WEBERFLOOR MOISTURE SENSOR FOR FLOOR SCREEDS

- Also suitable for long-term monitoring after the overlayment materials have been applied
- The measurement data can be transferred to the cloud service in order to enable easy data management and reporting

ABOUT THIS PRODUCT

A wireless sensor developed by Wiiste Oy that is suited to be used only with Weber's floor screeds. Also suited for use with coarse floor screeds (weber 6000 Rapid Screed and weber 8000 Thick renovation screed). The sensor measures the relative humidity and temperature of concrete and the sensor's designed purpose of use is to monitor drying during the construction period and to monitor the structure during its use.

AREA OF USE

The weberfloor Moisture control service is a system for the measurement of a structure's relative humidity and temperature. The system is especially designed for measurements related to the monitoring of floor screed humidity before overlayment application and for the long-term monitoring of structural humidity. The sensors do not include an energy source, but the required energy is transferred wirelessly by using the reader when performing the measurement. From the reader, the measurement data can be transferred to the Relia cloud service in order to enable easy data management and reporting.

WORK INSTRUCTIONS

Installation:

1. Check the location of the measuring points and the needed sensors' measuring depths from the measuring plan.
2. Check the thickness of the screed on the measuring point.
3. Attach the sensor on the base so that the upper level of the sensor settles on the screed surface. Use height markers or screws for attachment. Use two attachments if needed. The sensor should stay firmly in place during the spreading process of the levelling product, as well as during the hardening process.
4. After the screed application, and in case a sensor is installed a bit too high, there is an extra 2 mm on the sensor surface that can be grinded away.

PRODUCT SPECIFICATION

Dimensions (LxWxH)	MECHANICAL PROPERTIES: see Figure 3
Weight	7 ... 15g (D = 15 ... 70mm)
Measuring range	HUMIDITY MEASUREMENT: 10 ... 100 %RH (Max dew point has been limited to 80°C.). TEMPERATURE MEASUREMENT: -40 ... 85°C
Operating temperature range	-40 ... 85°C
Measurement tolerance	HUMIDITY MEASUREMENT: ±2.5%RH (10 ... 80%RH), see Figure 1. Accuracy has been tested 23°C towards the rising relative humidity. Linearity error and hysteresis has not been taken into account in the accuracy. TEMPERATURE MEASUREMENT: ±0.2°C (0 ... 60 °C), see Figure 2.
Repeatability	HUMIDITY MEASUREMENT: ±0.2%RH. Repeatability has been measured in the same direction, and does not take hysteresis into account. TEMPERATURE MEASUREMENT: ±0.1°C
Hysteresis	HUMIDITY MEASUREMENT: < ±1%RH
Resolution	HUMIDITY MEASUREMENT: 0.1%RH. TEMPERATURE MEASUREMENT: 0.1°C.
Linearization error	HUMIDITY MEASUREMENT: < ±1%RH
Long-term stability	HUMIDITY MEASUREMENT: < 0.5%RH/a. TEMPERATURE MEASUREMENT: < 0.05°C/a.
Sensor type	HUMIDITY MEASUREMENT: Capacitive polymer. TEMPERATURE MEASUREMENT: PTAT.
IP classification (Ingress Protection)	MECHANICAL PROPERTIES: IP68
GTIN-codes	6415910033521 (15 mm) 6415910033538 (20 mm) 6415910033545 (25 mm) 6415910033552 (30 mm)
Certifications	CE

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The sensor is pre-installed on the surface of the screed layer prior to spreading the levelling compound. Attachment to the base is made using height marker or screw. With coarse floor screeds, the sensor is installed when spreading the screed compound by pushing the sensor to the fresh compound at the final surface level. The sensor remains firmly in the structure and is suitable for long-term monitoring even after coating. The stabilization time of the sensor after installation is about two weeks. The measurement results obtained during this time should not be used for the assessment of overlayment application. The measurement result is read from the sensor using a manual RD1 reader, weberfloor Moisture Reader. The maximum distance between the sensor reader head and the RD1 reader is approx. 40 mm, depending slightly on the material in between. For more detailed instructions, refer to the SolidRH system user instructions at http://www.wiiste.com/tuotteet.

Measurement depth:
The sensor measures the screed's relative humidity at the selected measuring depth (15, 20, 25 or 30 mm). The sensors are delivered pre-dimensioned and with the measurement depth stored in the sensor memory. More information on selecting the correct measurement depth can be found, for example, in the building information file card RT 14-10984 on the measurement of relative humidity in concrete.

Serial numbering:
Each sensor has a unique serial number. The serial number is programmed in the sensor memory and it is always read during the measuring. The serial number also enables the measurement result to be allocated to the drawing when examining the results at a later time.

Calibration:
The weberfloor Moisture Sensor sensors for permanent installation are delivered factory-calibrated. If stored and installed in accordance with the instructions, the sensor calibration is valid for one year. Typically, sensors are not calibrated after installation, so the gradual weakening of measurement accuracy (see technical data) must be taken into consideration when examining the measurement results.

PLEASE OBSERVE

Store the sensors in their packaging until installation in order to keep them protected from dust and other impurities. Concrete dust or other contaminants that have penetrated the sensor may affect the accuracy of the measurement.

One measuring point may include one or more sensors. Install the sensors of one measuring point about 20 cm apart from each other.

At the time of measurement, the reader must reach above the sensor. Install the sensors at least 20 cm away from walls or other fixed obstacles.

DISCLAIMER

As there are different conditions at every opportunity, Weber can not be held responsible for anything other than the information provided under the heading "Product Specification". Examples of information and circumstances, which are outside Saint-Gobain (whether specifically stated or not) include storage, construction, processing, interoperability with other products, workmanship and local conditions.

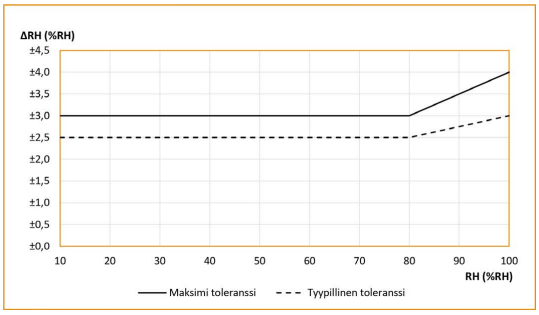


Figure 1

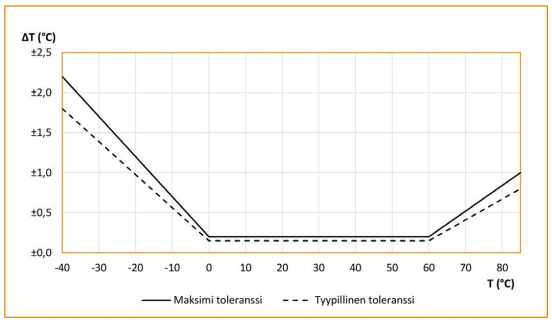


Figure 2

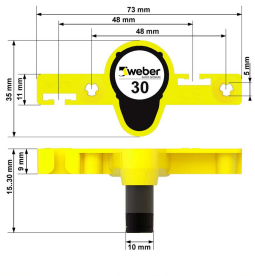
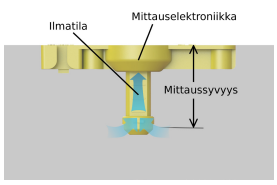


Figure 3



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