Operating Instructions

HYDROMETTE BL
UNI 10

EN

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0.1   Publication Statement

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GANN Mess- u. Regeltechnik GmbH, Gerlingen, Germany. 07/11/2014

0.2   General Notes

This measuring device fulfils the requirements of the applicable European and national directives (2004/108/EC) and standards (EN61010). Appropriate declarations and documentation are held by the manufacturer. To ensure trouble-free operation of the measuring device and operational reliability, the user must carefully read the operating instructions. The measuring device may only be operated under the climatic conditions specified. These conditions can be found in Chapter 3.1 "Technical data". This measuring device may likewise only be used under the conditions and for the purposes it was designed for. Operational reliability and functionality are no longer ensured if the device is modified or adapted. Gann Mess- u. Regeltechnik GmbH is not liable for any damage arising from such modifications or adaptations. The risk is borne by the user alone.

- Using appropriate means, make always sure that there are no electrical cables, water pipes, or other utility lines at the location, at which the measurement is to be carried out.

- The device must not be stored or operated in aggressive air or air containing solvents!

- Material that is frozen or has wet surfaces cannot be measured.

- The notes and tables in these instructions on permitted or normal humidity conditions in practice and the general definitions of terms have been taken from the specialist literature. No responsibility can therefore be taken by the manufacturer for the correctness of this information. The conclusions to be drawn from the measurement results are related to the individual conditions and the knowledge drawn from professional experience for each user.

- The measuring device may be operated in residential and commercial areas, as the stricter class B for emitted interference (EMC) has been adhered to.

- The device may not be operated in the immediate area of medical equipment (heart pacemakers, etc.).

- The measuring device may only be properly used as described in these instructions. Keep the device and accessories out of the reach of children!

- Measurements must not be carried out on metallic surfaces.

Gann Mess- u. Regeltechnik GmbH accepts no liability for damage resulting from non-adherence to the operating instructions or by not taking proper care during transport, storage or operation of the device, even if this requirement for care is not specifically addressed in the operating instructions.

0.3 WEEE Directive 2002/96/EC Law on Electrical and Electronic Equipment

Disposal of packaging, battery, and device must be undertaken in accordance with the legal requirements at a recycling centre.

The device was manufactured after 1 October, 2009

1   Introduction

1.1   Description

The Hydromette BL UNI 10 is a universal triple meter with a 3-line LCD display. By connecting an entire plate of active electrodes with fine sensor technology, the measurement ranges of building moisture, humidity and temperature can be covered.

The Auto Sensor Technology used enables the BL UNI 10 to automatically detect the electrode connected and to adapt the measured value readout to the respective sensor type.

The following BL active electrodes can be connected to the BL UNI 10:

Active electrode B 55 BL
Probe for non-destructive location of moisture concentration in construction materials of all kinds and moisture distribution in walls, ceilings and floors

Active electrode RF-T 28 BL
Probe for measuring the climate within seconds

Active electrode RF-T 37 BL
Probe for rapid measurement of air humidity and temperature

Active electrode TF-IR BL
Probe for the measurement of climate as well as infrared surface temperature

