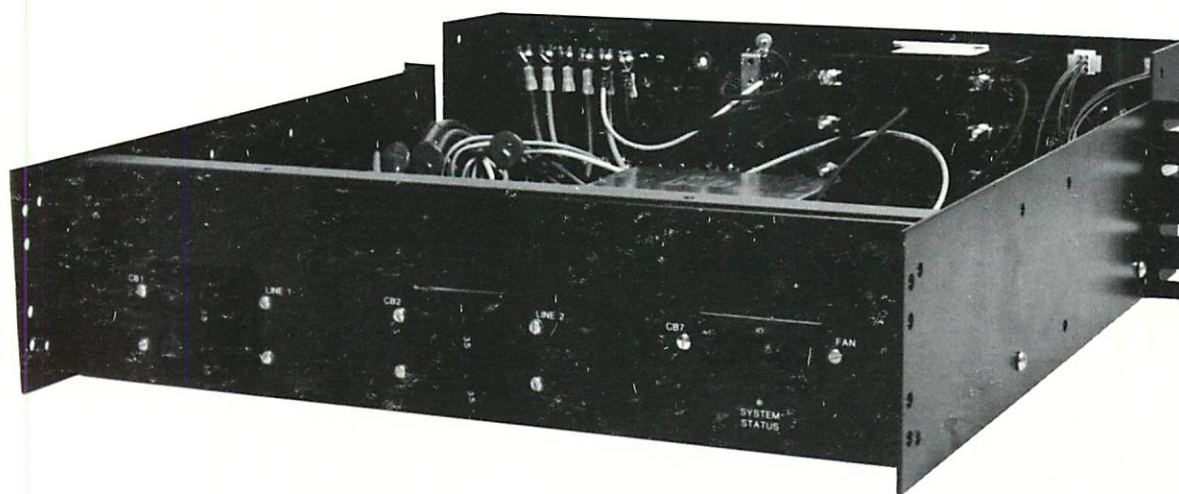


# Bailey network 90™

## Power Entry Panel NPEP0□



A7624

FIGURE 1 — NETWORK 90 Power Entry Panel (Front View)

Bailey® Controls

Product Instruction

E93-909-1

**WARNING** notices as used in this manual apply to hazards or unsafe practices which could result in personal injury or death.

**CAUTION** notices apply to hazards or unsafe practices which could result in property damage.

**NOTES** highlight procedures and contain information which assist the operator in understanding the information contained in this manual.

## **WARNING**

### **INSTRUCTION MANUALS**

DO NOT INSTALL, MAINTAIN OR OPERATE THIS EQUIPMENT WITHOUT READING, UNDERSTANDING AND FOLLOWING THE PROPER **Bailey Controls** INSTRUCTIONS AND MANUALS, OTHERWISE INJURY OR DAMAGE MAY RESULT.

### **RADIO FREQUENCY INTERFERENCE**

MOST ELECTRONIC EQUIPMENT IS INFLUENCED BY RADIO FREQUENCY INTERFERENCE (RFI). CAUTION SHOULD BE EXERCISED WITH REGARD TO THE USE OF PORTABLE COMMUNICATIONS EQUIPMENT IN THE AREA AROUND SUCH EQUIPMENT. PRUDENT PRACTICE DICTATES THAT SIGNS SHOULD BE POSTED IN THE VICINITY OF THE EQUIPMENT CAUTIONING AGAINST THE USE OF PORTABLE COMMUNICATIONS EQUIPMENT.

### **POSSIBLE PROCESS UPSETS**

MAINTENANCE MUST BE PERFORMED ONLY BY QUALIFIED PERSONNEL AND ONLY AFTER SECURING EQUIPMENT CONTROLLED BY THIS PRODUCT. ADJUSTING OR REMOVING THIS PRODUCT WHILE IT IS IN THE SYSTEM MAY UPSET THE PROCESS BEING CONTROLLED. SOME PROCESS UPSETS MAY CAUSE INJURY OR DAMAGE.

## **AVERTISSEMENT**

### **MANUELS D'OPERATION**

NE PAS METTRE EN PLACE, REPARER OU FAIRE FONCTIONNER CE MATERIEL SANS AVIOLU, COMPRIS ET SUIVI LES INSTRUCTIONS REGLIMENTAIRES DE **Bailey Controls** TOUTE NEGLIGENCE A CET EGARD POURRAIT ETRE UNE CAUSE D'ACCIDENT OU DE DEFAILLANCE DU MATERIEL.

### **PERTURBATIONS DE LA FREQUENCE RADIOPHONIQUE**

LA PLUPART DES EQUIPEMENTS ELECTRONIQUES SONT SINSIBLES AUX PERTURBATIONS DE LA FREQUENCE RADIO. DES PRECAUTIONS DEVRONT ETRE PRISES LORS DE L'UTILISATION DE MATERIEL DE COMMUNICATION PORTATIF. LA PRUDENCE EXIGE QUE LES PRECAUTIONS A PREDRE DANS CE CAS SOIENT SIGNALEES AUX ENDROITS VOULOUS DANS VOTRE USINE.

### **PERTES PROCEDE RENVERSEMENTS**

L'ENTRETIEN DOIT ETRE ASSURE PAR UN PERSONNEL QUALIFIE ET EN CONSIDERATION DE L'ASPECT SECURITAIRE DES EQUIPEMENTS CONTROLES PAR CE PRODUIT. L'ADJUSTEMENT ET/OU L'EXTRACTION DE CE PRODUIT LORSQU'IL EST INSERE A UN SYSTEME ACTIF PEUT OCCASIONNER DES A-COUPS AU PROCEDE CONTROLE. SUR CERTAINS PROCEDES, CES A-COUPS PEUVENT EGALEMENT OCCASIONNER DES DOMMAGES OU BLESSURES.

## **NOTICE**

The information contained in this document is subject to change without notice.

Bailey Controls Company, its affiliates, employees, and agents, and the authors of and contributors to this publication specifically disclaim all liabilities and warranties, express and implied (including warranties of merchantability and fitness for a particular purpose), for the accuracy, currency, completeness, and/or reliability of the information contained herein and/or for the fitness for any particular use and/or for the performance of any material and/or equipment selected in whole or part with the user of or in reliance upon information contained herein. Selection of materials and/or equipment is at the sole risk of the user of this publication.

This document contains proprietary information which is protected by copyright. All rights are reserved. No part of this document may be photocopied or reproduced without the prior written consent of **Bailey Controls Company**.

## Contents

Foreword .....	3
<b>Section 1 - Introduction.....</b>	<b>3</b>
<b>Section 2 - Description .....</b>	<b>4</b>
2.1 System Status LED .....	5
2.2 Interface Connections.....	5
2.3 Fusing .....	6
<b>Section 3 - Installation .....</b>	<b>7</b>
3.1 Receiving and Handling .....	7
3.2 Mounting Location .....	7
3.3 Power Supply .....	7
3.4 Switches on Monitor PC Board .....	7
3.5 Grounding.....	7
3.6 External Connections .....	8
3.7 Wiring Diagrams .....	9
<b>Section 4 - Operation .....</b>	<b>13</b>
4.1 AC Entry and Routing .....	13
4.2 Bus Monitor .....	13
4.3 Alarm Circuitry.....	13
<b>Section 5 - Application .....</b>	<b>18</b>
<b>Section 6 - Service and Replacement.....</b>	<b>18</b>
<b>Section 7 - Specifications.....</b>	<b>19</b>

## Foreword

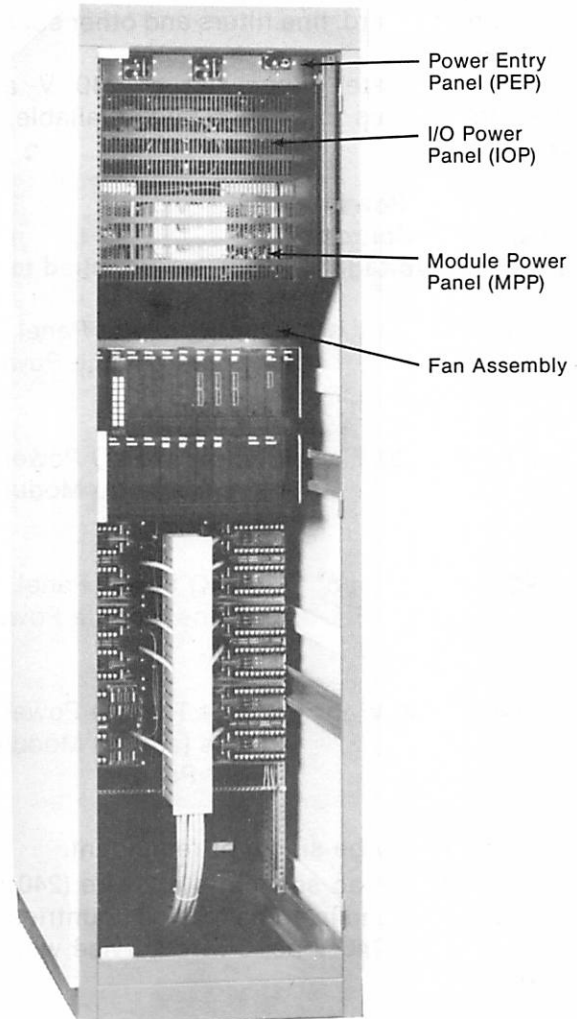
The power system for NETWORK 90™ is made up of standard components which include the Power Entry Panel (PEP), the I/O Power Panel (IOP) and Supplies, the Module Power Panel (MPP) and Supplies, and a Fan Assembly for cooling, as shown in Figure 2.

