

VMIVME-PS150 TO -PS750

Swing Out Power Supplies 150 to 750 W Specifications

- 75 to 80 percent efficiency
- Meets international and U.S. safety requirements
- Output regulated ±1 percent
- Self-cooling
- Automatic AC line selection
- Thermo protection
- Remote sense
- Compact
- Short protection
- Soft start
- Reverse voltage protected
- 16 ms holdup time
- 0 to 50 °C (122 °F)
- Dual power cords
- MTBF: 80,000 to 100,000 hours (217 F)

INTRODUCTION — VMIVME-PS150 to -PS750 switching regulated power supplies operate at either 115 or 230 VAC line voltage through automatic AC autoranging. These power supplies are intended to be used to supply 5 VDC with optional multioutput of ± 12 or ± 15 VDC.

These power supplies are comprised of highly reliable power modules mounted on a releasable hinged plate inside a frame that mounts to VMIC's VMIVME-120 (20-slot chassis) or VMIVME-220-160 (20-slot extruded 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-PS150 to -PS750 power supplies are equipped with an internationally and U.S. recognized standard CEE-22 power receptacle and are rated up to 250 VAC 15 A. Power is supplied by one of two power cords supplied with each power supply.

SPECIFICATIONS

AC Input: 90 to 132 VAC, 180 to 264 VAC, 47 to 63 Hz. AC autoranging automatically selects proper AC line voltage range to enable power operation at either 115 or 230 VAC without user intervention.



Adjustability: All outputs are user adjustable ±5 percent; for exceptions, please see the Ordering Information, Note 1.

Line and Load Regulation: ± 1 percent (of nominal DC output voltage) over AC input range (90 to 132/180 to 264 VAC) and 0 to 100 percent load change. The 5 V (V₁) output requires a minimum load of 10 percent (to maintain good regulation of the power supply). For exceptions, please see the Ordering Information, Note 2.

Orde	ering	Opt	ions	_	_			
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VMIVME-PS	-			0	-			
ABC = Wattage (See Polychart 1) D = Power Fail Options 0 = With Power Fail to Backpla 1 = Without Power Fail 8 = With Power Fail to User Te EF = Output Options 00 = No Aux Outputs 12 = ±12 V Outputs 15 = ±15 V Outputs	ne erminal							
	No	tes						
 PS160-012/112, V₁ and V₂ a adjustable. PS150-000/100, F PS500-000/100 output is adjuing 2. PS160-012/112, V₁ output re 3. Dual current ratings define co current shown can be delivere 4. PS160-012/112 is 75 percen 5. PS700-012/112 and PS750-1 	re user PS250- ustable quires ontinuo ed for a t. D12/11:	r adjus 000/10 ±10 p a mini us and a maxii 2 MTB	table ± 00, PS3 ercent mum lo peak o mum po F is 80	5 perc 350-00 minim bad of current eriod c	ent, V ₃ 0/100, um. 20 pero ts. The of 30 se ours.	is not and cent. peak econds		
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VMIVME-PS150 TO -PS750



Ripple and Noise: Less than 0.2 percent RMS, 1 percent P-P, or 100 mV, whichever is greater.

Remote Sense 5 V Output (V₁): Compensates for 250 mV total line drop. Open sense lead protected.

Temperature Coefficient: 0.02 percent per degree C.

Stability: 0.1 percent over 8 hours after 30 minutes warm-up.

Transient Response 5 V Output (V₁): Output voltage returns to within 1 percent in less than 500 μ s for a 50 percent load change. Peak transient does not exceed 5 percent.

Overload Protection: All outputs are protected against overload and short circuit (Power foldback). Automatic recovery upon removal of fault.

Overvoltage Protection 5 V Output (V₁): Protects load against power supply induced overvoltage. Trip point is factory set so that the output voltage cannot exceed 6.8 V (136 percent).

Peak Output Current: See Polychart 1. Also see the Ordering Information, Note 3.

Soft Start: The in-rush AC currents for 115 and 230 VAC operation are listed in Polychart 1.

Brown Out Protection: Holds regulation with AC input voltage down to 85 VAC up to 340 VAC (autoranging will change over about 170 VAC).

Thermal Protection: Shuts down the power supply if overheated. Automatic recovery.

Holdup Time: 16 ms minimum after removal of power, at nominal line voltage, with full DC load.

Temperature Range: 0 to 50 °C (32 to 122 °F) full ratings. Derate to half power at 70 °C (158 °F).

Efficiency: 80 percent typical. For exceptions, please see the Ordering Information, Note 4.

Safety Agencies: Approved to UL478, UL 1950, SCA22.2 bulletins 1402c and No. 234, IEC950, VDE 0805/ VDE 0806 Class 1 SELV and EN 60 950.

Conducted RFI: Meets FCC part 15, subpart J and VDE 0871, Class A. Contact the factory for information on VDE 0871 Class B compliances.

Output Isolation: Isolated from ground 50 V

Reverse Voltage: Protected against reverse voltage up to supply current rating.

Reliability: Over 100,000 hours MTBF, when calculated in accordance with MIL-HDBK-217. See exception in the Ordering Information, Note 5.

Cooling: Equipped with a ball-bearing cooling fan that provides proper cooling to achieve full ratings at 50 $^{\circ}$ C (122 $^{\circ}$ F) ambient temperature.

Option: Power fail, provides TTL 0, 5 ms before out of regulation band upon loss of AC power. VMEbus compatible, provides 48 mA sink current capability. Wired to backplane -0BC. Wired to user terminal block -8BC.

Power Cord: Two power cords are supplied with each assembly (115 and 230 VAC). 230 V power plug is furnished by the user.

TRADEMARKS

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The summation of multiple outputs and the wattage of each output <u>must not exceed</u> the maximum total Watt ratings specified for same.

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750 – 8 12	15	812	039 – 020	90 A	30 A	750	120	\bigvee

Polychart 1





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