Powerware®

9125 PowerPass® Distribution Module (PDM)

For use with Two-in-One 5000/6000 VA Models

USER'S GUIDE

www.powerware.com

POWERWARE®

Class A EMC Statements

FCC Part 15

NOTE This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

ICES-003

This Class A Interference Causing Equipment meets all requirements of the Canadian Interference Causing Equipment Regulations ICES-003.

Cet appareil numérique de la classe A respecte toutes les exigences du Reglement sur le matériel brouilleur du Canada.

EN50091-2

Some configurations are classified under EN50091-2 as "Class-A UPS for Unrestricted Sales Distribution." For these configurations, the following applies:

WARNING This is a Class A-UPS Product. In a domestic environment, this product may cause radio interference, in which case, the user may be required to take additional measures.

Requesting a Declaration of Conformity

Units that are labeled with a CE mark comply with the following harmonized standards and EU directives:

- Harmonized Standards: EN 50091-1-1 and EN 50091-2; IEC 60950 Third Edition
- EU Directives: 73/23/EEC, Council Directive on equipment designed for use within certain voltage limits
  93/68/EEC, Amending Directive 73/23/EEC
  89/336/EEC, Council Directive relating to electromagnetic compatibility
  92/31/EEC, Amending Directive 89/336/EEC relating to EMC

The EC Declaration of Conformity is available upon request for products with a CE mark. For copies of the EC Declaration of Conformity, contact:

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Fax: +358-9-452 665 68

Table of Contents

Chapter 1 Introduction

The PowerPass® Distribution Module (PDM) is designed to operate with a 5000/6000 VA Powerware® 9125 uninterruptible power system (UPS). The PDM allows you to:

- Replace or upgrade the UPS without losing power to the protected equipment (see "Using Maintenance Bypass" on page 33).
- Provide surge protection if the UPS is not present.
- Provide extra surge protection when the UPS is present.

Safety Warnings

IMPORTANT SAFETY INSTRUCTIONS
SAVE THESE INSTRUCTIONS

This manual contains important instructions that you should follow during installation and maintenance of the UPS. Please read all instructions before operating the equipment and save this manual for future reference.

CAUTION

- There are **NO USER SERVICEABLE PARTS** inside the UPS. All repairs and service should be performed by **AUTHORIZED SERVICE PERSONNEL ONLY**.
- To reduce the risk of fire or electric shock, install this UPS in a temperature and humidity controlled, indoor environment, free of conductive contaminants. Ambient temperature must not exceed 40°C (104°F). Do not operate near water or excessive humidity (95% max).
- For PDM models with hardwired outputs, overcurrent protection for the output AC circuit(s) is to be provided by others.
- For PDM models with hardwired outputs, suitably rated disconnect switches for the output AC circuit(s) are to be provided by others.

Sikkerhedsanvisninger

VIGTIGE SIKKERHEDSANVISNINGER
GEM DISSE ANVISNINGER
DENNE BRUGERVEJLEDNING INDEHOLDER VIGTIGE SIKKERHEDSANVISNINGER

ADVARSEL

- Denne PDM indeholder LIVSFARLIG HØJSPÆNDING. Alle reparationer og vedligeholdelse bør kun udføres af en AUTORISERET SERVICETEKNIKER. Ingen af PDM'ens indvendige dele kan repareres af brugeren.
- Installér denne PDM i et temperatur- og fugtighedskontrolleret indendørsmiljø, frit for ledende forureningsstoffer for at formindske risikoen for brand og elektrisk stød. Rumtemperaturen må ikke overstige 40°C. PDM'en bør ikke betjenes nær vand eller høj fugtighed (maksimalt 95%).
- For PDM systemer med hårdledningsudgange, skal overstrømsbeskyttelse for vekslestrømmens udgangskredsløb forsynes af andre.
- For PDM systemer med hårdledningsudgange, skal egnede, nominelle afbryderkontakter for vekslestrømmens udgangskredsløb forsynes af andre.

Belangrijke Veiligheidsinstructies

BELANGRIJKE VEILIGHEIDSINSTRUCTIES
BEWAAR DEZE INSTRUCTIES
DEZE HANDLEIDING BEVAT BELANGRIJKE VEILIGHEIDSINSTRUCTIES

OPGELET

- Deze PDM bevat LEVENSGEVAARLIJKE ELEKTRISCHE SPANNING. Alle reparaties en onderhoud dienen UITSLUITEND DOOR ERKEND SERVICEPERSONEEL te worden uitgevoerd. Er bevinden zich GEEN ONDERDELEN in de PDM die DOOR DE GEBRUIKER kunnen worden GEREPAREERD.
- Teneinde de kans op brand of elektrische schok te verminderen dient deze PDM in een gebouw met temperatuur- en vochtigheidregeling te worden geïnstalleerd, waar geen geleidende verontreinigingen aanwezig zijn. De omgevingstemperatuur mag 40°C niet overschrijden. Niet gebruiken in de buurt van water of bij zeer hoge vochtigheid (max. 95%).

- Voor PDM systemen met vast-bedrade uitgangen, moet de overstroombeveiliging voor wisselstroom uitvoercircuit(s) door anderen worden geleverd.
- Voor PDM systemen met vast-bedrade uitgangen, moeten de juiste hoofdschakelaars voor wisselstroom uitvoercircuit(s) door anderen worden geleverd.

Tarkeita Turvaohjeita

TÄRKEITÄ TURVAOHJEITA - SUOMI
SÄILYTÄ NÄMÄ OHJEET
TÄMÄ OPAS SISÄLTÄÄ TÄRKEITÄ TURVAOHJEITA

VARO

- Tämä PDM sisältää HENGENVAARALLISIA JÄNNITTEITÄ. Kaikki korjaukset ja huollot on jätettävä VAIN VALTUUTETUN HUOLTOHENKILÖN TOIMEKSI. PDM ei sisällä MITÄÄN KÄYTTÄJÄN HUOLLETTAVIA OSIA.
- Vähentääksesi tulipalon ja sähköiskun vaaraa asenna tämä PDM sisätiloihin, joissa lämpötila ja kosteus on säädettävissä ja joissa ei ole virtaa johtavia epäpuhtauksia. Ympäristön lämpötila ei saa ylittää 40 °C. Älä käytä lähellä vettä ja vältä kosteita tiloja (95 % maksimi).
- PDM-järjestelmissä kiintealla asennuksella: kuormana olevien laitteiden ylivirtasuojaus ja erotuskytkimet tulee toteuttaa kuormapiireissa.

Consignes de sécurité

CONSIGNES DE SÉCURITÉ IMPORTANTES
CONSERVER CES INSTRUCTIONS
CE MANUEL CONTIENT DES CONSIGNES DE SÉCURITÉ IMPORTANTES

ATTENTION!

- Cet onduleur contient des TENSIONS MORTELLES. Toute opération d'entretien et de réparation doit être EXCLUSIVEMENT CONFIÉE A UN PERSONNEL QUALIFIÉ AGRÉÉ. AUCUNE PIÈCE RÉPARABLE PAR L'UTILISATEUR ne se trouve dans l'onduleur.
- Pour réduire les risques d'incendie et de décharge électrique, installer l'onduleur uniquement à l'intérieur, dans un lieu dépourvu de matériaux conducteurs, où la température et l'humidité ambiantes sont contrôlées. La température ambiante ne doit pas dépasser 40 °C. Ne pas utiliser à proximité d'eau ou dans une atmosphère excessivement humide (95 % maximum).
- Pour les models PDM ayant des sorties câblées, la protection contre une surintensité pour le(s) circuit(s) de sortie de courant alternatif doit être fournie par un autre fournisseur.
- Pour les models PDM ayant des sorties câblées, les interrupteurs de déconnexion convenables pour le(s) circuit(s) de sortie de courant alternatif doivent être fournie par un autre fournisseur.

Sicherheitswarnungen

WICHTIGE SICHERHEITSANWEISUNGEN AUFBEWAHREN. DIESES HANDBUCH ENTHÄLT WICHTIGE SICHERHEITSANWEISUNGEN.

VORSICHT!

- Die USV führt lebensgefährliche Spannungen. Alle Reparatur- und Wartungsarbeiten sollten nur von Kundendienstfachleuten durchgeführt werden. Die USV enthält keine vom Benutzer zu wartenden Komponente.
- Um die Brand- oder Elektroschockgefahr zu verringern, diese USV nur in Gebäuden mit kontrollierter Temperatur und Luftfeuchtigkeit installieren, in denen keine leitenden Schmutzstoffen vorhanden sind. Die Umgebungstemperatur darf 40°C nicht übersteigen. Die USV nicht in der Nähe von Wasser oder in extrem hoher Luftfeuchtigkeit (max. 95 %) betreiben.
- Für PDM-Systeme mit festverdrahteten Eingängen muß der Überstromschutz für die Ausgangswechselstromkreise anderweitig bereitgestellt werden.
- Für PDM-Systeme mit festverdrahteten Ausgängen müssen Trennschalter für die Ausgangswechselstromkreise mit passendem Nennwert anderweitig bereitgestellt werden.

