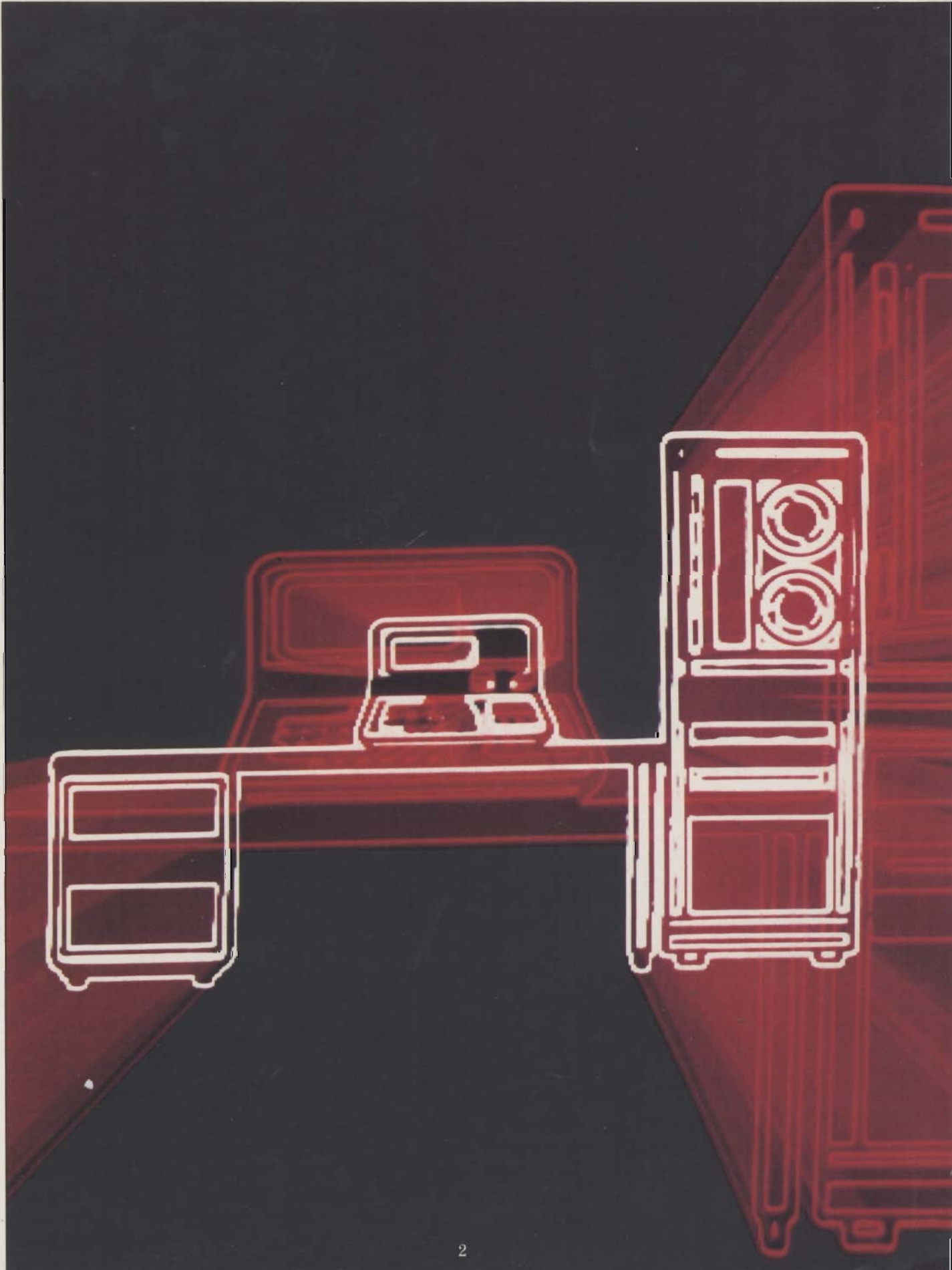




Hewlett-Packard

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HP Computer Museum
www.hpmuseum.net

For research and education purposes only.

Section I—Site Planning and Warranty Information
Computer Products Warranty and Installation Terms

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Insert latest
"Computer Products Warranty and
Installation Terms."

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Insert
“HP Computer Systems Support Services
Data Book.”

Section I—Site Planning and Warranty Information
Site Preparation Data Sheet

Customer: _____

Address: 1511 McCoy STREET

Contact: GEORGE ADAMS Phone: 827-7415

System configuration: _____

(include all
model #'s) _____

Form completed by: _____

Site prep date:

Travel zone:

Verification date:

Ship date:

Sales rep: _____

Sales order #: _____

Systems engineer: _____

Site prep ro: _____

Customer engineer: _____

OEM: _____

Directions to site: _____

Section II

On-site Customer Documents

Section II—On-site Customer Documents Site Planning Summary



Customer _____

Date _____

1. Can the system parts of a coordinated shipment be temporarily stored until all pieces arrive?
 YES NO COMMENTS _____

2. Are there any special delivery instructions, upstairs delivery, drop gate on truck, etc.?
 YES NO COMMENTS _____

3. Are passage ways large enough to allow equipment movements to site?
 YES NO COMMENTS _____

4. Does customer understand the HP CE does not move the equipment into the room?
 YES COMMENTS _____

5. What type of power is available at customer site?
 120V/240V 240V/240V OTHER _____

6. Does this site indicate the need for an immediate power monitor check?
 YES NO COMMENTS _____

7. Has customer been advised to arrange for a phone or phone connection at the computer for use in hardware and software servicing?
 YES COMMENTS _____

Customer Responsibilities

Equipment Arrival

Inspect all items upon arrival. Advise the carrier of anything missing or damaged at that time. An HP representative can be called upon to help supervise the unpacking; once everything is there, but the customer is responsible for unpacking, with or without HP supervision. Be sure to leave any plastic coverings on the equipment. This is also done with any additional add-on equipment that is ordered in the future. (*Very Important*)

Equipment Placement

All system components must be in the site room prior to HP's arrival for installation. Arrangements can be made with the shipper to do this for you on delivery if you do not have the means. Normal delivery is only to your loading dock. Contact your HP Sales Representative or Site Planner if there are any special arrangements needed, i.e., upstairs delivery, no elevator, etc.

Miscellaneous Cartons

The cartons containing disc packs, manuals, system tapes, cables and installation hardware should be left intact for the HP Customer Engineer (CE), so no items or important documents will be lost or misplaced.

Shortages

After all the items have arrived, an inventory should be taken and if any shortages are found, your Site Planner or Sales Representative should be notified.

Communication Wiring

All communication wiring from remote areas to the site is the customer's responsibility.

Power Cords

Some systems may come with an unattached power cord or none at all. It is the customer's responsibility in either case to have a power cord and plug attached prior to installation.

