

POWER CONVERSION PRODUCTS	Airborne Series
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Part No.: VTA03018-00

1500W Power Supply

FEATURES

- ❑ 28 VDC @ 35A, 12 VDC @ 10A Outputs
- ❑ AC I/P Power Source: 200VAC L-L, 3Ø, 1000-6400Hz
- ❑ DC I/P Power Source: 300VDC
- ❑ High Input/Output Isolation
- ❑ High Power Conversion Efficiency
- ❑ Continuous Short Circuit Protection
- ❑ Conduction and Convection Cooled
- ❑ Built-in Thermal Protection

This Power Supply designed for high power, airborne applications, features a low profile package of 11.0” L x 5.72” W x 5.62” H or 4.75Watt/in³. It has excellent load regulation, input filtering, and low output ripple as well as current limiting/thermal shutdown.

Input Specifications:

Steady State Voltage (AC) 167 to 250 Vrms L-L, 3Ø
 Steady State Frequency 1200 to 6400 Hz
 Steady State Voltage (DC) 220 to 300 Vdc
 Inrush Current 6 A peak maximum per phase
 Isolation (input/output to chassis) > 10 mega-ohm @ 500 Vdc
 Power Factor > 0.91 (max power @ 400 Hz)

Output Specifications:

<u>Nominal Voltage</u>	<u>Nominal Current</u>	<u>Maximum Current</u>	<u>DC Regulation</u>	<u>Ripple & Noise</u>	<u>Maximum Power</u>
+28 VDC	35 A	49A	±2%	< 750 mVp-p	1380W
+12 VDC	10 A	12.5A	±2%	< 750 mVp-p	120W

Output Specifications:

Over-voltage Protection	Between 115% and 130% Of nominal output
Over-current Protection.....	Constant current limiting @ 130% F.L.
Efficiency (full load)	> 82%
Load Regulation.....	±4V from 0% to 100% and 100% to 0% Load variations
Output Over/Under Shoot	<3% at rated voltage
RPM Signal Conditioning	Outputs +5 to +11.5 Vp-p signal when RPM I/P signal >0.09 Vrms.
RPM I/P Signal Maximum	1.0 Vrms

Physical Specifications:

Weight	< 5.3 Kg or 11.5 lbs
Case	Alluminum 6061-T6 Alloy
Finish (MIL-C-5341, Class 3 Alodine)	Hard Anodic Coat per MIL-A-8625, Type III, Class 1; or Black Enamel Paint Finish as per TT-E-527.
Mounting	Six 10-32 inserts on case; 3 per side
Connectors.....	Input: (J1) MS3114 P12-10P Output: (J2) MS3114 P12-8P Output: (J3) MS3114 P22-21S

Environmental Specifications:

Shock (MIL-STD-810C)	Half sine wave, 20G, 11 ms. (3 axis)
Vibration (MIL-STD-810E)	Method 514.3, Cat 7B, Procedure I
Temperature, Operating	-40°C to +65°C
Temperature, Non-operating	-55°C to +85°C
Thermal Protection.....	Shutdown @ +100°C at module base-plate
Altitude, Operating	Up to 45,000 ft. MSL
Humidity (MIL-STD-810E)	Method 507.2, Procedure III, 10 cycles
EMI (MIL-STD-461C, part 1 and 2)	CE03, CS01, CS02, CS06, RE02, RS02, RS03.
Predicted Reliability (MIL-HDBK-217F).....	>5000 hours @ 55°C.

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