



Fail-Safe Transfer Switch

Installation 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.

Notices

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Chapter 1: Introduction

Quick Installation Checklist

The following steps are recommended to quickly install and configure your Fail-Safe Transfer Switch for use in your data center equipment cabinet:

1. Mount the Fail-Safe Transfer Switch.
2. Select the operating voltage.
3. Select the primary power feed.
4. Connect to the power sources.
5. Connect the devices to the Fail-Safe Transfer Switch.

Technical Support



Experience Server Technology's FREE Technical Support

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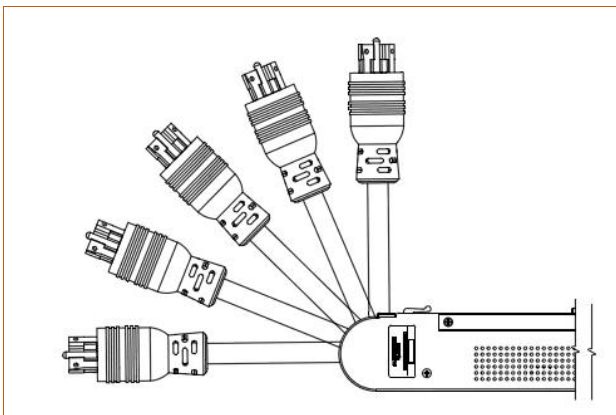
Fax: 775.284.2065

Email: support@servertech.com

PDU Power Pivot™

Server Technology's Power Pivot™ flexible infeed provides a simplified power cord routing to the PRO2 unit with a design that eliminates bend radius issues.

As illustrated below, the Power Pivot capability can deliver a solution for several types of PDU installations and mountings, setting the correct cord angle for overhead power, offset overhead power, concrete floor, raised floor, and intra-rack power.



Power Pivot – Flexible Cord Design

To learn more about Power Pivot and watch a brief video that animates the Power Pivot mounting angles in the equipment rack, see the Server Technology website at: <http://info.servertech.com/PDUpowerpivot>

Equipment Overview

1. The Range Select switch selects the operational voltage.
2. The Primary Select switch selects the primary power source.
3. The power inlets connect the Fail-Safe Transfer Switch to the electrical power sources.
4. LEDs display the input feeds power status.

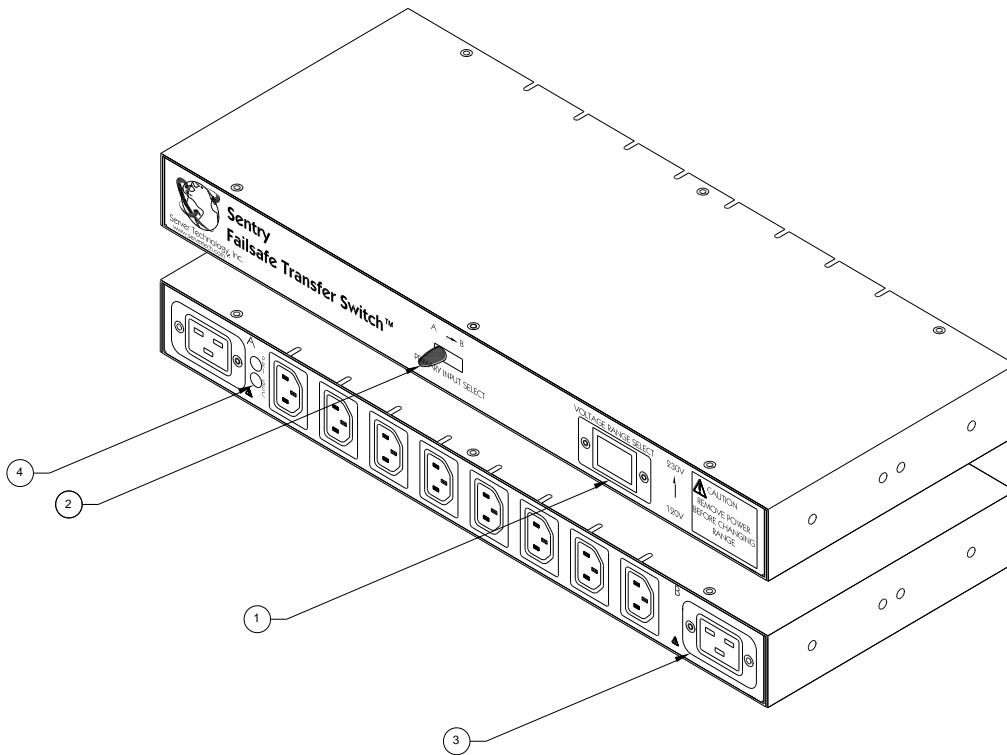


Figure 1. Fail-Safe Transfer Switch Views

Chapter 2: Installation

Before installing your Fail-Safe Transfer Switch, 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 hardware: two mounting brackets and four screws.
- Separate power input cords.

Additional Required Items

- Flathead and Phillips screwdrivers.
- Screws, washers, and nuts to attach the CDU to your rack.

Safety Precautions

This section contains important safety and regulatory information that **must be reviewed** before installing and using the Rack-Mount Fail-Safe Transfer Switch.