Active electrode ET 10 BL
Surface temperature sensor
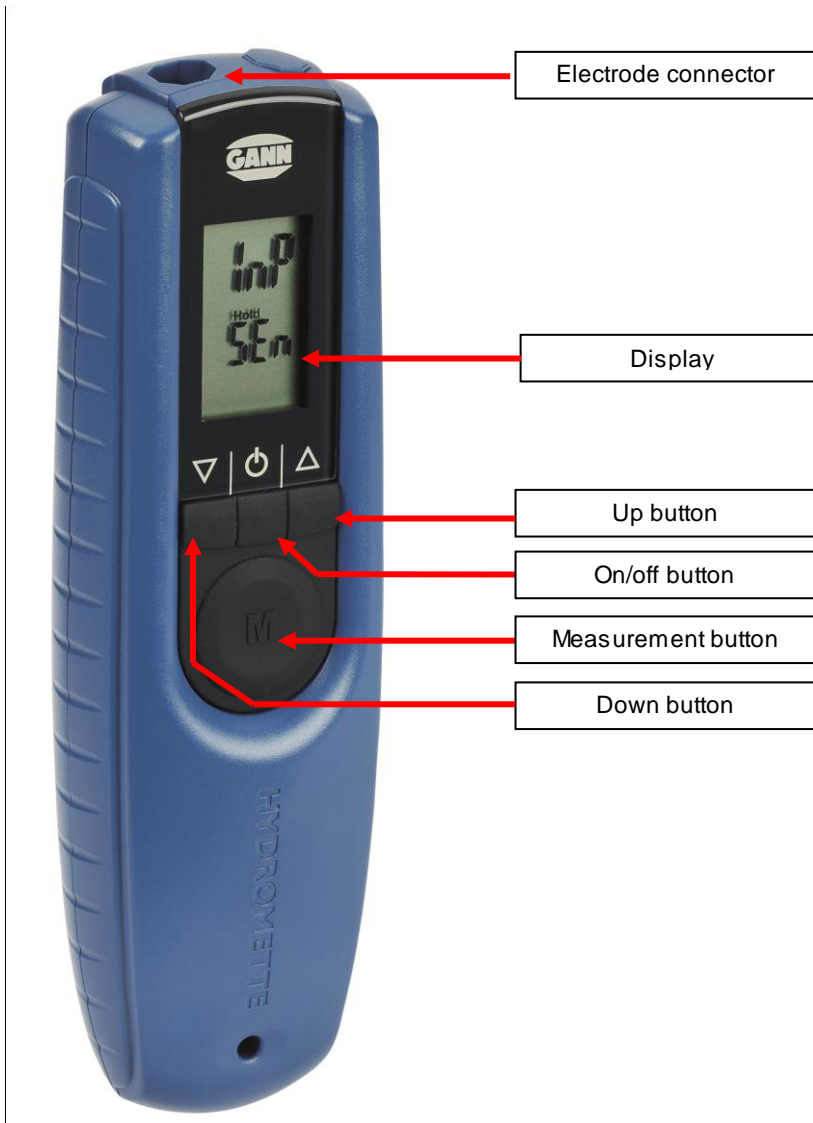
Active electrode OT 100 BL
Push-in electrode for measurements in solids, bulk materials and fluids

Active electrode TT 40 BL
Immersion and flue gas temperature sensor

All mentioned active electrodes are listed and described in detail in chapter 4.

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1.2   Device Layout and Button Assignment

Electrode connector

Display

Up button

On/off button

Measurement button

Down button

1.3   Display Symbols

Main menu symbols

Material humidity

Measured value is held. Ready for measurement

Temperature in °C

Construction material symbol

Construction material index

Other symbols

Max indicator

Digit value

Battery symbol

Temperature in °C

„0" = Scanning mode (digit)

Hydromette BL UNI 10
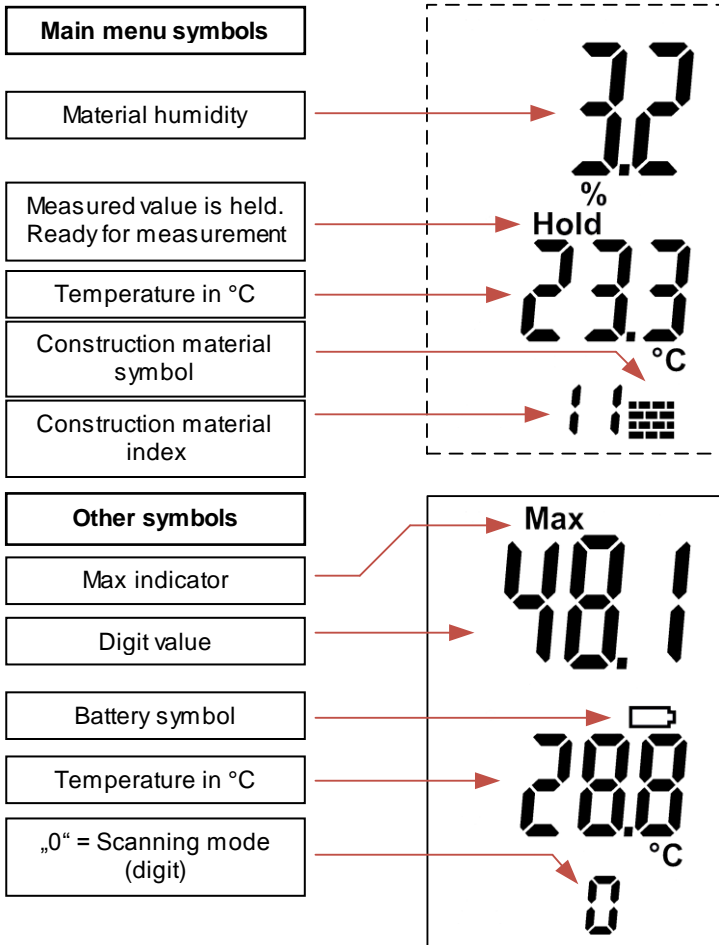
2 Basic Functions

2.1 Switch on Device

The unit is powered by pressing the **ON** button ⏻ .

