

Precision Hygro- / Thermo- / Barometer



- relative humidity, temperature and air pressure in just one instrument
- additional derived units: dew point temperature, wet bulb temperature, moisture content and absolute humidity
- min-/max-value memory for all measurements
- high accuracy by means of digital works calibration
- offset and slope correction for easy adjustment
- extrem low power consumption
- optional with serial interface

Application: Quick-response measurement of air pressure, atmospheric humidity, temperature and further derived units in EDP rooms, museums, churches, administrative and residential buildings, storage rooms, green houses, pools, production rooms, for cooling technology and air conditioning as well as for building engineers and for the evaluation of damage to buildings etc. Due to highly accurate sensors this device has a notably higher precision than comparable devices. Via the additional displaying possibilities ('dew point temperature Td', 'wet bulb temperature Twb', 'absolute humidity [g/m³]' and 'moisture content of the air [g/kg]') the current state of the air is precisely and concretely shown. Due to the low power consumption, the device can be run permanently, for example as "weather station".

Digital-Hygro-/Thermo-/Barometer

GFTB 100

Specification:

Measuring range:

temperature: -25.0°C ... +70.0 °C or -13.0 ... +158.0 °F
humidity: 0.0 ... 100.0 %RH (recommended range: 11 ... 90 %RH)
air pressure: 10.0 ... 1100.0 mbar

derived units:

dew point temperature Td: -40.0 ... 70.0 °C or -40.0 ... +158.0 °F
wet bulb temperature Twb: -27.0 ... 70.0 °C or -16.6 ... +158.0 °F
moisture content x: 0.0 ... 280.0 g/kg
absolute humidity d: 0.0 ... 200.0 g/m³

Resolution: 0.1%RH, 0.1°C/°F, 0.1mbar

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

temperature: ±0,5% of m.v. ±0,1°C (Pt1000 1/3 DIN B)
 humidity: ±1.5% linearity, ±1.5% hysteresis (at range 11 to 90%)
 air pressure: ±1.5mbar (750...1100mbar)

Measuring probe:

temperature: Pt1000
 humidity: capacitive polymere humidity sensor
 air pressure: piezoresistive pressure sensor hybrid

Response time: T₉₀ = 10 sec.

Display: 4½-digit, approx. 11mm high LCD-display

Operation elements: 3 keys for ON/OFF, min-/max-value display, hold

Nominal temperature: 25°C

Operating conditions:

Electronics: -25...70 °C; 0...80 %RH (non-condensing)
 Sensors: -25...70 °C; 0...100 %RH

Power supply: 9V-battery type IEC 6F22

Power consumption: approx. 30µA at 1 meas. / 60s (mode SLOW)
 approx. 70µA at 1 measurings / sec. (mode FAST)

Low battery warning: „BAT“

Auto-off function: when Auto Off is activated, the device switches auto-matically off, if keypad is not attended for a longer time (selectable 1..120min).

Interface (optional): serial interface, direct connection to RS232 or USB interface of a PC via electrically isolated interface adapter GRS3100 o. GRS3105 resp. USB3100 (accessories).

Min./max. value memory: Min and Max measuring values are stored for all ranges.

Hold key: the current measuring will be "frozen" (for all ranges)

Configurable display: The device can be configured by the user: display all measuring values alternating (2 or 4 sec. Cycle) or permanent with manual choice. Not required values can be suppressed.

Sea level adjustment: The displayed value of the barometer can be converted to air pressure at sea level. (therefore the altitude above sea level has to be entered)

Tendency indicator (for barometer): air pressure falling/increasing

Offset and Scale: digital offset- and scale adjustment of all sensors

Housing: impact resistant ABS-housing

approx. 106 x 67 x 30 mm (H x W x D), plus sensor head protruding at the longer side 35 mm long and 14 mm Ø, ie. overall length 141 mm.

Weight: approx. 130g incl. battery

Options: (upon upcharge)

- **GRS** serial interface

(ordering description: GFTB 100 / GRS)

- **KIT** USB-interface kit, consisting of:

- **interface option "GRS"** for the GFTB 100

- USB interface converter **USB 3100**

- multi channel software **EBS9M** (to record all 7 device units)

(ordering description: GFTB 100 / KIT)

Complete-offering:

GFTB 100 SET

(GFTB100 incl. infra-red thermometer GIM 530 MS)



The additional infrared thermometer contained in the **GFTB 100 SET** makes it easy to check mould-problem areas on walls etc.

The wall can easily scanned by means of the laser beam within very short time. When wall temperature falls below the critical dewpoint (this is, when the wall gets wet), the device alerts with an audible signal.

Additional advantages GFTB 100 SET:

- blindingly easy search for thermal bridges
- targeting laser for precise location even of inaccessible areas
- audible alarm below dewpoint
- fast evaluation of mould-problem areas

Note: for technical data for the infra-red thermometer GIM530MS please refer to catalog page 10.

Accessories:

GKK 252 case (235 x 185 x 48mm) with foam lining

WPF4 Certificate of calibration, humidity, for ISO9000ff (p.r.t. p. 4)

WPD5 Certificate of calibration, pressure, for ISO9000ff (p.r.t. p. 4)

miscellaneous accessories (cases, etc.) p.r.t. page 35