cientisol
soluciones científicas

GANN

ELECTRONIC MOISTURE METERS

LOCATION

OUR EXPERTISE ...
... FOR YOUR SUCCESS

Our family-owned company was founded in 1931 and is located in the core area of Baden-Württemberg, Germany. For more than 80 years, we have gathered expertise in moisture measurement and provide our customers with various products that are based on this knowledge. Already in 1948, GANN created and produced the first Hydromette® unit.

We are committed to our company philosophy **»Quality has a name«**. Therefore we design and manufacture our products only in Germany.

We are focusing on **handheld meters**. Within our **handheld meter range**, we manufacture units for measuring applications such as wood, construction materials, bulk materials, air humidity, and temperature. Tailored to the needs of our customers, our units provide various combinations of these application options ranging from simple test units to customised professional solutions and complex high-end all-in-one equipment.

This catalogue provides an overview of our products and solutions for electronic moisture meter applications. On the first few pages the latest meter generation of our **blue Hydromette units** as well as the **Hydromette® CH 17** are shown. In addition to our **Compact and Classic Series Hydromette** units, the second part of the catalogue presents a summary of the accessories available for our meters, including a large number of photos showing examples of use. At the end of our catalogue you will find some information on the topic of **»Measuring accuracy«**.

Enjoy reading our catalogue – your GANN team!

LEGEND

Wood Moisture | Structural Moisture | Air Humidity | Temperature: Air | Temperature: Surface | Temperature: Material | Air velocity

Accessories | Package

WOOD MOISTURE Products and accessories that are identified by this icon are used to measure moisture in wood. For this, our Hydromette® units use two measuring techniques: **electrical resistance measurement** or **capacitive radio frequency measurement.**

STRUCTURAL MOISTURE Products and accessories that are identified by this icon are used to measure moisture in building materials. Four measuring techniques are used: **electrical resistance measurement, capacitive radio frequency field, sorption isotherms,** and the **Calcium Carbide Method** (CM).

AIR HUMIDITY Products and accessories that are identified by this icon are used to measure relative air humidity. For measuring, **capacitive sensors** are used that operate rapidly and precisely.

TEMPERATURE: AIR Products and accessories that are identified by this icon are used to measure air temperature.

TEMPERATURE: SURFACE Products and accessories designed for measuring surface temperatures use **resistance-based Pt100** and **infrared sensors**.

TEMPERATURE: MATERIAL Products and accessories that are marked with this symbol are used for measuring material or core temperatures.

AIR VELOCITY Products and accessories that are identified by this icon are used to measure air velocity.

ACCESSORIES For products that are identified by this icon, additional accessories are available which are detailed in the second part of the catalogue.

PACKAGE For products that are identified by this icon, packages of different contents (different product accessory combinations) are offered.

At the bottom of a product page, an **info box** is used to show the accessory available, arranged according to the particular measuring task. Similarly, we provide an overview on each accessory page by means of an **info box** showing the products to which the respective accessory may be connected.

* = Special catalogue available on request

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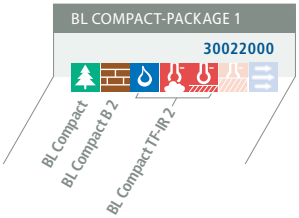
OUR BLUE PRODUCT SERIES: COMPACT UNITS

- Handy units for quick moisture measurement
- 3-line LCD display
- MIN, MAX, and HOLD feature
- Automatic unit shutdown
- 9 V block battery or rechargeable battery
- Housing: 175 [L] x 50 [W] x 30 mm [H]

HYDROMETTE®
BL COMPACT



see page 18

The BL Compact unit is an electronic **moisture meter** for **various types of wood** as well as for **soft building and insulating materials.**
The sensor pins are driven into the material to be measured and allow the measurement of moisture in sawn timber, chipboard, veneers and wood fibre materials up to 25 mm in thickness as well as of regular gypsum and mixed plaster.
After measuring, the construction material specific minimum and maximum values can be retrieved.

MEASURING RANGES

- **WOOD MOISTURE**
  6 to 25% (dry mass)
- **STRUCTURAL MOISTURE**
  0.4 to 6.0 wt.-%

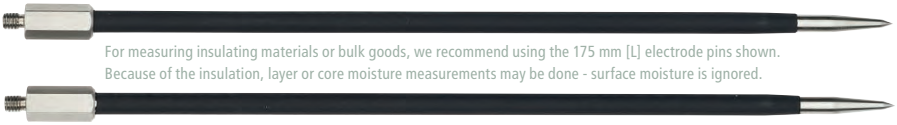
PROPERTIES

- 4-level wood species correction
- Characteristic curves for 3 types of building materials and 2 types of insulating materials
- Unit temperature display
- 195 mm [L]

APPLICATION

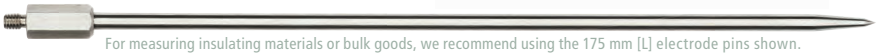
The **BL Compact** unit may also be used to measure plaster.

ORDER CODE **30012010**



For measuring insulating materials or bulk goods, we recommend using the 175 mm [L] electrode pins shown.
Because of the insulation, layer or core moisture measurements may be done - surface moisture is ignored.

COMPACT BI 175 STICK-IN ELECTRODE PINS **31014352**



For measuring insulating materials or bulk goods, we recommend using the 175 mm [L] electrode pins shown.
They are not insulated and therefore show the most humid spot of a cross section.

COMPACT HW 175 STICK-IN ELECTRODE PINS **31014351**

HYDROMETTE®
BL COMPACT S

ORDER CODE **30012011**

The BL Compact S is an electronic **moisture meter** for various **wood fuels,** suited for measuring **various types of hardwood or softwood.**

BENEFITS

- Environmental protection (lower emission)
- Oven and chimney protection (better combustion)
- High energy yield, since the wood is burned in its optimum moisture state

MEASURING RANGE

- **WOOD MOISTURE**
  10 to 50% (dry mass)
  10 to 34% water content

PROPERTIES

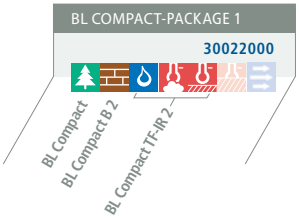
- 2-level wood species correction
- Unit temperature display
- 195 mm [L]

APPLICATION

Measuring the moisture of firewood using the **BL Compact S** unit – the best energy balance and lowest emission values are obtained at approx. 20% wood moisture

The **BL Compact** and **BL Compact S** units come with a **protective cap** fitted.

HYDROMETTE®
BL COMPACT B 2



see page 18

The BL Compact B 2 unit is an electronic **structural moisture meter** for non-destructive building material moisture measurement. The Hydromette® unit uses the dielectric constant/ radio frequency principle of measurement. The versatile ball sensor is used to sense moisture in building materials of any kind as well as to determine the **moisture distribution** in walls, ceilings, and floors.
For each building material, an individual limit may be set, the violation of which will be indicated by an **audible alert**.

An ideal **pre-tester** for all CM measurements.

MEASURING RANGE

- **STRUCTURAL MOISTURE**
  0 to 199.9 digits (scanning range)
  0.3 to 6.0 wt.-% or
  0.3 to 4.0 CM-%

PROPERTIES

- Characteristic curves for 7 types of building materials
- Audible alarm feature
- Unit temperature display
- 200 mm [L]

APPLICATION It is of importance **how the unit is held** while measuring: The **BL Compact B** 2 unit should be held at the rear part of the unit and applied to the material to be measured in a 90° angle.

ORDER CODE **30012032**

ORDER CODE **30019830**

HYDROMETTE®
BL COMPACT TF 3

The BL Compact TF 3 unit is a **precise thermo hygrometer** for measuring temperature and relative air humidity **in many applications** (e.g. residential space, air conditioning, printing shops, warehouses, museums).
The measuring sensor is exchangeable. Several of these sensors (plug-in TF sticks) can be put in different places (environments). Thus, successive measurements in those places can be carried out more quickly, for long adaption times can be avoided (compared to a meter with a fixed sensor).

MEASURING RANGES

- **AIR HUMIDITY**
  0 to 100% R.H.
  ± 2% R.H. (20 to 80% R.H.) (*)
- **TEMPERATURE**
  -20 to +80 °C
  ± 0.5 °C (0 to +60 °C) (*)

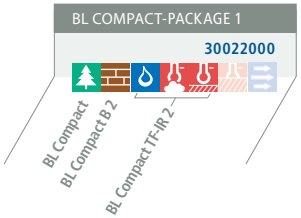
(*) = sensor accuracy

PROPERTIES

- Automatic calculation of dew point temperature and equilibrium wood moisture content (EMC)
- Display of absolute air humidity in g/m³
- USB interface for transferring the measured values to a PC on which the DIALOG BL+ optional software is executed (for long-term measurements or process monitoring)
- Storage of the 5 most recent measured values
- 210 mm [L] - total lenght incl. the TF stick
- for special requirements, other TF sticks with different filter types are optionally available

Further information on the TF sticks is available on page 12/13.

HYDROMETTE®
BL COMPACT TF-IR 2



see page 18

ORDER CODE **30012072**

The BL Compact TF-IR 2 unit has sensors for surface temperature infrared measurements as well as for measuring air temperature and relative air humidity.
This combination **of the different measuring techniques** enables the TF-IR 2 unit to be used for quickly and reliably **assessing dew point undershoots** or determining borderline conditions on **surfaces** such as walls, ceilings, floors as well as on window or door lintels. In addition to displaying the measured value, the unit creates an **audible signal when a critical surface temperature is detected**. 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.
The TF stick is exchangeable.

MEASURING RANGES

- **AIR HUMIDITY**
  0 to 100% R.H.
  ± 1.8% R.H. (10 to 90% R.H.) (*)
- **TEMPERATURE**
  Air temperature:
  -20 to +70 °C
  ± 0.3 °C (10 to +70 °C) (*)
- **INFRARED MEASURING RANGE**
  -40 to +240 °C
  ± 0.5 °C (0 to 60 °C),
  at 0 to 50 °C ambient temperature (*)

(*) = sensor accuracy

PROPERTIES

- Built-in audible interval signal:
  The more the surface temperature is approaching the dew point temperature, the more the signal will change from intermittent to continuous sound.
- Laser pointer for identifying the measuring spot
- 6:1 optical system
- Including dew point temperature and equilibrium wood moisture content (EMC)
- Emissivity adjustable from 20 to 100%
- USB interface for transferring measured values
- Storage of the 5 most recent measured values
- 185 mm [L]

TF Sticks

16 K-21 | 16 K-25

ORDER CODE 31003260/31003262

With the different TF Sticks it is possible to measure temperature and air relative humidity **in many applications** (e.g. residential space, air conditioning, printing shops, warehouses, museums).

31003260

MEASURING RANGES: TF STICK 16 K-21

31003260

- **AIR HUMIDITY**
  0 to 100 % R.H.
  ± 2 % R.H. (20 to 80 % R.H.) (*)
- **TEMPERATURE**
  -20 to +80 °C
  ± 0.5 °C (0 to +60 °C) (*)

(*) = sensor accuracy

PROPERTIES

- Standard stick for Hydromette® BL Compact TF 3
- PTFE filter cap for protection in case of wet conditions

MEASURING RANGES: TF STICK 16 K-25

31003262

- **AIR HUMIDITY**
  0 to 100 % R.H.
  ± 1.8 % R.H. (10 to 90 % R.H.) (*)
- **TEMPERATURE**
  -20 to +70 °C
  ± 0.3 °C (-10 to +70 °C) (*)

(*) = sensor accuracy

PROPERTIES

- Standard stick for Hydromette® BL Compact TF-IR 2
- Without filter
- Adapts quickly to ambient conditions
- Suitable for use in air with low pollutant content

31003262

PRODUCT INFO BOX

BL Compact TF 3	BL Compact TF-IR 2	BL UNI 11	CH 17

TF Sticks
16 K-25 M | 16 K-25 P

31003266

MEASURING RANGES: TF STICK 16 K-25 M

31003264

- **AIR HUMIDITY**
  0 to 100 % R.H.
  ± 1.8 % R.H. (10 to 90 % R.H.) (*)
- **TEMPERATURE**
  -20 to +70 °C
  ± 0.3 °C (-10 to +70 °C) (*)

(*) = sensor accuracy

PROPERTIES

- Metal grid filter for protection against coarse dust
- Suitable for use in air currents (HVAC technology)

MEASURING RANGES: TF STICK 16 K-25 P

31003266

- **AIR HUMIDITY**
  0 to 100 % R.H.
  ± 1.8 % R.H. (10 to 90 % R.H.) (*)
- **TEMPERATURE**
  -20 to +70 °C
  ± 0.3 °C (-10 to +70 °C) (*)

(*) = sensor accuracy

PROPERTIES

- PTFE filter membrane for protection in case of wet and dusty conditions
- Suitable for use in dust-laden air as well as in damp locations

31003264

PRODUCT INFO BOX

BL Compact TF 3	BL Compact TF-IR 2	BL UNI 11	CH 17

ORDER CODE 31003264/31003266

ORDER CODE **30012045/30012046**

HYDROMETTE®
BL COMPACT RH-T FLEX 250/350

The BL Compact RH-T FLEX 250/350 unit is a **precise thermo hygrometer** designed to be used for quickly measuring the relative **humidity** and **temperature of the air**. Using programmed **sorption isotherms**, the weight and mass percentages can be determined for various building and insulation materials, as well as for hardwood and softwood.

The unit has a **flexible sensor pipe** (**gooseneck**) and is therefore particularly suited for **humidity analyses**, e.g. for damage survey or while the building is drying. Additional applications include **checking whether** flooring or wall covering may be laid.

MEASURING RANGES

- **AIR HUMIDITY**
  0 to 100% R.H.
  ±1.8% R.H. (10 to 90% R.H.) (*)
- **TEMPERATURE**
  -20 to +70 °C
  ±0.3 °C (-10 to +70 °C) (*)

(*) = sensor accuracy

PROPERTIES

- Automatic calculation of dew point temperature, equilibrium wood moisture content, absolute humidity in g/m³, enthalpy in kJ/K, wet-bulb temperature in °C, and water activity (a_W)
- Sorption isotherms for hardwood and softwood as well as for 10 different types of building materials
- Storage of the 5 most recent measured values
- 440/545 mm [L]

SENSOR PIPE LENGTHS

250 x 6.5 mm [Ø] **30012045**
350 x 6.5 mm [Ø] **30012046**

APPLICATION The flexible sensor pipe can be used to easily and conveniently carry out measurements in places that are difficult to access.

DELIVERY The packaging prevents damage.

31014602

SINTERED FILTER 60 [L] x 10 mm [Ø] Sintered filter cap for protection against dusty air as well as for measurement at high air velocities

Sensor with SINTERED FILTER

31014602

ORDER CODE 30012040/30012041

HYDROMETTE®
BL COMPACT RH-T 165/320

APPLICATION Moisture measurement using **sorption isotherms** for quantitatively assessing damage caused by moisture

The BL Compact RH-T 165/320 unit is a **precise thermo hygrometer** designed to be used for quickly measuring the relative **humidity** and **temperature of the air**.
Using programmed **sorption isotherms**, the weight and mass percentages can be determined for various building and insulation materials, as well as for hardwood and softwood. The meter has a **slim sensor pipe** and is therefore suited to be used for a large variety of applications, e.g. humidity analyses in cases of damage, while the building is drying as well as for checking whether flooring or wall covering may be laid.

MEASURING RANGES

- **AIR HUMIDITY**
  0 to 100% R.H.
  ±1.8% R.H. (10 to 90% R.H.) (*)
- **TEMPERATURE**
  -20 to +70 °C
  ±0.3 °C (-10 to +70 °C) (*)

(*) = sensor accuracy

PROPERTIES

- Automatic calculation of dew point temperature, equilibrium wood moisture content, absolute humidity in g/m³, enthalpy in kJ/K, wet-bulb temperature in °C, and water activity (a_W)
- Sorption isotherms for hardwood and softwood as well as for 10 different types of building materials
- Storage of the 5 most recent measured values
- 355/510 mm [L]

SENSOR PIPE LENGTHS

165 x 5.5 mm [Ø] 30012040
320 x 5.5 mm [Ø] 30012041

SINTERED FILTER 60 [L] x 10 mm [Ø] 31014601
Sintered filter cap for protection against dusty air as well as for measurement at high air velocities

TAILORED TO YOUR SPECIFIC APPLICATION

ORDER CODE **30022000**

BL COMPACT PACKAGE

The BL Compact package contains the Hydromettes BL Compact B 2, BL Compact & BL Compact TF-IR 2. Therefore, the set covers the measuring areas of building moisture, wood moisture and climate (air temperature, air humidity & infrared surface temperature).

MEASURING RANGE

BL Compact see page 7

- **WOOD MOISTURE**
  6 – 25 % (atro)
- **STRUCTURAL MOISTURE**
  0.4 – 6.0 Gew.-%

BL Compact B 2 see page 9

- **STRUCTURAL MOISTURE**
  0 – 199.9 digits (scanning range)
  0.3 – 6.0 Gew.-% or
  0.3 – 4.0 CM-%

BL Compact TF-IR 2 see page11

- **AIR HUMIDITY**
  0 to 100% R.H.
  ± 1.8% R.H. (10 to 90% R.H.) (*)
- **TEMPERATURE**
  Air temperature:
  -20 to +70 °C
  ± 0.3 °C (-10 to +70 °C) (*)
- **INFRARED MEASURING RANGE**
  -40 to +240 °C
  ± 0.5 °C (0 to 60 °C),
  at 0 to 50 °C ambient temperature (*)

(*) = sensor accuracy

PROPERTIES

- Set of handy meters
- **Complete overview of conditions** due to the coverage of all relevant measuring ranges
- **Deep penetration** into the construction material due to the strong high frequency measuring field of the BL Compact B 2
- A quick **overview of the moisture content** of various types of wood, soft building and insulating materials due to the BL Compact
- Complete **climate overview** with the BL Compact TF-IR 2 (incl. dewpoint temperature and equilibrium wood moisture content (EMC)

Structural moisture, wood moisture & climate

ORDER CODE **30011100**

HYDROMETTE®
BL H 40

The BL H 40 unit is an electronic **wood moisture meter** that uses the resistance principle of measurement for precisely measuring **sawn timber** (up to 180 mm in thickness), **chipboards, and veneers**. The unit is used for individual measurements before and after processing. Additionally, the adjustable **wood temperature compensation** allows for optimisation of the measured value.
This meter is particularly suited to be used in joiner's workshops, by parquet layers or painting contractors.

