1U Horizontal rPDU with External Breaker Switch

Quick Installation Guide

NOTE: *Please visit http://www.Vertiv.com/ComplianceRegulatoryInfo for important safety information prior to installation.*

CAUTION: *Never exceed the recommended torque value of 6 lb-in (0.67791 Nm) when attaching any of the mounting hardware to the unit.*

Circuit Breaker (CB) Trip Variations

There may be slight variations in circuit breaker power trip levels due to the mounted orientation of the unit. See the chart to the right for more detailed information on power trip levels as a result of unit orientation.

NOTE: *Circuit and outlet ratings* ***DO NOT CHANGE*** *with orientation.*

Please visit https://lenovopress.lenovo.com/lp1556-lenovo-1u-switched-monitored-3-phase-pdu#circuit-breaker-ratings for more details.

Rackmount Installation

1U INSTALLATION

1. **Preparing the server cabinet**

   Determine the 1U space in the server cabinet where the unit is to be mounted and install any cage nuts or other hardware that will be needed to attach the unit to the server cabinet uprights.

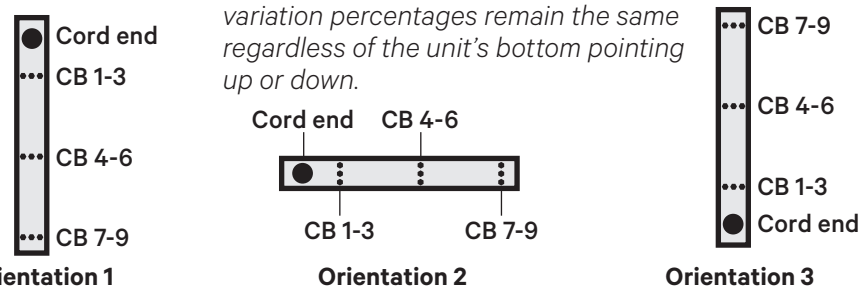
2. **Attaching the rear bracket's slotted portion to the Vertiv™ PowerIT Rack Power Distribution Unit (rPDU)**

   Using the illustration above as a guide, remove the screws in each side of the PowerIT rPDU where the rear brackets' slotted portions are to be mounted.

   NOTE: *The slotted portions of the rear brackets are symmetrical and each may be used on either side of the unit.*

   Match the hole pattern in the slotted portion of each rear bracket

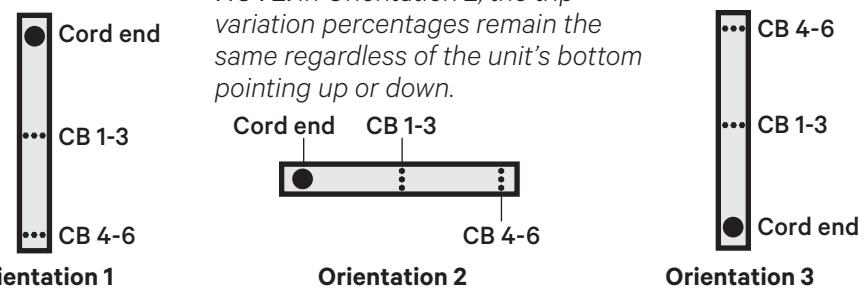
18 Outlet PowerIT rPDU Circuit Breaker Power Trip Variations



NOTE: *In Orientation 2, the trip variation percentages remain the same regardless of the unit's bottom pointing up or down.*

	CB1	CB2	CB3	CB4	CB5	CB6	CB7	CB8	CB9
Orientation 1	110%	110%	110%	110%	110%	110%	90%	90%	90%
Orientation 2	100%	100%	100%	100%	100%	100%	100%	100%	100%
Orientation 3	90%	90%	90%	90%	90%	90%	110%	110%	110%

