



**Phoenix<sup>TM</sup>**   
Phoenix Temperature Measurement 

# FIS04 Systems

For paint and powder coating processes up to 300°C



*...where experience counts!*

## Data logger

Phoenix™ 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	PTM1-206LT, PTM1-210LT, PTM1-220LT
No. of channels	6, 10 or 20
Thermocouple type	K
Measurement range	Type K: 0°C - +500°C
Accuracy	+/- 0.3°C
Resolution	0.1°C
Max operating temperature	80°C
Battery type	2 x Standard Alkaline (AA)
Sampling rate	Adjustable from 0.2 second to 1 hour
Memory	Up to 3.8M data points, non-volatile memory
Start trigger	Time, temperature, start button or software
Dimensions	20 x 98 x 200mm (h x w x l)

Two way radio transmission is available as an option



Robust housing for reliable use in hostile environments



Up to 1000 hours measurement time



Bluetooth PC connection



## What is temperature profiling?

All industrial ovens or furnaces use thermocouples to control the zone temperatures. However these thermocouples measure only atmosphere temperature in their respective zones and do not indicate the true temperature of the product, which is vital to ensure the heat treatment specification is adhered to.

### Phoenix™ can provide a solution:

Our monitoring system travels through the oven with the product, logging temperatures from up to 20 thermocouples connected to the product or distributed in the load to get an accurate thermal 'balance'. The system is easily placed on the line with the product causing less disruption and gives a more accurate picture of true product or load temperature. At the end of the profile run a powerful software package analyses the logged data to determine whether the specification has been met.

The profiling trials can be quickly carried out allowing you to resolve any oven problems quickly, and to provide your customers with an assurance of a consistent process control.





## TS04 Thermal Barriers

Specifically designed for finishing applications, the Phoenix<sup>TM</sup> TS04 Thermal Barrier range offers ease of handling and high thermal performance in a compact design. Ideal for use in the automotive industry these thermal barriers feature robust stainless steel case, microporous insulation, phase change heat sink and 100% silicone free construction.



Standard TS04 range performance

Type	TS04-60	TS04-113	TS04-135
100°C	1.7 h	10.0 h	16.0 h
150°C	1.1 h	5.0 h	7.0 h
200°C	0.8 h	3.0 h	4.8 h
250°C	0.7 h	2.0 h	3.8 h
Height	60mm	113mm	135mm
Width	180mm	185mm	185mm
Length*	420mm	370mm	370mm

\* for a 20 channel data logger

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.

Magnetic plate for thermocouple storage and efficient transfer to the product.



Heat sinks with very high thermal capacity and gas tight seals.



Dual thermocouple exits for 20ch data logger support and silicone free construction.



## Thermocouples

All Phoenix<sup>TM</sup> finishing thermocouples are manufactured using the highest quality materials and conform to ANSI 96.1 special limits specification. The thermocouples are designed to withstand rough handling and uniquely include user replaceable sensors to minimise long term running costs.

Available as magnetic, clamp or exposed junction, the thermocouples are PTFE insulated, triple wrapped with stainless steel braid, and have a final overall PTFE insulation.

Magnetic surface and air thermocouples.



Clamp surface and air thermocouples.

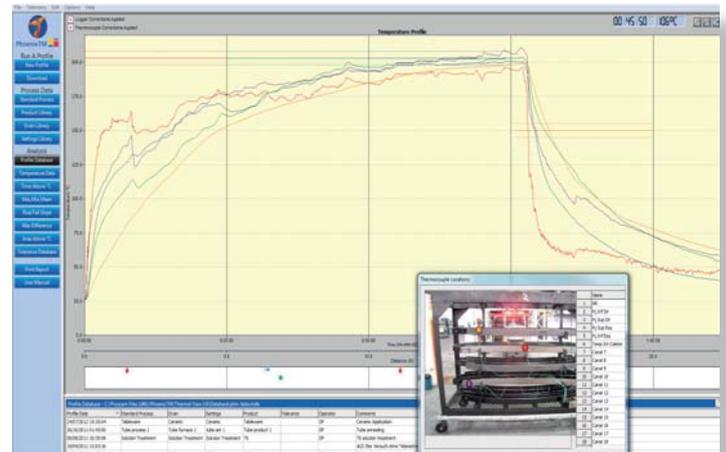
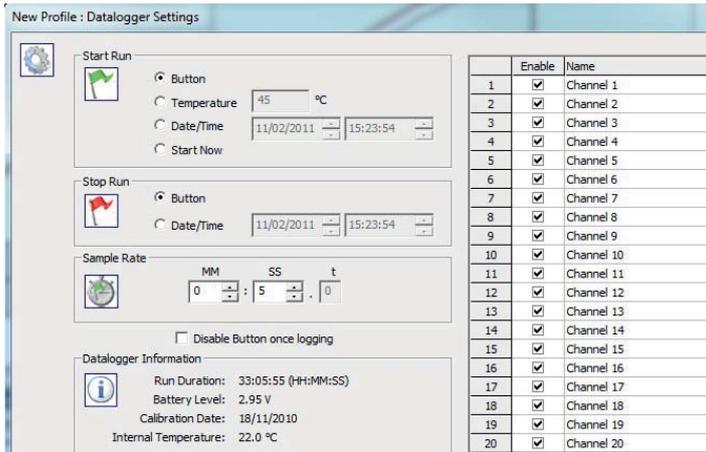


# Thermal View Plus

The easy way to get a perfect result!



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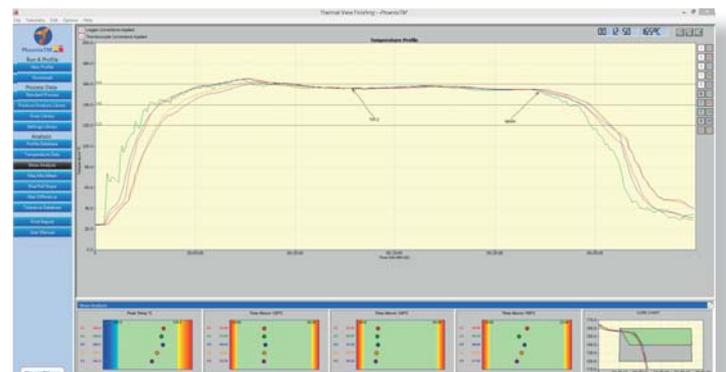


Simply enter:

- 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.

The temperature profile is displayed in the graphics window of the Thermal View software. Thermocouple profiles can be switched on or off individually and you can zoom in for more detailed analysis.



Comprehensive analysis tools are located on the left side of the screen for single click analysis and report generation. Data import and export in both .csv and PhoenixTM formats are available allowing electronic transfer of process data.

Instant visual confirmation of compliance to curing specification. Includes one page report summary for easy archiving and process traceability



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