

Wireless Temperature and Humidity Sensor for Concrete

BlueRock™ is a rugged waterproof sensor for wireless monitoring of relative humidity and temperature in concrete from fresh stage to hardened stage.

Overview

BlueRock™ can be placed in the concrete at the pouring time to monitor the temperature and relative humidity of concrete in situ. The continuous measurements are recorded on the BlueRock™ memory and can be downloaded at any time during the concrete setting and hardening using BlueRock™ mobile app on smartphone or tablet.

The continuous monitoring of concrete relative humidity and temperature can be used as a QC/QA method. By knowing the level of humidity in the concrete, flooring companies can optimize the timing of floor covering installation (such as resilient flooring, epoxy coating, or wood) based on the type of concrete materials used. Unlike the current destructive and time-consuming methods that measure only one data point at the testing time and require drilling a hole in concrete, BlueRock™ offers an embedded wireless solution for continuous measurement and accurate monitoring of internal humidity variations in concrete over time.

Applications

- Drying level in concrete floors
- Effectiveness of curing conditions
- Optimization of flooring installation
- Water penetration in concrete
- Monitoring of humidity gradients



Features

Software

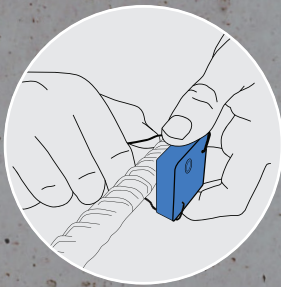
- Real-time data display (e.g. humidity and temperature)
- Free Android and iOS apps for smartphones and tablets
- Interactive plotting of data
- Easy data organization among different embedded sensors
- Full report generation in .csv or.pdf format

Hardware

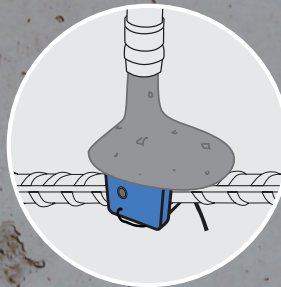
- Wireless technology
- Rugged and waterproof design
- Continuous measurement and recording of humidity and temperature with customizable data recording frequency.
- Memory capable of recording up to 2500 data points
- Easy installation and activation by tying the wires together
- Long battery life (up to 2 years after installation)³
- Patents pending

How to use BlueRock™ in 3 easy steps

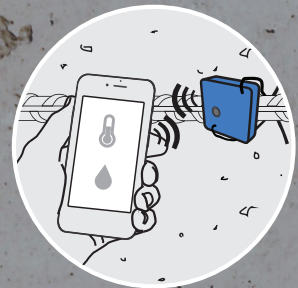
1. Install Sensor*



2. Pour Concrete



3. Read Sensor



Technical Specifications

	Reading Range	Accuracy ¹
Temperature	-30°C to 60°C (-22°F to 140°F)	± 1°C (± 1.8°F)
Relative Humidity ²	0 to 100%	20% - 80%, ±2% <20% or >80%, ±3% Hysteresis ±1%

¹ Accuracies are tested at Outgoing Quality Control at 25°C and 3.0V. Values exclude hysteresis and long-term drift and are applicable to non-condensing environments only.

* Sensors should be installed within 5cm (2 inches) below the surface of concrete

Wireless Signal Range	up to 8 meters* (26 feet)
Dimensions	39 x 39 x 20 mm (1.5 x 1.5 x 0.7 inches)
Battery Life	up to 2 years
Data Communication and Analysis	Free Android and iOS app

² Normal operating range: 0 to 80% RH, beyond this limit the sensor may read a reversible offset with slow kinetics (+ 3% RH after 60h at humidity > 80% RH)

³ Operating at room temperature with periodical connections to the sensor