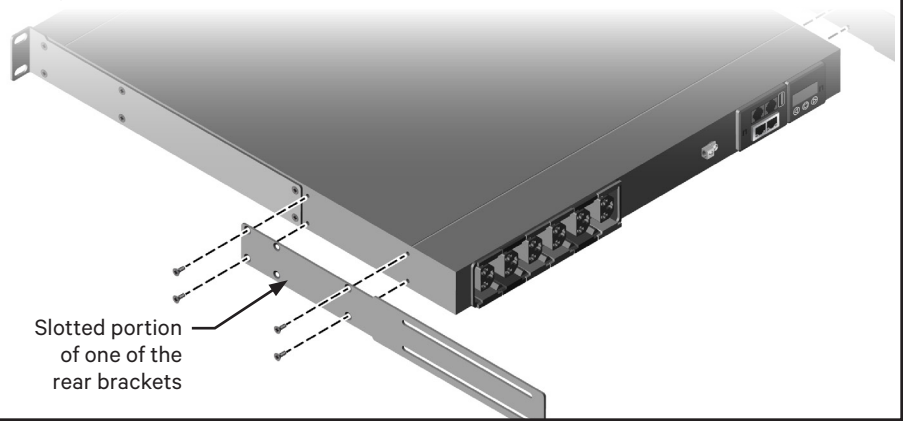
12 Outlet PowerIT rPDU Circuit Breaker Power Trip Variations



NOTE: *In Orientation 2, the trip variation percentages remain the same regardless of the unit's bottom pointing up or down.*

	CB1	CB2	CB3	CB4	CB5	CB6
Orientation 1	110%	110%	110%	110%	110%	110%
Orientation 2	100%	100%	100%	100%	100%	100%
Orientation 3	90%	90%	90%	90%	90%	90%

Attaching the Slotted Portion of the Rear Bracket to the Unit



to the hole pattern in the side of the Vertiv™ PowerIT rPDU attach them to the unit using the original screws.

3. **Attaching the front brackets to the server cabinet's uprights**

   Slide the PowerIT rPDU/rear slotted bracket assembly into the desired 1U space. Using the appropriate hardware, loosely fasten the PowerIT rPDU's two front brackets to the server cabinet uprights.

4. **Attaching the rear brackets to the server cabinet's uprights**

   Orient the threaded rod portion of the rear bracket so that its threaded rods point toward the centerline of the PowerIT rPDU. Insert the threaded rods into the slots of the slotted portion of the rear bracket attached to the PowerIT rPDU.

   Loosely fasten the threaded rods in place with washers and lock nuts.

   Attach the ear of the threaded rod portion of the rear bracket to the appropriate 1U space on the server cabinet upright.

   Repeat on the opposite side.

5. **Completing installation**

   Inspect all bracket hardware, being sure to tighten all screws and nuts.

0U INSTALLATION

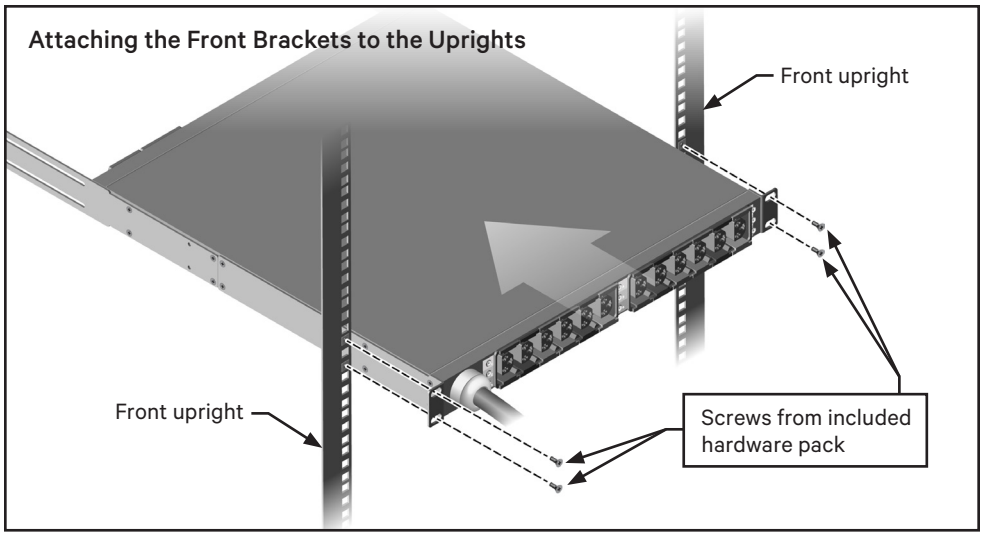
1. **Determining the 0U mounting location**

