Data-Logger
recording thermometers

ETI has used its vast experience in temperature measurement, together with the latest technology, to create the ThermaData range of small, cost-effective, data-loggers. Unlike many loggers on the market today, they have been designed for ease of use and with reliability very much in mind.

what are data-loggers?

Data-loggers are electronic devices that record temperature over a period of time for analysis at a later date. The user chooses what information is required and the data-logger records it. The data-loggers incorporate a thermistor sensor that measures the temperature, and the data-loggers internal microprocessor chip then stores the data. The stored data can then be transferred to a computer, via a USB cradle, for further analysis at a time convenient to the user.

applications for data-loggers

There are many uses for data-loggers, for example, to ensure compliance with legislation, to help save costs, to ensure the quality of a product, process, or for research purposes in the following industries

- food processing
- environment
- agriculture
- logistics
- laboratories
- museums & archives
- refrigeration
- medical

The EC food industry directive suggests that organisations involved in food preparation, storage or transportation should have the ability to verify that the temperature of food has been kept at the correct levels. This is often referred to as due diligence. Data-loggers offer organisations a method of complying with food industry legislation by offering traceability from the moment the food is received to the time it is delivered to the customer. For shippers, data-loggers can verify that conditions within the transportation vehicles have been maintained within the specified levels.

For growers of fresh produce, data-loggers provide an accurate record of temperatures during the life cycle of a product, from farm to plate, i.e. during growth, preparation and transportation of produce, thus ensuring best quality.

Monitoring the environment can help organisations ensure that HVAC systems are used to the optimum, keeping energy use to a minimum and saving money.

UKAS Certificates of Calibration

ETI's in-house UKAS calibration laboratory offers certification for both temperature and humidity data-loggers. Each certificate indicates deviations from standards at three temperature or humidity check points.

ThermaData™ Logger

recording thermometers

- ✓ waterproof housing offering IP66/67 protection
- ✓ meets EN 12830, S & T , C & D, 1
- ✓ range -40 to 85 °C or 125 °C
- ✓ resolution 0.1 °C, high accuracy ±0.5 °C

The ThermaData logger mk II series consists of a comprehensive range of portable data-loggers utilising the latest in electronic technology. The ThermaData loggers are housed in waterproof, ergonomic cases that are designed to meet IP66/67 protection.

The ThermaData logger mk II range offers the choice of either blind data-loggers or data-loggers with a LCD display. Other options include internal and external temperature sensors/probes. The external probes can be either fixed or detachable via a waterproof three-pin connector. The remote temperature probes are supplied with a one metre PVC/PFA (fixed) or PUR/PVC (detachable) lead.

Each logger incorporates a red and green LED, the flashing green LED indicates that the logger is active/logging and the flashing red LED indicates that your customised pre-set alarms have been exceeded. For details of the range of the loggers, see overleaf.

ThermaData logger mk II software

The ThermaData logger is connected to a PC via a USB cradle. By clicking the relevant icon the data can be downloaded and displayed either as a graph, table or summary. The information can be analysed by zooming in, storing to disc or exporting as a text (.txt) file to other software packages.

The ThermaData logger software incorporates several useful functions, including the ability to display two traces on a graph, the trace colours are user selectable. All files can be viewed as thumbnail icons for easy identification. There are also options for customers requiring alternative languages.

The ThermaData logger software will work equally with all ThermaData loggers except the RF version . The software is both powerful and sophisticated, yet user-friendly enabling temperature data to be organised and analysed to provide management information. The software allows the user to programme the logging sample/interval rate (0.1 to 255 minutes), the real-time clock, °C or °F, delayed start (maximum 23 hours, 59 minutes) or select a magnetic start option. It is also possible to include a 32-character user ID for each logger.

By selecting continuous logging in the software options, it is possible to start the ThermaData logger only once and never have to reset its parameters again, even if downloaded regularly. Unlike most low cost loggers, the ThermaData logger will continue recording during and after downloading the data.

The ThermaData logger software is supplied with each USB cradle. Please note: when initially ordering loggers it is necessary to order at least one ThermaData logger cradle.

