

# DATASHEET

# TMI-Orion

## PicoVACQ Temperature 1T and 1Tc Type 3



Temperature measurement in thermal processes from -45°C to +140°C with a small datalogger offering enhanced performance in time drift and in memory capacity.

The PicoVACQ Temperature Type 3 is a small dimension autonomous temperature data logger (diameter 15 mm).

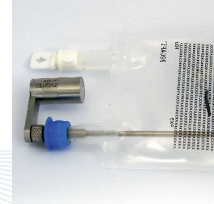
- The model PicoVACQ 1T Type 3 is equipped with an internal temperature sensor.
- The model PicoVACQ 1Tc Type 3 is equipped with a temperature sensor at the end of a rigid probe.

### METROLOGY

	Operating range	Battery	Resolution	Calibration uncertainty*
<b>PicoVACQ Temperature 1T and 1Tc Type 3</b>	-45°C to +140°C	016PTA	< ± 0.02°C	± 0.1°C from -45°C to +140°C (± 0.05°C upon request)
	-45°C to +85°C	015PW		
		015PWV		
	-40°C to +140°C	016T		
	-40°C to +100°C	015M		
	0°C to +140°C	015P**		
		015PV**		

Each logger can be calibrated and adjusted at the temperature points corresponding to the user's needs.

(\*) The specified uncertainties correspond to two standard deviations. 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...



## FUNCTIONS

- Start set up: immediate or delayed
- Time stamped measurement dat
- Battery level alert with Qlever software
- Memory configuration : stop at maximum capacity or loop writing

## TECHNICAL SPECIFICATIONS

Model	Number of channels	Probe type <sup>(1)</sup>	Probe dimensions	Watertightness
PicoVACQ 1T Type 3	1	Internal		●
PicoVACQ 1Tc Type 3	1	Rigid (INOX 316L)	D. 3 mm L. 10 to 220 mm	●
			D. 1,9 mm L. 10 to 220 mm	●
			D. hybride 3 > 1,9 mm L. 10 to 220 mm	●

<sup>(1)</sup> The choice of the probe depends on the application, ask our Sales department.

Material	Datalogger body: 316L Stainless steel				
Dimensions without probe	Models		Battery packs	Total dimensions of the logger (without probe)	Operating range
	PicoVACQ Temperature Type 3	PicoVACQ 1T and 1Tc Type 3	016PTA	D.16 mm x H.70 mm	From -45°C to +140°C
			015PW	D.15 mm x H.47 mm	From -45°C to +85°C
			015PWV (battery with thread)	D.15 mm x H.50 mm	
			016T	D.16 mm x H.44,5 mm	From -40°C to +140°C
			015M	D.15 mm x H.39,5 mm	From -40°C to +100°C
			015P**	D.15 mm x H.22 mm	From 0°C to +140°C
			015PV** (battery with thread)	D.15 mm x H.25 mm	

(\*\*) The battery life decreases significantly below ambient temperature and becomes very short close to 0°C. In applications below ambient temperature, we recommend that you use other battery models or check that the application is compatible with the battery type.

Temperature sensor	Pt 1000	
Memory capacity	32 340 acquisitions	
Acquisition rate	Programmable: minimum 1 second, maximum 59 minutes and 59 seconds	
Program duration	Programmable: days, hours, minutes	
Recording	Programmable start: by day, hour, minute, or on temperature threshold	
Clock drift	At 25°C and 1 Hz	±1.5 second / 24 hours
	From -30°C and +140°C, 1 Hz	±4 seconds / 24 hours
Power	User replaceable battery pack	
Connectivity	USB wired interface with the PC	
ATEX compliance	See specific documentation on our website	



## Examples of PicoVACQ Temperature 1T and 1Tc Type 3 models



PicoVACQ 1T



PicoVACQ 1Tc with various probes



PicoVACQ 1Tc with a thread and an o-ring



PicoVACQ 1Tc, battery pack with a thread

## AUTONOMY

The PicoVACQ Temperature Type 3 is powered by a battery pack; its autonomy depends on the environment and the operational conditions of the application (temperatures at both ends of the mentioned operating range, data acquisition rate).

Please contact our sales department to optimize the choice of the battery pack according to the temperature of your application.

As a result of the variety of environments and operational conditions, TMI-Orion does not guarantee the battery lifetime and recommends that the user determine the battery lifetime according to his own process conditions and experience.

## SOFTWARE AND RELATED PRODUCTS

The PicoVACQ Temperature Type 3 is used with Qlever software.

**Qlever software platform:** data acquisition, management and visualization of data from TMI-Orion data loggers.

Qlever is installed on a PC and operates under Windows® Vista 7/8/10/11. Data transmission and visualization are done after the industrial process.

The PicoVACQ Temperature family of data loggers also include the models:

- PicoVACQ 1Td, PicoVACQ 2Td, PicoVACQ 1Tc-1Td, PicoVACQ 1Tdi,
- PicoVACQ Microwave shield and PicoVACQ Microwave bullet.

These models are described in specific datasheets available on our web site.

## DELIVERABLES

The PicoVACQ Temperature Type 3 solution usually includes the following items:

- The PicoVACQ Temperature data logger with a battery pack
- The PicoVACQ Temperature calibration certificate
- The PicoVACQ Temperature configuration and calibration file

- Qlever software platform (to be ordered separately)
- A USB wired interface to the PC (to be ordered separately)
- A transport case (optional – to be ordered separately)

## SERVICES

**Maintenance :** TMI-Orion recommends annual preventative maintenance and calibration service for the replacement of o-rings, functional checking, calibration and adjustment.

**Accessories:** The battery packs, engineered by TMI-Orion, are replaceable by the user and are referenced in the specific datasheet on our website.



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