

493-521

# Tempest



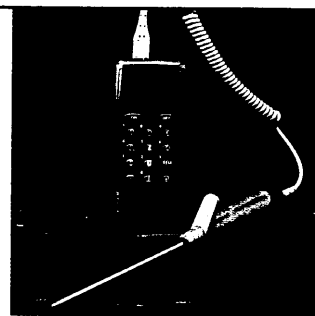
## 2000 series temperature and RH instruments

*Setting new  
standards in  
temperature  
measurement*

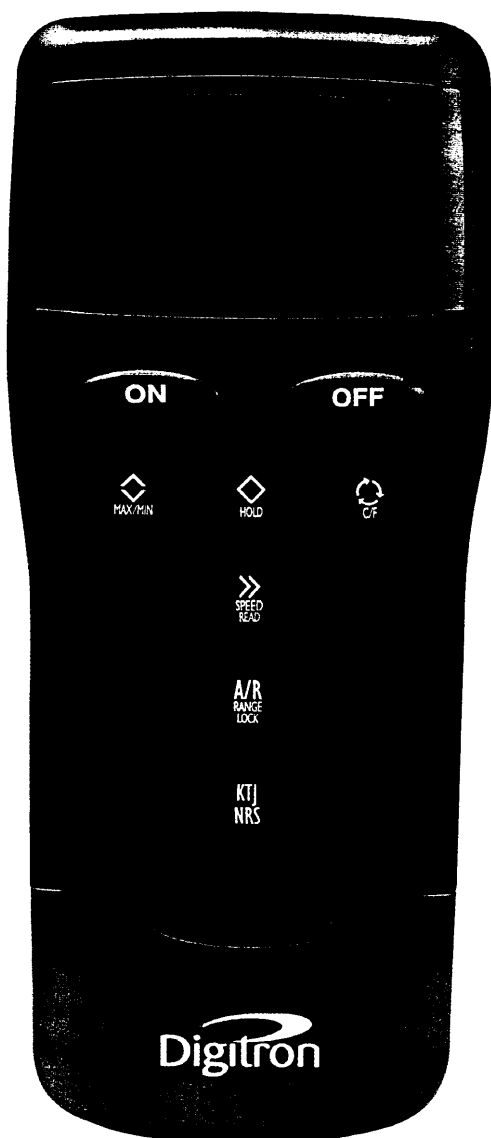
# Thermometers

## A new range of hand-held contact thermometers

In response to today's ever increasing demand for speed, accuracy and performance, Digitron has introduced the 2000 Series of hand-held digital thermometers. Models available range from simple 'on, off and hold' versions to instruments with advanced measurement and datalogging functions.



- ◆ SpeedRead>>> for quicker indicative readings
- ◆ Logging mode for storage, retrieval and output of readings
- ◆ Long battery life: typically 500 hours
- ◆ Wide temperature ranges  
-250°C to +1750°C/  
-418°F to +3182°F
- ◆ Accurate performance:  
0.2% of reading
- ◆ For type K,T,J,N,R, and S thermocouples, PT100 and Thermistor sensors
- ◆ Robust case for long life in harsh environments
- ◆ 2 year warranty
- ◆ Selectable auto switch-off
- ◆ Automatic zero calibration for added accuracy
- ◆ Last settings memorised



### Built to last

With its ergonomic design, positive action key pad and magnified display, the 2000 Series is a pleasure to operate. To maximise the instrument's useful life, the series features IP65 or IP67 protection, silicone rubber key pads with hard plastic coated on/off buttons and a fully isolated battery compartment.

### Protective Boot

A high impact protective rubber boot is available to enhance even further the durability of these instruments.

Representing a new standard in industrial temperature measurement, the 2000 Series provides precise, stable readings, even in demanding environments. Furthermore, the 2000 Series features a number of new, innovative functions, specifically designed for today's industrial temperature applications.

### Readings in seconds rather than minutes!

Some measurements take minutes using standard thermometers due to poor thermal conductivity in the item being measured. Often a highly accurate answer is not required and an indicative answer showing that the reading is above or below a desired threshold will suffice. Digitron's unique SpeedRead>>> function will offer an answer in 14 seconds\*, or, if such a prediction cannot be made, revert back to a standard accuracy thermometer automatically.

### Data collection at the touch of a button

Say goodbye to the clipboard and hours spent keying data into your PC. The 2000 Series' logging functions, on demand or pre-set interval, enable readings to be stored, retrieved and output to a printer or PC, all at the touch of a button. This enables error-free and fully traceable records to be maintained!

\* Please refer to accuracy statement.



## All models feature:



### Backlight

Enables readings to be taken easily in the dark.



### Display hold

Freezes the reading – when watching the probe is more important than watching the instrument.

### Auto switch-off

Auto switch-off after 12 minutes extends battery life (Auto Switch-off does not operate in max/min or logging modes. This feature can also be turned off by the user if not required).

