VMIVME-PSS500
Swing Out Power Supply
500 Watts Specifications

- Two-stage current limit
- Power MOSFET design
- Meets international and U.S. safety requirements - UL 1950, IEEE 472, 587 CSA C22.2 no. 950, IEC 950, FCC 2078A, and VDE 0871A.
- Output regulated ±.2 percent
- Self-cooling
- AC line selection via jumper
- Thermo protection
- Remote sense
- Compact
- Short circuit protection
- Soft start
- Reverse voltage protected
- 30 ms holdup time
- 0 to 50 °C (122 °F)
- Two power cords supplied
- No minimum load required
- MTBF: 500,000 hours

INTRODUCTION — VMIVME-PSS500 switching regulated power supply operate at either 115 or 230 VAC line voltage, range externally selectable. The power supply is intended to be used to supply 5 VDC with multi output of ±12 VDC.

The power supply is comprised of highly reliable power modules mounted on a releaseable hinged plate inside a frame that mounts to VMIC's VMIVME-120 Board chassis.

The power supply is equipped with a ball-bearing cooling fan that provides proper cooling to achieve full ratings at 50 ˚C ambient temperature.

The DC wiring is sized according to the maximum current capability of the power supply at 50 ˚C ambient temperature and is wired so the installer can mount the power supply to a chassis, then cut, strip, and terminate each DC power lead to the appropriate backplane connector(s). (System integration is available with the purchase of a chassis and backplane.) An assortment of crimp terminals (lugs) are supplied with each power supply to facilitate termination to the backplane.

In computing DC power requirements, observe the maximum VMEbus slot current specifications and total backplane current limits.

The VMIVME-PSS500 power supply is equipped with an internationally and U.S. recognized standard CEE-22 power receptacle. Power is supplied by one of two power cords supplied with each power supply.

INPUT CHARACTERISTICS

AC Input Ranges: 90 to 132 VAC or 180 to 264 VAC, 47 to 440 Hz, single phase, range externally selectable.

Inrush Current: Limited to 40 A rms maximum for 20 milliseconds

PHOTO NOT AVAILABLE

Fusing: All units are fused internally

Line Transient: Meets IEEE 472 and 587 guide for surge withstand capability

Line Filtering: Filter complies with FCC Docket 20780, Level A, and VDE 0871, Level A

OUTPUT CHARACTERISTICS

Output Power: 500 W maximum

Output Voltage and Current (Maximum):

V1 = 5 VDC at 80 A
V2 = 12 VDC at 10 A
V3 = -12 VDC at 5 A

Number of Outputs: 3

Voltage Adjust Range: ±10 percent

Load Regulation: 0.2 percent no load to full load

Line Regulation: 0.2 percent over full input range

Cross Regulation: 0.1 percent maximum

Ripple and Noise: 1 percent or 50 mV, whichever is greater, when measured at the power supply terminals with a 20 MHz scope.

Ordering Options

April 21, 1994 800-000061-000 B		A	B	C	–	D	E	F
VMIVME-PSS500	–	1	1	2	–			

ABC = 112 Standard Configuration

For Ordering Information, Call:
1-800-322-3616 or 1-256-880-0444 • FAX (256) 882-0859
E-mail: info@vmic.com Web Address: www.vmic.com

Hold Up Time: All outputs will remain in regulation for 30 milliseconds after loss of nominal AC power.

Turn On Delay: Under full load conditions, all outputs will be in regulation in less than 500 milliseconds.

Transient Response: All outputs will recover to 1 percent regulation within 100 microseconds from a step load change of 25 percent. No overshoot or undershoot at turn on or turn off.

Output Polarity: All outputs are floating and may be referenced as desired by the user.

Minimum Load: No minimum loading is required on any output.

LOGIC AND CONTROL

Remote Sense: Outputs V1, V2, and V3 have remote sensing which will compensate for up to 500 mV load cable loss. Output is sensed internally if a sense line is open. No damage will result if the sense lines are reversed or shorted.

Remote Inhibit: Standard

AC Power Fail Warning: A logic signal is provided at least 5 milliseconds before loss of any output voltage. The signal will not be activated for at least 20 milliseconds after loss of nominal AC power. The signal is provided through an opto-coupler and may be referenced as desired.

Current Monitor: V1 only. Calibrated voltage proportional to the output current of V1. 1 V (±5 percent) at full load.

PROTECTION

Overvoltage Protection: Standard on outputs V1, V2, and V3. If any output exceeds the nominal voltage by 20 to 30 percent, the OVP circuit will be activated and will turn all outputs off. AC input or remote on/off must be recycled to restart the supply.

Overcurrent: Unique two-stage current limit circuit allows for momentary overloads but will shut the supply down prior to damage to costly backplanes and wiring.

Thermal Shutdown: Supply will shut down if the internal temperature reaches an unsafe operating level. Restart is automatic when the supply returns to the normal operating range.

Reverse Polarity: V1 and V2 outputs protected against reverse voltage up to their maximum current rating. Other outputs protected up to 6 A.