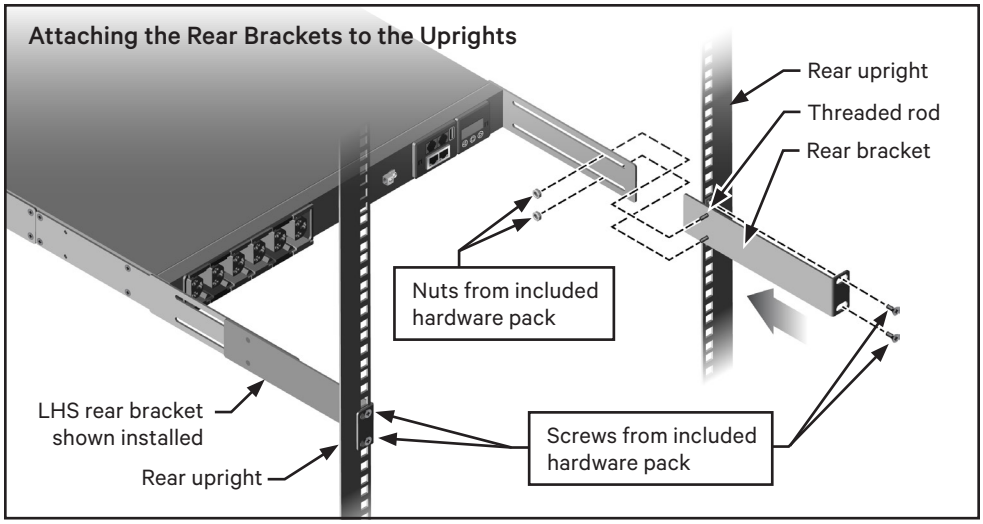
   NOTE: *There are eight 0U locations (four on each side) in a Lenovo 48U server cabinet and six 0U locations (three on each side) in a Lenovo 42U server cabinet.*

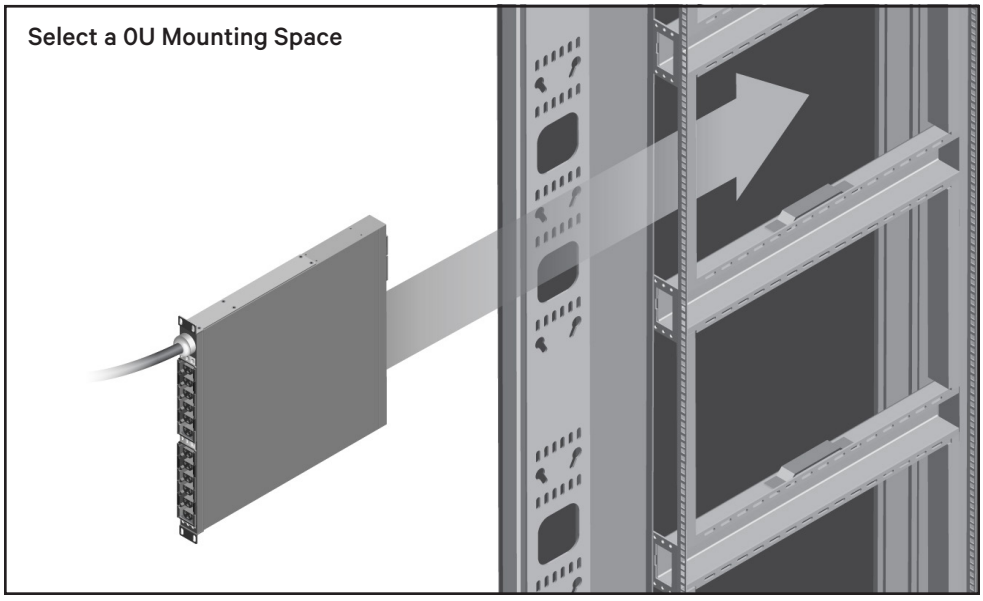
   Determine which 0U location would provide the other rack devices easiest access to the PowerIT rPDU's power outlets.