Most recently measured material humidity in %

Most recently measured temperature in °C
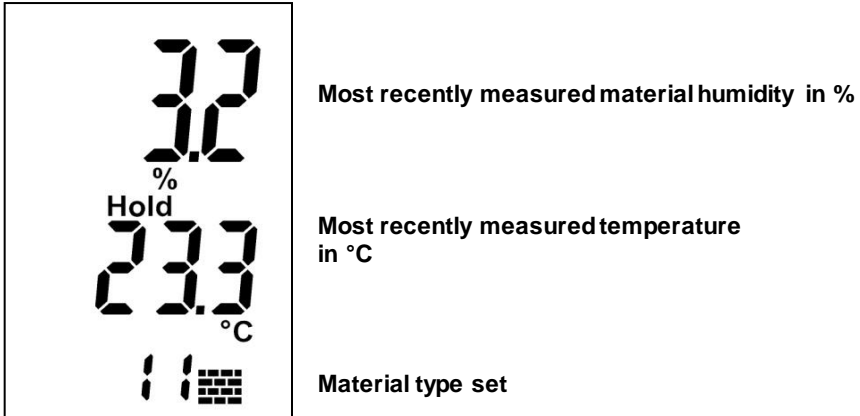
Material type set

Figure 2-1 Measurement menu

After pressing **ON**, the display changes to the measurement menu (the main menu). This menu is used to show the most recently measured values. The "Ready for measurement" information is shown by displaying "Hold" on the display.

2.2   Display in Measuring Mode

Displayed measured value in %

"Hold" symbol signals readiness to carry out a measurement

Measured temperature in °C

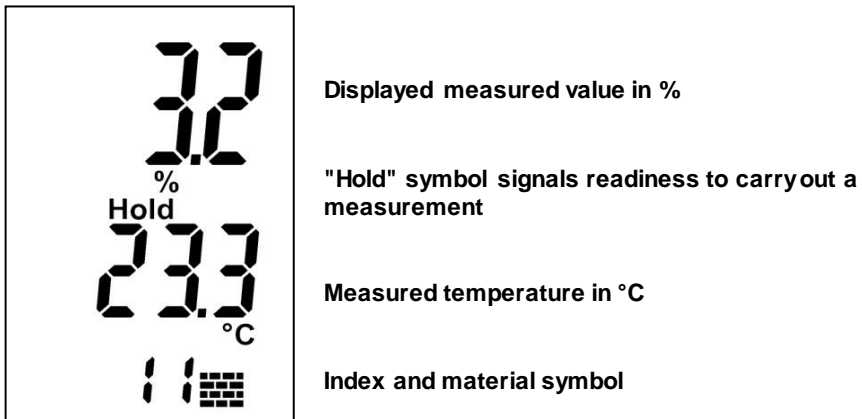**Index and material symbol**

Figure 2-2 Measuring mode

A measurement process is started by pressing the **M** button.

The 0 type index for a measurement is shown in **Digits**. Scaling is then from 0 to 100, % character and material symbol will disappear. This value allows individual measurements or complete humidity profiles to be created, irrespective of the properties of the material to be measured.

Digit values are non-dimensional measured values and no real humidity values in %!

A measurement is initiated by pressing the **M** button for more than 1 second.

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2.3   Setting Menus

From the measuring menu, repeatedly press the **Up** or **Down** button to select the following menu items one after another (use **Down** to select the menus in their order, use **Up** to select them in opposite order).

1.   **Measurement menu** (main menu)**:** Use to carry out the measuring process.
2.   **Material setting:** Use to select the material type.
3.   **Maximum value display:** The highest value measured is shown here.
4.   **Minimum value display:** The lowest value measured is shown here.
5.   **Memory menu:** The last 5 values measured can be called here.

