

R175 Rack PDU Sensor for Raritan PX4 Series Products

Designed for integration with Raritan PX4 intelligent PDUs, R175 sensor enables “wire-free” power monitoring over the RF Code radio frequency infrastructure.



Features & Benefits

- Encoded Radio Transmissions at 433 MHz
- Reduced cost of ownership – cost of IP address is eliminated.
- Real-Time Monitoring for PDU Power Metrics, Alerts, Alarms and Warnings
- Per Phase Status & Metrics, including:
 - Phase Voltage
 - Phase Amperage
 - Phase Power
 - Phase Energy Use
- Plug and play into one of the Ethernet ports for “Wire-free” Power Monitoring
- Compatible with Raritan PX4 intelligent PDUs
- Integrates with RF Code’s CenterScope Platform
- Autoconfiguration of up to 2 linked PDUs

RF Code’s R175 power sensor offers wireless communication for use in data centers, equipment room racks and cabinets that provides continuous, automated monitoring of each rack PDU.

Power metrics and PDU information are transmitted utilizing RF Code’s “wire-free” radio frequency infrastructure via the RPDU sensor. This results in a comprehensive power monitoring solution made available in RF Code’s CenterScope platform.

The R175 RPDU sensor plugs into one of the Ethernet ports of the PDU and identifies the model and capabilities then relays that information to CenterScope. The R175 RPDU sensor can monitor individual PDUs or up to two linked PDUs. This solution enables customers to monitor power metrics from each PDU at a dramatically reduced cost of ownership by reducing wires/cables, IP address allocation and network administration.

Designed for use with rack-mounted PDUs, the R175 RPDU sensor features a simple plug-and-play 433 MHz RF transmitter for quick and easy installation. Simply plug the sensor’s locking RJ45 connector into the Ethernet port on the PDU and attach the sensor to the top of the rack (this ensures clear signal transmission in metal-dense data center environments).

Each sensor broadcasts its unique ID and a portion of the PDU data every 10-seconds using RF Code’s patented communication protocol. All power data collected from the

PDU flows via the RF Code readers to the RF Code CenterScope platform. The software presents all the collected power parameters and computes additional attributes from this data to provide a complete picture of power utilization, power efficiency and power status. Power attributes can be utilized by existing CenterScope features such as:

- Live table and map views
- Interactive graphing
- Scheduled reports and graphs
- Alarms, Alerts, and thresholds

The R175 is DC powered via an AC/DC adapter or USB power from the PDU. An internal battery supports alerts if DC power is lost, and beacons periodically to maintain connectivity with CenterScope. The R175 will continue to beacon for over 4 years using battery backup. A low battery alert is provided to indicate when the battery needs to be replaced.

In operational mode the R175 RPDU sensors only receive information from the PDUs. No outlet control or other actions are possible through the sensor.



RF Code R175 RPDU Sensor Specifications

AVAILABLE PDU INFORMATION AND POWER METRICS

GENERAL INFORMATION

PDU model number
PDU serial number
PDU firmware revision
PDU message loss
PDU input phase

POWER INFORMATION

Per phase active power in watts
Per phase apparent power in Volt-Amps (V-A)
Per phase active energy in watt-hours
Per phase apparent energy in V-A-Hours
Per phase current load balance
Per phase power factor
Per outlet average root mean square (RMS) current (A)
Per outlet apparent energy (VA-Hours) *
Per outlet active energy (watt-hours) *
Per line current flow (A)

ALARM INFORMATION

Unit disconnect status
Unit communication status
Phase voltage and current alarms
High in-feed load (80% or more of capacity) alarm
Outlet current alarms
Sensor low-battery notification
Over current protection device – breaker-tripped alarm

COMPUTED ATTRIBUTES IN RF CODE CENTERSCAPE

Per branch voltage (V)*
Per branch current flow (A) *
Per branch energy (kVA-Hours) *
Per outlet power factor*
Power allowance
Available current capacity per phase
Total PDU active and apparent power
Rack power redundancy

** Requires per outlet monitoring models*

REGULATORY

FCC Compliance	FCC Title 47 CFR Part 15; FCC ID: P6FX
CE Compliance	RED 2014/53/EU Article 3.1(a): Health and Safety RED 2014/53/EU Article 3.1(b): Electromagnetic Compatibility RED 2014/53/EU Article 3.2: Radio Spectrum CE Marked
WEEE Compliant	

REQUIREMENTS

RF Code CenterScape version 1.7 and above
Xerus™ Firmware revision 4.1.0 and above