Sentry

AC Power Distribution Unit

- PTPD-V0, PTPD-H0
- PTPD-VE, PTPD-HE

Installation and Operations Manual

Instructions
This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

Dangerous Voltage
This symbol is intended to alert the user to the presence of un-insulated dangerous voltage within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

Protective Grounding Terminal
This symbol indicates a terminal that must be connected to earth ground prior to making any other connections to the equipment.

Life-Support Policy

As a general policy, Server Technology does not recommend the use of any of its products in the following situations:

- life-support applications where failure or malfunction of the Server Technology product can be reasonably expected to cause failure of the life-support device or to significantly affect its safety or effectiveness.
- direct patient care.

Server Technology will not knowingly sell its products for use in such applications unless it receives in writing assurances satisfactory to Server Technology that:

- the risks of injury or damage have been minimized,
- the customer assumes all such risks, and
- the liability of Server Technology is adequately protected under the circumstances.

The term life-support device includes but is not limited to neonatal oxygen analyzers, nerve stimulators (whether used for anesthesia, pain relief or other purposes), auto-transfusion devices, blood pumps, defibrillators, arrhythmia detectors and alarms, pacemakers, hemodialysis systems, peritoneal dialysis systems, neonatal ventilator incubators, ventilators (for adults or infants), anesthesia ventilators, infusion pumps, and any other devices designated as "critical" by the U.S. FDA.

Compliance

Units have been safety tested/certified to the following standards: USA and Canada to UL 60950:2000 and CAN/CSA 22.2 No. 60950-00, European Union to EN60950:2000

USA Notification

Warning: Changes or modifications to these units not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment under FCC rules.

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 is 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.

Canadian Notification

This digital apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la classe A prescrites dans le Règlement sur le brouillage radioélectrique édicté par le Ministère des Communications du Canada.

Japanese Notification

この装置は、情報処理装置等電波障害自主規制協議会（ＶＣＣＩ）の基準に基づくクラスA情報技術装置です。この装置を家庭環境で使用すると電波妨害を引き起こすことがあります。この場合には使用者が適切な対策を講ずるよう要求されることがあります。

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Chapter 1: Introduction

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The Server Technology Inc. Sentry family of products provides easy, practical, and secure solutions for power distribution, power management and load-measurement for remote internetworking equipment and branch AC circuits.

The **Sentry Power Distribution Unit** (PTPD) provides simple power distribution with cumulative load monitoring for environments without a requirement for remote power management.

Features and Benefits

Sentry Power Distribution Units are available in 8-outlet, 16-outlet and 18-outlet configurations for 100-120VAC or 208-240VAC up to 30A. See *Standard Models* in Appendix C: Technical Specifications.

Power Distribution

A Sentry Power Distribution Unit distributes a maximum of 30A AC power (dependant on PTPD model) across a maximum of sixteen attached devices.

Load Measurement

The Sentry Power Distribution Unit's load measurement feature eliminates guesswork by supplying the cumulative operating load in amperes. This allows on-site technicians to maximize the equipment installed and operated on a circuit without worry. Use of the circuit is maximized, while effectively allowing a 10% to 20% safety margin. Remote users also may access this information at any time from the Control Screen interface (Remote access not available on PTPD-xE models).

Over-Threshold Notification

Sentry Power Distribution Units features two standard over-threshold alarms; an audible alarm for the local technician and a contact-closure alarm circuit which allows over-threshold alerts to be sent a third party device (Not available on PTPD-xE models).

Technical Support

Server Technology understands that there are often questions when installing and/or using a new product. Free Technical Support is provided from 8:30 AM to 5:00 PM, Monday-Friday, Pacific Time. See *Technical Support* in Warranty, Product Registration and Support for more information.

Server Technology, Inc.
1040 Sandhill Drive — Tel: 775.284.2000 — Web: www.servertech.com
Reno, Nevada 89521 USA — Fax: 775.284.2065 — Email: support@servertech.com

Quick Start Guide

The following instructions will help you quickly install and configure your Sentry Power Distribution Unit for use on your network. For detailed information on each step, go to the page number listed to the right.

Chapter 2: Installation

Chapter 2: Installation

Before installing your Sentry Power Distribution Unit, refer to the following lists to ensure that you have all the items shipped with the unit as well as all other items required for proper installation.

Standard Accessories

- Mounting bracket hardware:
  Vertical - two mounting brackets, two nut plates and four sets of screws and washers
  Horizontal/Rack – two mounting brackets and four screws
- Outlet retention clips, one per outlet (208-240V units only)
- Separate power input cord (208-240V units with < 30A total output capability only)

PTPD-x0 models only

- RJ45 to RJ45 crossover cable
- RJ45 to DB9F serial port adapter (for connection to standard DB9M DTE serial port)

Additional Required Items

- Phillip screwdriver
- Screws, washers and nuts to attach the PTPD to your rack

Equipment Overview

A letter/number combination is printed above each PTPD port. The ports are labeled A1 through A4, B1 through B4, C1 through C4 and D1through D4. The power inlet of the PTPD connects the PTPD to the electrical power source. See Appendix C: Technical Specifications for more information.