This product instruction provides description, installation, and operation information for the PEP, which provides circuit breakers and filtering for the source line voltage and routes this power to the individual dc supplies and the Fan Assembly. The PEP also monitors the outputs of these supplies and provides alarm indication for any out of tolerance conditions.

The I/O Power Supplies mount in the IOP (Product Instruction E93-909-3), which monitors the output voltage and provides auctioneering when redundant supplies are used. I/O power is 24 V or 125 V dc and is typically used to power final control elements, two-wire transmitters, field contacts and NETWORK 90 Digital Stations. 24 V dc is required, while 125 V dc is a field contact option.

The Module Power Supplies mount in the MPP (Product Instruction E93-909-2) which monitors the output voltages and provides auctioneering when redundant supplies are used. Module power is +5, ±15 and -30 V dc and is used to power system components such as the Controller Module and Logic Master Module.

The Fan Assembly (Product Instruction E93-909-6) mounts below the Power Panels in a NETWORK 90 Cabinet and provides cooling air for the power system.



A7255

FIGURE 2 — Location of Power System Components in PCU Cabinet.

## Section 1 - Introduction

The Power Entry Panel (PEP) is a power distribution assembly with overload protection and system status indication. The PEP is located in the top position of a NETWORK 90 Cabinet. It serves as the interface between the external power source(s) and the internal power requirements of a NETWORK 90 Cabinet.

There are three basic functions performed by the PEP:

- 1) to provide for ac power entry from an external source
- 2) to filter and distribute ac power to the power supplies and cabinet cooling blowers
- 3) to monitor the power system.

## Section 2 - Description

The Power Entry Panel is an assembly containing components for power distribution. These components consist of circuit breakers, terminal strips, a printed circuit board, line filters and other supporting hardware.

To accommodate either 120 or 240 V ac\*\* sources, four types of PEP's are available, as follows:

Nomenclature	Power Source Voltage*	Power Supplied to
NPEP01	120 V ac	One I/O Power Panel and One Module Power Panel
NPEP02	120 V ac	One or Two I/O Power Panels (and no Module Power Panels)
NPEP03	240 V ac**	One I/O Power Panel and One Module Power Panel
NPEP04	240 V ac**	One or Two I/O Power Panels (and no Module Power Panels)

\*Line voltage may be single or redundant.

\*\*Note: This 240 V ac service is a 2-wire (240 V to ground) system found in some foreign countries, not the standard U.S. 240 V ac, 3-wire service which is 120 V to ground.

The front face of the PEP (Figure 3) contains:

1) individual circuit breakers (CB1 and CB2) for each ac power input. These serve as on/off switches for the total system. Either breaker will provide all necessary power to the system. Each is rated for 35 amps.

2) fan circuit breaker (CB7) which normally remains in the ON position to drive the two fans in the I/O Power Panel and the two fans in the Fan Assembly. This circuit breaker is rated for 5 amps.

3) System Status indicator, which is a red/green LED located just below CB7. The LED is mounted on the Monitor PC Board assembly and projects thru a hole in the front panel.

The back face of the PEP (Figure 4) contains:

1) circuit breakers (CB4 and CB6) thru which ac power to the I/O Power Supplies is fed. The circuit breakers are rated for 10 amps.

2) circuit breakers (CB3 and CB5) in the PEP01/03, rated 25 amps and feeding ac power to the Module Power Supplies. In the PEP02/04, these are rated for 10 amps and 25 amps to feed I/O supplies as required.

3) electrical terminals for power and monitoring connections

4) a utility receptacle with a 10 amp fuse (on 120 V ac, PEP01/02 units only)

5) customer alarm terminals which allow connection of panel lamp or relay (maximum 120 mA, from supply up to 24 V dc)

6) terminals for system status alarm feeding communication loop(s); these signal an Operator Interface Unit or a computer, if used.

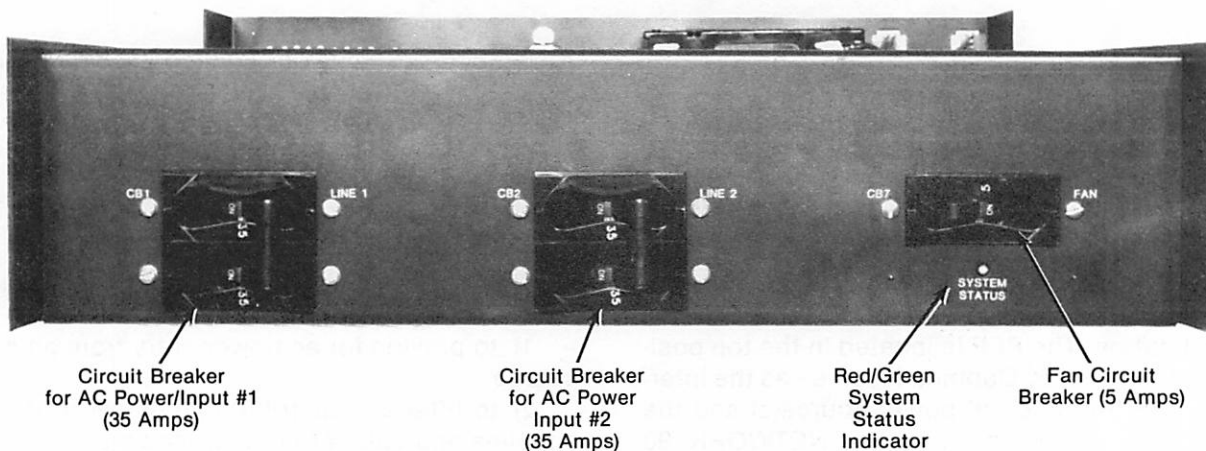


FIGURE 3 — Front Face of Power Entry Panel.

A7625

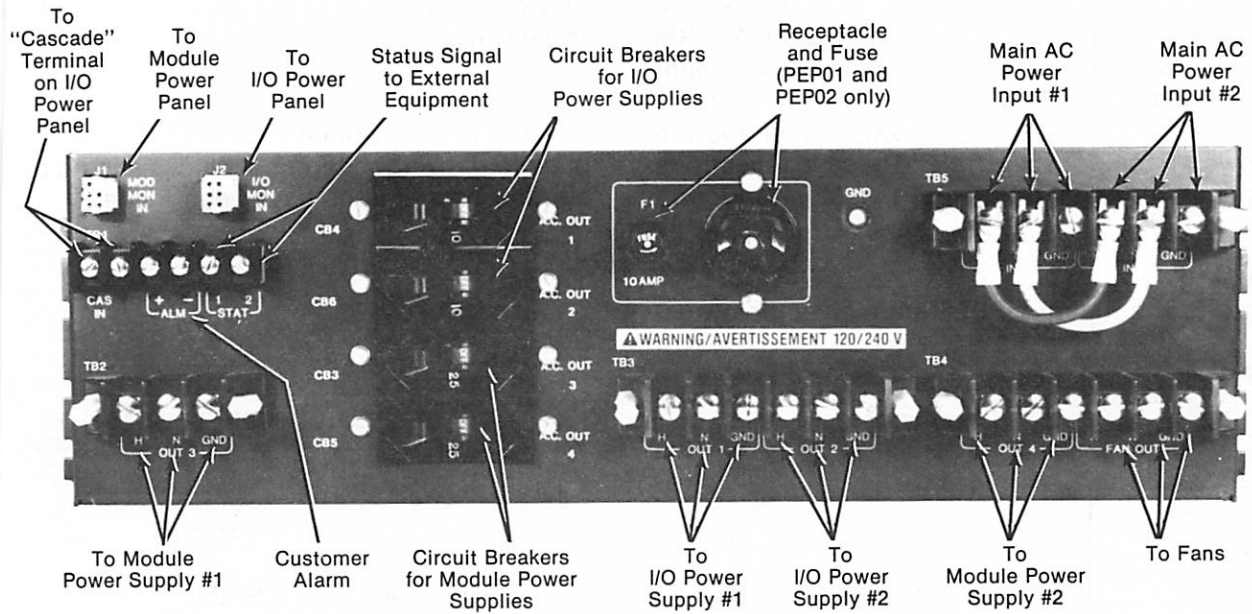


FIGURE 4 — Back Face of Power Entry Panel.