°C/°F IP66/67

ThermaData logger - model TB

blind with an internal sensor

specification	model TB
range	-40 to 85 °C
resolution	0.1 °C
accuracy	±0.5 °C
memory	4000 readings
sample rate	0.1 to 255 minutes
battery	3.6 volt ½ AA lithium
battery life	18 months @ 20 °C
display	2 LEDs
dimensions	Ø76 x 23 mm
weight	71 grams

order code	description
295-001	model TB

ThermaData logger - model TD

LCD with an internal sensor

specification	model TD
range	-30 to 85 °C
resolution	0.1 °C
accuracy	±0.5 °C
memory	4000 readings
sample rate	0.1 to 255 minutes
battery	3.6 volt ½ AA lithium
battery life	18 months @ 20 °C
display	10 mm LCD/2 LEDs
dimensions	Ø76 x 23 mm
weight	80 grams

order code	description
296-001	model TD

ThermaData logger - model TBF

blind logger with an external fixed sensor

specification	model TBF
range	-40 to 125 °C
resolution	0.1 °C
accuracy	±0.5 °C
memory	4000 readings
sample rate	0.1 to 255 minutes
battery	3.6 volt ½ AA lithium
battery life	18 months @ 20 °C
display	2 LEDs
dimensions	Ø76 x 23 mm
weight	82 grams

order code	description
295-101	model TBF

ThermaData logger - model TDF

LCD with an external fixed sensor

specification	model TDF
range	-40 to 125 °C
resolution	0.1 °C
accuracy	±0.5 °C
memory	4000 readings
sample rate	0.1 to 255 minutes
battery	3.6 volt ½ AA lithium
battery life	18 months @ 20 °C
display	10 mm LCD/2 LEDs
dimensions	Ø76 x 23 mm
weight	91 grams

order code	description
296-101	model TDF

ThermaData logger - model TB1F

blind with an internal & external fixed sensor

specification	model TB1F
range	-40 to 85/125 °C
resolution	0.1 °C
accuracy	±0.5 °C
memory	2 x 2000 readings
sample rate	0.1 to 255 minutes
battery	3.6 volt ½ AA lithium
battery life	18 months @ 20 °C
display	2 LEDs
dimensions	Ø76 x 23 mm
weight	82 grams

order code	description
295-011	model TB1F

ThermaData logger - model TD1F

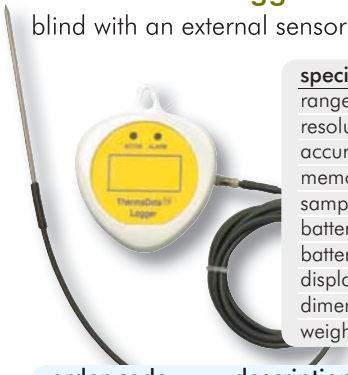
LCD with an internal & external fixed sensor

specification	model TD1F
range	-30 to 85/125 °C
resolution	0.1 °C
accuracy	±0.5 °C
memory	2 x 2000 readings
sample rate	0.1 to 255 minutes
battery	3.6 volt ½ AA lithium
battery life	18 months @ 20 °C
display	10 mm LCD/2 LEDs
dimensions	Ø76 x 23 mm
weight	91 grams

order code	description
296-011	model TD1F

ThermaData logger - model TBC

blind with an external sensor with connector

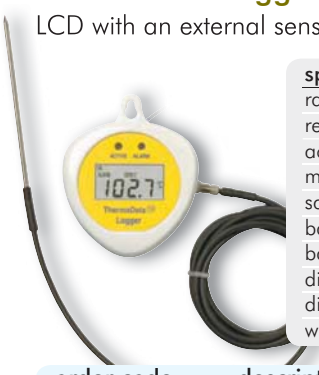


specification	model TBC
range	-40 to 125 °C
resolution	0.1 °C
accuracy	±0.5 °C
memory	4000 readings
sample rate	0.1 to 255 minutes
battery	3.6 volt ½ AA lithium
battery life	18 months @ 20 °C
display	2 LEDs
dimensions	Ø76 x 23 mm
weight	91 grams

order code	description
295-501	model TBC

ThermaData logger - model TDC

LCD with an external sensor with connector



specification	model TDC
range	-40 to 125 °C
resolution	0.1 °C
accuracy	±0.5 °C
memory	4000 readings
sample rate	0.1 to 255 minutes
battery	3.6 volt ½ AA lithium
battery life	18 months @ 20 °C
display	10 mm LCD/2 LEDs
dimensions	Ø76 x 23 mm
weight	100 grams

order code	description
296-501	model TDC

ThermaData logger - model TB1C

blind with an internal & external sensor with connector

specification	model TB1C
range	-40 to 85/125 °C
resolution	0.1 °C
accuracy	±0.5 °C
memory	2 x 2000 readings
sample rate	0.1 to 255 minutes
battery	3.6 volt ½ AA lithium
battery life	18 months @ 20 °C
display	2 LEDs
dimensions	Ø76 x 23 mm
weight	91 grams