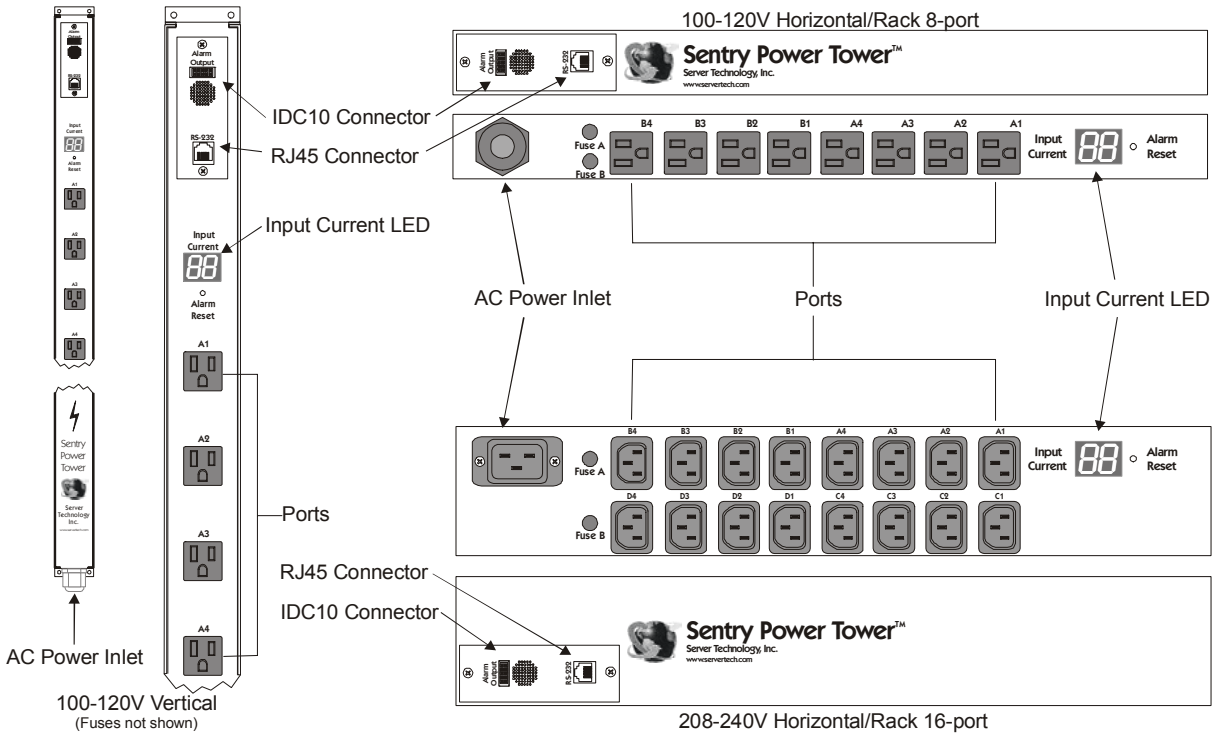


Figure 2.1 PTPD Views (PTPD-x0 model types shown)

Safety Precautions

This section contains important safety and regulatory information that should be reviewed before installing and using the Sentry Sentry Power Distribution Unit. For input and output current ratings, see *Ratings* in Appendix C: Technical Specifications.

	Only for installation and use in a Service Access Location in accordance with the following installation and use instructions.	*Destiné à l'installation et l'utilisation dans le cadre de Service Access Location selon les instructions d'installation et d'utilisation.*	Nur für Installation und Gebrauch an Anschlusszugriffspunkten gemäß der folgenden Installations- und Gebrauchsanweisungen.
	This equipment is designed to be installed on a dedicated circuit.	*Cet équipement est conçu à être installé sur un circuit spécialisé.*	Diese Ausrüstung ist zur Installation in einem festen Stromkreis vorgesehen.
	Dedicated circuit must have circuit breaker or fuse protection. Sentry Power Distribution Units have been designed without a master circuit breaker or fuse to avoid becoming a single point of failure. It is the customer's responsibility to provide adequate protection for the dedicated power circuit. Protection of capacity equal to current rating of equipment, and must meet all applicable codes and regulations. Circuit breaker or fuse for installation in North America must have 10,000A interrupt capacity.	*Le circuit spécialisé doit avoir un disjoncteur ou une protection de fusible. Des Sentry Power Distribution Units ont été conçus sans disjoncteur général ni fusible pour éviter que cela devient un seul endroit de panne. C'est la responsabilité du client de fournir une protection adéquate pour le circuit-alimentation spécialisé. Protection de capacité équivalant à la puissance de l'équipement, et respectant tous les codes et normes applicables. Les disjoncteurs ou fusibles destinés à l'installation en Amérique du Nord doivent avoir une capacité d'interruption de 10 000 A.*	Der feste Stromkreis muss mit einem Schutzschalter oder einem Sicherungsschutz versehen sein. Ein Sentry Power Distribution Units verfügt über keinen Hauptschutzschalter bzw. über keine Sicherung, damit kein einzelner Fehlerpunkt entstehen kann. Der Kapazitätsschutz entspricht der aktuellen Stromstärke der Geräte und muss alle relevanten Codes und Bestimmungen erfüllen. Für Installation in Nordamerika müssen Ausschalter bzw. Sicherung über 10.000 A Unterbrechungskapazität verfügen.
	The plug on the power supply cord shall be installed near the equipment and shall be easily accessible.	*La prise sur le cordon d'alimentation sera installée près de l'équipement et sera facilement disponible.*	Der Stecker des Netzkabels muss in der Nähe der Ausrüstung installiert werden und leicht zugänglich sein.
	Installation Orientation: PTxx-Vxxx-x units are design to be installed in vertical orientation.	*Installation Orientation : Les unités PTxx-Vxxx-x sont conçues pour être installées dans une orientation verticale.*	Installationsausrichtung: PTxx-Vxxx-x Einheiten sind zur vertikalen Installation vorgesehen.
	Always disconnect the power supply cord before opening to avoid electrical shock.	*Toujours déconnecter le cordon d'alimentation avant d'ouvrir pour éviter un choque électrique.*	Ziehen Sie vor dem Öffnen immer das Netzkabel heraus, um die Gefahr eines elektrischen Schlags zu vermeiden.
	WARNING! High leakage current! Earth connection is essential before connecting supply!	*ATTENTION ! Haut fuite très possible ! Une connection de masse est essentielle avant de connecter l'alimentation !*	ACHTUNG! Hoher Verluststrom! Ein Erdungsanschluss ist vor dem Einschalten der Stromzufuhr erforderlich!
	Warning: 208-240/230V models only: Outlets are not fused. Outlet circuit protection is provided by the building installation, which shall not exceed 30A branch circuit protection	*Attention: les modèles 208-240/230V seulement : Les prises n'ont pas de fusible incorporé. Une protection de la prise du circuit est fournie par l'installation du bâtiment, qui ne devrait pas dépasser 30A protection d'une branche de circuit.*	Achtung: Nur für 208-240/230V-Modelle: Die Anschlussstellen sind nicht gesichert. Der Ausgangsstromkreisschutz erfolgt durch die elektrische Gebäudeinstallation, die einen Abzweigschutz von 30A nicht übersteigen darf.
	For PTPD-VE18 models, verify input voltage selection PRIOR to connection. See Appendix B: for more information.	*Pour PTPD-VE18 modèles, vérifier de la sélection de tension de données AVANT la connexion. Voir le B d'Appendice: pour plus amples renseignements.*	Für PTPD-VE18 entwerfen Sie, Überprüfen Sie Eingabespannung Auswahl VOR Anschluß. Siehe Anhang B: für mehr Informationen.