A7626

### 2.1 System Status LED

The overall status of the power system is provided by the red/green LED located below the fan circuit breaker on the right front of the PCU cabinet's PEP (Figure 3). It is green if all monitored inputs, including the "CAS IN" internal alarm signal from the I/O Power Panel (IOP), are within specifications. It can turn red if a voltage from a Module Power Panel (MPP) or I/O Power Panel (IOP) fails, or a fan is inoperative.

If the light turns red, check the LED light indicators on the MPP(s) and IOP(s) for Power Supply failure and the Fan Panel for proper fan operation.

### 2.2 Interface Connections

All terminal strips are located on the back of the PEP, as shown in Figure 4. AC power input and output have the following terminal board arrangement:

AC	Terminal Board	Circuit Breaker	To
IN1	5	1	Power Source
IN2	5	2	Power Source
OUT1	3	4	I/O Power Supply
OUT2	3	6	I/O Power Supply
OUT3	2	3	Module Power Supply*
OUT4	4	5	Module Power Supply*
FAN OUT	4	7	Fan Panel & I/O Power Panel

\*PEP01/03 listed; to I/O power supply as required from PEP02/04.

TB1, located at the top left of the PEP (Figure 4), is used for the internal system alarm line (CAS IN) from the Power Panel below the PEP and the ALARM and STATUS signal outputs to external equipment when needed. MOD IN (J1) and I/O IN (J2) are cable connections from the Module Power Panel and the I/O Power Panel, respectively. These connections provide bus voltages to the PEP01/03 Monitor Board.

A 1/4-20 grounding stud is provided near TB5. This stud is welded to the chassis and tied internally to TB5-GND.

NOTE: The clear plastic protectors which are supplied to fit over the terminal blocks should be replaced after connections have been made.

### 2.3 Fusing

Ratings for the fusing on PEP's are given below.

Circuit Breakers		NPEP01/03	NPEP02/04
Power Entry	CB1 & CB2	DPDT, 35A	DPDT, 35A
Fan Power	CB7	SPDT, 5A	SPDT, 5A
Module Power Supply in PEP01/03 I/O Power Supply in PEP02/04	CB3 & CB5	SPDT, 25A	SPDT, 10A
I/O Power Supply	CB4 & CB6	SPDT, 10A	SPDT, 10A
Fuse			
AC Receptacle		10 A, 120 V (PEP01 only)	10A, 120 V (PEP02 only)

## Section 3 - Installation

### CAUTION

*THIS MODULE CONTAINS MOS DEVICES WHICH CAN BE DAMAGED DURING HANDLING BY STATIC CHARGES. THE CARD IS SHIPPED IN A SPECIAL ANTI-STATIC BAG THAT SHOULD BE SAVED FOR FUTURE USE. ALTHOUGH SURROUNDING CIRCUITRY OF THE CARD AND MODULE IS PLANNED TO PROTECT MOS DEVICES, SPECIAL MOS HANDLING PROCEDURES SHOULD BE OBSERVED. A CARD SHOULD NOT BE REMOVED FROM THE ANTI-STATIC BAG UNTIL READY TO BE PUT INTO SERVICE. DO NOT TOUCH CIRCUITRY WHEN HANDLING CARD.*

### ATTENTION

*CE MODULE EST MUNI DE DISPOSITIFS MOS SUSCEPTIBLES D'ETRE ENDOMMAGES, EN COURS DE MANIPULATION, PAR LES CHARGES STATIQUES. POUR LES BESOINS DE L'EXPEDITION LA CARTE EST PLACEE DANS UN SAC SPECIAL ANTI-STATIQUE A RESERVER POUR USAGE ULTERIEUR. BIEN QUE LES CIRCUITS SUR LA CARTE, ET LE MODULE, AIENT ETE ETUDIES POUR FOURNIR LA PROTECTION VOULUE AUX DISPOSITIFS MOS, IL N'EN DEMEURE PAS MOINS NECESSAIRE DE RESPECTER LES PROCEDURES DE MANIPULATION PRESCRITES POUR CE GENRE DE MATERIEL. ON NE DOIT PAS ENLEVER LA CARTE DE SON SAC ANTI-STATIQUE AVANT LE MOMENT PRECIS DE LA MISE EN SERVICE. DURANT LA MANIPULATION DE LA CARTE, IL NE FAUT PAS TOUCHER AUX CIRCUITS.*

### 3.1 Receiving and Handling

Upon receipt, the Power Entry Panel should be examined for possible damage in transit. If damage is found or if there is any evidence of rough handling, a damage claim should be filed with the transportation company responsible, and the nearest Bailey Sales Office should be notified.

Storage should make use of original packing material and container. The storage environment should be protected and should be free of all environmental extremes, including temperature, moisture and air quality conditions.

### 3.2 Mounting Location

The PEP is mounted from the rear in the uppermost position of the cabinet (Figure 2). The PEP is bolted to the standard 19" mounting rails and bracketed to the cabinet front corners by eight #10 screws.

### 3.3 Power Supply

The 120 V ac or 240 V ac (50/60 Hz) power source is connected to the PEP from the rear. The power source must be capable of 30 amps at 120 V ac or 15 amps at 240 V ac.

Input power is connected to a 10-32 barrier strip, TB5, on the back of the PEP (Figure 4). If two ac sources are used, the two jumpers on TB5 which connect "IN1" and "IN2" must be removed.

### 3.4 Switches on Monitor PC Board

The Monitor PC Board (Figure 5) is attached to the bottom right of the PEP01/03 by four plastic post supports. The system status LED is mounted on this board and projects thru a hole in the front panel. The dipswitches on the board (Figure 5) are used to disable either of the two I/O monitors if only one I/O Power Supply is used. Switch C1/C2 disables I/O bus #1 to the I/O Power Supply #1 position. Switch C3/C4 disables I/O bus #2 to the I/O Power Supply #2 position. Refer to Table A for a summary of the possible switch positions. The I/O bus voltages are measured at the I/O Power Panel.

### 3.5 Grounding

The PEP contains a welded 1/4-20 nut near TB5 on the rear plate (Figure 4) that will accept a grounding bolt. This chassis ground terminal is internally connected thru the PEP chassis to the ground of the main power entry terminal block TB5. The Cabinet frame contains four 1/4-20 tapped holes, one in each quadrant, for ground connections. Two 1/4-20 x 1/2 bolts are provided in the top two holes for safety earth grounding and to bond one NETWORK 90 cabinet to an adjacent one, if present.



