

HygroMate

Quality at an affordable price



A cost-optimized, precise hand-held instrument for measuring the relative humidity and temperature in rooms and ventilation systems. The large, backlit liquid crystal display permits optimal readout of the measurements at all times.

The optimal handheld instrument for the service technician, for those installing climate control systems, and for process control. It is also well-suited to quality control applications in the foodstuff, pharmaceutical chemical, engineering and electronic industries.

Relative humidity	:	0...95% rH	<i>non-condensing</i>
Temperature	:	-20...50°C	<i>Sensor & measurement range</i>
		0...50°C	<i>Electronics, power & display</i>
Precision	:	+/- 2% rH	<i>5...90% rH without chemical effect</i>
		+/- 0.3°C	<i>0...40°C otherwise +/-0.5°C</i>
Measurement hysteresis:		approx. 1...1.5%RH (capacitive measurement cell)	
Resolution	:	0.1°C / 0.1% rH	
Communication	:	Large area LC display with LED back-lighting <u>No</u> digital/analog interfaces	
Display functions	:	Min / Max value storage, average computation Measurement value storage - Hold . Time and Date functions, AutoOff function Temperature display °C - °F Humidity display with Mollier Diagram computation functions :	
		•	<i>Relative humidity in % RH</i>
		•	<i>Dewpoint temperature in °C und °F</i>
		•	<i>Mixing proportion in g/m3</i>



Mobile measurements of air temperature and humidity

Economical, fast, flexible, robust

Who does not instantly want to know how hot, cold and humid it is? The new Hygromate measurement instrument satisfies these wishes in almost any place in the simplest way. It is a professional instrument for daily use, incorporating well-proven capacitive humidity measurement technology. The HygroMate is a perfect addition to Novasina's palette of hand-held instruments. A worse precision at a more attractive price is adequate for many environmental applications, but this is not the case in industrial production processes, where our Novasina **ms-1** product is still the industrial leader.

The innovative **Thumbwheel** sets new standards of user-friendliness. This complements the ergonomic, anti-slip dual-colour case design and the additional sensor-protecting filter system. The instrument can be checked at any time and, if necessary, calibrated at one or two values using the well-known **Novasina SC-Check** salt standards.

The new low-power processor technology with integrated climate computer and **Auto OFF** functions guarantees a long battery life. The display is switchable from **International** to **US units**. Further functions, **Dewpoint** and **Water Content** in g/m3 help the expert to make the correct on-the-spot decisions.

Typical HygroMate applications:

- Heating, ventilation and air conditioning: monitoring und service
- Space checks in warehouses, libraries, food storage areas
- Air measurements in buildings (offices, auditoria, lecture halls, auditoria)
- Pharmaceutical production, chemical, biological and foodstuff processing

Measurement instrument ms1:

Dimensions	:	145x85x37mm
Weight	:	ca. 400 g
Power	:	4 x 1.5V alkaline batteries

Humidity measurement:

Capacitive humidity measurement cell	
Range	: 0...95% rH
	<i>noncondensing</i>
Precision	: +/- 2.0%rH 5...90% rH
Measurement hysteresis:	~ 1...1.5% rH
Speed	: T90 < 10 sec.

Temperature measurement:

Precise NTC resistance	
Range	: -20...50°C
Precision	: +/- 0.3°C (0...40°C)
otherwise	: +/- 0.5°C

Attention: The electronics, power and display should only be used in the temperature range 0...50°C .

Sensor Checks SC:

Humidity standards based on saturated salt solutions in plastic cylinders with a moisture permeable membrane.

Values: 11%, 33%, 53%, 75%, 90% rH

**A CH adapter(reducing ring)
is required for use of the SC Checks.**

HygroMate Instruments

Consisting of :



[111 8903](#)

HygroMate handheld measuring instrument

The HygroMate hand-held measurement instrument is delivered with a set of alkaline batteries, a metal web protection filter and a English/German user manual in a protective cardboard package. A certificate documenting a factory 2-point calibration is included.

-> The instrument is thus ready to use.

The instrument consists of:

Integrated electronics in an ergonomically formed plastic casing on which is mounted a capacitive sensor system.

- Chrome plated sensor protection system with a fine mesh metal filter.
 - 4 1.5V LR 6 AA alkaline batteries
 - User manual (English/German)
 - Factory certificate with 2 humidity calibration values.
 - Protective cardboard package
- Weight : 400 g

Accessories for HygroMate instruments



[111 8929](#)

Table or wall holder

An ideal support when wall-mounting of the *HygroMate* is required. Can be used as a table support by simply bending out a metal flap.

Made of stainless steel type : X5CrNi1810

Der Wand/Tischhalter besteht aus :

- Dimensions : AA x BBmm
- Weight : 85 g
- Material : Stainless steel type X5CrNi1810



[111 8957](#)

Protective bag for the *HygroMate*

We recommend that the HygroMate measurement instrument be stored, used and transported in this durable, practical, protective bag. It provides protection for the instrument and includes space for accessories such as SC- Checks etc.. It can be carried on the shoulder or attached to a belt using the loops provided.