Verify Input Voltage Selection (PTPD-VE18 models only)

Verify input voltage selection PRIOR to connection. See Appendix B: on page 15 for instructions.
Vérifier de la sélection de tension de données AVANT la connexion. Voir le B d'Appendice: à la page 15 pour les instructions.
Uberprüfen Sie Eingabespannung Auswahl VOR Anschluß. Siehe Anhang B: Auf Seite 15 für Anweisungen.

Mounting

Horizontal/Rack PTPD

1. Select the appropriate bracket mounting points for proper mounting depth within the rack.
2. Attach one bracket to these mounting points with two screws.
3. Repeat with the other mounting bracket on the opposite side of the enclosure.
4. Install the enclosure into your rack, using the slots in each bracket. The slots allow about ¼ inch of horizontal adaptability to align with the mounting holes of your rack.

NOTE: A mounting bracket kit for 23" wide rack or cabinets is available. Contact your Server Technology Sales Representative for more information.

Vertical PTPD

1. Attach one of the removable flanges to the mount points on the top rear of the enclosure using M4 screws.
2. Repeat with the other flange for the bottom mount points on the enclosure.
3. Attach one mounting bracket to the top flange with one set of screws and washers through each of the slots in the bracket into the nut plate, as shown in Figure 2.2 (brackets may differ from the illustration). The slots allow about 1½ inches of vertical adaptability.
4. Repeat with the other mounting bracket on the bottom flange.
5. Attach the top and bottom brackets to your rack.

NOTE: Contact your Server Technology Sales Representative for information regarding custom bracket design and fabrication services if you are unable to find a suitable manner for utilizing the included mounting brackets.

Connecting to the Power Source

On all 100-120V units and 208-240V units with a total output rating of 30A, the input power cord is attached to the base of the PTPD unit. On 208-240V units with a total output rating <30, you must first attach the power cord to the PTPD unit before connecting the PTPD to the power source.

To attach a 230V power cord to the 230V PTPD unit:

1. Plug the female end of the power cord firmly into its connector at the base of the PTPD.
2. Use a screwdriver to tighten the two screws on the retention bracket.

To connect the PTPD to the power source:

Plug the male end of the PTPD power cord into the AC power source.

On power up, PTPD-x0 models perform a self-test and display the results on the terminal screen:

- The Input Current LED displays 'On', then switches to the cumulative input load.
- The audible alarm and contact-closure output relay are triggered for one second.

```
Power Tower PDU Version 1.0b
Booting...
  Display Detected, Status OK, Configured.
  Power Supply Detected, Status OK, Configured, ADC Enabled.
  EEPROM Detected, Configuration Loaded.
Boot Complete.
```

Figure 2.2 Example of power up self-test results.

Connecting Devices to the PTPD

To avoid the possibility of noise due to arcing:

Keep the device's on/off switch in the off position until after it is plugged into the PTPD port.

On 115V units, connect devices to the PTPD ports.

On 230V units, install a retention clip on each port. Pull the open prongs out slightly and insert them into holes on the sides of the PTPD adjacent to the port. Then insert the device's power cord and gently snap the retention clip over the cord.

NOTE:

1. Server Technology recommends even distribution of attached devices across the all available outlets to avoid exceeding the outlet, quad or octet ratings limitations. See Ratings in Appendix B: for more information.
2. The outlet retention clips on the 230V PTPD are designed for use with Server Technology's IEC 60320/C13 to IEC 60320/C14 cable (CAB-1302). The retention clip may not properly fit 3rd party cables.

Always disconnect the power supply cord before opening to avoid electrical shock.
Afin d'éviter les chocs électriques, débranchez le cable électrique avant d'ouvrir.
Immer Netzleitung auskuppeln vor den Aufmachen um elektrischen Schlag zu vermeiden.

Connecting to the PTPD (PTPD-x0 models only)

The Sentry Power Distribution Unit is equipped with a single RJ45 RS-232 serial port for attachment to a PC or networked terminal server using the supplied RJ45 to RJ45 crossover cable and RJ45 to DB9F serial port adapter as required. Additionally, the PTPD is equipped with a single IDC10 alarm port for connection to contact-closure overload alarm circuits. See Chapter 4: Appendices for more information these ports.

Chapter 3: Operations (PTPD-x0 models only)

Chapter 3: Operations (PTPD-x0 models only)

Interface

The Sentry Power Distribution Unit has one interface: the Control Screen. This screen displays all data from the Power Distribution Unit.