	Only for installation and use in a Restricted Access Location in accordance with the following installation and use instructions. This equipment should only be installed by trained personnel.	Destiné à l'installation et l'utilisation dans le cadre de Restricted Access Location selon les instructions d'installation et d'utilisation. Cet équipement est uniquement destiné à être installé par personnel qualifié.	Nur für Installation und Gebrauch in eingeschränkten Betriebszonen gemäß der folgenden Installations- und Gebrauchsanweisungen. Dieses Gerät ist nur für den Einbau durch Personal vorgesehen.
	This equipment is designed to be installed on a dedicated circuit. The power supply cord shall be a minimum of 1.5m (4.9ft) and a maximum of 4.5m (15ft). If using an extension power cord, the total length shall also be no more than the maximum allowed. The plug is considered the disconnect device and must be easily accessible.	Cet équipement a été conçu pour être installé que un circuit dédié. Le cordon d'alimentation doit être d'au moins 1,5M et un maximum de 4,5m. Si vous utilisez un cordon de rallonge, la longueur totale est également plus que le maximum autorisé. La prise est considérée comme un dispositif de coupure et doit être facilement accessible.	Die Geräte sind für eine Installation an einer fest zugeordneten Leitung ausgelegt. Die Stromzuleitung hat eine Mindestlänge von 1,5m, und höchstens 4,5m. Sollten Sie ein Verlängerungsnetzkabel, der Gesamtlänge auch nicht mehr als die maximal zulässig sein. Der Stecker dient zur Trennung vom Netz und muss einfach erreichbar sein.
	The dedicated circuit must have circuit breaker or fuse protection. CDUs 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 the current rating of the CDU must be provided and must meet all applicable codes and regulations. In North America, protection must have a 10,000A interrupt capacity.	Le circuit spécialisé doit avoir un disjoncteur ou une protection de fusible. CDUs 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. CDUs verfügt über keinen Hauptschutzschalter bzw. über keine Sicherung, damit kein einzelner Fehlerpunkt entstehen kann. Der Kunde ist dafür verantwortlich, den Stromkreis sachgemäß zu schützen. 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.
	Models with unterminated power cords: Input connector must be installed by qualified service personnel. Input connector rating must meet all applicable codes and regulations.	Modèles avec cordons d'alimentation non terminées: Le connecteur d'entrée doit être installé par un personnel qualifié. Entrée cote de raccordement doit respecter tous les codes et règlements électriques applicables.	Modelle mit nicht abgeschlossenen Netzkabel: Der Eingangsstecker darf nur von qualifiziertem Wartungspersonal installiert werden. Eingangsanschluss Bewertung müssen alle geltenden und verbindlichen Normen und Vorschriften entsprechen.
	Do not block venting holes when installing this product. Allow for maximum airflow at all times.	Ne bloquez pas les orifices d'aération lors de l'installation de ce produit. Permettre une circulation d'air maximale à tout moment.	Achten Sie darauf, dass keine Belüftungslöcher bei der Installation dieses Produkts. Damit für maximalen Luftstrom zu allen Zeiten.
	Installation Orientation: Vertical units are designed to be installed in vertical orientation.	Installation Orientation: Les unités vertical sont conçues pour être installées dans une orientation verticale.	Installationsausrichtung: Vertical Einheiten sind zur vertikalen Installation vorgesehen.
 	Always disconnect the power supply cord before servicing to avoid electrical shock. For products with two input power cords, both must be disconnected before servicing.	Toujours débrancher le cordon d'alimentation avant de l'ouverture pour éviter un choc électrique. Pour les produits avec deux cordons d'alimentation d'entrée, les deux doivent être déconnectés avant l'entretien.	Trennen Sie das Netzkabel, bevor Sie Wartungsarbeiten Öffnung einen elektrischen Schlag zu vermeiden. Für Produkte mit zwei Eingangsstromkabel, sowohl, müssen vor der Wartung abgeschaltet werden.
	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 Ableitstrom! Ein Erdungsanschluss ist vor dem Einschalten der Stromzufuhr erforderlich!
 	WARNING! Cx-xxE-x units double pole/neutral fusing	ATTENTION! Les unités Cx-xxE-x Double Pôle/Fusible sur le Neutre	ACHTUNG! Cx-xxE-x Zweipolige bzw. Neutralleiter-Sicherung
	ATTENTION! Observe precautions for handling Electrostatic Sensitive Devices.	Attention ! Respecter les mesures de sécurité en manipulant des dispositifs sensibles aux décharges électrostatiques.	Achtung! Vorsichtshinweise zur Handhabung elektrostatisch empfindlicher Geräte beachten.
	Products rated for 240/415VAC may be fitted with a plug that is rated for a higher voltage. Caution must be taken to assure that the rating of the unit and the supply voltage match.	Les produits prévus pour 240/415VAC peut être équipé d'un bouchon qui est conçu pour une tension plus élevée. Des précautions doivent être prises pour assurer que la cote de l'unité et la tension d'alimentation correspond.	Produkte die für 240/415VAC zugelassen sind können mit einem Stecker der für eine höhere Spannung ausgestattet sein. Vorsicht ist geboten, um sicherzustellen, dass die erlaubten Betriebswerte des Gerätes und der Versorgungsspannung zueinander passen.