### Set-up retention

The instrument switches on with the last settings used.

## Other selected models feature:



### SpeedRead>>

Enables an indicative reading to be shown in 14 seconds, saving operator time.



### A/B, A-B

Enables the operator to select input channel A, channel B and the difference between them.



### Celsius/Fahrenheit selection



### Range lock

Enables the operator to set the instrument to 1° resolution only.



### Thermocouple selection

Enables use with most common thermocouple types.



### Max/Min recorder

Stores maximum, minimum and average temperatures. Averaging is also available on some models within this mode.



### Logging on demand

Allows readings to be stored as and when required.



### Pre-Set interval logging

Allows readings to be stored automatically at a pre-set time interval.

## Common specification

<b>Resolution:</b>	0.1° from -199.9° to +199.9°
<b>Operating Temperature:</b>	0°C to +50°C/+32°F to 122°F (ambient)
<b>Battery Type:</b>	Two AA or equivalent cells (not supplied)
<b>Battery Life:</b>	Typically 500 hours
<b>Low Battery Check:</b>	" " symbol appears on display
<b>Display:</b>	12.7mm / 0.5" custom L.C.D.
<b>Sensor Open Circuit:</b>	Indicated by 'O-C' on display
<b>Overrange/Underrange:</b>	'Out' flashes on display
<b>Cold Junction Compensation:</b>	Yes
<b>Environmental Specifications:</b>	IP65 (IP67 optional)
<b>Auto Switch-Off Time:</b>	12 minutes
<b>Dimensions:</b>	155 x 67 x 40mm/6.1 x 2.6 x 1.6"
<b>Weight:</b>	180g/6.4oz

## Instrument accuracies

(All  $\pm 1$  digit except models 2024T, 2084T)

Models 2000T, 2022T, 2028T, 2029T, 2038T, 2088T, 2098T:

0.1% rdg  $\pm 0.2^\circ\text{C}/0.4^\circ\text{F}$  above  $-100^\circ\text{C}/-148^\circ\text{F}$

0.5% rdg  $\pm 0.2^\circ\text{C}/0.4^\circ\text{F}$  below  $-100^\circ\text{C}/-148^\circ\text{F}$

Models 2006T, 2086T:

$\pm 0.2^\circ\text{C}/0.4^\circ\text{F}$  over range  $-20^\circ\text{C}$  to  $+70^\circ\text{C}/-4^\circ\text{F}$  to  $+158^\circ\text{F}$

$\pm 0.1\%$  rdg  $\pm 0.2^\circ\text{C}/0.4^\circ\text{F}$  elsewhere.

Models 2024T, 2084T:

$\pm 0.2\%$  rdg  $\pm 0.1^\circ\text{C}/0.2^\circ\text{F}$  over range  $-150^\circ\text{C}$  to  $+800^\circ\text{C}/-238^\circ\text{F}$  to  $+1472^\circ\text{F}$

Model 2046T (including Digitron probe)

Better than  $\pm 0.5^\circ\text{C}/0.9^\circ\text{F}$  over range  $-20^\circ\text{C}$  to  $+70^\circ\text{C}/-4^\circ\text{F}$  to  $+158^\circ\text{F}$

$\pm 0.8^\circ\text{C}/1.4^\circ\text{F}$  elsewhere.

SpeedRead>>: This function reduces the accuracy from Class 0.5 to 2 (CEN TC141/WG12 N42E applies).

## Performance you can rely on

Over 20 years experience, combined with extensive customer research, has given Digitron a thorough understanding of industrial applications and has enabled us to design instruments that

meet real needs. As the 2000 Series is probably the fastest, most accurate range of hand-held thermometers available, we are sure there is a model to suit you and your business requirements.

2000T Series option table

	2046T	2000T	2006T	2022T	2024T	2028T	2086T	2084T	2088T	2029T	2038T	2098T
<b>Sensor Type:</b>	Thermistor	K	T	K	PT 100	K	T	PT 100	K	KT JNRS	KT JNRS	KT JNRS
<b>2-input</b>				●							●	●
<b>SpeedRead:</b>				●	●	●	●		●	●	●	●
<b>°C/°F Function*:</b>				●	●	●		●	●	●	●	●
<b>Hold:</b>	●	●	●	●	●	●	●	●	●	●	●	●
<b>Range Lock:</b>					●	●		●	●	●	●	●
<b>Max/Min:</b>				●	●	●	●	●	●	●	●	●
<b>Averaging:</b>								●				●
<b>Logging:</b>							●	●	●			●
<b>Range:</b>	-40°C to +120°C/ -40°F to +248°F	-200°C to +1350°C/ -328°F to +2462°F	-250°C to +400°C/ -418°F to +752°F	-200°C to +1350°C/ -328°F to +2462°F	-150°C to +800°C/ -238°F to +1472°F	-200°C to +1350°C/ -328°F to +2462°F	-250°C to +400°C/ -418°F to +752°F	-150°C to +800°C/ -238°F to +1472°F	-200°C to +1350°C/ -328°F to +2462°F	Type K -200°C to +1350°C/-328°F to +2462°F Type T -250°C to +400°C/-418°F to +752°F Type J -180°C to +750°C/-292°F to +1382°F Type N -200°C to +1300°C/-328°F to +2372°F Type R 0°C to +1750°C/+32°F to +3182°F Type S 0°C to +1750°C/+32°F to +3182°F		

\* Models without selectable °C/°F function can be ordered for either °C or °F use.

