

DATA SHEET

TMI-Orion

VACQ uFlat



Ultra-flat data logger for measurement of temperature in 3 points in processes where clearance is an issue.

VACQ uFlat is an ultra-flat data logger (7.5 mm high) designed for temperature measurement in drying and cooking processes of very flat products, such as boards or panels, or in ovens with reduced clearance.

VACQ uFlat must be protected by a thermal shield when temperature exceeds +125°C.

METROLOGY

Operating range	Measurement range	Resolution	Internal reference channel calibration uncertainty*
Without thermal shield : from 0°C to 125°C For temperatures over 125°C, a thermal shield is necessary.	Up to +1300°C	$< \pm 0.1^\circ\text{C}$	$\pm 0.1^\circ\text{C}$ from 0°C to +125°C

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

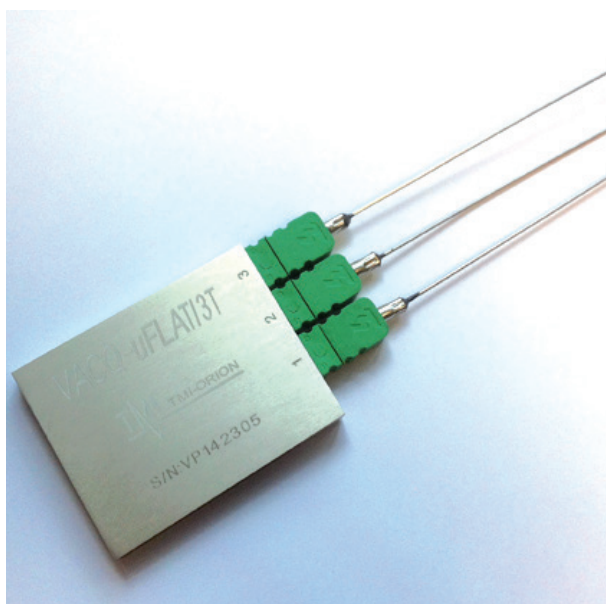
**The specified uncertainties correspond to two standard deviations. The uncertainties are calculated taking into account the various significant error sources, including the calibration probes, the equipment, the environmental conditions, the influence of the logger, repeatability, etc...*

FUNCTIONS

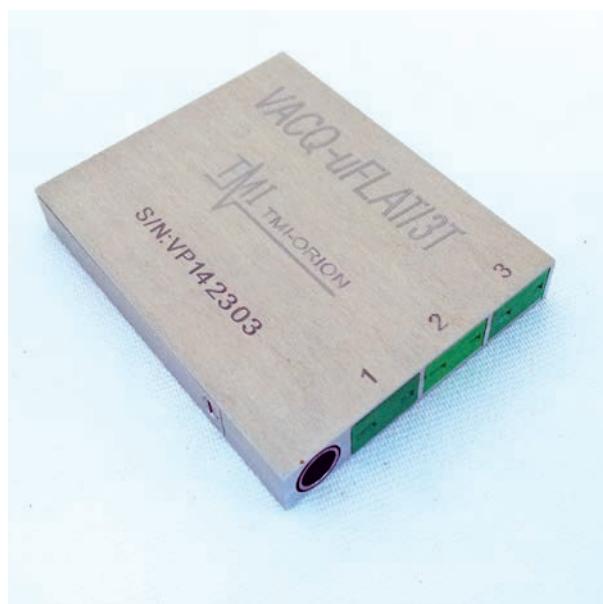
- Start set up: immediate or delayed
- Time stamped measurement data
- Battery level alert with Qlever software

TECHNICAL SPECIFICATIONS

Material	Logger body: Anodized aluminum
Dimensions	46 mm x 7.5 mm x 58 mm
Number of channels	3 connected thermocouple elements 1 platinum sensor as reference channel for cold junction and internal temperature of the box
Temperature sensor	Thermocouples : type K (full scale 1300°C) or type T (full scale 400°C)
Memory capacity	65 100 acquisitions divided by number of measurement channels
Acquisition rate	Programmable: minimum 3 acquisitions per 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



VACQ uFlat with connected thermocouples



VACQ uFlat

AUTONOMY

The VACQ uFlat is powered by a battery pack; its autonomy depends on environment and operational conditions of the application (extreme temperatures, electromagnetic disturbances, data acquisition and transmission 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

VACQ uFlat is used with **Qlever software platform**.

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 **VACQ uFlat** solution usually includes the following items:

- The VACQ uFlat data logger with a battery pack
- The VACQ uFlat calibration certificate
- The VACQ uFlat configuration and calibration file
- Qlever software platform (to be ordered separately)
- A wired USB 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 functional checking, calibration and adjustment.

Accessories: The battery packs, engineered by TMI-Orion, are replaceable by the user and are referenced in our web site.

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