Προειδοποιήσεις Ασφάλειας

ΣΗΜΑΝΤΙΚΕΣ ΟΔΗΓΙΕΣ ΑΣΦΑΛΕΙΑΣ
ΦΥΛΑΞΤΕ ΑΥΤΕΣ ΤΙΣ ΟΔΗΓΙΕΣ
ΤΟ ΠΑΡΟΝ ΕΓΧΕΙΡΙΔΙΟ ΠΕΡΙΕΧΕΙ ΣΗΜΑΝΤΙΚΕΣ ΟΔΗΓΙΕΣ ΑΣΦΑΛΕΙΑΣ

ΠΡΟΣΟΧΗ

- Αυτό το PDM περιέχει ΘΑΝΑΤΗΦΟΡΑ ΤΑΣΗ. Όλες οι επισκευές και οι συντηρήσεις πρέπει να γίνονται ΜΟΝΟ ΑΠΟ ΕΞΟΥΣΙΟΔΟΤΗΜΕΝΟ ΓΙΑ ΤΗ ΣΥΝΤΗΡΗΣΗ ΠΡΟΣΩΠΙΚΟ. Το PDM ΔΕΝ ΠΕΡΙΕΧΕΙ ΚΑΝΕΝΑ ΕΞΑΡΤΗΜΑ ΠΟΥ ΝΑ ΜΠΟΡΕΙ ΝΑ ΕΠΙΣΚΕΥΑΣΤΕΙ ΑΠΟ ΤΟ ΧΡΗΣΤΗ.
- Για να μειώσετε τον κίνδυνο πυρκαγιάς ή ηλεκτροπληξίας, εγκαταστήστε το συγκεκριμένο PDM σε εσωτερικό χώρο με ελεγχόμενη θερμοκρασία και υγρασία, ο οποίος να μην περιέχει αγώγιμα υλικά. Η θερμοκρασία περιβάλλοντος δεν πρέπει να ξεπερνάει τους 40° C. Μη χρησιμοποιείτε το PDM κοντά σε νερό ή υπερβολική υγρασία (μέγιστη τιμή: 95%).

Avvisi di sicurezza

IMPORTANTI ISTRUZIONI DI SICUREZZA
CONSERVARE QUESTE ISTRUZIONI
QUESTO MANUALE CONTIENE IMPORTANTI ISTRUZIONI DI SICUREZZA

ATTENZIONE

- la TENSIONE contenuta in questo gruppo statico di continuità è LETALE. Tutte le operazioni di riparazione e di manutenzione devono essere effettuate ESCLUSIVAMENTE DA PERSONALE TECNICO AUTORIZZATO. All'interno del gruppo statico di continuità NON vi sono PARTI RIPARABILI DALL'UTENTE.
- Per ridurre il rischio di incendio o di scossa elettrica, installare il gruppo statico di continuità in un ambiente interno a temperatura ed umidità controllata, privo di agenti contaminanti conduttivi. La temperatura ambiente non deve superare i 40°C. Non utilizzare l'unità in prossimità di acqua o in presenza di umidità eccessiva (95% max).

- Nei sistemi PDM provvisti di uscite cablate, i dispositivi di protezione da sovracorrente per il/i circuito/i a corrente alternata in uscita devono essere forniti da terzi.
- Nei sistemi PDM provvisti di uscite cablate, i sezionatori di corrente nominale adeguata per il/i circuito/i a corrente alternata in uscita devono essere forniti da terzi.

Viktig Sikkerhetsinformasion

FORSIKTIG

- Denne PDM'en inneholder LIVSFARLIGE SPENNINGER. All reparasjon og service må kun utføres av AUTORISERT SERVICEPERSONALE. BRUKERE KAN IKKE UTFØRE SERVICE PÅ NOEN AV DELENE i PDM'en.
- For å redusere fare for brann eller elektriske støt, bør denne PDM'en installeres i et innendørs miljø med kontrollert temperatur og luftfuktighet som er fritt for ledende, forurensende stoffer. Romtemperaturen må ikke overskride 40°C. Den må ikke brukes i nærheten av vann eller ved meget høy luftfuktighet (95% maks.).
- For PDM systemer med fastkoplete uttak, må overstrømvern for vekselstrømuttak(ene) stilles til rådighet av andre.
- For PDM systemer med fastkoplete uttak, må passende utkoplingsbrytere for vekselstrømuttak(ene) stilles til rådighet av andre.

Regulamentos de Segurança

INSTRUÇÕES DE SEGURANÇA IMPORTANTES
GUARDE ESTAS INSTRUÇÕES
ESTE MANUAL CONTÉM INSTRUÇÕES DE SEGURANÇA IMPORTANTES

PERIGO

- A PDM contém VOLTAGEM MORTAL. Todos os reparos e assistência técnica devem ser executados SOMENTE POR PESSOAL DA ASSISTÊNCIA TÉCNICA AUTORIZADO. Não há nenhuma PEÇA QUE POSSA SER REPARADA PELO USUÁRIO dentro da PDM.
- Para reduzir o risco de incêndios ou choques elétricos, instale a PDM em ambiente interno com temperatura e umidade controladas e livres de contaminadores condutíveis. A temperatura ambiente não deve exceder 40°C. Não opere próximo a água ou em umidade excessiva (máx: 95%).

- Para sistemas PDM com saídas conectadas, a proteção de sobrecarga para circuitos de saída de corrente alternada deve ser fornecida por outros.
- Para sistemas PDM com saídas conectadas, interruptores de desconexão devidamente qualificados para circuitos de saída de corrente alternada devem ser fornecidos por outros.

Предупреждения по мерам безопасности

ВАЖНЫЕ УКАЗАНИЯ ПО МЕРАМ БЕЗОПАСНОСТИ СОХРАНИТЕ ЭТИ УКАЗАНИЯ ДАННОЕ РУКОВОДСТВО СОДЕРЖИТ ВАЖНЫЕ УКАЗАНИЯ ПО МЕРАМ БЕЗОПАСНОСТИ

ОСТОРОЖНО

- В данном ИБП имеются СМЕРТЕЛЬНО ОПАСНЫЕ НАПРЯЖЕНИЯ. Все работы по ремонту и обслуживанию должны выполняться ТОЛЬКО УПОЛНОМОЧЕННЫМ ОБСЛУЖИВАЮЩИМ ПЕРСОНАЛОМ. Внутри ИБП нет узлов, ОБСЛУЖИВАЕМЫХ ПОЛЬЗОВАТЕЛЕМ.
- Для снижения опасности пожара или поражения электрическим током устанавливайте ИБП в закрытом помещении с контролируемыми температурой и влажностью, в котором отсутствуют проводящие загрязняющие вещества. Температура окружающего воздуха не должна превышать 40°C. Не эксплуатируйте устройство около воды или в местах с повышенной влажностью (макс. 95%).

Advertencias de Seguridad

INSTRUCCIONES DE SEGURIDAD IMPORTANTES
GUARDE ESTAS INSTRUCCIONES
ESTE MANUAL CONTIENE INSTRUCCIONES DE SEGURIDAD IMPORTANTES

PRECAUCIÓN

- Este SIE contiene VOLTAJES MORTALES. Todas las reparaciones y el servicio técnico deben ser efectuados SOLAMENTE POR PERSONAL DE SERVICIO TÉCNICO AUTORIZADO. No hay NINGUNA PARTE QUE EL USUARIO PUEDA REPARAR dentro del SIE.
- Para reducir el riesgo de incendio o de choque eléctrico, instale este SIE en un lugar cubierto, con temperatura y humedad controladas, libre de contaminantes conductores. La temperatura ambiente no debe exceder los 40°C. No trabaje cerca del agua o con humedad excesiva (95% máximo).
- Para los sistemas PDM con salidas cableadas permanentemente, la protección contra exceso de corriente para el/los circuito(s) de CA de salida será suministrada por terceros.
- Para los sistemas PDM con salidas cableadas permanentemente, los interruptores de desconexión debidamente clasificados para el/los circuito(s) de CA de salida serán suministrados por terceros.

Säkerhetsföreskrifter

VIKTIGA SÄKERHETSFÖRESKRIFTER
SPARA DESSA FÖRESKRIFTER
DENNA BRUKSANVISNING INNEHÅLLER VIKTIGA SÄKERHETSFÖRESKRIFTER

VIKTIGT

- Denna PDM-enhet innehåller LIVSFARLIG SPÄNNING. ENDAST AUKTORISERAD SERVICEPERSONAL får utföra reparationer eller service. Det finns inga delar som ANVÄNDAREN KAN UTFÖRA SERVICE PÅ inuti PDM-enheten.
- Minska risken för brand eller elektriska stötar genom att installera denna PDM-enhet inomhus, där temperatur och luftfuktighet är kontrollerade och där inga ledande föroreningar förekommer. Omgivande temperatur får ej överstiga 40°C. Använd inte utrustningen nära vatten eller vid hög luftfuktighet (max 95 %).
- Överströmsskydd för de utgående växelströmskretsarna ska tillhandahållas av andra för PDM-system med fasta utgångar.
- Bortkopplingsswitchar med passande dimensionering för de utgående växelströmskretsarna ska tillhandahållas av andra för PDM-system med fasta utgångar.

Chapter 2 | Installation

This section explains:

- Equipment inspection
- PowerPass Distribution Module setup and installation
- Remote Emergency Power-Off (REPO) installation
- PDM rear panels

Inspecting the Equipment

If any equipment has been damaged during shipment, keep the shipping cartons and packing materials for the carrier or place of purchase and file a claim for shipping damage. If you discover damage after acceptance, file a claim for concealed damage.

To file a claim for shipping damage or concealed damage: 1) File with the carrier within 15 days of receipt of the equipment; 2) Send a copy of the damage claim within 15 days to your service representative.

NOTE *Check the battery recharge date on the shipping carton label. If the date has expired and the batteries were never recharged, do not use the UPS. Contact your service representative.*

PDM Setup

If the UPS is already installed and operating, prepare your equipment for shutdown; then use the following procedure to shut down the UPS:

1. Turn off the equipment that is connected to the UPS.
2. Press and hold the Off ⏻ button for approximately three seconds. The UPS switches to Standby mode.
3. Unplug the UPS; the UPS shuts down in five seconds. The bar graph and battery indicators flash briefly prior to shutdown.
4. Disconnect the power cord from the UPS input connector.
5. Disconnect the protected equipment power cord from the UPS.

