RFOT
WIRELESS MEAT TEMPERATURE DATA LOGGER

MADGETECH
WE BUILD DATA LOGGERS

Features
- Wireless 2 Way Communication
- Splash proof (IP67)
- Real-time Operation
- Battery Life Indicator
- Programmable Start Time
- Memory Wrap Around
- Field Upgradeable Firmware

Benefits
- No Wiring
- Fast Installation
- Minimal Long-Term Maintenance
- Long-Term Field Deployment

Applications
- Meat Processing
- Meat Storage
- Smoke Houses
- HACCP Compliance
- Complying with USDA Regulations
- Food Process Monitoring

MadgeTech's RFOT is the most advanced wireless temperature data logger in the meat industry today. The RFOT's rugged design, equipped with a flexible piercing probe allows it to be used in the harshest environments. It is perfectly suited for smoke houses, ovens and other cooking processes up to 212 °F (100 °C) as well as refrigerators and freezers down to -4 °F (-20 °C). It is completely splash proof and can withstand wash down cycles. This state-of-the-art device records and transmits internal product temperature readings back to a central computer for instant real-time monitoring.

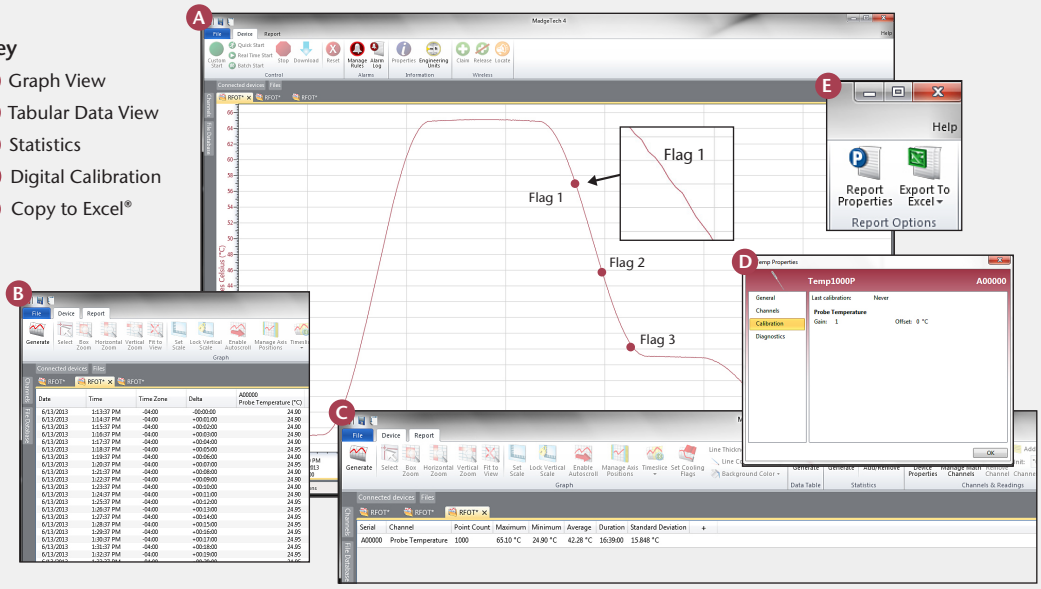
The RFOT never needs to be connected to a computer as it has been designed for two way wireless communication. All communication can be performed directly from a central PC. In addition to wirelessly transmitting data, the RFOT also stores each reading to internal memory for backup. This back up data may be retrieved wirelessly at a later time.

MadgeTech's easy to use software features user programmable critical control points, called "cooling flags" to assist in compliance with USDA Appendix B. The "cooling flags" are automatically annotated on the graph and tabular data views. The summary tab provides the cool down duration between each critical control point. The data can also be automatically exported to Excel® for further calculations.

As the leader in low power data logger technology, MadgeTech continuously improves its products and develops solutions to meet ever-changing challenges. The RFOT was designed with our customers in mind. MadgeTech offers free firmware upgrades for the life of the product so that data loggers already deployed in the field can grow with new technological developments. Units do not need to be returned to the factory for upgrades. The user can do this automatically from any PC.

