

# PT-104 Data Logger

Temperature, Resistance, Voltage

The ultimate in resolution and accuracy

0.001 °C

0.015 °C

- Measures and records up to 4 platinum resistance thermometers
- Works with PT100 and PT1000 sensors
- Supports 2, 3 and 4-wire sensors
- Measures voltage and resistance
- 24-bit ADC
- Uses calibrated reference resistors for stability
- Supplied with PicoLog data logging software
- USB interface ensures easy installation
- Ethernet interface for remote operation
- Powered by USB port or Power-over-Ethernet (PoE)
- Multiple units can be run on a single PC



## USB PT-104 PRT Data Logger



**Flexible:** Measures temperatures with either PT100 or PT1000 sensors, as well as resistance and voltage.

**Adaptable:** Can measure and record temperatures ranging from  $-200\text{ }^{\circ}\text{C}$  to  $+800\text{ }^{\circ}\text{C}$ .

**Stable:** Instead of voltage references,

which tend to drift with temperature, the PT-104 uses high-precision reference resistors.

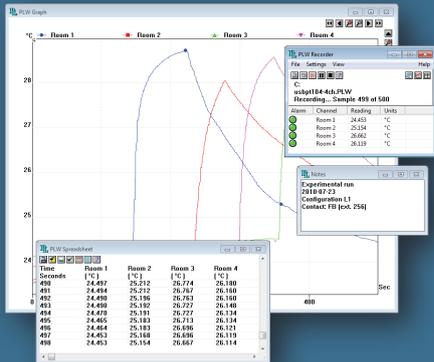
**Expandable:** Up to 20 units can be used simultaneously on one PC.

**Portable:** The PT-104 obtains its power from either the USB port or Power-over-Ethernet (PoE), so no additional power cable is needed.



## PicoLog<sup>®</sup>

PicoLog is a powerful and flexible data acquisition program designed for collecting, analyzing and displaying data over long or short periods of time. Data can be viewed both during and after data collection in spreadsheet or graphical format. If required, the data can also be easily exported to other applications.



In addition to the monitor view, PicoLog can also display a graph, a spreadsheet and user notes. It can display them all at once, as shown here, or individually in any combination.

## Software drivers

For users who wish to write their own software or use our products with third-party software, we provide, free of charge, a range of software drivers and examples. Drivers are included for Windows XP (SP2), Windows Vista and Windows 7. Programming examples are supplied for C, LabVIEW and Excel.

## Specifications

	Temperature	Resistance	Voltage
<b>Sensor</b>	PT100, PT1000	N/A	N/A
<b>Ranges</b>	$-200$ to $+800\text{ }^{\circ}\text{C}$	0 to $375\ \Omega$ 0 to $10\ \text{k}\Omega$	0 to $115\ \text{mV}$ 0 to $2.5\ \text{V}$
<b>Accuracy (unit at <math>23 \pm 2\text{ }^{\circ}\text{C}</math>)</b>	$0.015\text{ }^{\circ}\text{C} +$ $0.01\%$ of reading	$20\ \text{ppm}$ @ $100\ \Omega$	$0.4\%$
<b>Temp. coeff. (unit)</b>	N/A	$5\ \text{ppm}/^{\circ}\text{C}$	$100\ \text{ppm}/^{\circ}\text{C}$
<b>RMS noise with filter</b>	$0.01\text{ }^{\circ}\text{C}$	$10\ \text{ppm}$	$10\ \text{ppm}$
<b>Resolution</b>	$0.001\text{ }^{\circ}\text{C}$	$1\ \mu\Omega$	$0.156\ \mu\text{V}$
<b>Overload protection</b>	$\pm 30\ \text{V}$		
<b>Number of inputs</b>	4		
<b>Converter resolution</b>	24 bits		
<b>Conversion time</b>	720 ms per channel		
<b>Input connectors</b>	4-pin mini DIN		
<b>Input impedance</b>	$\gg 1\ \text{M}\Omega$		
<b>Output connectors</b>	USB and Ethernet		
<b>Power supply</b>	USB or Ethernet		
<b>Temperature range</b>	$20\text{ }^{\circ}\text{C}$ to $30\text{ }^{\circ}\text{C}$ for stated accuracy $0\text{ }^{\circ}\text{C}$ to $70\text{ }^{\circ}\text{C}$ operating $-20\text{ }^{\circ}\text{C}$ to $+80\text{ }^{\circ}\text{C}$ storage		
<b>Humidity range</b>	20% to 90% RH, non-condensing, operating 5% to 95% RH, non-condensing, storage		
<b>Dimensions</b>	$184 \times 135 \times 36\ \text{mm}$ ( $5.31 \times 7.24 \times 1.42\ \text{in.}$ )		



## Screw-terminal adapter

Connects discrete wires to the PT-104 without soldering. Suitable for wire-ended sensors and custom circuits.



## PRTs

SE011  
General-purpose probe  
Many other types available!

Pico Technology offers a range of platinum resistance thermometers (PRTs) for use with the PT-104. The PT-104 is compatible with all standard PT100 and PT1000 PRTs, which offer high accuracy, resolution and stability. All our probes have a stainless steel body and a 1 m long cable.

For full information on PRT specifications, characteristics and prices, go to :

[accessories.picotech.com](http://accessories.picotech.com)

and click "Sensors".

## ORDER CODES and PRICES

CODE	DESCRIPTION	GBP	USD*	EUR*
PP682	PT-104 Data Logger	399	658	483
PP660	Screw Terminal Adapter	6.00	9.90	7.02
SE011	PT-100 Temperature Sensor	23.00	37.95	27.83

\* Dollar and euro prices were correct at the time of printing. For latest prices see our website or contact us at the address below. PicoLog is a registered trade mark of Pico Technology Ltd. Windows and Excel are registered trademarks of Microsoft Corporation. LabVIEW is a registered trademark of National Instruments Corporation.



Pico Technology James House  
T: +44 (0) 1480 396 395

Colmworth Business Park St Neots  
F: +44 (0) 1480 396 296

Cambridgeshire PE19 8YP  
E: [sales@picotech.com](mailto:sales@picotech.com)

[www.picotech.com](http://www.picotech.com)

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