

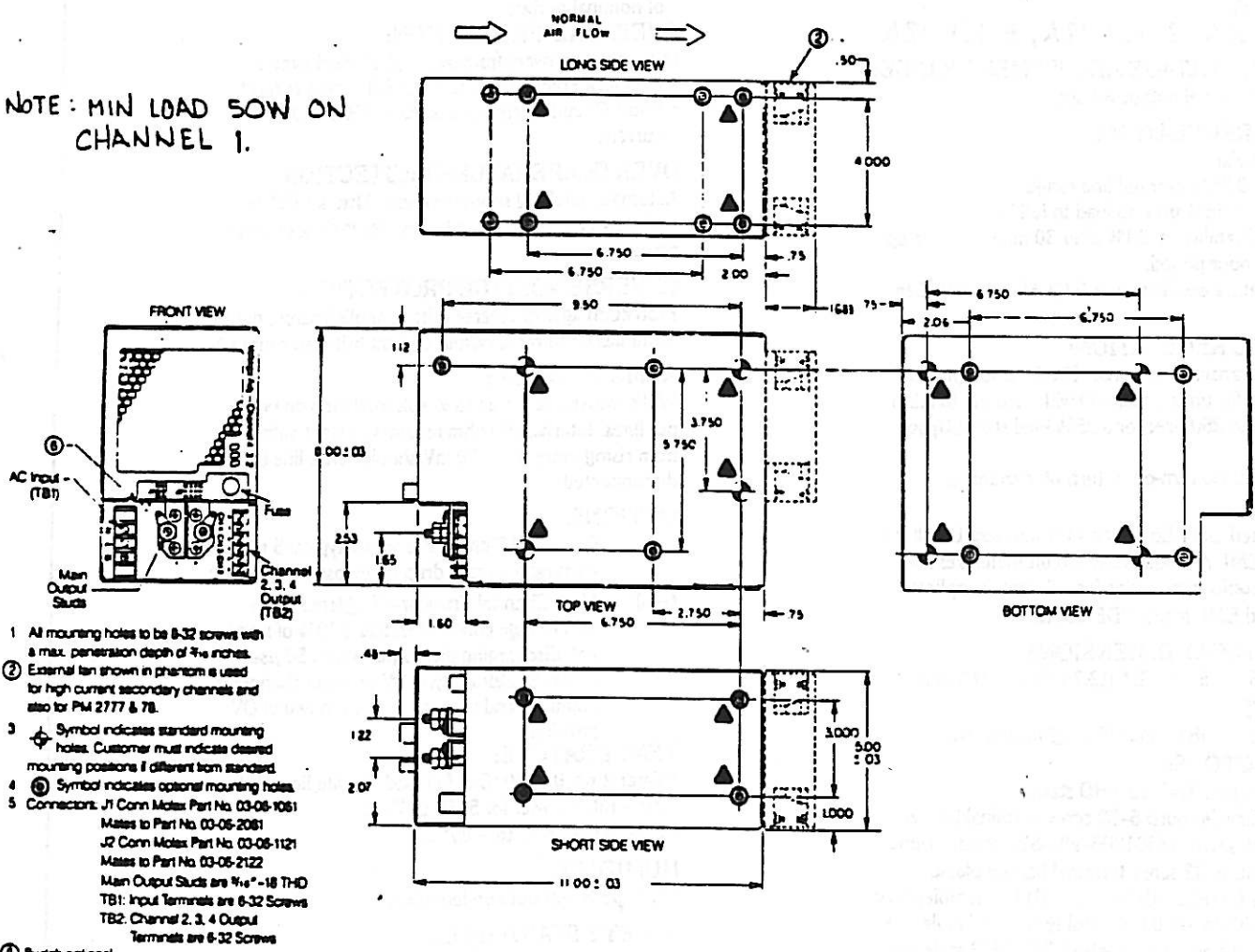
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WESTINGHOUSE ELECTRIC CORPORATION      AUTOMATION DIVISION  
 TITLE POWER SUPPLY, DC/DC, 375W      PITTSBURGH PA USA



ITEM	STYLE NO.	DESCRIPTION	SPEC.
1	405A857H01	POWER SUPPLY, DC/DC, 125VI/3 OUT, 375W	SH 3
2	405A857H02	POWER SUPPLY, DC/DC, 48VI/3 OUT, 375W	SH 4

NOTE: MIN LOAD 50W ON CHANNEL 1.



