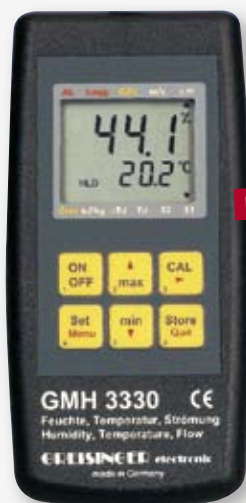


humidity, temperature and flow rate measuring device



DOUBLE DISPLAY OF HUMIDITY AND TEMPERATURE

- Calculation of dew point temperature, dew point distance and enthalpy
- Min-/Max value memory, Hold function
- Serial interface
- Additional temperature input (type K)

additional functions of GMH 3350

- 2 integrated logger functions
- Optical and acoustic min-/max- alarm
- Real-time clock with day, month and year

GMH 3330

climate measuring device, probe not included

GMH 3350

climate measuring device, probe not included, with data logger

Please order probes separately! (p.r.t. next page)
(No re-calibration required for probe exchange!)

Specification:

Measuring ranges:

Relative humidity:	0.0 ... 100.0 % RH
Ambient temperature:	-40.0 ... +120.0 °C (depending on TFS-probe)
Surface temperature:	-80.0 ... +250.0 °C
Flow rate:	depending on STS probe (p.r.t. next page)
Resolution:	0.1 % RH, 0.1 °C / 0.1 °F, 0.01 m/s

Accuracy (device) (±1 digit) (at nominal temperature = 25 °C)

Relative humidity:	±0.1 %
Ambient temperature (Pt1000):	±0.2 %
Surface temperature (NiCr-Ni):	±0.5 % of m.v. ±0.5 °C
Flow rate:	±0.1 %

Probes: No calibration required for exchange of humidity/temperature or flow rate probe. (p.r.t. page 21)

Probe connection: 6-pin screened Mini-DIN-socket

NiCr-Ni-connection: for miniature flat-pin plug

Display: two 4½ digit LCDs (12.4 mm or 7 mm high), as well as additional functional arrows.

Working temperature: -25 ... +50 °C

Relative humidity: 0 ... 95 % RH (non-condensing)

Storage temperature: -25 ... +70 °C

Pushbuttons: 6 membrane keys

Interface: serial interface, direct connection to RS232 or USB interface of a PC via electrically isolated interface adapter GRS 3100 or GRS 3105 resp. USB 3100 N (p.r.t. accessories).

Power supply: 9 V battery, type IEC 6F22 (included) as well as additional d.c. connector for external 10.5-12 V direct voltage supply. (suitable power supply: GNG10/3000)

Auto-Off-Function: 1 ... 120 min (can also be deactivated).

Power consumption: approx. 2.5 mA (incl. TFS0100)

Low battery warning: Δ and 'bat'

Housing dimensions: (device): 142 x 71 x 26 mm (H x W x D)
Impact-resistant ABS plastic housing, membrane keyboard. Front side IP65, integrated pop-up clip for table top or suspended use.

Weight: approx. 160 g (incl. battery)

Functions:

Min-/Max-value memory: memorizing of max. and min. values for humidity, temperature, dew point etc.

Hold function: By pressing a button the current values will be „frozen“.

Calculation of dew point: based upon humidity and temperature.

Calculation of dew point distance: by means of a surface measurement

Calculation of enthalpy (thermal content h of the air)

Adjustment-function for atmospheric humidity measurements

NiCr-Ni-temperature measuring: any standard NiCr-Ni-probe (type K) can be plugged in. Recommendation: GOF400VE (p.r.t. p. 128). A compensation value can be set for surface measurement if necessary.

Flow measurements:

Two different systems for averaging are integrated:

- **continuous averaging:** the average value displayed is calculated using the last measurements during the averaging time set.
- **averaging upon request:** by starting the current measuring value will be displayed for the averaging time. As soon as the time has expired the average value will be displayed, the device is in HOLD mode.
- **selectable averaging time:** 1 ... 30 seconds

Additional functions of the GMH3350:

Min-/Max-alarm: the measuring value is constantly monitored if they remain within the min./max. limits set.

- Alarm: 3 different alarm settings

- off: alarm function not activated
- on: visual alarm via display, integrated buzzer and interface
- no Sound: alarm via display and interface

- **Controlling function:** with the help of the switching module GAM3000 (optionally) electric equipment can be switched on/off or alarm memoried (p.r.t. accessories)

Logger functions:

- **manually:** 99 data sets (data recall via keyboard or interface)
- **cycle:** 5.400 data sets (data recall via interface)
adjustable cycle time: 1 s ... 1 h

Logger start and stop via the keyboard or interface. Comfortable read-out and display software (GSOFT3050) available as additional equipment.