2. **Inserting the PowerIT rPDU into the 0U space**

   Slide the PowerIT rPDU through the desired 0U space's opening created by the cabinet side, rear







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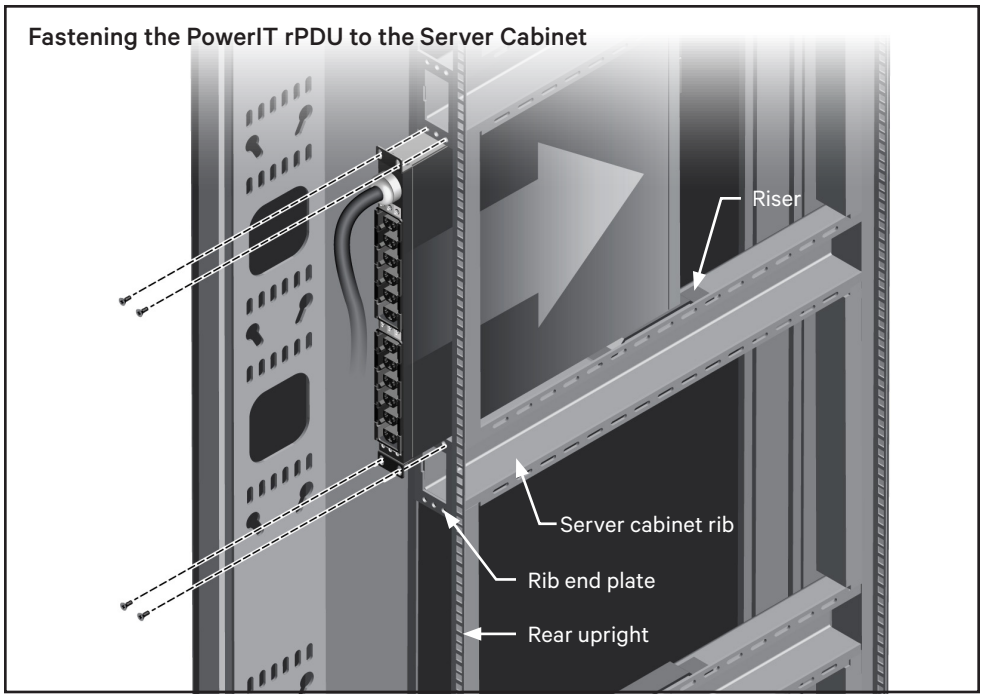


upright and two of the server cabinet ribs. Push the PowerIT rPDU into the opening until the unit's mounting ears are against the server cabinet ribs' end plates.

NOTE: *Once inserted into the 0U space, the bottom of the unit will be supported by a riser that sits on top of the lower server cabinet rib.*

3. Fastening the PowerIT rPDU to the server cabinet

Attach the PowerIT rPDU's mounting ears to the threaded holes in the server cabinet ribs' end plates using the appropriate hardware.

Configuring IP Addressable Units

The PowerIT rPDU is equipped with an RJ45 Ethernet port for connection to an existing network. The PowerIT rPDU is configured with the following default network settings to allow unit configuration:

- IP address: 192.168.123.123
- Subnet Mask: 255.255.255.0
- Gateway: 192.168.123.1

The local PC network connection must be configured as follows:

- IP Address: 192.168.123.x (where x is 2-253, except 123)
- Subnet Mask: 255.255.255.0
- Gateway: <leave blank>

Set System Time for Logging

See the User Guide for instructions regarding setting System Time to ensure that the PDU will log data (default logging sample rate is one sample every 15 minutes).

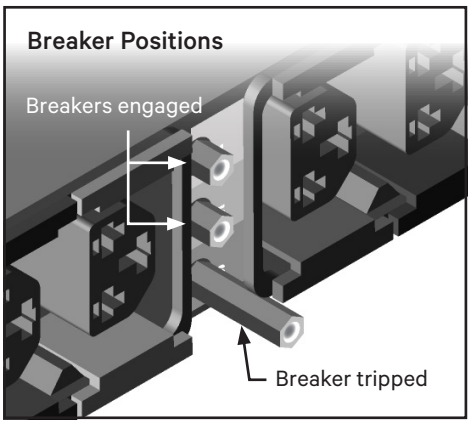
NOTE: *For additional information, see Lenovo Tech Tip TT1743, "How to enable logging on the Lenovo 1U Switched and Monitored 3-phase PDU by Vertiv", available at https://datacentersupport.lenovo.com/solutions/tt1743-how-to-enable-logging-on-the-lenovo-1u-switched-and-monitored-3-phase-pdu-by-vertiv.*

Outlet Management

Outlets are managed and sequenced by the PDU to control in-rush current. Order and timing of the outlets can be set through the Graphical User Interface (GUI).

