Quick Start Guide

Version 1.0

ACTIVE-ELECTRODE

RH-T 37 BL flex 350

Order Code: 31013143

EN

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All relevant national, regional and local safety regulations must always be observed when installing and using this device. For reasons of safety and to ensure compliance with the documented system data, only the manufacturer is authorised to carry out repairs to components. Failure to observe this information may result in injury or damage to the equipment.

Table of Contents

1 Foreword

This quick start guide contains short information on how to use the RH-T 37 BL flex active electrode. It also provides an overview of the Hydromettes to which the active electrode can be connected.

The manual contains only parts of the legal and safety information as well as parts of the application instructions and has been shortened for better readability.

A complete digital version of the operating instructions for the connectable Hydromettes with all relevant information is available on our homepage in the download area.

Only use the device if you have read and understood all legal and safety information as well as the application instructions in the complete operating instructions for the respective Hydromette.

1.1 Explanation of the General Warnings

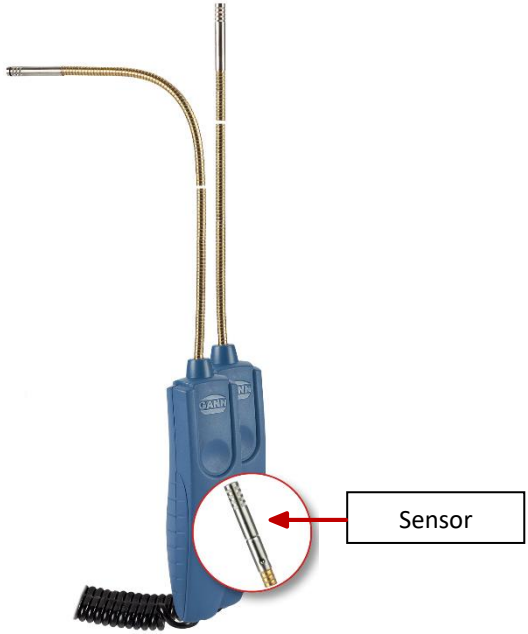
The following danger levels are used in this quick start guide to indicate potentially dangerous situations and important safety instructions:

Danger Level	Description
 **DANGER**	**Danger / Indicates a hazardous situation which, if not avoided, will result in death or serious irreversible injuries.**
 **WARNING**	Warning / Indicates a hazardous situation which, if not avoided, could result in death or serious irreversible injuries.
 **CAUTION**	Caution / Indicates a hazardous situation which, if not avoided, could result in minor or moderate injuries.
 **INFORMATION**	Indicates important information.

2 Description of the Product

The RH-T 37 BL flex active electrode is a **precise thermo-hygrometer** for quick measurement of **relative humidity** and **air temperature**. It can be used in particular for measuring in bulk materials, air ducts and solids (e.g. masonry, concrete, etc.).

The RH-T 37 BL flex active electrode has a flexible probe pipe (gooseneck) with Ø of 6.5 mm and a length of 250 mm, making it ideal for measurements in hard-to-reach places.



3 Specifications

3.1 Technical Data

Storage conditions:	+ 5 to + 40 °C
	- 10 to + 60°C (for a short time)
Operating conditions:	0 to + 50 °C
	- 10 to + 60°C (for a short time)
	< 85 % R.H. non-condensing
Dimensions (without cable):	560 x 50 x 35 (L x W x H) mm
Weight (with cable):	approx. 190 g
Protection class:	III
Protection rating:	IP20

3.2 Prohibited Environmental Conditions

- Condensation. humidity continuously too high (> 85% R.H.) and wetness
- Permanent presence of dust and combustible gases, vapours or solvents
- Ambient temperatures continuously too high (> +50 °C)
- Ambient temperatures continuously too low (< 0 °C)

3.3 Measuring Range

Humidity:	0 … 100 % R.H.
	± 1.8 % R.H. in the range 10 … 90% R.H.(*)
Air temperature:	-20 … 80 °C
	± 0.3 °C in the range 0 to 60 °C (*)
	(*) Typical sensor accuracy
Sorption isotherm:	Observe the operating instructions of the Hydromette

3.4 Transport & Storage Conditions

The RH-T 37 BL flex active electrode may only be stored in the packaging provided by the manufacturer or available from the manufacturer as an accessory. The manufacturer shall not accept any liability or warranty for damage that may occur to the device or to the sensor system as a result of non-compliance.