- All mounting holes to be 8-32 screws with a max. penetration depth of 3/4 inches.
- External fan shown in phantom is used for high current secondary channels and also for PM 2777 & 78.
- Symbol indicates standard mounting holes. Customer must indicate desired mounting positions if different from standard.
- Symbol indicates optional mounting holes.
- Connectors: J1 Conn Mates Part No. 03-06-1061  
 Mates to Part No. 03-06-2061  
 J2 Conn Mates Part No. 03-06-1121  
 Mates to Part No. 03-06-2122  
 Main Output Studs are 3/8" - 18 THD  
 TB1: Input Terminals are 8-32 Screws  
 TB2: Channel 2, 3, 4 Output Terminals are 8-32 Screws
- Switch optional
- All dimensional tolerances are .005 ± .02  
 .001 ± .010

8. ▲ SYMBOL INDICATES CLINCH NUTS TO BE INSTALLED AT THESE LOCATIONS.

H01 & H02

405A857

DC/DC-1

DPTH.	RDW
CHKD.	
SUPV.	
APPD.	
APPD.	
APPD.	
APPD.	
1	15054 16048698-6

WESTINGHOUSE ELECTRIC CORPORATION

AUTOMATION DIVISION

PITTSBURGH PA USA



TITLE POWER SUPPLY, DC/DC, 125V1/3OUT, 375 W

## SPECIFICATIONS

### INPUT:

- Continuous voltage range: 100-145 VAC (-1 input),
- Turn-on Delay: 200 msec. maximum.
- Reverse Input Protection: Supply is protected against reverse voltages applied across input terminals.

### OUTPUT:

1: 5V 50A, 2: 12V 12A, 3: 12V 12A

### 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

### DYNAMIC REGULATION:

- Output Transient Response: 1% deviation (100 mV deviation for units under 5V) with recovery to 0.5% in less than 250 μsec for a 25% load step, 1A/μsec slew rate.
- Overshoot: No turn-on or turn-off overshoot.

### EMI:

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

### MECHANICAL DIMENSIONS:

- PM2775 5 x 8 x 11" (12.7 x 20.3 x 27.9 cm).

### WEIGHT:

- PM2775 18 pounds (8.2 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: 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.

### INPUT FUSE:

Bus 30AB or equivalent.

- (1) 5 x 8 x 12 3/4" envelope for one or more high current secondary channels.
- (2) Sum of all channel output wattages may not exceed maximum supply rating.
- (3) 30 and 45 amp channels available. Consult factory.

### 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.

### 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 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.
- (-3) Main Channel Crowbar—Triggered by an overvoltage condition (125% ± 10% of nominal) discharging the output within 50 μsec (Note: Shutdown type OV on main channel is standard and is normally used in lieu of OV crowbar).

### 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 designed to meet UL 114, 1012, 478 and CSA 143 and 154.

405A857

RDW						
DPTH.	CHKD.	SUPV.	APPD.	APPD.	APPD.	
1	2					

65054  
REV 4508-6  
112

WESTINGHOUSE ELECTRIC CORPORATION      AUTOMATION DIVISION  
 TITLE POWER SUPPLY, DC/DC, 48 VI/3 OUT, 375 W      PITTSBURGH PA USA



**SPECIFICATIONS**

**INPUT:**

- Continuous voltage range: 42-56 VAC (-1 input).
- Turn-on Delay: 200 msec. maximum.
- Reverse Input Protection: Supply is protected against reverse voltages applied across input terminals.

**OUTPUT:**

1: 5V 50A, 2: 12V 12A, 3: 12V 12A

**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

**DYNAMIC REGULATION:**

- Output Transient Response: 1% deviation (100 mV deviation for units under 5V) with recovery to 0.5% in less than 250 µsec for a 25% load step, 1A/µsec slew rate.
- Overshoot: No turn-on or turn-off overshoot.

