

# DATA SHEET

# TMI-Orion

## CeriDry Mini Split

Temperature,  
humidity and  
shrinkage data logger



**Monitor temperature, humidity and shrinkage in drying processes of bricks, tiles and ceramics with a very small data logger in two parts for a perfect flow of the hot air.**

The CeriDry Mini Split is an autonomous data logger equipped with one temperature sensor, one humidity sensor and one retractometer. This data logger is made in two parts: the retractometer is separated from the temperature and humidity data logger by a high-temperature cable. Its very small size is optimized to enter in even more challenging locations where space is limited.

This solution is designed for the drying of hollow bricks, but can be used in other drying processes.

The CeriDry Mini Split correlates the changes in relative humidity and air temperature with the shrinkage of bricks, tiles or ceramics during the drying process.

It also enables the accurate evaluation of drying of a brick or tile.

## METROLOGY

	Operating range	Measurement range	Resolution	Uncertainty*
Temperature	- 30°C to +140°C	0°C to +140°C	0.04°C	± 0.1°C
Humidity	0 to 100 % RH non condensed	2 to 98 % RH	0.05 % RH	± 3.5 % RH
Shrinkage		0 mm to 25 mm	0.01 mm	± 1 mm

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
- Memory set up: stop at maximum capacity / loop writing
- Time stamped data
- Battery level alert with Qlever software



## TECHNICAL SPECIFICATIONS

<b>Material</b>	Stainless Steel
<b>Dimensions of the temperature and humidity data logger part</b>	Diameter 33 mm, height 57 mm
<b>Dimensions of the retractometer part</b>	External diameter 9.52 mm, height 68.7 mm, + 28.0 mm mechanical travel
<b>Dimensions of the remote retractometer cable</b>	Up to 1 meter
<b>Temperature sensor</b>	PT1000
<b>Humidity sensor</b>	Capacitive
<b>Shrinkage measurement</b>	Linear potentiometer (Optional custom mechanical fixtures based on customer application.)
<b>Memory capacity</b>	12 000 acquisitions per measurement channel
<b>Memory capacity with Big Memory option</b>	73 500 acquisitions per measurement channel
<b>Acquisition rate</b>	Programmable: min. 1 second, max 59 minutes and 59 sec.
<b>Program duration</b>	Programmable: days, hours, minutes
<b>Recording</b>	Programmable start: by date, hours, minutes
<b>Power</b>	User replaceable battery pack
<b>Connectivity</b>	USB wired interface to the PC

## AUTONOMY

The CeriDry Mini Split is powered by a battery pack; its autonomy depends on environment and operational conditions of the application (extreme temperatures, 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

**CeriDry Mini Split 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 CeriDry Mini Split system usually includes the following items:

- The CeriDry Mini Split logger with a battery pack
- The CeriDry Mini Split calibration certificate
- The CeriDry Mini Split configuration and calibration file
- A USB wired interface to the PC (To be ordered separately)

- Qlever software platform (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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