Displaying the Control Screen

Displaying the Control Screen of a PTPD requires the use of a terminal or terminal emulation software. The terminal or emulation software must be configured to support ANSI or VT100, a supported data rate (300, 1200, 2400, 4800, 9600, 19200, or 38400 BPS)- 8 data bits-no parity-one stop bit and Device Ready output signal (DTR or DSR).

To display or refresh the Control Screen:

Press **Enter**.

Using the Control Screen

The Control Screen displays all status information for the Sentry Power Distribution Unit. Figure 3.1 shows an example of the Control Screen.

```
Power Tower PDU Version 1.0b
Location:
  Input Current:  0.00 Amps
  Alarm Status:   No Alarm
  Threshold:      30 Amps
Press 'L' to edit Location
Press 'T' to adjust Threshold
Press 'Enter' to refresh
```

Figure 3.1 Example Control Screen

Control Screen Key Commands

Key	Action
L	Pressing L allows editing of the Location field.
T	Pressing T allows editing of the overload threshold.
Enter	Displays or refreshes the Control Screen.

The following sections describe each Control Screen field.

Location field

The editable Location field may contain a descriptive location for the PTPD.

To specify a location:

Type **L**. If you are changing an existing name, press the **Backspace** key to erase characters. Enter a 1-30 character string and press **Enter**.

Input Current field

The display-only Input Current field indicates the current cumulative input load for the PTPD, in quarter-ampere granularity. Additionally, the digital LED above the ports on the PTPD indicates the total input load in half-ampere granularity to 10 amperes and whole ampere granularity above 10 amperes.

Threshold field

The editable Threshold field indicates the PTPD 's current overload threshold setting. If the Input Current exceeds the Threshold by 1/8 ampere the PTPD will trigger the audible alarm and the contact-closure alarm output.

To adjust the overload threshold:

Type **t**. Use the + and – key to increase or decrease the threshold value in Amperes. The threshold may be set from 1-31. Press **Enter**.

Alarm Status field

The display-only Control Status field indicates the PTPD 's current alarm state.

Alarm Status Field Values

Display	Description
No Alarm	Current PTPD load is under overload threshold setting.
ALARM -> Over Threshold	Current PTPD load exceeds overload threshold setting.
ALARM (Cleared) -> Over Threshold	Alarm reset - Current PTPD load exceeds overload threshold setting.

```
Power Tower PDU Version 1.0b
Location:
  Input Current:  20.25 Amps
  Alarm Status:   ALARM -> Over Threshold
  Threshold:      20 Amps
Press 'C' to clear Alarm
Press 'L' to edit Location
Press 'T' to adjust Threshold
Press 'Enter' to refresh
```

Figure 3.2 Example Control Screen in an over-threshold condition

Clearing an Over-Threshold Alarm

The over-threshold alarm may be cleared from the Control Screen or by pressing the Alarm Reset button. Clearing the alarm resets both the audible alarm and the contact-closure alarm output.

NOTE: The alarm is automatically cleared if the Input Current returns to 1/8 ampere below the overload threshold.

To clear an alarm from the Control Screen:

Type **c**.

To clear an alarm using the reset button:

On the front of the PTPD, locate the recessed reset button directly below the *Input Current* LED. You will need a non-conductive, non-metallic tool that fits inside the recess.

Insert the tool, then depress and hold the reset button until the audible alarm is silenced.

NOTE: The reset button should be released immediately after the audible alarm is silenced. Failure to release within 7 seconds will result in resetting the PTPD to factory defaults. See Appendix A: Resetting to Factory Defaults for more information.

```
Power Tower PDU Version 1.0b
Location:
  Input Current:  20.25 Amps
  Alarm Status:   ALARM (Cleared) -> Over Threshold
  Threshold:      20 Amps
Press 'L' to edit Location
Press 'T' to adjust Threshold
Press 'Enter' to refresh
```

Figure 3.3 Example Control Screen with a cleared over-threshold condition.

Ending a Session

Sessions are ended automatically after each refresh of the Control Screen.

Chapter 4: Appendices

Chapter 4: Appendices

Appendix A: Resetting to Factory Defaults

You may reset the non-volatile RAM that stores all configurable Sentry Power Distribution Unit options. This clears all editable fields on the Control Screen.

You may reset the Sentry Power Distribution Unit to factory defaults by pressing the reset button.

To reset the PTPD to factory defaults using the reset button:

On the front of the PTPD, locate the recessed reset button directly below the *Input Current* LED. You will need a non-conductive, non-metallic tool that fits inside the recess.

Insert the tool in the recess, then depress and hold the reset button for at least 8 seconds. A reset is indicated by three side-by-side pairs of horizontal lines in the top, middle and bottom of the display. At this point, you may release the reset button. The PTPD will perform a power up self-test and then return to displaying the cumulative input load on the Input Current LED.

Appendix B: Verifying/Setting the Operational Voltage

Vérification/réglage de la tension de service

Überprüfen/Einstellen der Betriebsspannung

PTPD-VE18 models are equipped with an internal input voltage selector switch, for operation in either a 100-120V or a 208-240V environment.

THIS OPERATION SHOULD ONLY BE PERFORMED BY A QUALIFIED TECHNICIAN.
The customer is responsible for proper identification of required input voltage and configuration of the Sentry Power Distribution Unit.

The customer assumes responsibility and liability for possible damage to the Sentry Power Distribution Unit, 3rd party equipment and/or injury to personnel due to improper configuration.

CETTE OPERATION NE DOIT ETRE FAIRE QUE PAR UN TECHNICIEN QUALIFIE.
Il incombe au client de déterminer correctement la tension d'entrée et la configuration du Sentry Power Distribution Unit.