The Powerware 9125 UPS is designed for flexible configurations and can be installed in a rack or as a standalone cabinet.

If you are installing the UPS in a rack, follow the instructions with the rail kit to set up the UPS. Otherwise, continue to the following section "Installing the Internal Batteries" to begin the UPS setup.

Installing the Internal Batteries

To install the battery trays into the UPS chassis:

1. Verify that the battery breaker on the UPS rear panel is in the OFF position.
2. Slide the left battery tray into the chassis. Repeat for the right battery tray.

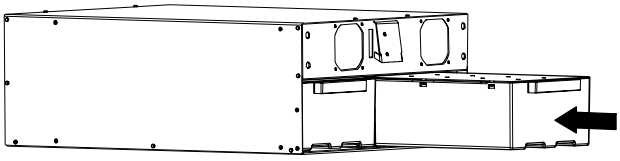


Figure 1. Installing the Battery Trays

3. Secure the battery trays to the chassis with the battery retaining bracket and screws provided in the accessory kit (see Figure 2).

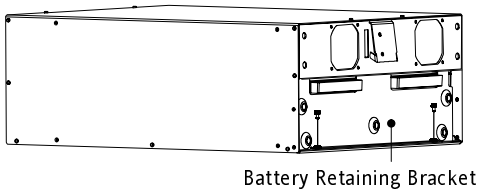


Figure 2. Securing the Battery Trays

4. Install the UPS front panels (provided in the accessory kit).

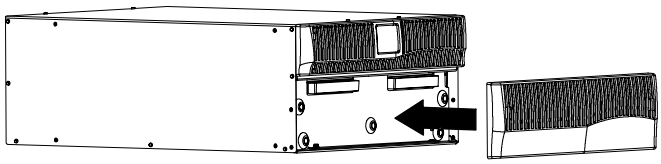


Figure 3. Installing the Front Panels

5. If you are installing the UPS as a standalone cabinet or in a tower configuration, continue to the following section, "Tower Setup."

If the UPS is in a rack and you are installing an optional Extended Battery Module (EBM), continue to "EBM Installation" on page 16; otherwise, continue to "Plug-Receptacle PDM Installation" on page 17 or "Hardwired PDM Installation" on page 22.

Tower Setup

The UPS and any optional cabinets must be stabilized with joining brackets.

1. Carefully position the cabinets upright (see Figure 4).

NOTE *The PDM must be installed to the right of the UPS (between the UPS and EBM) as shown in Figure 4.*

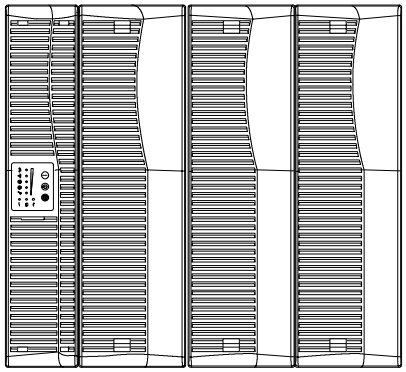


Figure 4. Tower PDM Configuration

2. Align each joining bracket with the adjacent cabinet screw holes and secure with the supplied screws (see Figure 5).

3. If installing additional cabinets, repeat Step 2 for each cabinet.

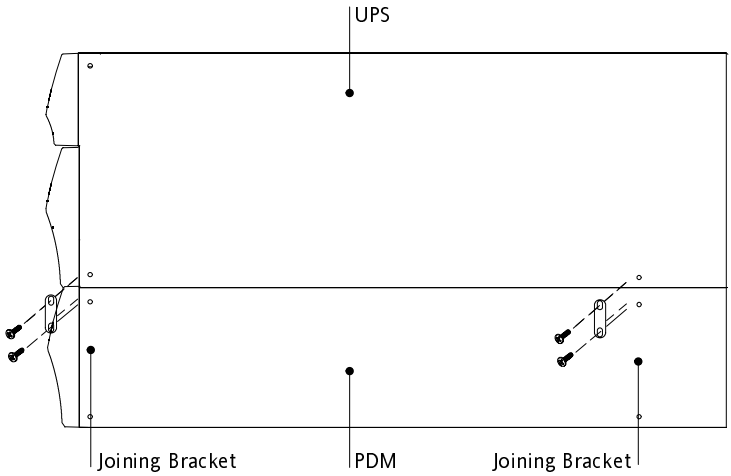


Figure 5. Installing the Joining Brackets (Top View)

4. If you are installing optional EBMs, continue to the following section, "EBM Installation;" otherwise, continue to "Plug-Receptacle PDM Installation" on page 17 or "Hardwired PDM Installation" on page 22.

EBM Installation

CAUTION

A small amount of arcing may occur when connecting an EBM to the UPS. This is normal and will not harm personnel. Insert the EBM cable into the UPS battery connector quickly and firmly.

If you are installing the optional EBM(s), use the following steps:

1. Verify that all battery circuit breakers are in the OFF (O) position (see Figure 6).
2. Plug the EBM cable into the UPS battery connector.
3. If additional EBMs are to be installed, plug the EBM cable of the second cabinet into the battery connector on the first EBM. Repeat for each additional EBM. Up to four EBMs may be connected to the UPS.
4. Continue to the following section, “Plug-Receptacle PDM Installation” or “Hardwired PDM Installation” on page 22.

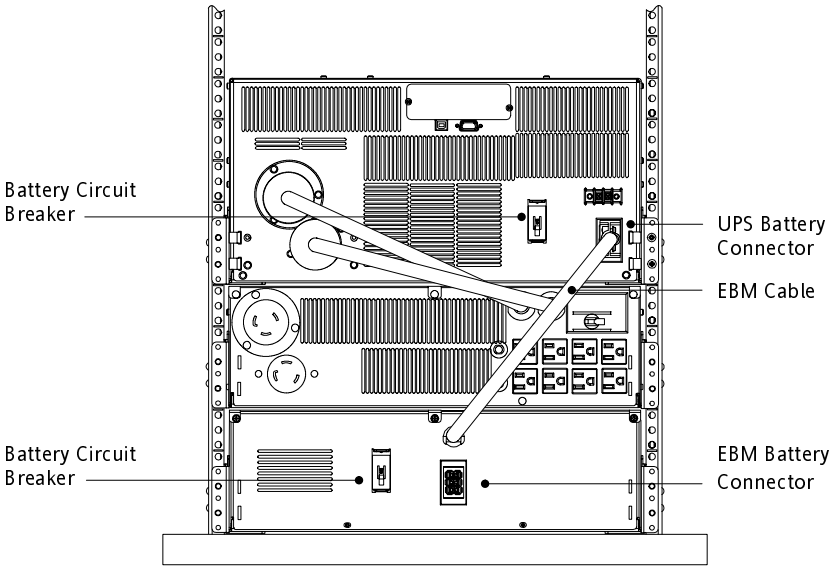


Figure 6. Typical EBM with PDM Installation

Plug-Receptacle PDM Installation

The following steps explain how to install the PDM.

NOTE *Do not make unauthorized changes to the UPS; otherwise, damage may occur to your equipment and void your warranty.*

1. If you are installing power management software, connect your computer to the USB port or UPS communication port. For the communication port, use only the serial cable supplied in the accessory kit.
2. Verify that the PDM output circuit breaker is in the OFF position (see Figure 8).
3. Verify that the Bypass switch on the PDM is in the NORMAL position (see Figure 7).

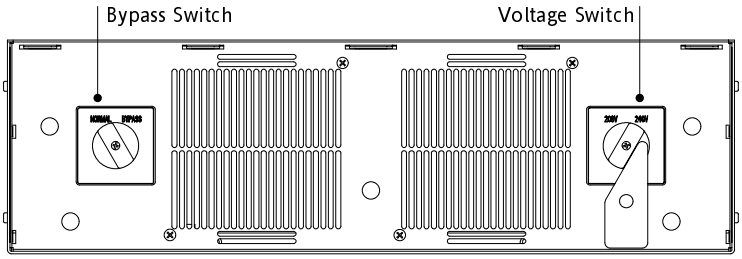


Figure 7. PDM (with Front Panel Removed)

4. **For 208V input only.** If you need 240V output with a 208V UPS input voltage, move the PDM voltage switch to the 208V position (see Figure 7).

   To move the switch position, remove the bracket screw and turn the switch. Flip the bracket around to fit the new position and reinstall.

NOTE *If you change the voltage switch to the 208V position, be sure to also complete Step 13 on page 19.*

5. If an emergency power-off (disconnect) switch is required by local codes, see "Remote Emergency Power-Off" on page 20 to install the REPO switch before powering on the UPS.

6. **For rack-mount applications only.** If your rack has conductors for grounding or bonding of ungrounded metal parts, connect the ground cable (not included) to the ground bonding screw.

7. Plug the input and output cords of the PDM into the input and output power connectors on the UPS rear panel (see Figure 8).

