

IP-PDU Series

Overview

Ritchfield MAC Monitored PDU (IP-PDU) is designed specifically for small and medium-sized data centers. It guarantees reliable power distribution and metering at the input stage, and it also accommodates environmental sensors to monitor temperature and humidity. This MAC Monitored PDU streamlines the task of making well-informed decisions about capacity planning, ultimately resulting in enhanced availability and energy efficiency.

What is MAC?

Manageable:

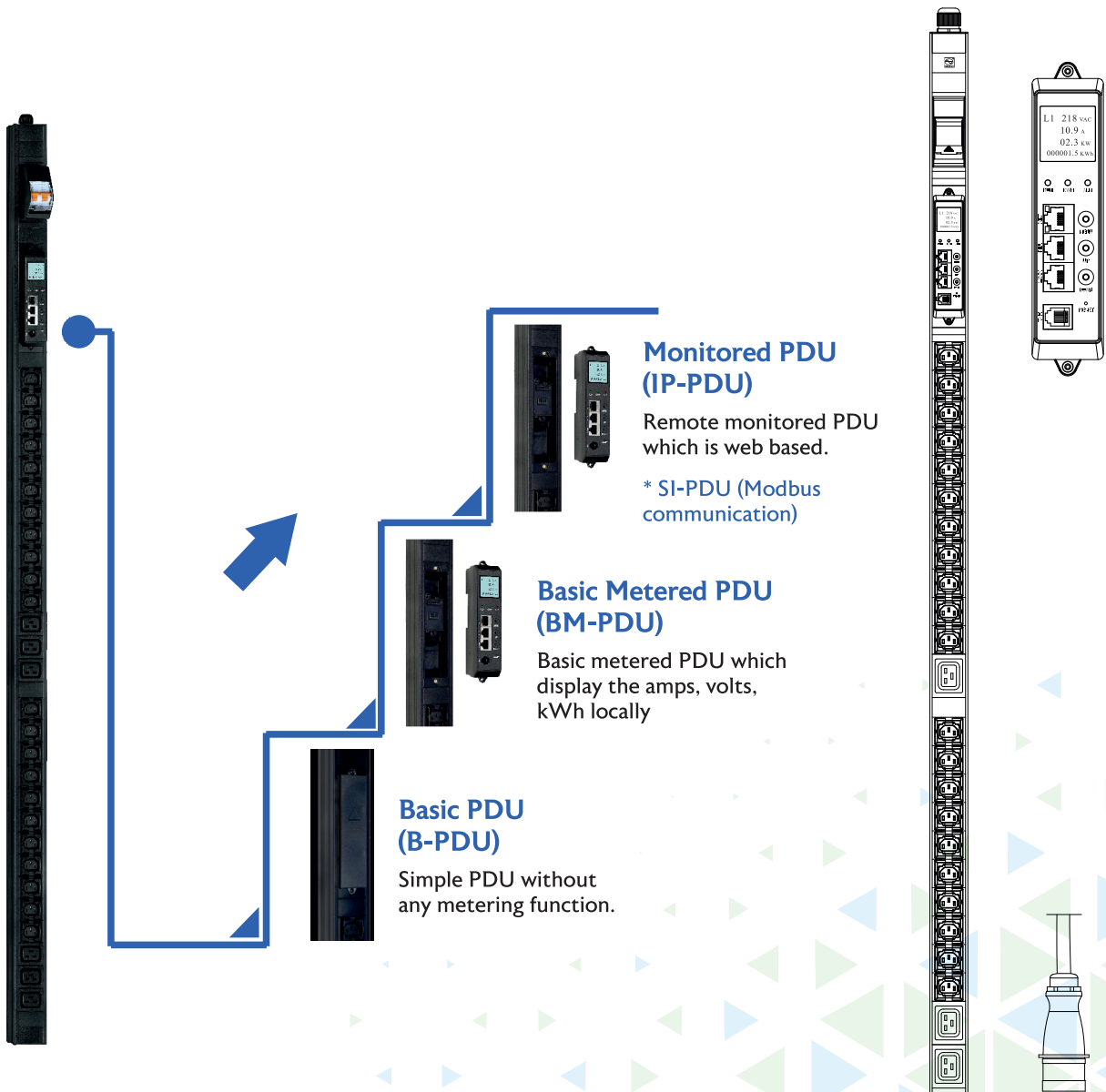
Performing in-field maintenance safely and reliably without disrupting the power supply to IT equipment.

