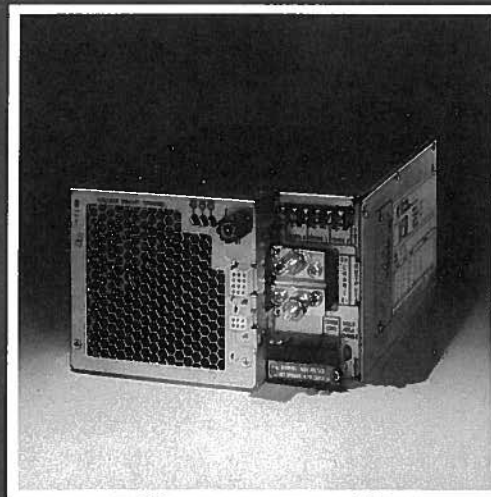


PIONEER MAGNETICS, INC.

Dependables

Series PM 2675A-78A MULTIPLE OUTPUT SWITCHING POWER SUPPLIES 375-850 WATTS



FEATURES

- Approved to UL, CSA Safety Standards
- 5 x 8 x 11" Envelope (250 to 600 Watts)
- 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 Outputs
- Self Contained Forced Air Cooling
- 43,000 Hour MTBF
- 115V/230V Input (Dedicated)

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 PM2675A through PM2678A

MULTIPLE OUTPUT
SWITCHING POWER SUPPLIES
375-850 WATTS

CONFIGURATION DESCRIPTION

Pioneer's "Dependables" series of multiple output supplies are based on long established, field proven technology. The series provides up to four completely floating, regulated outputs from 2V to 48 VDC 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.

The main channel is brought out on $5/16"$ —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, 7.5, 12, and 15 amp channel ratings are standard. 30 or 45 amp outputs can also be ordered.

The PM2600 series multiple output supply is packaged in the industry standard 5 x 8 x 11" fan cooled envelope for output powers up to 600 watts. Units in the 750 to 850 watt power range extend the 11" dimension to 12 $3/4"$.

The AC input is via a 6-32 screw terminal block and is protected with a front panel serviceable fuse. 115 volt and 230 volt dedicated inputs are available.

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: 90 to 138 VAC, single phase (115 volt select) 184 to 264 VAC, single phase (230 volt select)
- 10 minute operation 80 VAC minimum (115 volt select) 160 VAC minimum (230 volt select)
- Brown-out point: 75/145 VAC (PM2678 has 86/167 VAC brown-out)
- Frequency: 47 to 63 Hz.
- Inrush Limiting: Automatic soft start circuitry minimizes inrush surges. 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: 1.5 mA maximum @264 VAC, 63Hz.
- Surge Withstand test: IEEE Spec 472, Rev 1974.
- Not applicable for PM2678.

OUTPUT:

See Selection Chart.

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

STATIC REGULATION:

(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%/°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: ±5mV,
TC: 1 mV/°C)

Dependables

MULTI-OUTPUT SUPPLY SELECTION CHART

Model Number		PM2675A	PM2676A	PM2677A	PM2678A
Maximum Total Output Power (Watts)		375W	600W	750W	850W
Main Channel	DC Voltages Available	2, 3, 5, 12, 15, 18, 24, 28, 48 VDC			
	Max 5V Power (Watts)	250W	500W	600W	750W
	Max Current @ 5V (Amps)	50A	100A	120A	150A
Channels 2, 3, & 4 Maximum Output Current (Amps) (2)	DC Voltages Available	2, 3, 5, 12, 15 VDC		18, 21, 24, 28 VDC	
	Medium Current	12A		6A	
	High Current (1) (3)	15A		7.5A	

DYNAMIC REGULATION:

- Output Transient Response: 2% deviation (100 mV deviation for units under 5V) with recovery to 0.5% in less than 500 μ sec for a 25% load step, 1A/ μ sec 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.

HOLD-UP TIME:

30 msec minimum from 115/230 VAC with output voltage set to nominal. (20 msec for 2678)

OVERVOLTAGE PROTECTION:

(Shutdown type)

- 3V-48V outputs: Unit will shutdown at 125% \pm 10% of nominal output.
- 2V outputs: Unit will shutdown 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 AC 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.

COMMON 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) Main Channel Crowbar—Triggered by an over-voltage condition (125% \pm 10% of nominal), discharging the output within 50 μ sec (Note: Shut-down type OV on main channel is standard and is normally used in lieu of OV crowbar).
- (-3S) Secondary Channel OV Shutdown—Triggered by overvoltage condition (125% \pm 10% of nominal), latching the entire supply off. Resettable by cycling AC power.
- (-5MR) 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. Derate linearly to 80% rated power for 50°C to 71°C.
- Storage: -55°C to +85°C.

HUMIDITY:

5% to 95% without condensation.

ISOLATION:

Class I SELV.

SAFETY:

Recognized to UL114, 1012, 478 and certified to CSA 22.2-143/154.

EMI:

- Conducted: Equipped with standard LC filter to suppress EMI. Meets VDE 0871, level B with external filter.
- Radiated: Meets VDE 0871B.

MECHANICAL DIMENSIONS:

- PM2675A/76A 5 x 8 x 11" (12.7 x 20.3 x 27.9 cm).
- PM2677A/78A 5 x 8 x 12 3/4" (12.7 x 20.3 x 32.38 cm).

WEIGHT:

- PM2675A/76A: 18 pounds (8.2 kg) maximum.
- PM2677A/78A: 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.
- AC Input: 6-32 screw terminal barrier 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 02-06-2103 male pin.

AC INPUT FUSE:

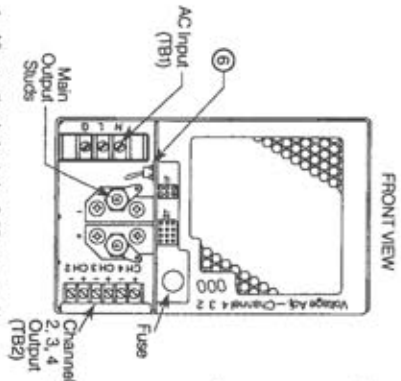
- 115V input: 20A, 250V; Buss MDA 20 or equivalent.
- 220V input: 12A, 250A, Buss ABC 12 or equivalent.

MTBF:

- Greater than 43,000 hrs.
- (1) 5 x 8 x 12 3/4" envelope for one or more secondary channels.
- (2) 30 ampere and 45 ampere channels are 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 2675A-78A



- 1 All mounting holes to be 8-32 screws with a max. penetration depth of $\frac{3}{16}$ inches.
- 2 External fan shown in phantom is used for high current secondary channels and also for PM 2677 & 78.
- 3 Symbol indicates standard mounting holes. Customer must indicate desired mounting positions if different from standard.
- 4 Symbol indicates optional mounting holes. Connectors: J1 Conn Molex Part No. 03-06-1061 Mates to Part No. 03-06-2081 J2 Conn Molex Part No. 03-06-1121 Mates to Part No. 03-06-2122

Main Output Studs are $\frac{1}{4}$ "-18 THD
 TB1: Input Terminals are 6-32 Screws
 TB2: Channel 2, 3, 4 Output
 Terminals are 6-32 Screws

- 5 Switch optional.
- 7 All dimensional tolerances are .XX \pm .02
 .XXX \pm .010