MEASURING RANGE

- **WOOD MOISTURE**
  5 to 40% (dry mass)

PROPERTIES

- 7-level wood species correction (more than 300 types)
- Wood temperature compensation is done manually or automatically in the range from -10 to +40 °C through the unit temperature
- Storage of the 5 most recent measured values

APPLICATION Moisture measurement perpendicular to the wood fibre direction using an **M 20 electrode**

Various resistance-based electrodes may be connected to the **BNC socket**

- Optional: 2 customer-specific characteristic curves may be programmed in factory
- 185 mm [L]

ACCESSORIES INFO BOX

For packages, please refer to page 32.

M 18 | M 20 | M 20-OF 15 | M 20-HW 200/300

HYDROMETTE®
BL HT 70

The BL HT 70 unit is an electronic **wood moisture and temperature meter** that uses the resistance principle of measurement for precisely measuring **sawn timber** (up to 180 mm in thickness), **chipboards, veneers, wood chips** and similar bulk materials. The unit is used for individual measurements before and after processing. Additionally, the adjustable **wood temperature compensation** allows for optimisation of the measured value.

DETAIL VIEW In addition to a **BNC socket**, the **BL HT 70** has a **jack connector** to which a temperature sensor may be connected

Particularly suited for saw mills, parquet factories, and wood-processing companies.

MEASURING RANGES

- **WOOD MOISTURE**
  5 to 70% (dry mass)
  3.1 to 41% water content
- **TEMPERATURE**
  -50 to +250 °C
  using ET 10 BL

PROPERTIES

- 7-level wood species correction (more than 300 types)
- Wood temperature compensation is done manually or automatically in the range from -10 to +50 °C through the unit temperature or by means of an external temperature sensor
- Storage of the 10 most recent measured values
- Optional: 5 customer-specific characteristic curves may be programmed in factory
- 185 mm [L]

ORDER CODE **30011250**

For packages, please refer to page 32.

	M 18	M 20	M 20-OF 15	M 20-HW 200/300
	ET 10 BL			

ORDER CODE **30011101**

HYDROMETTE®
BL H 41

In co-operation with:

VHD
Verband Holzfaser Dämmstoffe

The Hydromette® BL H 41 is a measuring device for determining the moisture content of wood and, in particular, of wood fibre insulants. The meter features **6 new characteristic curves for wood fibre insulants**, grouped according to the gross density of the material (in kg/m³) and the board manufacturing process (wet/dry).

This device is suited for everyone who processes or assesses wood fibre insulants. With the BL H 41 a facade can be checked prior to plastering to ensure that future moisture-induced damage - e.g. flaking of plastering or lignin exudation - is avoided.

The sets contain special insulated electrode nuts that reduce the impact of surface moisture.

MEASURING RANGE

- **WOOD MOISTURE**
  5 – 40 % (dry mass)
- **WOOD FIBRE INSULATING BOARDS**
  4.5 to 45 % (dry mass)
- **TEMPERATURE COMPENSATION**
  -10 to +40°C

The new characteristic curves are based on products by these manufacturers:

STEICO natürlich besser dämmen

GUTEX DÄMMPLATTEN AUS SCHWARZWALDHOLZ

best wood SCHNEIDER

pavatex Bauen. Dämmen. Wohlfühlen.

AGEPAN SYSTEM macht's fester!

In co-operation with:

VHD
Verband Holzfaser Dämmstoffe

PROPERTIES

- 7-level wood species correction (more than 300 types)
- Wood temperature compensation is done manually or automatically in the range from 10 to +40 °C through the unit temperature
- Storage of the 5 most recent measured values
- Optional: 2 customer-specific characteristic curves may be programmed in factory
- 185 mm [L]

M 20 drive-in electrode with special insulated electrode nuts that reduce the impact of surface moisture

SET 1 contains the M 20 drive-in elecrode

M 19 push-in electrode with insulated electrode pins (60 mm) for measuring in finished thermal insulation composite systems

For packages, please refer to page 32.

HYDROMETTE®
BL A plus

2 measuring methods in 1 instrument

The possibilities offered by high-precision **resistance-based measurement method** and the **non-destructive capacitive measuring method** are now combined in one **compact measuring instrument**: the Hydromette® BL A plus. It is perfectly suitable for determining the moisture content of sawn timber (up to 180 mm thick), chipboard and veneer. It is equipped with a high-quality measuring amplifier and an **OLED display**. The **new ResCap mode** (automatic adjustment to a previously measured resistant value) combines the accuracy of the resistance-based measurement method with the easy handling of the capacitive measuring mode.

The **resistance-based measuring mode** features a wood species selector for more than 300 species as well as a temperature compensation device, which is manually adjustable.
The **capacitive measuring method** enables **fast measurement** (maximum thickness: 40 mm), for it is not necessary to drive any electrodes into the wood. Wood species correction is available for more than 50 species.

Limit values can be set freely. If a measured value crosses such a threshold, the meter will indicate this through a flashing LED.

MEASURING RANGE

- **WOOD MOISTURE**
  resistance-based measuring method
  5 - 70 % (dry mass)
- **WOOD MOISTURE**
  capacitive measuring method
  5 - 50 % (dry mass)

ORDER CODE **30011200**

PROPERTIES

- Wood species correction
  RES-based measuring method: more than 300 species
  Capacitive measuring method: more than 50 species
- Correction factors for unplaned or thin (10-20 mm) timber in capacitive mode
- Wood temperature compensation is done manually or automatically through the unit temperature
- New ResCap mode available
- Storage of the 5 most recent measured values
- LED alarm feature
- 185 [L] x 50 [W] x 30 mm [H]

Non-destructive mesasurement by means of a single-point contact area [LED indicating alarm]

Resistance-based measurement in hardwood using an **M 18 ram-in electrode**

For packages, please refer to page 34.

ORDER CODE **30011300**

HYDROMETTE®
BL E

The BL E is a **triple measuring instrument** for wood moisture, structural moisture and temperature.
The device allows accurate measurements of wood, building and insulation materials using the electrical resistance measuring method.
The wood moisture measuring circuit enables the measurement of lumber (up to 180 mm thick), chipboard and hardwood flooring.
The Hydromette® is equipped with **material specific settings** for an automatic correction of readings for 23 building materials and insulants, for instance screed, mortar, renders, concrete, brick and several insulants.
Connecting **B 55 BL active electrode** enables **non-destructive moisture measurement** and indication in ceilings, walls, floors, and other building materials.

MEASURING RANGES

- **WOOD MOISTURE**
  5.5 - 58 % (dry mass)
- **STRUCTURAL MOISTURE**
  0 – 200 digits (scanning range)
  0.1 to 42.2 wt.-%, or
  0.2 to 0.9 CM-%,
  depending on the material to be measured
- **TEMPERATURE**
  -50 to +350 °C,
  depending on the Pt100 temperature sensor

APPLICATION
Measurement of **structural moisture in bricks** using an M 25-100 brush electrode pair

PROPERTIES

- Direct readout of structural moisture in wt.-% or CM-% on the 3-line LCD display, resolution: 0.1% or 0.1 °C
- When connecting a B 55 BL the scan mode yields between 1-200 digits
- 2-level wood species correction (characteristic curve groups 2 and 3) for automatic measurement value correction
- Rapid measurement of hardened building materials by the high-frequency capacitive measurement method using a B 55 BL active electrode
- Temperature measurement precision is achieved by Pt100 measuring resistors connected in 4-wire technology
- Storage of the 5 most recent measured values
- Optional: 5 customer-specific characteristic curves may be programmed in factory
- 185 mm [L]

APPLICATION

Measurement of plaster moisture or **wood moisture** using an M 20 electrode

ACCESSORIES INFO BOX

For packages, please refer to page 35.

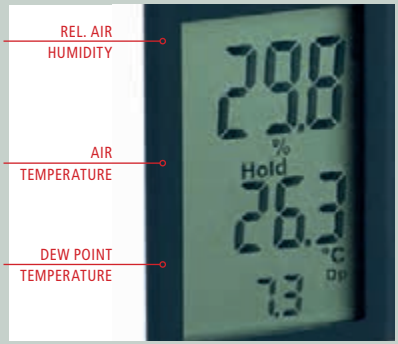
	M 18	M 20	M 20-OF 15	M 20-HW 200/300								
	B 55 BL	M 6	M 6-150/250	M 6-Bi 200/300	M 20	M 20-OF 15	M 20-Bi 200/300	M 21-100/250	M 25-100/300			
	OT 100 BL											
	ET 10 BL	TT 40 BL										

HYDROMETTE®
BL UNI 11

ORDER CODE **30011440**

The BL UNI 11 unit is an electronic multi-purpose meter for three measured values. It can be used with a number of blue product series electrodes and TF sticks. Electrodes for measuring structural moisture, air humidity, and temperature may be connected.

The **Auto Sensor Technology** used enables the BL UNI 11 to automatically detect the electrode or TF stick connected and to adapt the measured value readout to the respective sensor type. If a TF stick (either directly or using the measuring cable MK 18) and another electrode (e.g. B 55 BL) are connected at the same time, the meter will always show the measuring values obtained with the TF stick.



DETAIL VIEW

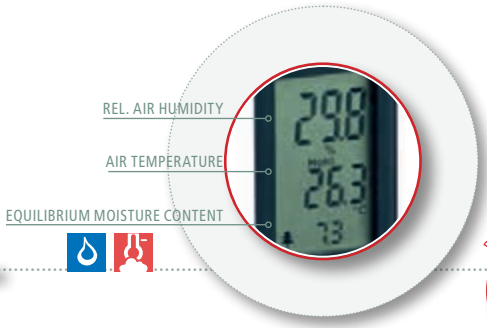
Display of three different measurement values

MEASURING RANGES

The Hydromette® covers the measuring ranges of the respective electrode/TF stick connected.

PROPERTIES

- Simultaneous readout of three measured values as well as direct readout of structural moisture in wt.-% or CM-% on the 3-line LCD display, resolution: 0.1% or 0.1 °C
- Quick measurement of moisture in set building materials using the capacitive radio-frequency measuring technique
- High temperature measurement precision is achieved by Pt100 platinum measuring resistors connected in 4-wire technology
- Audible alarm in case a user-defined limit is exceeded (using B 55 BL) or intermitent alert signal in case case dew point threshold regions are reached (using TF-IR BL)



Details
page 12 +13

ELECTRODE B 55 BL 31013755

Non-destructive measurement and display of moisture in ceilings, walls, floors and other building materials or solid materials, respectively.

MEASURING RANGES

- **STRUCTURAL MOISTURE**
  0 to 199 digits (scan range)
  0.3 to 8.5 wt.-% or
  0.3 to 6.5 CM-%

TF-STICKS

The TF sticks are used to measure the temperature and air relative humidity in many applications (e.g. residential space, air conditioning, printing shops, warehouses, museums). There are 4 different TF sticks with different levels of accuracy and various filter types for protection against dust and moisture.

MEASURING RANGES

- **AIR HUMIDITY**
  0 – 100 % R.H.
  ± 1.8 / 2 % R.H.
  (10 – 90 % R.H.) (*)
- **TEMPERATURE**
  –20 to +70 °C
  ± 0.3 / 0.5 °C
  (-10 to +70 °C) (*)

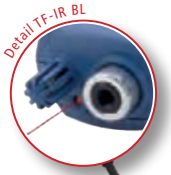
ELECTRODE TF-IR BL 31013100

Combined electrode that can be used to simultaneously perform climate measurements (air humidity and temperature) and infrared surface temperature measurements.

- The combination of the different measuring techniques allows to quickly and reliably assess dew point undershoots
- Built-in audible interval signal

MEASURING RANGES

- **AIR HUMIDITY**
  0 to 100% R.H.
  ± 1.8% R.H. (10 to 90% R.H.) (*)
- **TEMPERATURE**
  -20 to +70 °C, ± 0.3 °C (-10 to +70 °C),
- **INFRARED MEASURING RANGE**
  -40 to +380 °C, ± 0.5 °C (0 to 60 °C)
  for 0 to 50 °C ambient temperature (*)



HYDROMETTE®
BL UNI 11

PT100 SENSORS BL TEMPERATURE PROBES
in 4-wire technology with built-in microprocessor

SURFACE TEMPERATURE SENSORS
OT 100 BL 31013170

Suspended sensor tip with thermal separation, resulting in optimised measured value collection, e.g. on solid wall surfaces
Sensor pipe: 110mm [L], 5mm [Ø]

MEASURING RANGES
- **TEMPERATURE**
  –50 to +250 °C

PUSH-IN ELECTRODE ET 10 BL 31013165

For measurements in solids, bulk materials, fluids
Sensor pipe: 100mm [L], 3mm [Ø]

MEASURING RANGES
- **TEMPERATURE**
  –50 to +250 °C

IMMERSION AND FLUE GAS TEMPERATURE SENSOR TT 40 BL 31013180

Rugged immersion and flue gas sensor for temperature measurement in fluids or highly viscous materials
Sensor pipe: 380mm [L], 5mm [Ø]

MEASURING RANGES
- **TEMPERATURE**
  –50 to +350 °C

SPECIAL PROBES OF THE RH-T 37 FAMILY
For air humidity and temperature measurement, particularly suited for measurements in bulk materials and solid materials (e.g. brickwork or screeds)

MEASURING RANGES

- **AIR HUMIDITY**
  0 – 100 % R.H.
  ± 1.8 % R.H. (10 – 90 % R.H.) (*)
- **TEMPERATURE**
  –20 to +70 °C
  ± 0.3 °C (-10 to +70 °C) (*)

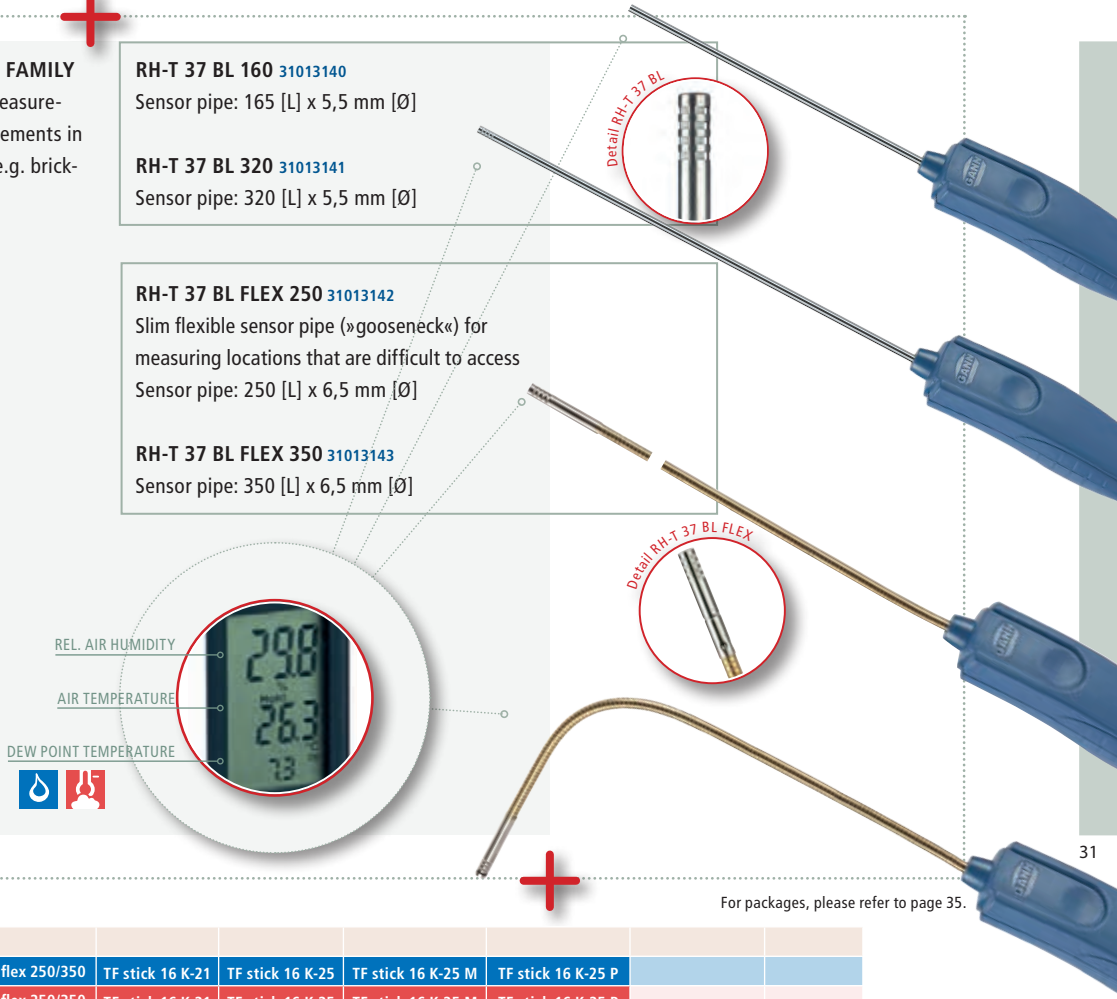
(*) = sensor accuracy

RH-T 37 BL 160 31013140
Sensor pipe: 165 [L] x 5,5 mm [Ø]

RH-T 37 BL 320 31013141
Sensor pipe: 320 [L] x 5,5 mm [Ø]

RH-T 37 BL FLEX 250 31013142
Slim flexible sensor pipe (»gooseneck«) for measuring locations that are difficult to access
Sensor pipe: 250 [L] x 6,5 mm [Ø]

RH-T 37 BL FLEX 350 31013143
Sensor pipe: 350 [L] x 6,5 mm [Ø]



ACCESSORIES INFO BOX

For packages, please refer to page 35.

	B 55 BL								
	TF-IR BL	RH-T 37 BL 160/320	RH-T 37 BL flex 250/350	TF stick 16 K-21	TF stick 16 K-25	TF stick 16 K-25 M	TF stick 16 K-25 P		
	TF-IR BL	RH-T 37 BL 160/320	RH-T 37 BL flex 250/350	TF stick 16 K-21	TF stick 16 K-25	TF stick 16 K-25 M	TF stick 16 K-25 P		
	TT-IR BL	OT 100 BL							
	ET 10 BL	TT 40 BL							

ORDER CODE **30012120**

Air flow measurement

Air velocity measurement

BASIC UNIT
BL LG 17

The BL LG 17 is a **high-precision anemometer**. Even very low air flow can be measured, and the instrument can be used in a variety of applications such as monitoring of rooms, HVAC, blower door tests, laminar air flow control (clean-room technology), etc. The LG 17 basic unit will be delivered with the **LG-25 BL air velocity electrode**. This electrode features a **telescopic handle**, which makes it easy to reach spots that are difficult to access. The sensor can also be screwed onto standard camera tripods, e.g. for carrying out long-term measurements. The OLED display indicates air velocity and barometric pressure simultaneously. Line or bar charts can be shown as alternative display modes.
The LG-25 BL air velocity sensor is designed for use in enclosed spaces.