2.3.1   Measurement Menu (Main Menu)

The last measurement with the note **"Hold"** is shown here. The device temperature and the current type are also shown on the display. When an external temperature sensor is connected, the sensor temperature is shown instead of the unit temperature.

In this menu, a new measurement can be started by pressing the **"M"** button.

During the measuring process, the **"Hold"** symbol disappears from the display. After releasing the **"M"** button, the measured value is saved. The **"Hold"** symbol is displayed again.

If the new measured value is larger than the previous maximum value, **"Max"** flashes on the display. If the value is not to be saved, the **"M"** button must be pressed *briefly*. If the value is to be saved, a new measurement is started with a *long* press on the **"M"** button without changing the previous maximum values.

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2.3.2   Material Setting
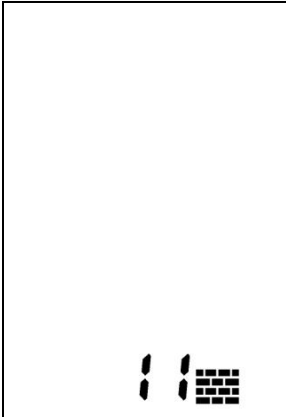
The material index set is displayed together with the symbol for the material moisture.
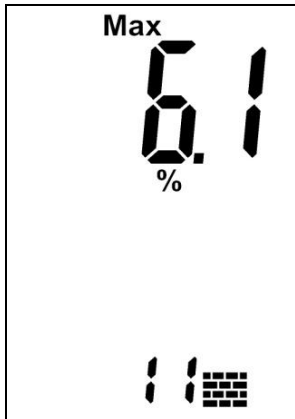
Index and material symbol

Figure 2-3 Material selection

If the preset material is to be changed, the **Up button** must be pressed once. After that, the **"M"** button (measurement button) must be pressed *momentarily*.

The Material index flashes and can be set using the **Up** or **Down** buttons. The change is saved by pressing the **"M"** button again *briefly*.

The material table is found in the appendix of each probe.

2.3.3 Maximum Value Display

The highest measured value of a measurement series is displayed together with the "Max" display symbol

Index and material symbol

Figure 2-4 Maximum value menu

If a maximum value is to be deleted, the displayed value must be selected by *momentarily* pressing the **"M"** button (measurement button).

The value flashes and can now be deleted using a *long* press on the **"M"** button.

Afterwards, only the "Max" symbol is still flashing. Using another *momentary* press on "M" button, the entry is confirmed and the device returns to the Ready mode.

Using the **"M"** button, a new measurement can then be carried out immediately.

2.3.4 Minimum Value Display

The lowest moisture measurement in a measurement series is displayed together with the "Min" display symbol
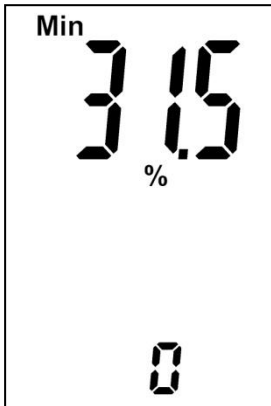
Type index

Figure 2-5 Minimum value

If a minimum value is to be deleted, the displayed value is selected by *momentarily* pressing the **"M"** button.

The value and the % symbol now flash and the value can be deleted by a *long* press on the **"M"** button. After deleting the value, only the % symbol still flashes. By *momentarily* pressing the **"M"** button again, the deletion of the value is confirmed and the % symbol disappears. The device now returns to Ready mode.

Using the **"M"** button, a new measurement can then be carried out.

2.3.5   Memory Menu
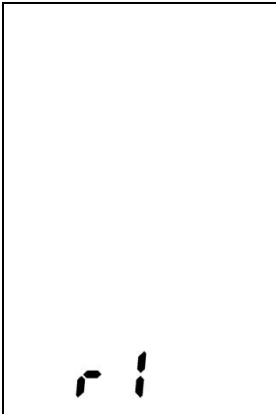
Symbol: memory "r1"

Figure 2-6 Memory location "r1"

As soon as you select the memory menu, the memory location number "r1" is displayed for approx. 1 second, and then the last measured saved value contained there is displayed.

The last 5 measured values are automatically saved and stored in memory locations "r1" to "r5". The last measured value is in memory location "r1". This is a ring buffer: Once the sixth measured value is recorded, the first measured value is automatically removed from the memory.

