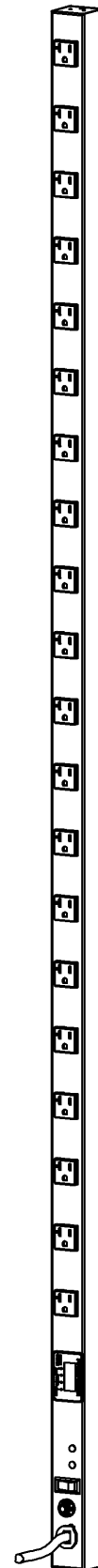
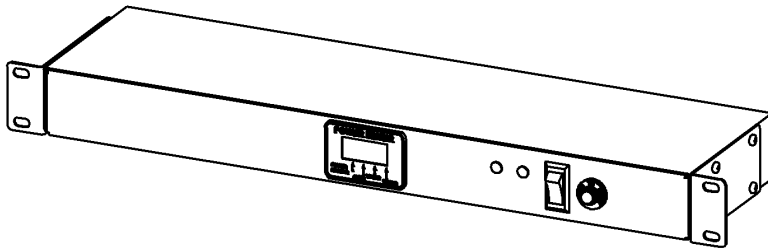




Instruction Manual
Rack Power Distribution Unit

BR, SP, SVR, VRT,
NSV and VSS Series



Contents

Contents	2
Specifications	3
Overview	3
Environmental	3
Electrical	3
Receptacle Ratings	3
EMC Verification	4
Installation	5
Instructions	5
Guidelines	5
Mounting	6
Optional Surge Suppression	14
Surge Protection Circuit Ratings	14
Optional Local Monitoring	15
Power Meter	15
Current Meter	15
Service/Tech Support	16
Service and Maintenance	16
More Technical Support	16
Table of Figures	17
Revision History	18
Revision History	18

Specifications

Overview

The BR, SP, SVR, VRT, NSV, and VSS Series products are Power Distribution Units (PDU) intended for connection to a 15 or 20 Amp AC Mains circuit. The PDUs may include optional single pole thermal breakers for supplementary over-current protection of the output receptacles. The VRT, SVR, NSV, and VSS Series are available in vertical configurations rated 125 V, while the BR and SP Series are available in horizontal configurations rated 125 V. All PDU Series covered by this instruction sheet can optionally be configured with a Geist Power Meter that provides local monitoring and display of Current, Voltage, Wattage, and Power Factor.

Environmental

Temperature

Operating:	10°C (50°F) min	45°C (113°F) max
Storage:	-25°C (-13°F) min	65°C (149°F) max

Humidity

Operating:	5% min	95% max	(non-condensing)
Storage:	5% min	95% max	(non-condensing)

Elevation

Operating:	0 m (0 ft) min	2000 m (6561 ft) max
Storage:	0 m (0 ft) min	15240 m (50000 ft) max

Electrical

See nameplate for unit ratings.

Receptacle Ratings

NEMA 5-15R or L5-15R 125 Volts, 15 Amp
NEMA 5-20R or L5-20R 125 Volts, 20 Amp

EMC Verification

This Class A device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This Class A digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.

Warning: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

Installation

Instructions

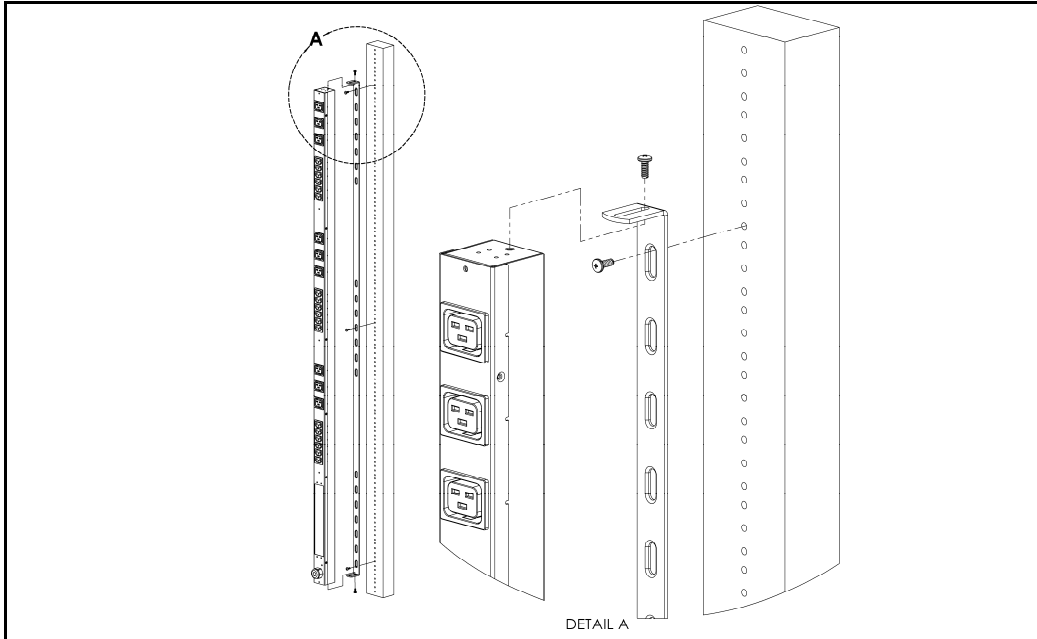
1. Using appropriate hardware, mount PDU to rack (see Mounting section for additional instructions).
2. Plug PDU into de-energized 15 or 20 Amp branch circuit receptacle¹.
3. Connect devices into PDU's output receptacles. It is recommended that the devices are turned off until all devices are connected to PDU
4. Turn on branch circuit to energize PDU.
5. Power on devices. Sequential power up is recommended to avoid high inrush current.