MEASURING RANGES

- **AIR VELOCITY**
  -2.50 to +2.50 m/s
  ±3 % of the measured value
  +2 % of lower and upper range limits;
  min. ± 0.05 m/s (*)
- **BAROMETRIC PRESSURE**
  300 to 1100 mbar
  ±1 mbar (*)

(*) = sensor accuracy

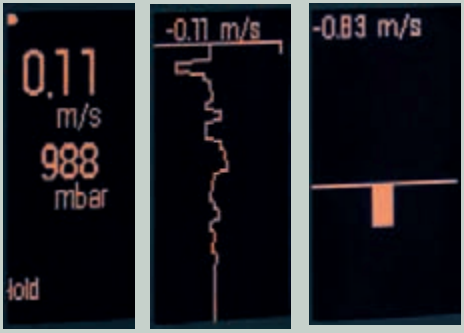
DETAIL VIEW

LG-25 BL air velocity electrode

PROPERTIES

- Indicates air velocity in m/s
- Indicates absolute barometric pressure in mbar
- Measurement of volume flow rate: circular or rectangular profiles
- Alternative display modes for air velocity: line or bar chart
- Convenient telescopic handle included
- Storage of the 5 most recent measured values
- Total sensor length: 200 mm [L]
- Total length (handle fully extended): 1100 mm [L]
- Will be delivered as a full set, including carrying case **30012121**

30012121



DETAIL VIEW OF THE DISPLAY

Different display modes of air velocity in m/s

For packages, please refer to page 35.

PACKAGES
BL H 40 | HT 70 | BL H 41

Measuring task is supported by the Hydromette® unit – the respective accessories are included in the package (short name below the symbol)

Measuring task is supported by the Hydromette® unit – but this package does not include the respective accessories

Measuring task is not supported by the Hydromette® unit

BL H 40-PACKAGES Page 20

ORDER CODE **30012100** — M 20

ORDER CODE **30012105** — M 18

BL HT 70-PACKAGES Page 21

ORDER CODE **30012250** — M 20

ORDER CODE **30012255** — M 18

BL H 41-PACKAGES Page 22

ORDER CODE **30012101** — M 20

ORDER CODE **30012102** — M 20 + M 19

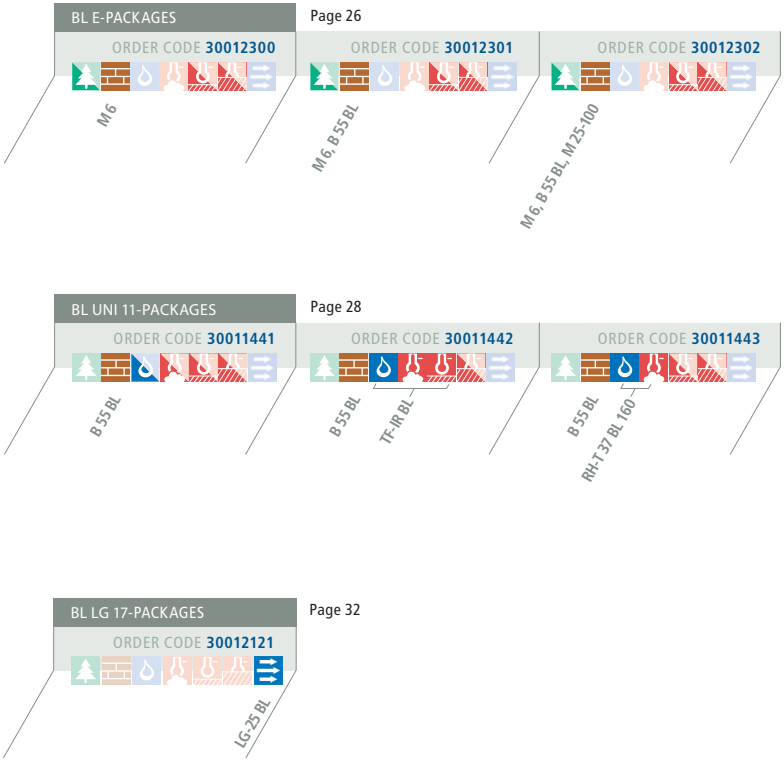
incl. the measurement of wood fibre insulating boards

BL A plus-PACKAGES Page 24

ORDER CODE **30012201** — M 20

ORDER CODE **30012202** — M 18

PACKAGES
BL E | BL UNI 11 | BL LG 17



HYDROMETTE®
CH 17

ORDER CODE **30003150**

The Hydromette® CH 17 is a multifunctional measuring instrument for measuring wood moisture, building moisture and air humidity as well as temperature and air velocity.
The robust touch display in combination with modern evaluation and storage possibilities enables a completely new variety of options.

In the field of wood moisture measurement, different resistance measurement electrodes are used depending on the thickness and texture of the wood. Thus precision measurements of sawn timber (up to 180 mm thickness), chipboard and OSB boards, veneers, wood chips and similar bulk materials are possible. The automatic temperature compensation corrects measured values depending on the wood temperature.

The capacitive measuring method is used for the non-destructive moisture measurement of building materials (e.g. screeds, mortars, plasters, concrete, bricks, thermal insulating materials). This time-saving application method is ideal for detecting leaks or for monitoring drying processes in new buildings or during renovation work.

Special resistance measurement electrodes are available for the creation of exact moisture profiles and for depth measurements in building materials for the various application purposes.

Humidity and air temperature are measured by RF-T and RH-T series probes that are equipped with high quality sensors.In addition to air temperature, surface temperatures (based on Pt100 or infrared) and material temperatures (also based on Pt100) can be measured.

With its various evaluation and storage options (especially in conjunction with the GANN Dialog Pro software), the device is an indispensable aid, e.g. for experts. Hydromette® CH 17 also provides optimum support for all other occupational groups in the construction industry as it covers a wide range of requirements.

HIGHLIGHTS & FEATURES

- 3.5" TFT colour display (resolution: 320 x 240 pixels)
- Modern operating concept: Operation via capacitive touch input and haptic silicone buttons
- Status LEDs indicate the different device states
- Multifunctional device for all available application areas
- Loudspeaker
- Mini-USB port
- Micro SD card slot for using an external memory card
- Integrated sensor for measurement of the absolute air pressure
- Context-sensitive help function
- Screenshot function
- Individual characteristic curves for 250 types of wood and for more than 20 types of building material
- Processing & evaluation of measurement data via the new GANN Dialog Pro software
- Power supply: 6x 1.5 V AA batteries or external power supply via USB (connection of a power bank is possible)
- Meets the requirements of EN 14080:2013 (glued laminated timber, glued solid timber) and EN 15497:2014 (structural finger jointed solid timber)

Modern Operating Concept

The Hydromette® CH 17 is operated via its capacitive display and via haptic buttons.

Software updates via the Internet

The device software can be updated using the GANN Dialog Pro PC program - on the one hand, to enable new functions in the device, or on the other hand, to install service patches.

Various Software Licences

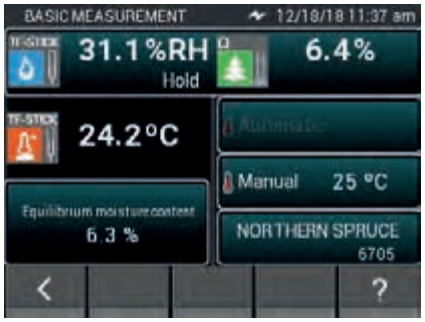
Various software licences are available for the Hydromette® CH 17. These differ in the range of functions as follows:

	Basic	Advanced
Selection of language	✓	✓
Systems of units (metric/imperial)	✓	✓
Alarm values	✓	✓
Screenshot function		✓
Basic measurement	✓	✓
List measurement	✓	✓
Grid measurement with directional setting options		✓
Mean value measurement	✓	✓
Data logging function, tabular and graphic		✓
Projects and batches in internal memory	✓	✓
Projects and batches on SD card		✓

MEASUREMENT FUNCTIONS

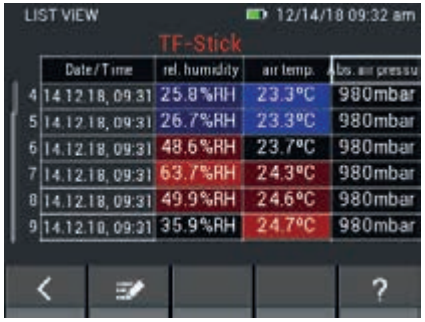
Basic Measurement

For individual measurements without project context. In the example, the left half of the display shows measurement data of a connected TF stick, on the right the data and settings of a wood moisture measurement using the example of Central European spruce.



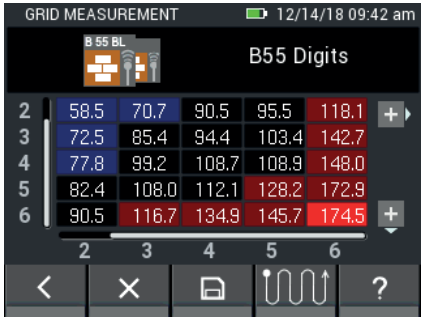
List Measurement

Measured values can easily be stored one after the other (with date and time). The fields highlighted in colour provide additional information (e.g. min/max).



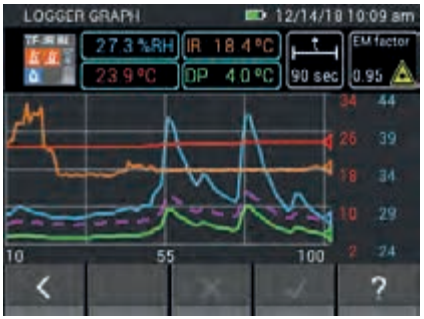
Grid Measurement

The Hydromette® CH 17 enables the display of variable measuring grids (max. 10x10). Differences from the average value are displayed in colour.



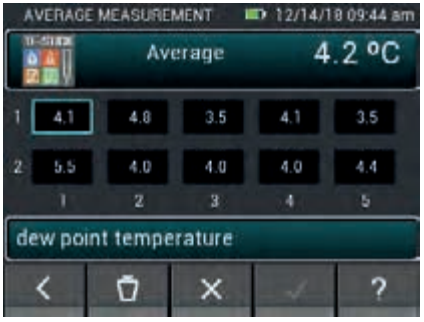
Graphical Log Function

Provides a quick overview of the given conditions. The graphic can be saved after the measurement and used for later evaluation. The figure shows various climate data and the resulting variables, such as the dew point temperature.



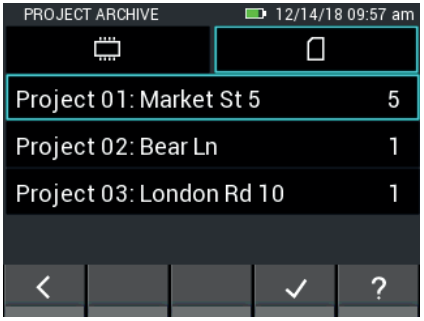
Mean Value Measurement

Provides the ability to detect a trend (for reference values) from up to 10 measured values. This makes it easier to carry out comparative measurements.



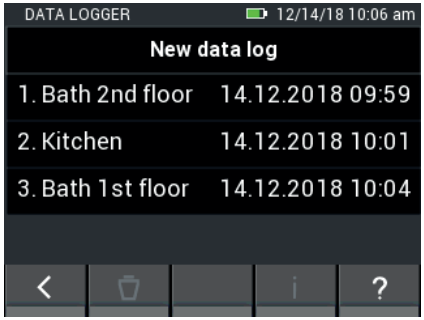
Data Structure

Project > Batch > Measurement – projects and batches can be named individually to structure and manage the measurements.



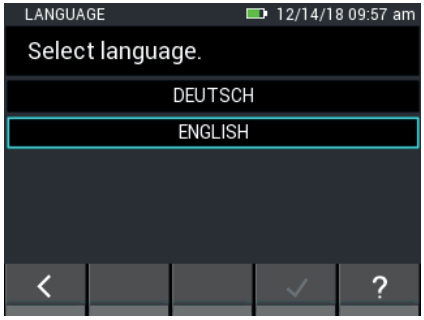
Data Logger

For long-term climate monitoring (humidity and air temperature) with subsequent evaluation via the GANN Dialog Pro software. Up to 31 days can be recorded; the number of measured values depends on the specified interval.



Menu guidance in various languages

The menu guidance is currently available in German and English. The language can be changed at any time.



Screenshot function

No more photographing the display necessary - makes documentation of the measured values easier.

AIR FLOW MEASUREMENT & CLEAN ROOM APPLICATION

In combination with the LG-25 BL air speed sensor, the Hydromette® CH 17 is ideal for measuring the smallest air flows and is characterised by long-term stability, direction recognition and fast commissioning.

Documentation of the measurements is easy to create by storing the measured values with time stamp and sensor serial number. The air speed sensors are optionally available with ISO calibration certificate.
For clean room applications, a high-precision calibration for the range around 0.45 m/s is also possible.

One instrument – a wide variety of measuring options!

* Image shows a selection of available accessories

ACCESSORIES INFO BOX

For packages, please refer to page 42

	M 18	M 20	M 20-OF 15	M 20-HW 200/300	M19				
	B 55 BL	M 6	M 6-150/250	M 6-Bi 200/300	M 20	M 20-OF 15	M 20-Bi 200/300	M 21-100/250	M 25-100/300
	TF-IR BL	RH-T 37 BL 160/320	RH-T 37 BL flex 250/350	TF-Stick 16 K-21	TF-Stick 16 K-25	TF-Stick 16 K-25 M	TF-Stick 16 K-25 P		
	TF-IR BL	RH-T 37 BL 160/320	RH-T 37 BL flex 250/350	TF-Stick 16 K-21	TF-Stick 16 K-25	TF-Stick 16 K-25 M	TF-Stick 16 K-25 P		
	TF-IR BL	OT 100 BL							
	ET 10 BL	TT 40 BL							
	LG-25 BL								

PC-SOFTWARE GANN DIALOG PRO

Program for transmission, storage and evaluation of measurement data.

HIGHLIGHTS & FEATURES

- Export of preconfigured measurement parameters (GANN Dialog Pro -> CH 17)
- Import of measurement data (GANN Dialog Pro <- CH 17)
- Local archiving of measurement data
- Automatic backups of measurement data
- Measurement data analysis
- Export of measurement data to Excel, image or CSV files
- Updates and upgrades of the Hydromette® CH 17 device firmware

FUNCTIONS - EXAMPLES

Evaluation of a grid measurement

Evaluation of the climate recording, including graphic

Use of the data archive

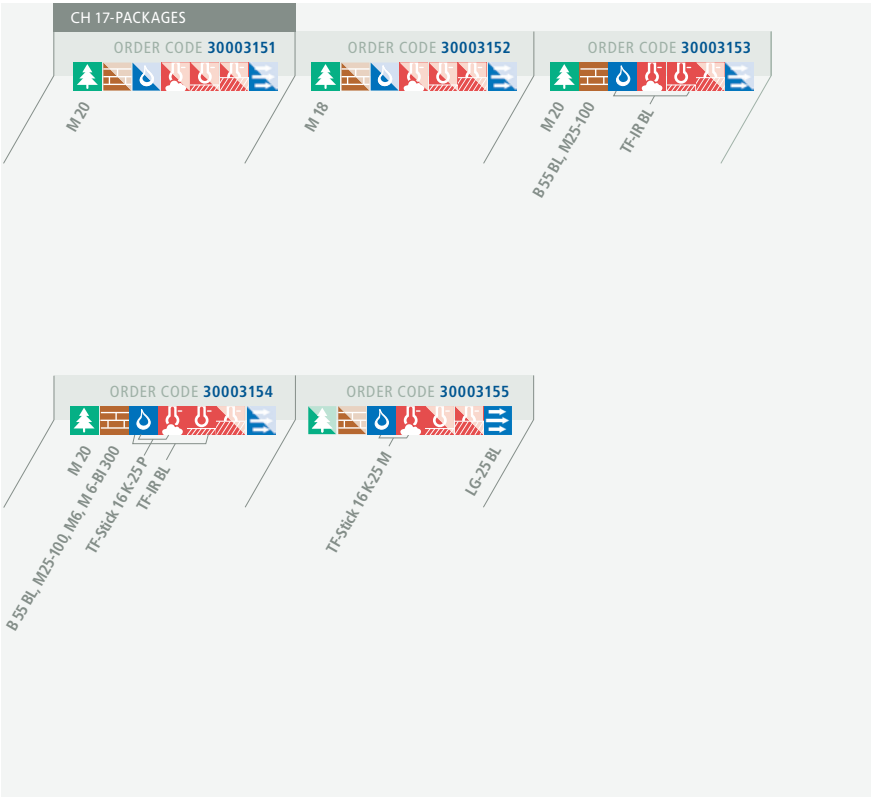
Note about Hydromette® CH 17 firmware updates

PACKAGES
CH 17

Measuring task is supported by the Hydromette® unit – the respective accessories are included in the package (short name below the symbol)

Measuring task is supported by the Hydromette® unit – but this package does not include the respective accessories

Measuring task is not supported by the Hydromette® unit



OUR HANDY COMPACT SERIES UNITS

- Handy units for quick moisture measurement
- Fully automated adjustment of the meter
- No separate electrodes or cables required
- 9 V block battery or rechargeable battery

HYDROMETTE®
COMPACT

ORDER CODE **30002010**

The Compact unit is an electronic **wood and plaster moisture meter** that uses the resistance principle of measurement.

The ergonomically designed housing is enclosed by the entire palm so that the measuring pins at the top of the unit can be pressed into the material to be measured. The slim pins allow the moisture in **sawn timber**, **chipboard**, **veneers**, and **wood fibre materials** (up to 25 mm in thickness) as well as in regular gypsum or mixed plasters to be measured.

Ideal secondary meter paunters or interior fitting contractors or experienced do-it-yourselfers.

MEASURING RANGES

- **WOOD MOISTURE**
  5 to 20% (dry mass)
- **STRUCTURAL MOISTURE**
  0.3 to 3.5 wt.-% (plaster moisture)

PROPERTIES

- 2-level wood species correction
- Plaster moisture measurement including direct readout in wt.-% on large 3-digit LCD display
- Comes with protective cap
- Housing: 200 [L] x 35 [W] x 35 mm [H]

APPLICATION

Measuring a wooden board using the **Compact**

HYDROMETTE®
COMPACT S

The Compact S is an electronic **moisture meter** for various **wood fuels,** suited for measuring **various types of hardwood or softwood.**
The sensor pins at the top of the meter allow for moisture measurements to be carried out in wood of up to 30 mm in thickness.