Site Verification

The computer site must be verified by HP for readiness before a system can be installed. HP systems operating in sites that do not conform to HP specifications will not receive normal warranty nor be eligible for service contract coverage. A service call should be scheduled in advance to identify any possible deficiencies before the system arrives, approximately one week. Before calling, the electrician verification checklist must be completed.

Installation Scheduling

When all equipment has arrived and the site has been verified, a call should be placed to the Site Planner to schedule installation. Your installation will be scheduled at a mutually agreed upon time; normally within 3 work days.



Site Preparation Procedure

1. The following documents are to be presented and discussed during the initial site preparation visit. The Site Planning Summary should be signed by both the Site Prep CE and the customer:

- Warranty and Installation Terms
- Customer Responsibilities
- Site Preparation Specifications
- Site Planning Summary
- Electricians Verification Checklist
- Applicable Site Preparation Manual

2. The Verification Report is to be completed and signed by both the Site Prep CE and the customer during the follow-up site verification visit.

Site Planning Summary

(to be completed by HP)

NSR-39-CEO-02

Customer DATAKRIX INC Date 10 AUGUST 1983

1. Can the system parts of a coordinated shipment be temporarily stored until all pieces arrive?

YES NO COMMENTS EQUIPMENT NOT IN WARRANTY, ALREADY AT CUSTOMER'S SITE.

2. Are there any special delivery instructions; upstairs delivery, drop gate on truck, etc.?

YES NO COMMENTS _____

3. Are passage ways large enough to allow equipment movement to site?

YES NO COMMENTS _____

4. Does customer understand the HP CE does not move the equipment into the room?

YES COMMENTS EQUIPMENT IN COMPUTER ROOM NOW.

5. What type of power is available at customer site?

120V/208V 120V/240V OTHER

6. Does this site indicate the need for an immediate power monitor check?

YES NO COMMENTS _____

7. Has customer been advised to arrange for a phone or phone connection at the computer for use in hardware and software servicing?

YES COMMENTS _____

Site Planning Summary (cont.)

8. Has customer been informed about having an emergency shunt-trip, with manual and heat sensing activation, included in his power panel that also deactivates any room air conditioning in case of fire?

YES COMMENTS _____

9. Is air conditioning available 7 days/24 hours?

YES NO COMMENTS RESIDENTIAL ENVIRONMENT.

10. Is customer aware his system must have noise-free dedicated power, an insulated ground wire coming from the building primary power and all isolated GND receptacles? No separate rod or conduit grounds are acceptable (Hewlett-Packard must check and OK the ground system before installation.) Refer to the "Site Preparation Guide" for specific requirements of each system.

YES COMMENTS (Specify chosen grounding point) RESIDENTIAL POWER INSTALLATION. ELECTRICAL WORK MAY NEED TO BE DONE PENDING INVESTIGATION & CONSULTING WITH SITE PREP TSE.

11. Is customer aware that only computer equipment is to be operated from the circuit and is not to be shared with copiers, heaters, air conditioning, etc.? (Your HP Site Planner should be notified of any non-HP equipment use of the circuit to see that it is not detrimental to system performance.)

YES COMMENTS _____

12. Is customer aware that any remote terminals in a building, separate from the processor, cannot be hardwired due to the difference of building electrical grounds?

YES COMMENTS _____

13. Is customer aware that until the electrical and other room requirements are acceptable to HP that his system will not be covered under normal warranty or allowed a service contract?

YES COMMENTS CIRCUIT BREAKER TO BE UPGRADED TO 30 AMP FOR POWER CONDITIONING.

(Signature)

Site Planning Summary (cont.)

14. Has customer been informed of room temperature specifications, room cleanliness and the importance of humidity in controlling static?

YES COMMENTS _____

15. Is customer aware that carpet is discouraged and why? Antistatic mats must be of the grounding type.

YES COMMENTS STATIC MATS REQUIRED. HEAVY
CARPETING PRESENT.

16. Is customer aware it is his responsibility, not HP's, to see that all work done at his site is done according to our instructions and information and meets any local codes and regulations? HP will bring to the customer's attention any inferior workmanship or possible code violations found during the verification check of the site.

YES COMMENTS _____

17. Is customer aware it is his responsibility to install any remote cabling and connectors?

YES COMMENTS _____

18. Does customer understand he is to call specific service people, stipulated during site plan visit, not sales, when he is ready to have his site verified and installed? All of his system equipment must be there before scheduling an installation.

YES COMMENTS _____

19. Is customer aware that, depending on his system type, he is entitled to one or two visits only, to help plan his site and verify it? (Any additional site visits may prompt an additional charge.)

YES COMMENTS N/A EQUIPMENT AT SITE

Site Planning Summary (cont.)

20. Are there any concerns about RFI or other energy radiations that could affect system or peripheral performance?

YES NO COMMENTS _____

21. RFI survey recommended?

YES NO COMMENTS _____

22. Are there additional site concerns?

YES NO COMMENTS NEW CARPETING, Pm's on 7906
Need to be scheduled approx 3 mos.

23. Type of floor. (check one)

Raised floor Surface floor Subfloor COMMENTS _____

24. Special air filtering recommended?

YES NO COMMENTS _____

Hewlett-Packard
Site Planner D. Scott Well
Signature

Customer George W. Adams
Signature

Electricians Verification Checklist

(to be completed by electrician)

(Fill out and return to Customer)

1. Power to the computer is wired for exclusive use by the computer equipment and is not an existing circuit shared with air conditioning, copiers, heaters, etc.

YES NO

2. Power service is of recommended amperage or larger, with proper wire size for length used.

YES NO

3. All power phases, neutral and ground are uninterrupted lines back to the building main power panel or if in a multi-story building, from the bus-transformer source supplying that floor. No conduit, overhead water pipes or rods for a ground.

YES NO Specify ground point MAIN PANEL

4. A ground wire is not being used for the neutral or vice versa.

YES NO

5. The ground wire in the computer panel is isolated from the case and conduit. It is 8 gauge minimum or to code for the feeder size.

YES NO

6. All receptacles powered by the panel are the isolating ground type or are installed to maintain ground isolation at the receptacle.

YES NO

7. With exception of the computer receptacle, all equipment receptacles are of 20 AMP capacity with separate neutral and ground wire to each, unless otherwise stated.

YES NO

(Complete the following if power conditioner installed)

8. Case and secondary neutral connected to dedicated ground.

YES NO

9. Isolating PVC bushings between the input/output and the case.

YES NO

10. Bond between the input and output conduit to the safety ground.

YES NO

*John Henry
McBRIDE ELECT.*

Verification Report

NSR-41-CEO-02



Customer _____ Date _____

1. Voltage readings are NEUT/GND _____ V, A0/NEUT _____ V, B0/NEUT _____ V, C0/NEUT _____ V, CPU PLUG _____ V, GND _____ ohms, TEMP _____ °F, RH _____ %, RFI _____ V/M

2. Power is dedicated to the system; ground wire is properly isolated, wire sizes are consistent and adequate.

YES NO CORRECTED COMMENTS _____

All system receptacles powered by panel are of the isolating type or an acceptable alternate.

