



PhoenixTM
Phoenix Temperature Measurement

FIS04 Epsilon-x System

Intrinsically safe 10 & 20 Channel Temperature Monitoring System

Certified to ATEX (Europe) 




... where experience and safety counts !

FIS04 Epsilon-x System

Intrinsically Safe Data Logger

Data logger

The robust intrinsically safe 10 or 20 channel data logger has been designed specifically to temperature profile paint processes to optimise the operation of the process, identify process issues and verify the cure quality. Cold junction compensation with feed back 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. The data logger is supplied with a factory calibration certificate traceable to national standard. Optional certification to UKAS(UK) or DKD(Germany) can be supplied if required.

Type	PTM1-510-LT-EXE, PTM1-520-LT-EXE
No. of channels	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 Tadiran SL560 (AA User Replaceable)
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)
PC connection:	cable/ wireless/  Bluetooth™



Two way radio transmission as an option



Approved for use in hazardous locations (Zone2, 22) against ATEX standards

ATEX Classification **Group II (Surface) System Category 3**



CE Ex II 3G Ex ic IIC T4 Gc
Zone 2 Gas "Liquid / Water based paint"
CE Ex II 3D Ex ic IIIC T135 Dc
Zone22 Dust "Powder Coating"

ATEX Certificate No EXVeritas 19 ATEX 0472X

Robust housing for reliable use in hostile environments



User replaceable batteries
Up to 1000 hours measurement time



ATEX (ATmosphere EXplosive)

To perform a temperature profile on a solvent , water-based or powder coating line requires that the profiling system be passed through zones / areas that are classified as potentially hazardous. These areas may include the spray booth, flash off zone and even the curing oven itself. In such areas potentially explosive gases / volatile organic compounds (VOC) may be present from solvents such as Acetone, Toluene and Xylene, used in and released from the coatings or as cleaning agents. When powder coating fine particles can form potentially explosive dust clouds.

PhoenixTM can provide a solution:

The logger is certified as Group II Category 3G & 3D for intrinsically safe operation in gaseous environments defined as Zone 2 and dust environments defined as Zone 22 respectively in ATEX 99/92/EC. Classification of equipment use in hazardous zones and identification of Zone classification (at varying solvent concentrations) in the paint application complies with European standards;



- EN 16985:2018 "Spray Booths for organic coating material – Safety requirements"
- EN 1539:2015 "Dryers and ovens in which flammable substances are released – Safety requirements"





TS04 Thermal Barriers

Specifically designed for finishing applications, the PhoenixTM 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.

** Light weight **Aluminium** option also available



Standard TS04 range performance:

Type	TS04-060	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

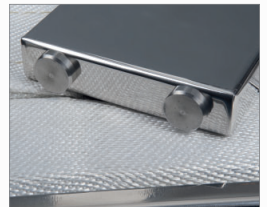
* for a 20 channel data logger

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.

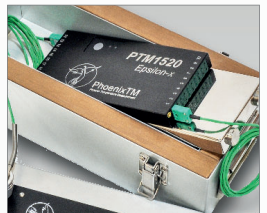
Magnetic plate for thermocouple storage and efficient transfer to the product.



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



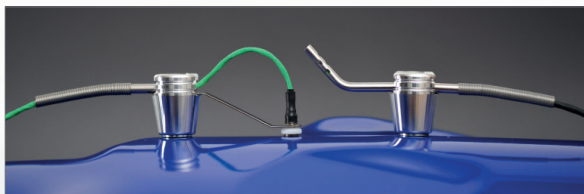
Dual thermocouple exits for 20ch data logger support and silicone free construction.



Thermocouples

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.

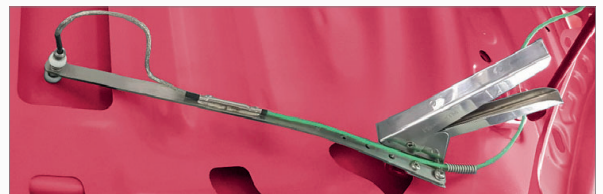
All PhoenixTM finishing thermocouples are manufactured using the highest quality materials and conform to ANSI 96.1 special limits specification. The thermocouples are designed to withstand rough handling and uniquely include user replaceable sensors to minimise long term running costs.



Magnetic Surface and Air



MiniMag



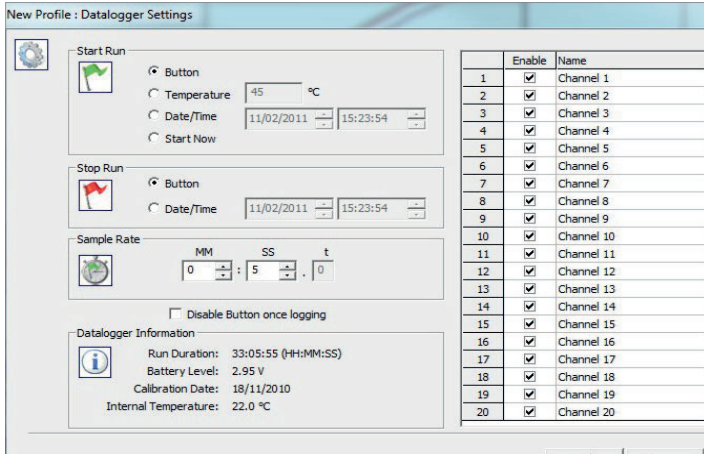
Aluminium Clamp

Thermal View Finishing

The easy way to get a perfect result!