INFORMATION

In particular, **avoid keeping or storing the devices in foams not supplied by the manufacturer**, as these can damage the sensors due to possible outgassing and result in incorrect measurements.

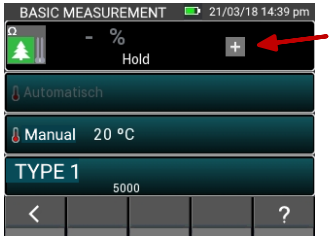
4 Usable Hydromettes

4.1 Hydromette CH 17

The active electrode RH-T 37 BL flex must be connected to the measuring instrument via the 3.5 mm jack receptacle. Ensure that the octagonal plug is firmly seated. The measuring instrument now automatically recognises the connected accessories.

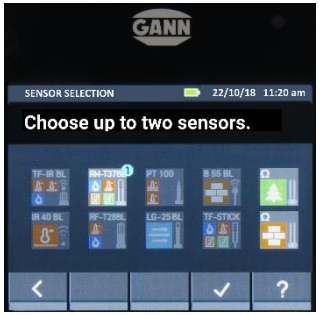
To measure, a measurement mode must first be selected by touching on the touch display, here an example of selecting the basic measurement.

The basic measurement offers a pure measuring function without the option of saving measured values in the device. It is intended for quick measurements that do not require documentation of the results.



Touching the "+" symbol takes you to the sensor selection.

Sensors that are connected to the measuring device are visually highlighted and can be selected.



To activate the RHT measurement mode, the "RH-T 37 BL flex" symbol must now be selected. The selection is confirmed by pressing the "Confirm" button.

For all information, read the complete operating instructions for the Hydromette CH 17 on our homepage (in **English**: pdf. file with **EN** extension):

https://www.gann.de/en/products/handhelds/electronic-moisture-meters/ch-17#downloads

4.2 Hydromette BL UNI 11

The Hydromette BL UNI 11 and the RH-T 37 BL flex active electrode must be connected to each other via the 3.5 mm jack receptacle. Ensure that the octagonal plug is correctly seated.

The Auto-Sensor technology now recognises the connected electrode. To activate the RHT measurement, the measurement button must be pressed for **longer** than *2 seconds*. The device now starts in the measuring menu or main menu. The measuring process can be performed here. The RHT measurement remains active until the RH-T 37 BL flex active electrode is replaced by another electrode or TF stick and its measuring mode is activated.

For all information, read the complete operating instructions for the Hydromette BL UNI 11 on our homepage (in **English**: pdf. file with **EN** extension):

https://www.gann.de/en/products/handhelds/electronic-moisture-meters/blue-product-series/bl-uni-11#downloads

5 Using the Active Electrode RH-T 37 BL flex

Measure:

Press and hold the **"M"** button for longer than *2 seconds*. A measurement process is carried out as long as the measure button is kept pressed. After releasing the **"M"** button, the measurement process is interrupted and the **"Hold"** symbol is displayed.

Measuring error:

Measurements below 20% R.H. and above 80% R.H. should preferably not be taken over a prolonged period of time (continuous measurements). Other measurement falsifications can occur due to shielding with body parts (e.g. hand) as well as blowing or speaking/breathing in the direction of the sensor.

Caution:

- The sensor is not designed for continuous measurements above 80% R.H. (longer than approx. 36 hours at a time without regeneration at 30-40% R.H. in the same time frame).
- The measuring device may only be exposed to temperatures above 50 °C for short periods.

INFORMATION

For particularly precise measurements, especially at temperatures below room temperature (20–25 °C) or if there are significant temperature differences between the intrinsic temperature of the measuring instrument and the ambient climate, the device should be ex-

posed to the ambient climate for approx. 10 to 15 minutes or until the temperature has equalised. The sensor adapts to the respective climate even when it is not switched on.

Precautions:

The sensor can be irreparably damaged by various mechanical or environmental influence. These include in particular:

- direct contact of the sensor with the fingers
- direct contact with solid or sticky materials or objects
- measurement in environments containing solvents, oil vapours or other high levels of contaminants
- storing the sensor in foam materials NOT provided by us
- removal from the drill hole too hastily. This can cause the sensor cap to get stuck in the drill hole and tear off. The entire sensor pipe and sensor may be irreparably damaged
- Tearing off the sensor cap due to a drill hole that is too narrow, resulting in damage to the sensor pipe and the sensor

5.1 Measuring relative Humidity

The response speed of the sensor is very high, so that even small air flows (door gap, leaky window, etc.) influence the measured value display. An absolute standstill of the display can therefore only be achieved in a climate box.

