

## Digital precision quick-response thermometer for thermocouples



- Correction factor for surface measuring can be switched on / off
- Serial interface

**5 DIFFERENT THERMOCOUPLES CAN  
BE USED! (TYPES J, K, N, S, T)**

suitable probes p.r.t. p. 128-130!

additional functions of GMH 3230 and GMH 3250

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

additional functions of GMH 3250

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

additional functions of GMH 3210

- Analog output 0 - 1 V

**GMH 3210**

precision quick-response thermometer, accessories not included, 1 plug-in probe input

**GMH 3230**

precision quick-response thermometer, accessories not included, 2 plug-in probe inputs

**GMH 3250**

precision quick-response thermometer, accessories not included, 2 plug-in probe inputs

Specifications:	GMH 3210	GMH 3230	GMH 3250
Thermocouples:	J, K, N, S, T	J, K, N, S, T	J, K, N, S, T
Resolution:	0.1 °C or 1 °C	0.1 °C or 1 °C	0.1 °C or 1 °C
Measuring range:	-220 °C ... +1750 °C (depending on thermocouples)		
Measuring ranges: (extract)			
Type K:	(MB1) -65.0 ... +300.0 °C		-199.9 ... +999.9 °C
	(MB2) -220 ... +1372 °C		-220 ... +1372 °C
	further measuring ranges online at <a href="http://www.greisinger.de">www.greisinger.de</a>		
Accuracy: (extract)			
Type K:	(for MB1) ±0.03 % of m.v. ±0.05 % f.s.	±0.03 % of m.v. ±0.05 % f.s. (T≥-60 °C) ±0.2 % of m.v. ±0.05 % f.s. (T<-60 °C)	
	(for MB2) ±0.08 % of m.v. ±0.1 % f.s.	±0.08 % of m.v. ±0.1 % f.s. (T≥-100 °C) ±1 °C ±0.1 % f.s. (T<-100 °C)	
Working temperature:	-25 ... +50 °C		-25 ... +50 °C
Probe connections:	1	2	2
Display:	two 4-digit LCDs (12.4 mm and 7 mm high)		
Output:	3-pin jack connector Ø 3.5 mm, configurable		
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).		
Analog output:	x	-	-
Power supply:	9V-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)		
Power consumption:	approx. 0.3 mA	approx. 1.6 mA	approx. 1.6 mA
Housing:	aus schlagfestem ABS, Folientastatur, Klarsichtscheibe. Frontseitig IP65, integrierter Aufstell-/Aufhängebügel		
Dimensions:	142 x 71 x 26 mm (H x W x D), weight: approx. 155 g		

Functions:	GMH 3210	GMH 3230	GMH 3250
Min./Max. value memory	x	x	x
Hold function	x	x	x
Auto-Off-function	x	x	x
Low battery warning	x	x	x

Special applications:	GMH 3210	GMH 3230	GMH 3250
Compensation value for surface measurements	x	x	x
Zero-point offset entry	x	x	x
Difference measurements	-	x	x
Tare/diff-function	-	x	x
Min-/Max-alarm	-	-	x
Logger functions	-	-	x
Real-time clock	-	-	x

**Functions:****Compensation value for surface measurements:**

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 measurements if required.

**Zero-point offset entry:**

By entering the offset temperature the parameter can be moved parallel to the calibration graph.

**Difference measurements:**

Temperature difference probe 1 - probe 2 can be displayed if 2 probes are connected.

**Tare/diff-function:**

Press button to set the difference display ,probe 1 - probe 2' to zero.

**Analog output:**

0 - 1 V, freely adjustable, resolution 13 bit, accuracy 0.05 % at nominal temperature

**Min-/Max-alarm:**

The meas. values of probe 1 or 2, probes 1 and 2 or the temperature difference are constantly monitored reg. the min. and max. values 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 memorised (see accessories).

**Logger functions:**

- manually: 99 data sets  
 (data recall via keyboard or interface)  
 - cycle: 9.999 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 (GSOFT 3050) available as additional equipment.

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