Guidelines

- If the PDU is installed in a cabinet the ambient temperature of the rack should be no greater than 45°C.
- Install the PDU such that the amount of airflow required for safe operation of equipment is not compromised.
- Mount the PDU so that a hazardous condition is not achieved due to uneven mechanical loading.
- Follow nameplate ratings when connecting equipment to the branch circuit. Take into consideration the effect that overloading of the circuits might have on over-current protection and supply wiring.
- The PDU relies on the building installation for protection from over-current conditions. A Listed circuit breaker is required within the building installation. The circuit breaker should be sized according to the PDU's nameplate ratings and local/national electrical codes.
- Reliable earthing of rack-mount equipment should be maintained. Particular attention should be given to supply connections other than direct connections to the branch circuit. The PDU must be connected to an earthed socket-outlet.
- The PDU is intended for Restricted Access Locations only and only qualified service personnel should install and access the PDU.
- For pluggable equipment, install the PDU so that the input plug or appliance coupler may be disconnected for service.
- Sequential power-up of devices powered by the PDU is recommended to avoid high inrush current.
- **Caution:** Disconnect all power cords before servicing.

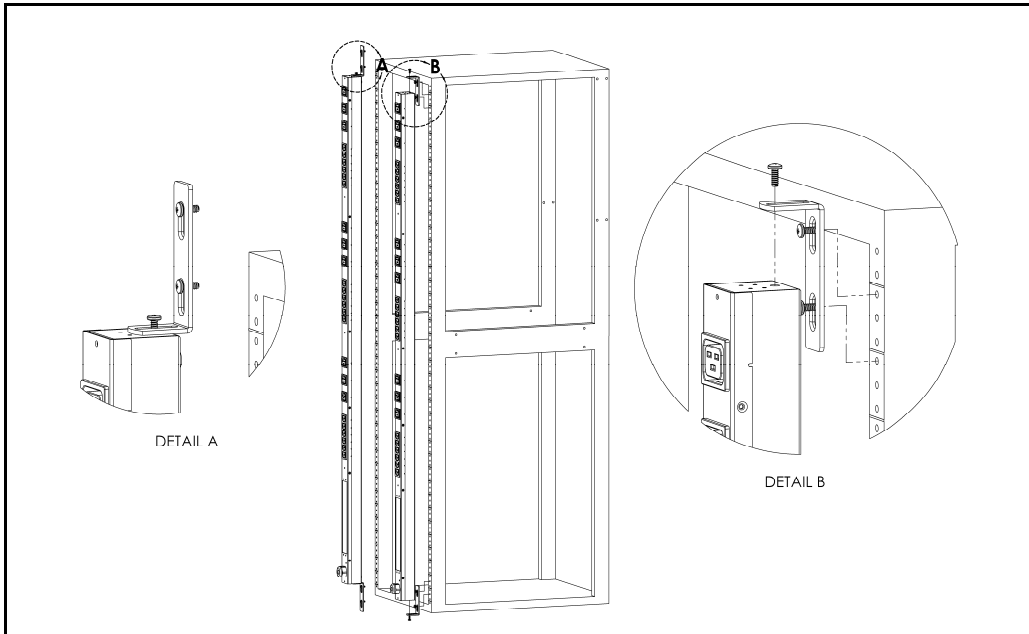
¹ Branch Circuit should be sized based on the PDU's nameplate electrical rating. A 12 Amp rated PDU is intended for use on a 15 Amp Branch Circuit, while a 16 Amp rated PDU is intended for use on a 20 Amp Branch Circuit.