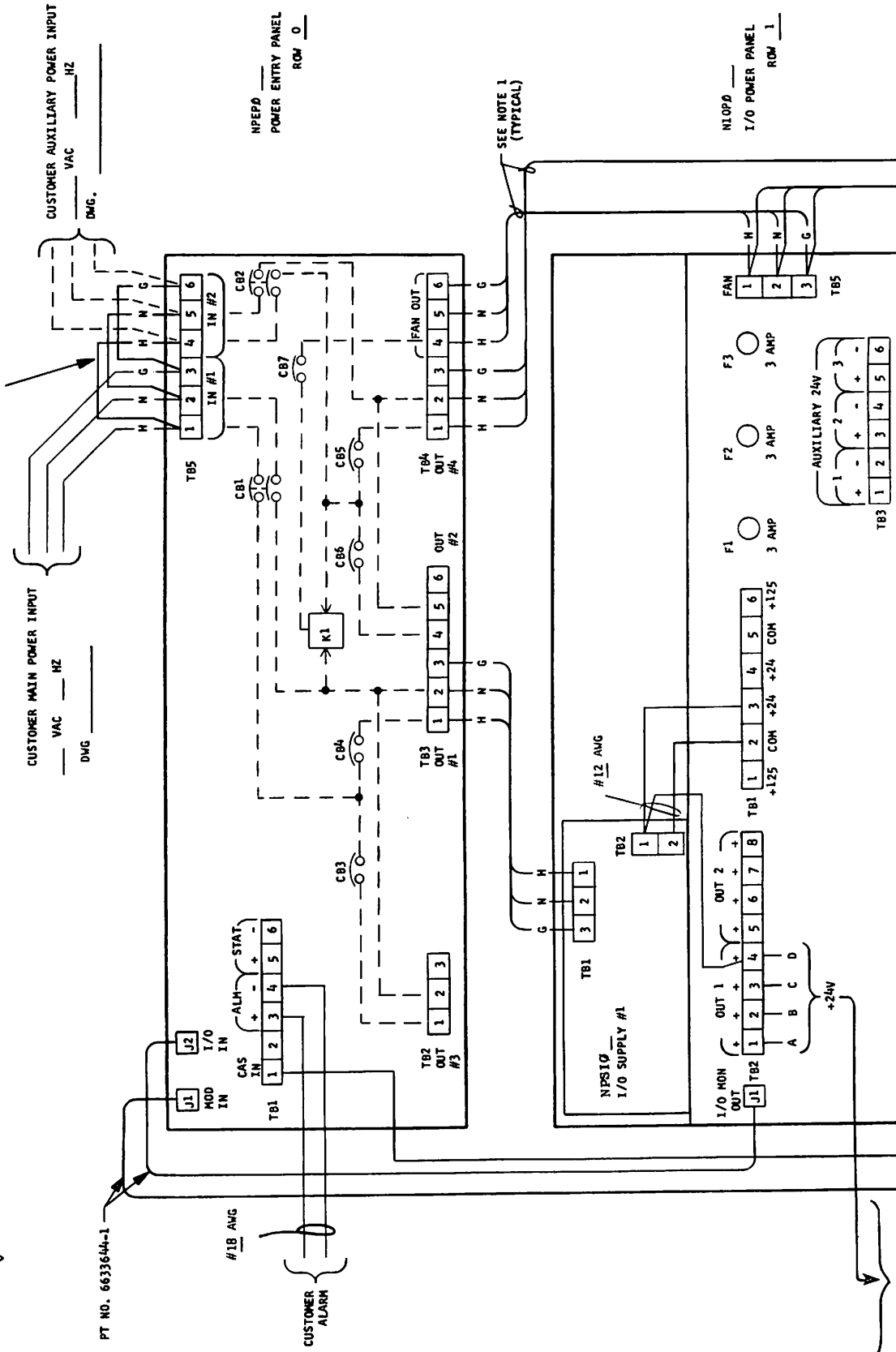
**NOTES:**

- 1) H = HOT (BLK)  
N = NEUT (WHT)  
G = GND (GRN)

2) USE #10 AWG UNLESS OTHERWISE SPECIFIED

3)  $\nabla$  = CONNECT TO ISOLATED SYSTEM COMMON BUS

NOTE: SOURCE 2  
IF SEPARATE BACK-UP SOURCE IS AVAILABLE, REMOVE JUMPERS  
& CONNECT TO TB5-4, -5 & -6 USING #10 AWG WIRE (H = BLK,  
N = WHT AND G = GRN).



TO I/O POWER WIRING  
DMG. \_\_\_\_\_  
SHEET \_\_\_\_\_

### 3.7 Wiring Diagrams

The PEP is available in versions for PCU Cabinet installation (PEP01/03), and for Termination Cabinet requirements (PEP02/04).

Wiring for the PEP01/03, with two I/O supplies and two module supplies, is shown in Figure 7. Connections to the PEP02/04, with two sets of I/O supplies, is shown in Figure 8.

Wiring diagrams for other configurations (for ex-

ample, a system with two auctioneered I/O Power Panels) are covered in drawing series D1113411 thru D1113420. These drawings are found in the wiring section of System Engineering Procedure, Product Information E93-900-4.

NOTE: The clear plastic protectors which are supplied to fit over the terminal blocks should be replaced after wiring is complete.

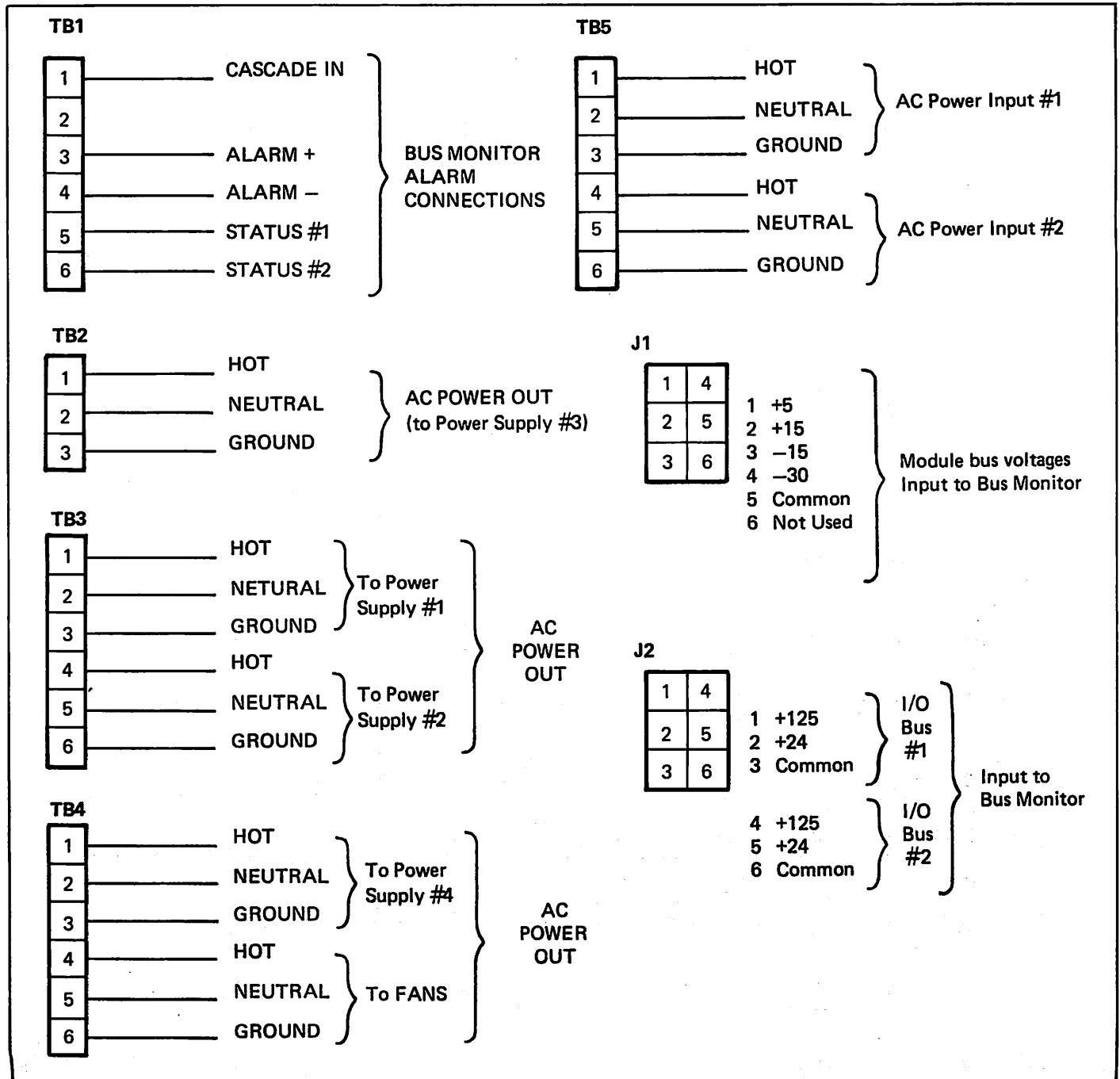


FIGURE 6 — External Connections on the Power Entry Panel.