Velcro strips are provided to prevent objects falling out of the bag.

The protective bag comprises :

- Dimensions : 250 x 200 x 40mm
- Weight : 185 g (empty)
- Material : 2 Padded textile side pockets for 2 SC Checks and their containers



[111 8958](#)

Protective case for the *HygroMate*

The HygroMate can also be stored and transported in a strong plastic case. This provides more protection than the above bag, but needs more space. Space for the appropriate accessories is also provided.

The protective case comprises:

- Dimensions : AA x BB x CCmm
- Weight : 240 g (empty)
- Material : Polycarbonate



- [111 0885](#) -> 11% RH
- [111 0855](#) -> 33% RH
- [111 0857](#) -> 53% RH
- [111 0859](#) -> 75% RH
- [111 0896](#) -> 90% RH

Sensor-Checks SC:

Humidity standards based on saturated salt solutions in plastic cylinders with moisture permeable membranes. Each salt is delivered in a well-sealed box. Sensor Checks SC are obtainable for the following values (at 25°C):

11.3 %	colour	white
32.8 %	colour	blue
52.9 %	colour	green
75.3 %	colour	purple
90.1 %	colour	white

Humidity values in the temperature range 15° 30°C:

- 11.3 11.3% rH
- 33.3 32.4% rH
- 55.9 51.4% rH
- 75.6 75.1% rH
- 90.9 89.9% rH

The precision corresponds to the Greenspan Report 1977
typically +/- 0.3 % rH

Weight : 240 g



111 7847 Sensor-check set

Set with 5 Sensor-Checks SC:

Humidity standards based on saturated salt solutions in plastic cylinders with moisture permeable membranes. Each salt is delivered in a well-sealed box. Sensor Checks SC are obtainable for the following values (at 25°C):

11.3 %	colour	white
32.8 %	colour	blue
52.9 %	colour	green
75.3 %	colour	purple
90.1 %	colour	white

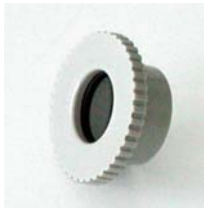
Case with all 5 Sensor Checks from 11 to 90%rH.

Humidity values in the temperature range 15° 30°C:

11.3	11.3% rH
33.3	32.4% rH
55.9	51.4% rH
75.6	75.1% rH
90.9	89.9% rH

The precision corresponds to the Greenspan Report 1977 typically +/- 0.3 % rH

Weight : 900 g



110 7345 Adapter CH

Sensor check adapter ch

for any 13mm sensor to SC-check salt standard

This adapter is needed for calibration an instrument. It ensures an airtight connection of a Sensor Check to the sensor tube of the top of the instrument. It reduces the diameter of 20 mm down to 13 mm and ensures an airtight seal.

-> The adaptor should first be attached to the sensor and then to the SC check. Both seals should be carefully checked, leaks will bias the calibration.

CH adapter for any 13mm sensors to SC checks:

Dimensions : 30 x 13 mm
Material : Polycarbonate, rubber

Weight : 5 g

Quantity : 1 unit.



111 8959 Sintered filter

Sintered filter for the HygroMate

For higher protection against particles, dust and mechanical stress

A robust metallic filter made of sintered stainless steel. Provides active protection for the sensor system against particles larger than 10um.

-> Other filter systems may be available on request

Sintered filter system :

Dimensions : 34 x 13 mm
Material : Sintered stainless steel.

Response time : T50 ca. 30 sec

Weight : 30 g

Quantity : 1 pc.

Replacement parts for the Set ms1



111 8960 Metal web filter for the HygroMate

Metal web filter for the HygroMate

Replacement metal web filter

A robust metal web filter made of stainless steel. Prevents particles larger than 100 um from reaching the sensor system and provides active protection. The instrument is delivered with this filter installed.

Tressenfiltersystem :

Dimensions : 34 x 12.5 mm
Material : Stainless steel, plastic

Response time : T50 approx 10 sec.

Weight : 20 g

Quantity : 1 unit



111 8961 Measurement cell

Capacitive measurement cell

Replacement measurement cell for the HygroMate

A replacement capacitive humidity measurement cell only for the HygroMate instrument. It is important that a new 2 point calibration be performed with the SC-Check's 11% and 75 % rH when the cell is replaced.

Attention : In no circumstances should the cell be touched with the bare hands. Replacement should only be performed by our technician.

Capacitive humidity measurement cell:

Dimensions : 4 x 15 mm
Measurement : Capacitive
Streuungsfeld : +/-20% RH !!

A new 2 point calibration must be performed when this cell is replaced!

This should only be replaced by our agents!!