# PRECISION QUICK-RESPONSE THERMOMETER FOR THERMOCOUPLES

AUTOOFF
HOLD
ISO
MIN MAX
0°CORR


VERY QUICK RESPONSE TIMETIME!

HIGHLIGHTS:

- Serial interface (except GMH 3221)
- Correction factor for surface measuring can be switched on / off (except GMH 3221)

GMH 3221, GMH 3231 AND GMH 3251:

- 2 plug-in probes can be connected and read simultaneously
- Temperature differences

ADDITIONAL FUNCTIONS

GMH 3221 / 3231:

TARA

GMH 3251:

TARA ALARM LOGG

SUITABLE PROBES P.R.T. P. 32


*GMH 3221 connection*


*GMH 3231 / 51 connection*


*GMH 3211 connection*

NEW!

## GMH 3201
*Art. no. 474930*
Precision quick response thermometer Type K

## GMH 3211
*Art. no. 611381*
Precision quick response thermometer, universal

## GMH 3221
*Art. no. 611384*
Precision quick response thermometer, 2 channel Type K

## GMH 3231
*Art. no. 611382*
Precision quick response thermometer, 2 channel universal

## GMH 3251
*Art. no. 611383*
Precision quick response thermometer, 2 channel, logger

| Specifications: | GMH 3201 | GMH 3211 | GMH 3221 | GMH 3231 | GMH 3251 |
|---|---|---|---|---|---|
| **Thermocouples:** | K | K, J, T, N, S, E, B | K | K, J, T, N, S, E, B | K, J, T, N, S, E, B |
| **Measuring channels:** | 1 thermocouple input (type K balancing material) | | 2 thermocouple inputs (type K balancing material) | | |
| **Measuring ranges** | | | | | |
| **TypeK:** | -220.0 ... +1372.0 °C | -220.0 ... +1372.0 °C | -220.0 ... +1372.0 °C | -220.0 ... +1372.0 °C | -220.0 ... +1372.0 °C |
| **Type J:** | - | -200.0 ... +1100.0 °C | - | -200.0 ... +1100.0 °C | -200.0 ... +1100.0 °C |
| **Type T:** | - | -200.0 ... +400.0 °C | - | -200.0 ... +400.0 °C | -200.0 ... +400.0 °C |
| **Type N:** | - | -200.0 ... +1300.0 °C | - | -200.0 ... +1300.0 °C | -200.0 ... +1300.0 °C |
| **Type S:** | - | -50.0 ... +1768.0 °C | - | -50.0 ... +1768.0 °C | -50.0 ... +1768.0 °C |
| **Type E:** | - | -60.0 ... +850.0 °C NEW | - | -60.0 ... +850.0 °C NEW | -60.0 ... +850.0 °C NEW |
| **Type B:** | - | +300 ... +1750 °C NEW | - | +300 ... +1750 °C NEW | +300 ... +1750 °C NEW |
| **Accuracy: (at nominal temperature)** | ±(0.5 °C +0.2 % of m.v.) | ±(0.5 °C +0.2 % of m.v.) (J, K, N, T, E) ±(0.8 °C +0.4 % of m.v.) (S, B) | ±(0.5 °C +0.2 % of m.v.) | ±(0.5 °C +0.2 % of m.v.) (J, K, N, T, E) ±(0.8 °C +0.4 % of m.v.) (S, B) | |
| **Analog output:** | no | no | no | no | 0 ... 1 V |
| **Alarm:** | no | no | no | no | CH1, CH2, CH1+2, DIF |
| **Data logger:** | no | no | no | no | **manual:** 1.000 data sets **cyclic:** 10.000 data sets |
| **Probe connections (miniature flat plug):** | 1 | 1 | 2 | 2 | 2 |
| **Serial interface:** | - | 3-pin jack connector Ø 3.5 mm | - | 3-pin jack connector Ø 3.5 mm | 3-pin jack connector Ø 3.5 mm |
| **Difference measurement:** | | | Temperature difference probe 1 - probe 2 can be displayed if 2 probes are connected. | | |
| **Compensation value for surface measurements:** | - | adjustable | - | adjustable | adjustable |
| **Power supply:** | 9 V battery | 9 V battery, d.c. connector | 9 V battery | 9 V battery, d.c. connector | 9 V battery, d.c. connector |
| **Battery life:** | approx. 500 h | approx. 500 h | approx. 300 h | approx. 300 h | approx. 300 h |

