

RT0005 - RT0005ET

**Easy2log® Low Cost,
Semi-Passive UHF Logger Tag**



easy2log
RFID Temperature Loggers

Features

- High temperature accuracy
- Fast download of samples
- Button and LED for fast inspection
- Long monitoring time span
- EPC C1G2 RFID interface
- Available with external sensor (RT0005ET)

Applications

- Fresh food
- Seafood
- Meat and poultry
- Milk based products
- Frozen food
- Chemical/pharmaceutical products

General Info

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 UHF RFID readers available on the market without requiring any additional equipment thanks to its compatibility with the EPCGlobal C1G2 and ISO18000-6C 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.

In the Mod. RT0005ET the sensor is placed on an external probe so it is possible to measure temperature even inside a shielded box where the RFID field cannot get through.



easy2log[®] Family
 The easy2log[®] products family is the ideal portfolio of RFID enabled loggers for temperature-sensitive products that may be damaged when exposed to improper temperature ranges during shipment and storage. Especially indicated for food and pharmaceuticals, the easy2log[®] RFID loggers are well suited also for chemicals and special industrial products.



RT0005 - Technical Specifications Table

Tag Type	Semipassive
Data Points	4000
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
RFID Interface	UHF EPC Class1 Gen2/ISO 18000-6C compatible
Frequency range	860 MHz ÷ 928 MHz
Read range	approx. 10m in air @ 2W ERP
Memory capacity	4k samples (8 Kbyte)
Available Memory	Up to 512 bits in EPC bank, up to 512 bits in User Memory bank
Monitoring Delay Option	Up to 18 hours
Battery Type	Li / MnO2 Model Renata CR 2450N
Battery Life	1 year (typical) (depending on usage and operating temperature)
Alarms	Multiple user-configurable high temperature and low temperature alarms, ETA alarm, MKT alarm, shelf life alarm, low battery alarm
Shelf Life Prediction	Calculations based on Arrhenius kinetic model with customer designation of time-temperature dependency
Shelf Life Monitoring	Provides Remaining Shelf Life information at check points with RFID reader or manual interface
IP Rating	IP67
Dimensions (L,W,H)	107 x 107 x 8.7 mm ³
Enclosure material	PVC Tecnovil code: 21TV306TRS00000
Weight	31 g

Ordering Options

Code	Description
WRT0005XAAAA	RT0005 - Temp. logger UHF semi-passive tag (EPC C1G2) Blistered



RT0005ET - Technical Specifications Table

Tag Type	Semipassive
Data Points	4000
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
RFID Interface	UHF EPC Class1 Gen2/ISO 18000-6C compatible
Frequency range	860 MHz ÷ 928 MHz
Read range	approx. 8m in air @ 2W ERP
Memory capacity	4k samples (8 Kbyte)
Available Memory	Up to 512 bits in EPC bank, up to 512 bits in User Memory bank
Monitoring Delay Option	Up to 18 hours
Battery Type	Li / MnO2 Model Renata CR 2450N
Battery Life	1 year (typical) (depending on usage and operating temperature)
Alarms	Multiple user-configurable high temperature and low temperature alarms, ETA alarm, MKT alarm, shelf life alarm, low battery alarm
Shelf Life Prediction	Calculations based on Arrhenius kinetic model with customer designation of time-temperature dependency
Shelf Life Monitoring	Provides Remaining Shelf Life information at check points with RFID reader or manual interface
IP Rating	IP67
Dimensions (L,W,H)	107 x 107 x 8.7 mm ³
Probe dimensions	length 50.8mm (2.00 inches); diameter 6.35mm (0.250 inches)
Probe cable length	2m (6.56 feet)
Enclosure material	PVC Tecnovil code: 21TV306TRS00000
Weight	85 g

Ordering Options

Code	Description
WRT0005ETAAA	RT0005ET - UHF Temp. logger tag (EPC C1G2) with external probe



CAENRFID S.r.L. - Via Vetraia, 11 - 55049 Viareggio - Italy
 Tel. +39.0584.388.398 - Fax +39.0584.388.959 - info@caenrfid.com - www.caenrfid.com

For more information, visit our web site:
www.caenrfid.com

Copyright © CAENRFID srl. All rights reserved. Information in this publication supersedes all earlier versions. Specifications subject to change without notice.
 Printed in May 2013

