

# A new generation of humidity measuring devices!

## One single device for humidity, temperature, flow rate



- Double display of humidity and temperature
- Compact probe for humidity and temperature measuring (probe exchange without re-calibration)
- Plug-in flow rate measuring probe
- Calculation of dew point temperature
- Additional NiCr-Ni-socket for surface measurement
- Compensation value for surface meas. can be switched on/off
- Calculation of dew point distance and enthalpy
- Min-/Max value memory, Hold function
- Serial interface, device can be connected to bus system (up to 5 devices can be connected to one PC interface)
- Battery/d.c. operation

### GMH 3330 probe not included

Please order probes separately! (p.r.t. page 20)  
(No re-calibration required for probe exchange!)

#### Specification :

##### Measuring ranges:

**Rel. humidity:** 0,0 ... 100,0 % r.h.  
**Ambient temperature:** -40,0 ... +120,0°C (depending on TFS-probe)  
**Surface temperature:** -80,0 ... +250,0°C  
**Flow rate:** depending on STS probe

**Resolution:** 0,1 %r.h.  
0,1 °C / 0,1 °F  
0,1 m/sec.

**Accuracy (device):** (±1 digit, at nominal temperature)

**Rel. 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:** (p.r.t. page 20)

No calibration required for exchange of humidity/temperature or flow rate probe.

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

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

**Display:** 2 four digit LCDs (12.4mm resp. 7mm high) for humidity and temperature (dew point etc.), min./ max. values, hold function, etc. as well as additional functional arrows.

**Working temperature:** 0 to +50°C

**Relative humidity:** 0 to +95%r.h. (non-condensing)

**Storage temperature:** -20 to +70°C

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

**Hold function:** by pressing a button the current meas. value and the corresponding temperature will be 'frozen'.

**Pushbuttons:** 6 membrane keys for ON/OFF-switch, selection of measuring range, min- and max-value memory, hold-function, etc.

**Interface:** serial interface (3.5mm jack connector), direct connection to RS232 interface of a PC via electrically isolated interface adapter GRS3100 or GRS3105 (p.r.t. accessories).

**Power supply:** 9V-battery, type IEC 6F22 (included) as well as additional d.c. connector (internal pin Ø 1.9mm) for external 10-12V direct voltage supply. (suitable power supply: GNG10/3000)

**Power-Off-function:** Device will be automatically switched off if no key is pressed/no interface communication takes place for the time of the power-off delay. The power-off delay can be set to values between 1 and 120 min.; it can be completely deactivated.

**Low battery warning:**  $\Delta$  and 'bAt'

**Power consumption:** approx. 3,5 mA (probe power not incl.)

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

**Weight:** approx. 160 g (incl. battery)

**Calculation of dew point:** Dew point temperature calculation based upon current humidity and temperature values.

**Adjustment of atmospheric humidity measurements:** TFS0100 type probes can be adjusted by means of a humidity normal line to compensate for sensor drift.

**NiCr-Ni-temperature measuring:** any standard NiCr-Ni-probe can be plugged in. For surface measuring we recommend GOF130VE (p.r.t. page 14).

A compensation value (to compensate for the loss when transferring heat from the meas. object to the probe) can be set and switched on/off for surface meas. if necessary.

**Calculation of dew point distance:** The dew point distance between the ambient atmosphere and e.g. a wall surface can be displayed by means of a surface measurement.

**Calculation of enthalpy:** The enthalpy calculation gives the thermal content h of the air.

#### **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:** as soon as the device has been switched on or the hold-key has been pressed, the device starts averaging for the averaging time set. During measuring the current measuring value will be displayed. As soon as the averaging time has expired the average value will be displayed, the device is in the HOLD mode.

- **selectable averaging time:** 1 ... 30 seconds

#### Accessories:

for suitable measuring probes for GMH 33xx p.r.t. page 20

**GNG 10/3000** plug-in power supply

**GB 9 V** spare 9V battery, type JEC 6F22

**GKK 3000** case with cut-outs for GMH3xxx

**GKK 3100** case with foam lining for universal use

**GRS 3100** interface converter, electrically isolated

**EBS 9M** software for transmission, recording and archiving measuring values obtained from one GMH3xxx (p.r.t. page 39).

for additional spares and accessories p.r.t. pages 38