Mounting



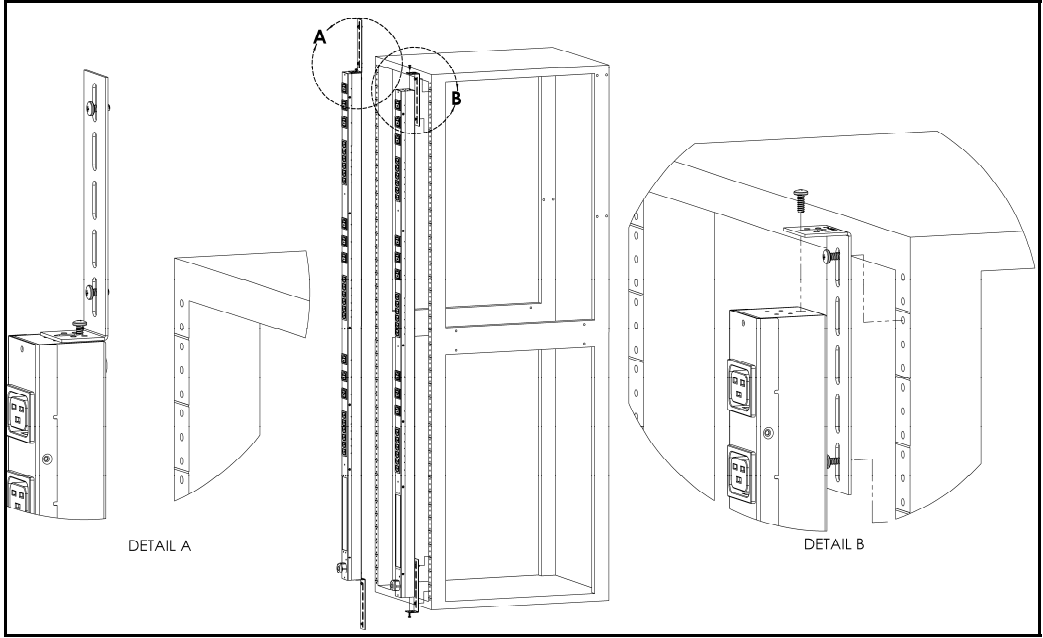
Full Length Bracket

Using the full length bracket, mount PDU to rack as shown



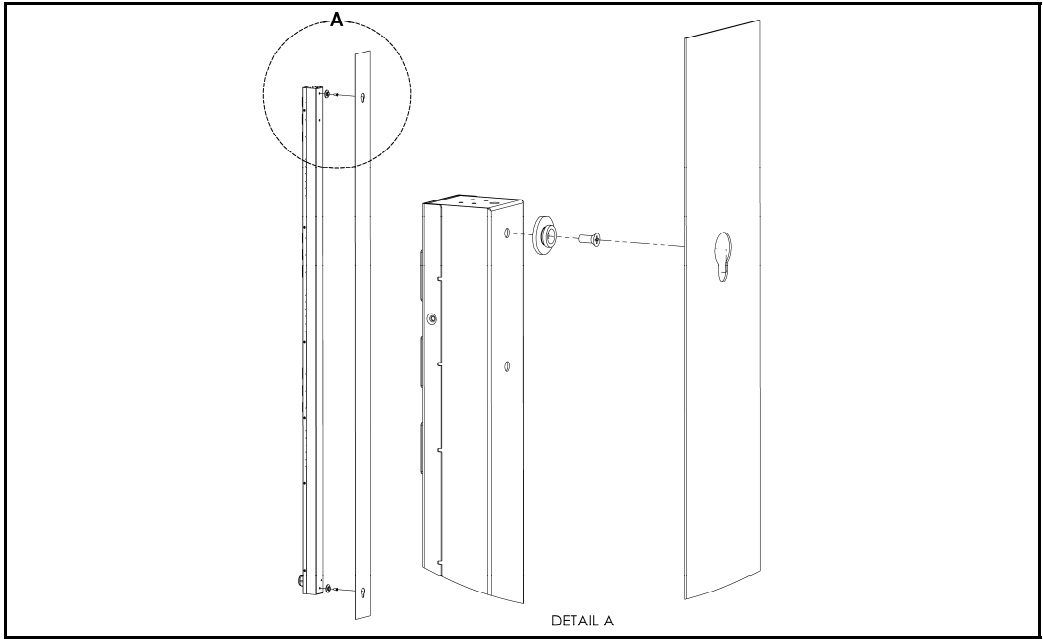
Mini "L" Brackets (SLB-4)

Using the mini "L" brackets, attach PDU to rack as shown



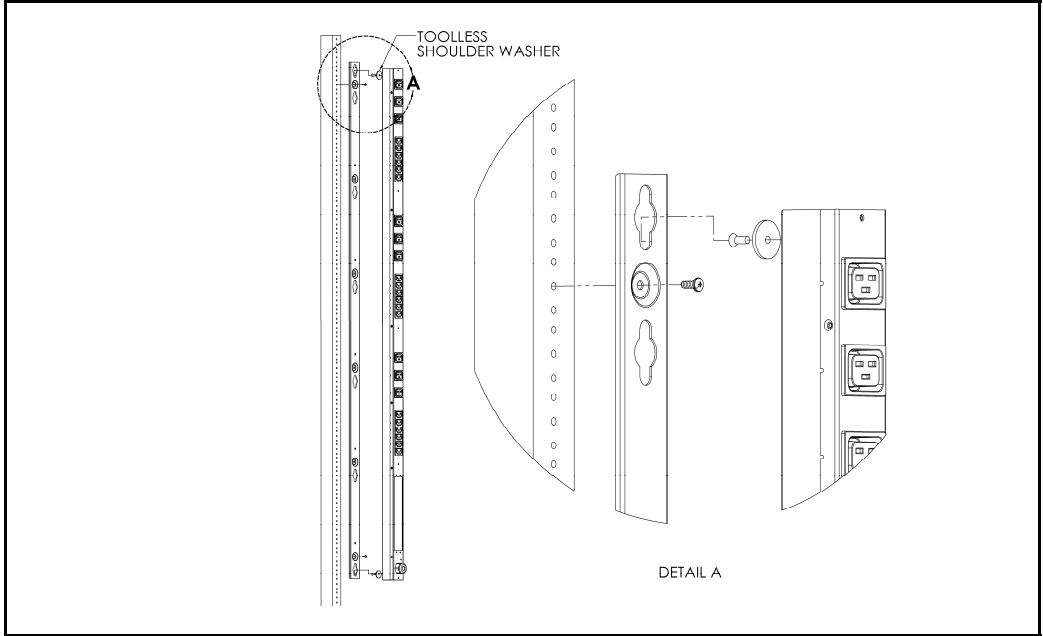
Vertical Extension Brackets (VCB-1)