order code	description
295-051	model TB1C

ThermaData logger - model TD1C

LCD with an internal & external sensor with connector

specification	model TD1C
range	-30 to 85/125 °C
resolution	0.1 °C
accuracy	±0.5 °C
memory	2 x 2000 readings
sample rate	0.1 to 255 minutes
battery	3.6 volt ½ AA lithium
battery life	18 months @ 20 °C
display	10 mm LCD/2 LEDs
dimensions	Ø76 x 23 mm
weight	100 grams

order code	description
296-051	model TD1C

ThermaData logger - model TB2F

blind with two external fixed sensors

specification	model TB2F
range	-40 to 125 °C
resolution	0.1 °C
accuracy	±0.5 °C
memory	2 x 2000 readings
sample rate	0.1 to 255 minutes
battery	3.6 volt ½ AA lithium
battery life	18 months @ 20 °C
display	2 LEDs
dimensions	Ø76 x 23 mm
weight	94 grams

order code	description
295-111	model TB2F

ThermaData logger - model TD2F

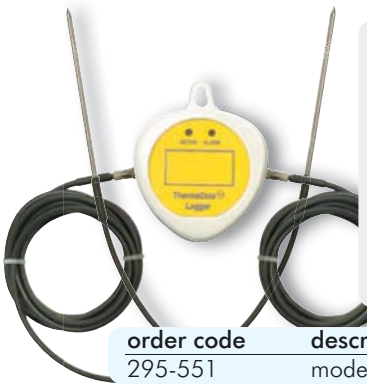
LCD with two external fixed sensors

specification	model TD2F
range	-40 to 125 °C
resolution	0.1 °C
accuracy	±0.5 °C
memory	2 x 2000 readings
sample rate	0.1 to 255 minutes
battery	3.6 volt ½ AA lithium
battery life	18 months @ 20 °C
display	10 mm LCD/2 LEDs
dimensions	Ø76 x 23 mm
weight	103 grams

order code	description
296-111	model TD2F

ThermaData logger - model TB2C

blind with two external sensors with connectors



specification	model TB2C
range	-40 to 125 °C
resolution	0.1 °C
accuracy	±0.5 °C
memory	2 x 2000 readings
sample rate	0.1 to 255 minutes
battery	3.6 volt ½ AA lithium
battery life	18 months @ 20 °C
display	2 LEDs
dimensions	Ø76 x 23 mm
weight	104 grams

order code	description
295-551	model TB2C

ThermaData logger - model TD2C

LCD with two external sensors with connectors

specification	model TD2C
range	-40 to 125 °C
resolution	0.1 °C
accuracy	±0.5 °C
memory	2 x 2000 readings
sample rate	0.1 to 255 minutes
battery	3.6 volt ½ AA lithium
battery life	18 months @ 20 °C
display	10 mm LCD/2 LEDs
dimensions	Ø76 x 23 mm
weight	113 grams

order code	description
296-551	model TD2C

USB cradle, software & start magnet

The ThermaData logger cradle is supplied complete with the ThermaData logger PC software and a start magnet.

Each USB cradle is supplied with a one metre PVC lead.

order code	description
293-804	cradle, software & start magnet

ThermaData logger accessories

An optional protective silicone boot is available for the ThermaData loggers.

The ThermaData loggers are supplied with white seals but customers can purchase coloured seals, available in packs of seven colours: black, blue, brown, green, red, white and yellow.

order code	description
830-270	protective silicone boot
296-990	pack of seven coloured seals

ThermaData™ Logger

humidity & temperature recording meters

- ✓ display toggles between humidity & temperature
- ✓ visual display of high & low alarm status
- ✓ records up to a maximum of 16000 readings
- ✓ choice of internal or remote sensors

The humidity and temperature ThermaData loggers measure and record both temperature and relative humidity (%rh) over the range of -20 to 85 °C and 0 to 100 %rh. At programmable intervals, the loggers will record simultaneously both temperature and humidity, recording up to a maximum of 16000 readings (8000 humidity and 8000 temperature).

The ThermaData loggers offer the choice of either a blind logger or a LCD display logger, both options include an internal or external humidity and temperature sensor with a one metre lead. Each logger incorporates two LEDs, a flashing green LED indicates that the logger is active/logging and a flashing red LED indicates that your customised pre-set alarms have been exceeded.

