FOS14 Systems

For Food processes up to 250°C

Data Logger

PhoenixTM multi-channel data loggers are designed for use in harsh industrial environments. The electronics are protected by a robust, water resistant, machined aluminum case. Cold junction compensation with feedback error detection and noise reduction ensures accurate and reliable data. Optional two way RF telemetry is available, allowing real time data analysis and for the data logger to be reset and downloaded remotely. All loggers are shipped with a factory calibration certificate traceable to national standards. Optional certification to UKAS (UK) or DKD (Germany) can be supplied if required. For convenience and future reference, a copy of the original calibration certificate and the calibration data are stored within the data logger and can be accessed as required.

Type	PTM1-206NT, PTM1-210NT, PTM1-220NT
No. of channels	6,10 or 20
Thermocouple type	K or T
Measurement range	Type K: -200°C - +400°C
	Type T: -200°C - +375°C
Accuracy	+/- 0.3°C (-40°C - +50°C)
	+/- 0.4°C (+51°C - +80°C)
Resolution	0.1°C
Operating temperature range	-40°C - +80°C
Battery type	2 x Standard Alkaline (AA)
Sampling rate	Adjustable from 0.2 second to 1 hour
Memory	Up to 3.8 M data points, non-volatile memory
Start trigger	Time, temperature, start button or software
PC connection	Hard wire or Bluetooth
Dimensions	20 x 98 x 200mm (h x w x l)

Bluetooth PC connection

Optional "Cook As You Look" system with wireless two-way RF telemetry enabling real-time dynamic oven adjustments

Robust and waterproof housing for reliable use in hostile environments

Up to 1000 hours measurement time

What is a PhoenixTM FOS14 Temperature Profiling System?
It is a multi-channel temperature data logging system designed to travel through the oven, fryer or freezer measuring actual core product temperatures.

How does the PhoenixTM System work?
The system uses a high temperature data logger, protected by a thermal barrier, to record the temperature of the product from up to 20 thermocouples as it travels through the process. At the end of the profile run, the data stored in the logger is transferred to a PC for analysis within a powerful industry specific software package. Optional two-way wireless RF telemetry allows data to be viewed and evaluated in real time from inside the process.

What are the benefits of the PhoenixTM System?
As the system can be easily placed in the process with the product, it causes less disruption and measures not only the atmosphere temperature, but also actual product temperature. This is vital to ensure that the cook/chill specification is adhered to. Viewing data in real time enables dynamic oven adjustments, potentially saving valuable time when working on new product developments.
The temperature information obtained can be used for HACCP compliance, process validation and optimisation, product yield management as well as problem solving. The user-friendly Thermal View Food software produces clear and concise reports to verify process compliance.

TS14 thermal barriers

Specifically designed for the food industry, the TS14 thermal barrier range provides enhanced levels of thermal and mechanical protection for the data logger inside the process. It is waterproof and suitable for use in frying, steam cooking, chillers and blast freezers. The housing is made of a food contact approved stainless steel so that it can travel safely through the process during normal production. The low height submersible design combines high thermal performance with ease of use in challenging food processing environments
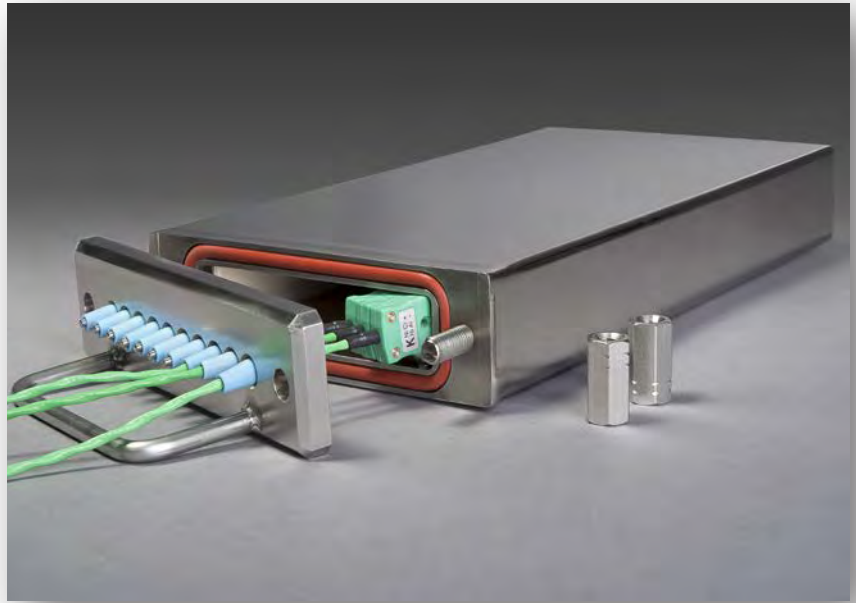
Standard TS14 range performance