Real-time clock: clock with day, month and year.

Accessories and spare parts:

GNG 10/3000

plug-in power supply

GKK 3500

case with cut-outs for GMH3xxx

GKK 3600

case with foam lining for universal use

USB 3100 N

interface converter, electrically isolated

ST-RN

device protection bag with cut out for sensor connection, suitable for: GMH3330, GMH3350

GSOFT 3050

software for the setting, data read-out and printing of all logger data stored for devices of the GMH3xxx-series with logger function

GAM 3000

Switching module for devices of the GMH3xxx-series incl. alarm output

GMH3330 incl. TFS0100E and WPF4

device incl. measuring probe, certificate of calibration and case (p.r.t. page 6)

Measuring probes for GMH 3330 and GMH 3350

Humidity / temperature

**Humidity/temperature:****TFS 0100 E**

(0.0 ... 100.0 % RH)

Humidity/temperature probe, exchangeable

Specification:	
Measuring ranges:	
Humidity:	0.0 ... 100.0 % RH (rec. range of application: 11 ... 90 % RH)
Temperature:	-40.0 ... +120.0 °C (attention: working temperature of electronics!)
Accuracy: (at nominal temperature = 25 °C)	
Humidity:	±2.5 % RH
Temperature:	±0.5 °C
Sensors:	
Humidity:	capacitive polymer humidity sensor
Temperature:	Pt1000, 1/3 DIN
Electronics:	
PC board with amplifier and data memory for sensor data (calibration, etc.) integrated in probe handle.	
Working temperature:	
-25 ... +60 °C (handle and electronics)	
-40 ... +100 °C (for short time up to +120 °C) (sensor head and tube)	
Relative humidity:	
0 ... +100 % RH	
Dimensions:	
Probe tube: Ø14 x 119 mm, plastic handle: Ø 19 x 135 mm, approx. 1 m PVC connection cable with 6-pin Mini-DIN-plug	
Weight:	
approx. 90 g	

Accessories: calibration device

Humidity reference cells work on the basis of physiochemical processes. A specific value of relative humidity adjusts itself over a saturated salt solution. The test chamber is separated from the solution by a diaphragm so that the sensor under test is protected against contamination by the solution. The test container can be used in all mounted positions.

GFN-SET1

Humidity reference cells for ~33 and ~76 %RH, probe adapter and robust carry case

GFN 33

humidity reference cell for ~33 % RH, incl. adapter

GFN 76

humidity reference cell for ~76 % RH, incl. adapter

Surface temperature:**GOF 400VE**

(p.r.t. page 128)

Quick-response surface probes for walls, floors etc.

GTF 300

(p.r.t. page 130)

Quick-response basic thermocouple probe for universal applications (surface measurement)

flow speed

**Water:****STS 005**

(0.05 ... 5.00 m/s)

Flow measuring probe with snap-on head, exchangeable

Specification:	
Sensor type:	windmill-type anemometer
Measuring range:	0.05 ... 5.00 m/s (water)
Accuracy:	of range ± 3 % of meas. value (at nominal temperature = 25 °C)
Permiss. angle flow:	±20°, without additional measuring faults
Working temperature:	0 ... +70 °C
Relative humidity:	0 ... +100 % RH (non-condensing)
Dimensions:	Probe head: Ø 11 x 15 mm, tube: Ø 15 mm, overall length 165 mm, required insertion opening: Ø 16 mm, approx. 5 m PVC connection cable with 6-pin Mini-DIN-plug
Weight:	approx. 75 g

Air:**STS 020**

(0.55 ... 20.00 m/s)

Flow measuring probe with snap-on head, calibrated and exchangeable.

Specification:	
Sensor type:	windmill-type anemometer
Measuring range:	0.55 ... 20.00 m/s (air)
Accuracy:	±1 % of range ± 3 % of meas. value (at nominal temperature) = 25 °C)
Permiss. angle flow:	±20°, without additional measuring faults
Working temperature:	0 ... +70 °C
Relative humidity:	0 ... +100 % RH (non-condensing)
Dimensions:	Probe head: Ø 11 x 15 mm, tube: Ø 15 mm, overall length 165 mm, required insertion opening: Ø 16 mm, approx. 5 m PVC connection cable with 6-pin Mini-DIN-plug
Weight:	approx. 75 g

Accessories and spare parts:**STE 005**

Spare snap-on head for STS 005

STE 020

Spare snap-on head for STS 020

GTS

GTS Telescopic rod (overall length 1 m)

Please specify when ordering - no retrofit assemblage possible!



picture shows GTS with assembled STS 020