**NOTES:**

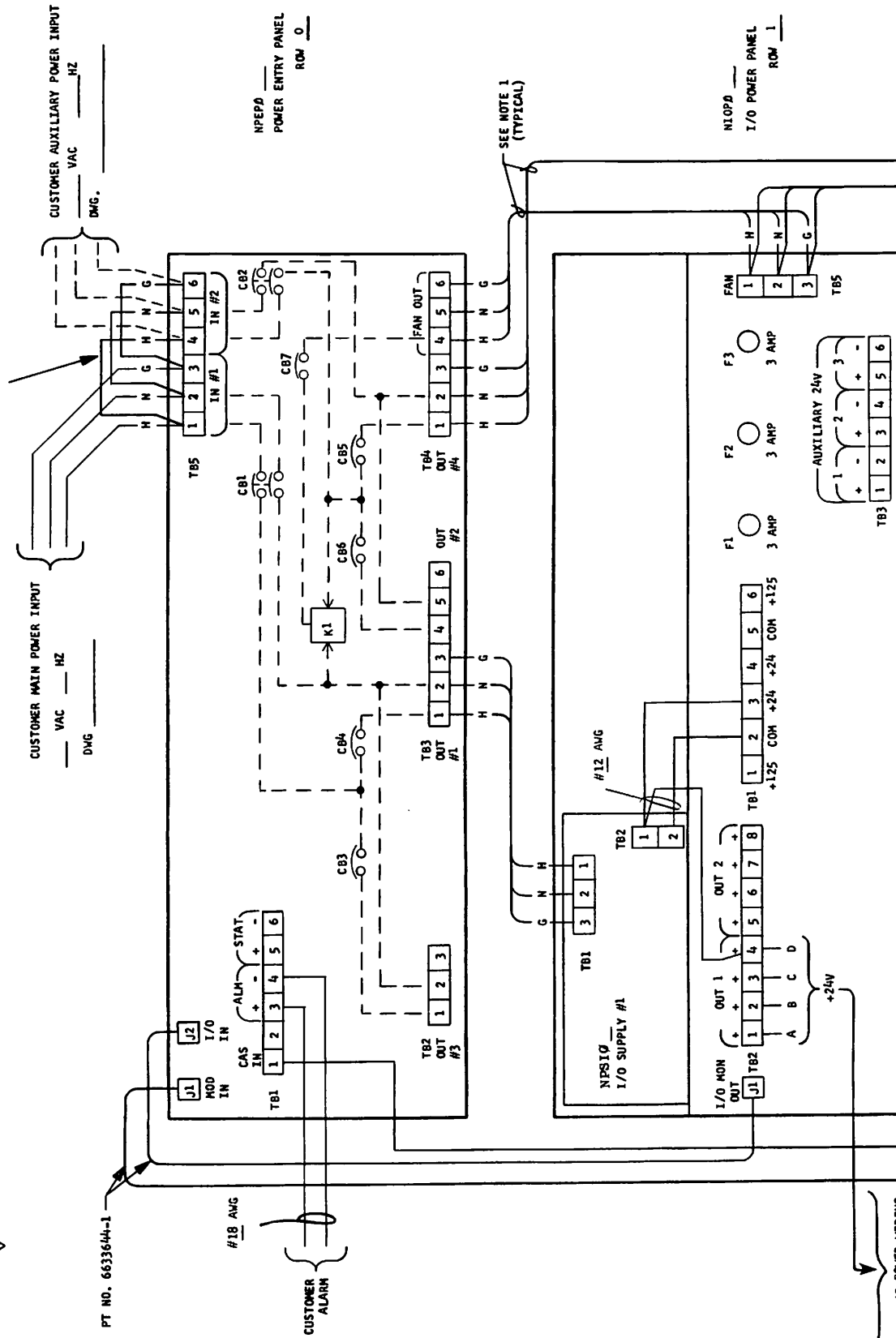
- 1) H = HOT (BLK) #12 ANG
- N = NEUT (WHT)
- G = GND (GRN)

2) USE #10 ANG UNLESS OTHERWISE SPECIFIED

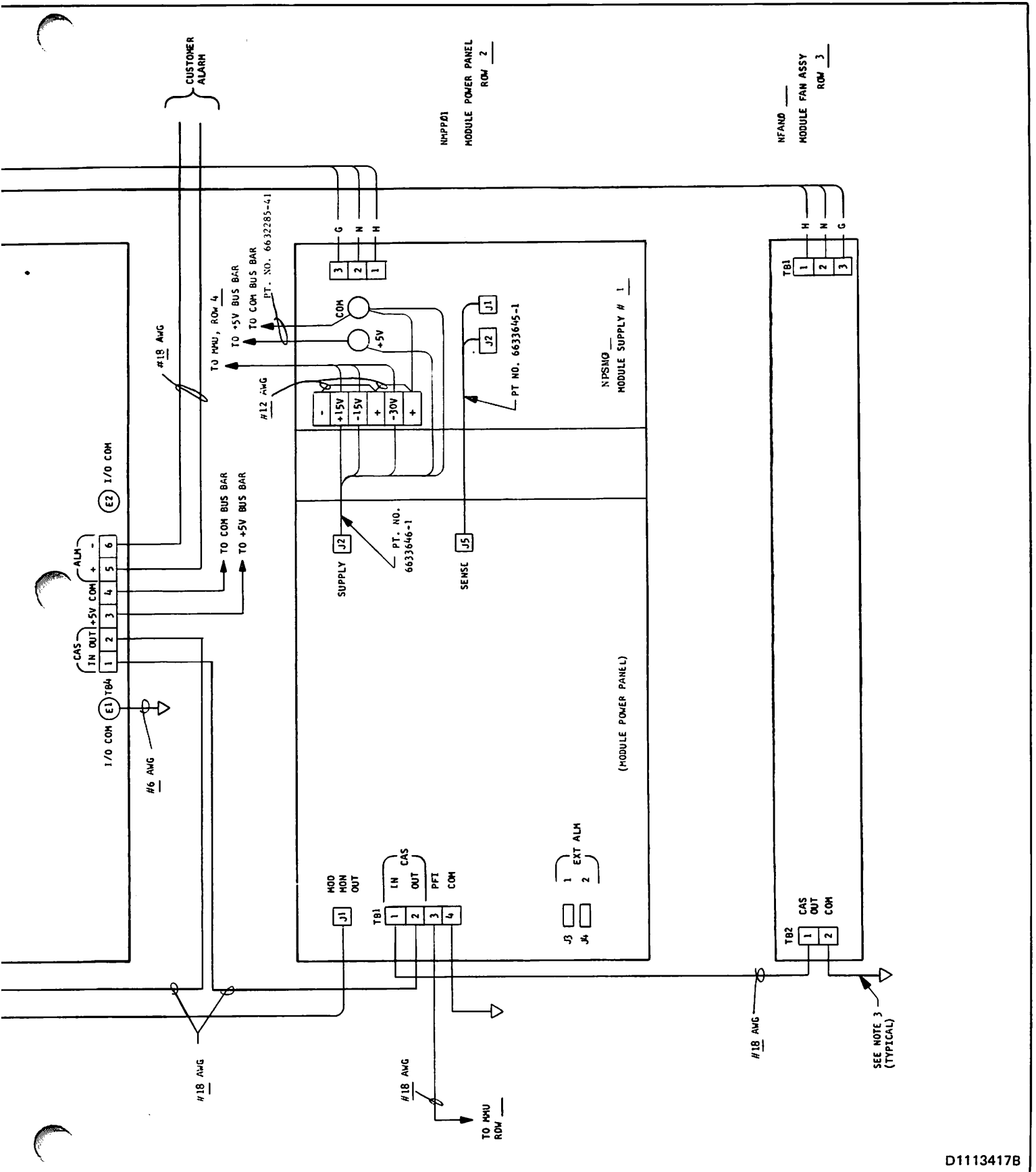
3)  $\nabla$  = CONNECT TO ISOLATED SYSTEM COMMON BUS

**NOTE: SOURCE 2**

IF SEPARATE BACK-UP SOURCE IS AVAILABLE, REMOVE JUMPERS & CONNECT TO TB5-4, -5 & -6 USING #10 AWG WIRE (H = BLK, N = WHT AND G = GRN).



TO I/O POWER WIRING  
DMG.  
SHEET



D1113417B

FIGURE 7 — Typical Wiring for a PCU Cabinet Auctioneered System Using PEP01/03. (con't on next page)