YES NO COMMENTS _____

3. System ground, like the power, is an uninterrupted wire back to the primary power panel, main water service pipe at ground entrance, or a vertical building beam if in a high rise building. No separate ground rods.

YES NO CORRECTED COMMENTS _____

4. Power panel has a shunt-trip with manual and heat sensing activation set at the maximum optimum temperature specification for the system or lower as measured in the warmest part of the room.

YES NO CORRECTED COMMENTS _____

5. Non-carpeted flooring is installed and/or static discharge mats are in place and grounded.

YES NO CORRECTED COMMENTS _____

6. Room air conditioning is installed, running and has the recommended tonnage or sufficient cooling provided to maintain the recommended temperature range.

YES NO CORRECTED COMMENTS _____

Verification Report (cont.)

7. Room has some provision for humidity control to maintain the recommended relative humidity range.

YES NO CORRECTED COMMENTS _____

8. Provisions have been made for having or using a phone in the room.

YES NO CORRECTED COMMENTS _____

9. Site is clean, free of debris and dust and routine room cleaning will be provided.

YES NO CORRECTED COMMENTS _____

10. Raised floor sufficiently grounded.

YES NO CORRECTED _____

(Complete the following if power conditioner installed)

11. Case and secondary neutral connected to dedicated ground.

YES NO

12. Isolating PVC bushings between the input/output and the case.

YES NO

13. Bond between the input and output conduit to the safety ground.

YES NO

14. Site is approved for installation.

YES NO CORRECTED COMMENTS _____

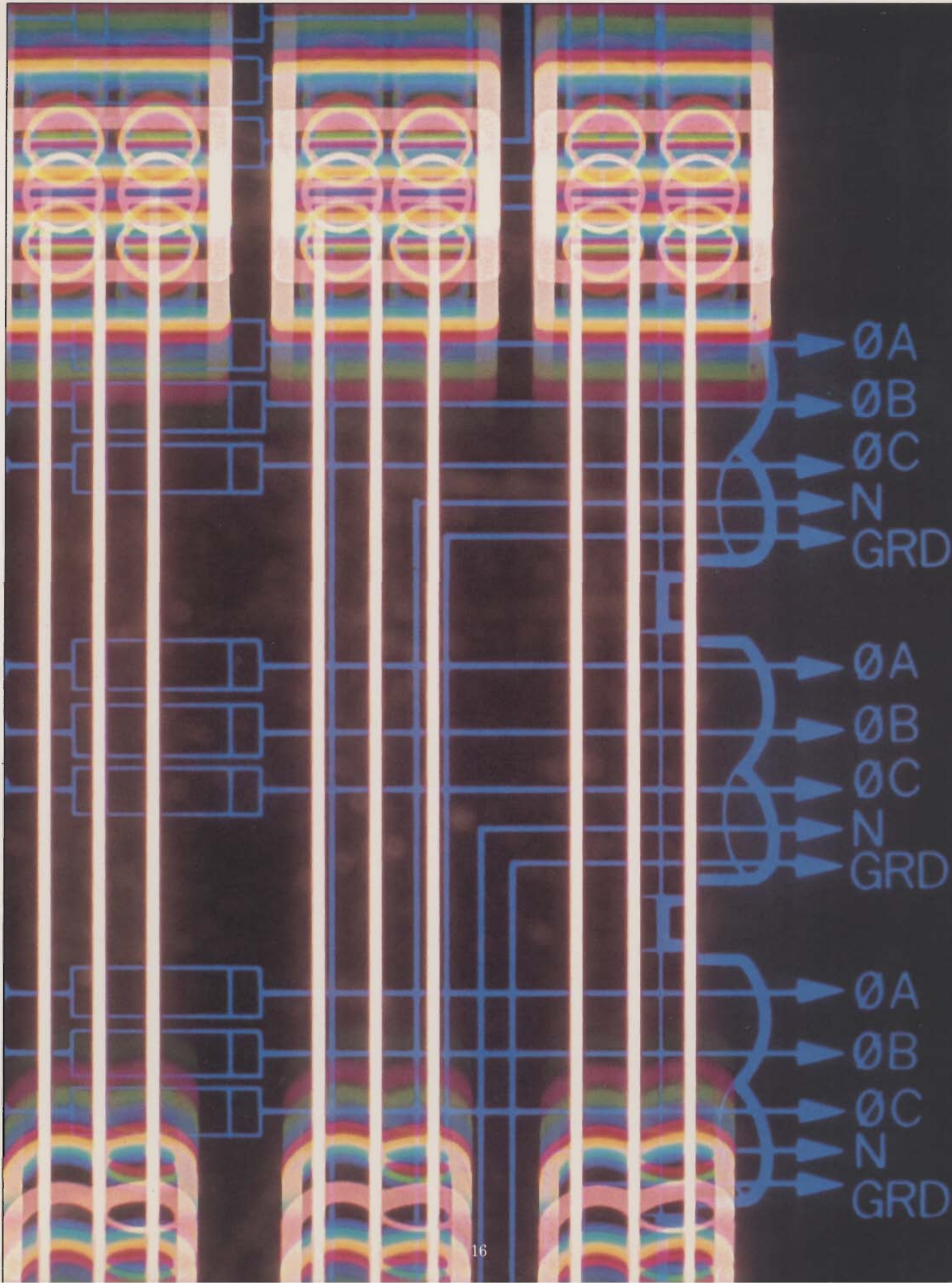
*Hewlett-Packard
Site Verifier* _____

Signature

Customer _____

Signature

Site Preparation Specifications



Section III—Site Preparation Specifications

Standard HP-IB Cable Lengths

SERIES 30			SERIES 33/44		300	
UNIT	STD	MAX	STD	MAX	STD	MAX
Tape	6M	6M	6M	6M	N/A	N/A
Disc	2M	2M	6M	6M	2M	2M
Printer	2M	6M*	2M	6M	2M	6M

*No HP-IB extender allowed in units without a built-in flexible disc drive. Max = 2M or 4M with two printers.

SHIELDED HP-IB CABLE PART NUMBERS

1 Meter: 10833A

2 Meter: 10833B

4 Meter: 10833C

Section III-Site Preparation Specifications

System Configuration Table

HP _____ System for _____
 _____ COMPANY _____ DIVISION DEPT _____
 System identification _____ Date _____
 Summary prepared by _____

ITEM #	MODEL	DESCRIPTION	VOLTS	CURRENT			KVA	BTU's/HR	BREAKER SIZE	NEMA RECEPTACLE#
				A Ø	B Ø	C Ø				

TOTALS	AMPS x120	AMPS x120	AMPS x120	KVA x.8 \cong	BTU's
	KVA	KVA	KVA	KW	TON'S 12,000 BTU's = 1 TON

LINE CONDITIONER RATING'S IN KVA:

FERRO _____ (single phase use) 40-60% loading	TAP SWITCHER _____ (split phase use) 85-90% loading	MAG SYN. _____ (three phase use) 85-90% loading
---	---	---

POWER AND GROUNDING

Power Source

The processor unit and all peripherals require individual 120 volt, single phase, 20 AMP service. Power cables supplied with Hewlett-Packard equipment are typically 8' in length and terminate in NEMA 5-15 plugs. Isolating ground receptacles, Hubbell IG-5362 or equivalent, are required for power supplied to the processor and each peripheral to be installed in your system configuration.

