R170-0B07 PDU Sensor

RF CODE
Sensors

Designed for deployment with Server Technology PRO Series PDUs, R170 Sensors enable "wire-free" power monitoring over the RF Code radio frequency infrastructure.

Features & Benefits

◆ Encoded Radio Transmissions at 433 MHz

◆ Per Phase Status & Metrics, including:

   ◆ Phase Voltage
   ◆ Phase Amperage
   ◆ Phase Power
   ◆ Phase Energy Use

◆ Over-Current Protection Device (OCPD)/Branch Status & Metrics

   ◆ Per Branch Current
   ◆ Breaker, Alarms & Overload Status

◆ Per-Outlet Status & Metrics including:

   ◆ Outlet Energy Use
   ◆ Outlet RMS Amperage
   ◆ Feed-Line Amperage & Overload Status

◆ Works with Server Technology's PRO1 & PRO2 Series PDUs

◆ Integrates with RF Code's CenterScape Platform

◆ Easy-to-Deploy, "Wire-free" Power Monitoring

◆ Low Power Consumption for Long Battery Life

RF Code's R170 PDU sensors integrate with Server Technology's PDUs which run custom firmware to support the RF Code device. The PDU sensor allows power monitoring information to be transmitted and utilized by RF Code's "wire-free" radio frequency infrastructure. This results in comprehensive power monitoring information from Server Technology's PDUs being made available in RF Code's CenterScape platform.

The R170-0B07 PDU sensor is compatible with Server Technology's Smart PRO1/2 Per Inlet Power Sensing (PIPS) PDUs, Switched PRO1/2 PIPS CDUs with or without Per Outlet Power Sensing (POPS). The R170-0B07 sensor supports PDUs and CDUs as all Master units or implemented as Master/Link units with one sensor required per Master PDU and up to three (3) Links. 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 R170 433 MHz RF transmitter features simple plug and play for quick and easy installation. Simply plug the sensor's locking RJ45 connector into the serial port on the PDU, peel off the sensor's adhesive liner, 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 gateways that includes PDU product information (model/serial/asset), PDU phase and outlet power usage information such as amperage, voltage, apparent power, active power, and breaker status. All power data collected from the PDU flows via the RF Code gateways to the RF Code CenterScape platform as well as other third-party applications for power monitoring and display. The software presents all of 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

Powered by a replaceable coin cell battery, the R170 sensor will perform reliably in any data center environment. The R170 sensor operates with a very low duty cycle that translates to long battery life (typically > 5 years). Featuring a low-battery alert, the sensor will continue to report PDU operational data for at least three months following this alerting.

R170 PDU 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 R170 PDU 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 R170 RPDU Sensor Specifications

OPERATION	
Operating Frequency	433.92 Mhz
Group Code & Sensor ID Codes	> 540,00 unique IDs per Group Code (STIPRO)
Typical Transmission Range	> 30 ft. in the data center
Radiated Emissions	71.8 dBμV/m at 3 meters (maximum)
Modulation	ASK
Stability	SAW stabilized
Sensor Cable Length (RJ45 from Sensor to Serial Port)	7 ft (2.1m)

ENCLOSURE	
Case Length	1.35 in (34.28 mm)
Case Width	1.84 in (46.74 mm)
Case Height	0.50 in (12.7 mm)
Case Weight (with sensor)	0.66 oz (18.71g)
Construction	Injection-molded polycarbonate enclosure
Durability	Tough, impact resistant and temperature stable
Mounting Options	Industrial-strength adhesive or screw-mountable snap-in bezel

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

POWER	
Battery Type	Lithium CR2032 replaceable coin cell
Smart Sensor Feature	Low battery indication
Battery Life	> 5 years (typical)

SOFTWARE	
CenterScape Platform	Requires version CS 1.2.5
Server Technology Firmware	Requires revision 8.m or higher

RFCODE

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