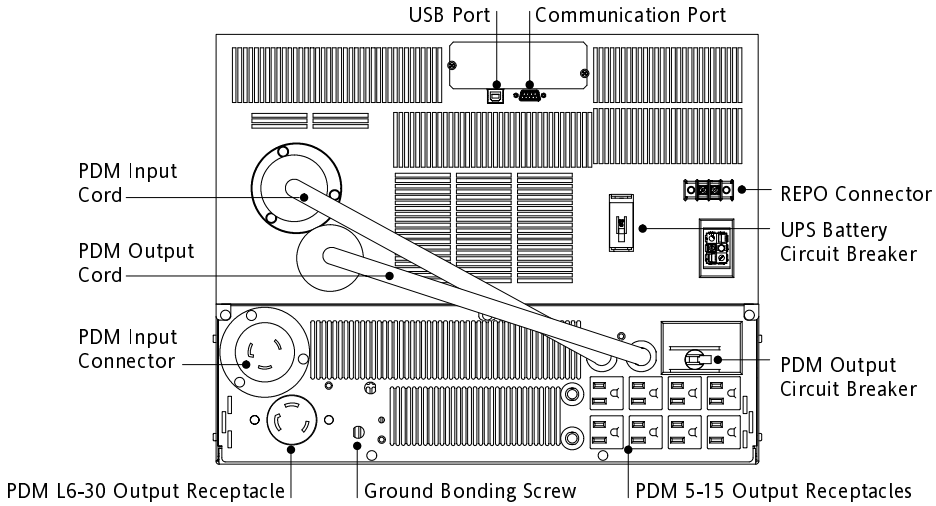


Figure 8. UPS and Plug-Receptacle PDM Installation (L6-30 Model shown)

8. Remove the breaker tie from all battery circuit breakers.

9. Switch all battery circuit breakers to the ON (|) position.

10. Plug the detachable UPS power cord into the input connector on the PDM rear panel.

11. Plug the UPS power cord into an L6-30 power outlet.

    The ~ indicator flashes, indicating the UPS is in Standby mode with the equipment offline.

12. Press the On | button on the UPS front panel.

    The ~ indicator stops flashing and the bar graph indicators display the percentage of load being applied to the UPS.

13. If you changed the voltage switch to 208V in Step 4 on page 17, confirm the UPS output voltage through the front panel (see page 29).

CAUTION

If you changed the voltage switch to 208V in Step 4 on page 17, failure to match the UPS voltage may result in a hazardous condition, including damage to the UPS or to the load.

14. Plug the equipment to be protected into the PDM output receptacle(s).

DO NOT protect laser printers with the UPS because of the exceptionally high power requirements of the heating elements.

15. Switch the PDM output circuit breaker to the ON (|) position.

NOTE *The PDM output circuit breaker (disconnect switch) disconnects power to all of the output receptacles on the PDM rear panel, but does NOT shut off power to the UPS (opening the upstream protection would be required).*

16. Install the PDM front panel.

NOTE *The batteries charge to 80% capacity in less than 2 hours. However, it is recommended that the batteries charge for 24 hours after installation or long-term storage.*

Remote Emergency Power-Off

The Powerware 9125 includes a REPO connector that allows power to be switched off at the UPS output receptacles from a customer-supplied switch in a remote location.

The REPO feature shuts down the protected equipment immediately, whether or not the UPS is in Normal or Battery mode, and does not follow the orderly shutdown procedure initiated by any power management software. The UPS switches to Standby mode.

When the REPO switch is reset, the equipment will not return to battery power until the UPS is manually restarted.

If the Off ⏻ button is pressed after the REPO is activated, the UPS remains in Standby mode when restarted until the On | button is pressed.

WARNING

The REPO circuit is an IEC 60950 safety extra low voltage (SELV) circuit. This circuit must be separated from any hazardous voltage circuits by reinforced insulation.

CAUTION

To ensure the UPS stops supplying power to the load during any mode of operation, the input power must be disconnected from the UPS when the emergency power-off function is activated.

NOTE *The REPO function activates when the REPO contacts close.*

Use the following procedure to install the REPO switch:

1. Verify that the UPS is off and unplugged.
2. Connect the switch or circuit to the REPO connector on the UPS rear panel using insulated 18–20 AWG (0.75 mm^2–0.5 mm^2) wire.

NOTE *A separate contact must simultaneously cause UPS input AC power to be removed.*

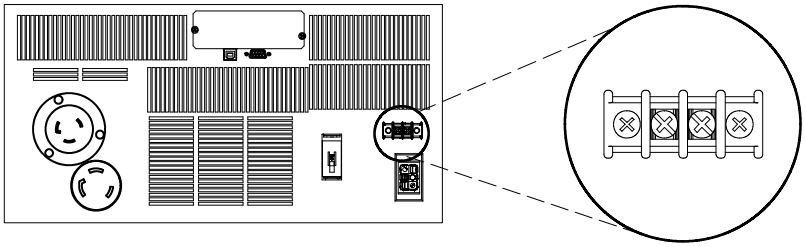


Figure 9. REPO Connector

3. Verify that the externally-connected REPO switch is not activated to enable power to the UPS output receptacle.
4. Plug in the UPS and start the UPS by pressing the On | button.
5. Activate the external REPO switch to test the REPO function.
6. De-activate the external REPO switch and restart the UPS.

Hardwired PDM Installation

WARNING

Only qualified service personnel (such as a licensed electrician) shall perform the electrical installation. Risk of electrical shock.

CAUTION

- For PDM models with hardwired outputs, overcurrent protection for the output AC circuit(s) is to be provided by others.
- For PDM models with hardwired outputs, suitably rated disconnect switches for the output AC circuit(s) are to be provided by others.

The Powerware 9125 requires a dedicated branch circuit that meets the following requirements:

- 40A minimum circuit with short circuit and overcurrent protection
- 200–240 Vac
- Single-phase
- 50/60 Hz
- The breaker must be wall-mounted within six feet of the UPS and be readily accessible to the operator
- Flexible metal conduit is recommended for ease of service and maintenance

To hardwire the PDM:

1. If you are installing power management software, connect your computer to the USB port or UPS communication port. For the communication port, use only the serial cable supplied in the accessory kit.
2. Switch off utility power at the distribution point where the UPS will be connected. Be absolutely sure there is no power.
3. Verify that the PDM output circuit breaker is in the OFF position (see Figure 11).
4. Verify that the Bypass switch on the PDM is in the NORMAL position (see Figure 10).

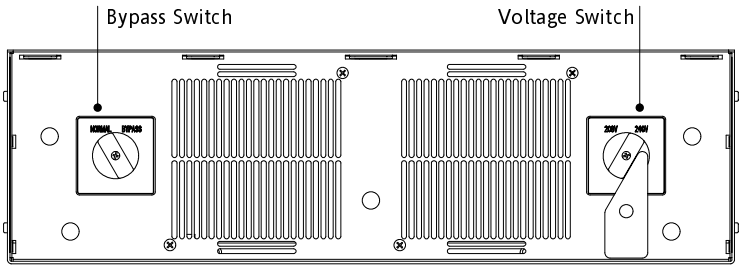


Figure 10. PDM (with Front Panel Removed)

5. **For 208V input only.** If you need 240V output with a 208V UPS input voltage, move the PDM voltage switch to the 208V position (see Figure 10).

   To move the switch position, remove the bracket screw and turn the switch. Flip the bracket around to fit the new position and reinstall.

NOTE *If you change the voltage switch to the 208V position, be sure to also complete Step 18 on page 26.*

6. Remove the wiring access cover and the conduit landing plate and retain (see Figure 11).

   Punch holes in the conduit landing plate for the input and output conduit using a Greenlee® punch or similar device.

7. Pull the input and output wires through separate conduit, leaving approximately 2 ft (0.5m) of exposed wire. Attach a flexible metal fitting to the end of each conduit.

8. Insert each conduit through a wiring access entry and attach the conduit fitting to the panel. Strip 0.35″ (9 mm) of insulation from the end of each incoming wire.