MADGETECH DATA LOGGER SOFTWARE

Key
- A Graph View
- B Tabular Data View
- C Statistics
- D Digital Calibration
- E Copy to Excel®



Software Features:
- Multiple graph overlay
- Statistics
- Digital calibration
- Zoom in/ zoom out
- Lethality equations (F0, PU)
- Mean Kinetic Temperature
- Full time zone support
- Data annotation
- Min./Max./Average lines
- Data table view
- Automatic report generation
- Summary view
- Multilingual

RFOT SPECIFICATIONS*

Temperature**

Probe Temperature Range:	-50 °C to +200 °C (-58 °F to +392 °F)
Resolution:	0.01 °C
Probe Calibrated Accuracy:	±0.1 °C (32 °F to 212 °F / 0 °C to +100 °C) ±0.5 °C (outside of that range)

Wireless

RF Frequency:	2.45 GHz IEEE 802.15.4 ultra-low power wireless transceiver with fully bi-directional communication
Band:	ISM band 2.405-2.48 GHz
Maximum Output Power:	+0 dBm typical (RFOT), 20 dBm maximum (RFC1000)
Receiver Sensitivity (RFC1000):	-95 dBm typical (RFOT), -104 dBm typical (RFC1000)
Transmission Distance (to data loggers)	• **RFC1000, RFC1000-CE & RFC1000-IP69K** 2,000 ft max. outdoors - line of sight unobstructed 500 ft max. indoors - typical urban environment
Transmission Distance (to other RFC1000's)	• **RFC1000** 4,000 ft max. outdoors - line of sight unobstructed 1,000 ft max. indoors - typical urban environment • **RFC1000-CE** 2,500 ft max. outdoors - line of sight unobstructed 700 ft max. indoors - typical urban environment • **RFC1000-IP69K** 4,000 ft max. outdoors - line of sight unobstructed 1,000 ft max. indoors - typical urban environment

***Temperature specifications based on ideal 100 Ω Pt RTD compliant with IEC 751 (1983) and ITS-90.*

BATTERY WARNING: Fire, explosion and severe burn hazard. Do not recharge, disassemble, heat above 100 °C (212 °F), incinerate, crush, or expose contents to water.

General

Reading Rate:	1 reading every 2 seconds up to 1 reading every 24 hours
Memory:	21,504 readings; software configurable memory wrap
Wrap Around:	Yes
Start Modes:	Immediate start / delay start
Calibration:	Digital calibration through software
Calibration Date:	Automatically recorded within device
Battery Type:	3.6V lithium battery included; **user replaceable**
Battery Life:	2 years typical at 15 second reading rate
IP Rating:	IP67
Data Format:	Date and time stamped °C, °F, K, °R
Time Accuracy:	±10 second / month (at 25 °C)
Computer Interface:	USB 115,200 baud
Software:	Windows XP SP3 or later
Operating Environment:	-20 °C to +100 °C (-4 °F to 212 °F), 0 %RH to 100 %RH non-condensing
Dimensions:	• **Body:** 7.8 in x 1.62 in dia. (198 mm x 41 mm dia.) • **Hook ID:** 0.625 in (16 mm) • **Cable Length:** 30 in (760 mm)
Probe Lengths	• **RFOT-FR:** 1.75 in (45 mm), Tip Diameter: 0.063 in (1.6 mm) Tip Length: 1.25 in (32 mm) • **RFOT-4-TD:** 4.00 in (102 mm), Tip Diameter: 0.125 in (3.2 mm), Tip Length: 3.50 in (89 mm) • **RFOT-4:** 4.00 in (102 mm), Tip Diameter: 0.188 in (4.8 mm), Tip Length: Full • **RFOT-7:** 7.00 in (177 mm), Tip Diameter: 0.188 in (4.8 mm), Tip Length: Full • **RFOT-12:** 12.00 in (305 mm), Tip Diameter: 0.188 in (4.8 mm), Tip Length: Full
Weight:	8.8 oz (250 g)
Material:	• Body: Radel R-5100 • Cable Jacket: Silicone Polyurethane
Approvals:	US (FCC), CA (IC), CE

ORDERING INFORMATION

MODEL	PART NUMBER	DESCRIPTION
RFOT	902143-00 = RFOT-FR 902144-00 = RFOT-4 902145-00 = RFOT-4-TD 902146-00 = RFOT-7 902147-00 = RFOT-12	Temperature Data Logger
RFC1000	901383-00	Wireless RF transceiver/repeater. USB to mini USB adapter & power supply included.
RFC1000-CE	901388-00	Wireless RF transceiver/repeater, CE approved for Europe. USB to mini USB adapter & power supply included.
RFC1000-IP69K	901389-00	Wireless RF transceiver/repeater, splash proof with an IP69K rating. USB to mini USB adapter included.
TLH-5903	901748-00	Replacement battery for RFOT

Countries approved for use, purchase and distribution of the RFOT:

Australia, Austria, Belgium, Bulgaria, Canada, Chile, Columbia, Croatia, Cyprus, Czech Republic, Denmark, Ecuador, Estonia, Finland, France, Germany, Greece, Honduras, Hungary, Iceland, Ireland, Israel, Japan, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Mexico, New Zealand, Norway, Peru, Poland, Portugal, Romania, Saudi Arabia, Singapore, Slovakia, Slovenia, South Africa, Spain, Sweden, Switzerland, Thailand, The Netherlands, Turkey, United Kingdom, United States, Venezuela, Vietnam