APPLICATION

The Compact S unit is particularly suited for checking firewood

BENEFITS

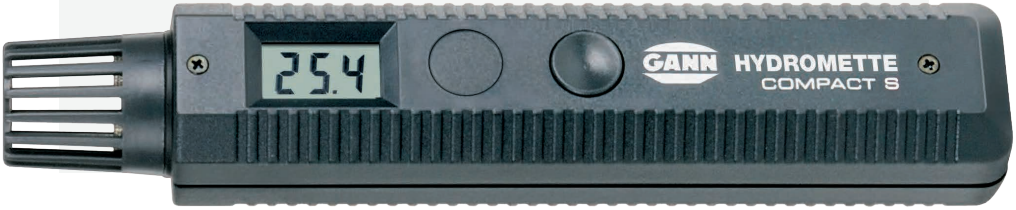
- Environmental protection due to lower emission
- Protection of oven and chimney due to better combustion
- Higher energy yield, since the wood is burned in its optimum moisture state

MEASURING RANGE

- **WOOD MOISTURE**
  10 to 50% (dry mass)

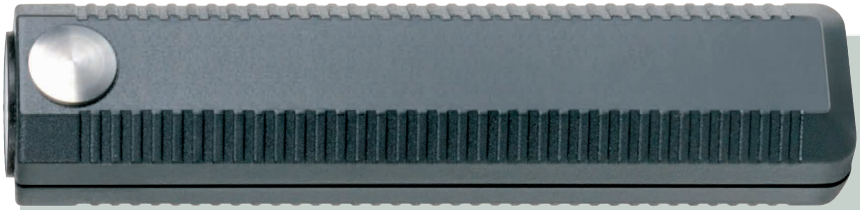
PROPERTIES

- Wood moisture measurement including direct readout in % on large 3-digit LCD display
- Comes with protective cap
- Housing: 200 [L] x 35 [W] x 35 mm [H]



ORDER CODE **30002011**

HYDROMETTE®
COMPACT A



VIEW showing the point-shaped surface at the bottom side of the **Compact A unit**

The Compact A unit uses the **non-destructive** dielectric constant or **radio frequency** principle of measurement and is simply placed onto the material to be measured. Thus many measurements can be performed within a short period of time. The moisture content can be read immediately. There are no electrodes to be tapped in. The moisture values can be measured in wood of up to 40 mm in thickness.

Particularly suited for painters, interior fitting contractors, parquet layers, or cabinet making contractors.

MEASURING RANGE

- **WOOD MOISTURE**
  5 to 45% (dry mass)

PROPERTIES

- Direct readout of wood moisture in wt.-%
- Measured value correction according to type of wood or wood material from 1 to 10 using the **wood type selector**
- Housing: 170 [L] x 35 [W] x 35 mm [H]

APPLICATION

Non-destructive wood moisture measurement using the **Compact A** unit

ORDER CODE **30002020**

HYDROMETTE®
COMPACT B

APPLICATION

The **Compact B** unit should be held at the rear part of the unit to prevent the measured value from being affected by the hand.

The Compact B unit is an electronic **structural moisture meter** that uses the **non-destructive measuring technique** that is based on the dielectric constant/radio frequency principle of measurement.
Fitted with LCD display and versatile ball sensor that is used to **sense moisture in building materials of any kind** as well as to **determine the humidity distribution** in walls, ceilings, screeds, and other set building materials.

Particularly suited for parquet layers and floor tiling contractors in conjunction with a CM meter.

MEASURING RANGE

- **STRUCTURAL MOISTURE**
  0 to 100 digits (scanning range)

PROPERTIES

- Ideal pre-tester for all CM measurements
- Housing: 200 [L] x 35 [W] x 35 mm [H]

ORDER CODE **30002030**

OUR CLASSIC SERIES METERS

- Handy units for quick moisture measurement
- LCD display, resolution: 0.1%
- Fully automated adjustment of the meter
- 9 V block battery or rechargeable battery

HYDROMETTE®
H 35

The H 35 unit is an electronic **wood moisture meter** that uses the resistance principle of measurement for precisely measuring **sawn timber** (up to 180 mm in thickness), **chipboards, and veneers**. The unit is used for individual measurements before and after processing.
Particularly suited to be used in joiner's workshops, by parquet layers or painting contractors.

MEASURING RANGE

- **WOOD MOISTURE**
  4 to 30% (dry mass)

PROPERTIES

- Direct readout of wood moisture in % on the large LCD display, resolution: 0.1%
- 4-level wood species correction for more than 300 types of wood
- Housing: 140 [L] x 90 [W] x 42/50 mm [H]

APPLICATION

Moisture measurement on a wood billet using the **H 35** unit and an **M 20 electrode**

ORDER CODE **30001100**

ACCESSORIES INFO BOX

M 18 | M 20 | M 20-OF 15 | M 20-HW 200/300

For packages, please refer to page 52.

HYDROMETTE®
HT 65

ORDER CODE **30001250**

The HT 65 unit is an electronic **wood moisture meter** that uses the resistance principle of measurement for precisely measuring **sawn timber** (up to 180 mm in thickness), **chipboards, veneers, wood chips**, and similar bulk materials. The unit is used for individual measurements before and after processing.
Additionally, the adjustable **wood temperature compensation** allows for optimisation of the measured value.
Particularly suited for saw mills, parquet factories, and wood-processing companies.

MEASURING RANGE

- **WOOD MOISTURE**
  4 to 60% (dry mass)

PROPERTIES

- Direct readout of wood moisture in % on the large LCD display, resolution: 0.1%
- 4-level wood species correction for more than 300 types of wood
- Automatic wood temperature compensation from -10 to +40 °C
- Housing: 140 [L] x 90 [W] x 42/50 mm [H]

APPLICATION

Hydromette® **HT 65** unit in conjunction with an **M 20 electrode**

For packages, please refer to page 52.

ACCESSORIES INFO BOX

M 18 | M 20 | M 20-OF 15 | M 20-HW 200/300

HYDROMETTE®
HT 85 T

APPLICATION Hydromette® **HT 85 T** unit together with an **M 18 ram-in electrode**

The HT 85 T unit is an electronic **multipurpose meter** for sensing three values: wood moisture, structural moisture, and temperature. It allows for precisely measuring **sawn timber** (up to 180 mm in thickness), **chipboards, veneers, wood chips,** and similar bulk materials as well as **set building materials**. Thanks to the **large wood moisture measuring range**, the unit is very well suited for individual measurements on the timber yard as well as in the operations before and after processing.
It can be combined with any number of wood moisture, equilibrium wood moisture (EMC), or temperature measuring points to monitor current drying processes. Particularly suited for interior fitting or parquet laying contractors, wood-processing companies, industrial wood drying processes, construction companies or architects.

MEASURING RANGES

- **WOOD MOISTURE**
  4 to 100% (dry mass)
- **STRUCTURAL MOISTURE**
  – Refer to the overview on page 57 –
- **TEMPERATURE**
  -50 to +199.9 °C
  depending on the Pt100 temperature sensor

PROPERTIES

- 4-level wood species correction for more than 300 types of wood
- Automatic wood temperature compensation from -10 to +90 °C
- Quick measurement of moisture in set building materials using the resistance-based measuring technique
- Temperature measurement precision is achieved by Pt100 measuring resistors connected in 4-wire technology
- Housing: 180 [L] x 115 [W] x 53 mm [H]

ORDER CODE **30001370**

For packages, please refer to page 52.

	M 18	M 20	M 20-OF 15	M 20-HW 200/300								
	M 6	M 6-150/250	M 6-Bi 200/300	M 20	M 20-OF 15	M 20-Bi 200/300	M 21-100/250	M 25-100/300				
	LT 20											
	OTW 90	OT 100										
	ET 10	TT 40	TT 30	ET 50	FT 2-30							

PACKAGES
H 35 | HT 65 | HT 85 T

Measuring task is supported by the Hydromette® unit – the respective accessories are included in the package (short name below the symbol)

Measuring task is supported by the Hydromette® unit – but this package does not include the respective accessories

Measuring task is not supported by the Hydromette® unit

H 35-PACKAGES Page 49

ORDER CODE **30002100**
M 20

ORDER CODE **30002105**
M 18

HT 65-PACKAGES Page 50

ORDER CODE **30002250**
M 20

ORDER CODE **30002255**
M 18

HT 85 T-PACKAGES Page 51

ORDER CODE **30002370**
M 20

ORDER CODE **30002375**
M 18

ORDER CODE **30002377**
M 20
M 6

HYDROMETTE®
HB 30

The HB 30 unit is an electronic **wood and structural moisture meter** that uses the resistance principle of measurement for precisely measuring **sawn timber** (up to 180 mm in thickness), **chipboards, parquet, and set building materials**.
Thanks to its **connectivity for a large variety of (active) electrodes** that are used for structural moisture measurement, the unit is highly flexible and allows non-destructive measurements to be performed. Moreover, surface temperature can be measured using an infrared sensor.
Particularly suited for interior fitting or parquet laying contractors, or joiners.

MEASURING RANGES

- **WOOD MOISTURE**
  4 to 30% (dry mass)
- **STRUCTURAL MOISTURE**
  – Refer to the overview on page 57 –
- **TEMPERATURE**
  Infrared measuring range:
  -20 to +199.9 °C using IR 40 EL

APPLICATION HB 30 together with an **M 25-100 brush electrode pair**

PROPERTIES

- Direct readout of wood moisture in % on the large LCD display, resolution: 0.1%
- 2-level wood species correction for more than 300 types of wood
- Housing: 140 [L] x 90 [W] x 42/50 mm [H]

ORDER CODE **30001510**

ACCESSORIES INFO BOX

For packages, please refer to page 52.

	M 18	M 20	M 20-OF 15	M 20-HW 200/300							
	M 6	M 6-150/250	M 6-Bi 200/300	M 20	M 20-OF 15	M 20-Bi 200/300	M 21-100/250	M 25-100/300	B 50	B 60	LB 71
	IR 40 EL										

HYDROMETTE®
UNI 1

ORDER CODE **30001430**

The UNI 1 is an electronic **multipurpose meter** for three measured values. It can be used with active electrodes for measuring structural moisture, air humidity, and temperature may be connected.

The following (active) electrodes may be connected:

- **B 50, B 60, LB 71** for non-destructive measurement and display of moisture in ceilings, walls, floors, or other building materials
- **IR 40 EL** for sensing surface temperature, thermal bridges, and dew point temperature
- **RF-T 28 EL, RH-T 37 EL, RH-T 37 EL flex** for air humidity and air temperature measurement and
- All of our **Pt100 temperature sensors**

Particularly suited for air conditioning technicians, surveyors who evaluate damage caused by water, insurance companies, and as a supplement for a wood moisture meter.

MEASURING RANGES

- **STRUCTURAL MOISTURE**
  – Refer to the overview on page 57 –
- **AIR HUMIDITY**
  0 to 100% R.H.
  using RF-T 28 EL, RH-T 37 EL, RH-T 37 EL flex
- **TEMPERATURE**
  -50 to +600 °C
  depending on the Pt100 temperature sensor
- ***Infrared measuring range***
  -20 to +199.9 °C
  using IR 40 EL

PROPERTIES

- Quick measurement of moisture in set building materials using the capacitive radio frequency measuring technique
- The temperature measurement precision is achieved by Pt100 measuring resistors connected in 4-wire technology
- Housing: 140 [L] x 90 [W] x 42/50 mm [H]

ACCESSORIES INFO BOX

For packages, please refer to page 58.

	B 50	B 60	LB 71									
	RF-T 28 EL	RH-T 37 EL 165/320	RH-T 37 EL flex 250/350									
	RF-T 28 EL	RH-T 37 EL 165/320	RH-T 37 EL flex 250/350	LT 20								
	OTW 90	OT 100	OTW 480	IR 40 EL								
	ET 10	TT 40	TT 30	ET 50	TT 480	TT 600	FT 2-30					

HYDROMETTE®
UNI 2

APPLICATION Measuring structural moisture using the **UNI 2** unit and an **M 21-250 deep measuring electrode pair** [left] and measuring the relative humidity in boring using **RH-T 37 active electrode** [right]

The UNI 2 is an electronic **multipurpose meter** for three measured values. It can be used with active electrodes for measuring structural moisture, air humidity, and temperature. Additionally, all **structural moisture measuring electrodes** that are based on the **resistance principle of measurement** may be connected to the UNI 2 unit.

The following (active) electrodes may be connected: Refer to page 54 »UNI 1«.

MEASURING RANGES

- **STRUCTURAL MOISTURE**
  – Refer to the overview on page 57 –
- **AIR HUMIDITY**
  0 to 100% R.H.
  using RF-T 28 EL, RH-T 37 EL, RH-T 37 EL flex
- **TEMPERATURE**
  -50 to +600 °C
  depending on Pt100 temperature sensor
- ***Infrared measuring range***
  -20 to +199.9 °C
  using IR 40 EL

PROPERTIES

- Quick measurement of moisture in set building materials using the resistance-based and capacitive radio frequency measuring techniques
- Temperature measurement precision is achieved by Pt100 measuring resistors connected in 4-wire technology
- Housing: 140 [L] x 90 [W] x 42/50 mm [H]

ORDER CODE **30001550**

ACCESSORIES INFO BOX

For packages, please refer to page 58.

	M 6	M 6-150/250	M 6-Bi 200/300	M 20	M 20-OF 15	M 20-Bi 200/300	M 21-100/250	M 25-100/300	B 50	B 60	LB 71
	RF-T 28 EL	RH-T 37 EL 165/320	RH-T 37 EL flex 250/350								
	RF-T 28 EL	RH-T 37 EL 165/320	RH-T 37 EL flex 250/350	LT 20							
	OTW 90	OT 100	OTW 480	IR 40 EL							
	ET 10	TT 40	TT 30	ET 50	TT 480	TT 600	FT 2-30				

HYDROMETTE®
RTU 600

APPLICATION Measuring structural moisture using the RTU 600 unit and an M 21-100 deep measuring electrode pair

ORDER CODE **30001670**

The RTU 600 unit is a **combined** electronic **multipurpose meter** for sensing four values (wood moisture, structural moisture, air humidity, and temperature) that is equipped with **universal wood species correction** for each type of wood and with automatic **temperature compensation**. The **versatile** Hydromette® unit allows a large number of (active) electrodes (refer to page 54 »UNI 1«) to be connected as well as all resistance-based wood or structural moisture electrodes to be used with the unit. Particularly suited for painting, interior fitting or parquet laying contractors, parquet factories, wood-processing companies, industrial wood drying processes, construction companies, architects, surveyors, residential building construction companies, and municipal building departments.

MEASURING RANGES

- **WOOD MOISTURE**
  4 – 100% (dry mass) for resistance-based measuring techniques
- **STRUCTURAL MOISTURE**
  – Refer to the overview on page 57 –
- **AIR HUMIDITY**
  0 to 100% R.H.
  using RF-T 28 EL, RH-T 37 EL, RH-T 37 EL flex
- **TEMPERATURE**
  -50 to +600 °C
  depending on the Pt100 temperature sensor
- ***Infrared measuring range***
  -20 to +199.9 °C
  using IR 40 EL

PROPERTIES

- 81-level wood species correction
- Automatic wood temperature compensation from -10 to +90 °C
- Quick moisture measurement in set building materials
- The temperature measurement precision is achieved by Pt100 measuring resistors connected in 4-wire technology
- Housing: 180 [L] x 115 [W] x 53 mm [H]

ACCESSORIES INFO BOX

For packages, please refer to page 59.

	M 18	M 20	M 20-OF 15	M 20-HW 200/300							
	M 6	M 6-150/250	M 6-Bi 200/300	M 20	M 20-OF 15	M 20-Bi 200/300	M 21-100/250	M 25-100/300	B 50	B 60	LB 71
	RF-T 28 EL	RH-T 37 EL 165/320	RH-T 37 EL flex 250/350								
	RF-T 28 EL	RH-T 37 EL 165/320	RH-T 37 EL flex 250/350	LT 20							
	OTW 90	OT 100	OTW 480	IR 40 EL							
	ET 10	TT 40	TT 30	ET 50	TT 480	TT 600	FT 2-30				

STRUCTURAL MOISTURE MEASURING RANGES

HT 85 T

RESISTANCE-BASED MEASUREMENTS*

0 to 80 digits

0.5 to 25 wt.-% or **0.3 to 12 CM-%**

RTU 600
UNI 2
CH 17
HB 30

CAPACITIVE MEASUREMENTS*

0 to 199 digits (scanning range)

0.3 to 8.5 wt.-% or

0.3 to 6.5.0 CM-% using B 50, B 60, LB 71

UNI 1

AIR RELATIVE HUMIDITY IN DRILLING HOLE*

5 to 98 R.H. or

0.2 to 3.7 wt-% using RH-T 37 EL/RH-T 37 EL flex

* **for HB 30, HT 85 T, UNI 1, UNI 2, RTU 600:** moisture conversion in % according to the building material using the conversion table in the operating manual

PACKAGES
HB 30 | UNI 1 | UNI 2

- Measuring task is supported by the Hydromette® unit – the respective accessories are included in the package (short name below the symbol)
- Measuring task is supported by the Hydromette® unit – but this package does not include the respective accessories
- Measuring task is not supported by the Hydromette® unit

HB 30-PACKAGES

Page 53

ORDER CODE **30002511**
M 20

ORDER CODE **30002512**
M 6

ORDER CODE **30002505**
M 20
M 6

ORDER CODE **30002506**
M 20
M 6, B 50

ORDER CODE **30002507**
M 20
M 6, B 50
KLIMA 20
IR 40 EL
DIALOG D+

ORDER CODE **30002508**
M 20
M 6, B 50
KLIMA 30
IR 40 EL
NT 3
DIALOG D+

UNI 1-PACKAGES

Page 54

ORDER CODE **30002436**
B 50

ORDER CODE **30002432**
B 60

ORDER CODE **30002431**
B 60
RF-T 28 EL
IR 40 EL

UNI 2-PACKAGES

Page 55

ORDER CODE **30002550**

ORDER CODE **30002553**
M6, B 50

ORDER CODE **30002552**
M6, B 50
RF-T 28 EL

ORDER CODE **30002551**
M6, B 60
RF-T 28 EL
IR 40 EL

PACKAGES
RTU 600

RTU 600-PACKAGES

Page 56

ORDER CODE **30002670**
M 20

ORDER CODE **30002675**
M 18

ORDER CODE **30002680**
M 20
RF-T 28 EL

BESTELL-NR **30002685**
M 18
RF-T 28 EL

ORDER CODE **30002681**
M 20
M 6
RF-T 28 EL

ORDER CODE **30002678**
M 20
M 25-100, B 60
RF-T 28 EL

ORDER CODE **30002679**
M 20
M 25-100, B 60
RF-T 28 EL
IR 40 EL

OUR PRACTICAL CM SERIES METERS

- Particularly compact pressure cylinder
- Specially shaped cylinder bottom
- Variable sealing system
- Small sample quantity (e.g. 20/50 g)

The CM-B Pro (order code 30002910) and CM-P Pro units (order code 30002920) are compatible with DIN standard.