Separate Panel

A 300 system will normally have a larger number of peripheral devices and for this reason a separate power panel for this system is strongly recommended.

System Ground

To obtain a clean system ground, grounding wires for all receptacles used by the computer and peripheral equipment must be connected to a separate ground strip that is insulated from the frame of the distribution panel. A minimum #8 AWG, insulated wire must be run from the insulated ground strip to the building earth reference. Conduit must not be used for the computer system ground return.

Voltage/Noise Transients

In general, the system can withstand an under-voltage/overvoltage range of 108-126 volts and transient impulses must not exceed 100 volts (200 volts for HP 250). The system must not share a distribution panel providing power to air conditioning units or other inductive loads. If any of the above specifications cannot be met, a 1.8 KVA power line conditioner, HP P/N 35030A or equivalent, is required to suppress severe electrical noise and prevent line voltage variations that may impair system operation. This device requires installation of a 30 AMP service plus L5-30R receptacle, Hubbell IG-2610 or equivalent, and provides a standard duplex receptacle that may be utilized to power a total of two system components (CPU and system disc recommended).

AIR CONDITIONING

Sizing Factors

The heat dissipation for your system is estimated in BTU/hr for equipment to be located within the computer room. The air conditioning unit selected must be capable of handling the heat produced by Hewlett-Packard's electronic equipment. In addition, it must handle the heat

load presented by operations personnel, room lighting, and the heat input of external walls, windows, and the floor and ceiling of the computer room, while not exceeding an ambient room temperature of 86°F (72°F recommended). The room selected for the system should be relatively dust free and as large as possible to assist in maintaining a stable ambient temperature.

Humidity

Hewlett-Packard equipment is designed to operate over a wide relative humidity range (30-80%). Supplies such as magnetic tapes, disc cartridges, line printer paper, etc. are specified to be stored and operate in environments greater than 50% relative humidity. Under low humidity conditions, static discharge could produce undesirable results such as paper jams, system halts, and loss of data. HP strongly recommends that relative humidity be kept in a range of 40-60%. Because of the high mineral content in most water, spray devices are not recommended. The humidity device should be a heat evaporating type.

No Air Conditioning

If the building air conditioning is turned off after working hours or on weekends, then the system will have to be turned off.

STATIC ELECTRICITY

Carpet/Humidity

Hewlett-Packard strongly discourages installation of computer systems in rooms with carpeted floors. Should system failures be traced to static discharges due to carpeted floors or low humidity, the necessary repairs will not be covered under Hewlett-Packard warranty or service contract agreements. If carpeting remains, static-discharge mats, such as available from HP Company #92175A/B or equivalent, should be used in front of the system.

Carpeting is not recommended for more reasons than just static. New carpet is constantly shedding off lint; even old carpets shed to some extent. Carpet also harbors dust and could locally raise airborne contaminants.

Floor Surface

When properly installed, raised vinyl, tile or sealed concrete floors are normally acceptable. The computer room should be periodically cleaned to prevent excessive dirt/dust build up.

RADIATED INTERFERENCE

Moderate levels of radiated interference may

cause intermittent system operation and read/write errors. Common sources are radar installations, radio stations, hand-held and microwave transmitters, and X ray equipment. HP computer systems are designed to withstand levels of radiation up to 0.5 volt/meter over a frequency range of 14KHz to 1GHz. Personnel should be alerted not to use hand-held transceivers near the computer area.

SYSTEM FLOOR PLAN

Adequate space should be provided for the computer, peripherals, storage, operator comfort and servicing. It is important to consider the length of signal cables connecting each peripheral device to the processor unit when laying out your system floor plan. A minimum of 3 feet must be provided from the rear of all equipment to any

wall, and a front to rear service access.

CABLE FABRICATION

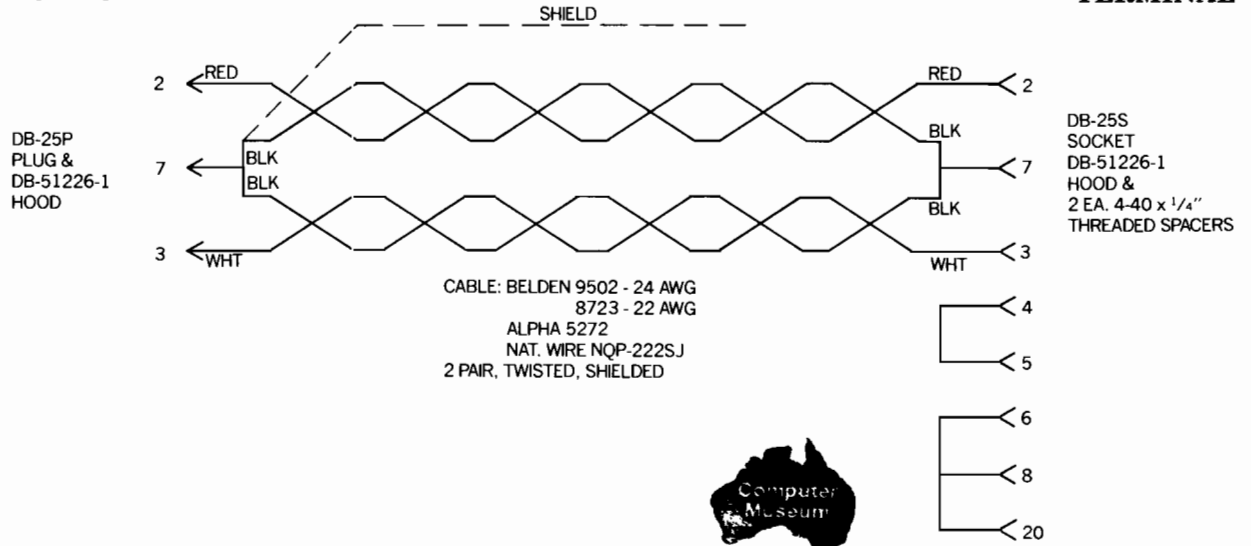
An RS-232 cable drawing has been included to assist you in fabricating extender cables for remote terminal operation. Cable lengths beyond 50' may require the use of short haul modems. Cable runs between buildings must utilize short haul modems. Please arrange for a phone extension near the system to assist your operator and Hewlett-Packard service personnel when maintenance is required.

Although the above requirements may seem somewhat restrictive, they are intended to ensure your success and the best possible performance of your Hewlett-Packard system. The site preparation literature will be of further assistance to you.