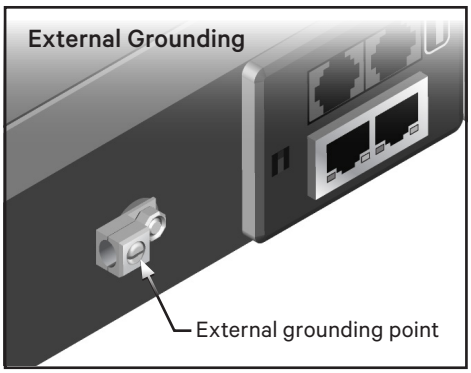
Breaker Actuators

The Vertiv™ PowerIT 1U Horizontal rPDU with External Breaker Switch



features internal hydraulic magnetic circuit breakers. If a breaker is tripped, the actuator arm will protrude from the unit as shown in the figure below.

To re-engage the circuit breaker, push the actuator arm towards the rear of the unit until the lever rests in place.



External Grounding

The Vertiv™ PowerIT 1U Horizontal rPDU with External Breaker Switch offers an external grounding point. This ground location allows a bonding strap to be installed to the chassis of the PowerIT rPDU.

NOTE: *Only models with 9 circuit breakers include an external grounding point for attaching an optional wire. See the label on the unit for specific wire sizing and torque guidance.*

Related Publications and Links

For additional user manuals, quick install guides, installer guides and IMD replacement guides, go to:

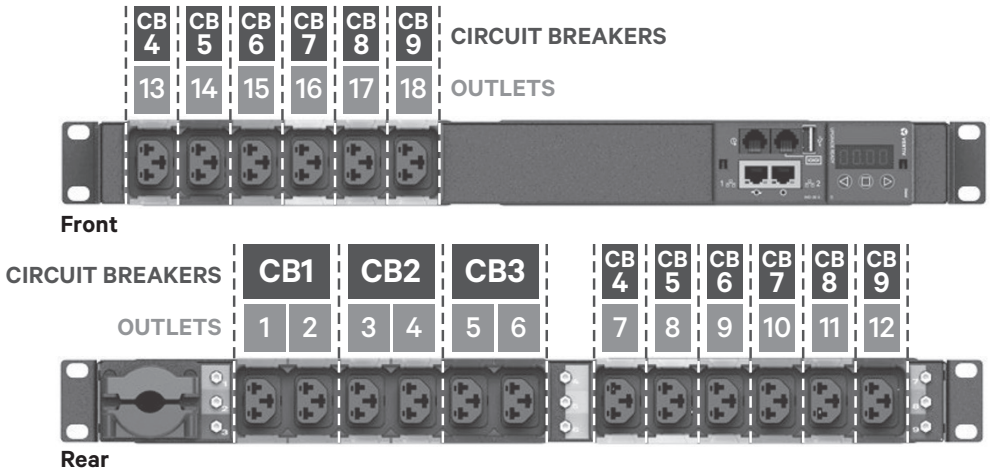
https://www.vertiv.com/en-us/support/avocent-support-lenovo/

12 Outlet PowerIT rPDU - Circuit Breaker/Outlet Relationship

Circuit Rating:
- 16A

Outlet/Plug Rating:
- C19/C20-16A
- C13/C14-10A
- C13/C14-12A (North America)

18 Outlet PowerIT rPDU - Circuit Breaker/Outlet Relationship



Circuit Rating:
- 16A

Outlet/Plug Rating:
- C19/C20-16A
- C13/C14-10A
- C13/C14-12A (North America)

Environmental

Temperature		
Operating	10°C (50°F) Minimum	60°C (140°F) Maximum
Storage	-40°C (-40°F) Minimum	70°C (158°F) Maximum
Humidity		
Operating	5% Minimum	95% Maximum (non-condensing)
Storage	5% Minimum	95% Maximum (non-condensing)
Elevation		
Operating	0 m (0 ft) Minimum	3048 m (10000 ft) Maximum
Storage	0 m (0 ft) Minimum	15240 m (50000 ft) Maximum

To contact Vertiv Technical Support: visit www.Vertiv.com

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