

*Designed for deployment with Server Technology CDUs, 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:**
  - ◆ **Per Phase Voltage/Power**
  - ◆ **Phase Cumulative Energy Use**
  - ◆ **Per Outlet Watt-Hour**
  - ◆ **Feed-line Amperage and Overload Status**
- ◆ **Works with Server Technology's Smart or Switched PIPS CDUs**
- ◆ **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**

RF Code's R170 tags integrate with Server Technology's CDUs which run custom firmware to support the RF Code device. The CDU Sensor Tag 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 CDUs being made available in RF Code's Sensor Manager application.

The R170-0B02 CDU Sensor Tag is compatible with Server Technology's Smart and Switched CDUs with PIPS (Per Inlet Power Sensing) and with or without POPS (Per Outlet Power Sensing). The tags periodically transmit their own unique ID and, depending upon the model of CDU, transmissions include CDU product information (model/serial/etc), CDU phase and outlet power usage information such as amperage, voltage, apparent power, active power, and breaker status. This solution enables customers to monitor power information from each CDU at a dramatically reduced cost by the elimination of wires/cables, IP addresses and IP address administration.

Designed for use with rack-mounted CDUs, 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 serial port on the CDU, 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 CDU 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 CDU 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 CDU operational data for at least three months following this alerting.

R170 CDU Sensor Tags only receive information from the CDUs, 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 CDU 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 CDU.*

# RF Code R170 CDU 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 Serial 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)