Using the vertical extension brackets, attach PDU to rack as shown



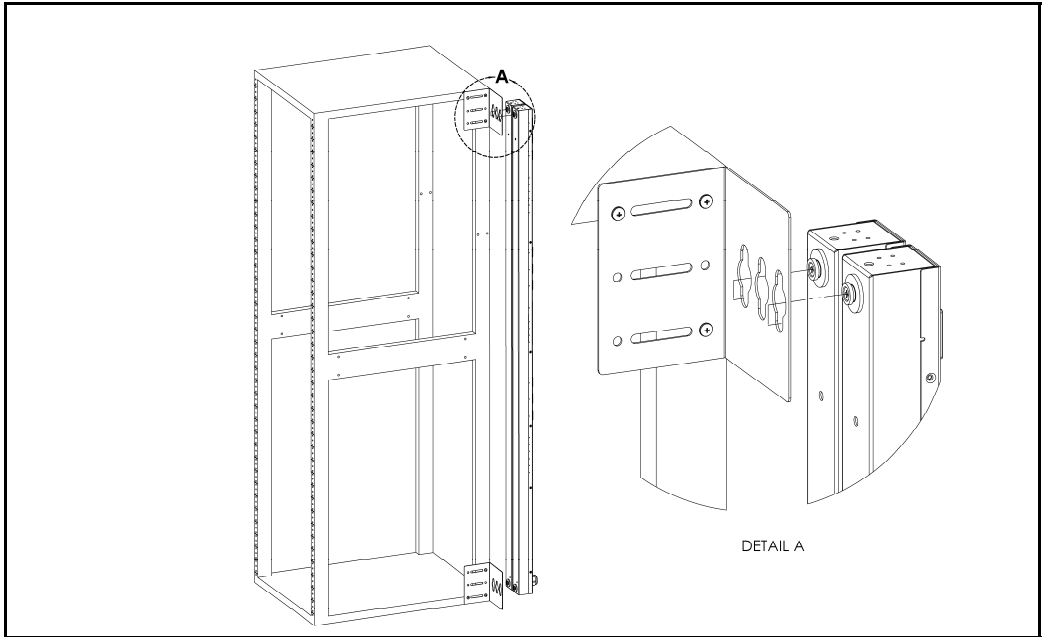
Toolless Mounting Hardware (11621)

Secure toolless mounting buttons to PDU as shown. Use toolless buttons with key-holed slots built into cabinet or with optional Geist key-holed brackets.



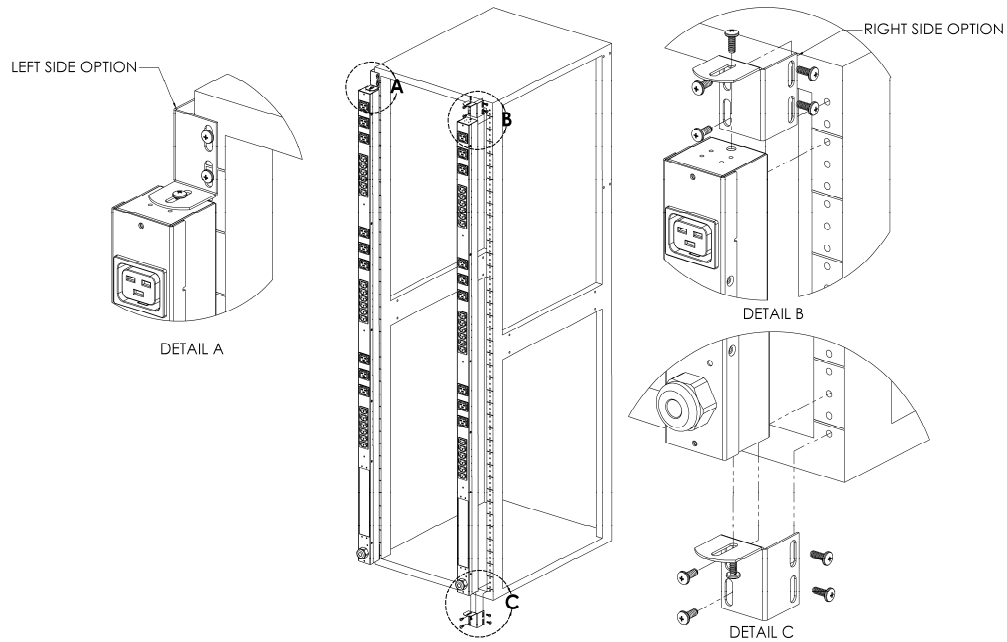
Toolless Full Length Bracket (TLFL)

Using full length toolless bracket and toolless mounting buttons, attach PDU to rack as shown



