

# PS3200



## *Power Supply*

Rugged, 200 W, 3U

### Features

- MIL-STD-1275AT compliant
- 90%+ efficiency
- 2-Level maintenance compatible with top and bottom covers
- P47 backplane connectors
- On-board LED for test status
- Off-board LED drive circuitry
- RS485 Test interface
- Supports remote management and monitoring (I2C)
- Supports dynamic, real time, load sharing across multiple supplies to improve system reliability

Designed to meet 2-level maintenance requirements in tactical and armored fighting vehicles, the PS3200 efficiently provides 200W of conditioned output from 28V vehicle power. The PS3200 supports remote monitoring and supports load sharing across multiple power supplies for added system reliability.

## Product Specifications

**DC Input Voltage (operating):** MIL-STD-1275AT

18 - 33V dc SS

15 - 100V MIL\_STD-1275AT Single and double fault Surge.

6V starting disturbance (at reduced power <100W output)

**Input Inrush Current:** 5A Max

**Efficiency:** >91% @ 20-30V dc all outputs loaded 50-100%

**Input Line Protection:** Polarity, surge per MIL-STD-1275AT

**Outputs: V1:** +5V dc @ 20A

**V2:** +3.3V dc @ 20A

**V3:** +12V dc @ 2.5A

**V4:** -12V dc @ 0.5A

OR **V4:** +3.3V AUX @ 2.0A

**Total Output Power:** 202W, all outputs at 100% load

**Line Regulation:** V1, V2, V3 & V4 +/- 0.5% max.

**Initial Setting Accuracy:**

**V1 & V2:** +/- 0.5% for

**V3 & V4:** +/- 1% for

**Load Regulation:** V1, V2, V3 & V4; +/- 1% 0 to 100%

**Long Term Stability:** 0.1% (TBD)

**Hot-Swap:** No

**Current Share Method:** Single Wire active on V1, V2, and V3, Droop share on the -12V

**Remote Sense:** On V1 (+5V), V2 (+3.3V), V3(+12V)

**Transient Response:** For a step Load of 50% max Load, peak transient < 5% & output. Recovers to 1% in less than 0.5mSec.

**Over-Voltage Protection:** 110% - 125% of V1, V2, V3 & V3 with Latched Shut Down

**Short Circuit Protection:** All Outputs with Latched Shut Down

**Overload Protection:** V1, V2, V3 & V4, 125% of Maximum load current (nominal), latched shut down

**Temperature Protection:** Excess Temp will shut down the power supply, - with auto recovery

**Min. Load Requirement:** No

**Overshoot/Undershoot at Turn-On:** Less than 5%

**Turn-On Delay:** 1 Sec Max.

**Ripple:** Ripple @ Noise with 20MHz Bandwidth measured across 10uF Load Capacitor Paralleled with 0.1uF Ceramic Cap.

V1 50mV p-p

V2 30mV p-p

V3 & V4 120mV p-p

**Isolation:** Input to Case 100V dc

Input to Output 500V dc

Output to Case 50V dc

## Environmental

### Temperature

**Operation:** -46°C to +85°C Card Edge

**Storage:** -51°C to +91°C

**Humidity:** Up to 95% RH Non-Condensing

**Shock:** MIL-STD-810F Method 516.5, Procedure I

**Vibration:** MIL-STD-810F Method 514.5, Category 13, 14, 20, and 24

**Conducted & Radiated Emission:** MIL-STD-461E in intended enclosure, and with external input filter.

## Monitoring Command & Control

**Remote Monitor:** IPMI (I2C) monitors all power rails, voltages, currents and temperature, including input voltage rails.

**Remote Control:** IPMI (I2C) OR enable/inhibit signals to backplane connector

**Enable:** Input, internally pulled up to 3.3V, enabled high.

**Inhibit:** Input, internally pulled up to 3.3V, inhibited high.

**Power FAIL:** Open Collector LOW Signal Indicates Outputs Out of Range

**Current Share:** On V1, V2, and V3 Allows +/- 10% Current Share with a Similar Unit

**Remote Sense:** On V1, V2, and V3 for Loss Correction of up to 50mV

**Input/Output Connector:** PICMG 47 Pin



## GENERAL DYNAMICS

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