Section III—Site Preparation Specifications

Hardwired Terminal Cable Diagram

COMPUTER



FABRICATING YOUR OWN DATA COMMUNICATIONS CABLE

A variety of connectors and cables are available should you need to fabricate your own data communications cable. Part numbers of the items are given below.

ITEM	HP PART NO.	DESCRIPTION	ALTERNATE SOURCE
RS232 Connector Kit	5061-2405	Includes male and female RS232 Connectors (1 each)	
264X PCA Hood Connector Kit	5061-1340		
262X Connector Kit	5061-2412	Includes one 50-pin male connector	Connector only Amphenol 57-30500
Multipoint Connector Kit	5061-2401	Includes one male and one female connector	
Connector Cable ¹	8120-1903	15 conductor, non-shielded	U L Style 2560
	8120-1903	18 conductor, non-shielded	U L Style 2560
	8120-1950	12 conductor, shielded	U L Style 2560
	8120-2398	16 conductor, shielded	U L Style 2560
Multipoint Cable ²	8120-2305		Brand Rex POSS4P22 U L Style 2448

Note: All connectors include contacts

¹ 26 AWG (or greater) low voltage computer cable

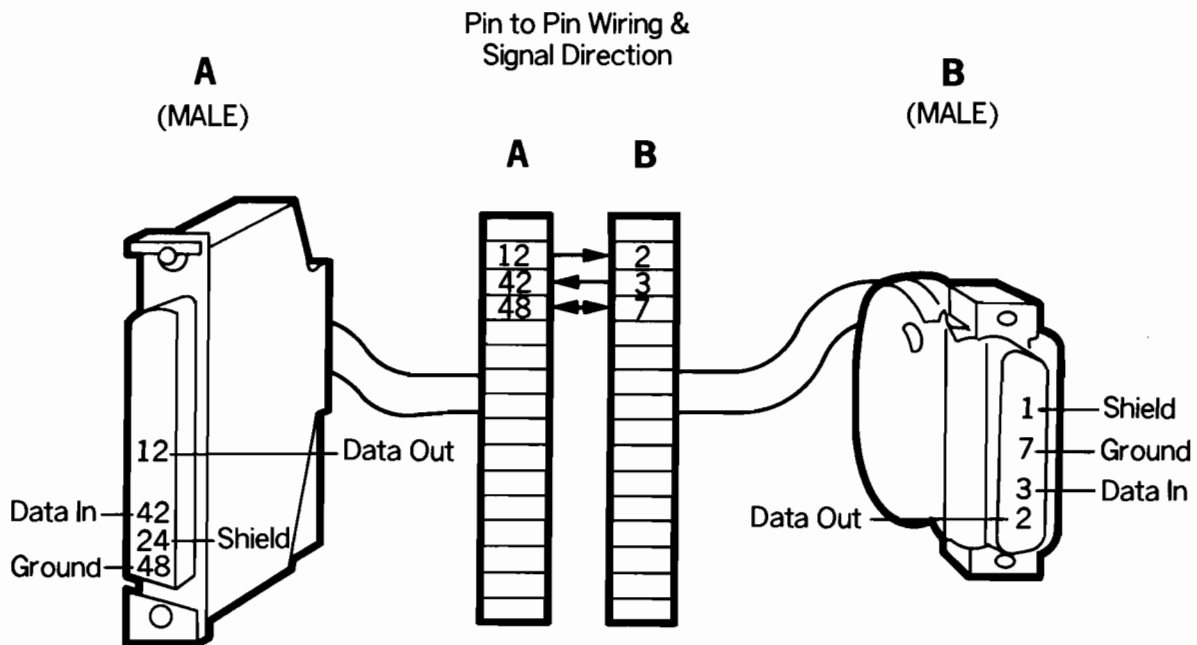
² 22 AWG 4 twisted pairs over all shield 75 ohm differential mode characteristic impedance

13222 Y
(13222-60005)

Cable Length: 5 meters 16.7 feet

Name on Hood: EMP PROTECT (MALE)

Uses: 262X Terminal protection from lighting-induced transients on data comm. lines. For Hardwired Applications only. Works with HP 1000, 2000, 3000 MUX. Shielded.



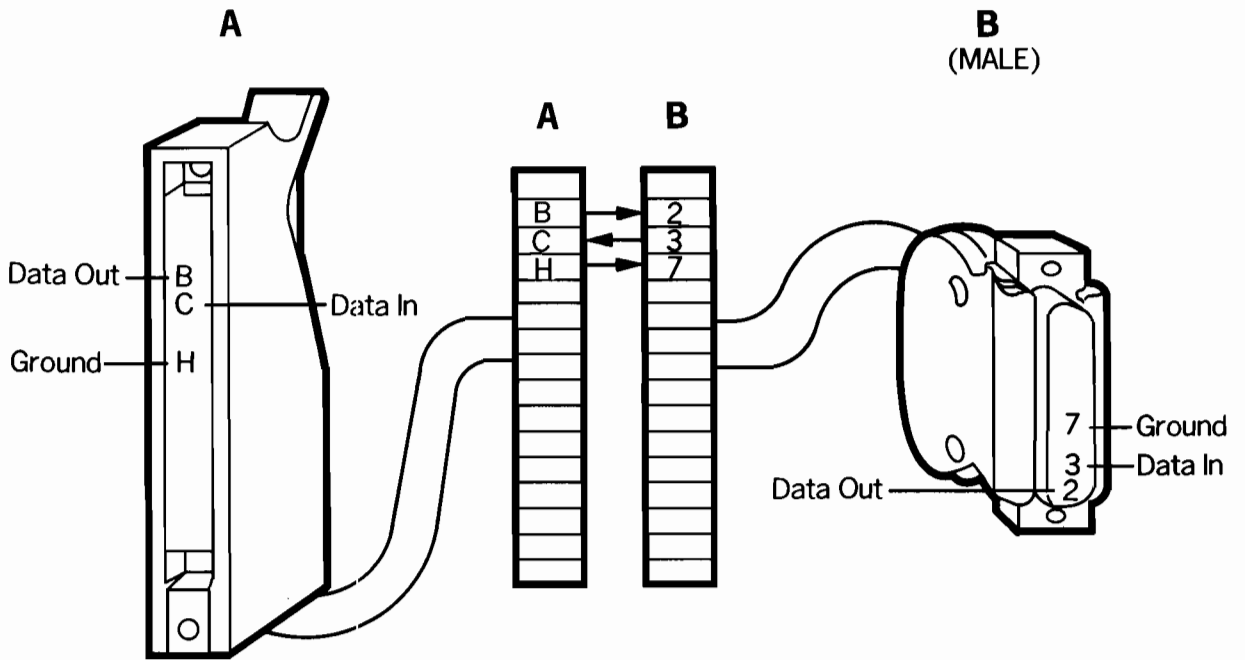
Hardwired Terminal Cable Diagram (cont.)