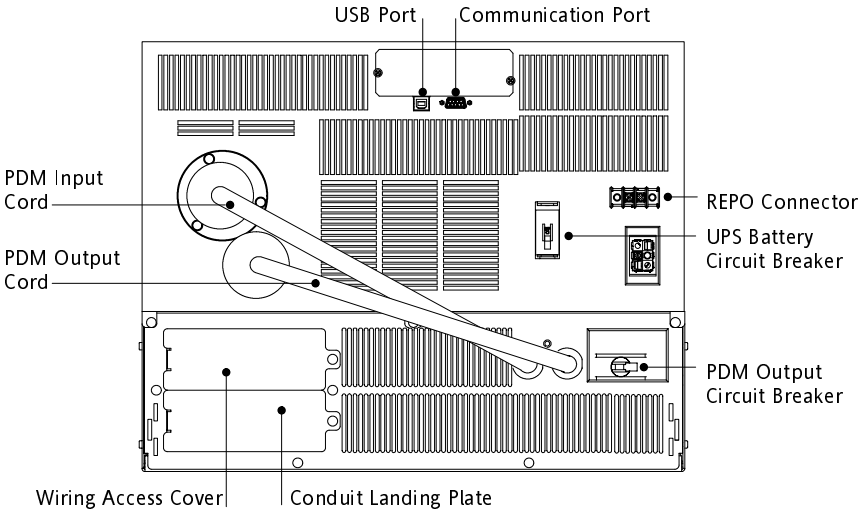


Figure 11. UPS and Hardwired PDM Installation

9. Connect the input and ground wires to the input terminal block according to Figure 12 or Figure 13 and Table 1.

10. Connect the output and ground wires to the output terminal block according to Figure 12 or Figure 13 and Table 1.

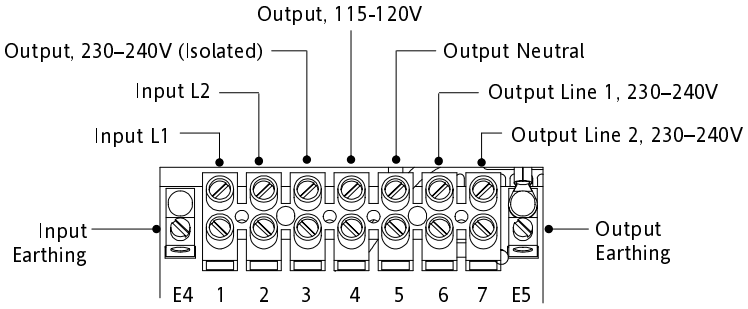


Figure 12. PPDM EURO HW Model Terminal Block

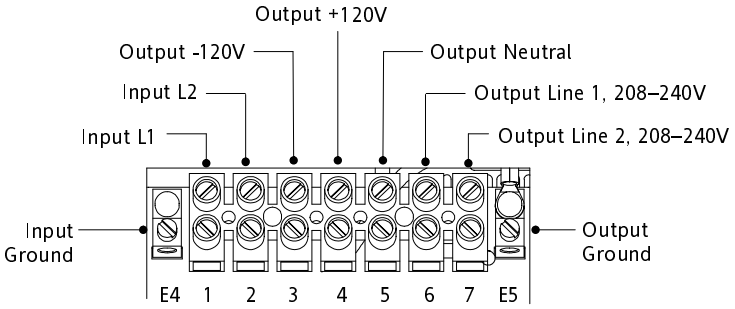


Figure 13. PPDM HW Model Terminal Block

Table 1. PDM Wiring Specifications

Terminal Position	PDM Wire Function		Terminal Wire Size Rating*	Tightening Torque
	PPDM EURO HW	PPDM HW		
1	Input Line 1	Input Line 1	2–17 mm² (14–6 AWG)	1.8 ±0.22 Nm (16 ±2 in lb)
2	Input Line 2	Input Line 2		
3	Output 230–240V (Isolated)	Output -120V		
4	Output 115–120V	Output +120V		
5	Output Neutral	Output Neutral		
6	Output Line 1, 230–240V	Output Line 1, 208–240V		
7	Output Line 2, 230–240V	Output Line 2, 208–240V		
E4	Input Earthing	Input Ground	2–5 mm² (14–10 AWG)	2.26 ±0.22 Nm (20 ±2 in lb)
E5	Output Earthing	Output Ground	8 mm² (8 AWG)	2.82 ±0.22 Nm (25 ±2 in lb)
			17 mm² (6 AWG)	3.95 ±0.22 Nm (35 ±2 in lb)

*Use 2.0 mm² (14 AWG) 75°C copper wire minimum.

11. Replace the wiring access cover and the conduit landing plate.

12. Plug the input and output cords of the PDM into the input and output power connectors on the UPS rear panel.

13. Remove the breaker tie from all battery circuit breakers.

14. Switch all battery circuit breakers to the ON (|) position.

15. If an emergency power-off (disconnect) switch is required by local codes, see "Remote Emergency Power-Off" on page 20 to install the REPO switch before powering on the UPS.

16. Switch the main utility breaker on.

The ~ indicator flashes, indicating the UPS is in Standby mode with the equipment offline.

17. Press the On | button on the UPS front panel.

The ~ indicator stops flashing and the bar graph indicators display the percentage of load being applied to the UPS.

18. If you changed the voltage switch to 208V in Step 5 on page 23, confirm the UPS output voltage through the front panel (see page 29).

CAUTION

If you changed the voltage switch to 208V in Step 5 on page 23, failure to match the UPS voltage may result in a hazardous condition, including damage to the UPS or to the load.

19. Switch the PDM output circuit breaker to the ON (|) position.

NOTE *The PDM output circuit breaker (disconnect switch) disconnects power to all of the output receptacles on the PDM rear panel, but does NOT shut off power to the UPS (opening the upstream protection would be required).*

20. Install the PDM front panel.

NOTE *The batteries charge to 80% capacity in less than 2 hours. However, it is recommended that the batteries charge for 24 hours after installation or long-term storage.*

PDM Rear Panels

This section shows the rear panels of the plug-receptacle PDM models.

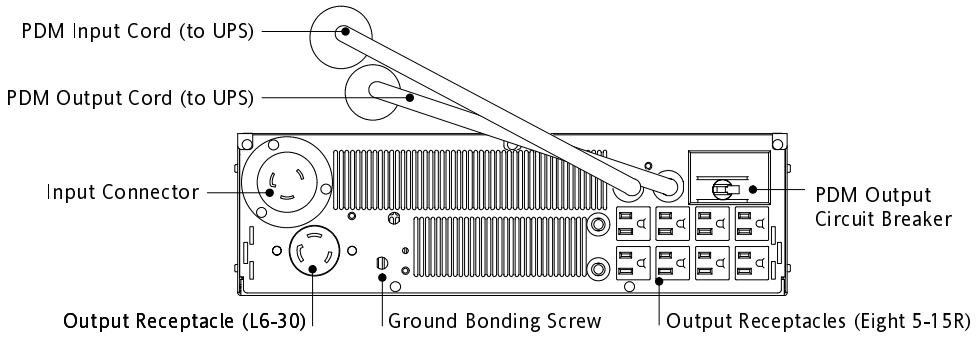


Figure 14. PPDM L6-30

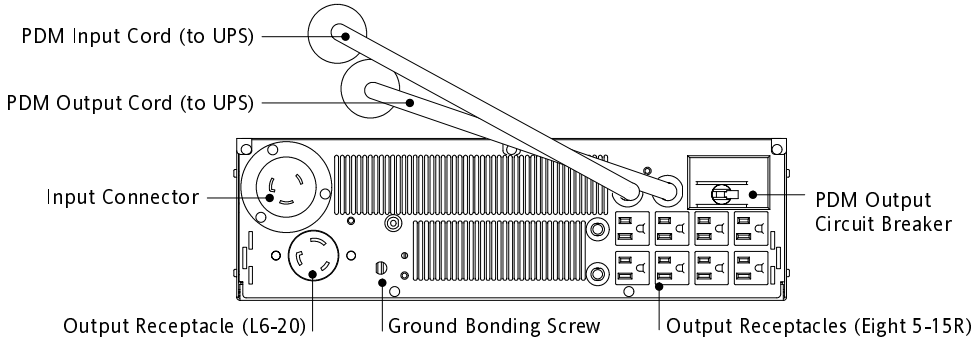


Figure 15. PPDM L6-20

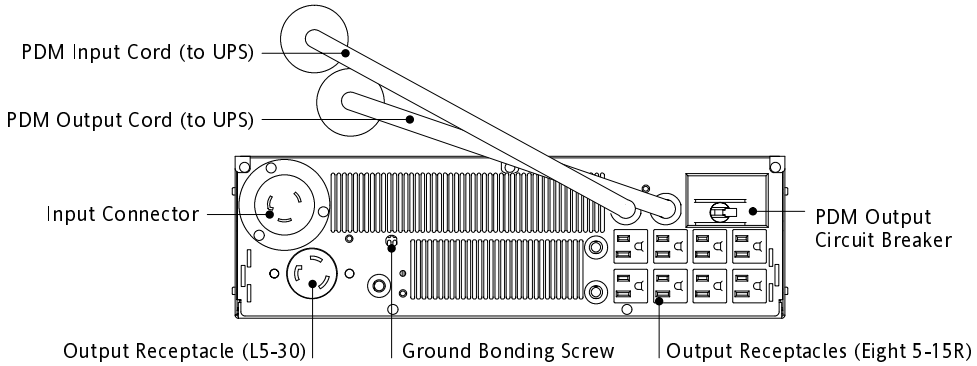


Figure 16. PPDM L5-30

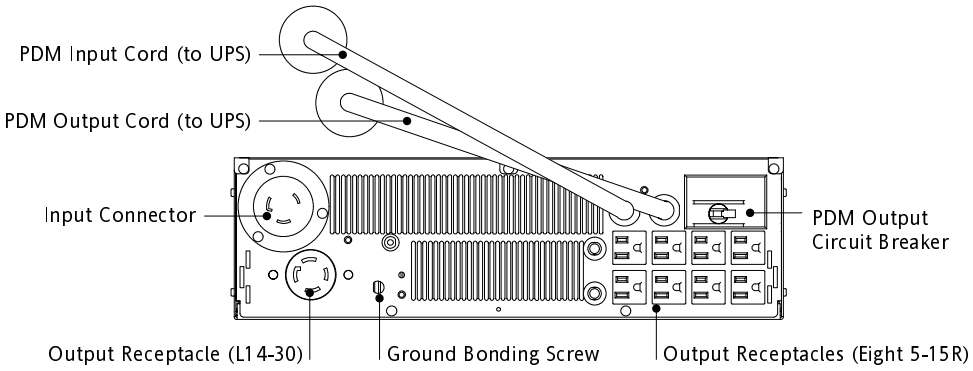


Figure 17. PPDM L14-30

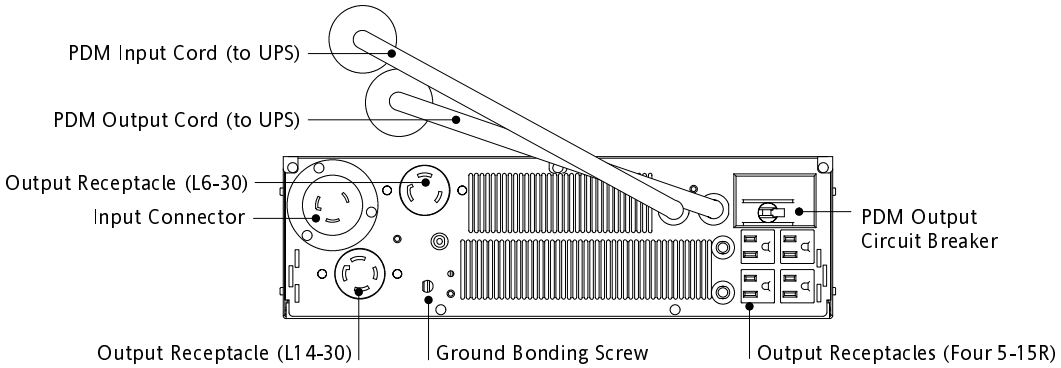


Figure 18. PPDM L6-30&L14-30

Chapter 3 | Configuration

This section describes how to reconfigure options using the Configuration mode, including output voltage and site wiring fault.