Adaptable:

Upgrading from a basic PDU to a local metered PDU and subsequently to an IP-monitored PDU is made simple by merely replacing the function modules















Conservation:

Ritchfield MAC PDU offers various functions throughout different stages of business operations through the utilization of hot-swappable function modules.



MAC PDU Family	B-PDU	BM-PDU	IP-PDU
Max current up to 63A	✓	✓	✓
Voltage: 100~240V, 200~400V	✓	✓	✓
Multiple outlet configuration	✓	✓	✓
Surge protection - optional	✓	✓	✓
Circuit breaker - optional	✓	✓	✓
Three phase 16A/32A	✓	✓	✓
Locking outlets	✓	✓	✓
Tool - less mounting	✓	✓	✓
Hot - swap local ammeter		✓	✓
IP access			✓
SNMP management			✓
Environment monitoring			✓

Electrical Characteristics

Input voltage	100-240 VAC / 200-415VAC ± (1%+3 digit)
Input current	1P: 16A/ 32 A/ 63 A 3P: 3x16 A/ 3x32 A
Input frequency	50 / 60 Hz
Input plug	1P:       3P: 
Output voltage	100-240 VAC ± (1% +3digit)
Output current	1P: 10A / 15A / 16A / 20A / 32A / 63A 3P: 3x16A / 3x32A
Maximum output current (Circuit breaker bank)	16A / 32A
Output/ Socket type	      
Overload protection (Internal)	1P: 32A 2x16A, 63A 2x32A 3P: 3x16A /3x32A, Air circuit breakers
Outlet configurations	Free combination base on customer request

Physical Characteristics

Dimensions(H x W x D)	Lx50x44.4 mm Lx56x44.4 mm
Shipping dimensions(H x W x D)	Lx150x85 mm
Power cord length	3.0 m (factory standard)

Environmental Characteristics

Maximum elevation, above MSL(Operating/Storage)	0 to 3,000 m / 0 to 15,000 m
Temperature (Operating/Storage)	0 to 45°C / -20 to 10°C
Humidity	5 - 95% RH/ 5 - 95%, Non-condensing

Compliance Characteristics

EMC verification	En55022, EN61000, FCC Part 15 Class A, ICES
Safety verification	LVD
Environmental verification	ROHS

Product Features

Ritchfield MAC-monitored PDU delivers comprehensive and accurate electrical power data to customers, offering uninterrupted monitoring of rack devices. Timely alerts can be dispatched to administrators to prevent potential losses. The monitored data can be leveraged for analyzing power consumption and environmental conditions in the data center, empowering managers to make well-informed decisions. Advanced MAC concept enhances data center flexibility, reliability, and safety.

Monitoring

The MAC-monitored PDU provides real-time metering data, including input voltage, total load current, apparent power, and energy consumption, with a precision of ±1%. When equipped with an additional sensor, it can also oversee the rack environment and issue alerts as needed



Alarm

Thresholds for critical electrical parameters can be adjusted to activate alerts. When a risk arises, the PDU's buzzer will sound, and the LED indicator will flash. Simultaneously, automatic email and trap alerts will be sent to the administrator, keeping them well-informed about the system's status and aiding in reducing management risks.

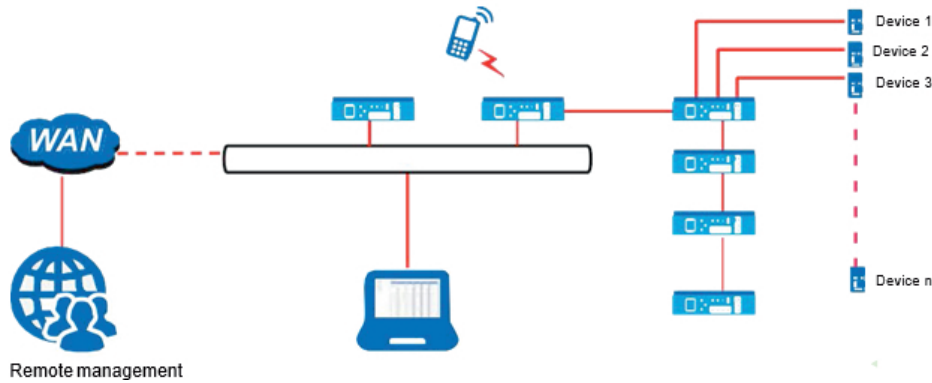


Daisy-chain

IP-PDU: 1 master can cascade 4 slaves.
SI-PDU: 1 master can cascade 32 slaves.