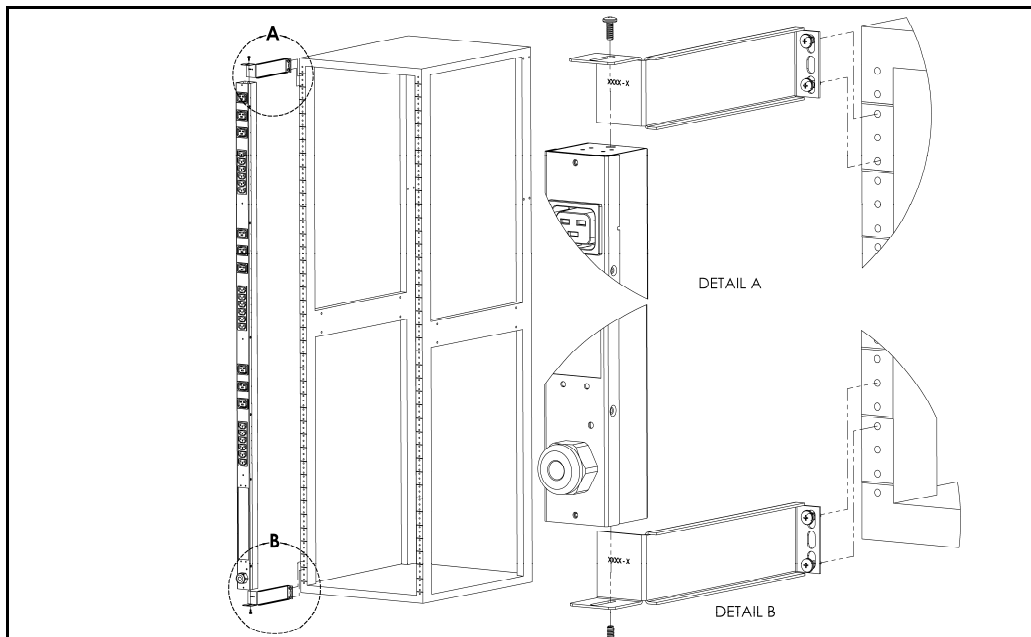
Single Side Mount 2 Unit Brackets (TSMX2)

Using single side mount 2 unit brackets and toolless mounting buttons, attach PDU to rack as shown



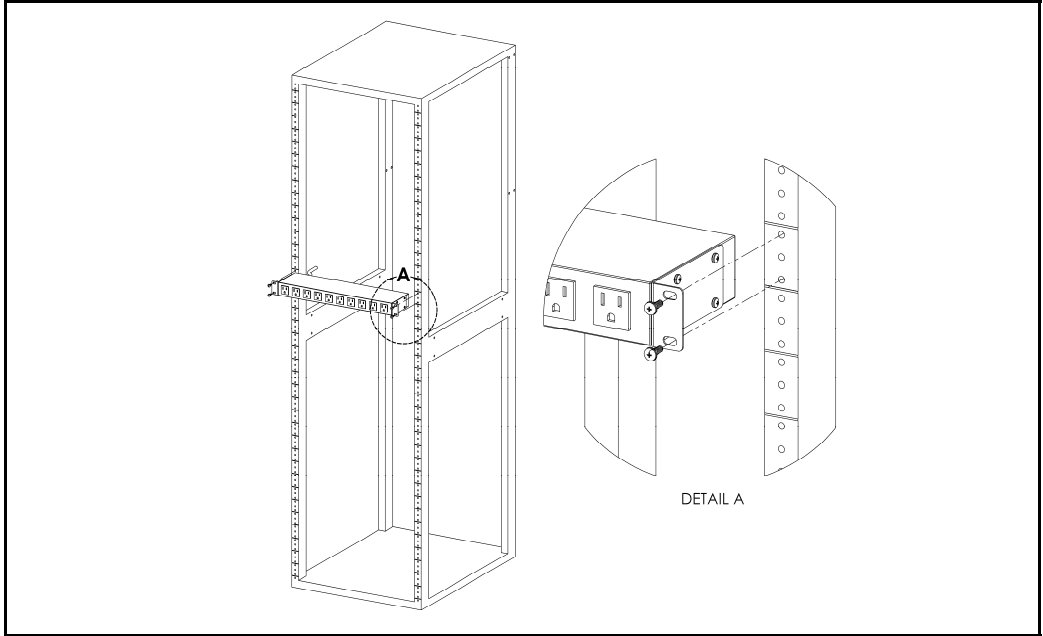
Offset/Side Mount Brackets (EZB-1)

Using the offset/side mount brackets, attach PDU to rack as shown.



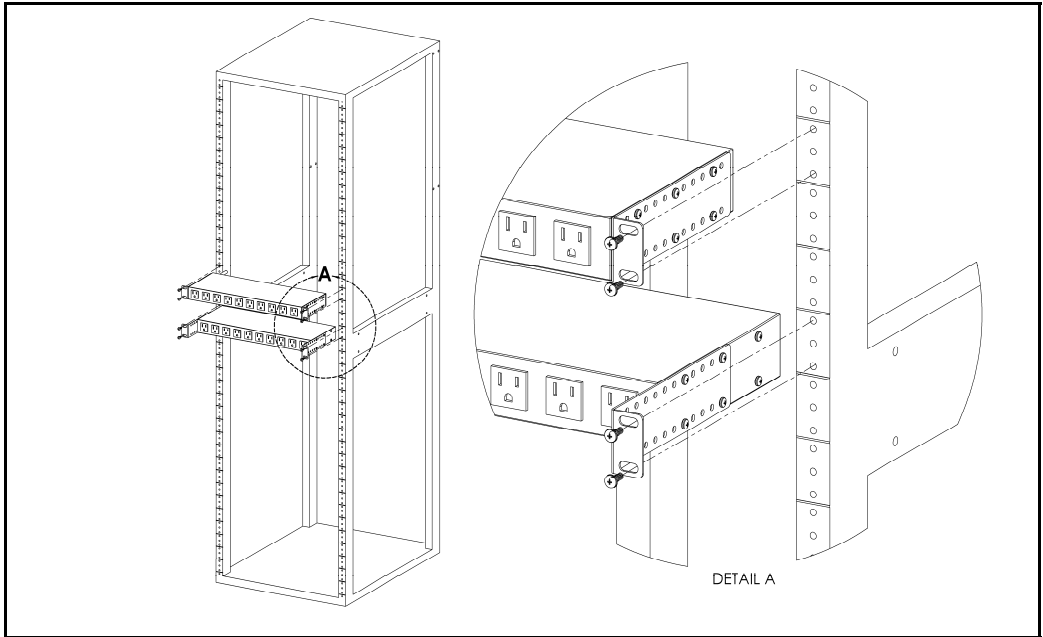
7" Extension Brackets (XB-7)