Configuration Mode

When the UPS is in Configuration mode, the bar graph indicators represent the configuration options. The control buttons (On | button and 🔊 button) are used to modify the UPS configuration. Figure 19 shows the LEDs and Table 2 explains the corresponding options.

NOTE *The UPS can be configured while in Battery mode.*

CAUTION

DO NOT press the Off ⏻ button while the UPS is in Configuration mode; pressing the Off ⏻ button removes all power to your equipment immediately and the UPS enters Standby mode.

1. Press the On | button and the 🔊 button simultaneously for three seconds. The UPS switches to Configuration mode.

   The bar graph indicators flash briefly and then display the enabled options.

2. Press the On | button to scroll through the options. Each time you press the button, the UPS beeps. The LED for the selected option indicates the current setting; flashing represents disabled options (see Figure 19 and Table 2).

   If you press the On | button and nothing happens, the UPS is still in Operation mode. Repeat Step 1 to enter Configuration mode, and then perform Step 2.

3. Press the button ONCE to toggle the selected option on or off.

   Repeat Steps 2 and 3 for each option. Scrolling past the last LED returns to the first configuration option.

NOTE *The UPS exits Configuration mode automatically after two minutes of inactivity.*

4. Press the On | button and the button simultaneously for three seconds to exit Configuration mode at any time.

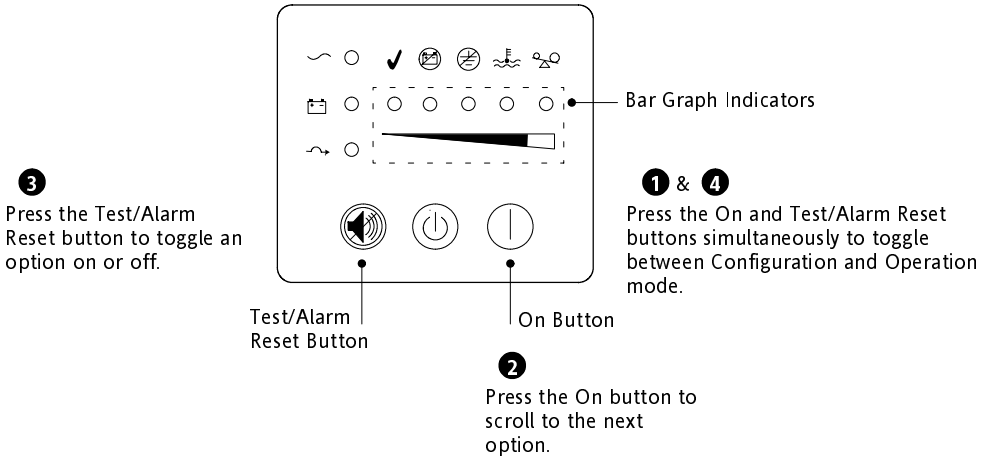
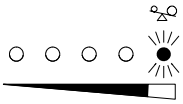
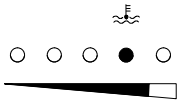
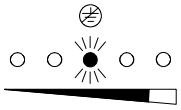
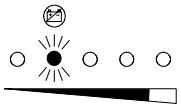
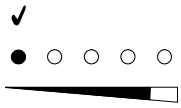


Figure 19. Using the Configuration Mode

Table 2. Configuration Mode LEDs and Options

Bar Graph Indicators	Option	LED Status	Explanation
	240V Nominal Output Voltage	On	Nominal output voltage is 240V. All other nominal output voltages are disabled.
		Flashing	240V is disabled; one of the other output voltage options is selected.
	230V Nominal Output Voltage	On	Nominal output voltage is 230V. All other nominal output voltages are disabled.
		Flashing	230V is disabled; one of the other output voltage options is selected.
	220V Nominal Output Voltage	On	Nominal output voltage is 220V. All other nominal output voltages are disabled.
		Flashing	220V is disabled; one of the other output voltage options is selected.
	208V Nominal Output Voltage	On	Nominal output voltage is 208V. All other nominal output voltages are disabled.
		Flashing	208V is disabled; one of the other output voltage options is selected.
	Site Wiring Fault Alarm	On	Alarm sounds when the polarity of the outlet is reversed or the ground connection is missing; have a qualified electrician repair the outlet wiring.
		Flashing (default)	Alarm DOES NOT sound when the polarity of the outlet is reversed or the ground connection is missing.

Chapter 4 | Operation

The PowerPass Distribution Module allows for the removal of the UPS while providing power to your protected equipment. This Maintenance Bypass feature is useful when replacing the UPS for maintenance or upgrades.

Using Maintenance Bypass

Use the following procedure to transfer your equipment to Maintenance Bypass (AC Line operation) and remove the UPS:

1. Turn the Bypass switch on the PDM to the BYPASS position. The PDM is now powering your equipment from utility power.
2. Press and hold the Off ⏻ button for approximately three seconds. The UPS switches to Standby mode.
3. If optional Extended Battery Module(s) are installed, switch the battery circuit breaker on the first EBM rear panel to the OFF (O) position.

   Unplug the EBM cable from the UPS.
4. Disconnect the PDM input and output cords from the UPS. See Figure 8 on page 18.

   The UPS shuts down in five seconds. The bar graph and battery indicators flash briefly prior to shutdown.
5. Remove the UPS.

Use the following procedure to reinstall the UPS and transfer your equipment from Maintenance Bypass (AC Line operation) to the UPS:

1. If optional EBM(s) are installed, reconnect the EBM cable to the battery connector on the UPS rear panel.

   Switch the battery circuit breaker on the first EBM rear panel to the ON (|) position.

2. Plug the input and output cords of the PDM into the input and output power connectors on the UPS rear panel (see Figure 8 on page 18).

   The ~ indicator flashes, indicating the UPS is in Standby mode with the equipment offline.

3. Press the On | button on the UPS front panel.

   The ~ indicator stops flashing.

4. If the PDM voltage switch is set to 208V, confirm the UPS output voltage through the front panel (see page 29).

5. Turn the Bypass switch on the PDM to the NORMAL position.

   The bar graph indicators display the percentage of load being applied to the UPS. The UPS is now in Normal mode and supplying power to your equipment.

Chapter 5 | Specifications

Table 3. Model Specifications

Model	Input Voltage	Input Current	Output Voltage	Output Current	Output Receptacles
PPDM L6-30	208–240V	24A	115/120/208/240V	30A	(1) L6-30R, (8) 5-15R
PPDM L6-20	208–240V	24A	115/120/208/240V	30A	(1) L6-20R, (8) 5-15R
PPDM L5-30	208–240V	24A	115/120V	41A/208V 45A/240V	(1) L5-30R, (8) 5-15R
PPDM L14-30	208–240V	24A	115/120/208/240V		(1) L14-30R, (8) 5-15R
PPDM L6-30&L14-30	208–240V	24A	115/120	41A/208V 45A/240V	(1) L6-30R, (1) L14-30R, (4) 5-15R
			208/240V	30A	
PPDM EURO HW	230/240V	30A	115/120/230/240V	30A	Hardwired
PPDM HW	208–240V	30A	115/120/208/240V	41A/208V 45A/240V	Hardwired

Table 4. Technical

Frequency	60 Hz PPDM L5-30: 50/60 Hz
Isolation Transformer	208V/120V or 240V/120V
Bypass Switch	30A
Operating Temperature	0°C to 40°C (32°F to 104°F)
Storage Temperature	-22°C to 55°C (-7°F to 131°F)
Relative Humidity	5–95% noncondensing
Safety Conformance	UL 1778; CSA C22.2, No. 107.1, 107.2; NOM-019-SCFI EN 50091-1-1, IEC 60950
Agency Markings	UL, cUL, NOM-NYCE (all models except PPDM EURO HW), CE UL/DEMKO GS (PPDM EURO HW only)
EMC (Class A)	EN 50091-2, FCC Part 15, ICES-003
Dimensions (WxDxH)	17.37” x 24.75” x 5.25” (3U) (44.1 x 62.9 x 13.3 cm)
Weight	106 lb (43 kg)

Chapter 6 | Service and Support

If you have any questions or problems with the UPS, call your **Local Distributor** or the **Help Desk** at one of the following telephone numbers and ask for a UPS technical representative.

In the United States:	**1-800-356-5737** or **1-608-565-2100**
Europe, Middle East, Africa:	**+44-17 53 608 700**
Asia:	**+852-2830-3030**
Australia:	**+61-3-9706-5022**

Please have the following information ready when you call the Help Desk:

- Model number
- Serial number (located behind the UPS front panel)
- Version number (if available)
- Date of failure or problem
- Symptoms of failure or problem
- Customer return address and contact information

If repair is required, you will be given a Returned Material Authorization (RMA) Number. This number must appear on the outside of the package and on the Bill Of Lading (if applicable). Use the original packaging or request packaging from the Help Desk or distributor. Units damaged in shipment as a result of improper packaging are not covered under warranty. A replacement or repair unit will be shipped, freight prepaid for all warrantied units.

