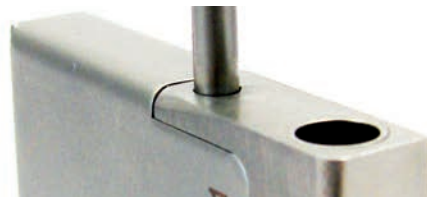# TMI-Orion

NanoVACQ xFlat Temperature

Temperature control inside thin layer materials such as wood or plasterboard.

NanoVACQ xFlat is a temperature data logger equipped with one external sensor at the end of a tip.

Thanks to its small dimensions the NanoVACQ xFlat has no impact on the physical parameters of the environment.

It fits into thin materials such as wood, plasterboard or into any other narrow space processes.

METROLOGY

	Operating range	Resolution	Internal reference channel calibration uncertainties*
NanoVACQ xFlat	From -20°C to +140°C	*16 bit converter* *<±0.06 °C*	± 0.5°C from 0°C to +140°C

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 data
- Battery level alert with Qlever software

TECHNICAL SPECIFICATIONS

Model	Number of external channels	External Probe type	Probe dimensions	
NanoVACQ xFlat	1	Rigid (SS 316L)	D. 3 mm L. 35 mm (other lengths possible)	

Watertightness	No - This logger must not be used in autoclaves
Material	Logger body: 316L Stainless steel
Dimensions of the body	42 mm x 42 mm x 7,5 mm
Temperature sensor	Pt 1000
Memory capacity	16 000 acquisitions
Acquisition rate	Programmable: minimum 1 second, maximum 59 minutes and 59 seconds
Program duration	Programmable: days, hours, minutes
Recording	Programmable start: by date, hour, minute
Power	User replaceable battery pack
Connectivity	USB wired interface to the PC

NanoVACQ xFlat

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AUTONOMY

The NanoVACQ xFlat is powered by a battery pack; its autonomy depends on environment and operational conditions of the application (extreme temperatures, data acquisition rate).

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

SOFTWARE AND RELATED PRODUCTS

NanoVACQ xFlat 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. Data transmission and visualization are done after the industrial process.

DELIVERABLES

The NanoVACQ xFlat solution usually includes the following items:

- The NanoVACQ xFlat data logger with a battery pack
- The NanoVACQ xFlat calibration certificate

- The NanoVACQ xFlat 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: The NanoVACQ xFlat is associated with an annual preventative maintenance service for 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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