



Server rack power availability and cost allocation

"It is essential we ensure uptime and minimize failures that threaten business continuity. Energy efficiency and energy cost allocations are also important factors in terms of my business success"



PDU with Isobar and PowerTag

Customer story

As CTO, David designs data centers all around the world. One of his key considerations is to ensure the **high availability of servers** that he designs for his customers. Detecting and even anticipating power supply failures enables his team to maximize operational uptime and business efficiency.

David is also responsible for delivering **cost-optimized** data centers with **short lead-times**. For this reason, his investments need to be scalable and adapted to the servers' allocation.

Finally, he understands that it makes more business sense to charge customers or service partners on a pro-rata basis, according to their server energy consumption.

Proposed solution

Schneider Electric solution comprises:

- **PowerTag energy sensors:** fit directly onto circuit breaker for wireless communication of energy consumption data.
- **PowerTag Link high density gateway:** connect up to 100 PowerTag energy sensors. Direct connection through Ethernet network (Modbus TCP).
- **Isobar chassis:**

Fully IP2X with shrouds.

Unique power disconnection for branch circuits.

The PowerTag solution provides each rack server with the following data:

- Energy consumption and real-time monitoring:
 - class 1 active energy (IEC 61557-12)
 - real time data U, V, I, PF, P, P demand.
- Alarm notifications:
 - in the event of an overload: 45 %, 80 %
 - in the event of voltage loss, as a result of overloads and short-circuit currents.

Benefits

Design phase:

- **Meet connectivity needs:** energy management, alarm notifications, real-time monitoring at rack server level.
- **More space for IT servers:** up to 30% footprint reduction compared to PDU with traditional metering features.
- **A seamless design:** no need to change way of working. Measurement is an add-on for existing architectures.
- **Fast and simple scalability:** best-in-class live disconnectable outgoing in terms of power distribution and wireless metering features.
- **Optimized TCO:** cost savings thanks to wireless and compact measurement technology, faster configuration and supervision integration.

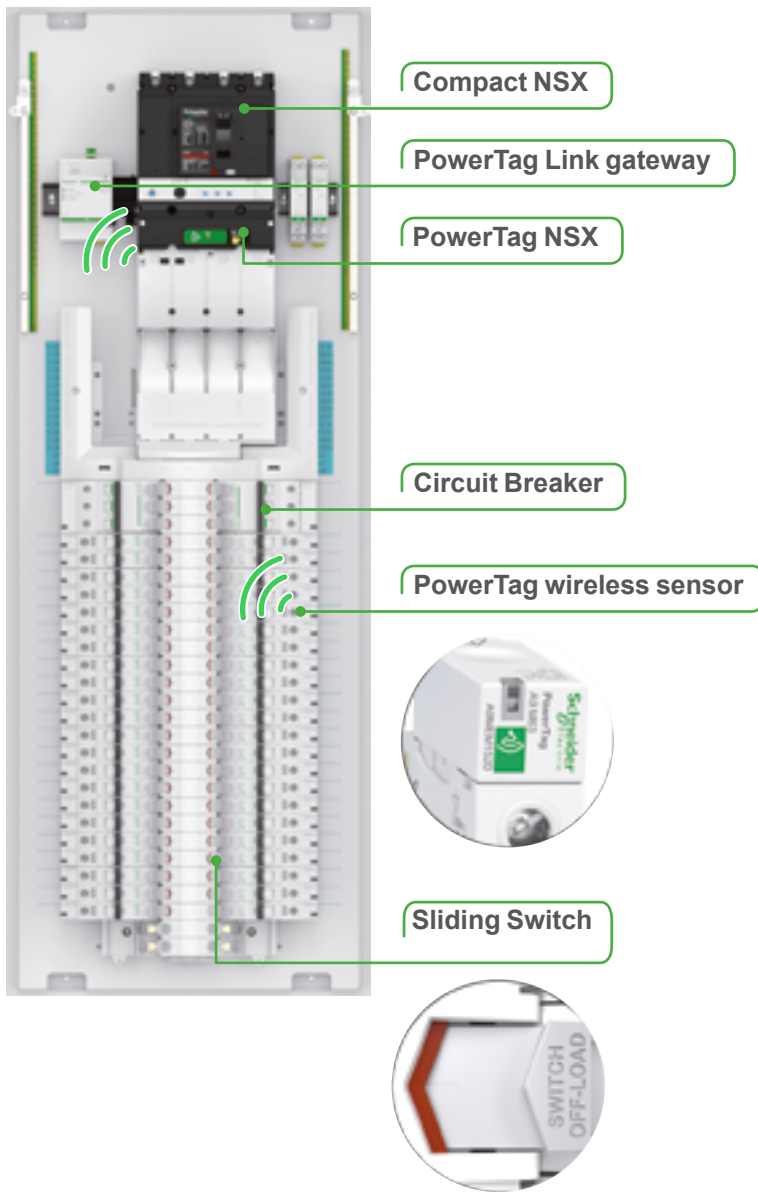
Installation:

- **Fast and simple:** plug & play wireless sensors that fit perfectly onto circuit breakers.
- **Reduced commissioning time** - from configuration to supervision system integration.
- **Project under control:** PDU delivered with formal Factory Acceptance Test - to assess performance of communication system.

Operation and maintenance:

- **Improved availability:** anticipate and reduce downtime occurrence thanks to pre-alarm.
- **Reduce downtime impact:** act quickly thanks to alarms and live-disconnection operation.
- **Follow and provide energy cost allocation reports** for main and branch circuit.

Improved energy performance with new connectivity system for data centers



Customize branch circuits for all your requests, thanks to the modularity of this Schneider Electric offer:

- From 1P to 3P+N
- Up to 40 kA breaking capacity
- Option for metering - with PowerTag
- Option for circuit breaker status
- Option for Residual Current Device.

Isobar chassis:

- Icw: 25 kA 50 ms.
- Nominal rating: 200 A for 35°C, 160 A for 50°C.
- From 12 to 72 branch circuits.
- IEC 61439-3 certified.
- Neutral system:
 - Neutral switching capability on any branch circuit.
 - Split neutral on both sides.
- Option as incomer: MCB, switch, or MCCB up to 250 A.
- Power sliding contact: interlock restricts to power-on without device on the power connection.

This digital system is part of the EcoStruxure™ platform and can be connected to Schneider Electric supervision offers.



EcoStruxure™
Innovation At Every Level

More about PowerTag

<https://www.schneider-electric.com/en/work/products/product-launch/poweritag/>



More about Isobars

<https://www.schneider-electric.com/en/product-range-presentation/66034>



More about EcoStruxure

<https://www.schneider-electric.com/en/work/solutions/for-business/data-centers-and-networks/>



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