

Article Overview

A metering-type intelligent PDU meter head is a smart power distribution unit that measures and monitors electrical parameters such as voltage, current, power, energy consumption, and power factor, providing real-time insights for data center management.

Overview

A metering-type intelligent PDU (Power Distribution Unit) is designed to provide more than simple power distribution. It includes integrated metering capabilities that allow operators to monitor energy usage at the inlet, branch, or individual outlet level. This enables precise tracking of power consumption, helps prevent circuit overloads, and supports energy efficiency initiatives in data centers .

Key Features

- o Electrical Monitoring: Measures voltage, current, frequency, power (kW), energy consumption (kWh), and power factor .
- o Inlet Metering: Tracks total power entering the PDU, useful for overall rack-level monitoring .
- o Branch and Outlet Metering: Some models provide per-branch or per-outlet monitoring, allowing granular visibility into individual devices .
- o Remote Management: Many intelligent PDUs support network protocols such as SNMP, MODBUS/TCP, REST API, and can be monitored via web interfaces or management software .
- o Environmental Integration: Supports external sensors for temperature, humidity, water leakage, and rack door status, enhancing operational safety and efficiency .
- o Daisy-Chaining: Multiple PDUs can be connected to reduce IP address usage and simplify network management, with some models supporting up to 32-64 units per chain .

Applications

Metering-type intelligent PDUs are widely used in data centers, server rooms, and IT racks to:

- o Optimize energy usage and reduce operational costs.
- o Prevent downtime by monitoring load thresholds and alerting on overloads.
- o Support capacity planning and improve Power Usage Effectiveness (PUE).
- o Enable remote monitoring and control of power distribution in unmanned or large-scale facilities .

Types of Metering PDUs

- o Basic Metered PDU: Measures energy consumption at the input or branch level without remote switching.



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- o Monitored PDU: Provides measurement per outlet but may not allow remote switching.
- o Switched/Managed PDU: Combines outlet monitoring with remote on/off switching and network management capabilities .

Conclusion

A metering-type intelligent PDU meter head is an essential tool for modern data centers, offering real-time power monitoring, environmental integration, and remote management. By providing detailed insights into energy consumption and load distribution, it helps improve efficiency, prevent overloads, and support scalable IT infrastructure management .

Discover the top 10 APC rack PDUs available at Comms Express. Compare basic, metered, and switched models to

The Advantage Series Input Metered PDU family offers energy metering with advanced power and environmental monitoring options.

PDU for powering active equipment, with 1 phase 32A and max power 7.4kW. Provides 24 high-density

Here are the types of smart PDUs, based on their level of capability (and cost). Metered PDU Metered power distribution units have a

The range consists of four models offering various levels of power monitoring and power switching

InfraPower®; Z & M intelligent PDU series are supplied with new generation meters. The Z IP Meter not

Data Center Intelligent Switched and Monitored Power Distribution PDU Individual outlet power metering,remote power on/off or

An intelligent PDU can be added to a metered PDU (or any PDU) using a Packet Power Smart Power Cable. You can wirelessly

WHAT ARE THE BENEFITS OF SMART PDU? Smart PDUs represent the next stage in the PDU evolution, combining metering,

What is a switched PDU vs. a metered PDU? Learn the differences between the two and when to use them from the



Metering-type intelligent PDU meter head

Discover how PDU intelligent features like remote monitoring, energy analytics, and environmental tracking enhance power

Switched PDUs with Outlet Metering: This type of intelligent rack PDU successfully combines all of the capabilities of

So, let's explore some of the benefits of intelligent metering at the inlet, outlet, and rack

Explore different PDU types used in data centers, including basic, metered, monitored, switched, and intelligent PDUs.

THE DIFFERENT TYPES OF INTELLIGENT PDUS METERED INLET PDUS Metered Inlet PDUs meter power at the PDU-level, and

Changing your location may affect product availability. Certain products may not be available in all international regions. Current

Web: <https://www.kremgroup.co.za>