**EMI:**

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

**MECHANICAL DIMENSIONS:**

PM2775 5 x 8 x 11" (12.7 x 20.3 x 27.9 cm).

**WEIGHT:**

PM2775 18 pounds (8.2 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: 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.

**INPUT FUSE:**

Bus 30AB or equivalent.

- (1) 5 x 8 x 12 3/4" envelope for one or more high current secondary channels.
- (2) Sum of all channel output wattages may not exceed maximum supply rating.
- (3) 30 and 45 amp channels available. Consult factory.

**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.

**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 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.
- (-3) Main Channel Crowbar—Triggered by an overvoltage condition (125% ±10% of nominal) discharging the output within 50 µsec (Note: Shutdown type OV on main channel is standard and is normally used in lieu of OV crowbar).

**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 *DESIGNED TO MEET UL478 AND CSA 143 AND 159*

405A857

DC/DC-3

PIONEER MAGNETICS  
PM2675 - PM2676 - PM2677 - PM2678  
ADJUSTMENT PROCEDURES

If the supply has gone out of specification parameters, it may be adjusted as follows:

**Minor Voltage Adjustment**

Ascertain that a 50 watt or specified minimum load is connected to the primary channel. If only a minor voltage adjustment is necessary, rotate VOLTAGE ADJUST pots (See FIG. 1 FRONT PANEL) to proper level. Do not go through complete adjustment procedure.

**CHANNEL 1**

**Complete Adjustment Procedure**  
ALL STEPS MUST BE COMPLETED

**A. Voltage Adjustments**

1. Connect input and output leads to proper terminals. Place a digital voltmeter across the output terminals. Do not install a load.
2. Rotate VOLTAGE ADJUST pot fully counter-clockwise.
3. Turn on power to unit. If voltage appears, set to correct level by turning VOLTAGE ADJUST pot clockwise. If voltage level drops as pot is rotated clockwise, rotate OVER-VOLTAGE pot (See FIG. 1 REAR OF SUPPLY) fully counter-clockwise temporarily. Set VOLTAGE ADJUST pot to specified voltage. Turn off power.
4. Even if no voltage appears, continue adjustment procedure as problem may involve CURRENT LIMIT adjustment.

**B. Current Limit Adjust**

1. Remove screw for access to CURRENT LIMIT adjustment pot. (See FIG. 1 FRONT PANEL)
2. Rotate CURRENT LIMIT adjustment pot fully clockwise. Turn on unit. Voltage should appear on voltmeter; if not, discontinue procedure, unit is defective. If voltage appears, verify "A" (Voltage Adjustments).
3. Turn off power.
4. Connect a 110% load to the supply via an ammeter within range to be checked.

$$\text{Load Resistor} = \frac{\text{Voltage}}{\text{Current}}$$

For example: For 110% load for 50 ampere, 5 volt supply  $R = \frac{5}{55} = .0909$  ohms

Load resistor wattage required is voltage x current, or in this case, 275 watts minimum. Resistor must be relatively temperature stable under continuous load.

5. Supply power to unit and rotate CURRENT LIMIT adjustment pot counter-clockwise until ammeter just starts to indicate decreasing current. Turn off power.

**C. Overvoltage adjustments**

1. Remove load from supply. Leave voltmeter connected.
2. Rotate OVERVOLTAGE pot fully counterclockwise if not done in step A3.
3. Supply power to unit and rotate VOLTAGE ADJUST to level at which overvoltage limit should work (if within range of model to be adjusted).
4. Rotate OVERVOLTAGE adjust pot slowly clockwise until output voltage disappears from voltmeter.

C. Overvoltage Adjustments continued

5. Turn off power.
6. Rotate VOLTAGE ADJUST pot fully counter-clockwise.
7. Apply power to unit.
8. Rotate VOLTAGE ADJUST pot clockwise to specified operating voltage.

Adjustment is complete. Replace screw over CURRENT LIMIT adjustment pot.

CHANNELS 2 and 3

1. Ascertain that a 50 watt or specified minimum load is connected to the primary channel for all adjustments.
2. Repeat Channel 1 procedures except current limit and OVP adjust pots are accessed by removing the top cover (See FIG. 1), and their rotation is opposite Channel 1 pots.