## Simple data collection and analysis

The 2000 Series models 2084T, 2086T, 2088T, 2098T and 2080R feature special logging functions that enable readings to be taken, stored, retrieved and downloaded in the shortest possible time. This reduces the risk of clerical errors and saves writing and keying-in time when analysis is needed.

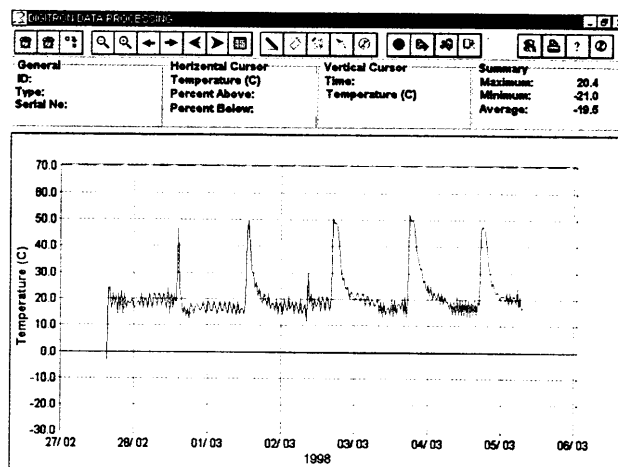
### Logging on Demand

Logging On Demand allows readings to be stored when required, with the ability to add a four digit reference number (including decimal point) to each reading, and record the date and time each reading is taken. This function is excellent for helping you cut down on paperwork and clerical errors. It is ideally suited to tasks where you wish to maintain a record of the time and date when a temperature was taken.

### Data Analysis

Data can be viewed and analysed direct from the magnified display. By simply pressing a few keys you can scroll through your readings with ease.

You may then download the data to a PC or Epson compatible printer via Digitron's DigiLink (see over for further details). Data can then be analysed using our DigiLog Windows™ software.



### Preset Interval Logging

Preset Interval Logging lets you determine the frequency at which readings are taken. Once the instrument has been set, readings are taken automatically at the interval you decide (from once every minute, to once every 24 hours), providing an excellent means of troubleshooting and examining trends over a given period of time.



With Preset Interval Logging, you really can "set it, forget it", as the instrument will continue logging until a maximum of 250 readings are taken or your data is downloaded.



DigiLink

# Digitron. The professional's choice.

## Data download with DigiLink

Access to stored information is gained via Digitron's infrared DigiLink, which is designed to give users of the 2000 Series a quick and simple means of retrieving and downloading data.

Information can be output direct to either an Epson compatible printer for immediate study, or downloaded to a PC\* for more detailed analysis.

## Data analysis with DigiLog for Windows™

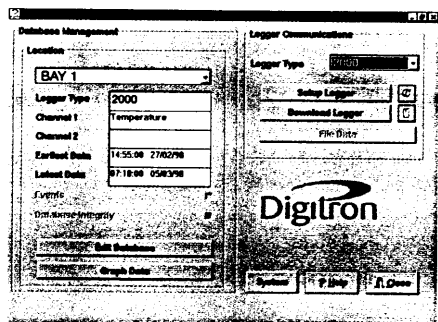
Digitron have created a Windows™ software package, DigiLog, (suitable for all Digitron logging instruments) enabling information to be put into spreadsheets and charts for incorporating into reports and other documents. Even separate reports from different units can be merged to produce one report.

PC analysis really couldn't be any simpler. By following the software's simple menu instructions, you will find it easy to view and manipulate information to your individual requirements. For example, once

a logging session is complete, all you need do in order to gain access to information stored within the instrument is position the PC's cursor over the "Retrieve Data" menu icon, click once and press a button on the instrument. Information is then automatically transferred, via the infrared link and stored within the computer.

You may display the retrieved information in graph format by positioning the cursor over the "Display As Graphical Data" menu icon and click again. You can access the graph produced to highlight certain areas or key data points, prior to printing or exporting the graph into other software packages.

Furthermore, all graphs show the identification number of the instrument used, enabling data to be cross-checked against calibration records helping to ensure full traceability.



