

## Operating Manual Moisture indicator for wood and buildings

# GMI 15



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## 1 General Note

Read this document carefully and get used to the operation of the device before you use it. Keep this document within easy reach near the device for consulting in case of doubt.

Mounting, start-up, operating, maintenance and removing from operation must be done by qualified, specially trained staff that have carefully read and understood this manual before starting any work.

The manufacturer will assume no liability or warranty in case of usage for other purpose than the intended one, ignoring this manual, operating by unqualified staff as well as unauthorized modifications to the device.

The manufacturer is not liable for any costs or damages incurred at the user or third parties because of the usage or application of this device, in particular in case of improper use of the device, misuse or malfunction of the connection or of the device.

The manufacturer is not liable for misprints.

## 2 Safety

### 2.1 Intended Use

The safety requirements (see below) have to be observed.

The device must be used only according to its intended purpose and under suitable conditions.

Use the device carefully and according to its technical data (do not throw it, strike it, ...)

Protect the device from dirt.

This device is designed for quick-response measuring of moisture in buildings, on building sites etc.

The GMI15 allows moisture measurements in wood down to a depth of approx. 3 cm and down to a depth of approx. 4 cm in concrete or wash floor. It is even able to detect moisture behind ceramic tiles or behind and under various floor or wall coverings. Simply place device on top of the surface to be measured – no injection into the measuring object required.

### 2.2 Safety signs and symbols

Warnings are labelled in this document with the followings signs:



**Caution!** This symbol warns of imminent danger, death, serious injuries and significant damage to property at non-observance.




**Attention!** This symbol warns of possible dangers or dangerous situations which can provoke damage to the device or environment at non-observance.



**Note!** This symbol point out processes which can indirectly influence operation or provoke unforeseen reactions at non-observance.

## 2.3 Safety guidelines

This device has been designed and tested in accordance with the safety regulations for electronic devices. However, its trouble-free operation and reliability cannot be guaranteed unless the standard safety measures and special safety advises given in this manual will be adhered to when using the device.

1. Trouble-free operation and reliability of the device can only be guaranteed if the device is not subjected to any other climatic conditions than those stated under "Specification".
2. If the device is transported from a cold to a warm environment condensation may cause in a failure of the function. In such a case make sure the device temperature has adjusted to the ambient temperature before trying a new start-up.
3.  If there is a risk whatsoever involved in running it, the device has to be switched off immediately and to be marked accordingly to avoid re-starting.  
Operator safety may be a risk if:
  - there is visible damage to the device
  - the device is not working as specified
  - the device has been stored under unsuitable conditions for a longer time.
 In case of doubt, please return device to manufacturer for repair or maintenance.

**DANGER**

## 3 Product Specification

### 3.1 Scope of supply

The scope of supply includes:

- Device GMI15, incl. 9V battery block
- Operation manual

### 3.2 Operation and maintenance advice

#### • Battery operation:

If 'bAt' is shown in the lower display the battery has been used up and needs to be replaced. However, the device will operate correctly for a certain time. If 'bAt' is shown in the upper display the voltage is too low to operate the device; the battery has been completely used up.

If the battery voltage falls even lower the voltage may not be sufficient for "BAT" to be displayed so that there will be no "BAT" indication although the battery has been used up.

We recommend to make it a rule to always check the battery if the values indicated seem to be completely out of range.



***The battery has to be taken out, when storing device above 50 °C.***

***We recommend taking out battery if device is not used for a longer period of time.***

- Treat device and sensor carefully. Use only in accordance with above specification. (do not throw, hit against etc.). Protect plug and socket from soiling.
- **The moisture indicator GMI15 is no measuring device and cannot be used in this capacity!**  
(We recommend our moisture meters GMH3810, GMH3830 and GMH3850 suitable for high-precision measurements in wood or on building sites!)
- **The moisture indicator reacts to metal in the same way as it does to humidity.**  
In case there is a nail, an armouring or another metal object to be found in the material to be measured within the radiation area (measuring plate on back side of device) the value indicated will be too high! Correct measurements cannot be obtained.

## 4 Measuring instructions

- Place bottom of indicator housing on a level part of the material to be measured. When measuring wood make sure that measurements are carried out in accordance with its fibre direction – otherwise the values achieved will be too low. For the measuring direction to be correct the wood fibre direction has to be parallel to the indication (from left to right)
- The value indicated has to be evaluated depending on the material measured:

### Concrete / wash floor

Indication            Moisture rating

0 ... 5 =            **dry**

6 ... 9 =            **moist**, normal degree of moisture

10 ... =            **wet**, to wet for machining and/or finishing.

We recommend waiting till the material moisture has gone down to a standard of 6 to 9.

The GMI15 allows moisture measurements in concrete and wash floor down to a depth of approx. 4 cm.

Please note: The moisture rating „dry“ is dependent on the measured material (different flagstones have a higher rating), in this case the scale is relative to this point of origin.

### Wood / fibre-reinforced polyester

Indication            Moisture rating

0 ... 3. ~ 0...12% :    **dry**, a varnish coating can be applied.

3 ... 6. ~ 12...20% :    **air dry**, if a varnish coating is to be applied make sure to use varnishes allowing for moisture in the ground material.

6 ... 11 ~ 20...30% :    **wind dry**, finishing treatment is only possible using agents with a high moisture permeability.

11 ... . ~ 30% ... :    **wet**, finishing is only possible with a paint system especially suitable for wet wood.

The GMI15 allows moisture measurements in wood down to a depth of approx. 3 cm.

## 5 Specification

**Working temperature:** 0 ... +50 °C

**Relative humidity:** 0 ... 80 %RH. (non condensing)

**Storage temperature:** -20 ... +70°C

**Display:** approx. 13mm high, 3 ½-digit LCD

**Power supply:** 9V-Battery, type IEC 6F22

**Power consumption:** approx. 5mA

**Low battery warning:** automatic warning „BAT“ if battery is low

**Dimensions:** 106 x 67 x 30 mm (L x B x D), impact resistant ABS housing

**Weight:** approx. 150g (ready for operation)

**EMC:** The device corresponds to the essential protection rating established in the Regulations of the Council for the Approximation of Legislation for the member countries regarding electromagnetic compatibility (2004/108/EWG).

## 6 Reshipment and Disposal

### 6.1 Reshipment



**DANGER**

All devices returned to the manufacturer have to be free of any residual of measuring media and other hazardous substances. Measuring residuals at housing or sensor may be a risk for persons or environment



Use an adequate transport package for reshipment, especially for fully functional devices. Please make sure that the device is protected in the package by enough packing materials.

### 6.2 Disposal instructions



Batteries must not be disposed in the regular domestic waste but at the designated collecting points.

The device must not be disposed in the unsorted municipal waste! Send the device directly to us (sufficiently stamped), if it should be disposed. We will dispose the device appropriate and environmentally sound.