Le client prend la responsabilité si la Tour Electrique est endommagée, autre équipement/ou blessure de personnels à cause d'une configuration incorrecte.

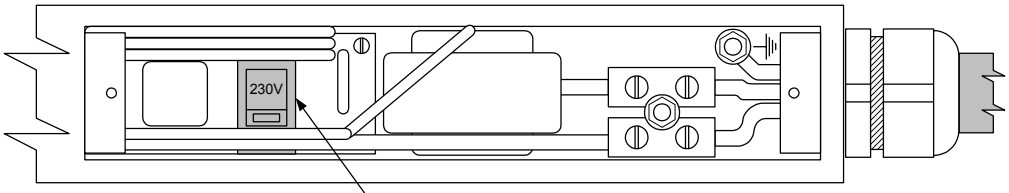
DIESE ARBEITEN SOLLTEN NUR VON EINEM QUALIFIZIERTEN TECHNIKER DURCHGEFÜHRT WERDEN.
Der Kunde ist für die Ermittlung der erforderlichen Eingangsspannung und die Konfiguration des Sentry Power Distribution Unit verantwortlich.

Der Kunde die Verantwortung und Haftung für eine etwaige Beschädigung des Sentry Power Distribution Unit, der Ausrüstung von Fremdfirmen und/oder Verletzungen von Mitarbeitern durch Falsche Konfiguration.

Tools needed:
1. Philips screwdriver

Outils nécessaires:
1. Tournevis cruciforme

Benötigtes Werkzeug Teile:
1. Kreuzschlitzschraubenzieher



Voltage selector switch
Sélecteur de tension
Spannungswahlschalter

Procedure:
1. Unplug Sentry Power Distribution Unit.
2. Open the rear access plate.
   2.1. Remove both screws from access plate on the back of the Sentry Power Distribution Unit.
   2.2. Remove the access plate.
3. Verify the proper setting on the voltage selector switch. Correct as necessary.
   115V – for 100-120V
   230V – for 208-240V
4. Replace rear access plate and secure with original screws.

Procédure:
1. Débrancher la Sentry Power Distribution Unit.
2. Ouvrir la plaque d'accès de dernière.
   2.1. Enlever les deux vis de la plaque d'accès dernière la Power Twoer.
   2.2. Enlever la plaque d'accès.
3. Vérifier que le sélecteur de tension est correctement positionné. Changer le réglage selon le besoin.
   115V – pour 100 -120V
   230V – pour 208-240V
4. Remettre la plaque de dernière et fermer bien avec les vis original.

Vorgangsweise:
1. Ziehen Sie den Stecker des Sentry Power Distribution Unit heraus.
2. Öffnen Sie die hintere Abdeckung.
   2.1. Entfernen Sie beide Schrauben aus der hinteren Abdeckung des Sentry Power Distribution Unit.
   2.2. Nehmen Sie die Abdeckung ab.
3. Vergewissern Sie sich, dass der Spannungswahlschalter richtig eingestellt ist. Ändern Sie die Einstellung bei Bedarf.
   115V - für 100 - 120 V
   230V - für 208 - 240 V
4. Bringen Sie die hintere Abdeckung wieder an, und befestigen Sie sie mit den Originalschrauben.

NOTE:
Changing the voltage setting of the Sentry Power Distribution Unit may require changing of the input power cord. For information on changing the input power cord, go to www.servertech.com.
Le changement du réglage de tension du Sentry Power Distribution Unit peur exiger le changement du cordon d'alimentation. Pour toute information concernant le changement du cordon, consulter le site www.servertech.com.
Bei einer Änderung der Spannungseinstellung des Sentry Power Distribution Unit muss unter Umständen das Netzkabel ausgetauscht werden. Informationen über den Austausch des Netzkabels finden Sie unter www.servertech.com.

Appendix C: Technical Specifications

Standard Models

Vertical Installation

Model	Voltage	Inlet	Cordset (10')	Outlets
PTPD-V008-1-01	100-120V, 50/60Hz	Hardwired	NEMA 5-20P, 20A/125V straight	8 NEMA 5-20R
PTPD-V008-1-03	100-120V, 50/60Hz	Hardwired	NEMA 5-15P, 15A/125V straight	8 NEMA 5-20R
PTPD-V008-1-04	100-120V, 50/60Hz	Hardwired	NEMA L5-20P, 20A/125V locking	8 NEMA 5-20R
PTPD-V008-1-05	100-120V, 50/60Hz	Hardwired	NEMA L5-30P, 30A/125V locking	8 NEMA 5-20R
PTPD-V008-2-02	208-240V, 50/60Hz	IEC 60320/C20	*	8 IEC 60320/C13
PTPD-V008-2-06	208-240V, 50/60Hz	Hardwired	NEMA L6-30P, 30A/230V locking	8 IEC 60320/C13
PTPD-V016-1-01	100-120V, 50/60Hz	Hardwired	NEMA 5-20P, 20A/125V straight	16 NEMA 5-20R
PTPD-V016-1-03	100-120V, 50/60Hz	Hardwired	NEMA 5-15P, 15A/125V straight	16 NEMA 5-20R
PTPD-V016-1-04	100-120V, 50/60Hz	Hardwired	NEMA L5-20P, 20A/125V locking	16 NEMA 5-20R
PTPD-V016-1-05	100-120V, 50/60Hz	Hardwired	NEMA L5-30P, 30A/125V locking	16 NEMA 5-20R
PTPD-V016-2-02	208-240V, 50/60Hz	IEC 60320/C20	*	16 IEC 60320/C13
PTPD-V016-2-06	208-240V, 50/60Hz	Hardwired	NEMA L6-30P, 30A/230V locking	16 IEC 60320/C13
PTPD-VE16-1-01	100-120V, 50/60Hz	Hardwired	NEMA 5-20P, 20A/125V straight	16 NEMA 5-20R
PTPD-VE16-1-03	100-120V, 50/60Hz	Hardwired	NEMA 5-15P, 15A/125V straight	16 NEMA 5-20R
PTPD-VE16-1-04	100-120V, 50/60Hz	Hardwired	NEMA L5-20P, 20A/125V locking	16 NEMA 5-20R
PTPD-VE16-1-05	100-120V, 50/60Hz	Hardwired	NEMA L5-30P, 30A/125V locking	16 NEMA 5-20R
PTPD-VE18-0-01	100-240V, 50/60Hz	Hardwired	NEMA 5-20P, 20A/125V straight	18 IEC 60320/C13
PTPD-VE18-0-03	100-240V, 50/60Hz	Hardwired	NEMA 5-15P, 15A/125V straight	18 IEC 60320/C13
PTPD-VE18-0-04	100-240V, 50/60Hz	Hardwired	NEMA L5-20P, 20A/125V locking	18 IEC 60320/C13
PTPD-VE18-0-05	100-240V, 50/60Hz	Hardwired	NEMA L5-30P, 30A/125V locking	18 IEC 60320/C13
PTPD-VE18-0-06	100-240V, 50/60Hz	Hardwired	NEMA L6-30P, 30A/230V locking	18 IEC 60320/C13