\* Minimum PC requirements; 386, 4Mb RAM running with either Windows 3.1X or Windows 95



## Complete logging and measurement solutions

Digitron manufacture a world class range of instruments that measure, monitor and calibrate; pressure, airflow, temperature, humidity, gas emissions, volts, amps and strain. There is a range of catalogues that give the full story - just ask for the one that covers your area of interest, ie Industrial, Food, Environmental, Heating & Ventilation and Process.

Globally, we work in partnership with an ever-increasing variety of customers to protect the public from everyday hazards and improve the environment.

This concern for the environment is continued through to biodegradable packaging. Furthermore, our products are manufactured in plants where the use of ozone depleting substances, such as CFC's, have been eliminated ahead of internationally-set target dates. All Digitron products are manufactured to the highest quality and carry a minimum of one year's warranty. Our Quality Management System is assessed to ISO 9001 and all products carry the CE mark.

If you require more information on our customer service, please contact Digitron.

# Digitron

**DIGITRON INSTRUMENTATION LIMITED**  
MEAD LANE HERTFORD HERTS  
SG13 7AW ENGLAND  
**TEL: 01992 587441** FAX: 01992 500028  
E-MAIL: Digitron\_HertfordUK@compuserve.com  
www.digitron.co.uk

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As part of our policy of continuous product improvement we reserve the right to change specifications at any time.

## A new range of hand-held Relative Humidity instruments

The range has been specifically designed in response to demand for the effective and reliable measurement of controlled environments. Featuring two models 2020R and 2080R with the latter including functions: dewpoint calculation, separate thermocouple input and logging.





### Performance

The 2000R meters from Digitron offers the user the highest accuracies for a budget price. The ergonomic case design with advanced technology sensors combine to give an instrument with excellent performance and long life.

The 2080R features an external temperature probe option for pinpoint temperature measurement. 250 readings can be logged, replayed on the screen and output to a printer or PC using DigiLink. Each reading is user coded, time and date stamped.



### Common specification

	2020R	2080R
<b>Sensor(s):</b>	PT100 plus capacitive RH sensor	Input for Type K thermocouple Pt100 + capacitive RH
<b>Range:</b>	0 to 100%RH -10°C to +100°C/ +14°F to +212°F	0 to 100%RH -10°C to +100°C/ +14°F to +212°F
<b>Resolution:</b>	0.1% RH, 0.1°	RH 0.1%. Temperature 0.1° from -199.9° to +199.9°, 1° elsewhere
<b>Accuracy:</b>	±2% RH, 0 to 80% RH ±3% RH, 80 to 100% RH ±0.5°C/1°F 0 to +80°C/+32°F to +176°F ±1°C/2°F elsewhere	±2% RH, 0 to 80% RH ±3% RH, 80 to 100% RH ±0.5°C/1°F 0 to +80°C/+32°F to +176°F ±1°C/2°F elsewhere, ± 0.2% reading ±2 digits for thermocouple input
<b>Operating Temperature:</b>	0°C to +50°C	0°C to +50°C
<b>Operating Humidity:</b>	0 to 100%RH (non-condensing)	0 to 100%RH (non-condensing)
<b>Battery Type:</b>	Two AA or equivalent cells (not supplied)	Two AA or equivalent cells (not supplied)
<b>Battery Life:</b>	Typically 150 hours	Typically 150 hours
<b>Low Battery Check:</b>	"  " symbol appears on display	"  " symbol appears on display
<b>Display:</b>	12.7mm / 0.5" custom L.C.D.	12.7mm / 0.5" custom L.C.D.
<b>Back Light:</b>	Yes	Yes
<b>Environmental Specifications:</b>	IP65 (IP67 optional) with plug connected	IP65 (IP67 optional) with plug connected
<b>Dimensions:</b>	155 x 67 x 40mm/6.1 x 2.6 x 1.6"	155 x 67 x 40mm/6.1 x 2.6 x 1.6"
<b>Weight:</b>	180g/6.4oz	180g/6.4oz

### Dew Point

The dew point is defined as the lower temperature to which air must be cooled in order for condensation (saturation) to occur. The dew point is dependent on the concentration of water vapour present, and therefore the relative humidity.

### Common features

- ◆ Waterproof to IP65 (with plug connected) with IP67 option
- ◆ Magnified display
- ◆ Separate battery compartment
- ◆ Accuracy:  
0 to 100%RH ±2%
- ◆ -10°C to +100°C/  
+14°F to +212°F

### 2020R

- ◆ Back Light
- ◆ Auto Switch-off
- ◆ °C/°F/RH selection button

### 2080R

- ◆ External probe option
- ◆ Max/Min averaging
- ◆ Display hold
- ◆ Logging (250 readings on demand or pre set interval)
- ◆ Data store with 4 digit data code input
- ◆ Dewpoint measurement
- ◆ Auto Range/range lock

