User's Manual

Fidbox V.5

FW: V 5.4

Contents

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Version	Date	Author	Description
1.0.0	01.05.2013	SM	Initial document
1.0.1	06.05.2013	SM	Additional FCC Information

1 Product description

1.1 General

The **fidbox®** is a monitor for temperature (°C) and relative humidity (%) as well as a data log for long-term data recording all in one, which is concealed in the hardwood flooring itself. The data stored therein can be read at any time by wireless transmission and allows the determination of the degree of moisture in the screed and in the hardwood flooring by vertical measurements. This information is not only pertaining to the indoor environment, but is especially important in the event of damage as it provides understandable facts.

For example, if damage occurs to the floor due to excessive floor temperature in the hardwood or through increasing or decreasing of moisture, often a lengthy fundamental research as to cause is needed and this might result in unjust blame. The **fidbox®** puts a stop to that and provides unadulteratable clarity as to the question of guilt; prompt – candid - definite!

The **fidbox®** brings measurable benefits to the hardwood installer, designers, owners, occupants or builders. The results of the measurements can quickly clarify damage claims and thus speed up the process of clarification and solution.

The **fidbox®** is a product that is directed at resolving a genuine problem and it offers a lot of extra security on top. The relevance of this subject itself is apparent, as many damage claims can eventually endanger the pure existence of many hardwood installation companies. The **fidbox®** provides unadulteratable results that are recognized by hardwood flooring inspectors and therefore an important element in the preparation of a court case.

1.2 Technical data

Carrier	2.45 GHz
Protocol	proprietary
Number of channels	1
Output power	max. 0 dBm
Power supply voltage	3 V DC Lithium Battery
Current consumption	avg. 23 mA – 2 µA (power down)
Ambient temperature	0°C to +55°C
Weight	30 g
Dimensions (W x H x D)	95.5 mm x 52.5 mm x 7 mm
Humidity	Accuracy: up to +/- 2% rH Resolution: 0,04% rH Repeatability: up to +/- 0,1% rH
Temperature	Accuracy: up to +/- 0,3°C bei +25°C Resolution: 0,01°C Repeatability: up to +/- 0,1°C

1.3 Installation Instructions

Congratulations, you have decided for the use of the fidbox®. A good decision in favour of your secure future. When the fidbox® that you ordered leaves our humidity chamber, we check the complete functionality and provide you with our guarantee. Already at this point in time, fidbox® begins with long term measurement and data collection. Please pay attention to the following instructions and help ensure the flawless functioning of the fidbox®. Choose the optimal location of the fidbox® together with the builder before the installation. The fidbox® should be integrated into the rooms with the highest climate variabilitys, for example, in the middle of the living room or in the vicinity of the underfloor heating. In single rooms sizes bigger than 30 m² parquet or in projects with more several rooms bigger than 50 m² parquet sizes, in projects with serveral floors or in rooms with diverse types of utilisation, in projects with several heating water distributors from the underfloor heating water in each case the fidbox® installation should be planned individually. In single rooms smaller than 30 m² parquet or in projects under 50 m² project size it´s not necessary to install a fidbox® because the low contract value. We will gladly support you during the planning stage. See our pamphlet regarding "Requirement Calculation". Please observe: Security Warning Store fidbox®, frost-proof at room temperature - Safeguard the fidbox® until use in the storage box. Never subject the unprotected fidbox® to the direct sunlight or submerge in water. Do not crack, bend or drill objects or saw through the fidbox®. All stored data remains complete for many years when the battery capacity is over. Send us in this case of damage the fidbox® complete for a service check to our office. Avoid falsifications of measuring data: no furniture over or on the emplaced fidbox® do not lay textile rugs on the area of the emplaced fidbox® Exclude and avoid strong electronic radiation for example from mobile telephones at the position of the fidbox® 1st step. The fidbox® can be integrated on all substrates into the parquet element directly under the top layer. Attention: please note that 3 mm from the toplayer must remain. It is necessary, that before or during the installation process a parquet element is used to mill out the necessary dimensions (min. 8 mm egde distance) with the aid of a Template. This can be accomplished professionally using a top milling machine or with the use of suitable tools. 2nd step. During the parquet installation the cover of the adhesive strips which are applied to one side of the fidbox®
are peeled off and fixed with this side going into the parquet element. Use no other adhesive or sealants as they can endanger the flawless function of the fidbox®. 3rd step. During parquet installation you insert the prepared parquet element at the defined position. Avoid the contact of parquet adhesive to the underside of the fidbox® which is the point (see blue circle) of measurement which may cause falsified measurements. 4th step. After accomplished parquet installation note the exact position of the fidbox® in the "Floor Passport" and enter all general information concerning this particular project. Thereby you facilitate prompt position locating and simplified data recovery if required.
Please make a brief sktech with dimensions

