# **POWER DISTRIBUTION UNITS**



# **Tripp Lite PDUs**

Reliable rack power distribution for high-density IT environments.



Introduction	2-3
Basic PDUs	4
Metered PDUs	5
Monitored PDUs	6
Switched PDUs	7
ATS PDUs	8
Hot-Swap PDUs	8

# TRIPPILITE INTRODUCTION



Tripp Lite Rack PDUs increase the availability, efficiency and manageability of equipment in data centers and other high-density IT environments. More than 100 vertical (0U) and horizontal (1U or 2U) models are available, divided into several types with distinct features and benefits.

## **Basic PDUs**

 Provide Reliable Power Distribution to multiple devices from a UPS system, generator or utility (mains) source.

## **Metered PDUs**

Provide all Basic PDU features, plus digital LED meters that provide local
 Current Monitoring to enable load balancing and help prevent overloads.

## **Monitored PDUs**

- Provide all Metered PDU features, plus an Ethernet Network Interface for remote monitoring and control from any location.
- Send automated alerts to help IT managers prevent accidental overloads, power loss and downtime.

## **Switched PDUs**

- Provide all Monitored PDU features, plus **Individual Outlet Control**.
- $\bullet \ \ \, \text{Eliminate costly site visits by remotely rebooting malfunctioning devices}.$
- Increase runtime of critical systems by automatically turning off nonessential equipment during extended power outages.

## **ATS PDUs**

 Provide all Metered or Switched PDU features, plus dual AC inputs and an Automatic Transfer Switch to provide redundant power to single-cord devices that do not have redundant power supplies.

# **Hot-Swap PDUs**

 Include dual AC inputs and a Manual Transfer Switch to allow hot-swappable replacement of compatible UPS systems up to 3kVA without interrupting power to connected equipment.

# **PDU Types**

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Features	Basic PDUs (p. 4)	Metered PDUs (p. 5)	Monitored PDUs (p. 6)	Switched PDUs (p. 7)	ATS PDUs (p. 8)	Hot-Swap PDUs (p. 8)	
Reliable Power Distribution							
Current Monitoring		RMP5	RMP5	RMP5	RMP5		
Network Interface					Select Models		
Individual Outlet Control				ON OFF	ON OFF		
Automatic Transfer Switch					Ф Ф М		
Manual Transfer Switch						1 2	



## FIND IT FAST!

Try our interactive UPS selector guide at **www.tripplite.com/pduguide** 



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**Jertical PDU** 

**Basic PDUs** provide reliable power distribution to multiple devices from a UPS system, generator or utility (mains) source.





Horizontal PDU (Front and Back)

- 15 models
- Up to 40 outlets
- Up to 7.2kW
- Horizontal or vertical rack installation

#### Versatile Mounting Options

- EIA-compliant rack installation or surface mounting.
- Horizontal PDUs are optimized for 1U or 2U rack installation.
- Vertical PDUs are optimized for spacesaving 0U (vertical) rack installation.





#### **Durable Metal Case**

• The metal case increases the PDU's operational service life in harsh and demanding installation environments.

#### AC Outlets (NEMA and/or IEC)

• High-quality outlets provide reliable power distribution to multiple devices.

#### Heavy-Duty AC Input Cord and Plug

- Most models have an AC input power cord long enough to reach distant outlets and improve placement flexibility.
- Some models have an AC inlet that connects to the PDU's detachable cord or a user-supplied cord.

#### **Toolless Mounting Buttons**

 Detachable buttons permit quick installation of vertical PDUs in keyhole mounting slots of compatible racks.



Keyhole Mounting Slot Toolless Mounting Button

#### **Mounting Brackets**

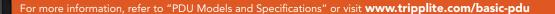
 Detachable brackets support rack or surface mounting.

#### Circuit Breakers

 Many models include breakers to protect against short circuits and overloads.







Metered PDUs provide all Basic PDU features, plus digital load meters for local current monitoring to enable load balancing and help prevent overloads.





Power Distribution





Horizontal PDU (Front and Back)

- 25 models
- Up to 48 outlets
- Up to 14.4kW
- Single-phase or 3-phase input

#### **Load Meters**

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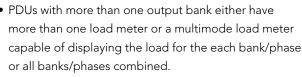
2 W.

- Digital LED meters display the current draw of connected equipment in amps.
- Real-time visual data from local current monitoring helps installers balance load levels to prevent PDU and supply circuit overloads that cause downtime. Installers can connect more equipment with confidence to increase utilization
- reduction in reliability. • PDUs with more than one output bank either have more than one load meter or a multimode load meter

of available PDU, UPS and circuit capacity without a



Single Load Meter



#### Cord Retention Brackets

• Most models include detachable brackets with built-in anchor points to secure equipment power cords and help prevent accidental disconnection.





Triple Load Meters



Multimode Load Meter



**Dual Load Meters** 





**Monitored PDUs** provide all Basic and Metered PDU features, plus a network interface for remote monitoring and automated alerts.











Network Interface



Horizontal PDU

- More than 30 models
- Up to 42 outlets
- Up to 12.6 kW
- Single-phase or 3-phase input

#### Network Interface

 RJ45 Ethernet connection permits remote monitoring and alerts over the LAN/WAN via



SNMP, Web, SSH, telnet, RSS, text message and e-mail.