**WARNING**

Short AC input and DC outputs before Hi-Pot testing otherwise serious damage may result to internal components.

**System Checkout**

After installation in a system, make a final voltage measurement and reset VOLTAGE ADJUST pots if required.

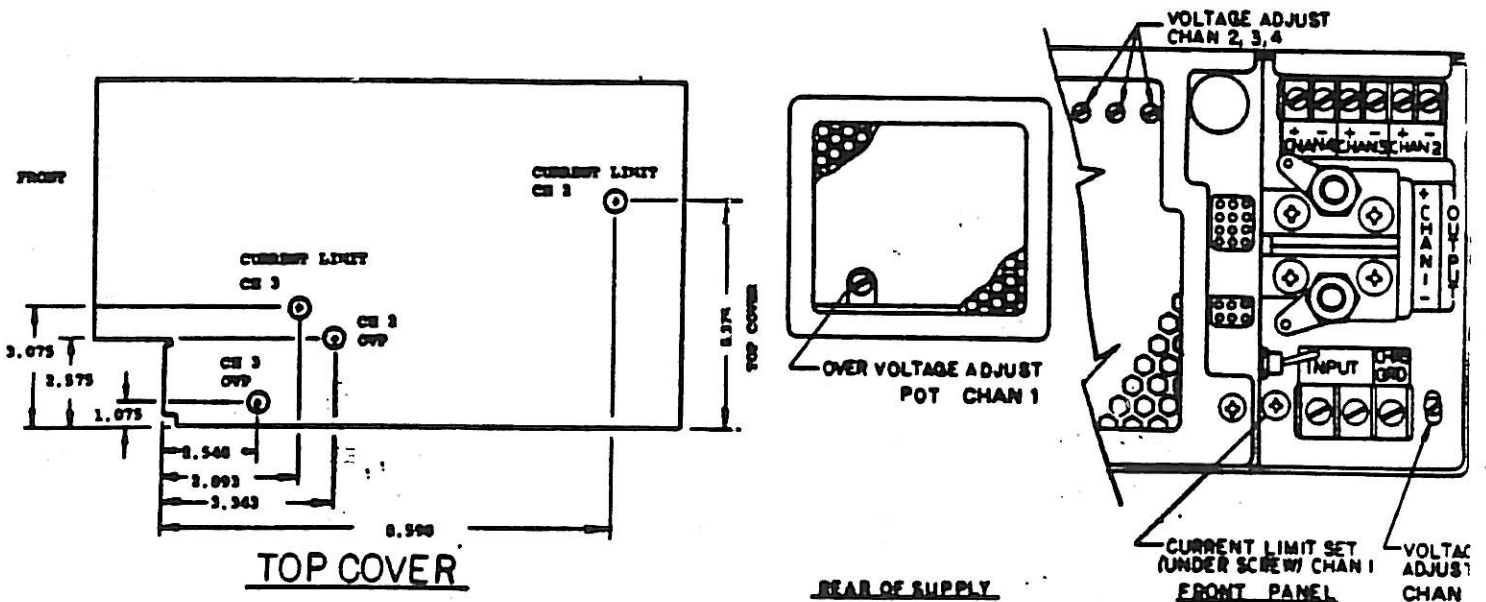


FIGURE 1 - ADJUSTMENT LOCATIONS

DC/DC-5

The following information was obtained from the records of the Department of Health and Human Services, Office of the Assistant Secretary for Health, regarding the activities of the National Health and Medical Research Council (NH&MRC) during the period from 1980 to 1985.

The NH&MRC is a statutory body established under the Health Research Act 1987. Its primary function is to advise the Government on matters relating to health research and to coordinate and support research in the health field.

Summary

The NH&MRC has been instrumental in the development and implementation of a number of major health research programs, including the National Health and Medical Research Council Research Program on Cancer.

Research Program

The NH&MRC has funded a number of research projects in the area of cancer, including the National Health and Medical Research Council Research Program on Cancer.



Prepared by the NH&MRC

Date: 1985