Installing the Power Input Retention Bracket

To install the power input retention bracket

1. Remove the two screws attaching the IEC 60320 C19 inlet to the enclosure.
2. Assemble and attach the retention bracket to the enclosure as shown.

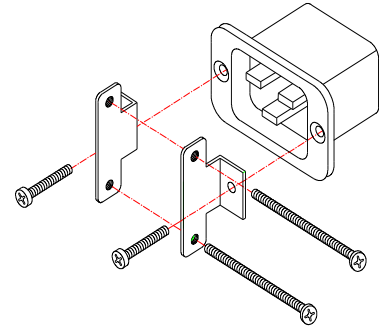


Figure 2. Retention Bracket Assembly

Mounting

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

NOTE: A mounting bracket kit for 23" wide racks or cabinets is available. For more information, contact your Server Technology sales representative.

Selecting the Operational Voltage

IMPORTANT! Before selecting or changing the operation voltage, ensure that both power inputs have been detached from the unit.

1. Remove the Range Select cover plate.
2. Select operational voltage range.
3. Reattach cover plate.

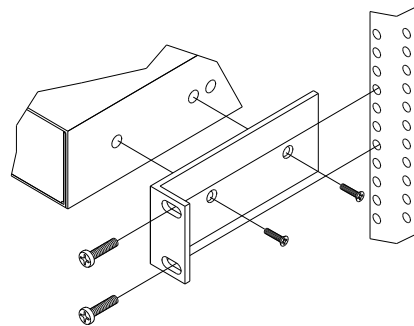


Figure 3. Mounting

Selecting the Primary Input Feed

Slide the **Primary Select** switch to desired primary input feed. The LEDs indicate input feed power status. Refer to the following table for output power source related to input feed power availability.

Input Feed-to-Output Power Source Association

Primary Input	Secondary Input	Output Power Source
On	On	Primary
Off	On	Secondary
On	Off	Primary
Off	Off	Off

Connecting to the Power Source



CAUTION!

Installation of this Transfer Switch should be performed by qualified personnel only.

This Transfer Switch requires that the applied AC waveforms from both power sources be in phase with respect to each other. Failure to do so can potentially damage the unit and create an unexpected...



...to be present on the pins of either the A Source or the B Source plug when disconnected, or on the A Source or the B source output receptacles.

For questions about this requirement, contact Server Technology Technical Support at:

Phone: 1-800-835-1515

Email: support@servertech.com

To attach a power cord to the unit

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

To connect to the power source

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

Connecting Devices

1. Keep the device's on/off switch in the off position until after it is plugged into the outlet.
2. Connect devices to the CDU outlets.

NOTE: Server Technology recommends even distribution of attached devices across all available outlets to avoid exceeding the outlet, branch, or phase limitations.



Always disconnect ALL power supply cords before opening to avoid electrical shock.
Afin d'éviter les chocs électriques, débranchez TOUTES les câbles électrique avant d'ouvrir.
Immer ALLE Netzleitungen auskuppeln vor den Aufmachen um elektrischen Schlag zu vermeiden.

Chapter 3: Appendices

Appendix A: Technical Specifications

Regulatory Compliance

Product Safety

Units have been safety tested and certified to the following standards:

- USA/Canada UL 60950:2007 and CAN/CSA 22.2 No. 60950-1-07
- European Union EN60950-1:2006+A11

This product is also designed for Norwegian IT power system with phase-to phase voltage 230V.

USA Notification

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.

Modifications not expressly approved by the manufacturer could void the user's authority to operated the equipment under FCC rules.

Canadian Notification

This Class A digital apparatus complies meets all requirements of the Canadian Interference-Causing Equipment Regulations.

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

European Union Notification

Products with the CE Marking comply with both the EMC Directive (89/336/EEC) and the Low Voltage Directive (73/23/EEC) issued by the Commission of the European Community.

Compliance with these directives implies conformity to the following European Norms:

- EN55022 Electromagnetic Interference
- EN55024 Electromagnetic Immunity
- EN60950-1 Product Safety
- EN61000-3 Harmonics and Flicker



Products with the following mark comply with the RoHS Directive (2002/95/EC) issued by the Commission of the European Community.

Japanese Notification

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Recycling



Server Technology Inc. encourages the recycling of its products. Disposal facilities, environmental conditions and regulations vary across local, state and country jurisdictions, so Server Technology encourages consultation with qualified professional and applicable regulations and authorities within your region to ensure proper disposal.

Waste Electrical and Electronic Equipment (WEEE)



In the European Union, this label indicates that this product should not be disposed of with household waste. It should be deposited at an appropriate facility to enable recovery and recycling.

Appendix B: Product Support Information

Warranty

For the Server Technology warranty information, please see our website at www.servertech.com

Technical Support



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Return Merchandise Authorization

If you have a product that is not functioning properly and needs technical assistance or repair, see the Server Technology **Return Merchandise Authorization** process at: www.servertech.com





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