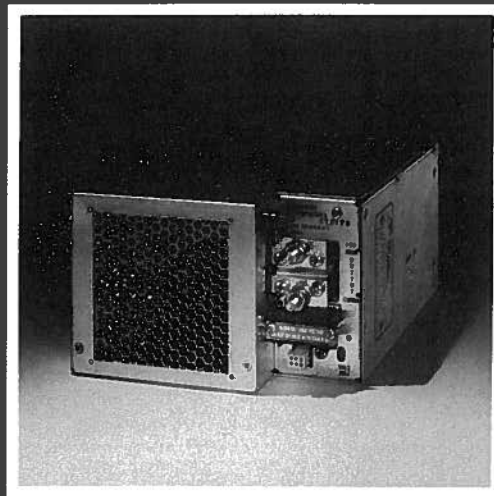


PIONEER MAGNETICS, INC.

Dependables

Series PM 2721A, 22A
SINGLE OUTPUT,
SWITCHING DC/DC CONVERTERS
200-800 WATTS



FEATURES

- Approved to UL, CSA Safety Standards
- 5 x 8 x 11" Envelope
- 0 to 50°C Operation at Full Load
- Overvoltage Protection
- Overcurrent Protection

- Overtemperature Protection
- No Turn-On or Turn-off Overshoot
- Completely Isolated Output
- Self Contained Forced Air Cooling
- Over 70,000 Hours MTBF
- Wide Input Range

TYPICAL OPTIONS

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

Model PM2721A, and PM2722A

SINGLE OUTPUT,
SWITCHING DC/DC CONVERTERS
200-800 WATTS

Pioneer's PM2721A and PM2722A "Dependables" are single-output switching DC/DC converters that provide from 200 to 800 watts of output power with highly regulated output voltages ranging from 2 VDC to 60 VDC. The supplies are based on a long established, field proven technology utilizing an inherently stable regulator design that ensures excellent dynamic response.

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.

Over 300,000 "Dependables" are in the field providing reliable, trouble free operation.

CONFIGURATION DESCRIPTION

The PM2721/22A is packaged in the industry standard 5 x 8 x 11" fan cooled envelope. Output currents up to 200 amperes are available on $\frac{5}{16}$ "-18 THD studs while DC input power is via a 6-32 screw terminal block. In addition to input/output power the front panel provides for one 6 pin Molex connector (options interface) and output voltage and OVP adjustments.

SPECIFICATIONS

INPUT:

- Continuous voltage range: 22-34 VDC (-4 input), 42-56 VDC (-2 input), 100-145 VDC (-1 input), 200-250 VDC (-3 input) (Note: 24V input units limited to 375 watts).
- Turn-on Delay: 200 msec. maximum.
- Reverse Input Protection: Supply is protected against reverse voltages applied across input terminals.

OUTPUT:

See Selection Chart.

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

STATIC REGULATION:

- Line: ± 0.25% over full input 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%/°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)

DYNAMIC REGULATION:

- Output Transient Response: 1% deviation with recovery to 0.5% in less than 250 μ sec for a 25% load step, 1A/ μ sec slew rate.
- Overshoot: No turn-on or turn-off overshoot.

Dependables

SINGLE-OUTPUT SUPPLY SELECTION CHART

Model Number		PM2721A	PM2722A	PM2722A	PM2722A
Maximum 5V Power (Watts)	Type # (Add amps in blank)	375W	500W	600W	750W
DC Output Voltage		Output Current (Amps)			
2	2F—	100A			200A
3	3F—	100A	100A	120A	200A
5	5F—	75A	—	—	150A
12	12F—	30A	—	—	60A
15	15F—	25A	—	—	50A
18	18F—	22A	—	—	45A
24	24F—	16A	—	—	33A
28	28F—	13A	—	—	27A
48	48F—	8A	—	—	16A
60	60F—	6A	—	—	12A

P-P RIPPLE AND NOISE:

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

OVERVOLTAGE PROTECTION:

(Shutdown type)

- 3V–48V outputs: Unit will shut down at 125% ± 10% of nominal output.
- 2V outputs: Unit will shutdown at 3V ± 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 ½ volt 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 warning of output drop upon loss of input 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% ± 10% of nominal) discharging the output within 50 μsec (Note: Shut-down type OV is standard and can be used in lieu of OV crowbar).
- (-5MR) Margining/Programming—Allows ±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 terminals and sinks to logic return when output is beyond ±4% of nominal voltage.

TEMPERATURE:

- Operating: 0 to 50°C at full load. Derate linearly to 80% rated power for 50°C to 71°C.
- Storage: -55°C to +85°C.

HUMIDITY:

5% to 95% without condensation.

SAFETY STANDARDS:

Standard models recognized to UL 478, and designed to meet CSA 143 and 154.

