

Temperature data logger

VACQ II



Measure temperature inside kilns during curing processes of bricks, tiles, ceramics

In its standard version, **VACQ II** enables the measurement of temperature in kilns for ceramics, tiles and bricks.

It has 8 or 16 thermocouple channels and is also available in **Radio transmission** version, for real time reading of data.

The logger is associated to a software designed for this industry.

It allows to:

- visualize thermocouple temperature inside kilns and thus create a mapping,
 - match wagon position in the kiln and temperature at corresponding location.
- By positioning the instruments (burner, door...) in the software, you can anticipate possible failures.



Metrology

- **Measurement range:** up to 1200°C
- **Operating range:**
 - 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.
- **Resolution:**
 - 0.03°C for Pt1000 / 0.2°C for type K thermocouples (full scale 1300°C)

Technical specifications

- **Material:** 316 L Stainless steel
- **Dimensions:** diameter 55 mm, length 120 mm without connector
- **Sensors:**
 - 1 Pt1000 type sensor in the logger (for measurement inside the shield)
 - 1 Pt1000 type sensor as reference channel (cold junction) in the interconnection box
 - K type thermocouples
- **Memory capacity:**
 - 26 100 acquisitions per measurement channel for the VACQ II 8 thermocouples
 - 14 500 acquisitions per measurement channel for the VACQ II 16 thermocouples
- **Programmable acquisition rate:** minimum 1 second, maximum 59 minutes and 59 seconds.
- Programmable acquisition duration
- Programmable recording start from date, hour, minute
- User replaceable high temperature battery
- Non volatile memory (EEPROM)



Software operating conditions

- Data transfer with a communication interface connected to the serial or USB port.
- Operates under Windows® 98/Me/NT/2000/XP

VACQ II FM Radio option



The **VACQ II FM** is a VACQ II with a radio transmitter. This system is made of a VACQ II with its transmitter and a transmitting antenna and of a receiver with its antenna customized for the application. It has been designed to offer two functions: real time radio transmission of the data given by the sensors and recording of the transmitted data.

The radio transmission can support temperatures from 0°C to +1200°C.

- The body of the **VACQ II FM** has a diameter of 55mm, its height is 120 mm without the connector.
- The transmitting antenna is unpluggable from the body.
- **VACQ II FM** can be set up by the user. The operation mode of the device may be selected during set up.
 - Radio transmission of data without recording them in memory.
 - Recording the data without radio transmission.
 - Radio transmission of data while recording them in the memory.



VACQ II FM Radio transmission



Example of antenna

- The frequency used by the radio transmitter is within ISM 433MHz/915MHz bandwidth (industrial, scientific or medical devices).

This bandwidth can be used without licence if the power is inferior to 10mW.

- **VACQ II FM** transmits within this bandwidth with a power between 8 and 10mW on 50 ohms.



Receiver with antenna

NOTA:

A yearly maintenance is advised for O-rings replacement, recalibration and adjustment.