

novasina
ms 1



The Hygro Measuring System

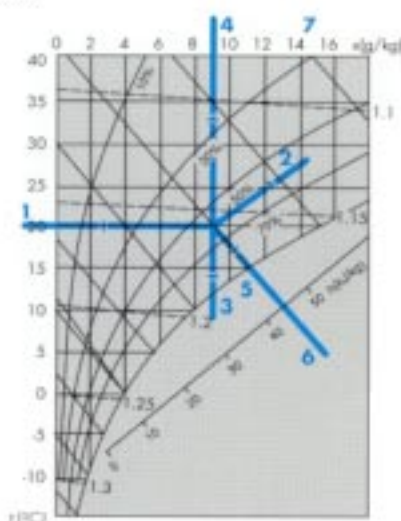
Exact, fast, versatile

A micro-processor driven hand-held measuring instrument for precise measurement of relative humidity in %, air temperature, surface temperature and dew point. Optionally in °C or °F. Electrolytic measuring cell for exact measurement of humidity. Program menu indicates 7 climatic measured variables. Clearly laid-out LCD multi display for simultaneous indication of 2 different measured values. Unique calibration facility of up to 5 different calibration points. RS-232 interface for further processing of the measured values via PC. Compact and safely protected in its impact resistant plastic cover.

novasina ms 1: Temperature and humidity

Mollier diagram can be selected by simply pressing a button

What could only be illustrated with the aid of the Mollier diagram, can now be selected with the new novasina ms 1 measuring system by press-button. The micro-processor supported electronic of ms 1 enables exact calculation of other climatic variables, based on the measured air humidity and temperature values. The climatic variables can be called up and shown on the display by simply pressing the corresponding select button.



- 1 Dry bulb temperature in °C
- 2 Relative humidity in % rh
- 3 Dew point temperature in °C
- 4 Water content in g/kg
- 5 Wet bulb temperature in °C
- 6 Specific enthalpy in kJ/kg
- 7 Partial water vapour pressure in mbar

The correct measuring sensor for each application



Numerous applications exist because of the wide range of humidity sensors for measuring in air and substances.



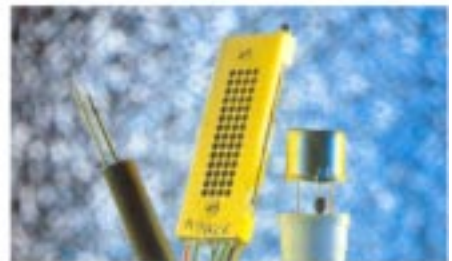
lity measurement safely in your grip

Fast and accurate measurement procedure

Because of the integrated micro-processor, measured values of temperature and humidity can be recorded quickly and accurately with the novasina ms1 instrument. Measurement is carried out automatically in cycles of 2 seconds. The indicated stability values inform the user of the stability of the measured values.

Measuring cells for the highest demands

For precise measurement of humidity ($\pm 1\%$), the ms 1 instrument is equipped with an electrolytic measuring cell, for measurement of temperature with a special NTC precision resistor, which is located directly next to the humidity measuring cell. The measuring cell possesses the remarkable properties of a long life-span and barely measurable hysteresis over the total measuring range. An external splash-proof temperature sensor can be attached additionally to the measuring instrument. This allows simultaneous measuring and indicating of surface and dew point temperatures.



Clearly laid-out indication with a multi-display panel

When the instrument is switched on, temperature is permanently displayed in the top part of the large-area LCD multi-display panel. All other climatic parameters are called up and displayed in the bottom part of the display by pressing the menu select button. Temperature values can be indicated either in $^{\circ}\text{C}$ or $^{\circ}\text{F}$. Because the minimum and maximum measured values are stored automatically, these can be called up at any time onto the display panel.



Unique calibration facility

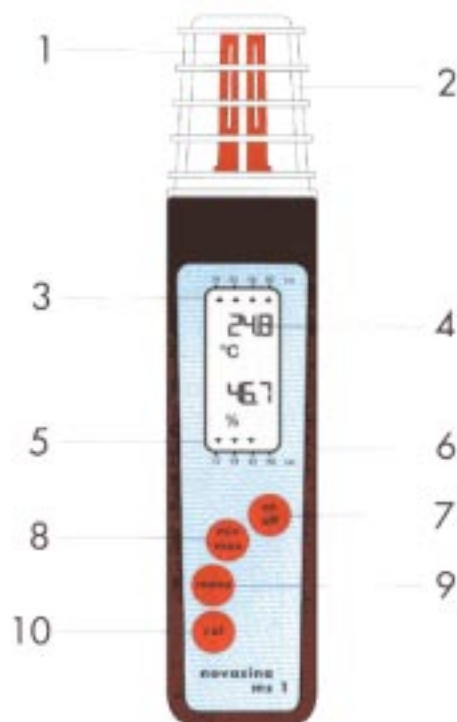
The calibration standards (the novasina sensor-checks), which are preserved for a practically unlimited period, guarantee especially precise and constant measurement results. These are based on saturated salt solutions and are internationally recognised. The unique calibration facility of novasina ms 1 enables checking of precision and subsequent automatic recalibration of up to 5 calibration points between 11% and 90% relative humidity. Control values and actual values can be called up by pressing the cal-button and will be indicated on the display panel.



Transmitting of measurement data onto a PC

The novasina ms 1 measuring system can be equipped with a RS-232 interface for the complex tasks of works management, such as, for example, temperature- und humidity-dependent controlling and regulating processes. This interface enables further processing of the measurement data using a PC, for example for statistics or graphics within a data bank.





1 Humidity and temperature measuring cell, 2 Protective cage, 3 Temperature stability value indicator, 4 Multiple display, 5 Humidity stability value indicator, 6 Interface for connection to PC, 7 Power supply on/off, 8 min/max value, 9 Menu selection button, 10 Calibration button

Technical data

Application of novasina ms 1: $-10\text{ }^{\circ}\text{C} \dots +50\text{ }^{\circ}\text{C}$
(with extension $\dots +80\text{ }^{\circ}\text{C}$)

	Humidity electrolytic measuring cell	Temperature
Measuring element	en CK-3	spez. NTC-element
Measuring range	6...98% rh	$-20\text{ }^{\circ}\text{C} \dots +80\text{ }^{\circ}\text{C}$
Accuracy	$\pm 1\%$ rh (20...90% rh)	$\pm 0.3\text{ }^{\circ}\text{C}$
Reproducibility	$\pm 0.3\%$ rh	$\pm 0.1\text{ }^{\circ}\text{C}$
Resolution	0.1%	0.1 $^{\circ}\text{C}$
Power supply	usual 9 V-battery or mains adaptor	
Dimensions	54 x 43 x 265 mm	
Weight	279 g	

Reference temperature for the above data: $25\text{ }^{\circ}\text{C}$

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novasina ms 1

The right measurement set for each application



novasina ms1-E with electrolytic measuring cell for precise and fast climatic measurements

novasina ms1-Set A with expander tube for measurements of humidity in masonry and concrete

novasina ms1-Set B with a sword sensor for spot-check measurement within paper stacks, granulates...

novasina ms1-Set L with a pin sensor for spot-check measurements of meat products, packaged goods...

novasina ms1-Set M with a box sensor for measurements of humidity in firm substances, coarse-grain products

Optional accessories

- mains adaptor to power circuit
- surface temperature sensor
- extension tube for measurements in ducts 240 mm
- additional humidity standard sensor check SC or salt tablets SAL
- protective filter
- RS-232 interface and software

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