13232 Y
(02640-60218)

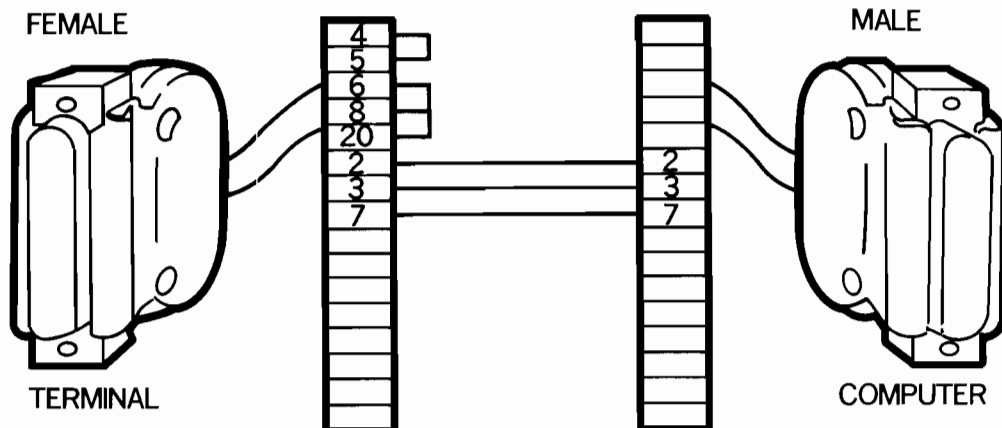
Cable Length: 4.5 meters 15 feet

Name on Hood: EMP PROTECT MALE

Uses: 264X Terminal protection from lighting-induced transients on data comm. lines. For Hardwired Applications only. Works with HP 1000, 2000, 3000 MUX.



HARDWIRED EXTENSION CABLE



Section III—Site Preparation Specifications

Receptacle Descriptions

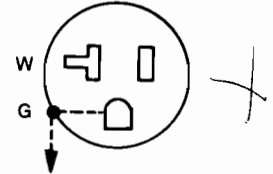
The following receptacles are commonly used on all HP systems and are all to be of the isolating ground type, regardless of vendor. An identifying characteristic of these special receptacles is an orange body color or an orange triangle symbol on an ivory body.



A. Isolating ground type receptacle, required for all 120V, 20 AMP, single phase system devices. Use 10 gauge wire.

2 pole, 3 wire
120V/20 AMP

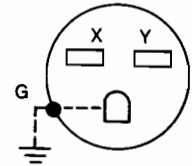
NEMA#: 5-20R
Vendor#: 5362-IG



B. Isolating ground type receptacle, required for all 208V/240V, 30 AMP, single phase system devices.

2 pole, 3 wire
250V/30 AMP

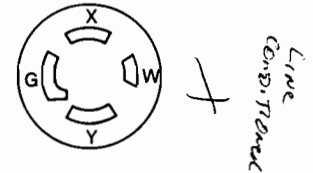
NEMA#: 6-30R
Vendor#: Pass & Seymour 5930-IG



C. Isolating ground type receptacle, required for all system cabinets with 120V/240V/20 AMP, split phase input. Use 10 gauge wire.

3 pole, 4 wire
125V/250V/20 AMP

NEMA#: L14-20R
Vendor#: Hubbell 2410-IG



D. Isolating ground type receptacle, required for all system cabinets with 120V/208V/20 AMP, 3 phase input. Use 10 gauge wire.