Daisy chain drawing of intelligent IP-PDU



Management

Offers both local and remote management capabilities through Web, SNMP, Telnet, and Modbus. It also supports widely recognized communication protocols like SNMP V1/V2C/V3, DHCP, HTTP(S), IPV4, NTP, SMTP(S), TFTP, and Modbus RTU. Additionally, it seamlessly integrates with Ritchfield Manager software, allowing management of up to 1000 PDUs



Ordering Information

MAC Standard PDU Variants			Rack space	Input Volt	Rated current	Input plug	#of bank	Outlet
B-PDU	BM-PDU	IP-PDU						
RF4-CBH-A-0500	RF4-CBMH-A-0500	RF4-IPV-A-0500	1U/0U	100-240V	16A	IEC320 C20	1x16A	5xIEC320 C13
RF4-CBV-D-0900	RF4-CBMV-D-0900	RF4-IPV-D-0900	0U	100-240V	16A	IEC320 C20	1x16A	9xIEC320C13
RF4-CBV-D-F0900	RF4-CBMV-D-F0900	RF4-IPV-D-F0900	0U	100-240V	16A	DIN49441	1x16A	9xDIN49440
RF4-CBV-D-E0900	RF4-CBMV-D-E0900	RF4-IPV-D-E0900	0U	100-240V	16A	DIN49441	1x16A	9xNF C61-314
RF4-CBV-D-B0900	RF4-CBMV-D-B0900	RF4-IPV-D-B0900	0U	100-240V	15A	NEMA5-15P	1x15A	9xNEMA5-15R
RF4-CBV-E-2103	RF4-CBMV-E-2103	RF4-IPV-E-2103	0U	100-240V	32A	IEC60309 32A	2x16A	21xC13, 3xC19
RF4-CBV-E-1806	RF4-CBMV-E-1806	RF4-IPV-E-1806	0U	100-240V	32A	IEC60309 32A	2x16A	18xC13, 6xC19
RF4-CBV-E-2004	RF4-CBMV-E-2004	RF4-IPV-E-2004	0U	100-240V	32A	IEC60309 32A	2x16A	20xC13, 4xC19
RF4-CBH-F-2606	RF4-CBMV-F-2606	RF4-IPV-F-2606	0U	100-240V	32A	IEC60309 32A	2x16A	26xC13, 6xC19
RF4-CBV-G-3006	RF4-CBMV-G-3006	RF4-IPV-G-3006	0U	100-240V	32A	IEC60309 32A	2x16A	30xC13, 6xC19
RF4-CBV-J-2408	RF4-CBMV-J-2408	RF4-IPV-J-2408	0U	100-240V	63A	IEC60309 63A	4x16A	24xC13, 8xC19

RF4-CBV-K-2103	RF4-CBMV-K-2103	RF4-IPV-K-2103	0U	200-400V	3X16A	IEC60309 16A	3x16A	21xC13, 3xC19
RF4-CBV-K-2004	RF4-CBMV-K-2004	RF4-IPV-K-2004	0U	200-400V	3X16A	IEC60309 16A	3x16A	20xC13, 4xC19
RF4-CBV-K-1806	RF4-CBMV-K-1806	RF4-IPV-K-1806	0U	200-400V	3X16A	IEC60309 16A	3x16A	18xC13, 6xC19
RF4-CBV-L-2406	RF4-CBMV-L-2406	RF4-IPV-L-2406	0U	200-400V	3X16A	IEC60309 16A	3x16A	24xC13, 6xC19
RF4-CBV-N-3003	RF4-CBMV-N-3003	RF4-IPV-N-3003	0U	200-400V	3X16A	IEC60309 16A	3x16A	30xC13, 3xC19
RF4-CBV-R-2103	RF4-CBMV-R-2103	RF4-IPV-R-2103	0U	200-400V	3X32A	IEC60309 32A	3x32A	21xC13, 3xC19
RF4-CBV-R-1806	RF4-CBMV-R-1806	RF4-IPV-R-1806	0U	200-400V	3X32A	IEC60309 32A	3x32A	18xC13, 6xC19
RF4-CBV-R-2004	RF4-CBMV-R-2004	RF4-IPV-R-2004	0U	200-400V	3X32A	IEC60309 32A	3x32A	20xC13, 4xC19
RF4-CBV-S-2406	RF4-CBMV-S-2406	RF4-IPV-S-2406	0U	200-400V	3X32A	IEC60309 32A	3x32A	24xC13,6xC19
RF4-CBV-T-3003	RF4-CBMV-T-3003	RF4-IPV-T-3003	0U	200-400V	3X32A	IEC60309 32A	3x32A	30xC13, 3xC19