Horizontal/Rack Installation

Model*	Voltage	Inlet	Cordset	Outlets
PTPD-H008-1-01	100-120V, 50/60Hz	Hardwired	NEMA 5-20P, 20A/125V straight	8 NEMA 5-20R
PTPD-H008-1-03	100-120V, 50/60Hz	Hardwired	NEMA 5-15P, 15A/125V straight	8 NEMA 5-20R
PTPD-H008-1-04	100-120V, 50/60Hz	Hardwired	NEMA L5-20P, 20A/125V locking	8 NEMA 5-20R
PTPD-H008-1-05	100-120V, 50/60Hz	Hardwired	NEMA L5-30P, 30A/125V locking	8 NEMA 5-20R
PTPD-H008-2-02	208-240V, 50/60Hz	IEC 60320/C20	*	8 IEC 60320/C13
PTPD-H008-2-06	208-240V, 50/60Hz	Hardwired	NEMA L6-30P, 30A/230V locking	8 IEC 60320/C13
PTPD-H016-1-01	100-120V, 50/60Hz	Hardwired	NEMA 5-20P, 20A/125V straight	16 NEMA 5-20R
PTPD-H016-1-03	100-120V, 50/60Hz	Hardwired	NEMA 5-15P, 15A/125V straight	16 NEMA 5-20R
PTPD-H016-1-04	100-120V, 50/60Hz	Hardwired	NEMA L5-20P, 20A/125V locking	16 NEMA 5-20R
PTPD-H016-1-05	100-120V, 50/60Hz	Hardwired	NEMA L5-30P, 30A/125V locking	16 NEMA 5-20R
PTPD-H016-2-02	208-240V, 50/60Hz	IEC 60320/C20	*	16 IEC 60320/C13
PTPD-H016-2-06	208-240V, 50/60Hz	Hardwired	NEMA L6-30P, 30A/230V locking	16 IEC 60320/C13

* Input cordset selected at time of purchase. Current options available (Contact your account representative for more information):
  1. IEC 60320/C19 to CEE7/7 Schuko for use in continental Europe.
  2. IEC 60320/C19 to NEMA L6-20P for use in North America.
  3. IEC 60320/C19 cable-mount connector.

Ratings

POWER RATINGS	*INDICE D'ALIMENTATION*	NENNLEISTUNG
PTPD-V0##-y-0z* * ## - Number of outlets y - Input Voltage (1-100-120V, 50/60Hz w/NEMA outlets, 2-100-240V 60Hz & 230V 50/60Hz w/IEC 60320/C13 outlets) z - Power input configuration	*PTPD-V0##-y-0z** * *## - Nombre de prises* *y - Tension d'entrée (1-100-120V, 50/60Hz w/NEMA prises, 2-100-240V 60Hz & 230V 50/60Hz w/ IEC 60320/C13 prises)* *z – Configuration de l'entrée de l'alimentation*	PTPD-V0##-y-0z* * ## - Anzahl der Anschlussstellen y - Eingangsspannung (1 - 100-120V, 50/60Hz mit NEMA-Anschlussstellen, 2 - 100-240V, 60Hz, und 230V, 50/60Hz mit IEC 60320/C13-Anschlussstellen) z - Eingangskonfiguration

Available Configurations *Configurations Disponibles* Verfügbare Konfigurationen[6]

	Input Current Ratings[1,2] *L'indice du courant d'entrée* Eingangsstromstärke		**Output Current Ratings** *L'indice du courant de sortie* Ausgangsstromstärke							
Outlets *Prises* Anschlussstellen	**Voltage** *Tension* Spannung	**Current** *Courrant* Strom	**Outlet** *Prise* Anschlussstelle	**Quad**[3] **A**	**B**	**C**	**D**	**Octet**[4] **A&B**	**C&D**	**Sextet**[5]	**Total** *Total* Insgesamt
08	100-120V 50/60Hz	15	10	15	15			15			15
08	100-120V 50/60Hz	20	10	15	15			20			20
08	100-120V 50/60Hz	30	10	15	15			30			30
16	100-120V 50/60Hz	15	10	15	15	15	15	15	15		15
16	100-120V 50/60Hz	20	10	15	15	15	15	15	15		20
16	100-120V 50/60Hz	30	10	15	15	15	15	15	15		30
18	100-120V 50/60Hz	15	10							10	15
18	100-120V 50/60Hz	20	10							10	20
18	100-120V 50/60Hz	30	10							10	30
08	208-240V 60Hz	20	6	10	10			20			20
08	208-240V 60Hz	30	6	15	15			30			30
16	208-240V 60Hz	20	6	10	10	10	10	20	20		20
16	208-240V 60Hz	30	6	15	15	15	15	24	24		30
18	208-240V 60Hz	20	6							10	20
18	208-240V 60Hz	30	6							10	30
08	230V 50/60Hz	16	6	10	10			16			16
08	230V 50/60Hz	30	6	15	15			30			30
16	230V 50/60Hz	16	6	10	10	10	10	16	16		16
16	230V 50/60Hz	30	6	15	15	15	15	24	24		30
18	230V 50/60Hz	16	6							10	16
18	230V 50/60Hz	30	6							10	30

