_+12V/1A, Aux\_-12V/.75A, Aux\_+3.3V/2A
- No Minimum Load Required
- 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
- Ruggedized Mechanical Design
- One Year Warranty
- Greater than 150,000 Hrs MTBF
- Proudly Made in U.S.A.

# VPX-400-DC-270

| P0 - INPUT/OUTPUT CONNECTOR<br>TE CONNECTIVITY P/N 6450849-7 |             |         |                |
|--|-------------|---------|----------------|
| PIN NO.  | SIGNAL      | PIN NO. | SIGNAL         |
| P1   | -DC_IN      | A6      | N/C            |
| P2   | +DC_IN      | B6      | N/C            |
| LP1  | CHASSIS_GND | C6      | -12V_AUX/0.75A |
| A1   | GA2*        | D6      | SYSRESET*      |
| B1   | N/C         | A7      | N/C            |
| C1   | N/C         | B7      | N/C            |
| D1   | N/C         | C7      | N/C            |
| A2   | VBAT        | D7      | SIGNAL_RETURN  |
| B2   | FAIL*       | A8      | +12V_SENSE     |
| C2   | INHIBIT*    | B8      | +3.3V_SENSE    |
| D2   | ENABLE*     | C8      | +5V_SENSE      |
| A3   | N/C         | D8      | SENSE_RETURN   |
| B3   | +12V_AUX/1A | P3      | +5V/20A        |
| C3   | NED         | P4      | POWER_RETURN   |
| D3   | NED_RETURN  | P5      | POWER_RETURN   |
| A4   | 3.3V_AUX    | LP2     | +3.3V/20A      |
| B4   | 3.3V_AUX    | 2A      | P6             |
| C4   | 3.3V_AUX    |         |                |
| D4   | 3.3V_AUX    |         |                |
| A5   | GA0*        |         |                |
| B5   | GA1*        |         |                |
| C5   | SCLK        |         |                |
| D5   | SDA         |         |                |



|  |  |
|--|--|
| <b>Nominal Input Voltage</b>           | 270 Vdc, 1.75A.  |
| <b>Operational Input Voltage Range</b> | 240-290 Vdc, with input transient protection to 200 & 370 Vdc for 50 ms exceeding limits per MIL-STD-704E/F.                                     |
| <b>Inrush Current</b>                  | Less than 4 msec, 60 amperes @ 270 Vdc.  |
| <b>Reverse Input Protection:</b>       | Reverse input protection to rated DC voltage.  |
| <b>Fusing</b>                          | 3.15 Ampere, 400 Vdc, Internal ceramic body fuse.  |
| <b>Hold up time</b>                    | 20msec minimum after loss of DC Input at full load and nominal input.  |
| <b>Efficiency</b>                      | 85% typical  |
| <b>Turn on time</b>                    | 1 sec max. from power up.  |
| <b>Line and Load Regulation</b>        | ±2% over DC input range and 0 to 100% load change.   |
| <b>Minimum Load</b>                    | No minimum load required.  |
| <b>Ripple &amp; Noise</b>              | Through 20MHz 1% max. or 50mv whichever is greater for all 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>                       | Less than 5%.  |
| <b>Output Isolation</b>                | Isolated from chassis ground, 100 Vdc.   |
| <b>Input/Output Isolation</b>          | 2200 Vdc from input to both chassis/outputs. SELV construction.  |
| <b>Reverse Voltage</b>                 | Protected against reverse voltage to supply current rating.  |
| <b>Overvoltage Protection</b>          | Shutdown at 130% of nominal Vout. Recycle input power to reset.  |
| <b>Overtemperature Protection</b>      | Unit shuts down if overheated. Recycle input.  |
| <b>Current Limiting</b>                | All outputs protected with current limit. Automatic recovery when overload or short is removed.  |
| <b>Paralleling</b>                     | Two or more supplies can be operated in parallel and will share +12V/+3.3V/+5V current to 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 +12V, +3.3V and +5V outputs.   |
| <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>   | -20°C to 85°C (at wedge lock edge) 400W  |
| <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>     | -40°C to 85°C.   |
| <b>Connectors</b>              | VITA 62 compliant  |
| <b>Size</b>                    | 3U x 5HP (1") x 160mm <b>Weight:</b> 1.75 lbs.   |
| <b>EMC</b>                     | Designed to meet Mil-Std-461F with SPI's external filter, Top Assembly 25880, 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. |