The humidity and temperature ThermaData loggers are suitable for a diverse range of applications which include HVAC climate monitoring, QA monitoring of storage areas etc.

ThermaData logger software

The ThermaData logger is connected to a PC via a USB cradle. By clicking the relevant icon the data can be downloaded and displayed either as a graph, table or summary. The information can be analysed by zooming in, storing to disc or exporting in Excel (.xls) or as a text (.txt) file to other software packages. Please note: when initially ordering loggers it is necessary to order at least one ThermaData logger cradle.

order code	description
295-061	blind model HTB - internal sensors
296-061	LCD model HTD - internal sensors
295-062	blind model HTBF - external sensors
296-062	LCD model HTDF - external sensors
293-804	USB cradle, software & magnet
890-111	*UKAS 3-point Humidity Certificate

**this preferential price is only available at the time of purchase*

specification	temperature	humidity
range	-20 to 85 °C	0 to 100 %rh
resolution	0.1 °C	0.1 %rh
accuracy	±0.5 °C (0 to 45 °C)	±2 %rh @ 25 °C (10 to 90 %rh)
	±1 °C (-20 to 70 °C)	
	±1.5 °C (70 to 85 °C)	
hysteresis	n/a	±1 %rh
sensor type	silicon bandgap	capacitance polymer
memory	2 x 8000 readings	
sample rate	0.1 to 255 minutes	
battery	3.6 volt ½ AA lithium coin cell	
battery life	minimum 2 years	
display	10 mm LCD - toggles every 6 seconds/2 LEDs	
dimensions	Ø76 x 23 mm	
weight	approx 80 grams	

optional UKAS Certificate of Calibration is available

ThermaData™ Logger

blind recording thermometers

- ✓ range -40 to 85 °C
- ✓ blind recording thermometer & data-logger
- ✓ visual display of high & low alarm status
- ✓ simple visual inspection shows if limits exceeded

The ThermaData logger is a cost effective, self-contained temperature data-logger or blind recording thermometer that is designed to record the temperature of the surrounding environment. The ThermaData logger is housed in a water-resistant polyethylene case and incorporates two LED status indicators.

The ThermaData logger software allows the user to programme the logging sample/interval rate (1 to 255 minutes), the real-time clock, °C/°F, delayed start (maximum 23 hours, 59 minutes) or push-button start and a 12-character user ID. The software also incorporates a password protected calibration adjustment feature that allows the user to check the calibration of loggers and make minor adjustments 0.5 °C (±3 °C).

By selecting continuous logging in the software options, it is possible to start the ThermaData logger only once and never have to reset its parameters again, even if downloaded regularly. Unlike most low cost loggers, the ThermaData logger will continue recording during and after downloading the data.

The user can also set, within the software, high and low alarm values for a specific application. A button push will allow a simple visual inspection of the unit to show if either of these limits has been exceeded. A flashing red LED will warn the user that the alarm limits have been exceeded (reject) or a flashing green LED will advise the user that the alarm limits have not been exceeded (accept).

ThermaData PC software

The ThermaData logger is connected to a PC via a serial or USB port lead. By clicking on the relevant icon the data can be downloaded and displayed either as a graph, table or summary. The information can then be analysed by zooming in, storing to disc or exporting to other software packages.

colour-coded data-loggers

The ThermaData loggers are available in a variety of coloured cases; blue, white, yellow, green, red, brown and black. The colour-coded cases help to prevent cross-contamination by allowing the user to allocate a colour to a specific product or application. For example, in the food industry, green may be used for salads, blue for fish and red for raw meats etc.

Other applications include different coloured loggers for easy identification in, eg, the building and construction industry where loggers can often blend in with the environment.

order code	description
293-001	ThermaData logger - blue
293-105	ThermaData logger - white
293-205	ThermaData logger - yellow
293-305	ThermaData logger - green
293-405	ThermaData logger - red
293-605	ThermaData logger - brown
293-701	ThermaData logger - black
293-005	ThermaData logger box of 10 - blue
293-101	software & RS232 serial lead
293-104	software & RS232 USB lead

specification	ThermaData logger
range	-40 to 85 °C
resolution	0.5 °C
accuracy	±1 °C (±0.5 °C with calibration utility)
memory	2048 temperature readings
sample rate	1 minute to 255 minutes
battery	3.6 volt ½ AA lithium
battery life	minimum 3 years
dimensions	Ø55 x 25 mm
weight	45 grams