[1] **All current ratings are in amperes.**
Tous les indices de courant sont en ampères.
Alle Angaben der Stromstärke erfolgen in Ampere.

[2] **Input current ratings are based on the power input configuration.**
Les indices du courant d'entrée sont basés sur la configuration de tension d'entrée.
Die Eingangsstromstärke hängt von der Eingangskonfiguration ab.

[3] A=A1+A2+A3+A4 or 1+2+3+4, B=B1+B2+B3+B4 or 5+6+7+8, C=C1+C2+C3+C4 or 9+10+11+12, D=D1+D2+D3+D4 or 13+14+15+16

[4] A&B=A1+A2+A3+A4+B1+B2+B3+B4 or 1+2+3+4+5+6+7+8, C&D=C1+C2+C3+C4+D1+D2+D3+D4 or 9+10+11+12+13+14+15+16

[5] 1+2+3+4+5+6 OR 7+8+9+10+11+12 OR 13+14+15+16+17+18

[6] **The following configurations are NOT available:**
100-120V units with 16A input current rating.
208-240V and 230V units with 15A input current rating.

Les configurations suivantes NE SONT PAS disponible:
Unités de 100-120V avec indice de courant d'entrée de 16A.
Unités de 208-240V et 230V avec indice de courant d'entrée de 15A.

Die folgenden Konfigurationen sind NICHT verfügbar:
100-120V-Einheiten mit einer Eingangsstromstärke von 16A
208-240V und 230V-Einheiten mit einer Eingangsstromstärke von 15A

Physical Specifications

Model	PTPD-	**Vx08**	**Vx16**	**Vx18**	**Hx08**	**Hx16**
Size (H, W, D):	'0' series	43.0 x 1.75 x 2.25 in	65.0 x 1.75 x 2.25 in	N/A	1.75 x 17.25 x 5.5 in	33.0 x 1.75 x 2.25 in
	'E' series	N/A	63.0 x 2.0 x 1.75 in	62.0 x 2.0 x 1.75 in	N/A	N/A
Weight:		8.0 lb	10.9 lb	10.6 lb	7.0 lb	7.8 lb
Temperature:	Operating	0° to 50° C (32° to 122° F)				
	Storage	-40° to 85° C (-40° to 185° F)				
Elevation: (above MSL):	Operating	0 to 10,000 ft (0 to 3000 m)				
	Storage	0 to 50,000 ft (0 to 15 000 m)				
Rel. humidity:	Operating	10 to 90%, non-condensing				
	Storage	10 to 90%, non-condensing				
Approvals		cTUVus, TUV-GS[1]				

[1] cTUVus - UL 60950:2000, CAN/CSA 22.2 No. 60950-00, TUV-GS - EN60950:2000

Fuses

100-120V Sentry Power Distribution Units may be equipped with fuses to protect each internal power branch. Replacement fuses must meet the following requirements:

	PTPD-x0xx models	PTPD-VE18 models
Type	Fast-acting ceramic	Time-delay ceramic
Form factor	¼"x 1-¼"	5mm x 20mm
AC Voltage Rating	250V	250V
Amperage Rating	15A	10A
Interrupt Rating @125V	10000A	N/A
Cooper-Bussman Part Number*	ABC-15	S505-10A

* Server Technology recommends the use of Cooper-Bussman fuses available through Graybar or Brill Electronics

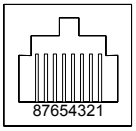
NOTE: PTPDs have two or three internal power branches.
8-port: Branch A – ports A1-A4 or 1-4, Branch B – ports B1-B4 or 5-8
16-port: Branch A – ports A1-A4 & B1-B4 or 1-8, Branch B – ports C1-C4 & D1-D4 or 9-16
18-port: Branch A – ports 1-6, Branch B – ports 7-12, Branch C – ports 13-18

Data Connection (PTPD-x0 models only)

RS-232 Serial port

Sentry Power Distribution Units are equipped standard with an RJ45 RS-232c serial port. This connector may be used for direct local access or from other serial devices such as a terminal server. An RJ45 crossover cable is provided for connection to an RJ45 DTE serial port.

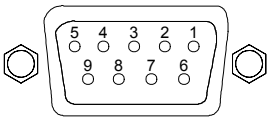
Pin	DTE Signal Name		Input/Output
1	Request to Send	RTS	Output
2	Data Terminal Ready	DTR	Output
3	Transmit Data	TD	Output
4	Signal Ground		
5	Signal Ground		
6	Receive Data	RD	Input
7	Data Set Ready	DSR	Input
8	Clear to Send	CTS	Input



RJ45 to DB9F serial port adapter

Additionally, an RJ45 to DB9F serial port adapter is provided for use in conjunction with the RJ45 crossover cable to connect to a PC DB9M DTE serial port. The adapter pinouts below reflect use of the adapter with the provided RJ45 crossover cable.