The response time of the humidity sensor in slightly moving air is approx. 8 seconds* at an ambient temperature of 25 °C for 63 % of the humidity difference. The filter used to protect the sensor (in RH-T models and the TF-Sticks 16 K-25 M / P) delays the re-

sponse time. By swivelling the device (ventilation of the sensor), the response time can be shortened in the event of air standstill or low air velocity.

*Specifications of the sensor manufacturer

5.2 Measuring Air Temperature

The response speed of the sensor is very high, so that even small air flows (door gap, leaky window, etc.) influence the measured value display. An absolute standstill of the display can therefore only be achieved in a climate box.

The response time of the air temperature sensor in moving air is approx. 5–30 seconds for 63 % of the temperature difference*. The filter used to protect the sensor (in RH-T models and the TF sticks 16 K-25 M / P) delays the response time.

*Specifications of the sensor manufacturer

5.3 Measuring the relative Air Humidity in Building Materials

The method for measuring the relative air humidity/equilibrium moisture content in screeds has been used for a long time in Great Britain and the Scandinavian countries. Compared to the non-destructive measurement or the resistance measurement, it is, however, more time-consuming and requires suitable drilled holes. On the other hand, it provides very reliable results when an equilibrium moisture content is sought in the drill hole.

This method is also used for depth measurements in older building materials (e.g. sandstone, quarry stone, damp walls, etc.) where the resistance measurement method does not provide reproducible results.

The "drill hole method" increases safety where there is insufficient information about the composition of the screed / building substance.

The measurement results obtained via the humidity / air temperature measurement are then converted into weight percentages using **sorption isotherms**. Sorption isotherms describe the equilibrium state of the sorption of a material.

Different materials also have different sorption behaviour depending on the specific properties of the material.

5.4 "Drill Hole"-Method

For the measurement, a hole with a diameter of min. 7 mm or 8 mm (flex) and a depth of at least 40 mm is drilled. A sharp drill bit, a high impact rate and a low speed are important.

If the drill hole is very hot, wait for the temperature to equalise before measuring. Before measuring in the drill hole, it must be carefully cleaned of drilling dust and blown out. There must be no free water in the hole.

The drill hole should then be sealed to prevent air exchange with the environment. The equilibrium moisture content in the hole is indicated after approx. 30 minutes, given temperature equilibrium (same temperature in material being measured and the tube sensor).

Without air circulation, e.g. when measuring in a drill hole, the response time of the sensor is extended. It is recommended to read an initial value after approx. 1 minute and to measure again in increments of 3–5 minutes until a constant value has been established.

WARNING

Before drilling holes for probes into **walls, ceilings, floors**, etc., make absolutely sure by suitable means that there are **no** electrical cables, water pipes or other supply lines in this location.

6 Appendix

6.1 Measuring Mode Table UNI 11

Measuring mode	Display
" Relative humidity"	(rh / t / rh)
"Air temperature"	(rh / t / t)
"Dew point Dp"	(rh / t / dP)
"Equilibrium wood moisture content, EMC"	(rh / t / UGL)
"Absolute humidity"	(rh / Ah)
"Enthalpy"	(rh / En / En)
"Wet-bulb thermometer"	(t / to / to)
"Water activity"	(t / Aw / Aw)
"Building materials"	(building material symbol / material index - see material table)
"Wood"	(wood symbol / material index - see material table)

6.2 Material Table / Sorption Isotherms UNI 11

Material index	Material
11	Cement screed in weight %
12	Anhydrite screed in weight %
13	Concrete in weight %
14	Cement mortar in weight %
17	Gypsum plaster in weight %
19	Lime sand brick in weight %
20	Lime cement mortar in weight %
22	Wood fibre insulation panels in weight %
23	Mineral wool insulation in weight %
25	Brick in weight %
32	Hardwood / Beech
33	Softwood / Spruce

The measurement modes and sorption isotherms listed here can be selected as full text on the touch display when using the Hydromette CH 17.

-Subject to technical changes- Status: May 2025

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