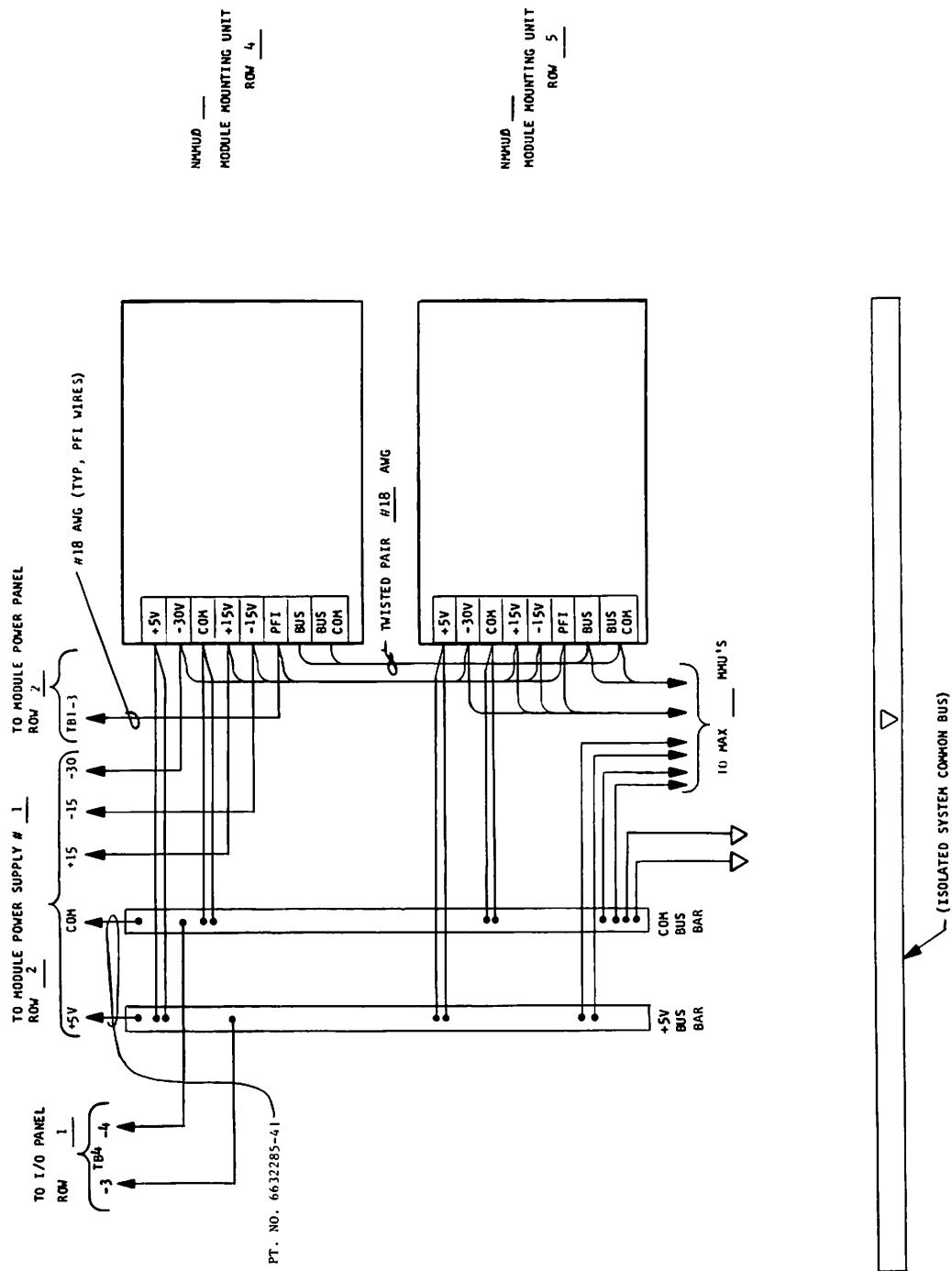


FIGURE 7 — Typical Wiring for a PCU Cabinet Auctioneered System Using PEP01/03.

D1113417B

## Section 4 - Operation

A schematic for the Power Entry Panel appears in Figure 9, which shows a system powered by two separate ac lines delivering power to the I/O Power Supplies, Module Power Supplies and a Fan Panel. Each ac line passes thru a main double-pole circuit breaker and is transient filtered before being distributed to the Power Supplies and cooling system. Each ac line feeds one of the auctioneered Module Power Supplies and one of the I/O Power Supplies so that cabinet power will not be lost if a single ac source fails. It is important that a single supply be capable of handling the entire load so that the reliability of an auctioneered system is not defeated.

### 4.1 AC Entry and Routing

Incoming power, single source or redundant, is split between two main double-pole circuit breakers. The main breakers are rated at 35 amps each to provide power to the NETWORK 90 Power Supplies and the Cabinet cooling system. The cooling system must be operational when either of the main circuit breakers is on. To accomplish this and retain isolation between redundant power sources, a relay in the PEP is wired such that the ac that powers the relay coil is also connected to the normally open contacts. The second source is connected to the normally closed contacts. The relay acts as a switch if the source powering the fans (and relay coil) is lost. The relay drops out, transferring the fans to the other ac source.

AC power out to the Power Supplies and fans passes thru series-trip, single-pole circuit breakers. The fan circuit breaker (CB7) is rated at 5 amps, the I/O Power Supply breakers (CB4 & CB6) are rated at 10 amps each, and CB3 and CB5 are rated at 25 amps for Types PEP01/03 and 10 amps for Types PEP02/04.

To minimize the effect of ac line surges and transients, the NETWORK 90 system is provided with metal-oxide varistors (whose resistance drops markedly as the voltage is increased) shunting the hot/neutral and neutral/ground power buses within the PEP. Additionally, the ac inputs of PEP01/03 to the Module Power Supplies are provided with EMI line filters. These filters serve a dual purpose by minimizing EMI generated by the switching Power Supplies from being conducted outside the Cabinet, and also filtering ac power to the NETWORK 90 system.

### 4.2 Bus Monitor

The Bus Monitor continuously checks and provides

information on the power system and Cabinet blower system. The inputs to the Bus Monitor are: Module voltages, +5, +15, -15 and -30 V dc; CAS IN signal; and two I/O voltages, 24 and/or 125 V dc. The CAS IN signal is the logical OR of the Module Power Panel alarm, the I/O Power Panel alarm, and the Fan Assembly alarm. It is further combined with the PEP alarms to provide an overall status of the power system.

The Bus Monitor circuit utilizes TTL, linear monolithic integrated circuits, and opto-isolators for isolation from I/O Power Supplies and customer's alarms.

The Module Supply Sub-Monitor is powered by the +15 V dc system logic power. If any of the Module Supply bus voltages fail, the bus monitor will signal an alarm. Since the Module Power Supplies have over-voltage protection, the Module Supply Sub-Monitor circuit senses only under-voltage conditions. The module power bus voltages are measured at the Module Power Panel.

The I/O Bus Sub-Monitor is powered by the I/O Bus being monitored. The I/O monitoring circuit is isolated from the rest of the monitor circuitry by optical isolators. There is a dipswitch on the Bus Monitor PC Board which may be used to disable either of the two I/O Sub-Monitors if only one supply is needed. Switch C1/C2 disables I/O bus #1. Switch C3/C4 disables I/O bus #2. The I/O bus voltages are measured at the I/O Power Panel.

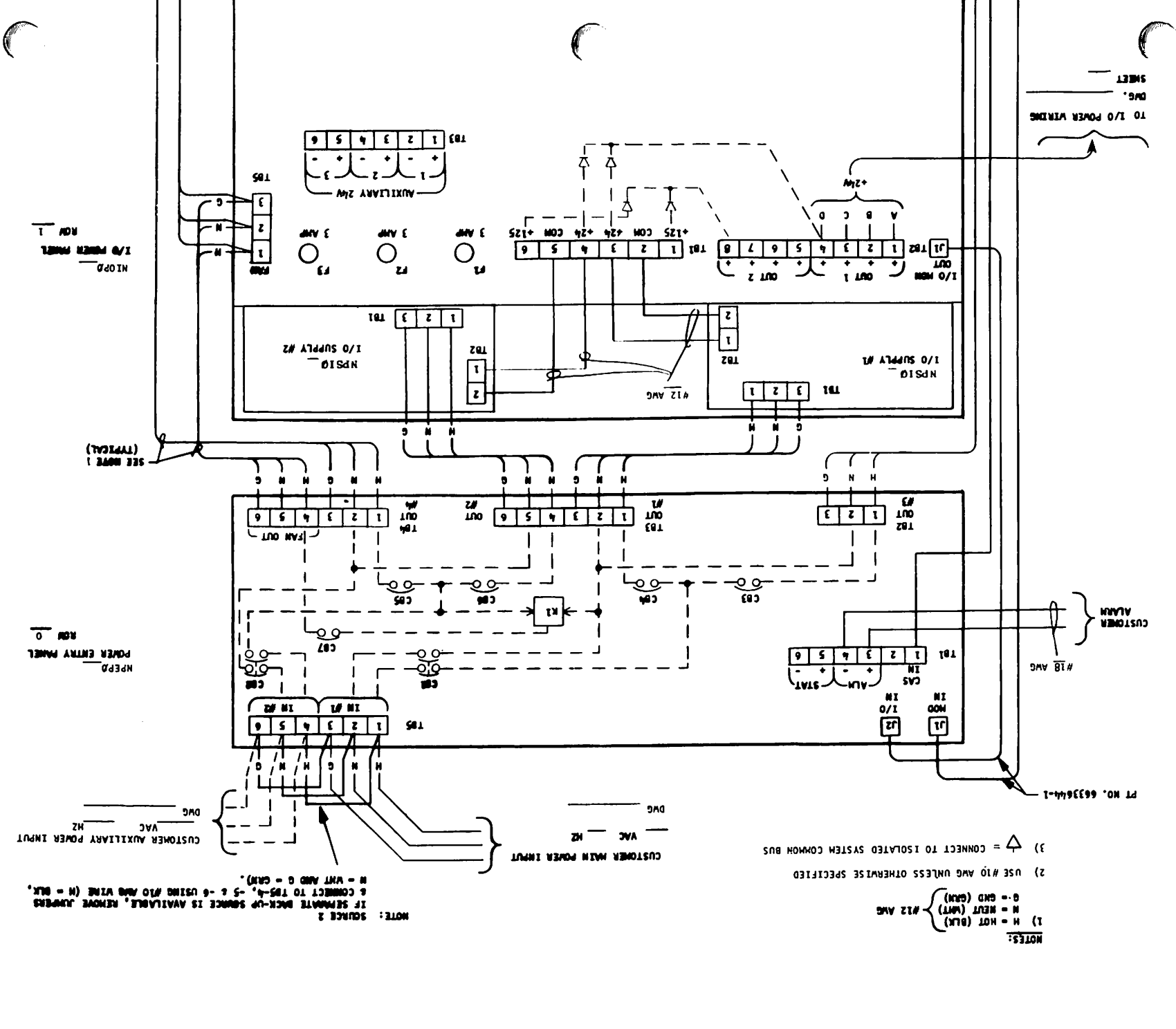
### 4.3 Alarm Circuitry

There are three indicators of power system status provided by the bus monitor as follows:

1) a visual, red/green LED (driven by the 5 V dc channel), located on the right front of the PEP. It is green if all monitored inputs and CAS IN are within specifications. It changes to red if an input goes out of tolerance.