Using the 7" extension brackets, attach PDU to rack as shown



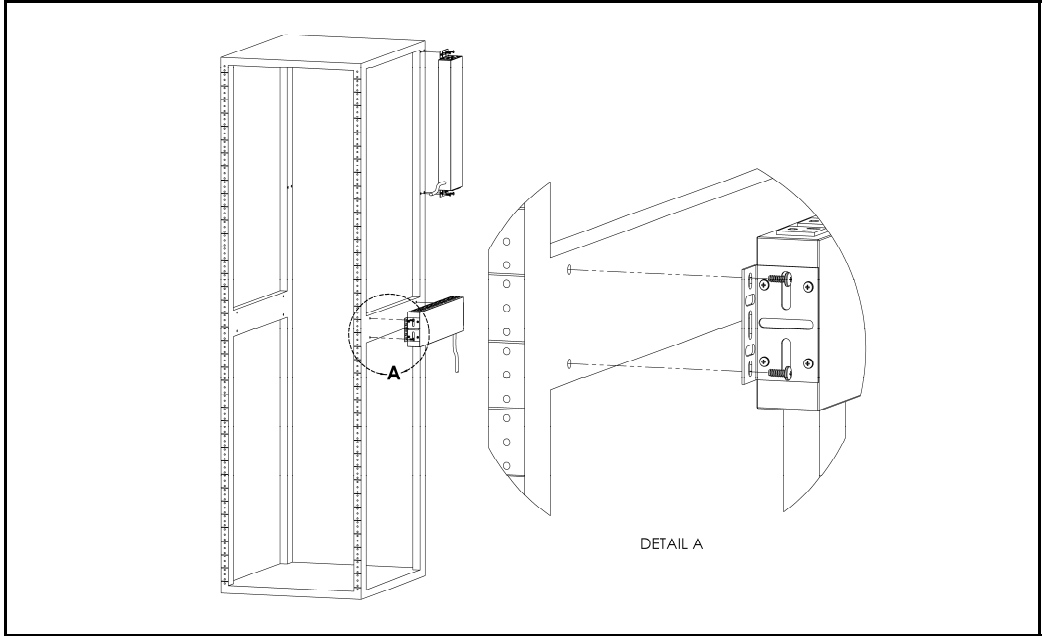
Flush Mount Brackets (FM)

Using flush mount brackets, attach PDU to rack as shown



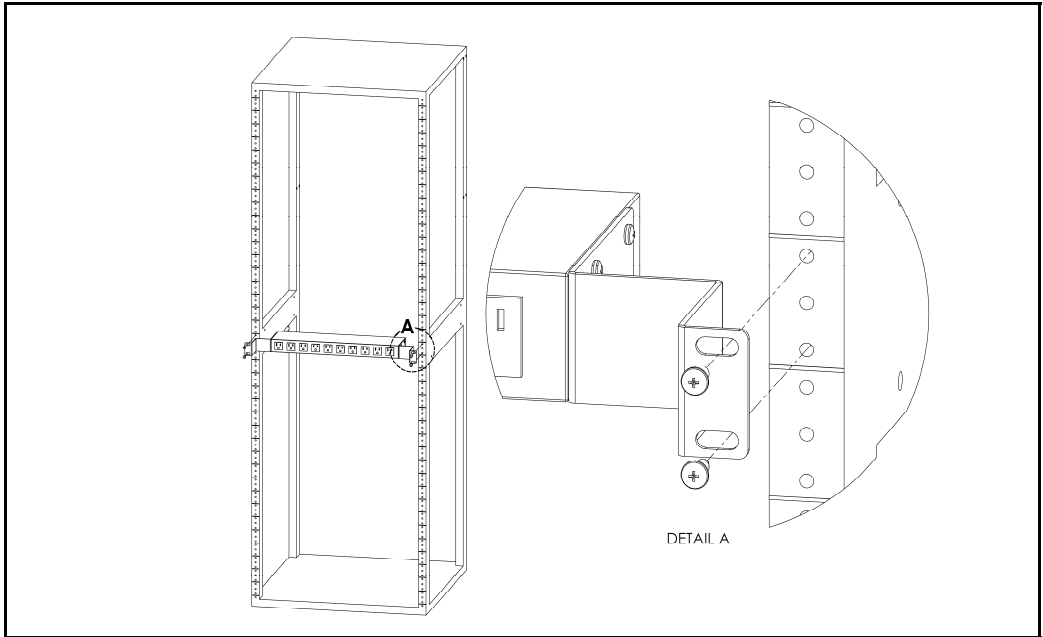
Adjustable Mount Brackets (AM)