## PRECISION QUICK-RESPONSE THERMOMETER FOR THERMOCOUPLES

| General specifications: | |
|---|---|
| **Resolution:** | 0.1 °C or 1 °C |
| **Working temperature:** | -25 ... +50 °C |
| **Display:** | two 4½-digit LCDs (12.4 mm and 7 mm high) |
| **Serial interface (except GMH 3201 and GMH 3221):** | 3-pole jack socket Ø 3.5 mm, direct connection to RS232 or USB interface of a PC via electrically isolated interface adapter GRS 310x or USB 3100 N (p.r.t. accessories). |
| **Data logger (GMH 3251 only):** | **manual:** 1.000 data sets<br>(fetch data via buttons or interface)<br>**cyclic:** 10.000 data sets<br>(fetch data via interface)<br>adjustable cycle time: 1 s ... 1 h<br>The logger is started or stopped by keypad or interface. The software GSOFT 3050 (see accessories) is available for comfortable read-out of logger data, see page 110. |
| **Housing:** | Impact-resistant ABS plastic housing, membrane keyboard, transparent panel, integrated pop-up clip |
| **Dimensions:** | 142 x 71 x 26 mm (H x W x D) |
| **Nominal temperature:** | 25 °C ±5 K |
| **Weight:** | approx. 155 g |
| **Scope of supply:** | device, battery, calibration protocol, manual |

**Features (except GMH3201 and -21):**

A correction factor can be entered for each probe connection for surface measurements. This optimally corrects the temperature difference of the measured surface relative to the environmental temperature in order to receive the most precise surface measurements possible, even in applications where infrared thermometers have their shortcomings, e.g. on shiny metallic surfaces!

**Accessories and spare parts:**

**GB 9 V**
*Art. no. 601115*
Spare battery 9V, type IEC 6F22

**GNG 10/3000**
*Art. no. 600273*
Plug-in power supply (220 / 240 V, 50 / 60 Hz), output voltage: 10.5 V / 10 mA, suitable for devices with power supply socket

**ST-RN**
*Art. no. 601074*
Nappa leathern device protection bag with 2 round cut-outs for sensor connection (1 x round, 1 x rectangular)

**ST-N2**
*Art. no. 601072*
Nappa leathern device protection bag with 2 rectangular cut-outs for sensor connection

**GKK 1100**
*Art. no. 601060*
Case with punched lining for universal application, 340 x 275 x 83 mm (W x H x D)

## 16 CHANNEL PRECISION QUICK-RESPONSE THERMOMETER FOR THERMOCOUPLES


HIGHLIGHTS:

- simultanous display of 4 inputs
- 800.000 measuring data storable
- for thermocouples type K, J, T, N, R, S, B, E


### HD32-8-16

*Art. no. 700077*
Precison-Thermocouple-Thermometer with 16 inputs and logger

**General:**

Ideal for complex temperature measuring tasks in which multiple temperature values must be measured, recorded and displayed at the same time.

**Application:**

Testing systems, drying and baking ovens, air conditioning control units, production and manufacturing processes, temperature monitoring in concrete or asphalt on roads and buildings

| Specifications: | | |
|---|---|---|
| **Thermocouples:** | K, J, T, N, R, S, B, E | |
| **Resolution:** | 0.05 °C or 0.1 °C | |
| **Measuring range: (depends on thermocouple)** | Type K: -200 °C ... +1370 °C<br>Type J: -100 °C ... +750 °C<br>Type T: -200 °C ... +400 °C<br>Type N: -200 °C ... +1300 °C | Type R: +200 °C ... +1480 °C<br>Type S: +200 °C ... +1480 °C<br>Type B: +200 °C ... +1800 °C<br>Type E: -200 °C ... +750 °C |
| **Accuracy: (depends on thermocouple)** | ±0.1 ... ±0.4 °C | |
| **Number of inputs:** | 16 | |
| **Operating conditions:** | -5 ... +50 °C working temperature, -25 ... +65 °C storage temperature, 0 ... 90 % relative humidity | |
| **Logger function:** | 800.000 data sets | |
| **Display:** | LCD display with background illumination, 128 x 64 pixel, simultanous display of 4 inputs | |
| **Serial interface:** | Communication via galvanically isolated 9-pin USB connecting cable | |
| **Power supply:** | 4 x 1.5 V alkaline batteries, via external 12 V DC mains adapter or via PC interface | |
| **Housing:** | ABS, IP64 | |
| **Dimensions:** | 220 x 180 x 50 mm | |
| **Weight:** | 1100 g | |
| **Scope of supply:** | Device, DeltaLog9 Software, carrying strap, batteries, manual | |

**Accessories and spare parts:**

**SWD-10**
*Art. no. 700039*
Plug in power supply for devices of the HD-handhelds, 12 V DC 1.0 A

**CP22**
*Art. no. 700078*
Interface Converter HD32-8 <=>PC, USB

Note:
Connection cable for PC and temperature sensors (page 31) must be ordered sparately.