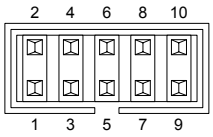
Pin	DCE Signal Name		Input/Output
1			
2	Receive Data	RD	Output
3	Transmit Data	TD	Input
4	Data Terminal Ready	DTR	Input
5	Signal Ground		
6	Data Set Ready	DSR	Output
7	Request to Send	RTS	Input
8	Clear to Send	CTS	Output



IDC10 alarm port

Sentry Power Distribution Units are equipped standard with an IDC10 alarm port for use with contact-closure overload alarm circuits. (Pins 1-7 are not used.)

Pin	
8	Normally Open
9	Common
10	Normally Closed



NOTE:

1. Normally Open: The relay switches to close the circuit in response to an over-threshold alarm.
   Normally Closed: The relay switches to open the circuit in response to an over-threshold alarm.
2. Relay specifications:
   Manufacturer's rating
   - Maximum switching voltage – 220V DC, 250V AC
   - Maximum switching current – 2A DC, AC

   UL/CSA rating
   - 0.6A, 125V AC
   - 0.6A, 110V DC
   - 2A, 20V DC

Appendix D: Warranty, Product Registration and Support

Warranty and Limitation of Liability

Server Technology, Inc. agrees to repair or replace Products that fail due to a defect within twelve (12) months after the shipment date of each Product unit to Buyer ("Warranty Period"). For purposes of this Agreement the term "defect" shall mean the Product fails to operate or fails to conform to its applicable specifications. Any claim made pursuant to this Agreement shall be asserted or made in writing only by Buyer. Buyer shall comply with Server Technology's Standard Return Merchandise Authorization ("RMA") procedure for all warranty claims as set forth in Server Technology's operation manual. **Buyer must return Products in original packaging and in good condition.** This limited warranty does not include labor, transportation, or other expenses to repair or reinstall warranted Products on site or at Buyer's premises.

Server Technology reserves the right to investigate any warranty claims to promptly resolve the problem or to determine whether such claims are proper. In the event that after repeated efforts Server Technology is unable to repair or replace a defective Product, then Buyer's exclusive remedy and Server Technology's entire liability in contract, tort, or otherwise shall be the payment by Server Technology of Buyer's actual damages after mitigation, but shall not exceed the purchase price actually paid by Buyer for the defective Product.

Server Technology shall have no responsibility or liability for any Product, or part thereof, that (a) has had the Serial Number, Model Number, or other identification markings altered, removed or rendered illegible; (b) has been damaged by or subject to improper installation or operation, misuse, accident, neglect and/or has been used in any way other than in strict compliance with Server Technology's operation and installation manual; (c) has become defective or inoperative due to its integration or assembly with any equipment or products not supplied by Server Technology; (d) has been repaired, modified or otherwise altered by anyone other than Server Technology and/or has been subject to the opening of any sealed cabinet boxes without Server Technology's prior written consent. If any warranty claim by Buyer falls within any of the foregoing exceptions, Buyer shall pay Server Technology its then current rates and charges for such services.

THE ABOVE WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THOSE OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ALL OF WHICH ARE EXPRESSLY DISCLAIMED. SERVER SHALL NOT BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, OR EXEMPLARY DAMAGES; EVEN OF IT HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

For warranty issues, contact the Product Support Department at the number listed above. All repair and return shipments must be approved by Server and must be accompanied by a RMA (Return Merchandise Authorization) number and dated proof of purchase.

Product Registration

Registration is your key to special offers and services reserved for Registered Users.

- Excellent Technical Support Services
- Special Update and Upgrade Programs
- Warranty Protection
- Extended Warranty Service
- New Product Information

Register your products online today!

www.servertech.com\support\supportindex.htm

Technical Support

Server Technology understands that there are often questions when installing and/or using a new product. Free Technical Support is provided from 8:30 AM to 5:00 PM, Monday-Friday, Pacific Time.

Server Technology, Inc.
1040 Sandhill Drive — Tel: 775.284.2000 — Web: www.servertech.com
Reno, Nevada 89521 USA — Fax: 775.284.2065 — Email: support@servertech.com

Return Merchandise Authorization

If you have a unit that is not functioning properly and is in need of technical assistance or repair:

Submit a request for support by phone at the above number, or via the web at www.servertech.com/forms/techrequest.htm.

Be ready to provide:
- Company Name
- Contact Name, Phone Number, and Email address
- Model or Part Number (from the label on the equipment)
- Server Technology Serial Number
- Version of code (type 'vers' at the Sentry: prompt)
- Description of problem

1. Technical Support will work to diagnose/resolve the problem remotely, if possible. If the problem cannot be resolved, Technical Support will then issue an RMA# for the return/repair of the equipment in question. RMA#'s are valid for 30 days only from the issue date.
2. Shipping charges for the return of the equipment to Server Technology shall be the responsibility of the customer. For warranty repairs, Server Technology shall assume return shipping charges but for non-warranty repairs, the shipping charges shall be billed.
3. The RMA# shall be placed conspicuously on all shipping documentation, associated correspondence, and the shipping container.
4. Equipment must be returned in proper/original packaging to protect the equipment in transit. The customer shall be financially responsible for any damage/destruction of the equipment due to improper packaging.
5. Equipment shall typically be turned around within 48-72 hours of receipt at Server Technology. Equipment under warranty shall be repaired at no cost. Equipment NOT under warranty shall be repaired at the standard labor rate plus parts. Upon diagnosis of the equipment, the customer shall be notified of estimated charges prior to repair.
6. For non-warranty repairs, return of the equipment will be expedited with the inclusion of a Purchase Order or credit card number for incurred charges.

Server Technology, Inc.

1040 Sandhill Drive, Reno, Nevada 89521 • (775) 284-2000 • Fax: (775) 284-2065
E-mail: sales@servertech.com • World Wide Web: www.servertech.com

301-0121-1 Rev. C (060603)