Round-Hygro-Thermometer

Instruction for use 1.0165.00.006 / 1.0168.00.006 / 1.0169.00.006

1.0165.00.006

1. Range of application

Round-Hygro-Thermometers measure and indicate the relative humidity and the temperature of the surroundings.
Typical uses include: climatic monitoring in computer rooms, manufacturing halls, warehouses, offices, laboratories, (tree) nurseries, museums and galleries.

The accuracy of indication can be impaired in acidic or ammoniacal air. The Round-Hygro-Thermometer is only suitable for use in non-aggressive media and is not suitable for use in superpressure or in under-pressure.

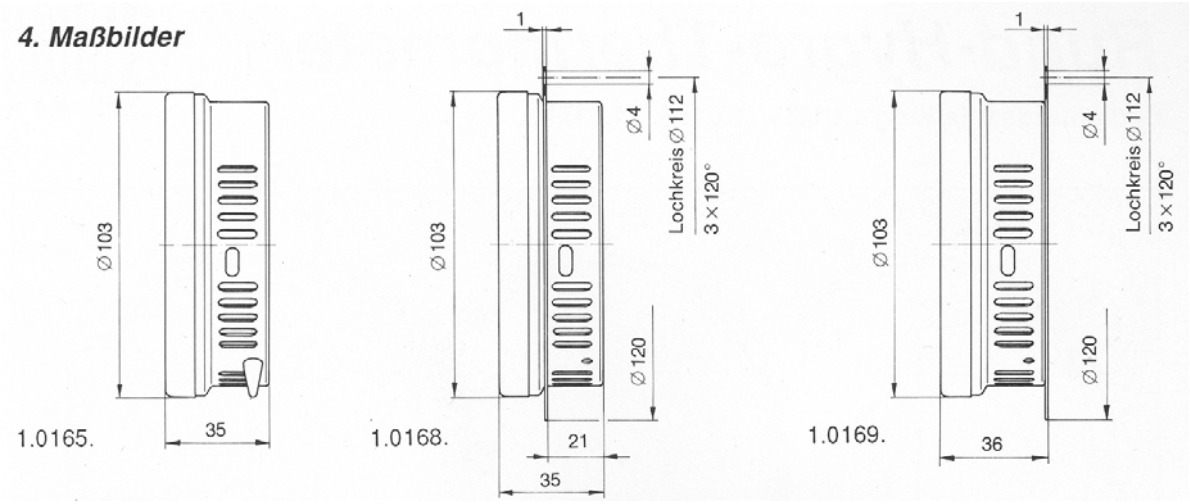
2. Technical data

Measuring range	: 10 ... 100 % rel. humidity - 20 ... + 40°C
Accuracy at ambient conditions 60% r.h and 20° C	: ± 3 % rel. humidity; ± 0,5 °C
Graduation	: 1 % rel. humidity; 1°C
Material	: brass, lacquered
Weight	: 0,3 kg

3. Models available

Order-no.	: **1.0165.00.006**	with feet and hook
	1.0168.00.006	with flange for install
	1.0169.00.006	with flange for wall - mounting

4. Scale drawing



5. Mode of operation

Humidity
Humidity measurements are made via a hair measuring element prepared by means of a special process. These measuring elements consists of several hairs whose length changes when the humidity changes. These changes in length - which are dependent on the humidity - are transferred to an indicator and can be read directly on the hygro-scale in % rel. humidity. The accuracy of indication can be impaired in acidic or ammoniacal air.

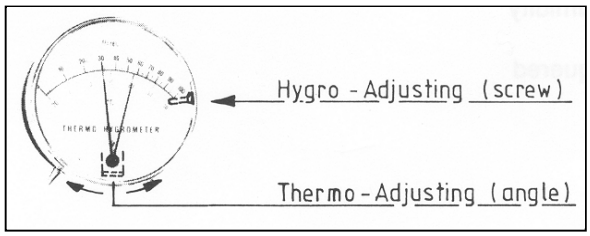
Temperature
Temperature measurements are carried out via a bimetallic measuring element which is bent into a spiral. The radius of the measuring element changes when the temperature fluctuates. This change in radius is conveyed over an axis with the aid of an indicator and indicated on a temperature scale in 0°C.

6. Regenerating and adjusting the hygro-measuring elements

„H“ measuring elements dry out at relative humidity below 60 %. This leads to an increase of ca. 5 % ore more relative humidity in the zero point. At 60 % relative humidity, maximum inaccuracy is attained in three weeks. Maximum inaccuracy is reached in even less time if the humidity value are even lower. This change can be corrected (regeneration) by placing the instrument in saturated air for several hours. Once regeneration has been completed, please check to make sure that the measuring element is adjusted to 95% relative humidity. This value can be set on the screw market in red.

7. Checking the thermo-measuring element

The accuracy of indication of the bimetallic element can be checked by carrying out a comparative measurement. Hang an accurate mercury thermometer next to the hygro-thermometer in a temperature-constant room. Compare the two temperatures in about 20 minutes. If the hygro-thermometer requires re-adjustment, then simply rotate the angle.



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