Compliant with DIN 18560-4:2012-06 standard

HYDROMAT
CM-B STANDARD | CM-B PRO

Compliant with DIN 18560-4:2012-06 standard

The CM-B-Standard and CM-B Pro case sets include meters for determining **moisture in set building materials** and several other materials using the **Calcium Carbide Method**. Beyond electrical measurements, this measuring technique has been known in the industry for years and several professional associations recommend using it for a number of measuring tasks. Using the case sets is easy. All measurements can be performed directly on the object using the tools included in the case and thus quickly allow to obtain information on the particular moisture condition. The decision on whether screed may be laid or a wall may be finished can be made immediately.
Particularly suited for parquet laying or floor tiling contractors, construction companies, architects, or surveyors.

MEASURING RANGE

- **STRUCTURAL MOISTURE**
  0.30 to 7.50 CM-% using gauge readout
  0.14 to 22.90 CM-% using conversion table

A detailed description of the contents of the case sets is found on our website or our price list.

ORDER CODE 30002900 CM-B Standard 30002910 CM-B Pro

HYDROMAT
CM-P PRO

Compliant with **DIN** 18560-4:2012-06 standard

ORDER CODE **30002920**

The Hydromat CM-P unit is a meter that is designed for determining **moisture in set building materials** and several other materials using the **Calcium Carbide Method**. All measurements can be performed directly on the object using the tools included in the case and thus quickly allow to obtain information on the particular moisture condition.

The CM-P case set includes comprehensive equipment. Among others, it contains the **Hydromette® Compact B structural moisture meter** (refer to page 47) that is designed to reduce the number of individual measurements required, to scan larger surfaces quickly and efficiently and to obtain significantly higher test reliability. The pre-tester operates non-destructively using a radio frequency field.

The practical **manual pestle** is designed to crush the test material directly in the pressure cylinder and to prepare it quickly while keeping the moisture content.

The decision on whether screed may be laid or a wall may be finished can be made immediately. Particularly suited for parquet laying or floor tiling contractors, construction companies, architects, or surveyors.

MEASURING RANGE

- **STRUCTURAL MOISTURE**
  0.30 to 7.50 CM-% using gauge readout
  0.14 to 22.90 CM-% using conversion table

A detailed description of the contents of the case set is found on our website or our price list.

31003603

31003604

31003615

31003630

BASE GAUGE 31003603
- Measuring range 0 to 2.5 bar, class 1.6
- Bourdon gauge, housing: plastic

PREMIUM GAUGE 31003604
- Measuring range 0 to 2.5 bar, class 1.0
- Bourdon gauge, housing: ptainless steel

DIGITAL TIMER 31003648
- For time recording during CM measurements

ELECTRONIC SCALES 31003642
- LCD display and battery operation
- Weighing range up to 500 g, resolution 0.1 g

MANUAL PESTLE 31003630
- For quick and moisture content keeping sample preparation in the CM bottle, including sealing

TEST WEIGHTS
- For testing our scales
- **Test weight M 1–20** (20 g) 31003645
- **Test weight M 2–100** (100 g) 31003643

STAINLESS STEEL BALLS 31003615
- Replacement pack containing **3 balls**

CALCIUM CARBIDE CA 7 VIALS
- Refill pack containing **20 vials** 31003620
- Refill pack containing **100 vials** 31003621

TEST WATER VIALS 31003626
- 10 vials of 0.7 ml test water each
- For testing the tightness of the pressure cylinder and operability of the gauge

PE BAGS (not shown) 31003649
- Refill pack of 100 bags

31003621

31003626

31003642

31003648

31003645 31003643

OUR DATA LOGGERS

- Portable, handy storage units
- With USB interface for data exchange with a PC and the programming of the data logger
- Min, max threshold function
- Measurement data (both air temperature and humidity) with date and time for each record
- USB interface
- Power supply: 3 V lithium battery
- Optional: software package DIALOG D+
- 81 [L] x 57 [W] x 21 mm [H]

KLIMA 20
DATA LOGGER

The Klima 20 data logger is a **mobile storage unit** for recording air temperature and air humidity data and is specifically designed for long-term monitoring.
The measured values are saved in **user-defined time intervals** (between 5 sec and 6 h) along with the **date and time.** They are stored in the internal memory of the device.
The programming and reading out of the data logger is done via the user-friendly **software DIALOG D+.** Among other things, the stored values can be displayed and printed as a table or as graphic.
The data logger is ideally suited for tracking the climate in residential or working rooms, museums, or warehouses.
The logger is not designed for outdoor use or constantly high air humidity.
The device is delivered with a battery; however, the software is not included.

APPLICATION

KLIMA 20 fixed with the wall bracket

MEASURING RANGE

- **AIR HUMIDITY**
  0 to 100 % R.H.
  ± 1.8 % R.H. (10 to 90 % R.H.) (*)
- **TEMPERATURE**
  -10 to +70 °C
  ± 0.5 °C (-10 to +40 °C) (*)

(*) = sensor accuracy

PROPERTIES

- Memory capacity:
  20.000 sets of measurement data

ORDER CODE **30009630**

KLIMA 30
DATA LOGGER

ORDER CODE **30009640**

The Klima 30 data logger is a **mobile storage** unit for recording air temperature and air humidity data and is specifically designed for **long-term monitoring.**

The measured values are saved in **user-defined time intervals** (between 5 sec and 6 h) along with the date and time. They are stored in the internal memory of the device.

Additionally, an **external temperature probe** can also be connected to the Klima 30, so **material or core temperature** measurements can be carried out.

The programming and reading out of the data logger is done via the user-friendly **software DIALOG D+.** Among other things, the stored values can be displayed and printed as a table or as a graphic.

The data logger is ideally suited for tracking the climate in residential or working rooms, museums, or warehouses.

The logger is not designed for outdoor use or constantly high air humidity.

The device is delivered with a battery; however, the software is not included.

MEASURING RANGE

- **AIR HUMIDITY**
  0 to 100 % R.H.
  ± 1.8 % R.H. (10 to 90 % R.H.) (*)
- **TEMPERATURE**
  -10 to +70 °C
  ± 0.5 °C (-10 to +40 °C) (*)

(*) = sensor accuracy

PROPERTIES

- Connection of an external temperature sensor
- Memory capacity:
  50.000 sets of measurement data

APPLICATION

KLIMA 30 fixed with the wall bracket

EXTERNAL TEMPERATURE PROBES
The external temperature probes NT 3 and NT 8 can be connected to the data logger Klima 30 via the USB port. They are used to detect the material or the core temperature in, for example, masonry and are automatically detected when connected to the data logger.

MEASURING RANGE

- **TEMPERATURE**
  -50 to +125 °C
  ± 0.5 °C (0 to +40 °C) (*)

(*) = sensor accuracy

- For Data logger Klima 30

EXTERNAL TEMPERATURE PROBE NT 3

- 3 m [L] 31003901

EXTERNAL TEMPERATURE PROBE NT 8

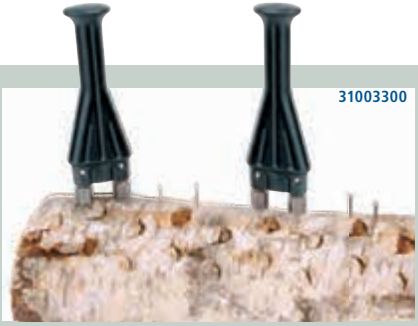
- 8 m [L] 31003902

WALL BRACKET FOR KLIMA 20 / 30 31003900
The wall bracket is used to carry out the measurements at a representative point in the room. By attaching the Klima 20/30 to a wall bracket it can be ensured that the data logger is always exposed to the same conditions, such as to the same air flow.
The wall bracket is magnetic on the back and can be screwed in or attached by a double-sided tape.

ACCESSORIES FOR WOOD MOISTURE

Electrode pairs to be used in conjunction with an M 20 electrode only

M 20 DRIVE-IN ELECTRODE
M 20-OF 15 SURFACE MEASURING CAP PAIR



M 20 drive-in electrode with M 20-DS 16-i conversion kit

M 20 DRIVE-IN ELECTRODE 31003300

- For resistance-based wood moisture measurement
- Material: impact-proof plastic
- Including 10 electrode pins each, 16/23 mm [L]
- For moisture measurement in wood of up to 50 mm in thickness

M 20-DS 16 CONVERSION KIT 31004310

- For moisture measurement in wood of up to 30 mm in thickness using particularly slim pins (1.6 mm [Ø])
- Hardly visible punctures in the material (e.g. in mopboards or veneer)

M 20-OF 15 SURFACE MEASURING CAP PAIR 31004315

- Moisture measurements on surfaces and veneers without damaging the material to be measured
- Operating depth approx. 2 to 5 mm

M 20-DS 16-i CONVERSION KIT 31004311

- For measuring wood fibre insulants
- The impact of surface moisture is reduced due to insulated electrode nuts
- Is used in combination with the Hydromette® BL H 41

PRODUCT INFO BOX

H 35	BL H 40	BL H 41	BL A plus	HT 65	BL HT 70	HT 85 T
HB 30	BL E	UNI 1	UNI 2	BL UNI 11	RTU 600	CH 17

M 18
RAM-IN ELECTRODE

M 18 RAM-IN ELECTRODE 31003500
- For resistance-based wood moisture measurement
- Material: corrosion-resistant stainless steel as well as special plastic
- Including 10 electrode pins each, 40/60 mm [L]
- For moisture measurement in thick wood (up to 180 mm) and in hardwood

M 18 V2 ELECTRODE SUPPORT 31003509
- without cap nuts, without electrode pins

ELECTRODE PINS WITH TEFLON INSULATION (see page 97)
- For layer or core humidity measurements
- For layer or core humidity measurements
- 2.5 mm [Ø]
- Quantity per pack: 10 pcs.

- **45 mm** [L], max. penetration depth: 25 mm
  31004550
- **60 mm** [L], max. penetration depth: 40 mm
  31004500

M 18 V2 Electrode support without cap nuts and electrode pins
31003509

PRODUCT INFO BOX

H 35	BL H 40	BL H 41	BL A plus	HT 65	BL HT 70	HT 85 T
HB 30	BL E	UNI 1	UNI 2	BL UNI 11	RTU 600	CH 17

M 19 PUSH-IN ELECTRODE
M 20-HW 200/300 STICK-IN ELECTRODE PIN PAIR

M 19 PUSH-IN ELECTRODE 31003400

- For measuring in finished thermal insulation composite systems
- It is equipped with teflon insulated electrode pins; 10 pieces à 60 mm
- Material: impact-proof plastic
- For the determination of the moisture content in wood fibre insulants

M 20-HW 200/300 STICK-IN ELECTRODE PIN PAIR

- For measurement in chips, wood wool veneer stacks, and bulk materials
- Non-isolated pins
- 200 mm [L] x 4 mm [Ø] 31004350
  300 mm [L] x 4 mm [Ø] 31004355
- To be used only in conjunction with an M 20 electrode

VIEW of **M 20-HW** electrode pin pair of 200 mm or 300 mm in length ORDER CODE 31004350/31004355

Electrode pins with teflon insulation of 45 mm or 60 mm in length 31004500/31004550

M 19 push-in electrode 31003400

PRODUCT INFO BOX

H 35	BL H 40	BL H 41	BL A plus	HT 65	BL HT 70	HT 85 T
HB 30	BL E	UNI 1	UNI 2	BL UNI 11	RTU 600	CH 17

M 19

H 35	BL H 40	BL H 41	BL A plus	HT 65	BL HT 70	HT 85 T
HB 30	BL E	UNI 1	UNI 2	BL UNI 11	RTU 600	CH 17

M 20-HW 200/300

YOUR SUCCESS THROUGH OUR PRECISION

ACTIVE ELECTRODES
B 50 | B 60 | LB 71

31003750

31003760

B 50 ACTIVE ELECTRODE 31003750

- For capacitive radio frequency based structural moisture measurement
- Built-in electronics for **non-destructively sensing** moisture in all types of building materials
- For detecting the **moisture distribution** in ceilings, walls, screeds, and other set building materials
- High penetration of up to 120 mm (depending on material density)

B 60 ACTIVE ELECTRODE 31003760

- Same as B 50, except for additional built-in **limit adjuster** from 20 to 140 digits and beeper

LB 71 ACTIVE ELECTRODE 31003765

- Same as B 50, except for additional **extendable telescopic handle:**
  - > Hardly accessible locations can be reached without ladder or stooping down
  - > Quick and convenient scanning of large surfaces and components
- Stagelessly extended up to 1.50 m

MEASURING RANGES

- 0 to 199 digits (scanning mode), moisture qualification using table
- 0.3 to 8.5 wt.-%,
  Depending on the building material, conversion by means of table
- 0.3 to 6.5 CM-%
  Depending on the building material, conversion by means of table

31003765

PRODUCT INFO BOX

H 35	BL H 40	BL H 41	BL A plus	HT 65	BL HT 70	HT 85 T
HB 30	BL E	UNI 1	UNI 2	BL UNI 11	RTU 600	CH 17

ORDER CODE **31013755**

B 55 BL
ACTIVE ELECTRODE

B 55 BL ACTIVE ELECTRODE 31013755

The B 55 BL is a probe designed for the field of **structural moisture** using the **capacitive high frequency measuring principle.**
The electrode is applicable for all blue Hydromettes that are using this kind of measuring principle.
In Connection with Hydromette® BL E: scanning mode only.

MEASURING RANGES

- 0 to 199 digits (scanning mode), moisture qualification using table
- 0.3 - 8.5 wt.-%, direct readout of the moisture values in % according to the building material
- 0.3 - 6.5 CM-%, direct readout of the moisture values in % according to the building material

PROPERTIES

- Built-in electronics for non-destructively sensing moisture in all types of building materials
- For detecting the moisture distribution in ceilings, walls, screeds, and other set builing materials or hard materials
- The Auto Sensor Technology used automatically detects the electrode connected and enables the Hydromette® to adapt the measured value readout to the respective sensor type
- Audible alarm in case a user-defined limit is exceeded. The limit can be set from 0.1 to 199 digits by using the Hydromette®

APPLICATION

The B 55 BL active electrode in combination with the Hydromette® BL E

PRODUKT-INFOBOX

H 35	BL H 40	BL H 41	BL A plus	HT 65	BL HT 70	HT 85 T
HB 30	**BL E**	UNI 1	UNI 2	**BL UNI 11**	RTU 600	**CH 17**

M 20 DRIVE-INELECTRODE
M 20-OF 15 SURFACE MEASURING CAP PAIR

APPLICATION A hammer may facilitate the drive-in of the M 20 electrode

31003300

31004315

M 20 DRIVE-IN ELECTRODE 31003300

- For resistance-based structural material moisture measurement
- Material: impact-proof plastic
- Including 10 electrode pins each, 16/23 mm [L]
- For moisture measurements in soft, set building materials (e.g. plaster, gypsum, or aerated concrete)
- For deep measurements in aerated concrete etc. up to 70 mm, also electrode pins of 60 mm length (order code 31004660) may be used

M 20-OF 15 SURFACE MEASURING CAP PAIR 31004315

- For moisture measurements on surfaces without damaging the material to be measured, to be used in conjunction with the M 20 electrode
- Operating depth approx. 2 to 5 mm

PRODUCT INFO BOX

H 35	BL H 40	BL H 41	BL A plus	HT 65	BL HT 70	HT 85 T
HB 30	BL E	UNI 1	UNI 2	BL UNI 11	RTU 600	CH 17

M 25
BRUSH ELECTRODE PAIR

APPLICATION The **brush electrodes** are put into the pre-drilled hole

- For structural moisture measurement in hard or soft building materials
- Easily create moisture profiles by performing measurements in layers
- Including convenient turning aid for inserting and removing
- No additional contact agent required
- Insulated stem to prevent surface moisture from skewing the measuring result

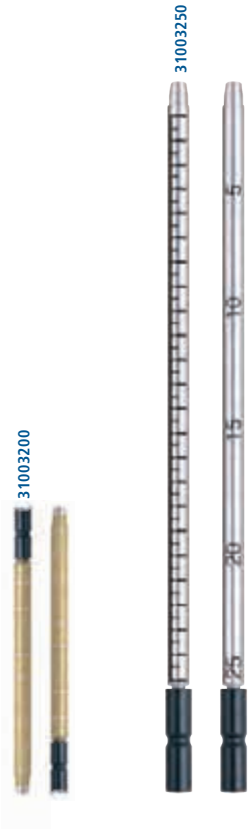
M 25-100 BRUSH ELECTRODE PAIR 31003740
- To be used up to 100 mm [D], sampling holes to be drilled with Ø 6 mm drill bit

M 25-300 BRUSH ELECTRODE PAIR 31003743
- To be used up to 300 mm [D], sampling holes to be drilled with Ø 6 mm drill bit

PRODUCT INFO BOX

H 35	BL H 40	BL H 41	BL A plus	HT 65	BL HT 70	HT 85 T
HB 30	BL E	UNI 1	UNI 2	BL UNI 11	RTU 600	CH 17

M 21
ELECTRODE PAIR FOR DEEP MEASUREMENT



- For structural moisture measurements, especially for deep measurements in building materials together with contact paste [31005400]
- Create moisture profiles by performing measurements in layers
- Including scale for indicating the measuring depth
- Insulated stem to prevent surface moisture from skewing the measuring result

M 21-100 ELECTRODE PAIR FOR DEEP MEASUREMENT 31003200

- To be used up to 100 mm [D], sampling holes to be drilled with Ø 8 mm drill bit

M 21-250 ELECTRODE PAIR FOR DEEP MEASUREMENT 31003250

- To be used up to 250 mm [D], sampling holes to be drilled with Ø 10 mm drill bit

DETAIL Both **electrode pairs are equipped** with one-centimetre **division** scale

PRODUCT INFO BOX

H 35	BL H 40	BL H 41	BL A plus	HT 65	BL HT 70	HT 85 T
HB 30	BL E	UNI 1	UNI 2	BL UNI 11	RTU 600	CH 17

M 6 STICK-IN ELECTRODE PAIR
M 6-Bi 200/300 FLAT ELECTRODE PAIR

APPLICATION TIP Ideal electrode clearance: 10 cm

Flat electrodes to be used in conjunction with M 6 electrodes

M 6 STICK-IN ELECTRODE PAIR 31003700

- For measuring hard, set building materials (concrete, screeds etc.) together with contact paste [31005400]
- Including 10 replacement pins each, 40/60 mm [L]
- Electrode heads are used as carrier system for various other electrode pairs:
  > M 6-Bi 200/300
  > M 20-Bi 200/300 (p. 78)
  > M 6-150/250 (p. 78)

M 6-Bi 200/300 FLAT ELECTRODE PAIR

- For moisture measurement in screed or insulating materials, particularly in edge or floating joints
- Insulated stem to prevent surface moisture from skewing the measuring result
- 10 [L] x 0.8 [W] x 200 mm [H] 31003702
  10 [L] x 0.8 [W] x 300 mm [H] 31003703
- For use, one M 6 electrode pair is required