4 pole, 5 wire
120V/208V, 20 AMP

NEMA#: L21-20R
Vendor#: Hubbell 2510-IG

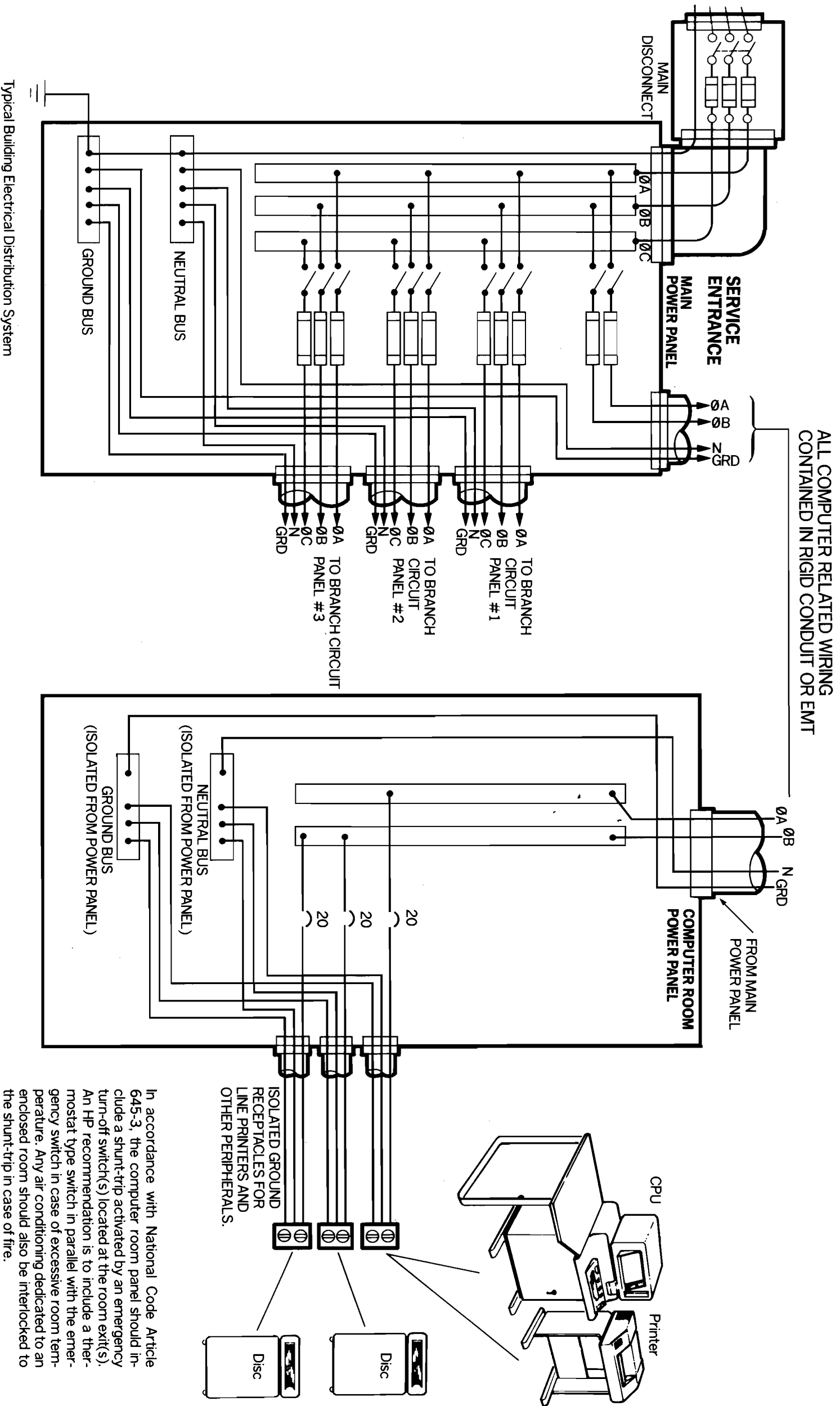


E. Isolating ground type receptacle, required for all system processors with 120V/208V/30 AMP, 3 phase input.

4 pole, 5 wire
120V/208V/30 AMP

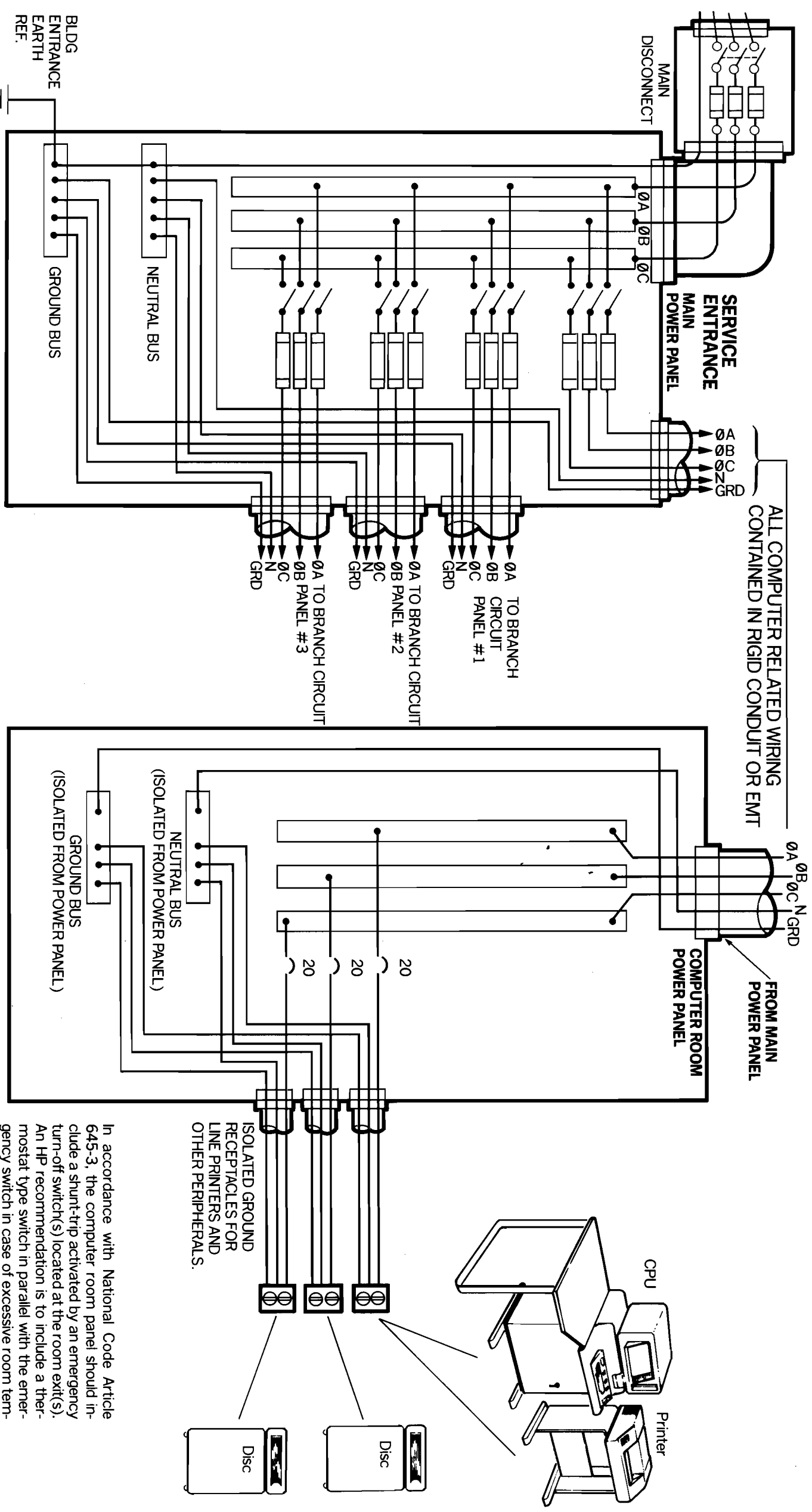
NEMA#: L21-30R
Vendor#: Hubbell 2810-IG





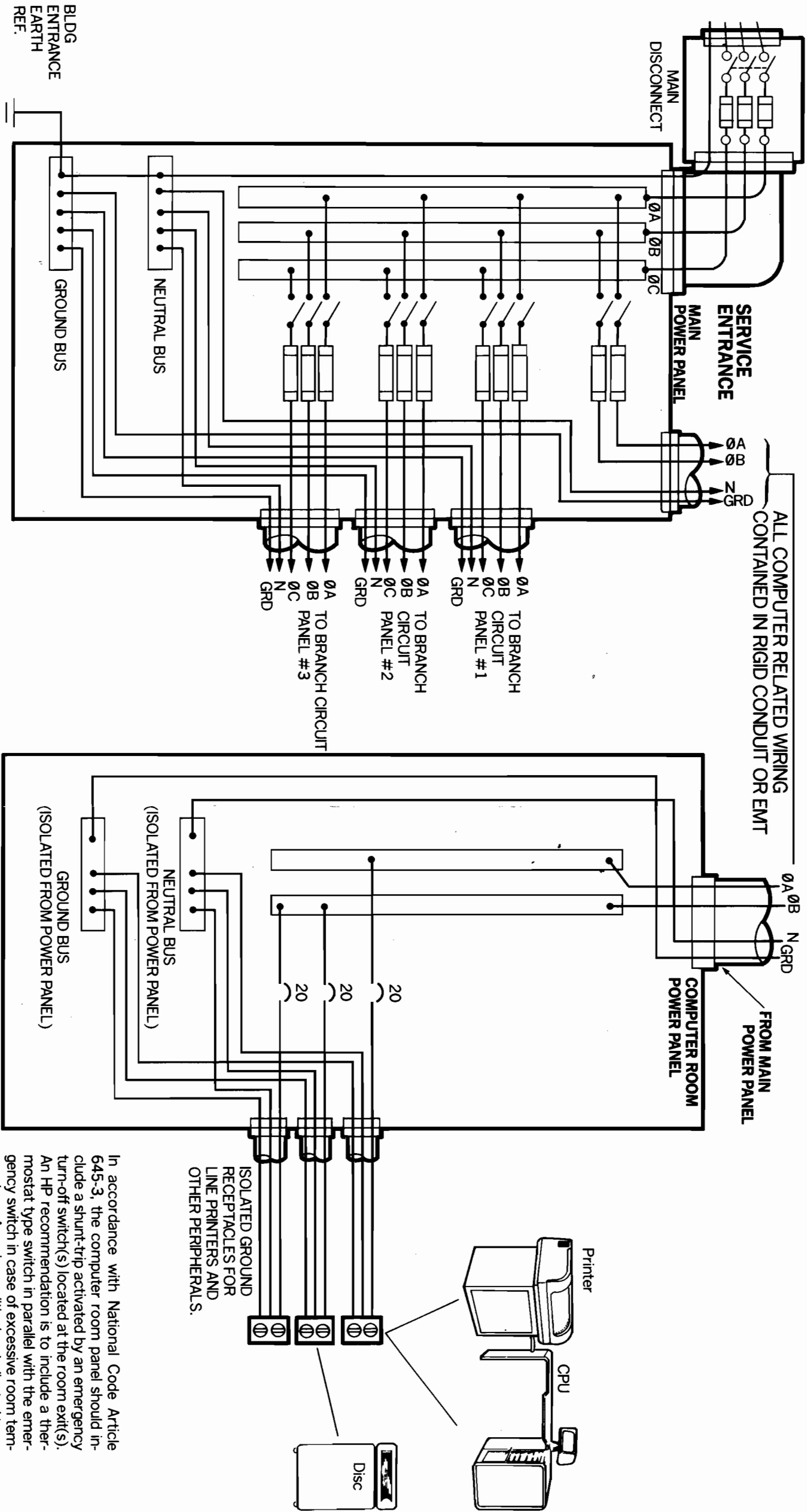
In accordance with National Code Article 645-3, the computer room panel should include a shunt-trip switch(s) located at the room exit(s). An HP recommendation is to include a thermostat type switch in parallel with the emergency switch in case of excessive room temperature. Any air conditioning dedicated to an enclosed room should also be interlocked to the shunt-trip in case of fire.