By *momentarily* pressing the **"M"** button, the next memory location "r2" is selected and the value contained there is displayed. After reaching the 5th memory location, the first one is shown again.

The saved values displayed can be identified by the fact that **no "Hold"** symbol is shown in the display.

2.4 Other Functions

2.4.1 Automatic Switch-off

If no button is pressed within approx. 30 seconds, the device switches off automatically. The current values are retained and are displayed again after the unit is switched back on.

2.4.2 Battery Monitoring

If the battery symbol ▭ appears in the display, the battery is dead and must be renewed.

A list of battery types that can be used can be found in the "Technical data" chapter.

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3 Specifications

3.1 Technical Data

Display:	3-line display
Display resolution:	0.1 %
Response time:	< 2 s
Storage conditions:	+ 5 to + 40 °C
	- 10 to + 60 °C (short-term)
Operating conditions:	0 to + 50 °C
	- 10 to + 60 °C (short-term)
Power supply:	9V block battery
Approved types:	6LR61 type or 6F22 type
Dimensions:	(L x W x H) 190 x 50 x 30mm
Weight:	approx. 150g

3.2 Prohibited Environmental Conditions

- Condensation, air humidity continuously too high (> 85 %) and wetness
- Permanent presence of dust and combustible gases, fumes or solutions
- Ambient temperatures continuously too high (> +50 °C)
- Ambient temperatures continuously too low (< 0 °C)

4 Application Notes and Equipment

4.1 Legend

Structural moisture

Temperature

Air humidity

4.2 General Notes

The BL UNI 10 is an electronic multi-purpose meter for three measured values, to which a number of GANN BL electrodes can be connected. The Auto Sensor Technology used enables the BL UNI 10 to automatically detect the electrode connected and to adapt the measured value readout to the respective sensor type. A 3-line LCD display for the detection of moisture, humidity and temperature is used.

If no active electrode is connected, "InP Sen" appears on the device. The various active electrodes are adapted to the different areas of application and can be changed arbitrarily and easily.

4.2.1 Active electrode B 55 BL

The active electrode B 55 BL is an electronic moisture meter of the dielectric constant / high frequency measuring principle. It has an integrated measuring circuit, designed for non-destructive location of moisture concentration in construction materials of all kinds and moisture distribution in walls, ceilings and floors.

An ideal pretester for use with all "CM" devices.

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4.2.2   Active electrode RF-T 28 BL

The active electrode RF-T 28 BL is a precise thermo-hygrometer for many application areas, for example living space surveillance, air-conditioning technology, printeries and warehouses.

Additional features include: the immediate display and calculation of relative humidity, air and dew point temperatures on the 3-line LCD display of the main unit.

4.2.3   Active electrode RH-T 37 BL

The active electrode RH-T 37 BL is a precise thermo-hygrometer for rapid measurement of relative humidity and air temperature. Using hardcoded sorption isotherm, weight and percentages by mass can be determined for various building and insulation materials as well as hard and soft wood.

The model "flex" has a flexible sensor tube and is therefore suitable for measurements in places that are hard to reach.

The RH-T 37 BL is particularly suitable for moisture analysis, damage assessments, construction-dehydration and to test the readiness for the installation of floor and wall coverings.

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4.2.4   Active electrode TF-IR BL

The active electrode TF-IR BL is a combination electrode which is able to determine the temperature and humidity of the air as well as infra-red surface temperature measurements at the same time.

Thanks to this combination of different measurement methods, the TF-BL IR allows a fast and accurate assessment of dew point shortfalls or borderline situations on surfaces such as walls, ceilings, floors, windows and balcony door lintels can be identified.

When using the unit in due time mould formation (fungal growth) may be prevented and occurrence of moistening caused by condensation may be assessed reliably.

4.2.5   Active electrode ET 10 BL

The stick-in temperature probe is a simple sensor for measuring temperatures in liquids and semi-solid materials (for example frozen) and for the measurement of core temperatures in a borehole.

4.2.6   Active electrode OT 100 BL

The OT 100 BL is a special low-mass sensor for the measurement of surfaces.

4.2.7   Active electrode TT 40 BL

The TT 40 BL is a special diving detector for measuring temperatures in liquids, in core temperatures, in boreholes as well as immersion and flue gas. The length of the sensor tube is 480 mm.

For your notes:

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