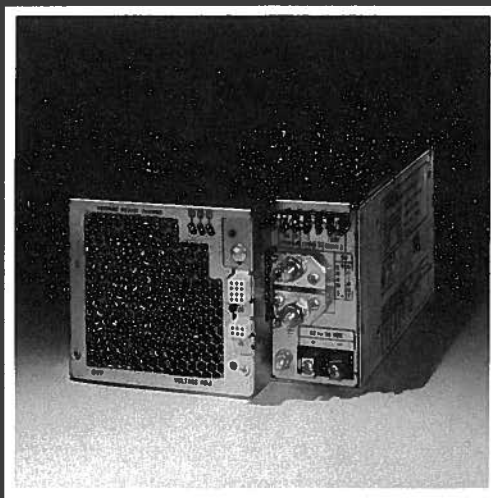


PIONEER MAGNETICS, INC.

International

Series PM 3074-76 MULTIPLE OUTPUT, 48V DC INPUT SWITCHING POWER SUPPLIES 750 TO 1000 WATTS



FEATURES

- Approved to UL, CSA, and IEC (Class I, SELV) Safety Standards
- 5 x 8 x 12³/₄" Envelope (PM3076)
- No Minimum Load
- 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
- Wide Input Range

TYPICAL OPTIONS

- (-1) Power Fail Signal
- (-2) Logic Inhibit
- (-3) Main Channel Crowbar
- (-3S) Secondary Channel OV Shutdown
- (-5) Margining/Programming
- (-6) Direct Paralleling
- (-8T) Power Good

Model PM3074, PM3075 & PM3076

MULTIPLE OUTPUT,
48V DC INPUT SWITCHING
POWER SUPPLIES
750 TO 1000 WATTS

Pioneer's PM3074/75/76 DC-DC, multi-output supply provides up to four independently regulated channels ideally suited for telecommunications, main-frame computer and peripheral environments (consult factory for extra channel capability). Employing the very latest technology, the 3000 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 PM3000 series main channel is brought out on $\frac{5}{16}$ "-18 THD studs and is regulated by the main feedback loop of the supply. Output currents up to 150 amperes are available. The secondary channels are brought out on 6-32 screw terminal blocks and are fully isolated and regulated. 6, 12 and 15 amp channel ratings are standard. 30 amp or 45 amp outputs can also be ordered. The PM3000 series does not require a minimum load on the main channel to guarantee operation of the secondary outputs.

The DC input is via a pair of 10-32 screw blocks.

The PM3000 series is packaged in a 5 x 8 x 12 $\frac{3}{4}$ " fan cooled envelope. Plug-in units are available. Consult factory.

Option Interface connections, where required, are brought out on two Molex connectors (6 pin and 12 pin) at the front panel.

All voltages are adjustable from the front panel along with the main channel OVP.

SPECIFICATIONS

INPUT:

- Continuous voltage range: 42-56 VDC. Other input ranges available. (Consult factory.)
- 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 REGULATIONS:

(All Channels)

- 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 units less than 5V the following apply:

Line: ±12.5mV, Load: ±12.5mV, VS: ±5mV,
TC: 1 mV/°C)

DYNAMIC REGULATION:

- Output Transient Response: 2% deviation (100 mV deviation for units under 5V) with recovery to ½% in less than 500 μsec for a 25% load step, 1A/μsec slew rate.
- 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.

International

MULTI-OUTPUT SUPPLY SELECTION CHART

Model Number		PM3074	PM3075	PM3076
Maximum Total Output Power (Watts)		750W	850W	1000W
Main Channel (1)	DC Voltages Available	2, 3, 5, 12, 15, 24, 28, or 48		
	Max 5V Power (Watts)	600W	750W	750W
	Max Current @ 5V (Amps)	120A	150A	150A
Channels 2, 3, & 4 Maximum Output Current (Amps) (2)	DC Voltages Available	2, 3, 5, 12, 15, 24, 28, 30, 48 VDC		
	Low Current	6A (up to 3A at 30 or 48 VDC)		
	Standard	12A (up to 6A at 30 or 48 VDC)		
	High Current (3)	15A (up to 7.5A at 30 or 48 VDC)		

OVERSHOOT:

No turn-on or turn-off overshoot.

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: Consult factory.

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 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.
- (-3S) Secondary Channel OV Shutdown—Triggered by overvoltage condition (125% \pm 10% of nominal) latching the entire supply off. Resettable by cycling AC power.
- (-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 terminals of one or more channels and sinks to logic return when output(s) are 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 STANDARDS:

UL I14, 1012 and 478 5th Edition; CSA 142, 143 and 154; IEC 380 and 435; VDE 0806, SELV levels.

EMI:

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

MECHANICAL DIMENSIONS:

5 x 8 x 12³/₄" (12.7 x 20.3 x 32.38 cm).

WEIGHT:

20 pounds (9.1 kg) maximum.

CONNECTORS:

- Main Output: 5/16" -18 THD studs.
- Secondary Outputs: 6-32 screw terminal barrier block. Magnum # A104206-NL-826 or equivalent.
- DC Input: 10-32 screw block.
- Options Interface: (1) 6 pin and (1) 12 pin molex type. Mates with Molex 03-06-2061 (6 pin) and Molex 03-06-2122 (12 pin). Uses Molex 02-06-2202 male pin.

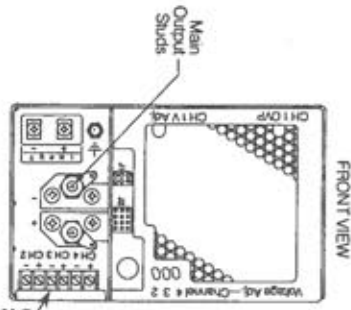
INPUT FUSE:

Must be provided for externally by user.

- (1) No Minimum Load required.
- (2) Sum of all channel output wattages may not exceed maximum supply rating.
- (3) 30 and 45 amp channels 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 3074-76



- 1 All mounting holes to be 8-32 screws with a max. penetration depth of $\frac{3}{16}$ inches.
- 2 ∇ Symbol indicates standard mounting holes. Customer must indicate desired mounting positions if different from standard.
- 3 \textcircled{M} Symbol indicates optional mounting holes.
- 4 Connectors: J1 Conn Molex Part No. 03-05-1061
Mates to Part No. 03-06-2051
J2 Conn Molex Part No. 03-06-1121
Mates to Part No. 03-06-2122
Input Terminals are 10-32 screws
Main Output Studs are $\frac{1}{8}$ "-18 THD
TB2: Channel 2, 3, 4 Output
- 5 All dimensional tolerances are XX \pm .02
XXX \pm .010

