

Pt100 - High-Precision Thermometer



STANDARD
FUNCTIONS:



HIGHLIGHTS:

- Highest accuracy and resolution (0.01 °C)
- Suitable for all Pt100 4-wire probes with 4-pin miniature DIN-plug
- Freely adjustable analog output 0-1 V or serial interface
- incl. calibration protocol

ADDITIONAL FUNCTIONS AT GMH 3750:



REFERENCE METER

FOR ANY CALIBRATION REQUIREMENT

GMH 3710

Pt100 - High-Precision Thermometer,
Accessories not incl., 4-wire

GMH 3750

Pt100 - High-Precision Thermometer,
Accessories not incl., 4-wire, Data logger

Application:	reference measurings in liquids, soft media, air/gases.
Specifications:	
Measuring range:	-199.99 ... +199.99 °C resp. -200.0 ... + 850.0 °C -199.99 ... +199.99 °F resp. -328.0 ... +1562.0 °F
Resolution:	0.01 °C resp. 0.1 °C; 0.01 °F resp. 0.1 °F
Linearisation:	Curve according to DIN EN 60751. GMH 3750 add. supports an userdefined curve.
Accuracy: (±1 digit) (at nominal temperature = 25 °C)	≤ 0.03 °C / 0.06 °F at resolution 0.01° ≤ 0.1 °C / 0.2 °F at resolution 0.1°
Temperature drift:	≤ 0.002 °C / K
Probe:	Pt100, 4-wire, in acc. to DIN EN 60751
Input:	probe connection via 4-pin miniature DIN-plug
Nominal temperature:	25 °C
Working temperature:	-25 ... +50 °C
Relative humidity:	0 ... +95 % RH (non-condensing)
Storage temperature:	-25 ... +70 °C
Display:	two 4½ digit LCDs (12.4 mm or 7 mm high), as well as additional arrows.
Pushbuttons:	6 membrane keys
Output:	3-pin jack connector Ø 3.5 mm, choice between serial interface or analog output
- serial interface:	direct connection to RS232 or USB interface of a PC via electri- cally isolated interface adapter GRS 3100 or GRS 3105 resp. USB 3100 N (p.r.t. accessories).
- analog output:	0 - 1 V, freely adjustable (resolution 13 bit, accuracy 0.05 % at nominal temperature)

Power supply:	9 V-battery, type IEC 6F22 as well as additional d.c. connector for external 10.5-12 V voltage supply.
Power consumption:	approx. 1 mA
Housing:	Impact-resistant ABS plastic housing, membrane keyboard, transparent panel. Front side IP65, integrated pop-up clip
Dimensions:	142 x 71 x 26 mm (H x W x D)
Weight:	approx. 155 g
Scope of supply:	Device, battery, manual

additional at GMH 3750:
Userdefined sensor curve (50 interpolation points)

Accessories and spare parts:	
USB 3100 N	interface converter
GSOFT 3050	operating software (p.r.t. p. 77)
GNG 10 / 3000	power supply
ST-R1	device protection bag (p.r.t. p. 73)
GKK 1100	case (340 x 275 x 83 mm) with foam lining for universal use
GMHKonfig	(visit our homepage: Download --> Software)
Software description:	Comfortable software to edit the user defined sensor curve of the GMH 3750. (e.g. for calibration laboratories etc.)
Note:	please note that for the interface communication with the device a interface converter (GRS 3100, GRS 3105 or USB 3100 N) is necessary (p.r.t. page 74).

Calibrated Systems



Scope of supply:
Measuring device GMH 3750 or GMH 3710, temperature
probe GTF 401 1/3 DIN, plastic case GKK 3500 and
certificate of calibration with 3 calibration points.

General:

The overall error of a measuring consists of the sum of the instrument error and the probe error. To minimize the overall error, we offer calibrated and optimized systems below.

Due to their excellent system accuracy they are especially suitable for quality assurance according to ISO9000ff, as reference instruments in manufacturing processes, laboratory, service and maintenance, etc.

The system optimization is done via a special characteristic curve which is determined for each temperature probe separately and stored in the instrument (GMH 3750) or with probe adjusting via offset and slope input (GMH 3710).

GMH 3750/SET1

Measuring set incl. certificate of calibration

Specifications:	
optimized measuring range:	-20 ... +70 °C
Temperature probe:	GTF 401 1/3 DIN, Pt100, 4-wire
System accuracy:	better than 0.07 °C (at opt. range)
Calibration points:	-20 °C / 0 °C / 70 °C

GMH 3750/SET2

Measuring set incl. certificate of calibration

Specifications:	
optimized measuring range:	0 ... +250 °C
Temperature probe:	GTF 401 1/3 DIN, Pt100, 4-wire
System accuracy:	better than 0.3 °C (at opt. range)
Calibration points:	0 °C / 100 °C / 250 °C

GMH 3710/SET1

Measuring set incl. certificate of calibration

Specifications:	
optimized measuring range:	-20 ... +70 °C
Temperature probe:	GTF 401 1/3 DIN, Pt100, 4-wire
System accuracy:	better than 0.1 °C (at opt. range)
Calibration points:	-20 °C / 0 °C / 70 °C

GMH 3710/DKD1

Measuring set incl. DKD calibration certificate
DIN 17025

Specifications:	
optimized measuring range:	-20 ... +70 °C
Temperature probe:	GTF 401 1/3 DIN, Pt100, 4-wire
System accuracy:	better than 0.1 °C (at opt. range)
Calibration points:	-20 °C / 0 °C / 70 °C