M 6 stick-in electrodes to be used in conjunction with the following units:

H 35	BL H 40	BL H 41	BL A plus	HT 65	BL HT 70	HT 85 T
HB 30	BL E	UNI 1	UNI 2	BL UNI 11	RTU 600	CH 17

M 6-150/250 | M 20-Bi 200/300
STICK-IN ELECTRODE PIN PAIRS

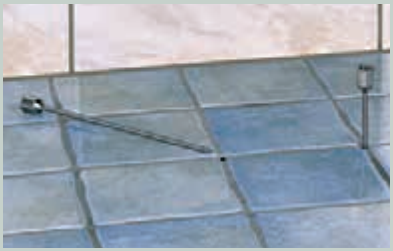
Special lengths on request

M 6-150/250 STICK-IN ELECTRODE PINS

- Extra slim probes for moisture measurement in building or insulating materials using floating joint/spacer cross
- Non-insulated
- For use, one M 6 electrode pair or one M 20 electrode is required
- **150 mm** [L] x 3 mm [Ø] 31003706
  250 mm [L] x 2 mm [Ø] 31003707

M 20-BI 200/300 STICK-IN ELECTRODE PINS

- For deep measurement in insulations, roofs, and soft set building materials
- Insulated stem to prevent surface moisture from skewing the measuring result
- **200 mm** [L] x 4 mm [Ø] 31004360
  300 mm [L] x 4 mm [Ø] 31004365
- For use, one M 6 electrode pair or one M 20 electrode is required



APPLICATION

Measurements in the spacer cross using the **M 6-150/250** stick-in electrode tip pair

M 6 stick-in electrodes or M 20 drive-in electrode to be used in conjunction with the following units:

H 35	BL H 40	BL H 41	BL A plus	HT 65	BL HT 70	HT 85 T
HB 30	BL E	UNI 1	UNI 2	BL UNI 11	RTU 600	CH 17

DESIGNED FOR REAL-WORLD APPLICATIONS

RF-T 28 EL
ACTIVE ELECTRODE

RF-T 28 ACTIVE ELECTRODE

- Probe for measuring climate (air humidity and temperature) within seconds
- Fast response speed of the sensor allows for detecting leakages (e.g. clearance between doorframe and door leaf or window)
- Excellent long-term stability of the sensor

MEASURING RANGES

- **AIR HUMIDITY**
  0 to 100% R.H.
  ± 1.8% R.H. (10 to 90% R.H.) (*)
- **TEMPERATURE**
  -10 to +70 °C
  ±0.5 °C (-10 to +40 °C) (*)

(*) = sensor accuracy

RF-T 28 EL ACTIVE ELECTRODE 31003155

DETAIL VIEW

Probe head **RF-T 28 EL**

PRODUCT INFO BOX

RF-T 28 EL		H 35	BL H 40	BL H 41	BL A plus	HT 65	BL HT 70	HT 85 T
		HB 30	BL E	**UNI 1**	**UNI 2**	BL UNI 11	**RTU 600**	CH 17

RH-T 37 EL/BL 160/320
ACTIVE ELECTRODE

VIEW of the ergonomically shaped handle of the **RH-T 37** (side view)

ORDER CODE **31003140**

RH-T 37 ACTIVE ELECTRODE

- Special probe for air humidity and temperature measurement, particularly suited for measurements in bulk materials and solid materials (e.g. brickwork or screeds)
- Slim sensor pipe
- For humidity analyses, damage survey, drying of buildings, checking whether floor or wall covers may be laid, measurements in joints
- Diaphragm filter (for air containing dust, pollution, or high air flow velocity) is standard equipment

- EL-electrodes -> devices of the Classic Series

RH-T 37 EL 160 31003140
- Sensor pipe: 165 [L] x 5.5 mm [Ø]

RH-T 37 EL 320 31003141
- Sensor pipe: 320 [L] x 5.5 mm [Ø]

MEASURING RANGES
- **AIR HUMIDITY**
  0 to 100% R.H.
  ±1.8% R.H. (10 to 90% R.H.) (*)
- **TEMPERATURE**
  -10 to +70 °C
  ±0.5 °C (-10 to +40 °C) (*)

(*) = sensor accuracy

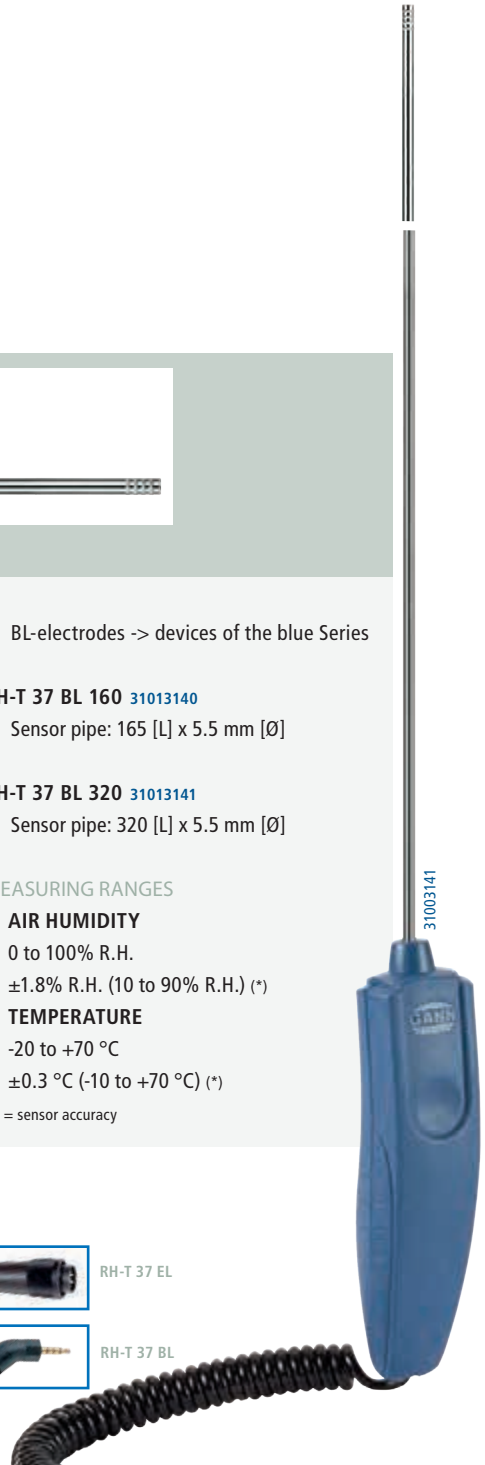
- BL-electrodes -> devices of the blue Series

RH-T 37 BL 160 31013140
- Sensor pipe: 165 [L] x 5.5 mm [Ø]

RH-T 37 BL 320 31013141
- Sensor pipe: 320 [L] x 5.5 mm [Ø]

MEASURING RANGES
- **AIR HUMIDITY**
  0 to 100% R.H.
  ±1.8% R.H. (10 to 90% R.H.) (*)
- **TEMPERATURE**
  -20 to +70 °C
  ±0.3 °C (-10 to +70 °C) (*)

(*) = sensor accuracy



PRODUCT INFO BOX

H 35	BL H 40	BL H 41	BL A plus	HT 65	BL HT 70	HT 85 T
HB 30	BL E	**UNI 1**	**UNI 2**	BL UNI 11	**RTU 600**	CH 17

RH-T 37 EL

H 35	BL H 40	BL H 41	BL A plus	HT 65	BL HT 70	HT 85 T
HB 30	BL E	UNI 1	UNI 1	**BL UNI 11**	RTU 600	**CH 17**

RH-T 37 BL

Active electrode with bent gooseneck

RH-T 37 EL FLEX 250/350
ACTIVE ELECTRODE

RH-T 37 EL FLEX ACTIVE ELECTRODE

- Special probe for air humidity and temperature measurement, particularly suited for measurements in bulk materials and solid materials (e.g. brickwork or screeds)
- Flexible sensor pipe (»gooseneck«) for measuring locations that are difficult to access
- For humidity analyses, damage survey, drying of buildings, checking whether floor or wall covers may be laid, measurements in joints
- It is possible to measure air humidity in a drill hole and *sorption isotherms* can be used to determine the moisture content of certain set building materials or whether coatings can be applied to these building materials
- Diaphragm filter (for air containing dust, pollution, or high air flow velocity) is standard equipment

- EL-electrodes -> Classic Series

RH-T 37 EL FLEX 250 31003142
- Sensor pipe (gooseneck): 250 [L] x 6.5 mm [Ø]

RH-T 37 FLEX 350 31013143
- Sensor pipe (gooseneck): 350 [L] x 6.5 mm [Ø]

MEASURING RANGES
- **AIR HUMIDITY**
  0 to 100% R.H.
  ±1.8% R.H. (10 to 90% R.H.) (*)
- **TEMPERATURE**
  -10 to +70 °C
  ±0.5 °C (-10 to +40 °C) (*)

(*) = sensor accuracy

- BL-electrodes -> blue Series

RH-T 37 BL FLEX 250 31013142
- Sensor pipe (gooseneck): 250 [L] x 6.5 mm [Ø]

RH-T 37 BL FLEX 350 31003143
- Sensor pipe (gooseneck): 350 [L] x 6.5 mm [Ø]

MEASURING RANGES
- **AIR HUMIDITY**
  0 to 100% R.H.
  ±1.8% R.H. (10 to 90% R.H.) (*)
- **TEMPERATURE**
  -20 to +70 °C
  ±0.3 °C (-10 to +70 °C) (*)

(*) = sensor accuracy

31003142 / 31013142

31003143 / 31013143

PRODUCT INFO BOX

RH-T 37 EL FLEX		H 35	BL H 40	BL H 41	BL A plus	HT 65	BL HT 70	HT 85 T
		HB 30	BL E	**UNI 1**	**UNI 2**	BL UNI 11	**RTU 600**	CH 17
RH-T 37 BL FLEX		H 35	BL H 40	BL H 41	BL A plus	HT 65	BL HT 70	HT 85 T
		HB 30	BL E	UNI 1	UNI 1	**BL UNI 11**	RTU 600	**CH 17**

3
4

ORDER CODE **31003150**

IR 40 EL
ACTIVE ELECTRODE

DETAIL VIEW

Built-in **laser pointer of the IR 40 EL**

INFRARED SURFACE TEMPERATURE SENSOR

- Infrared sensor for non-contact surface temperature measurements
- Particularly suited for objects having a low thermal capacity (wood, glass, insulating materials)
- Ideal sensor for detecting thermal bridges, determining the dew point temperature, measuring live, moving or vibrating parts as well as for locating heating pipes or coils
- Built-in laser pointer for identifying the measuring spot
- 6:1 optical system
- Fixed emissivity: 0.95

MEASURING RANGE

- **TEMPERATURE**
  Infrared measuring range:
  -20 to +199.9 °C (*)
  ± 0.5 °C (0 to +60 °C), at
  0 to 50 °C ambient temperature (*)

(*) = sensor accuracy

IR 40 EL 31003150

PRODUCT INFO BOX

H 35	BL H 40	BL H 41	BL A plus	HT 65	BL HT 70	HT 85 T
HB 30	BL E	UNI 1	UNI 2	BL UNI 11	RTU 600	CH 17

TF-IR BL
ACTIVE ELECTRODE

The **TF-IR BL active electrode** is a combined electrode that can be used to simultaneously perform climate measurements (air humidity and temperature) and infrared surface temperature measurements.
This combination of the different measuring techniques enables the TF-IR BL unit to be used for quickly and reliably assessing dew point undershoots or determining borderline conditions on surfaces such as walls, ceilings, floors as well as on window or door lintels.
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.

MEASURING RANGES

- **AIR HUMIDITY**
  0 to 100% R.H.
  ± 1.8% R.H. (20 to 80% R.H.) (*)
- **TEMPERATURE**
  Air temperature: –20 to +70 °C
  ± 0.3 °C (-10 to +70 °C) (*)
- **INFRARED MEASURING RANGE**
  -40 to +380 °C
  ± 0.5 °C (0 to +60 °C), at
  0 to 50 °C ambient temperature (*)

(*) = sensor accuracy

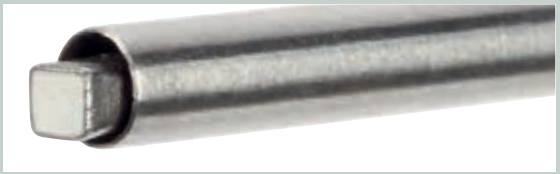
- **Built-in audible interval signal:**
  The more the surface temperature is approaching the dew point temperature, the more the signal will change from intermittent to continuous sound.
- Built-in laser pointer for identifying the measuring spot
- Emissivity adjustable from 20 to 100%; adjustable with Hydromette®
- Automatic calculation of dew point temperature, equilibrium wood moisture content (EMC) as well as air absolute humidity readout in g/m³

ORDER CODE **31013100**

PRODUCT INFO BOX

H 35	BL H 40	BL H 41	BL A plus	HT 65	BL HT 70	HT 85 T
HB 30	BL E	UNI 1	UNI 2	**BL UNI 11**	RTU 600	**CH 17**

PT100 SENSORS
BL TEMPERATURE SENSORS



DETAIL VIEW

The **ceramic tip** of the OT 100 BL sensor is **suspended**

ORDER CODE **31013170**

- Pt100 sensor in 4-wire technology
- Built-in microprocessor

ET 10 BL PUSH-IN TEMPERATURE SENSOR 31013165

- Rugged push-in sensor for measurements in solids, bulk materials, liquids
- Sensor pipe: 100 mm [L], 3 mm [Ø]
- MEASURING RANGE -50 to +250 °C

OT 100 BL SURFACE TEMPERATURE SENSOR 31013170

- Suspended sensor tip with thermal separation and resulting optimised measured value collection, e.g. on wall surfaces
- Optional: thermally conductive paste [refer to page 98]
- Sensor pipe: 110 mm [L], 5 mm [Ø]
- MEASURING RANGE -50 to +250 °C

TT 40 BL IMMERSION AND FLUE GAS TEMPERATURE SENSOR 31013180

- Rugged immersion and flue gas sensor for temperature measurement in liquids or pasty materials, e.g. glue, hot-melt adhesive or in asphalt or tar
- Sensor pipe: 380 mm [L], 5 mm [Ø]
- MEASURING RANGE -50 to +350 °C

ET 10 BL	H 35	BL H 40	BL H 41	BL A plus	HT 65	BL HT 70	HT 85 T
	HB 30	BL E	UNI 1	UNI 2	BL UNI 11	RTU 600	CH 17
OT 100 BL	H 35	BL H 40	BL H 41	BL A plus	HT 65	BL HT 70	HT 85 T
	HB 30	BL E	UNI 1	UNI 2	BL UNI 11	RTU 600	CH 17
TT 40 BL	H 35	BL H 40	BL H 41	BL A plus	HT 65	BL HT 70	HT 85 T
	HB 30	BL E	UNI 1	UNI 2	BL UNI 11	RTU 600	CH 17

PT100 SENSORS
CLASSIC TEMPERATURE SENSORS

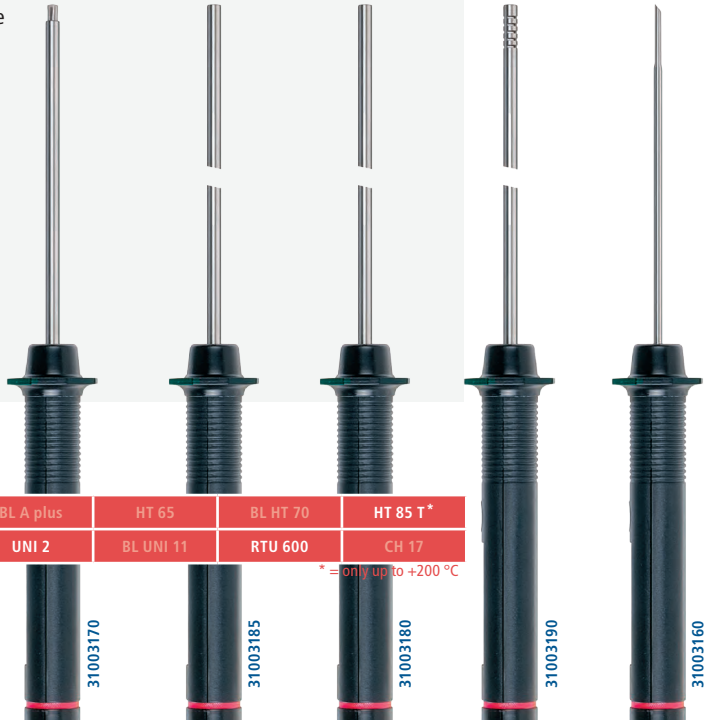
- Pt100 sensor in 4-wire technology

ET 10 PUSH-IN TEMPERATURE SENSOR
31003165
- Rugged push-in sensor for measurements in solids, bulk materials, liquids
- Sensor pipe: 100 mm [L], 3 mm [Ø]
- MEASURING RANGE -50 to +250 °C

OT 100 SURFACE TEMPERATURE SENSOR
31003170
- Suspended sensor tip with thermal separation and resulting optimised measured value collection, e.g. on wall surfaces
- Optional: thermally conductive paste [refer to page 98]
- Sensor pipe: 110 mm [L], 5 mm [Ø]
- MEASURING RANGE -50 to +250 °C

LT 20 AIR/GAS TEMPERATURE SENSOR
31003190
- Fast air/flue gas sensor with slotted openings in the sensing area which allow the sensor to quickly respond to changes of the ambient conditions
- Sensor pipe: 480 mm [L], 5 mm [Ø]
- MEASURING RANGE -20 to +200 °C

ET 50 PUSH-IN TEMPERATURE SENSOR
31003160
- For fast measurements in soft solids, bulk materials, liquids
- Sensor pipe: 120 mm [L], 3.0/2.3 mm [Ø] (tip)
- MEASURING RANGE -50 to +300 °C



PRODUCT INFO BOX

H 35	BL H 40	BL H 41	BL A plus	HT 65	BL HT 70	HT 85 T*
HB 30	BL E	UNI 1	UNI 2	BL UNI 11	RTU 600	CH 17

* = only up to +200 °C

PT100 SENSORS
CLASSIC TEMPERATURE SENSORS

- Pt100 sensor in 4-wire technology

SURFACE TEMPERATURE SENSORS

- Angled special surface sensor, e.g. for veneer presses

OTW 90 31003175
- Sensor pipe: 100 mm [L], 5 mm [Ø]
- MEASURING RANGE -50 to +250 °C

OTW 480 31003176
- Sensor pipe: 480 mm [L], 5 mm [Ø]
- MEASURING RANGE -50 to +600 °C

IMMERSION AND FLUE GAS TEMPERATURE SENSORS

- Rugged immersion and flue gas sensor for temperature measurement in liquids or pasty materials, e.g. glue, hot-melt adhesive or in asphalt or tar

TT 30 31003185
- Sensor pipe: 230 mm [L], 3 mm [Ø]
- MEASURING RANGE -50 to +350 °C

TT 40 31003180
- Sensor pipe: 480 mm [L], 5 mm [Ø]
- MEASURING RANGE -50 to +350 °C

TT 480 31003181
- Sensor pipe: 480 mm [L], 5 mm [Ø]
- MEASURING RANGE -50 to +600 °C

TT 600 31003182
- Sensor pipe: 600 mm [L], 5 mm [Ø]
- MEASURING RANGE -50 to +600 °C

DETAIL VIEW

Different **geometries of the measuring heads**

H 35	BL H 40	BL H 41	BL A plus	HT 65	BL HT 70	**HT 85 T***
HB 30	BL E	**UNI 1**	**UNI 2**	BL UNI 11	**RTU 600**	CH 17

* = only up to +200 °C

FLEXIBLE
TEMPERATURE SENSORS

For measuring the core temperature of various materials e.g. wood, building materials, and bulk materials. The measuring cable is Teflon sheathed and thus resistant to high temperatures. Additionally, the different cable lengths available increase versatility. So measurements in wood drying kilns (Sirex or ISPM-15 drying) are easily done.

