



HITY 4000

Humidity- and Temperature Measuring System



Application and Function

The humidity is an important parameter that has an influence on the quality of the product or process. HITY 4000 is successfully applied in many processes, such as air conditioning, cooling towers, drying plants, composting plants, store and production rooms of food and tobacco industry etc.

HITY 4000 is for installation in machinery, air duct or similar, too. For different operation purposes, Mütéc provides three lengths: 60 mm (Standard), 160 mm und 300 mm.

Additionally, the version HITY 4000w is applicable for wall mounting.

Examples

Because of high resistance and stability, HITY 4000 is an adequate product for demanding measurements of process and air-conditioning technology. Typical applications are as following:

Cooling Tower

Monitoring of condensation in cooling towers.

Air-Conditioning Technology

Monitoring and regulation of humidity in buildings and rooms.

Acclimatization of Plants

Maintaining the humidity in the process is essential for many products.

Drying Plants for Grain

Grain is stored in warehouses. High humidity has to be avoided preventing rot.

Gas Sterilization in Medical Technology

After packaging, the sterilization process of medical instruments is required. During sterilization, the humidity is an important parameter. Because of use of aggressive gases, such as ethylene oxide, the sensor has to stand during process.

The principle is the measurement of the altering impedance and capacity that is caused by humidity. A specific calibration for the process is not required.

Condensation does absolutely not affect the test probe.

The device has a PT100 – temperature sensor for automatic compensation.

Via 4-20 mA interface, values of humidity and temperature (optional) can be transferred.

Air Conditioning in Textile Industry

During fiber production, a constant humidity is required to avoid jamming of spray nozzles.

Tobacco Industry

Measurement of humidity in warehouses and production with vaporizing acids and aromas in the environment.

Food Industry

Application in rooms of cheese dairies during storage and aging with ammoniacal environment.

Manufacturer of Bakery Machines

Special ovens are applied for fast fermentation processes. In this processes, the regulation of the humidity is crucial.



Technical Data

Humidity

Measuring Range:	20 - 95%
Precision:	+/- 2%
Output Signal:	4 - 20 mA
Burden:	max. 600 Ohm

Temperature

Measuring Ranges:	T1 = +0°C - +50°C T2 = -30°C - +50°C T3 = -30°C - +70°C T4 = +0°C - +100°C T5 = -20°C - +100°C T6 = +0°C - +40°C
Precision:	+/- 1%
Output Signal:	4 bis 20 mA
Burden:	max. 600 Ohm

Technical Data

General

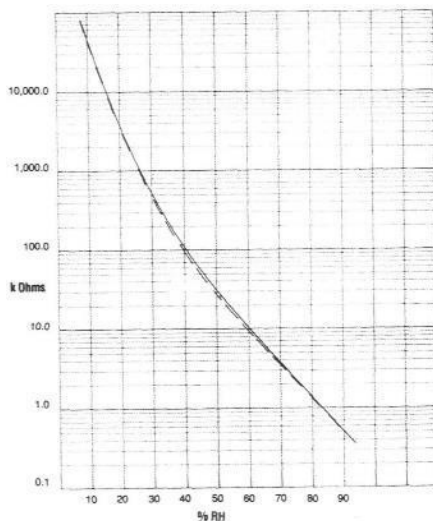
Case HITY 4000:	Polycarbonat (PC)
Case HITY 4000w:	Polycarbonat (PC)
Weight HITY 4000:	400 g
Weight HITY 4000w:	300 g
Protection Class:	IP65
Process Temperature:	+0°C bis +60°C
Process Temperature:	+5°C bis +60°C (kurzzeitig +100°C)
Storage Temperature:	-10° bis 80° C
Pressure:	0 bis 1 bar
Power Input:	max. 70 mA
Supply Voltage:	24 VDC