Using adjustable mount brackets, attach PDU to rack as shown



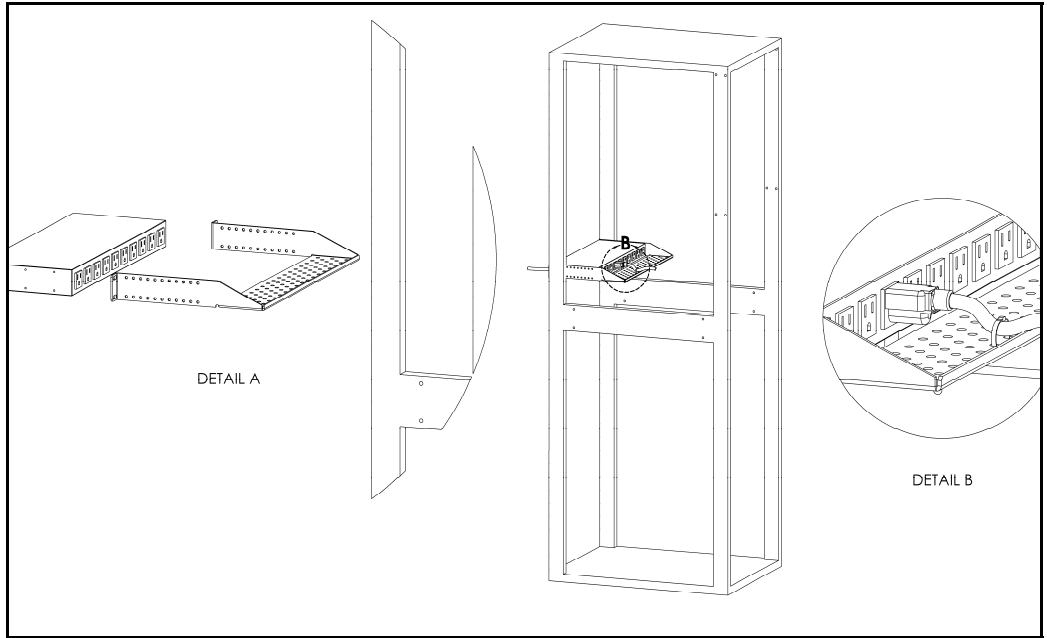
Panel Mount Brackets (PM)

Using panel mount brackets, attach PDU to rack as shown



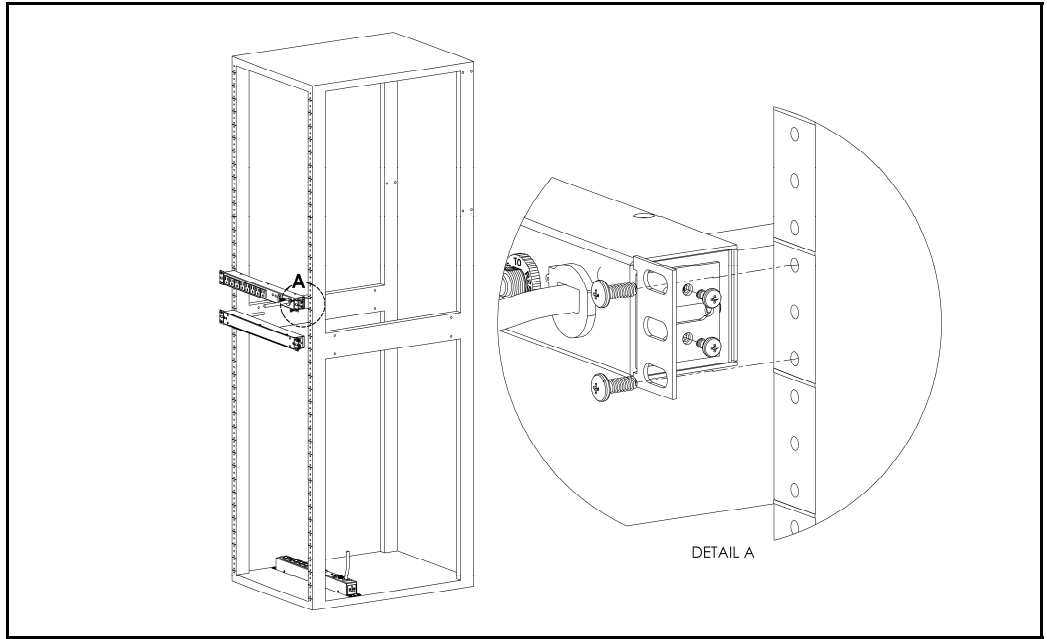
23" Conversion Mounting Brackets (23-RM)

