

# Temperature logger

## PicoVACQ Thermocouple



Measure temperature in your thermal processes up to 1300°C with an extra small thermocouple logger.

**PicoVACQ 1TH** is a cylindrical logger with one thermocouple channel. With its very small diameter, its measurement range up to 1300°C and its operating range up to 140°C, it is a solution specially designed for thermal processes requiring both temperature measurement in industrial environment and quick response time.

A thermal shield adapted to the application can be used for temperatures beyond 140°C up to 1300°C.

*Among the most common applications:*

- Bottle depyrogenation in pharmaceutical industry.
- Internal and external varnish polymerization of aluminum bottles and sprays in packaging industry.
- All tube manufacturing processes in metal industry like pipe spinning, annealing, hot piercing, coating, etc...



### Operating range

- From -40°C to +140°C
- For temperatures above 140°C, thermal protection necessary

### Metrology

- **Calibration uncertainty:** +/- 0.1°C from 0°C to 140°C  
*The uncertainties are calculated taking into account the various significant error sources, including the calibration probes, the equipment, the environmental conditions, the influence of the logger, repeatability, etc...*
- **Temperature resolution and noise:** 16 bit converter, resolution : <math>\leq \pm 0.1^\circ\text{C}</math>
- Each logger can be calibrated and checked at temperature points corresponding to the user's needs.
- Type K thermocouple (full scale 1300°C) or T type (full scale 400°C)

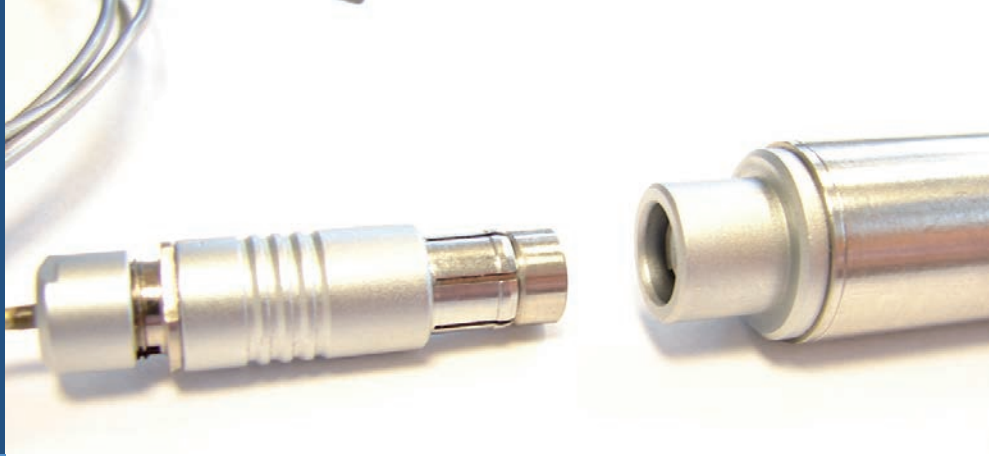
### Available option

### Technical specifications

- 10 Hz
- External material: 316 L stainless steel for logger body
- Dimensions :

PicoVACQ 1TH (including connector)	Height		Diameter
	T	K	
015P battery	102 mm	105 mm	15 mm
015PW battery	127 mm	130 mm	
016PTA battery	149 mm	152 mm	16 mm

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## Software operating conditions

- **Temperature sensors:** 1 connected thermocouple element and 1 Pt1000 platinum sensor for cold junction and internal temperature  
Thermocouple according to specifications
  - **Memory capacity:** 32 500 acquisitions divided by number of measurement channels
  - **Programmable acquisition rate:** minimum 1 second, maximum 59 minutes and 59 seconds.
  - Programmable acquisition duration
  - Programmable recording start by date, hour, minute.
  - High temperature battery replaceable by the user.
  - **Battery life:** Varies with acquisition period and use conditions:
    - 150 hours for a 5-second rate (015P battery)
    - 80 hours for a 1-second rate (015P battery)
  - Nonvolatile memory (EEPROM)
  - Compliant with regulations: EN 61326-1 :2006, FCC Part 15, ICES 001
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- Data transfer with a communication interface connected to the USB port.
  - Operates in **Windows® XP (SP3)/VISTA/7/8.**
  - TMI-ORION software (logger programming, registered data reading...)

### NOTA :

*A yearly checkup with our after-sale department is recommended: replacement of water tightness O-rings, overall operating checkup, metrological adjustment.*