EMI:

- Conducted: Equipped with standard LC filter to suppress EMI. Meets VDE 0871B with external filter. A unique filter circuit minimizes line reflected audio frequencies for talk circuit applications.
- Radiated: Meets VDE 0871B

MECHANICAL DIMENSIONS:

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

WEIGHT:

- PM2771 16 pounds (7.3 kg) maximum.
- PM2772 18 pounds (8.2 kg) maximum.

CONNECTORS:

- Output: 5/16"–18 THD studs.
- DC Input: 6–32 screw block.
- Options Interface: (1) 6 pin Molex type. Mates with Molex 03-06-2061 (6 pin) Uses Molex 02-06-2103 male pin.

INPUT FUSE:

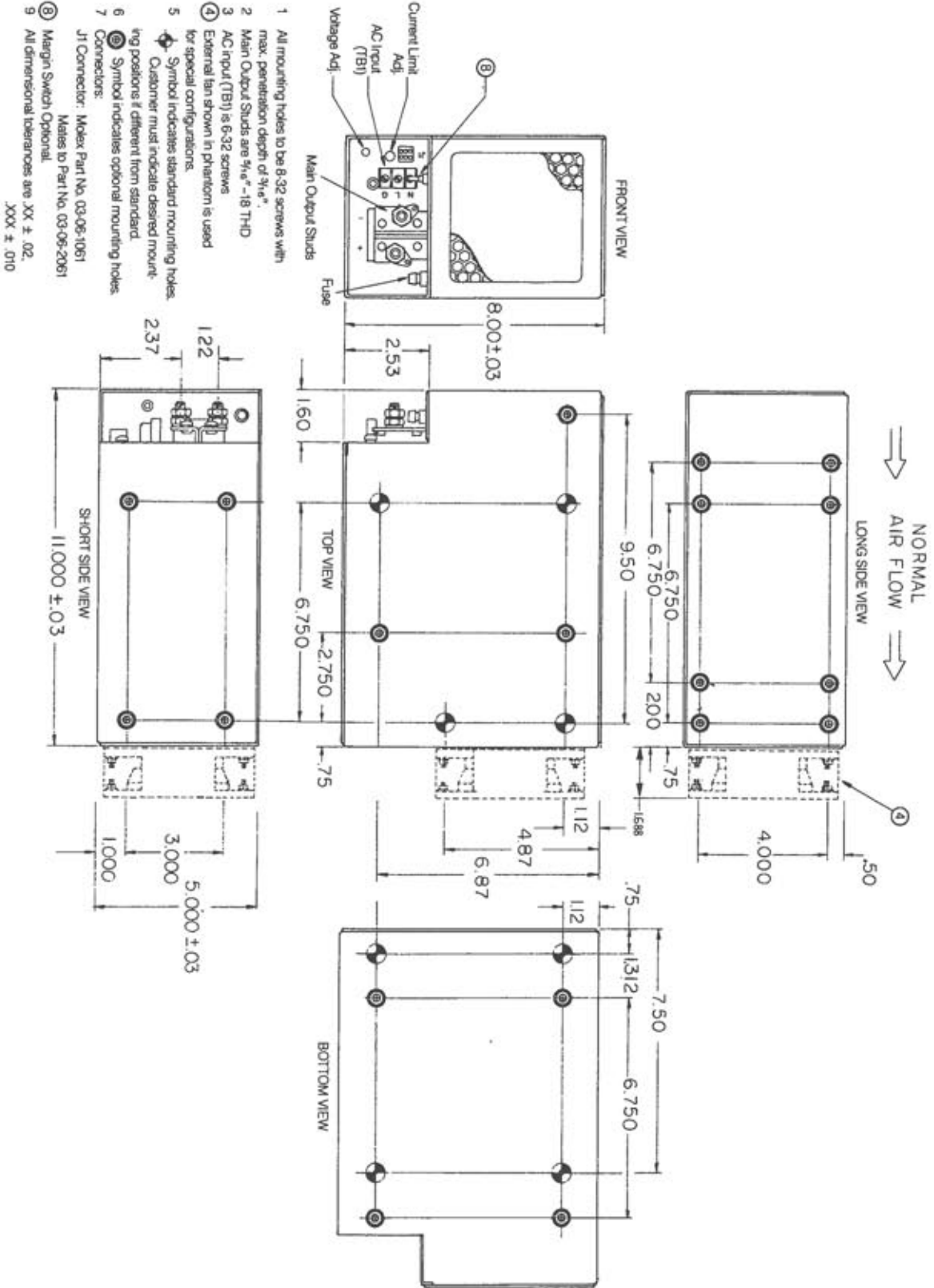
Buss 30AB or equivalent.

MTBF:

Greater than 70,000 hours.

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 2721A, 22A



- 1 All mounting holes to be 8-32 screws with max. penetration depth of 3/4".
- 2 Main Output Studs are 3/4" - 18 THD
- 3 AC Input (TBI) is 6-32 screws
- 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 Connections:
- 8 J1 Connector: Molex Part No. 03-06-1061 Mates to Part No. 03-05-2061 Margin Switch Optional.
- 9 All dimensional tolerances are .XX ± .02, .XXX ± .010