R175 Rack PDU Power Monitoring Sensor

RF**CODE**

Sensors

Designed for deployment with intelligent PDUs from any PDU vendor, R175 sensor enables "wire-free" power monitoring over the RF Code radio frequency infrastructure.

Features & Benefits

◆ Encoded Radio Transmissions at 433 MHz

◆ 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 Ethernet port of almost any Intelligent PDU for "Wire-free" Power Monitoring

◆ Compatible with almost Any Switched, or Intelligent PDUs

◆ Auto-Configuration up to 3 Link PDUs Daisy Chained through a Master PDU

◆ Integrates with RF Code's CenterScape Platform

◆ AC Powered via DC Adapter with Battery Back-Up

RF Code's R175 RPDU power sensors integrate with intelligent PDUs from major rack PDU vendors including:

• Chatsworth
• Vertiv
• Legrand

The RPDU sensor allows power monitoring information to be transmitted and utilized by RF Code's "wire-free" radio frequency infrastructure. This results in a vendor neutral comprehensive power monitoring solution made available in RF Code's CenterScape platform.

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

Designed for use with rack-mounted PDUs, the R175 433 MHz RF transmitter features simple plug and play 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 once every 10 seconds using RF Code's patented

communication protocol. The power metrics are transmitted to the RF Code readers that includes PDU product information (vendor, model/serial/asset), PDU phase and power usage information such as amperage, voltage, apparent power, active power, and breaker status if applicable. All power data collected from the PDU flows via the RF Code readers to the RF Code CenterScape platform as well as other third-party applications for power monitoring and display. 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 CenterScape 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 CenterScape. 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, hence no outlet control or other actions are possible through the sensor. This means the RF Code wireless solution does not compromise power security.

The R175 RPDU Sensor is ideal for data center managers that want to minimize wiring and eliminate costly administrative overhead of managing IP connections to each PDU.

RF Code R175 RPDU Sensor Specifications

OPERATION	
Operating Frequency	433.92 Mhz
Group Code & Sensor ID Codes	> 540,000 unique IDs per Group Code (PDUPWR)
Typical Transmission Range	> 30 ft. in the data center
Emitted Radiated Power	71.8 dBμV/m at 3 meters (maximum)
Modulation	ASK
Stability	SAW stabilized
Sensor Cable Length (RJ45 from Sensor to RJ45 Port)	Cat 5 or better 100m maximum (7 ft. Cat 5 cable supplied)

ENCLOSURE	
Case Length	3.0 in (76.2 mm)
Case Width	1.75 in (44.5 mm)
Case Height	1.0 in (25.4 mm)
Construction	Injection-molded enclosure - Flame retardant UL94-HB rated
Durability	Tough, impact resistant and temperature stable
Mounting Options	Industrial-strength adhesive

ENVIRONMENTAL	
Operating Temperature	-20° C to +70° C
Storage Temperature	40° C to +80°C

POWER	
Power	Typical using 12-24V DC – 60-40 mA Typical using USB 5V – 120 mA
External Power Supply	100-240 V with IEC connector to 12-24V DC adapter
Optional Power	5V over USB adapter
Battery Backup	Lithium CR2032 replaceable coin cell
Smart Sensor Feature	Low battery indication

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	

SOFTWARE	
CenterScape Platform	Requires version CS 1.4 and above

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