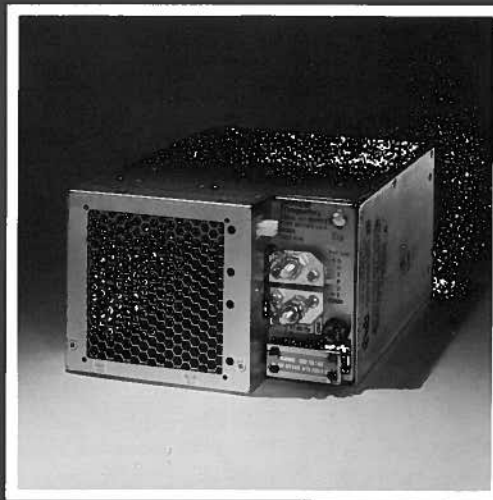


PIONEER MAGNETICS, INC.

International

Series PM 2920A-26A SINGLE OUTPUT SWITCHING POWER SUPPLIES 250 TO 1000 WATTS



FEATURES

- Approved to UL, CSA, and IEC (Class I, SELV) Safety Standards
- 5 x 8 x 11" Envelope
- No Minimum Load
- 0 to 50°C Operation at Full Load
- AC Input Fuse
- Overvoltage Protection
- Overcurrent Protection

- Overtemperature Protection
- Soft Start
- Remote Sense
- No Turn-On or Turn-Off Overshoot
- Completely Isolated Output
- Self Contained Forced Air Cooling
- 75,000 Hour MTBF
- Dual Input 115V/230V

TYPICAL OPTIONS

- (-1) Power Fail Signal
- (-2) Logic Inhibit
- (-3) Crowbar
- (-5) Margining/Programming
- (-6) Direct Paralleling
- (-8T) Power Good

Model PM2920A through PM2926A

SINGLE OUTPUT
SWITCHING POWER SUPPLIES
250 TO 1000 WATTS

Pioneer's PM2900 single output series provides a completely floating, regulated DC output ideally suited for mainframe computer, peripheral and telecommunications environments. Employing the very latest technology, the 2900 series meets today's stringent international safety and EMI standards.

Pioneer Magnetics can provide special custom options on request for units in suitable OEM quantities. Mechanical packaging considerations may limit the number of options that can be combined. Consult factory for details.

CONFIGURATION DESCRIPTION

The output is brought out on $\frac{5}{16}$ " - 18 THD studs. DC currents up to 200 amperes are available. The PM2900 Series is packaged in the industry standard 5 x 8 x 11" fan cooled envelope for output powers up to 1000 watts. Plug-in units are available.

The AC input is via a 6-32 screw terminal block and is protected with a front panel serviceable fuse (8-32 screw and internal fuse on PM2926). A dual voltage switch at the rear of the supply allows for worldwide operation. Dedicated input voltage units are also available at lower cost. Automatic soft start circuitry minimizes inrush surges.

Option interface connections, where required, are brought out on one Molex connector (6 pin) at the front panel.

Output voltage and OVP is adjustable from the front panel.

SPECIFICATIONS

INPUT:

- Continuous voltage range: 90 to 138 VAC, single phase (115 volt select) 180 to 264 VAC, single phase (230 volt select)
- 10 minute operation: 80 VAC minimum (115 volt select) 160 VAC minimum (230 volt select). Not applicable for PM2925
- Brown-out point: 75/145 VAC (PM2925 has reduced brown-out capability)
- Frequency: 47 to 63 Hz.
- Inrush Limiting: Automatic soft start circuitry minimizes inrush surges. Upon loss of AC power inrush circuitry will reset within 100 msec at full load.
- Turn-on Delay: 1 second maximum from application of AC line. 200 msec. maximum from inhibit turn-on.
- Leakage Current to Ground: 0.5 mA maximum @ 264 VAC, 63 Hz.
- Surge Withstand Test: IEEE Spec 472, Rev 1974.

OUTPUT:

See selection chart.

OUTPUT VOLTAGE ADJUSTMENT RANGE:
±10% of nominal output voltage.

STATIC REGULATION:

- Line: ±0.25% over full line range.
- Load: ±0.25% over no load to full load.
- Voltage Stability: ±0.1% after 30 minutes warm-up for a 24 hour period.
- Temperature coefficient: ±0.02% per °C from 0°C to 50°C.

(Note: For outputs less than 5V the following apply:
Line: ±12.5 mV, Load: ±12.5 mV, VS: ±5 mV,
TC: 1 mV/°C)

International

SINGLE OUTPUT SUPPLY SELECTION CHART

Model No.		PM2920A	PM2921A	PM2922A	PM2923A	PM2924A	PM2925A	PM2926A
Max. 5V power (Watts)		250W	375W	500W	625W	750W	850W	1000W
DC output Voltage	Type #s (Add Amps in Blanks)	OUTPUT CURRENT (AMPS)						
2	2D	100A	125A	200A	—	—	—	—
3	3D	50A	70A	100A	125A	150A	170A	200A
5	5D	50A	70A	100A	125A	150A	170A	200A
12	12D	21A	30A	42A	52A	60A	71A	85A
15	15D	17A	25A	33A	42A	50A	57A	70A
24	24D	10A	16A	21A	25A	33A	35A	40A
28	28D	9A	13A	18A	22A	27A	30A	36A
48 (1)	48D	5A	8A	10A	13A	16A	18A	20A

DYNAMIC REGULATION:

- Output Transient Response: 2% deviation (100 mV deviation for units under 5V) with recovery to 1/2% in less than 500 μ sec for a 25% load step, 1A/ μ sec slew rate. 3% or 200 mV on PM2926
- Overshoot: No turn-on or turn-off overshoot.