- Automated alerts warn IT managers when load levels exceed user-defined thresholds, identifying potential trouble spots and preventing accidental power loss and downtime.
- Embedded system with real-time clock and upgradable firmware supports enterprise network standards, including IPv6, SNMPv3, FTP, NTP, DHCP, SSL, SSH and Radius.

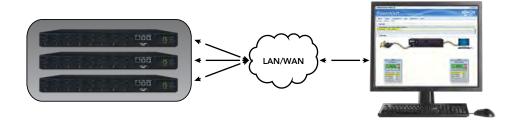
#### **ENVIROSENSE® Sensor**

- Environmental sensor connects to PDU for remote monitoring of temperature, humidity and contact closure interface.
- Contact closure interface can monitor alarm, security and telecom devices, as well as additional sensors.
- 12 ft. cord provides placement flexibility inside or outside racks.



# Centralize Power Management with PowerAlert NMS (Included)

- PowerAlert NMS allows IT managers to auto-discover and manage hundreds of PDUs, UPS systems, connected environmental sensors and other devices through a single interface from any location.
- PowerAlert software does not require any licensing fees, regardless of the quantity of managed devices.





# TRIPP-LITE SWITCHED PDUs

**Switched PDUs** provide all Basic, Metered and Monitored PDU features, plus individual outlet control for remote reboots and automated load shedding.



Horizontal PDU



Power

Distribution







Individua Outlet Control

- More than 40 models
- Up to 30 outlets
- Up to 27.6 kW
- Single-phase or 3-phase input

#### Individual Outlet Control

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**Jertical PDL** 

- Switch individual outlets on or off over the network manually or automatically.
- Remotely reboot unresponsive devices to eliminate costly site visits.
- Automatically turn off idle devices outside business hours to reduce power costs.
- Lock out unused outlets to prevent unauthorized use and related overloads.

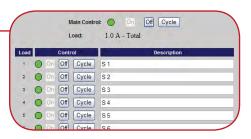
#### Load Ramping and Shedding

- Load ramping defines power-on sequences and delays to prevent malfunctions and inrush overloads at startup.
- Load shedding increases the runtime of critical systems by automatically turning off nonessential equipment.
- Example: A UPS supporting sixteen network switches can provide about twenty minutes of runtime during an outage. After load shedding turns off twelve switches that aren't essential to core network functions, runtime expands to two hours for the remaining mission-critical switches.

#### **Outlet LEDs**

• Display whether each Switched PDU outlet is on or off.





#### **Outlet-Level Current Monitoring**

- All 3-phase and some single-phase models can display how much power a specific device is drawing from a specific outlet.
- Outlet-level current monitoring provides the granular data needed to determine the power draw and operating cost of individual devices on the network. As data granularity increases, guesswork decreases, and efficiency and system reliability can increase.
- Example: If a PDU is near capacity, and a
  device connected to the PDU draws the
  majority of the power, it helps to know which
  device it is in order to better accommodate it
  without risking an overload. Outlet-level
  current monitoring can also reveal how much
  work a device does in relation to the energy
  it uses, confirming whether it would be more
  cost-effective to upgrade to a device that
  delivers more work value per watt.



# TRIPP-LITE ATS PDUs

ATS PDUs provide redundant power to single-cord devices that do not have redundant power supplies.



Horizontal PDU (Front and Back)

#### **Dual AC Inputs**

• Power cords and/or inlets connect to primary and secondary AC sources.

#### Automatic Transfer Switch (ATS)

• Internal circuitry automatically switches to the secondary power source if the primary source deviates from the reliable operating range.



Automatic Transfer Switch



Power

Current Monitoring Distribution



Individual Network Interface Outlet Control (Select (Select . Models) Models)

- 10 models with up to 25 outlets
- Also include all Metered or Switched PDU features (depends on model)

#### Input Source LEDs

• LEDs indicate which source is currently supplying power to connected equipment.





For more information, refer to "PDU Models and Specifications" or visit www.tripplite.com/ATS-pdu

# TRIPP:LITE HOT-SWAP PDUs

Hot-Swap PDUs allow maintenance, repair or replacement of compatible UPS systems up to 3 kVA without system downtime.



Manual Transfer Switch



Power Distribution



#### **Dual AC Inputs**

• Power cords and/or inlets connect to utility (mains) and UPS sources.

#### Manual Transfer Switch

• Selects the active power source to bypass the UPS when required.

- 5 models with up to 8 outlets
- Dual AC inputs
- Manual transfer switch

#### Space-Saving Form Factor

• 2U cabinet can be installed back-to-back with select UPS systems to conserve rack space.



For more information, refer to "PDU Models and Specifications" or visit www.tripplite.com/hotswap-pdu

#### **About Tripp Lite**

Since 1922, Tripp Lite has established a global reputation for quality manufacturing, superior value and excellent service. Tripp Lite makes more than 2,500 products to power, protect and connect electronic equipment, including UPS systems, replacement batteries, PDUs, rack systems, cooling solutions, surge suppressors, KVM switches, console servers, cables, display solutions, power strips and inverters. Learn more at www.tripplite.com.

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