2) a TTL level signal that is high (5 V dc) if all monitored inputs are satisfactory and low (0 V) if any input is out of specification. This indicator is labeled "STATUS" at TB1.

3) a customer application alarm at TB1. This is an optically isolated digital two wire output suitable for driving a panel lamp or relay. This alarm circuit sinks up to 120 mA dc when the status of the module and the I/O bus voltage are good, and the alarm circuit open should any bus or "Cascade In" go out of tolerance.



NOTE: SOURCE 2  
 IF SEPARATE BACK-UP SOURCE IS AVAILABLE, REMOVE JUMBERS  
 6 CONNECT TO TB5-4, -5 & -6 USING #10 AWG WIRE (H = BLK,  
 N = WHT AND G = GRN).

- NOTES:
- 1) H = HOT (BLK)
  - N = NEUT (WHT)
  - G = GND (GRN)
  - #12 AVG
  - #18 AVG

- 2) USE #10 AWG UNLESS OTHERWISE SPECIFIED
- 3)  $\Delta$  = CONNECT TO ISOLATED SYSTEM COMMON BUS

NPS10  
 POWER ENTRY PANEL  
 ROW 0

NPS10  
 I/O POWER PANEL  
 ROW 1

TO I/O POWER WIRING  
 Dwg.  
 SHEET

CUSTOMER ALARM  
 #18 AVG

PT NO. 6633644-1

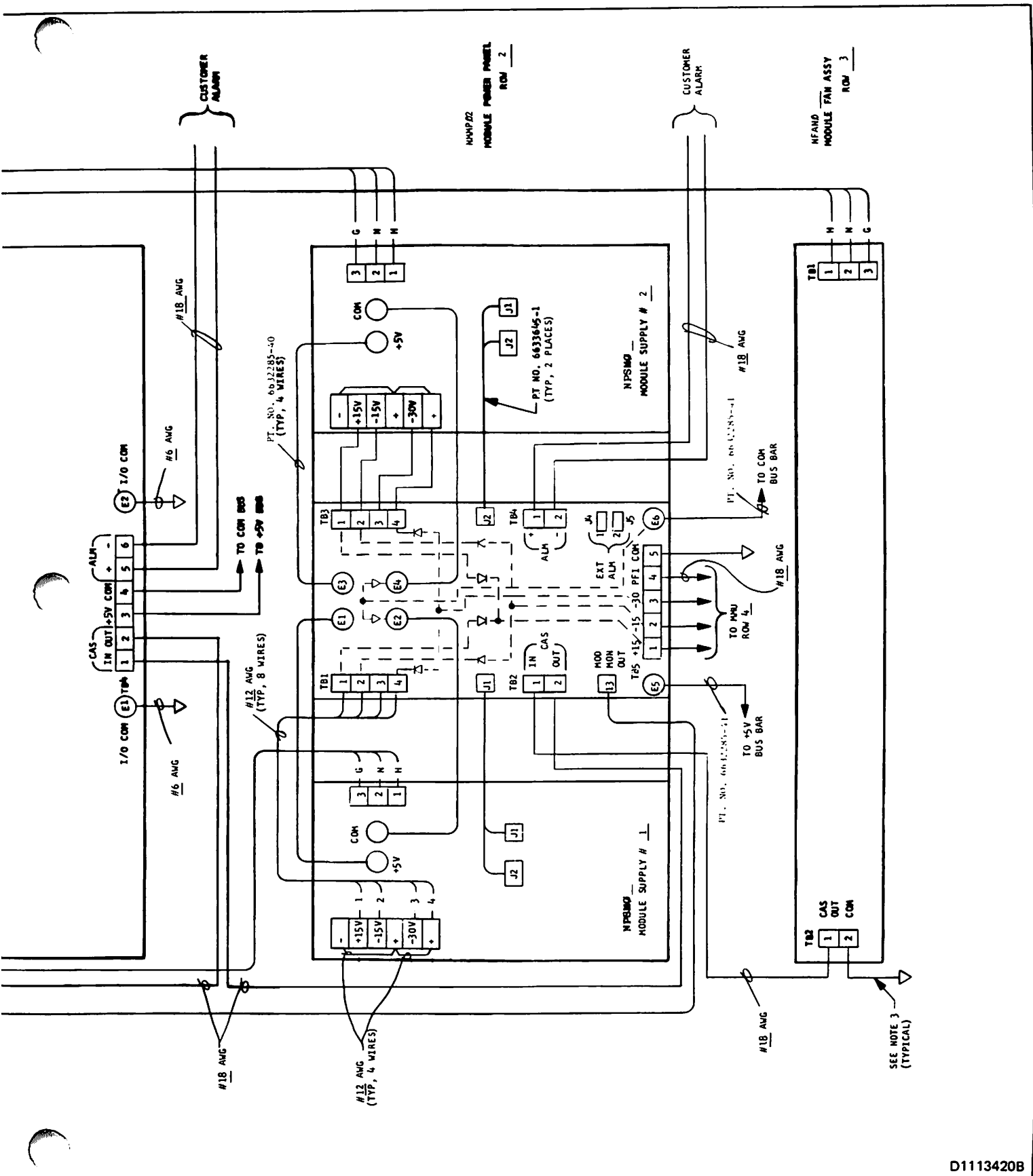


FIGURE 8 — Typical Wiring for a Termination Cabinet. (con't on next page)

