

PCT100/PCT200 Sensor Tag

Powercast® High-Function RFID Sensor Tags



DESCRIPTION

The Powercast PCT100 and PCT200 Sensor Tags enable RFID based monitoring of environmental conditions including temperature, humidity, and light level. Depending on the configuration desired, one, two or all three sensors can be supported on a single tag.

The PCT100 Sensor Tag is a high-function RFID tag capable of measuring temperature, humidity, and light level with high accuracy. The tag harnesses the capability of the Powercast Powerharvester® Chipset to enable long range, high-function RFID all without the need for an on-board battery. The tags are designed to maximize the RF to DC conversion efficiency of the energy provided by an RFID reader. Using this energy, sensor measurements can be taken and then read back out of the tag’s memory using any standard UHF RFID reader. Powercast’s technology enables a completely maintenance-free and battery-free sensing and tracking solution for UHF RFID applications.

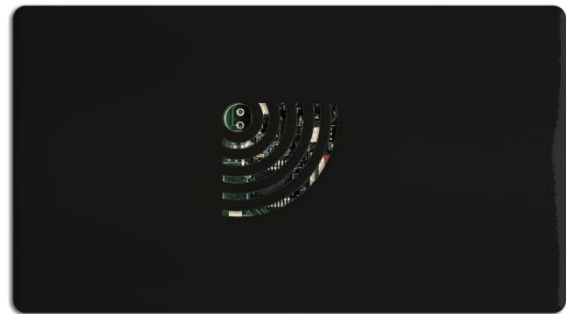
The PCT200 family adds a rechargeable battery to enable long lasting data logging capabilities while outside of the RFID reader’s field. The tag has customizable data reading capabilities that can be easily set through a user friendly interface. The tag uses the RFID Reader’s field to recharge the on-board battery while the data is being downloaded. This allows the tag to be reusable without the need to plug-in or change batteries.

APPLICATIONS

Medical Asset Tracking and Monitoring
 Smart Grid
 Building Automation
 Logistics
 Asset Monitoring
 Supply Chain Management
 Materials Management
 Industrial Monitoring

PCT100/PCT200 FEATURES

- EPC Class 1 Gen 2 compliant
- ISO/IEC 18000-6C compliant
- 10 meter read range
- High sensor accuracy



- “Find Tag” feature – enables locating one specific tag by illuminating an on-board LED
- Wide RF operating range: -17dBm to +20dBm
- Frequency range: 860MHz to 960MHz
- Compact and convenient hard case packaging
- RoHS compliant
- High RF to DC conversion efficiency - up to 75%
- -40 to +85C operational temperature range

PCT100 SPECIFIC FEATURES

- Completely battery-free wireless sensing
- Data accessible in user memory
- Fast read rate

PCT200 SPECIFIC FEATURES

- Up to 1 month of battery life without recharging
- Battery is recharged using the RFID reader’s field (no wires to plug in, no batteries to change)
- Customizable data read times from 1 minute to 1 hour
- Stores maximum, minimum, and average values in user memory
- Read times and dates are available along with sensor data

ORDERING INFORMATION

PCT100 and PCT200 tags are available in every sensor configuration of temperature, light and humidity possible.

PCT 1 00 - XYZ

PCT Tag series	Version 100 = Battery Free 200 = Datalogging	XYZ (Sensors Desired) T = Temperature H =Humidity L = Light
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Powercast® High-Function RFID Sensor Tags



PCT100-T	Temperature
PCT100-L	Light
PCT100-H	Humidity
PCT100-TL	Temperature and Light
PCT100-TH	Temperature and Humidity
PCT100-LH	Light and Humidity
PCT100-TLH	Temperature, Light and Humidity
PCT200-T	Temperature
PCT200-L	Light
PCT200-H	Humidity
PCT200-TL	Temperature and Light
PCT200-TH	Temperature and Humidity
PCT200-LH	Light and Humidity
PCT200-TLH	Temperature, Light and Humidity

Powercast products, reference designs, and technology are covered by one or more of the following patents and other patents pending:

6,289,237 | 6,615,074 | 6,856,291 | 7,027,311 | 7,057,514 | 7,639,994 | 7,643,312 | 7,812,771 | 7,844,306 | 7,868,482 | 7,898,105
7,925,308 | 8,159,090 | 8,380,255 | 8,432,062 | 8,461,817 | 8,621,245 | 9,000,616 | 9,021,277 | 9,107,579

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