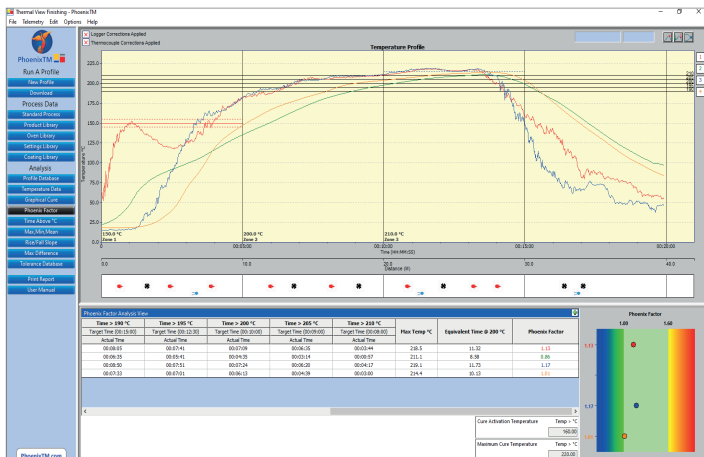
PhoenixTM
Phoenix Temperature Measurement



Simply enter:

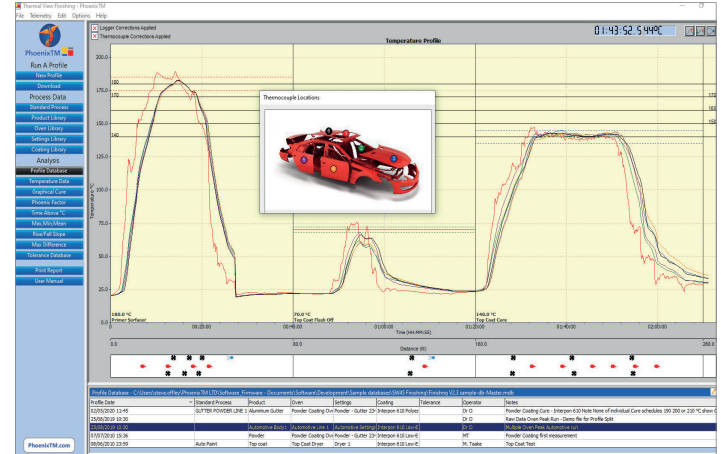
- How to start the data logger
- The rate at which data is to be collected
- The number of thermocouples to be used.

For regular measurements these can be set with one mouse click or pressing the data logger start button.



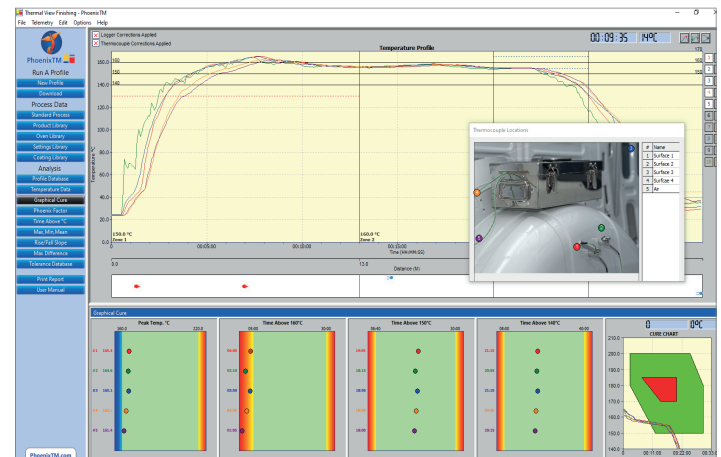
Comprehensive analysis tools are located on the left side of the screen for single click analysis and report generation. Data import and export in both .csv and PhoenixTM formats are available allowing electronic transfer of process data.

- Phoenix Factor (Cure index value)
- CureChart (Graphical Cure)
- Max Temperature & Thermocouple Temperature Difference
- Time @ Temperature
- Slopes
- Raw data table



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.

Split multiple peak runs to allow easy accurate analysis and reporting of separate cure ovens.



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

Process files allow quick efficient description of process characteristics (Oven Zones, Distance and setpoints) including a coating library with all default paint cure analysis parameters.

PhoenixTM Ltd
25 Earith Business Park
Meadow Drive,
Earith, Cambridgeshire
PE28 3QF, UK
Tel.: +44 1353 223100



www.phoenixtm.com
sales@phoenixtm.com