Typical Building Electrical Distribution System



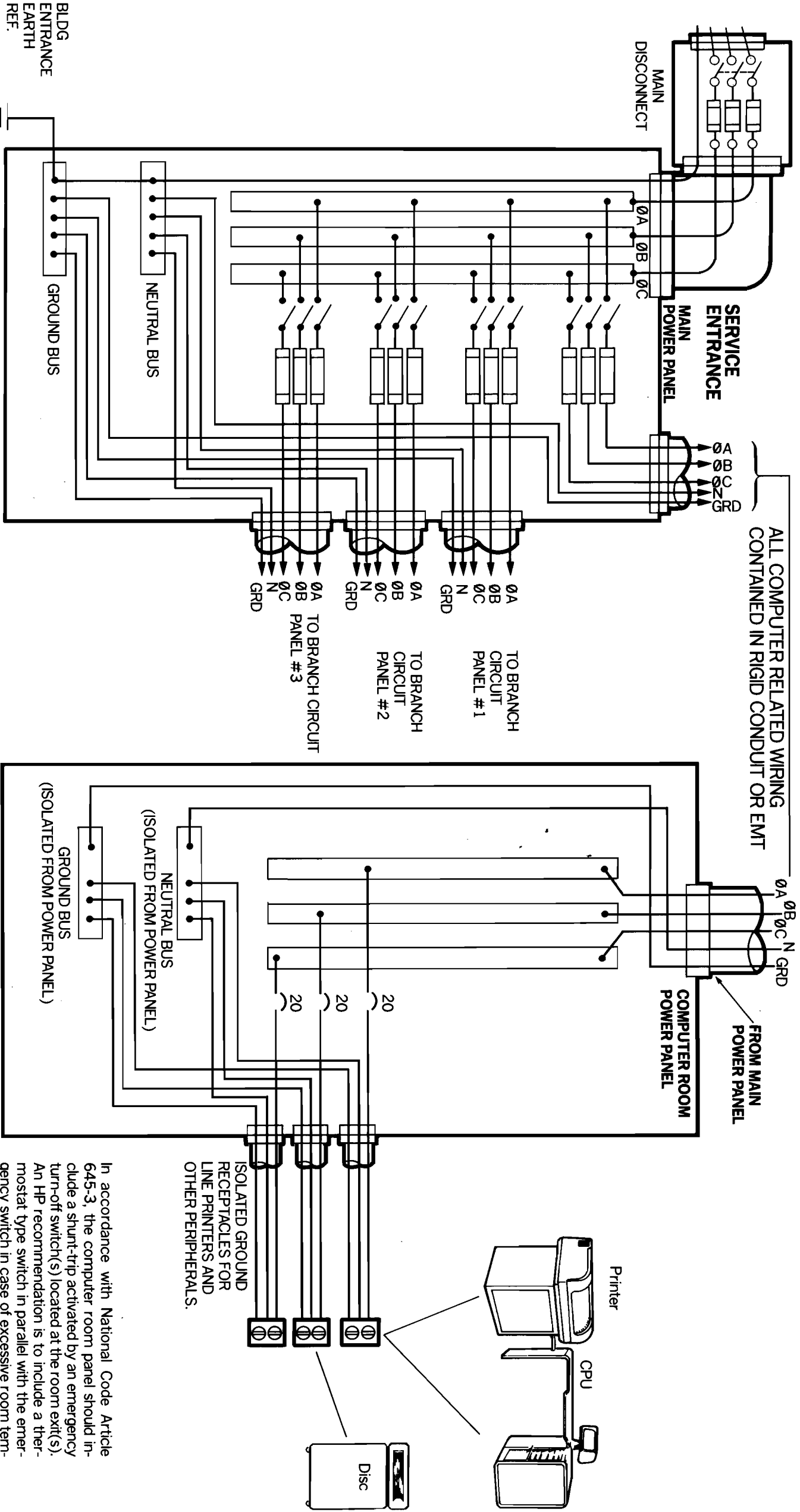
Typical Building Electrical Distribution System

In accordance with National Code Article 645-3, the computer room panel should include a shunt-trip activated by an emergency turn-off switch(s) located at the room exit(s). An HP recommendation is to include a thermostat type switch in parallel with the emergency switch in case of excessive room temperature. Any air conditioning dedicated to an enclosed room should also be interlocked to the shunt-trip in case of fire.



Typical Building Electrical Distribution System

In accordance with National Code Article 645-3, the computer room panel should include a shunt-trip activated by an emergency turn-off switch(s) located at the room exit(s). An HP recommendation is to include a thermostat type switch in parallel with the emergency switch in case of excessive room temperature. Any air conditioning dedicated to an enclosed room should also be interlocked to the shunt-trip in case of fire.



Typical Building Electrical Distribution System

In accordance with National Code Article 645-3, the computer room panel should include a shunt-trip activated by an emergency turn-off switch(s) located at the room exit(s). An HP recommendation is to include a thermostatic type switch in parallel with the emergency switch in case of excessive room temperature. Any air conditioning dedicated to an enclosed room should also be interlocked to the shunt-trip in case of fire.