Test Measuring with Gas and Steam

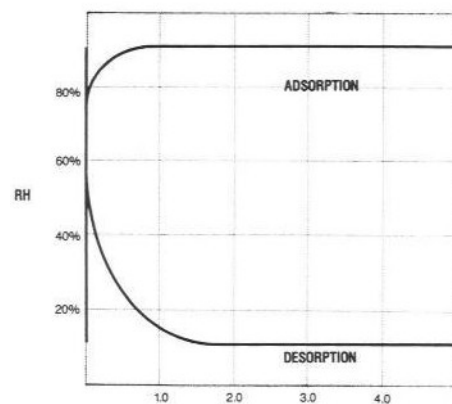
Influence on calibration curve really few. Measuring points with humidity of 30% and 70% and concentrations of 200 ppm and 1000 ppm.

Acetone	+ 1%
Toluol	- 1%
Isopropanol	- 1%
Hexane	+ 1%
Methanol	+ 1%
Trichlormethane	0%
Ethylglycol	+ 1%
Essigamylester	- 3%
Tetrachloromethane	+ 1%
Formaldehyde	- 2%

Hysteresis passing whole measuring range

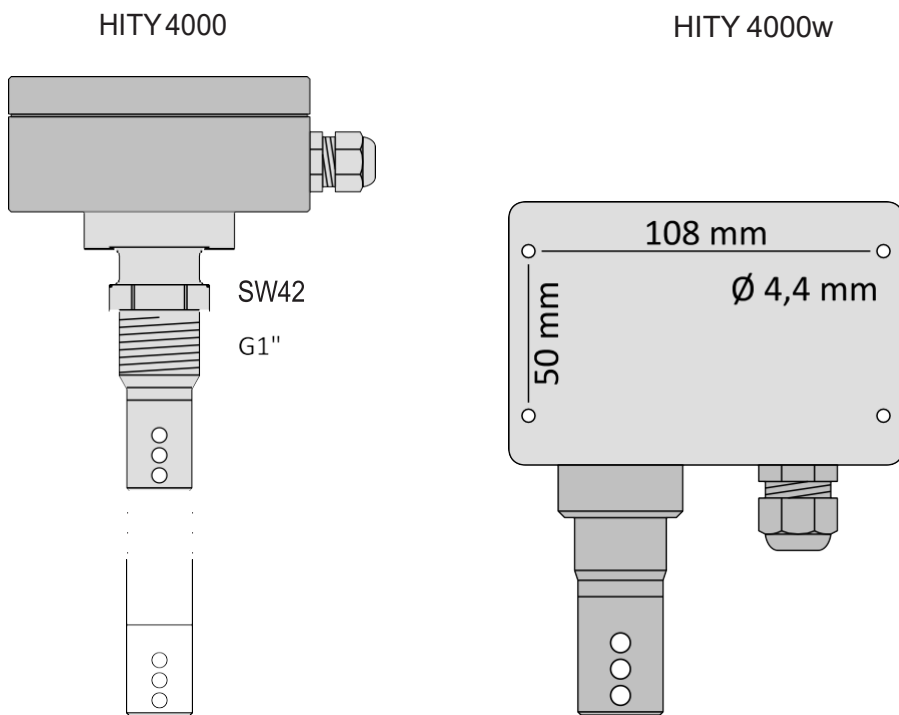


Speed of response 11-93% humidity with progressive change

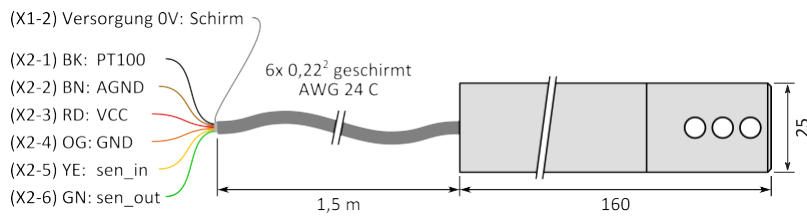


Time in minutes

Design:



Sensor



Connections