Dielectric Withstand Voltage:
Input to Output 2,400 VDC at 2 sec
Input to Ground 2,400 VDC at 2 sec
Output to Ground 500 VDC at 2 sec

TRADEMARKS

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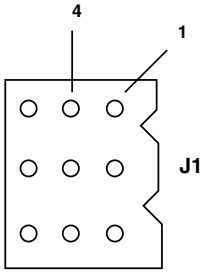
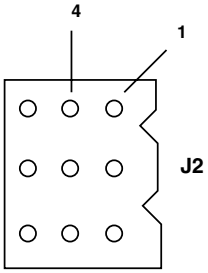


J1-1 = V1 + sense
J1-2 = V1 margin
J1-3 = +5 V reference
J1-4 = V1 - sense
J1-5 = Power fail RTN
J1-6 = Remote ON/OFF
J1-7 = Remote ON/OFF pull up
J1-8 = Power fail
J1-9 = Power fail pull up



J2-1 = V2 + sense
J2-2 = V1 current monitor (+)
J2-3 = V1 current monitor (-)
J2-4 = V2 - sense
J2-5 = V1 current share
J2-6 = V2 current share
J2-7 = +5 V logic (50 MA)
J2-8 = Logic common
J2-9 = N/C

MOLEX P/N 03-06-1091
MOLEX MATING P/N 03-06-2092
MOLEX MALE PINS P/N 02-06-2103

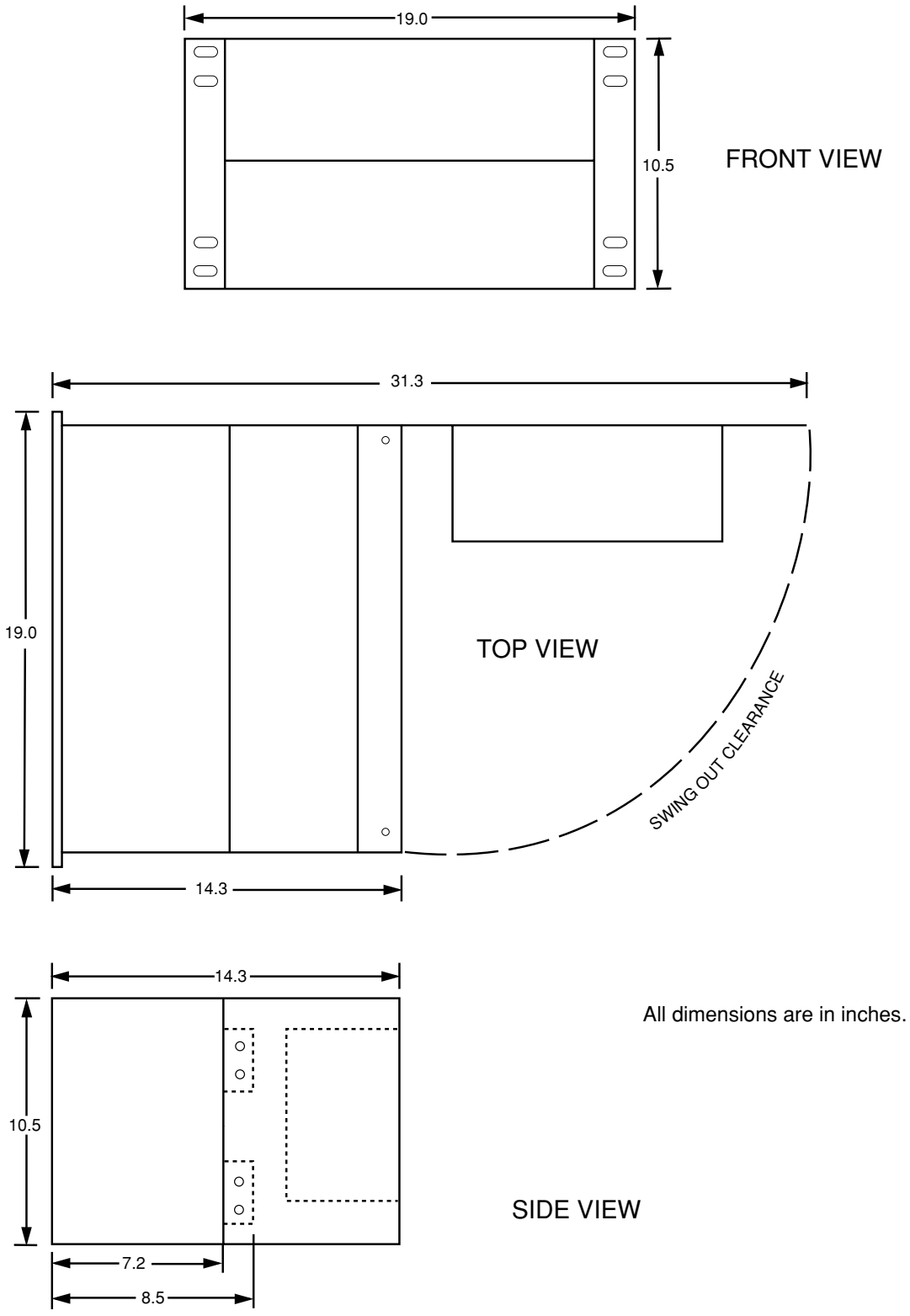


Figure 1. Outline and Nominal Dimensions of Board Chassis with PSS500 Swing Out Power Supply Mounted