NOTE *For critical applications, immediate replacement may be available. Call the* **Help Desk** *for the dealer or distributor nearest you.*

Appendix

The appendix contains the following information:

- Voltage switch description
- PowerPass Distribution Module schematics

PDM Voltage Switch

When the PDM Voltage switch is set to the 240V position (the default), the output voltage equals the input voltage on the L6-30 input connector. For example, if the input voltage from the UPS is 240V, then the output with the PDM is also 240V or if the UPS has 208V input, then the output is also 208V.

The Voltage switch should only be moved to the 208V position if you have 208V UPS input and need 240V output.

The following table shows the input/output voltages with the PDM:

Table 5. Voltage Switch Settings

Input Voltage (from UPS)	PDM Output Voltage	
	208V Switch Position	240V Switch Position
208	240/120	208/104
220	252/126	220/110
230	264/132	230/115
240	276/138	240/120

PDM Schematics

This section shows the schematics of each PDM model.

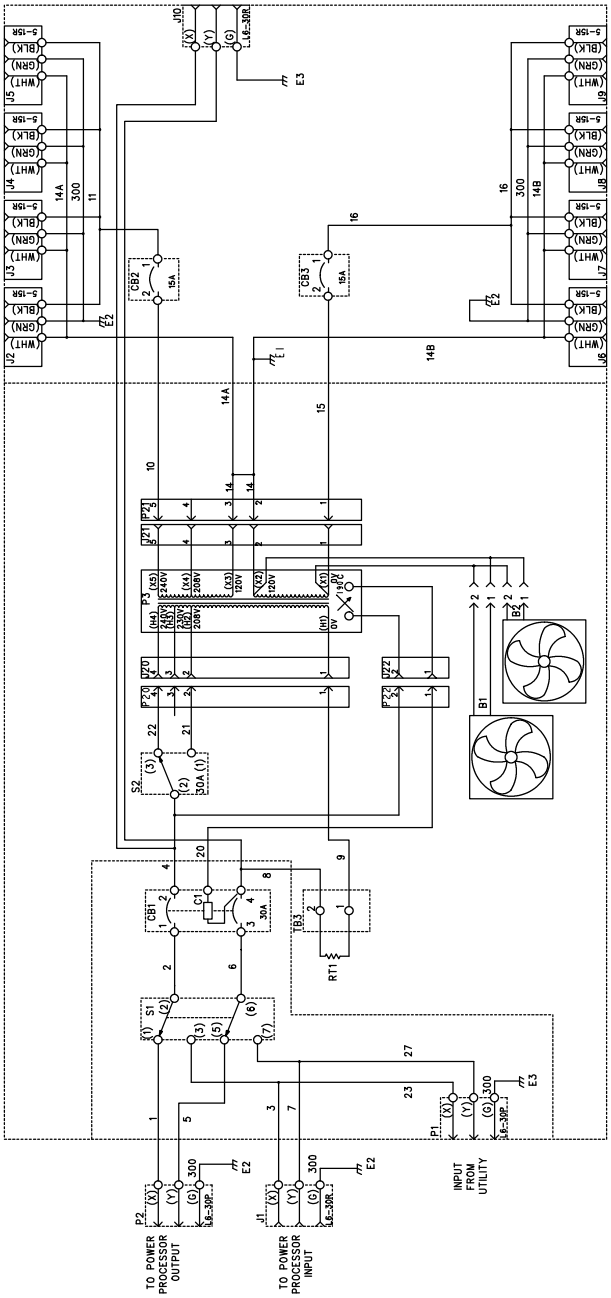


Figure 20. PPDM L6-30 Schematic

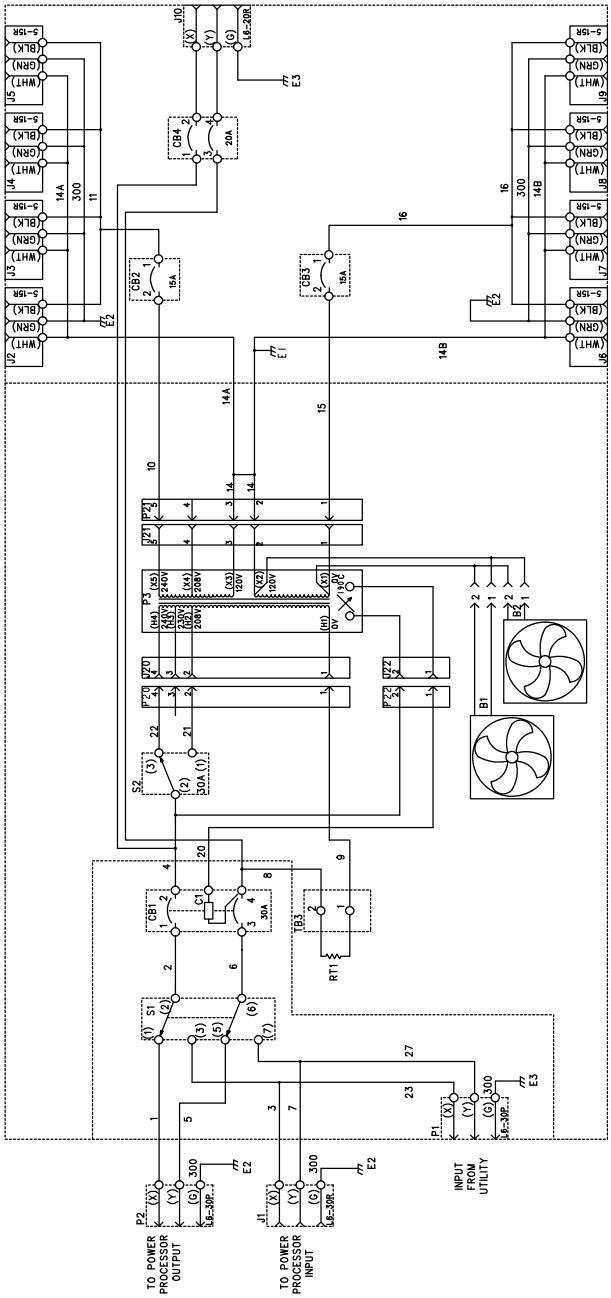


Figure 21. PPDM L6-20 Schematic

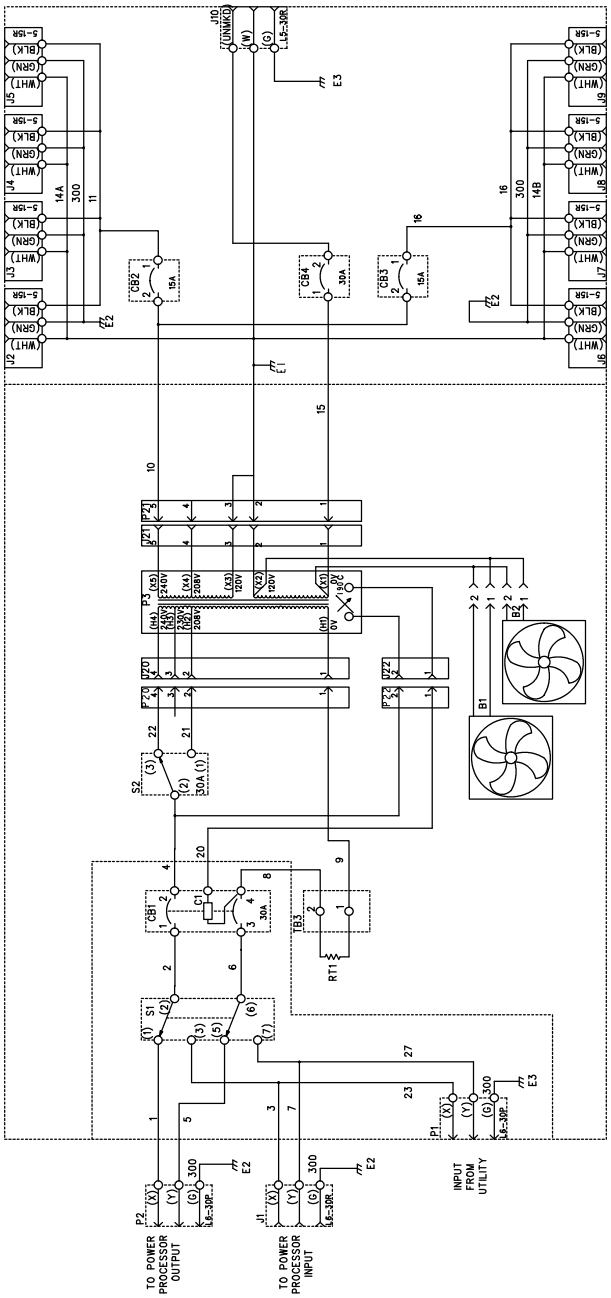


Figure 22. PPDM L5-30 Schematic

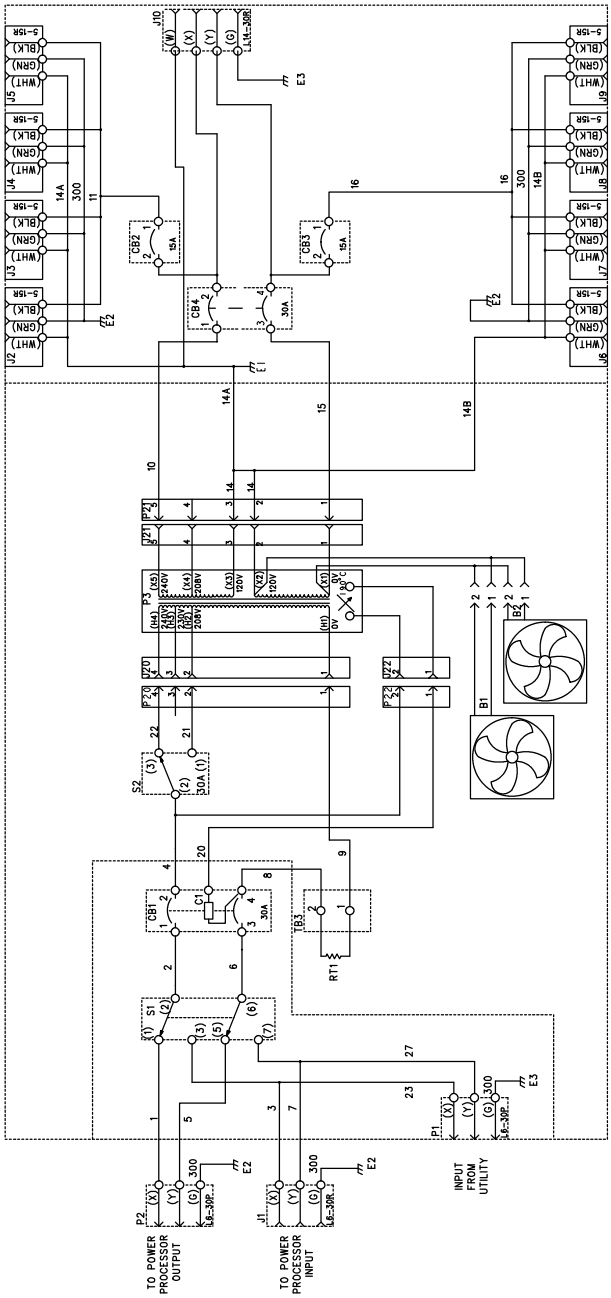


Figure 23. PPDM L14-30 Schematic

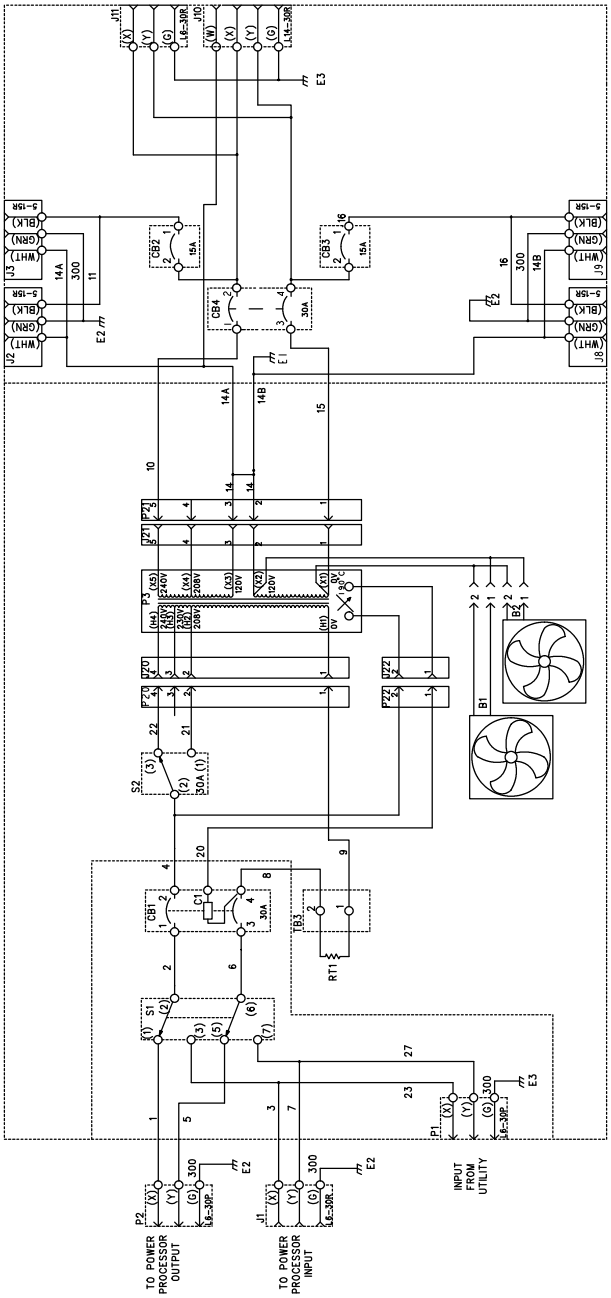


Figure 24. PPDM L6-30&L14-30 Schematic

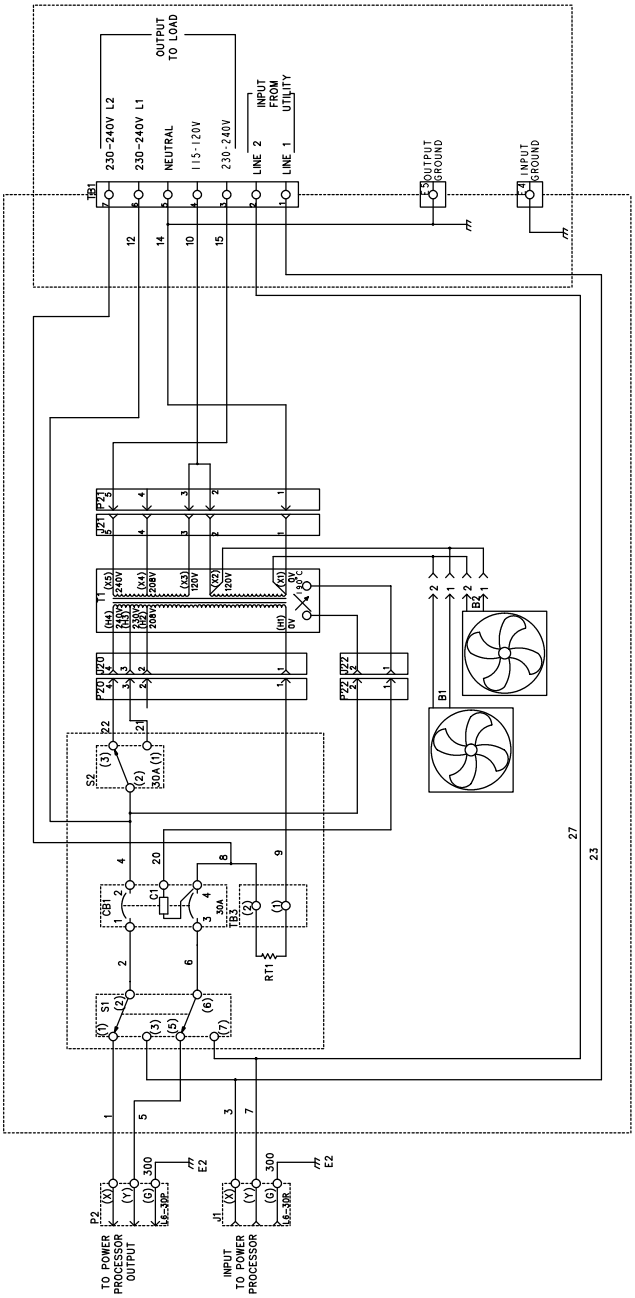


Figure 25. PPDM EURO HW Schematic

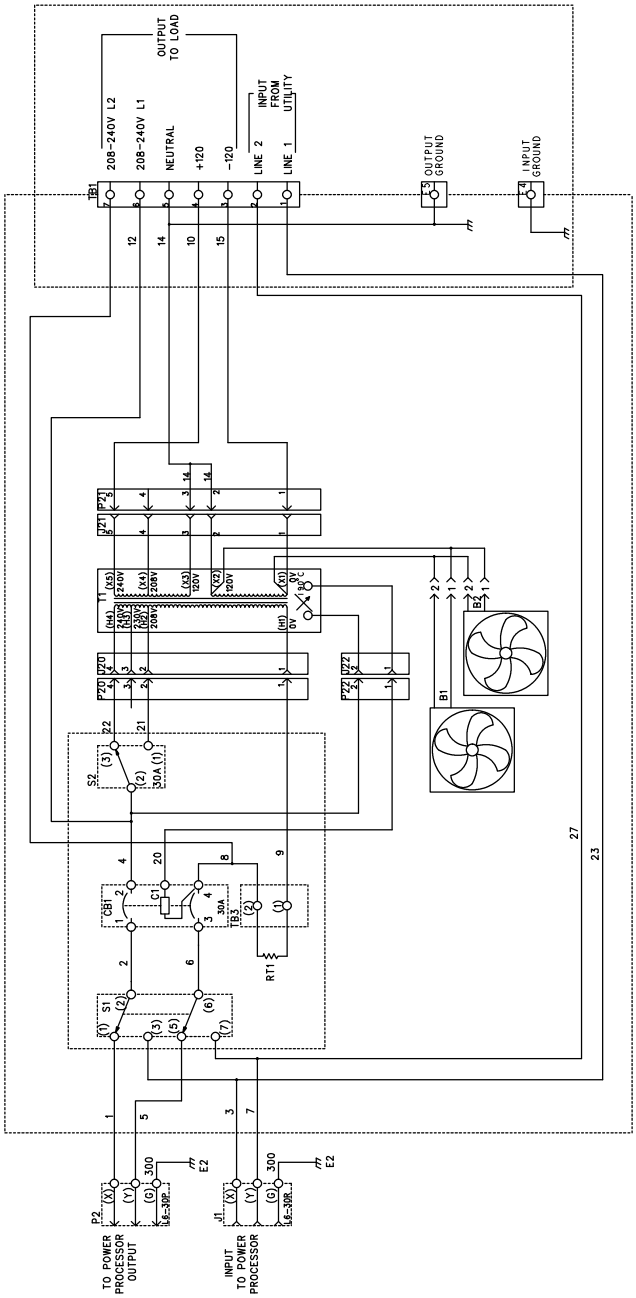


Figure 26. PPDM HW Schematic