

R170-OB04 PDU Sensor Tag



Designed for deployment with Emerson/Liebert PDUs, R170 Sensor Tags enable power monitoring data to flow over the RF Code radio frequency infrastructure.

Features & Benefits

- ♦ **Encoded Radio Transmissions at 433 MHz**
- ♦ **Power consumption and utilization trend monitoring, including:**
 - ♦ **Main PDU Data**
 - ♦ **PDU Phase Data**
 - ♦ **PDU Feed Line Data**
 - ♦ **PDU Breaker Data**
- ♦ **Works with Liebert MPX PDU Shipped with RCP-1000 Module and Liebert MPH PDU with Embedded RCP-1000**
- ♦ **Integrates with RF Code's Sensor Manager and Asset Manager software solutions**
- ♦ **Easy-to-Deploy, "Wire-free" Monitoring**
- ♦ **Low Power Consumption for Long Battery Life**

R170 tags integrate with Emerson/Liebert rack PDUs to monitor power consumption trends and utilization. The tags periodically report their own unique ID, the PDU model, serial number and PDU operational values, including: phase configuration, average RMS voltage and amperage, feed line set ID, and tower ID. The RF Code / Emerson wireless solution is ideal for data center managers that want to minimize wiring and eliminate the costly administrative overhead of managing IP connections to each PDU.

Designed for use with rack-mounted PDUs, the battery-powered R170 433 MHz RF transmitter features an industrial-strength adhesive backing for quick and easy installation. Simply plug the tag's locking RJ45 connector into the Sensor port on the PDU, peel off the tag's adhesive liner, and attach the tag to the top of the rack (this ensures clear signal transmission in metal-dense data center environments).

Each tag broadcasts its unique ID and a portion of the PDU data once every 10 seconds using RF Code's patented communication protocol. The power usage statistics are transmitted to RF Code Readers that are connected to the Ethernet network. All power data collected from the PDU flows via the RF Code readers to the RF Code software

(Zone Manager, Asset Manager, and Sensor Manager) and into other 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 attributes can be utilized by existing Sensor Manager features such as:

- Live table and map views
- Interactive graphing
- Scheduled reports and graphs
- Alerting and thresholds

Powered by a replaceable coin cell battery, the R170 tag will perform reliably in any data center environment (the tag's specified operating temperature range is -20 to +70 degrees Celsius). R170 tag cases are impact resistant and temperature stable. The R170 tag operates with a very low duty cycle that translates to long battery life (typically > 5 years). Featuring a low-battery alert, the tag will continue to report PDU operational data for at least three months following this alerting.

R170 PDU Sensor Tags only receive information from the PDUs. The tags do not allow any commands to be received by the PDU, hence no outlet switching or other actions are possible through the tag. This means the RF Code wireless solution does not compromise power security.



The R170 PDU Sensor Tag is ideal for data center managers that want to minimize wiring and eliminate the costly administrative overhead of managing IP connections to each PDU.

RF Code R170 PDU Tag Specifications

OPERATION

Operating Frequency	433.92 MHz
Group Code & Tag ID Codes	> 540,000 unique IDs per Group Code
Typical Transmission Range	> 30 ft in the data center
Radiated Emissions	71.8 dBuV/m at 3 meters (maximum)
Modulation	ASK
Stability	Saw stabilized
Sensor Cable Length (RJ45 from Sensor Tag to Sensor Port)	7 ft (2.1 m)

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 tag)	0.66 oz (18.71 g)
Construction	Injection-molded polycarbonate enclosure
Durability	Tough, impact resistant and temperature stable
Mounting Options	Industrial-strength adhesive or screw-mountable snap-in tag 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 Tag Feature	Low battery indication
Battery Life	> 5 years (typical)