Using conversion mounting brackets, attach 19 inch PDU to 23 inch rack as shown



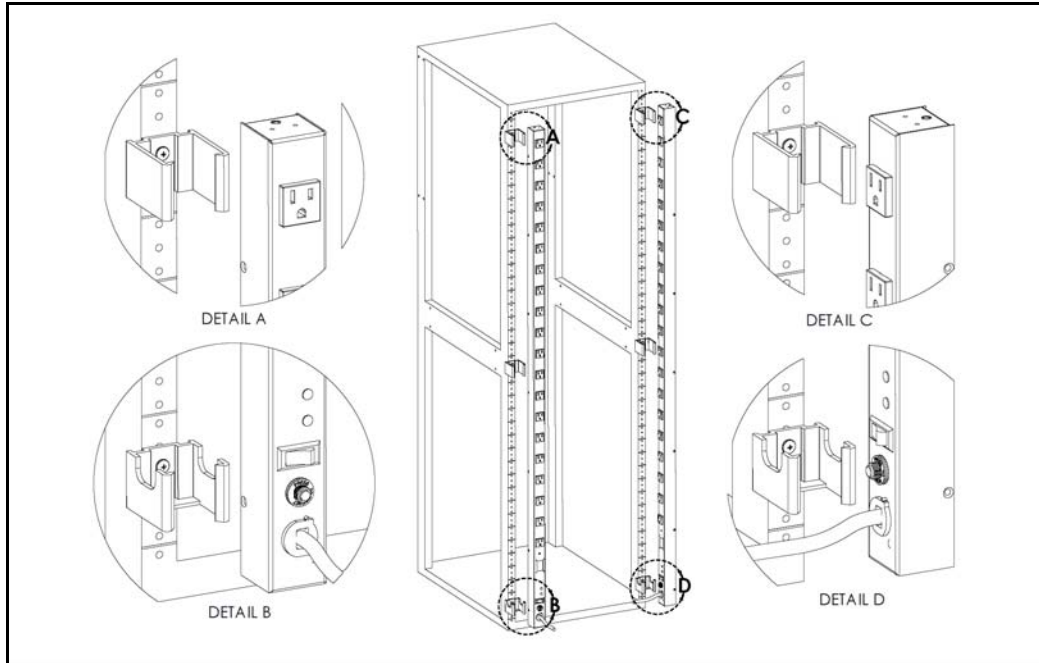
Cable Mount Bracket (CMB-1)

Attach cable mount bracket to PDU as shown; use tie-wraps to secure cords to bracket



19" Horizontal/Panel Mount Brackets (7938)

Using the 19" horizontal/panel mount brackets, attach PDU to rack as shown



Top and Bottom Mounting Clips (9083C & 9084C)

Using the top and bottom mounting clips, attach the PDU to the rack as shown. Please note that mounting clips are only intended for use with NSV and VSS Series PDUs.

Optional Surge Suppression

The SP, SVR, and VSS Series PDUs include a surge suppression circuit that is designed to prevent voltage surges on the input power line from reaching devices powered by the PDU. The surge suppression circuit uses Metal Oxide Varistors (MOVs) connected between Line, Neutral, and Ground wires to prevent voltage surges from damaging connected devices.



Surge Protection Circuit Ratings

Protection Voltage	330 V (Line-Line, Line-Neutral, Neutral-Ground)
Energy Absorption	720 Joules
Green Light Indicator	Power On
Red Light Indicator	Surge Protection Active

Optional Local Monitoring

Power Meter

The Geist PM-1 power meter is a low-power, high accuracy meter capable of measuring true RMS Current, Voltage, Power, and Power Factor. These values are individually shown on an easy to read, 4-digit LED Display, which continuously scrolls through the four different measured values. Each one of these displayed parameters is defined below. The Power Meter will automatically begin cycling through the displayed values when the PDU is connected to AC Mains power.

- Current: PDU output current draw measured in true RMS Amps
- Voltage: PDU output voltage measured in true RMS Voltage
- Power: PDU output power measured in Watts – referred to as real or active power
- Power Factor: Ration of real PDU output power to apparent PDU output power²



Power Meter Display

Current Meter

The Geist CM-1 current meter is a low-power, high accuracy meter capable of measuring true RMS Current. The value of current is continuously shown on an easy to read, 4-digit LED Display. The Current Meter will automatically begin to display value of output current when the PDU is connected to AC Mains power.



Current Meter Display

² Real power is the power in a circuit that is transformed from electric to non-electric energy, while apparent power is the total power supplied to the circuit.

Service/Tech Support

Service and Maintenance

No service or maintenance is required. Do not attempt to open the PDU or you may void the warranty. No serviceable parts inside. It is recommended that power be removed from the unit before installing or removing any equipment.

More Technical Support

<http://www.geistglobal.com>

(800) 432-3219

Email: support@geistglobal.com

Or contact your distributor.

Table of Figures

Full Length Bracket.....	6
Mini "L" Brackets (SLB-4)	6
Vertical Extension Brackets (VCB-1)	7
Toolless Mounting Hardware (11621).....	7
Toolless Full Length Bracket (TLFL).....	8
Single Side Mount 2 Unit Brackets (TSMX2)	8
Offset/Side Mount Brackets (EZB-1).....	9
7" Extension Brackets (XB-7).....	9
Flush Mount Brackets (FM)	10
Adjustable Mount Brackets (AM).....	10
Panel Mount Brackets (PM)	11
23" Conversion Mounting Brackets (23-RM)	11
Cable Mount Bracket (CMB-1).....	12
19" Horizontal/Panel Mount Brackets (7938).....	12
Top and Bottom Mounting Clips (9083C & 9084C)	13
Power Meter Display	15
Current Meter Display	15

Revision History

Revision	Date	Notes	Approved By
1.0	3/26/2009	Original Published Version	JLP