fidbox

Congratulations, you have decided for the use of the **fidbox®**. A good decision in favour of your secure future. When the **fidbox®** that you ordered leaves our humidity chamber, we check the complete functionality and provide you with our guarantee. Already at this point in time, **fidbox®** begins with long term measurement and data collection. Please pay attention to the following instructions and help ensure the flawless functioning of the **fidbox®**.

Choose the optimal location of the **fidbox®** together with the builder before the installation. The **fidbox®** should be integrated into the rooms with the highest climate variabilitys, for example, in the middle of the living room or in the vicinity of the underfloor heating. In single rooms sizes bigger than 30 m² parquet or in projects with more several rooms bigger than 50 m² parquet sizes, in projects with serveral floors or in rooms with diverse types of utilisation, in projects with several heating water distributors from the underfloor heating water in each case the **fidbox®** installation should be planned individually. In single rooms smaller than 30 m² parquet or in projects under 50 m² project size it´s not necessary to install a **fidbox®** because the low contract value. We will gladly support you during the planning stage. See our pamphlet regarding "Requirement Calculation".
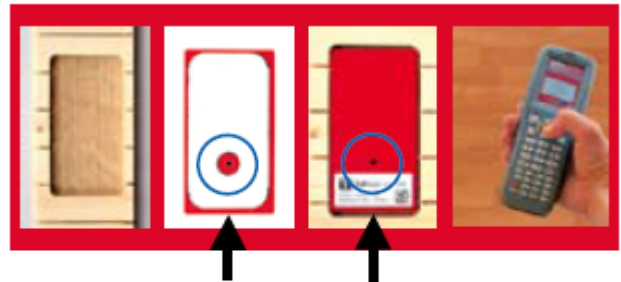
Please observe: **Security Warning**
- Store **fidbox®**, frost-proof at room temperature - Safeguard the **fidbox®** until use in the storage box.
- Never subject the unprotected **fidbox®** to the direct sunlight or submerge in water.
- Do not crack, bend or drill objects or saw through the **fidbox®**.
- All stored data remains complete **for many years when the battery capacity is over. Send us in this case of damage the fidbox® complete for a service check to our office.**

Avoid falsifications of measuring data:
- no furniture over or on the emplaced **fidbox®**
- do not lay textile rugs on the area of the emplaced **fidbox®**
- Exclude and avoid strong electronic radiation for example from mobile telephones at the position of the **fidbox®**

Step by step

1st step.
The **fidbox®** can be integrated on all substrates into the parquet **element directly under the top layer.**
Attention: please note that 3 mm from the toplayer must remain. It is necessary, that before or during the installation process a parquet element is used to mill out the necessary dimensions (**min. 8 mm egde distance**) with the aid of a Template. This can be accomplished professionally using a top milling machine or with the use of suitable tools.

2nd step.
During the parquet installation the cover of the adhesive strips which are applied to one side of the **fidbox®** are peeled off and fixed with this side going into the parquet element. Use **no other** adhesive or sealants as they can endanger the flawless function of the **fidbox®**.

3rd step.
During parquet installation you insert the prepared parquet element at the defined position. **Avoid** the contact of parquet adhesive to the underside of the **fidbox®** which is the point (see blue circle) of measurement which may cause falsified measurements.

4th step.
After accomplished parquet installation note the exact position of the **fidbox®** in the "Floor Passport" and enter all general information concerning this particular project. Thereby you facilitate prompt position locating and simplified data recovery if required. **Please make a brief sktech with dimensions.**

1.4 Certificates

1.4.1 EMC

The fidbox has been tested and found to comply with the following test standards:

- EN 301 489-1 V1.8.1 :2008

- EN 301 489-17 V2.1.1 2009

- EN 61000-4-2 :1995 + A1:1996 + A2: 2001

- EN 61000-4-3 :2006

1.4.2 EMI

The fidbox has been tested and found to comply with the following test standards:

- ETSI EN 300 328 V1.7.1 :2006-10

1.4.3 FCC

NOTE: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
—Reorient or relocate the receiving antenna.
—Increase the separation between the equipment and receiver.
—Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
—Consult the dealer or an experienced radio/ TV technician for help.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

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