HTS01 Systems

For processes up to 1470°F

...where experience counts !

Data Logger

PhoenixTM 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	PTM1-206, PTM1-210, PTM1-220	
No. of channels	6,10 or 20	
Thermocouple type	K or N	
Measurement range		
Type K:	-148°F - +2498°F	-100°C - +1370°C
Type N:	-148°F - +2372°F	-100°C - +1300°C
Accuracy	± 0.5°F	± 0.3°C
Resolution	0.2°F	0.1°C
Max operating temperature	176°F	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	Start button, time, temperature or software	
Dimensions	0.79"x3.85"x7.87"(h x w x l) 20 x 98 x 200mm	

Two way Radio transmission as an option

Robust and waterproof housing for reliable use in hostile environments

Bluetooth PC connection

Up to 1000 hours measurement time

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.

PhoenixTM can provide a solution:

Our monitoring system travels through the furnace 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 furnace problems quickly, and to provide your customers with an assurance of a consistent process control.

TS01 thermal barriers

PhoenixTM TS01 Thermal Barriers are designed to offer full protection to the data logger in demanding high temperature conditions. Designed to accommodate data loggers with up to 20 channels, TS01 barriers feature dual thermocouple exits and user replaceable thermocouple wear strips to help extend the life of the thermal barrier.

Standard TS01 range performance

Type		TS01 -90	TS01 -125	TS01 -150	TS01 -175	TS01 -200	TS01 -250	TS01 -300
390°F (200°C) /h			6.2	12.0	16.0	17.0	25.0	28.5
750°F (400°C) /h		0.7	2.2	5.0	7.0	8.0	12.2	16.5
1110°F (600°C) /h		0.5	1.4	3.0	4.5	5.0	8.5	10.5
1470°F (800°C) /h		0.4	1.1	2.0	2.5	3.5	6.2	8.0
Height	"	3.5	4.9	5.9	6.9	7.8	9.8	11.8
	mm	90	125	150	175	200	250	300
Width	"	8.3	9.5	11.8	11.8	12.2	13.8	15.8
	mm	210	240	300	300	310	350	400
Length*	"	18.5	23.2	23.2	23.2	23.2	23.8	25.8
	mm	470	588	588	588	588	605	655

* 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.

Recessed heat sink to minimize heat penetration.

Heat sinks with very high thermal capacity and gas tight seals allow use in vacuum or pressure applications up to 290psi (20 bar).

Dual thermocouple exits with replaceable wear-strips to extend thermal barrier life and minimize maintenance cost.

Thermocouples

For temperatures from 480°F (250°C) to more than 1830°F (1000°C) mineral insulated thermocouples are generally the first choice. The thermocouples wires are insulated by magnesium oxide and protected by a high grade alloy sheath. For special applications we can supply thermocouples with other insulation materials.

Thermocouples can be welded, mechanically held, or retained in holes to record temperatures at critical points.

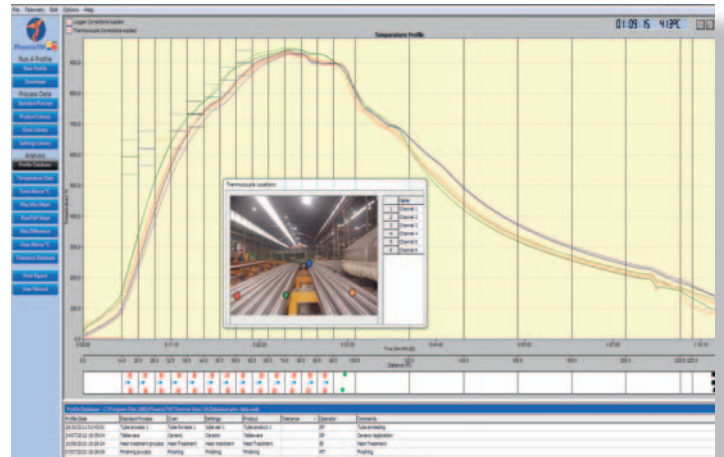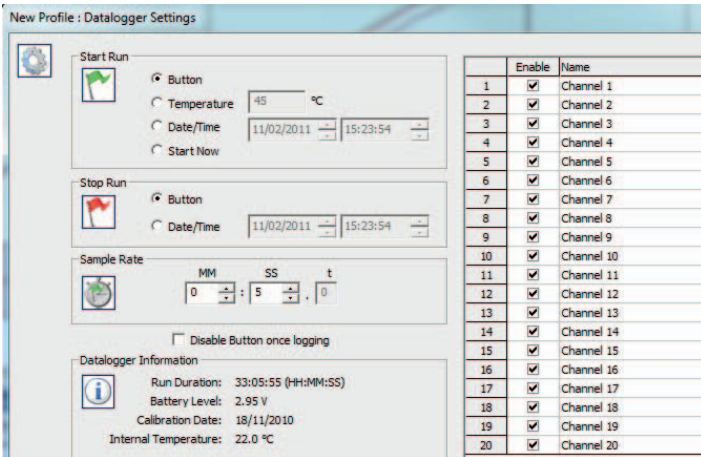Type K or N mineral insulated thermocouples in 1/16" (1.5mm) and 5/64" (2.0mm) diameter.

Thermal View Plus

The easy way to get a perfect result!

PhoenixTM
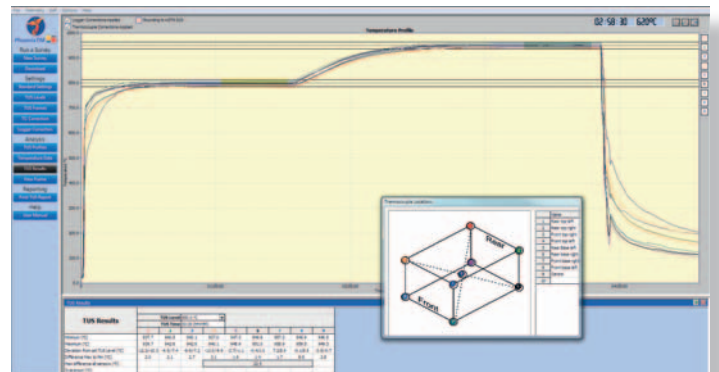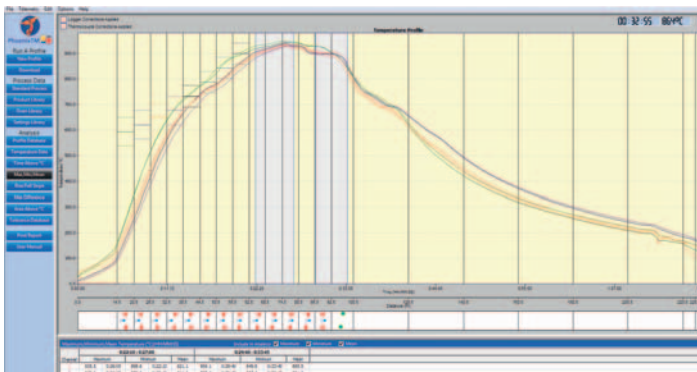Phoenix Temperature Measurement

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.

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.

A separate software package, "Thermal View Survey" is available for surveying furnaces to AMS2750 requirements. Featuring thermocouple and data logger correction factors, user defined TUS levels and tolerances, View Frame analysis, overshoot search, data import / export, printed AMS2750 report. Contact us for a demo version!