| Type	TS14-040	TS014-080
-150°C /min	30	50
100°C /min	105	150
150°C /min	55	75
200°C /min	40	60
250°C /min	30	40
Height /mm	40	80
Width /mm	148	148
Length /mm	338	360

Need a thermal barrier to suit your application? Tell us your requirements, and if it's possible, we'll design and manufacture it for you! We are constantly developing and looking forward to any new challenge.

Easy to clean stainless steel housing

Water tight thermocouple sealing for steam and liquid processes

High efficiency, small volume thermal barriers also available for long duration processes and/or higher temperatures

Thermocouples

All PhoenixTM food thermocouples are manufactured using the highest quality materials. The industry specific range is fitted with stainless steel tipped needles with optional locking collar to help maintain position of thermocouple during the process. The thermocouples are wrapped with stainless steel braid and have a final overall PTFE insulation.

Thermocouples can be fitted with a range of optional locking collars to hold the thermocouple in place and accurately measure the core temperature of the product.
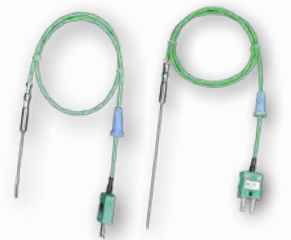
Type K or T mineral insulated thermocouples in 1.5 and 2.0mm diameter, fitted with standard sub-miniature thermocouple plugs.

Thermal View Food
The easy way to get a perfect result!

PhoenixTM Thermal View software has all the essential functions required to understand and optimise your process.

All results are saved in a database for easy access which can be organized in a logical manner using the multi column sorting facility.

Simplicity: Screen layout is clear, concise and intuitive making the software user friendly, uncluttered and easy to use without compromise to the analysis detail available.

Clarity: Single screen layout provides graphical representation for the process with instant access to analysis options and results.

PhoenixTM software has all the essential functions you require to keep your process under control:

• Temperature Data
• Multiple Time Above temperature analysis
• Multiple Maximum, Minimum and Mean temperature analysis options
• Multiple rates of change of temperature analysis
• F0 and Pu analysis
• Reference Profile to compare results for two different profiles
• On Screen Notes (time, temperature, slope and text)
• Printed reports
• Thermocouple location library
• Data import and export
• Oven start and stop positioning
• Logger real time measurement option when connected to a pc via USB
• PhoenixTM Mobile app support – download reset logger via android device*
• Same site logger license allows multiple users without the need to buy additional software licenses.

*subject to device compatibility

Simply enter:
• How to start the data logger
• The rate at which data is to be collected
• The number of thermocouples to be used.
For regular measurements these can be set with one mouse click or pressing the data logger start button.

Multiple time above temperature, rates of change of temperature and maximum temperature analysis options are available to verify product quality and meet process optimisation requirements.
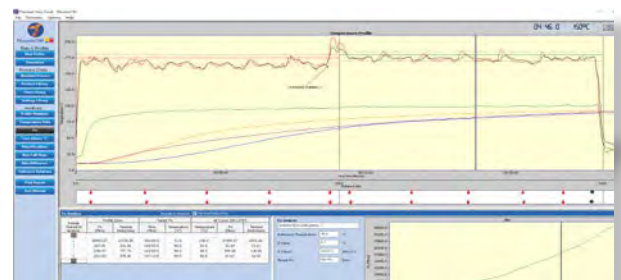
In-depth F0 and Pu analysis and visual confirmation of calculations enables efficient process validation and traceability