P-P RIPPLE AND NOISE:

1% of nominal output at full load current, 20 Hz to 20MHz bandwidth for 5V to 48V outputs. 50mV for outputs less than 5V.

HOLD-UP TIME:

30 milliseconds minimum from 115/230 VAC nominal (20 msec for PM2925) with output voltage set to nominal.

OVERVOLTAGE PROTECTION:

3V-48V outputs: Unit will shut down at 125% \pm 10% of nominal output.

2V outputs: Unit will shut down at 3V \pm 0.1V.

OVERLOAD PROTECTION:

- (Automatic recovery from overload or short circuit).
- Foldback Point: 105 to 120% of full output current.
 - Short Circuit Current: Less than 65% of full output current.

OVERTEMPERATURE PROTECTION:

Automatic latching shut-down type. After a suitable cool down period unit can be reset by cycling of input power.

REVERSE VOLTAGE PROTECTION:

Protection against reverse voltage applied across output terminals up to rated output current (with fan running).

REMOTE SENSE:

Will compensate for up to 1/2 volt total loop drop on output lines. Internal 100 ohm resistors prevent output from rising more than 100 mV should sense line be disconnected.

OPTIONS:

- (-1) Power Fail Signal—Provides a typical 5 msec warning of output drop upon loss of AC power.
- (-2) Logic Inhibit and Enable—System can be turned on or off with a TTL compatible signal or switch contact.
- (-3) Crowbar—Triggered by an overvoltage condition (125% \pm 10% of nominal), discharging the output within 50 μ sec (Note: Shutdown type OV is standard and can be used in lieu of OV crowbar).
- (-5L) Margining/Programming—Allows \pm 5% change of main output.
- (-6) Direct Paralleling—Current foldback is set between 100% and 105% of rated output allowing direct parallel operation.
- (-8T) Power Good Signal—Monitors the output terminal and sinks to logic return when output is beyond \pm 4% of nominal voltage.

TEMPERATURE:

- Operating: 0 to 50°C at full load.
- Storage: 55°C to +85°C.

HUMIDITY:

5% to 95% without condensation.

ISOLATION:

Class I SELV.

SAFETY:

Recognized to UL114, 1012 and 478 5th edition certified to CSA 22.2 -142/143/154, and approved to VDE 0806 Class I SELV, and IEC 380 and 435.

EMI:

- Conducted: Meets VDE 0871, level A and FCC Docket 20780, Part 15 Subpart J, Level A with internal filtering from 150 kHz to 30 MHz. (Level B available with higher leakage current.)
- Radiated: Meets VDE 0871, Level B.

MECHANICAL DIMENSIONS:

5 x 8 x 11" (12.7 x 20.3 x 27.9 cm).

WEIGHT:

16 pounds (7.3 kg) maximum.

CONNECTORS:

- Main Output: 5/16" -18 THD studs.
- AC Input: PM2920-2925: 6-32 screw terminal barrier block (Magnum # A307103-NL-R53-AB or equivalent). PM2926: 8-32 screw terminal barrier block.
- Options Interface: (1) 6 pin Molex type. Mates with Molex 03-06-2061 (6 pin). Uses Molex 02-06-2202 male pin.

AC INPUT FUSE:

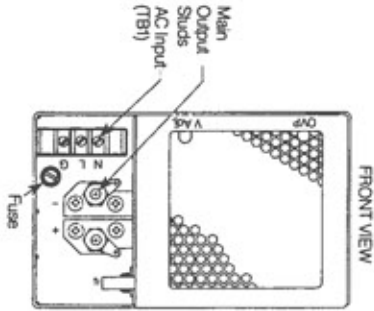
- PM2920-PM2925: 20A, 250V (115V input or 115/230V selectable). Buss ABC 20 or equivalent 12A, 250V (220V input only). Buss ABC 12 or equivalent.
- PM2926: 25A, 250V (internal fuse). Gould OTM25 or equivalent.
- MTBF 75,000 hours minimum.

(1) Non SELV

Higher currents available consult factory.

Pioneer Magnetics reserves the right to change specifications at any time without prior notice. It is Pioneer Magnetics' policy to improve products as new techniques and components become available.

Series PM 2920A-26A



- 1 All mounting holes to be 8-32 screws with a max. penetration depth of $\frac{3}{16}$ inches.
- 2 Main output studs are $\frac{1}{8}$ "-18 THD
- 3 Connectors:
J1 Conn Molex Part No. 03-06-1061
Mates to Part No. 03-06-2061
PM2920-25; Input terminals are 8-32 screws
PM2926; Input terminals are 8-32 screws
External fan shown in phantom is used for special configurations.
- 4 External fan shown in phantom is used for special configurations.
- 5 Symbol indicates standard mounting holes. Customer must indicate desired mounting positions if different from standard.
- 6 Symbol indicates optional mounting holes.
- 7 PM2926: Fuse is internal
- 8 Input selector switch (not used for dedicated input models).
- 9 All dimensional tolerances are .XX ± .02
XXX ± .010