- The 7-pin connector can be used to connect the sensor to different Hydromette® units
- Sensor approx. 5.2 mm [Ø]
- MEASURING RANGE -20 to +120 °C

FT 2 31003195
- Including 2 m Teflon cable

FT 5 31003196
- Including 5 m Teflon cable

FT 10 31003197
- Including 10 m Teflon cable

FT 20 31003198
- Including 20 m Teflon cable

FT 30 31003199
- Including 30 m Teflon cable

VIEW

FT 2 **temperature sensor**

ORDER CODE **31003195**

PRODUCT INFO BOX

H 35	BL H 40	BL H 41	BL A plus	HT 65	BL HT 70	**HT 85 T**
HB 30	BL E	**UNI 1**	**UNI 2**	BL UNI 11	**RTU 600**	CH 17

CABLE & ADAPTER
MEASURING & CONNECTING

31016710

MK 8 MEASURING CABLE 31006210
- For connecting a resistance-based electrode to a meter
- 1 m [L]

MK 15 MEASURING CABLE 31006710
- 7-pin connecting/extension cable
- 1 m [L]

MK 26 CONNECTING CABLE 31016920
- For connecting a data logger KLIMA 20/30 or a Hydromette® BL Compact TF 3, RH-T 165/320, RH-T flex 250/350, TF-IR 2 and BL UNI 11 to the USB port of a PC or notebook
- Mini USB–USB
- 1,8 m [L]

MK 16 CONNECTING CABLE 31016710
- Connecting / extension cable for BL active electrodes
- Suitable for Hydromette® BL E, BL UNI 11 and CH 17
- 2,0 m [L]

MK 18 CONNECTING CABLE 31016720
- Connecting/extension cable for TF sticks
- Suitable for Hydromette® BL Compact TF 3, BL Compact TF-IR 2, BL UNI 11 and CH 17
- 1,8 m [L]

BNC ADAPTER 31006050
- For connecting an electrode cable to a Hydromette® unit
- Direct monitoring of the wood moisture measuring points in a drying kiln

31006210

31006710

31006050

31016720

31016920

TEST ADAPTER FOR
HYDROMETTE® UNITS

VIEW Test adapter for wood moisture

Test adapter for structural moisture

WOOD MOISTURE TEST ADAPTER 31006070

- For checking the wood moisture measuring circuit of our Hydromette® units

STRUCTURAL MOISTURE TEST ADAPTER

31006071

- For checking the structural moisture measuring circuit of our Hydromette® units

TEMPERATURE TEST ADAPTER 31006072

- For checking the temperature measuring circuit of our Hydromette® units

	BL Compact	BL Compact S	BL H 40	BL HT 70	BL H 41	BL E	BL A plus	BL LG 17	
Test adapter	•	•	•	•	•	•	•		31006070
Test adapter						•			31006071
Test adapter									31006072

	H 35	HT 65	HT 85 T	HB 30	UNI 1	UNI 2	RTU 600	CH 17	
Test adapter	•	•	•	•			•	•	31006070
Test adapter			•	•			•	•	31006071
Test adapter			•		•	•	•		31006072

CARRYING **CASES**

- Used to store/transport GANN Hydromette® units and Hydromat CM units
- Equipped with specific inlays and paddings

CARRYING CASE I 31005051
- For H 35 / HT 65 Hydromette® units with M 20 electrode
- 255 [L] x 210 [W] x 72 mm [H]

CARRYING CASE VI 31015052
- For BL H 40/BL HT 70/BL H41 Hydromette® units with M 20 electrode
- 255 [L] x 210 [W] x 48 mm [H]

PLASTIC BOX 31015099
- For 1 blue Hydromette® unit without accessories
- 82 [L] x 270 [W] x 57 mm [H]

PLASTIC BOX II 31015058
- For 2 blue Hydromette® units without accessories
- 156 [L] x 270 [W] x 57 mm [H]

CARRYING CASE P 31005086
- For CM-B/CM-P Hydromat
- 500 [L] x 420 [W] x 125 mm [H]

COMBO CASE I 31015091
- For Hydromettes BL Compact, BL Compact B 2 and BL Compact TF-IR 2
- 255 [L] x 210 [W] x 72 mm [H]

CARRYING CASE BK 14-I 31005061
- For all Classic or BL Hydromettes
- Designed for one active electrode and various passive electrodes
- 437 [L] x 379 [W] x 100 mm [H]

CARRYING CASE BK 14-II 31005062
- For all Classic or BL Hydromettes
- Designed for up to three active electrodes and various passive electrodes
- 497 [L] x 411 [W] x 120 mm [H]

PLASTIC BOX D 31005095
- For data loggers KLIMA 20/30
- 156 [L] x 270 [W] x 57 mm [H]

CARRYING CASE BK LG 31015092
- For BL LG 17 incl. LG-25 BL air speed probe
- 255 [L] x 210 [W] x 72 mm [H]

CARRYING CASE BK LG-II 31015093
- For CH 17 with LG-25 BL air speed probe
- 340 [L] x 280 [W] x 68 mm [H]

SOFTWARE
DIALOG

DIALOG D+ SOFTWARE PACKAGE 31006082

- Software for programming up to 16 data loggers and for transferring measured values to a PC
- Including manual, USB stick, and MK 26 connecting cable
- Compatible with MS Windows XP, Vista, 7, 8, 10

UPDATE FOR DIALOG D+ SOFTWARE 31006087

- Update to the respective latest release
- Including manual and USB stick

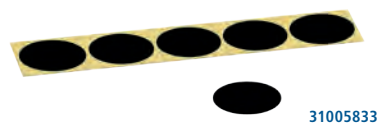
DIALOG BL+ SOFTWARE PACKAGE 31016083

- Application program for controlling various BL units
- Graphic and/or tabular measured value recording from up to four different sources
- Data export to MS Excel available
- To be used in conjunction with BL Compact RH-T / TF 3 / TF-IR 2
- Including manual, USB stick, and MK 26 connecting cable
- Compatible with MS Windows XP, Vista, 7, 8, 10

DATA LOGGERS

For associated **data loggers,** refer to page 59

OTHER
ACCESSORIES



31005833

VIEW The **measuring points** are particularly recommended for use with metallic or glossy surfaces

31006040

IR 30/E 95 MATTE BLACK LABEL 31005833

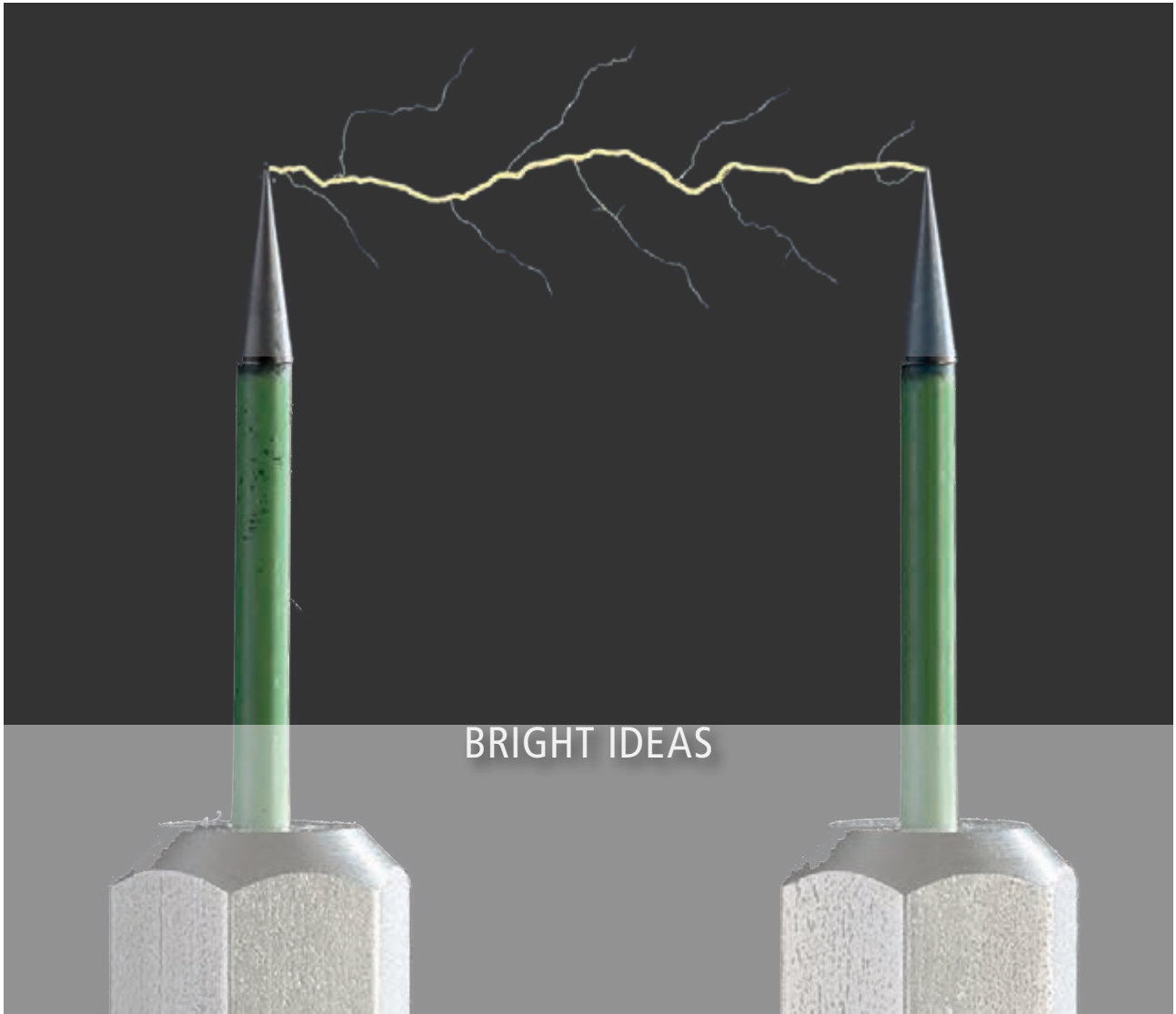
- For all infrared-based measurements
- 30 mm [Ø]
- Emissivity of 95, for measuring e.g. metallic surfaces
- Quantity per pack: 50 pcs.

TELESCOPIC EXTENSION FOR EL-BL ELECTRODES 31006040

- Probe extension for RF-T 28 EL (P. 86), B 55 BL (P.78), TF-IR BL (P.91), IR 40 EL (P.90)

TELESCOPIC EXTENSION with hinge for LG-25 BL 31006030

- Facilitates the measurement with LG-25 BL air velocity electrode (P.33)


BRIGHT IDEAS

INSULATED | NON-INSULATED
ELECTRODE PINS

APPLICATION Overview over various pin lengths: Use in conjunction with M 20 [left-hand side] and M 18 [right-hand side] electrodes

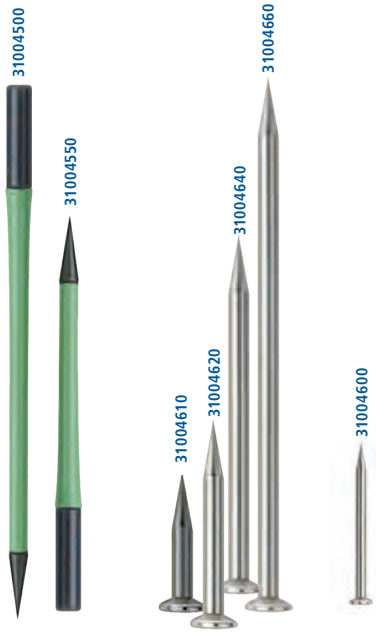
ELECTRODE PINS WITH TEFLON INSULATION

- For layer or core humidity measurements
- The insulation prevents the measurement from being affected by surface moisture
- Since only the foremost part of the pins has no insulation, layer measurements may be performed as well.
- 2.5 mm [Ø]
- For M 18
- Quantity per pack: 10 pcs.

- **45 mm** [L], max. penetration depth: 25 mm
  31004550
- **60 mm** [L], max. penetration depth: 40 mm
  31004500

ELECTRODE PINS WITHOUT INSULATION

- Non-isolated electrode pins show the most humid location in the material cross-section.
- 2.5 mm [Ø]
- For M 6, M 18, and M 20
- Quantity per pack: 100 pcs.
- **16 mm** [L], max. penetration depth: 10 mm
  31004610
- **23 mm** [L], max. penetration depth: 17 mm
  31004620
- **40 mm** [L], max. penetration depth: 34 mm
  31004640
- **60 mm** [L], max. penetration depth: 54 mm
  31004660
- **20 mm** [L], max. penetration depth: 8 mm
  31004600
- 1.6 mm [Ø]
- For (BL) Compact, (BL) Compact S, and M 20-DS 16 conversion kit
- Quantity per pack: 100 pcs.



OTHER
CONSUMABLES

CONTACT PASTE 31005400

- For measuring **hard and set building materials** (e.g. screed, concrete) which have to be drilled
- In conjunction with **M 6** and **M 21** electrodes

THERMALLY CONDUCTIVE PASTE 31005500

- For **improving heat transfer** on rough surfaces or in case of contact problems
- Recommended to be used for all contact-based temperature measurements, particularly for OT 100 (BL) and OTW 90/480

ABOUT
MEASURING ACCURACY

Assessing the accuracy of a meter or of a measuring process requires considerable knowledge and expertise. The following description and information is to assist you as the user in practice.
It is intended to help you to better get through the maze of terms and to better assess your measurements. For this, it is necessary to subdivide the term of "accuracy" into the individual portions.

The accuracy/precision of the measurement essentially depends on the following elements:

MEASURING CIRCUIT/BOARD AND COMPONENTS USED

The quality design of the electrical circuit and the board layout are some of the most important prerequisites to achieve the highest possible basic accuracy.

Shielding against external impact (electrostatics, radio-frequency irradiation etc) as well as a reliable temperature compensation are indispensable requirements.

High-quality and narrow-tolerance components are indispensable as well, e.g. an A/D converter (for converting analogue to digital signals) having 16 bit resolution is 256 times better than a comparable 8 bit resolution A/D converter.

BASIC ACCURACY OF THE METER

It is based on the circuit, precision of the components used as well as on the exact calibration/adjustment to one fixed value or several values of a calibration curve.

For given % values (e.g. ±2%), it is important to know whether these refer to the currently shown value or to the upper value of the measuring range.

The term "digit(s)" refers to a so-called "numerical step" (digital scale divisions) of a digital display.

For analogue gauges (pointer devices), the accuracy is commonly identified by "classes" (e.g. class 1 or class 1.6).

RESOLUTION OF THE ANALOGUE/DIGITAL DISPLAY

The term "resolution" is often mixed up with accuracy or used as a synonym. This is wrong. High resolution does not automatically result in high accuracy.

The term "resolution" that refers to an analogue or digital display only describes the number of readable digits (e.g. 000.00 = 5 digits) or more often the number of decimal places, commonly referred to as "reading accuracy". In this context, resolution is described using values (1 or 0.1 or 0.01) or digits (referring to the least significant digit).

REFERENCE/CALIBRATION STANDARD

In Germany, the supreme authority for calibration standards is the Physikalisch-Technische Bundesanstalt (PTB) in Brunswick. The PTB calibrates "standards" which are used by the DKD (Deutscher Kalibrierdienst) for calibrating meters and standards for factory calibrations. These in turn are used by the meter manufacturers for calibrating their units.

Such calibration standards/meters exist for the meters designed and manufactured by us for temperature measurement (for both mechanical sensors and for the units using infrared surface temperature measurement, also referred to as "pyrometers") and for air humidity measurement.

Thus, fixed specifications exist for these two application ranges, which means that the accuracy is therefore based on the grade of the sensors used and their exact adjustment.

For wood moisture measurement, there are no standard or other values specified by an officially recognised institution (exception: the calibration curve, based on the DIN 1052 standard, for spruce wood specified by the Materials Testing Institute of the University of Stuttgart (MPA Stuttgart, Otto-Graf-Institut) for the recognised glued laminated timber industry.

This also applies to measuring set building materials and a number of bulk materials (exception: certain types of grain, as far as these are commercially used for accounting purposes).

The term of "gauging" is actually reserved for the Gauging Office. "Gauging" refers to the calibration procedure performed by the Gauging Office. Basically, this only refers to equipment that is used for trading purposes, e.g. scales.

The calibration curves for the individual types of wood or building and insulating materials are created by reliable equipment manufacturers themselves. These curves are created using a complex procedure involving numerous series of measurement for each type of wood or each building or insulating material, based on the oven-dry test procedure. The calibration curves created that way are business secrets of a manufacturer.

QUALITY RATING OF THE SENSORS USED

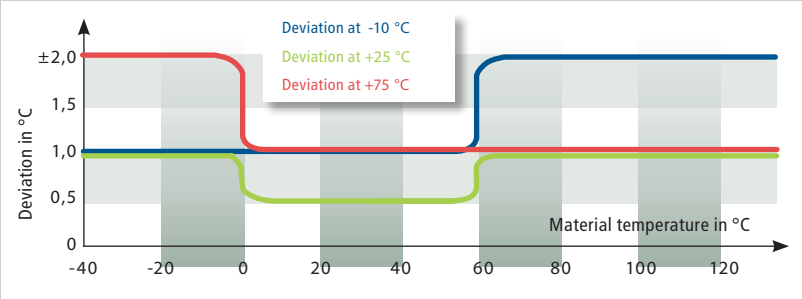
SENSORS FOR MEASURING TEMPERATURE

Temperatures are measured using a large variety

Temp.	Class A	Class B
-100 °C	0,35 °C	0,80 °C
0 °C	0,15 °C	0,30 °C
+100 °C	0,35 °C	0,80 °C
+200 °C	0,55 °C	1,30 °C

GRAPHIC A

Measuring accuracy for Pt100 sensors



GRAPHIC B

Measuring accuracy of infrared sensors at different ambient temperatures

of sensors. For measurement equipment of higher quality, temperature measurement of gas/air, liquids, bulk materials, and solids using platinum measuring resistors (e.g. Pt100 in 4-wire technology) has gained precedence. Of course, there are also different classes of accuracy (refer to graphic A).