D1113420B



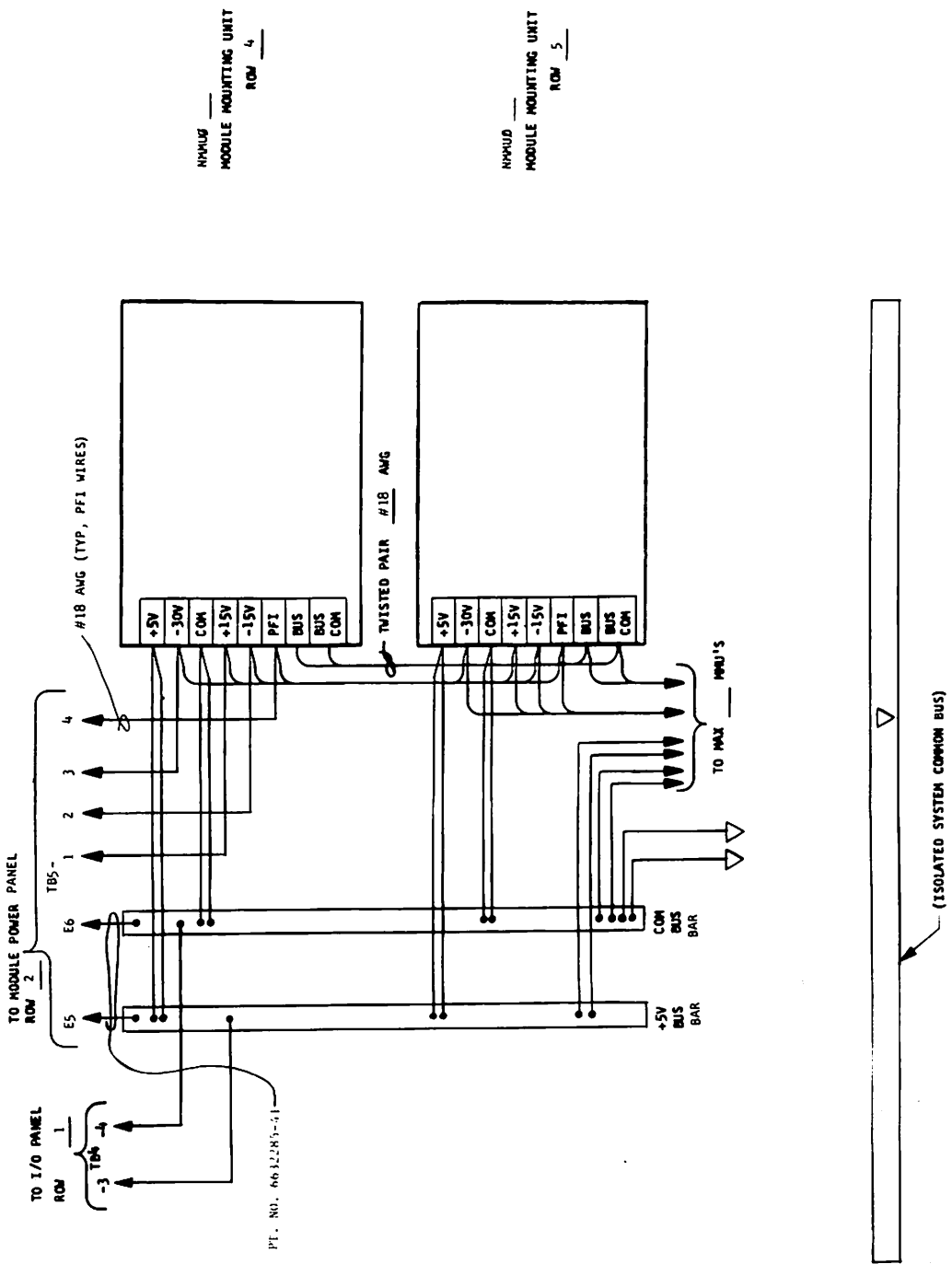


FIGURE 8 — Typical Wiring for a Termination Cabinet.

D1113420B

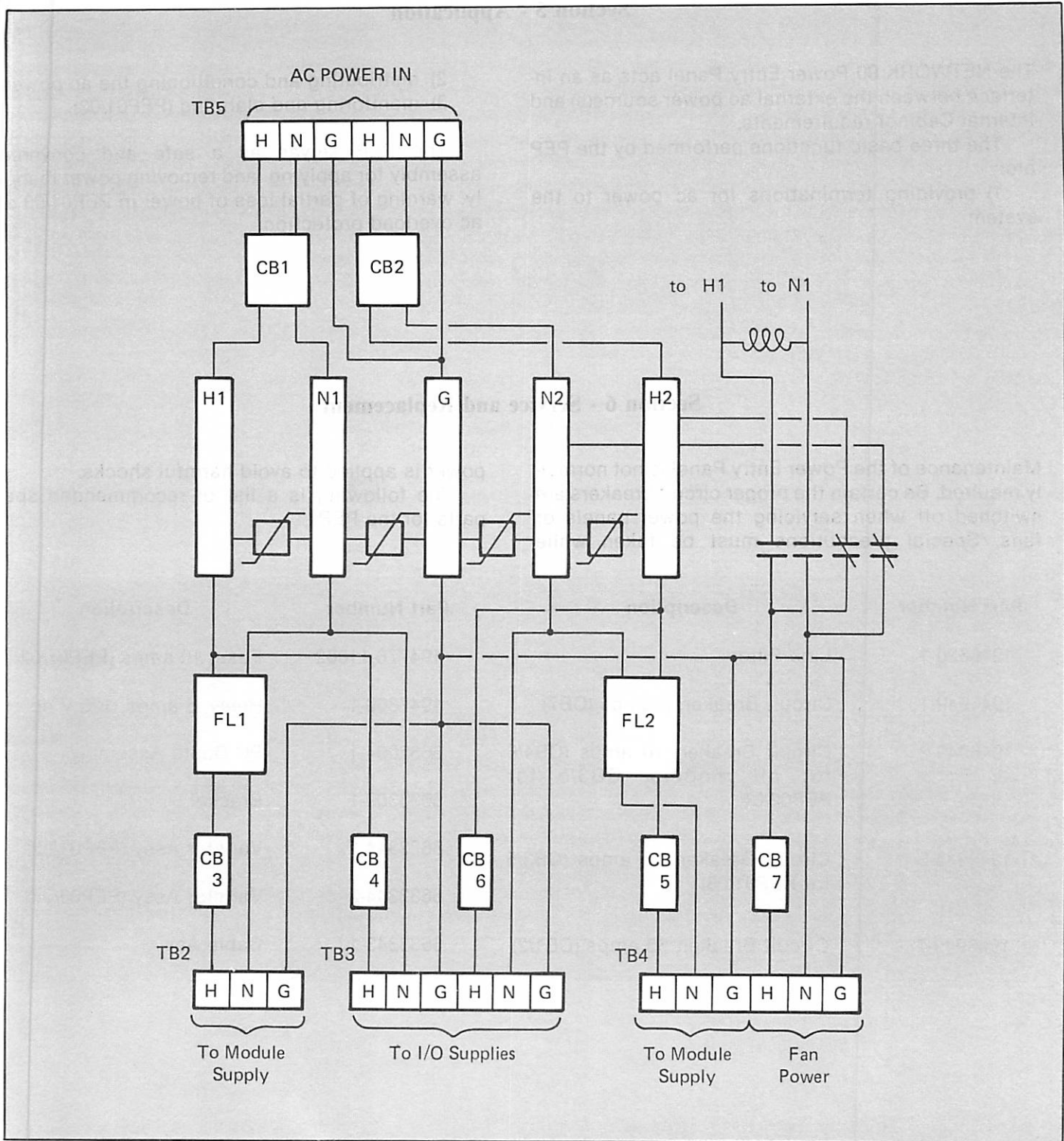


FIGURE 9 — Power Entry Panel AC Schematic.

## Section 5 - Application

The NETWORK 90 Power Entry Panel acts as an interface between the external ac power source(s) and internal Cabinet requirements.

The three basic functions performed by the PEP are:

1) providing terminations for ac power to the system

2) distributing and conditioning the ac power  
3) monitoring and alarming (PEP01/03).

The PEP serves as a safe and convenient assembly for applying and removing power manually, warning of partial loss of power in PEP01/03 and ac overload protection.

## Section 6 - Service and Replacement

Maintenance of the Power Entry Panel is not normally required. Be certain the proper circuit breakers are switched off when servicing the power panels or fans. Special precautions must be taken while

power is applied to avoid harmful shocks.

The following is a list of recommended spare parts for the PEP.

Part Number	Description	Part Number	Description
1946820-1	Line Filter	194776-11002	Fuse, 10 amps (PEP01/02)
1946949-1	Circuit Breaker, 5 amps (CB7)	1947309-1	Relay, 5 amps, 125 V dc
1946949-2	Circuit Breaker, 10 amps (CB4/6 for all models, CB3/5 for PEP02/04)	6632094-1	PC Board Assembly
1946949-3	Circuit Breaker, 25 amps (CB3/5 for PEP01/03)	6633309-1	Bracket
1946949-7	Circuit Breaker, 35 amps (CB1/2)	6633344-1	Varistor Assy (PEP01/02)
		6633344-2	Varistor Assy (PEP03/04)
		6633343-1	Cable Assy

## Section 7 - Specifications

Power Entry Panel Types:	Module Supply	I/O Supply	Power Source*
NPEP01	One	One or None	120 V ac
NPEP02	None	One or Two	120 V ac
NPEP03	One	One or None	240 V ac
NPEP04	None	One or Two	240 V ac
* Note: One or two power sources may be used.			
<b>Physical Aspects:</b>			
Width	19.00" (48.3 cm)		
Height	5.29" (13.4 cm)		
Length	21.5" (54.6 cm)		
<b>Performance:</b>			
Safe Operating Voltage (AC Input):	PEP01 and PEP02: 102 to 132 V ac PEP03 and PEP04: 204 to 264 V ac		
Isolated Alarm Output	24 V dc, 120 mA		

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE.

Overcurrent Protection:			PEP01/ PEP02/ 03 04	
Circuit Breakers	CB1, Power Entry CB2	DPDT	35A	35A
	CB3, Module Power Supply (PEP01/03), I/O Power Supply (PEP02/04)	SPDT	25A	10A
	CB4, I/O CB6 Power Supply	SPDT	10A	10A
	CB7 Fan Power	SPDT	5A	5A
Fuse	AC Receptacle - 10A, 250 V (PEP01/02 only)			
<b>Electrical Ratings:</b>				
PEP01 & PEP02	120 V ac, 50/60 Hz, 30A			
PEP03 & PEP04	240 V ac,** 50/60 Hz, 15A			
	**240 V ac to ground European-type service only.			

---

**Bailey Controls, 29801 Euclid Avenue, Wickliffe, OH 44092 USA**

*The worldwide network of Bailey Sales/Service representatives is ready to address your total control and instrumentation needs.  
For help from the one nearest you, call 1-216-585-8500. Telex 980621.*