

DATA SHEET

TMI-Orion

PicoVACQ

Pressure and Temperature

Type 3

4 Hz, 64 Hz, 256 Hz



Pressure and temperature measurement at up to 256 acquisitions per second with a very small autonomous data logger.

The PicoVACQ Pressure and Temperature Type 3 is a data logger for temperature and pressure measurement, up to 15 bar and 256 acquisitions per second depending on the model.

This very small data logger is equipped with one pressure sensor and one internal temperature sensor.

The PicoVACQ Pressure and Temperature Type 3 presents enhanced performance in memory capacity and time drift.

Designed for processes where pressure changes quickly, it offers, depending on the model (4 Hz, 64 Hz or 256 Hz) the possibility to program acquisition rates up to 256 Hz.

METROLOGY

	Operating range*	Temperature resolution	Pressure resolution	Temperature calibration uncertainty*	Pressure calibration uncertainty*
PicoVACQ PT 4 Hz Type 3 (15 bar absolute)	From -30°C to +140°C**	0.01°C	1 mbar	0.1°C from 0°C to +140°C	8 mbar from 30 mbar to 15 bar
PicoVACQ PT 64 Hz Type 3 (15 bar absolute)				0.1°C from 0°C to +140°C	11 mbar from 30 mbar to 15 bar
PicoVACQ PT 256 Hz Type 3 (15 bar absolute)				0.48°C from 0°C to +140°C	11 mbar from 30 mbar to 15 bar

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

(*) For temperature the uncertainty is calculated at an acquisition rate of one sample every 4 seconds.

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...

(**) The operating range varies depending on the battery pack used.



FUNCTIONS

- Start set up: immediate or delayed.
- Time stamped measurement data.
- Battery level alert with Qlever software.

TECHNICAL SPECIFICATIONS

Model	Number of channels	Pressure probe	Internal temperature probe	Watertightness
PicoVACQ PT Type 3 15 bar	2	Piezoresistive	Internal platinum sensor for pressure sensor compensation	●

Material	Logger body: 316L Stainless steel Cover: SS 316L or PEEK
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	Model	Operating range	Battery pack	Diameter with 316L SS cover	Height with 316L SS cover	Diameter with PEEK cover	Height with PEEK cover
	PicoVACQ PT 4 Hz Type 3	From 0°C to +140°C	015P	D.17 mm	H. 36 mm	D.16 mm	H.37 mm
			015PV*		H. 39 mm		H.40 mm
		From -30°C to +85°C	015PW		H. 61 mm		H.62 mm
			015PWW*		H. 64 mm		H.65 mm
		From -30°C to +100°C	015M		H. 52.5 mm		H.53.5 mm
			From -30°C to +140°C		016T		H. 58.5 mm
		016PTA			H. 84 mm		H.84 mm
			PicoVACQ PT 4 Hz Type 3 with option Big Memory		From -30°C to +100°C		015M
	From -30°C to +140°C	016T		H. 58.5 mm		H.59.5 mm	
		016PTA	H. 84 mm	H.84 mm			
	PicoVACQ PT 64 Hz Type 3		From 0°C to +140°C	015P	D.17 mm	H. 36 mm	D.16 mm
		015PV*		H. 39 mm		H.40 mm	
		From -30°C to +100°C	015M	H. 52.5 mm		H.53.5 mm	
			From -30°C to +140°C	016T		H. 58.5 mm	
	016PTA	H. 84 mm		H.84 mm			
		PicoVACQ PT 64 Hz Type 3 with option Big memory	From -30°C to +100°C	015M	H. 52.5 mm	H.53.5 mm	
From -30°C to +140°C	016T			H. 58.5 mm	H.59.5 mm		
	016PTA			H. 84 mm	H.84 mm		
PicoVACQ PT 256 Hz Type 3	From -30°C to +100°C	015M	D.17 mm	H. 52,5 mm	D.16 mm	H.53.5 mm	
		From -30°C to +140°C		016T		H. 58.5 mm	H.59.5 mm
				016PTA		H. 84 mm	H.84 mm

Memory capacity	PicoVACQ PT 4 Hz Type 3	65 350 acquisitions With Big memory option: 2 096 966 acquisitions
	PicoVACQ PT 64 Hz Type 3	65 350 acquisitions With Big memory option: 2 096 966 acquisitions
	PicoVACQ PT 256 Hz Type 3	2 096 966 acquisitions

TECHNICAL SPECIFICATIONS



Acquisition rate	PicoVACQ PT 4 Hz Type 3	Programmable: from 4 acquisitions per second to 1 acquisition per 59 minutes and 59 seconds	
	PicoVACQ PT 64 Hz Type 3	Programmable: from 64 acquisitions per second to 1 acquisition per 59 minutes and 59 seconds	
	PicoVACQ PT 256 Hz Type 3	Programmable : from 256 acquisitions per second to 1 acquisition per 59 minutes and 59 seconds	
Program duration	Programmable: day, hour, minute		
Recording	Programmable start: by date, hour, minute or on temperature threshold		
Clock drift	At 25°C and 1 Hz	± 1.5 second / 24 hours	
	From -30°C to +140°C, et 1 Hz	± 4 seconds / 24 hours	
Power	User replaceable battery pack		
Connectivity	USB wired interface to the PC		

(*) The letter V indicates battery packs with a thread for a positioning kit.



PicoVACQ Pressure and Temperature with remote pressure sensor



PicoVACQ Pressure and Temperature with 316L SS cover



PicoVACQ Pressure and Temperature with PEEK cover

AUTONOMY

The PicoVACQ Pressure and Temperature Type 3 is powered by a battery pack; its autonomy depends on environment and 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 model PicoVACQ PT 4 Hz Type 3 operates with TMI-Orion Qlever Software version 2.6.0.0 and higher.

The models PicoVACQ PT 64 Hz Type 3 and PicoVACQ PT 256 Hz Type 3 are used with Qlever software version 2.7.0.0 and higher.

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® 7/8/10/11. Data transmission and visualization are done after the industrial process.

DELIVERABLES

PicoVACQ Pressure and Temperature Type 3 solution usually includes the following items:

- The PicoVACQ Pressure and Temperature Type 3 data logger with a battery pack,
- The PicoVACQ Pressure and Temperature Type 3 calibration certificate,
- The PicoVACQ Pressure and Temperature Type 3 configuration and calibration file,

- Qlever software (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 documents available on our web site.

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