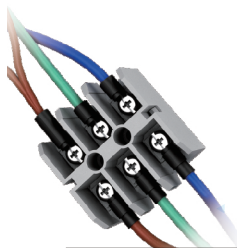


Product Features

Designed to perform.

1 Terminal block

A proficient manufacturing process ensures the solidity and dependability of the terminal block, while the terminal block box offers ample room for convenient on-site cable connections



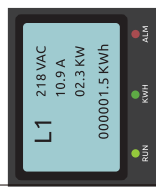
2 Circuit breaker

The Legrand circuit breaker, known for its high sensitivity, effectively safeguards IT equipment and minimizes the risk of inadvertent losses.



3 Intelligent module

Hot swap module monitors critical electric data locally and remotely; metering accuracy 1%; threshold setting & multimode alerts make data center safer.



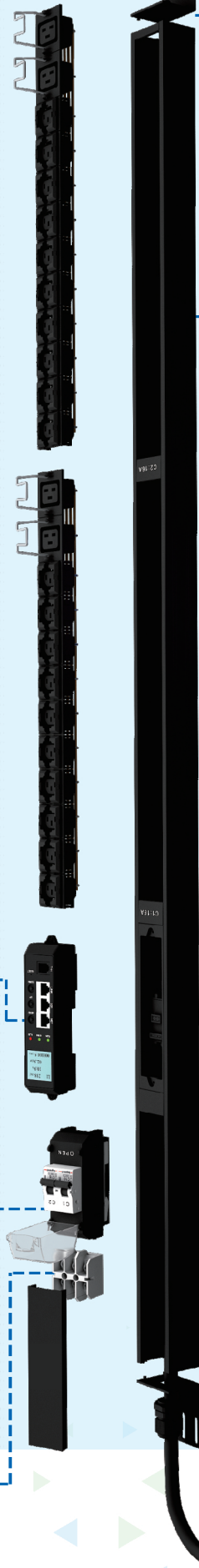
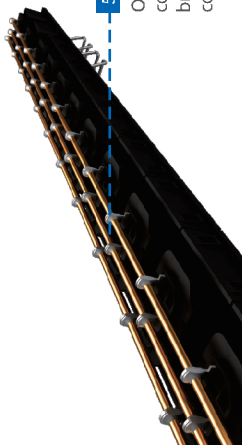
4 Outlets

Diverse outlet options, like IEC, GB, UK, NEMA, Schuko, provide unmatched flexibility, making your PDU stand out



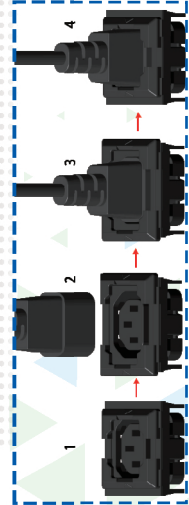
5 Copper bar

Our automatic welding process ensures reliable and consistent quality using high-quality phosphor bronze, known for its exceptional elasticity, electrical conductivity, and wear resistance



6 Locking outlets

Ritchfield's independently developed locking outlets prevent server downtime resulting from operator errors



7 Plug

Legrand's top-tier industrial plugs, certified by CCC, UL, and VDE, guarantee a long-lasting service life due to their superior quality



8 Housing

High-strength, eco-friendly aluminum alloy material ensures safety, while customizable size and color options offer unique features to customers

9 Installation

L-shaped brackets for mounting on both sides using screws. Vertical installation takes up zero rack units (0 U) of space