HUMIDITY / TEMPERATURE AND FLOW METER

HIGHLIGHTS:

o Calculation of the dew point, the dew point distance and the enthalpy

o Additional temperature input (type K)

ADDITIONAL FUNCTIONS GMH 3351:

ALARM   LOGG

GMH 3331
Item No. 477975
Air humidity/temperature and flow meter, device only, without probe

GMH 3351
Item No. 477977
Air humidity/temperature and flow meter with data logger,
device only, without probe

GENERAL:

The GMH 33xx devices are universal precision hygro/thermometers with additional thermocouple input. The probes are interchangeable without recalibration because they hold their calibration data in an integrated memory (TFS...). The thermocouple input T2 is optimized to quickly record surface temperatures, e.g. to directly display the dew point distance.

APPLICATION:

• Heating/ventilation air conditioning (HVAC)
• Indoor air, meteorology, laboratory, research and education
• Energy assessment / optimization of buildings
• Research into the causes of structural damage

TECHNICAL SPECIFICATIONS:

Measuring ranges:

Relative humidity:	0.0..100.0 % RH
Room temperature:	-40.0 .. + 120.0 °C (corresponding to TFS sensor)
Surface temperature:	-80.0 .. + 250.0 °C
Flow velocity:	Sensor on request
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 %
Room temperature (Pt1000):	± 0.2 %
Surface temperature (type K):	± 0.5 % oM ± 0.5 °C
Sensors:	Air humidity / temperature or flow sensor (on request) can be exchanged without adjustment.
Sensor connection:	6-pole shielded mini-DIN socket
Type K connection:	for miniature flat connectors
Display:	two 4½-digit LCDs (12.4 mm or 7 mm high) and additional indicators
Working temperature:	-25 .. + 50 °C
Relative humidity:	0..95 % RH, not condensing
Storage temperature:	-25 .. + 70 °C
Control elements:	6 membrane buttons
Interface:	serial interface, via galvanically isolated interface converter GRS 3100 or GRS 3105 or USB 3100 N (accessory) directly to the RS232 or USB interface of a PC.

Power supply:	9 V battery and additional power supply socket for external 10.5..12 V DC voltage supply (suitable power supply: GNG10 / 3000)
Battery life:	approx. 120 h (with TFS0100)
Dew point calculation:	based on humidity and temperature
Dew point distance calculation:	with surface measurement
Calculation of enthalpy:	Thermal content H of the air
Adjustment function for humidity measurement	
Type K temperature measurement:	Any type K standard sensor (NiCr-Ni) can be connected. Recommendation: GOF 400 VE. Correction value for compensation of heat transfer losses can be activated.
Flow measurements:	Two different averaging methods are integrated: **Continuous averaging** Continuous display of the mean value. **Averaging at the push of a button (Average Hold)** After the start of the measurement, the current instantaneous value is displayed, the average value is displayed when the averaging time has elapsed, the device switches to HOLD. **Adjustable averaging time** 1..30 s
Logger function (GMH 3351):	**manual:** 1000 data records (retrieval of the data via keyboard or interface) **cyclical:** 5,300 data records (data retrieval via interface) a djustable cycle time: 1 s..1 h (max. 64 recording series) The logger is started and stopped via the keyboard or the interface. A convenient software GSOFT 3050 (accessory) is available for reading-out the logger data.
Analog output (GMH 3351):	0..1 V
Alarm (GMH 3351):	Input signal and alarm limits freely selectable. Alerting horn / visual / interface
Housing:	Made of impact-resistant ABS, membrane keyboard, transparent panel, integrated pop-up clip
Dimensions:	142 x 71 x 26 mm (H x W x D)
Weight:	approx. 160 g (including battery)
Scope of delivery:	Device, battery, operating instructions

HUMIDITY / TEMPERATURE AND FLOW METER

ACCESSORIES OR SPARE PARTS:

GNG 10/3000
Item No. 600273
Power supply for GMH 3XXX series

USB 3100 N
Item No. 601092
Interface converter GMH3xxx <=> PC, USB

GSOFT 3050
Item No. 601336
Windows software for GMH 3000 and GMH 5000 with logger for setting, read-out data and printing the saved logger data from devices of the GMH3xxx series with logger function

ST-RN
Item No. 601074
Device protective bag with cut-outs for sensor connections

GKK 3500
Item No. 601052
Device case soft cutout e.g. 2 x GMH 3000 or 5000

GKK 3600
Item No. 601062
Case with knob foam for universal use

GFN 11
Item No. 475197
Humidity reference cell including adapter for TFS / GHTU, 11 % RH

GFN 33
Item No. 475198
Humidity reference cell including adapter for TFS / GHTU, 33 % RH

GFN 75
Item No. 475199
Humidity reference cell including adapter for TFS / GHTU, 75 % RH

COMPLETE PACKAGES

GMH 3331-TFS-WPF4
Item No. 478087
Air humidity / temperature and flow meter set including device, TFS 0100E, ISO calibration certificate ~ 20 / ~ 40 / ~ 60 / ~ 80 % r.h., case GKK 3500

GMH 3351-TFS-WPF4
Item No. 478088
Air humidity / temperature and flow meter with data logger set including device, TFS 0100E, ISO calibration certificate ~ 20 / ~ 40 / ~ 60 / ~ 80 % r.h., case GKK 3500

GMH 3331-TFS-GOF
Item No. 478089
Air humidity / temperature and flow meter Set including device, TFS 0100E, GOF 400 VE, case GKK 3500

GMH 3351-TFS-GOF
Item No. 478090
Air humidity / temperature and flow meter with data logger, set TFS 0100E, GOF 400 VE, case GKK 3500