

RT0005

RAIN RFID Temperature Logger Tag



Features

- RAIN RFID (UHF EPC Class1 Gen2, ISO 18000-63) interface
- High temperature and time accuracy
- Fast samples download
- Button and LED for fast inspection
- Configurable alarms
- Configurable sampling interval
- Long monitoring time span

Applications

- Fresh food
- Seafood
- Meat and poultry
- Milk based products
- Frozen food
- Pharmaceuticals
- Special chemical products
- Clinical trials

Overview

CAEN RFID easy2log® RT0005 is a low cost, semi-passive UHF Logger tag that allows to monitor temperature sensitive products like perishable foods and pharmaceuticals, during transportation and storage. The combination of the high resolution sensor, the large memory size and the standard RFID interface permits to realize effective track and trace solutions for the cold-chain.

The RT0005 can be used with standard RAIN RFID readers available on the market without requiring any additional equipment thanks to its compatibility with the EPCGlobal C1G2 and ISO18000-63 standards.

The tag can be configured to store temperature samples in intervals from 1 second to 18 hours in the internal memory that can contain up to 3,958 samples. The user can define up to 16 temperature ranges with independent threshold alarms for a very accurate control of the temperature excursions. The tag can be started either using a button or via standard RFID commands.

The tag is also able to calculate the Mean Kinetic Temperature and user configurable remaining shelf life time as well as generate alarms in case these parameters exceeded user defined thresholds.

The RT0005 RFID logger can be used for multiple shipments thanks to the long battery life and the reset function thus allowing to reduce the total cost of the solution and anticipate the ROI.



Technical Specification Table

Frequency Range	860÷928 MHz
Tag Type	Semipassive
RFID Interface	EPC Class 1 Gen 2 - ISO18000-63
Data Points	Up to 3,958 samples
Temperature Operating Range	-20 °C to +70 °C
Temperature Accuracy	±0.5 °C typical
Monitoring Time Span	Up to 5 years
Time Accuracy	<0.01% error
Read Range	Up to 10 mt. in free air @ 2W ERP
Available Memory	- Up to 512 bits in EPC memory bank - Up to 512 bits in User Memory bank
Monitoring Delay Option	Up to 18 hours
Features	- Multiple configurable sampling interval - Temperature histogram function - Mean Kinetic Temperature calculation - Shelf Life prediction (Arrhenius kinetic model with customer designation of time-temperature dependency) - Shelf Life monitoring (Remaining Shelf Life information available at check points or manual interface)
Alarms	- Multiple configurable high and low temperature thresholds - Estimated Time of Arrival - Battery level - Mean Kinetic Temperature - Shelf life
Battery Life	1 year typical (depending on usage and operating temperature)
Battery Type	Li/MnO2 Model Renata CR2450N
IP rating	IP67
Enclosure Material	PVC Tecnovil code: 21TV306TRS00000
Dimensions	- (W)107 x (L)107 x (H)8.7 mm ³ max. - 4.21 x 4.21 x 3.42 inches ³
Weight	31 g.

Ordering Options

WRT0005XAAAA	RT0005 - Temperature Logger Tag		