More information on accuracy of Pt sensors is found on the web. For achieving acceptable measuring accuracy, at least class B sensors are required to be used.

For measuring surface temperatures on objects having high heat content and good thermal conductivity, also thermocouple sensors (cross- or dual-band sensors) are used. However, their accuracy in the range that is relevant to dew point measurements is not always sufficient.

All mechanical temperature sensors (contact thermometers) are reasonably used only in cases where the media to be measured have sufficiently high heat content and corresponding good thermal conductivity.

Insulating materials consisting of foamed plastics, wood or wooden materials, compound materials having different thermal conductivity (e.g. bonded wallpapers etc.) or materials having a rough or uneven surface, moving, or vibrating parts either cannot be measured using mechanical sensors, or the accuracy achieved is not sufficient.

For this purpose, infrared surface temperature measuring equipment providing good sensor accuracy is available today. Our equipment that is used in the classic application of climate monitoring in residential or business rooms includes such sensors. In particular, this applies to the assessment of damage caused by humidity (e.g. mould formation (fungal growth) by undershooting the dew point temperature). An accuracy of ±0.5 °C is very important for determining the dew point on wall surfaces (refer to graphic B). The higher the inaccuracy in this range, the higher the inaccuracy span for establishing the dew point undershoot temperature. Furthermore, entering the correct emissivity for the surface material to be measured is of high importance.

SENSORS FOR MEASURING AIR RELATIVE HUMIDITY

Accuracy and long-term stability of the sensors for gathering relative air humidity have been significantly improved within recent years. This is also true for measurements in contaminated air where the sensors have to be protected by appropriate filter systems. Sometimes, filters significantly extend response times, which contributes to inducing measuring errors if values are read too early. Also, adapting the temperature of the sensor to the ambient/air temperature is very important. Measuring systems of higher quality (e.g. for surveyors) have a typical accuracy of ±1.8% R.H and ±0.3 °C temperature (or better) (refer to graphic C).

ABOUT
MEASURING ACCURACY

To maintain this precision, such equipment should be checked for accuracy at the manufacturer or by an appropriate calibration laboratory every 12 to 24 months, depending on its application purpose and frequency.

When air humidity sensors are used for determining humidity by means of sorption isotherms in solids (e.g. concrete, screed, brickwork, etc), the sensor or the sensor assembly must have sufficient accuracy even when used to measure air humidity values of 95% R.H.

SENSORS FOR MEASURING WOOD MOISTURE

Precise wood moisture measurements are mostly based on the resistance measuring technique. For measuring, two steel pins are pushed or tapped into the wood to be measured. For our meters, the pins should be driven in perpendicularly to the fibre direction. Particularly for wet wood, this heavily affects accuracy.

Another aspect that concerns accuracy, is setting/entering/selecting the correct type of wood. Implementation of this aspect depends on the respective equipment manufacturer.

Medium-class equipment should have 4 or 7 wood species correction levels – high-class equipment should provide at least 75 options for wood species correction levels, if not even individual code numbers for each type of wood (from 250 numbers on). In the dry range, accuracy values of ±0.5% can be obtained.

For the different wood thicknesses, pins of 16, 23, 40, or 60 mm in length are available. For accurate measurement, these are to be driven in up to a third of the entire wood thickness. Moreover, Teflon insulated pins of 45 or 60 mm in length are available. Using these pins, individual layers or wood surfaces wetted by rain or dew can reliably be measured.

Another popular option is measuring wood moisture using a capacitive sensor. These units are also referred to as put-on units. Most of them have area or spring sensors. Area sensors require a relatively large and in any case plane contact area (planed surface). This also applies to units having wide spring structures. Compared to these, the ball-shaped sensor used in our units has application benefits. With regard to accuracy, larger measured value deviations are to be expected from put-on units. Wood types such as beech whose moisture is evenly distributed between surface and core and which have no branches or spiral growth and have a constant volume weight (specific gravity, gross density), can be measured very well and quickly. Pieces of wood showing heavily varying gross density, different wood thickness, or irregularly distributed humidity can be measured with sufficient accuracy only when using additional tools. When you consider purchasing a put-on unit we recommend consulting our experts.

SENSORS FOR MEASURING STRUCTURAL MOISTURE (SET BUILDING MATERIALS)

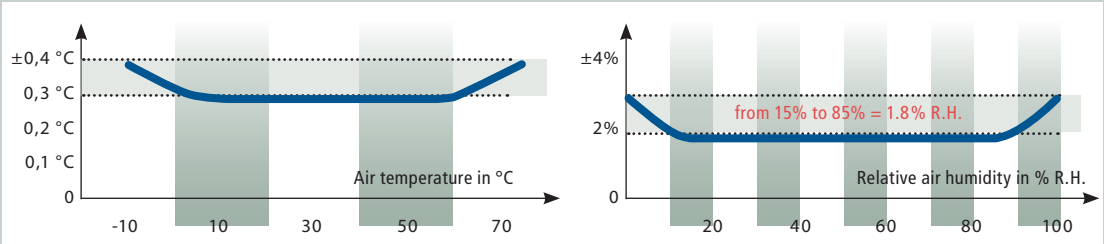
RESISTANCE/CONDUCTIVITY MEASURING TECHNIQUE

This value is measured using two steel pins, pipe probes (using contact paste), or brush probes. For the designs that are adapted to the different measuring tasks, please refer to our catalogue. Optimum contact between sensor and material is crucial to obtain high reproducibility.

Here, a general statement on accuracy of weight or mass percentage is hardly possible. Unmixed

GRAPHIC C

Typical characteristic curve using the example of our RH-T sensors



building materials with the latest calibration curves can be measured with good accuracy as opposed to mixed brickwork. But exact percentage values are often not necessary, and so-called comparative measurements are absolutely sufficient.

CAPACITIVE RADIO FREQUENCY MEASUREMENT

The so-called "ball probe" invented by us is a sensor for detecting moisture in many different materials (e.g. damage caused by moisture in rooms and buildings, mobile homes, caravans, boats, concrete, or plastics as well as in many other solids). Also, unmixed building materials having the latest calibration curves can be measured with good accuracy using this measuring technique. However, the accuracy obtained is less when measuring mixed brickwork or layered compounds consisting of different materials. As mentioned before, exact percentage values are often not necessary, and so-called comparative measurements are absolutely sufficient.

MEASURING THE RELATIVE AIR HUMIDITY IN HOLE

For this purpose, high-quality air humidity sensors suited for high humidity values must be used to determine moisture in solids (e.g. concrete, screed, brickwork). For measuring, the sensor is inserted into a prepared hole. The sensors should have good long-term stability in high air humidity (80 to 95% R.H.) as well as ±3% accuracy or better. The air humidity values are converted into weight percentage values for building materials using sorption isotherms either by means of automatic processor-supported conversion within the units or using tables provided in the operating manual.

CALCIUM CARBIDE METHOD

The humidity content of screeds is determined by means of a CM unit using a mechanical-chemical process. Accuracy essentially depends on correct sampling (across the entire cross-section, low humidity loss during sample preparation) and tightness of the pressure system.

■ PROPER MEASUREMENTS

The headline already tells what is meant. An "ideal" unit should be self-explaining, self-learning and work as independently as possible. Our Hydromette® units have been designed and engineered following these considerations. However, there will always be situations in which you will have to look into the operating instructions. Reading the operating instructions is one of the less pleasant and time-consuming things. But you will find that many problems will virtually settle on their own. Even if you have never worked with one of our units, reading the instructions that contain many tips on the particular topic and performing a small trial session will enable you to carry out your measuring task like a professional.

Your knowledge, your eyes, your technical skills, and our meters are parts of a successful top team.

It might be quite embarrassing "to be eaten up" by the lawyer of the opposing side, when the surveyor reads the instructions to you, or to be made to pay up for a damage, although you have the best meter on hand. You will find a lot of sticking points in connection with moisture measurement which you have not taken into account and which could have easily and quickly been avoided by means of properly performed measurement. Spare the second visit on site, the faulty survey report, the damage that could have been avoided in most cases.

We are here for you – when there are problems with moisture measurement or when you have no answer to your question, irrespective of the comprehensive operating instructions.

MEASURED VALUE ASSESSMENT

Professional assessment of the measured value indicated is the task of the expert – e.g. the decision on whether the 95 digits measured are still sufficient or too much considering a specified value of 90 digits. To assess e.g. an air humidity measured value, it is important to know whether the measurement was made in the more humid northern area or in the Alps region that is more dry and in which season it was made. Or whether the measurement was made in a humid vaulted cellar or in the hobby room of a newly erected building. Are there many flowers or hydroponics with fountains in the living room? All these and other factors have an impact on the "natural" humidity in the household. And in the end, only you as the expert can assess these different conditions. Similarly, this applies to structural moisture and to the moisture of other materials. In addition to the tips in our operating instructions, you may find other tips given by the manufacturer of the material or on the web, or you may consult our expert consultants.

We are your competent partner.

MANUAL MONITORING OF THE DRYING PROCESS

MEASURING POINT
SELECTOR

VIEW MEASURING POINTS Kiln temperature sensor **31007500** and mounting brackets of a wood moisture measuring point **31007200** [left-hand side] – Wood temperature measuring point **31007550** [centre] – EMC measuring point **31007400** [right-hand side]

- Central retrieval station for different wood or structural moisture measuring points that are based on the resistance principle of measurement.
- Depending on the particular type, additional measuring points for retrieving the temperature (on Pt100 basis) may be connected
- The measured values may be retrieved by means of a Gann Hydromette® (refer to the bottom of the page)
- Applications include: manual wood drying or manual long-term measurements of the drying condition of buildings (in newly erected or refurbished buildings)

TKMU-6 MEASURING POINT SELECTOR **31007100**
- Up to 6 wood/EMC or structural moisture measuring points

TKMU-6/1 MEASURING POINT SELECTOR **31007101**
- Up to 6 wood/EMC or structural moisture measuring points
- 1 additional temperature measuring point may be connected

TKMU-6/2 MEASURING POINT SELECTOR **31007102**
- Up to 6 wood/EMC or structural moisture measuring points
- 2 additional temperature measuring points may be connected

	H 35	BL H 40	HT 65	BL HT 70	HT 85 T	HB 30	BL E	UNI 1	UNI 2	RTU 600	
TKMU-6		•	•	•	• / •		•		•	• / •	31007100
TKMU-6/1					• / •				•	• / •	31007101
TKMU-6/2					• / •				•	• / •	31007102

31007100

31007101

31007102

WOOD MOISTURE MEASURING POINT

31007200

- For measuring the wood moisture in a wood drying kiln

EQUILIBRIUM WOOD MOISTURE CONTENT MEASURING POINT **31007400**

- For measuring the equilibrium wood moisture content (EMC) in a wood drying kiln

KILN TEMPERATURE MEASURING POINT

31007500

- For measuring the air temperature in a wood drying kiln

WOOD TEMPERATURE MEASURING POINT

31007550

- For measuring the wood temperature in a wood drying kiln

System overview of a wood drying kiln, please find more on our website

MEASURING POINT **ACCESSORIES**

SOCKET WRENCH 31007250
- For driving into and extracting the measuring electrodes from the wood

MOUNTING BRACKET 31007354
- Including mounting hardware for connecting the wood moisture or EMC measuring points

ELECTRODE LEAD
- Teflon insulated cable
- For connecting the wood moisture electrodes to a mounting bracket
  e.g. **4 m** [L] 41007304, **5 m** [L] 41007305, **6 m** [L] 41007306

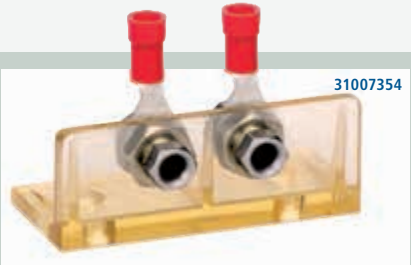
ELECTRODE SILICON LEAD
- Teflon insulated cable
- With additional silicone sheathing for increased resilience

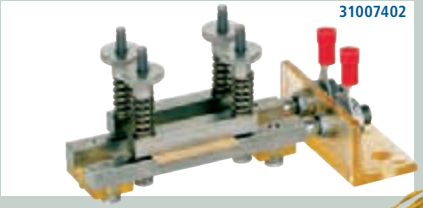
e.g. **4 m** [L] 41007284, **5 m** [L] 41007285, **6 m** [L] 41007286

MEASURING POINT LEAD
- For connecting the mounting bracket to a TKMU measuring point selector

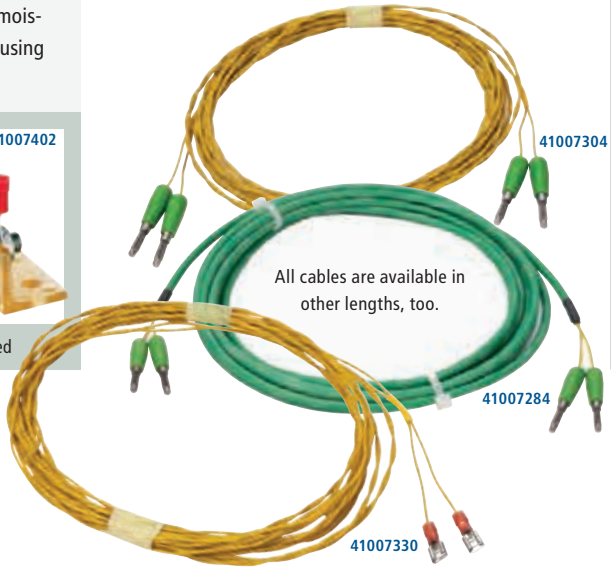
e.g. **10 m** [L] 41007330, **20 m** [L] 41007340

EMC ELECTRODE HOLDER 31007402
- For measuring the equilibrium wood moisture content (EMC) in the drying kiln using an EMC sensor

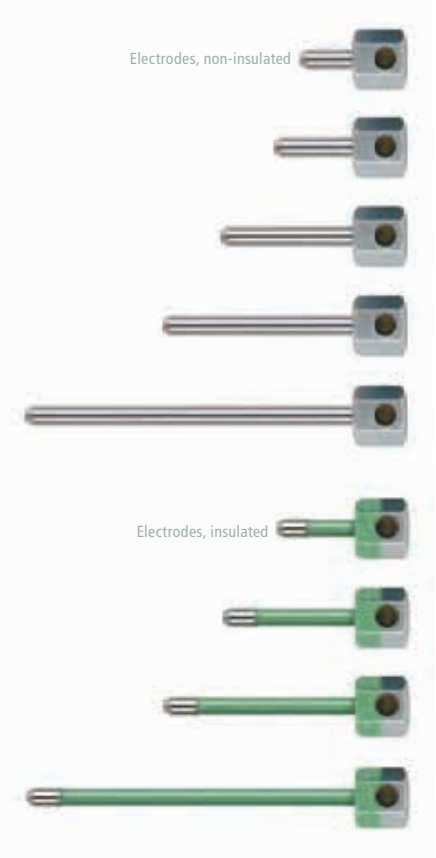




VIEW Mounting bracket [left-hand side] with EMC electrode holder and **EMC sensor** [right-hand side] inserted



REPLACEMENT PARTS FOR DRYING PROCESS MONITORING



STAINLESS STEEL DRIVE-IN ELECTRODES

- Stainless
- Without insulation
- For drying kiln use
- **10 mm** [L] 41007201
- **15 mm** [L] 41007202
- **25 mm** [L] 41007203
- **40 mm** [L] 41007204
- **70 mm** [L] 41007205

STAINLESS STEEL DRIVE-IN ELECTRODES, TEFLON INSULATED

- Stainless
- For drying kiln use
- Thanks to this insulation, only the core humidity is measured, while surface humidity is ignored
- **15 mm** [L] 41007207
- **25 mm** [L] 41007208
- **40 mm** [L] 41007209
- **70 mm** [L] 41007210

APPLICATION Connecting **non-insulated** [above] and **insulated** drive-in electrodes [below]

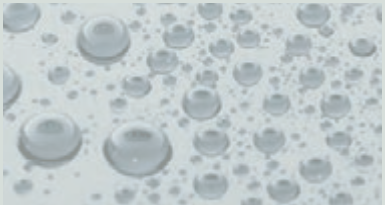
EMC SENSORS

- For sensing the equilibrium wood moisture content in a drying kiln using an EMC electrode holder
- **Pack of 50 EMC sensors** 41007403
- **Pack of 100 EMC sensors** 41007404

BLUE PRODUCT SERIES

COMPACT SERIES

CLASSIC SERIES



OVERVIEW

Blue product series

CH 17

	BL COMPACT	BL COMPACT S	BL COMPACT B 2	BL COMPACT TF 3	BL COMPACT TF-IR 2	BL COM. RH-T 250/350	BL COM. RH-T 165/320	BL H 40	BL HT 70	BL H 41	BL A plus	BL E	BL UNI 11	BL LG 17	CH 17
	7	8	9	10	11	14	16	20	21	22	24	26	28	32	36
	✓	✓						✓	✓	✓	✓	✓			✓
	✓		✓									✓	✓		✓
				✓	✓	✓	✓						✓		✓
				✓	✓	✓	✓		✓				✓		✓
														✓	✓
								✓	✓	✓	✓	✓			✓
								✓	✓	✓	✓	✓			✓

1931 ■ Company foundation in Stuttgart →

1948 ■ Development of the first „Hydromette" moisture meter →

1960 ■ Launch of the first fully automatic controlling system for

COMPACT	COMPACT S	COMPACT A	COMPACT B	H 35	HT 65	HT 85 T	HB 30	UNI 1	UNI 2	RTU 600	KLIMA 20	KLIMA 30
44	45	46	47	49	50	51	53	54	55	56	65	66
✓	✓	✓		✓	✓	✓	✓			✓		
			✓			✓	✓	✓	✓	✓		
								✓	✓	✓	✓	✓
						✓	✓	✓	✓	✓	✓	✓
												✓
				+	+	+	+	+	+	+		
				✓	✓	✓	✓	✓	✓	✓		

timber drying kilns → **1983** ■ The capacitive measuring method is patented »ball sensor« → **2009** ■ Introduction of the blue products series

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