

Operating manual for moisture indicator for wood and buildings

GMI 15



Range of application:

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!

Specification:

| | |
|-----------------------------|--|
| Display: | 3½-digit, 13mm high LCD-display |
| Power supply: | 9V-battery (type IEC 6F22) |
| Power consumption: | approx. 5mA |
| Low battery warning: | automatic warning „BAT“ if battery is low |
| Working temperature: | 0 to 50° C |
| rel. humidity: | 0 to 80 % r. h. (non condensing) |
| Storage temperature: | -20 to 70° C |
| Dimensions: | impact resistant ABS housing, 106 x 67 x 30 mm (h x w x d). |
| Weight: | approx. 150 g (ready for operation) |
| EMC: | The GMI 15 corresponds to the essential protection ratings established in the Regulations of the Council for the Approximation of Legislation for the member countries regarding electromagnetic compatibility (89/336/EWG). |



Safety regulations:

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 result in a failure of the device. 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 at 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.

Measuring and operating instructions:

1. 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).
2. 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**, too wet for machining and/or finishing.

We recommend to wait 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. Whenever several layers are to be applied we recommend to consider drying intervals.

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.

3. The moisture indicator reacts to metal in the same way as it does to humidity.
In case there is a nail, an armoring 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. **The moisture indicator GMI15 is no measuring device and cannot be used in this capacity!**
(We recommend our moisture meter GHH91 suitable for high-precision measurements in wood or on building sites!)
We shall not assume any liability for potential damage resulting from incorrect use of the indicator or from the fact that the indicator has been used as a measuring device.
5. As soon as "BAT" is displayed this is an indication that the battery has been used up and needs to be exchanged. Too low an operating voltage may result in wrong measurements.
Please note: 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.
6. The battery has to be taken out, when storing device above 50°C.
It is recommended to take the battery out, when storing device for a longer period of time.
7. Handle the device carefully and use in accordance with above mentioned specifications only (do not throw or hit against any other object, etc.)