DATA SHEET

TMI-Orion

VACQ III

Temperature measurement inside kilns during curing processes of bricks, tiles, ceramics.

VACQ III is an autonomous data logger which enables the measurement of temperature inside kilns during ceramics, tiles and bricks curing processes. It has 8 or 16 thermocouple channels and is associated with industry-specific software Qlever Ceramics.

Qlever Ceramics software enables the visualization and mapping of thermocouple temperature inside kilns, and the matching of wagon position and temperature at corresponding location. Positioning the instruments (burner, door...) in the software helps anticipate possible failures.

METROLOGY

Operating range	Measurement range	Resolution	Uncertainty of the internal reference channel*
Without thermal shield : from 0°C to 140°C With thermal shield: from 0°C to 250°C during 70 hours. Other thermal profiles upon request.	Up to 1300°C	<±0.1 °C	+/- 0.1°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…*

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FUNCTIONS

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

TECHNICAL SPECIFICATIONS

Material	Logger body: 316L Stainless steel		
Dimensions	Body : D.67 mm x L.100 mm (without connector)		
Number of channels	8	Up to 8 connected thermocouple elements and up to 3 platinum sensors as reference channel for cold junction, and internal temperature of the box	
	16	Up to 16 connected thermocouple elements and up to 6 platinum sensors as reference channel for cold junction, and internal temperature of the box	
Temperature sensor	Thermocouples: type K (full scale 1300°C)		
Memory capacity	232 000 acquisitions divided by number of measurement channels		
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		
External connection box (*)	Number of channels		Adapted to the number of channels of the logger
	Connectors		Miniature, standard or universal (upon request)
	Material		304 Stainless Steel for the hose 316L Stainless steel for the box

(*) We can study any customization of the box: connectors, format, flexible hose length.

VACQ III external connection box

VACQ III

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AUTONOMY

The VACQ III is powered by a battery pack; its autonomy depends on environmental and operational conditions of the application (extreme temperatures, radio range, 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 III is used with the 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.

- VACQ III products family includes VACQ III FullRadio for full wireless data logging real time monitoring.

DELIVERABLES

The VACQ III solution usually includes the following items:

- The VACQ III data logger with a battery pack
- The VACQ III calibration certificate
- The VACQ III 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 documentation available on our website.

TMI-ORION Vertretung Deutschland

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