

**RS Calibration**

Calibration and Repair Service

Serial No: 32408697

Cert No: 1834836

Cal Date: 13 Nov 2023

Recal Due:

DPN 175 Lammas Road, Corby, Northants, NN17 9RS

# **\*\*Calibration Certificate\*\***

## **Do Not Destroy**

Calibration Certificate Attached: 1834836

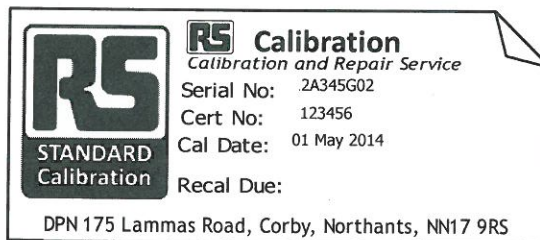
OD ref: 1227153539

GMH 3710 PT100 Type Digital Thermometer

first

## **IMPORTANT INFORMATION**

Simply detach the label in the top right hand corner of the new front sheet and apply to your instrument as required.



**For Re-Calibration of your unit please email:**

***calibration.uk@rs-components.com***

**or call us on 01536 405545 to arrange free collection. Please quote serial number when returning.**

 **Calibration**

# CERTIFICATE OF CALIBRATION

Issued by: RS Components Ltd

Date Issued: 13 Nov 2023

Certificate No. 1834836



Calibration and Repair Service

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DPN 175, Lammas Rd,  
Weldon Industrial Est  
Corby, Northants, NN17 9RS

Tel: 01536 405545  
Fax: 01536 401590

Beata Kuflewska

Client	TOTAL LABORATORY SERVICES LTD BLANDFORD FORUM DORSET DT11 8ST
Instrument	GMH 3710 PT100 Type Digital Thermometer
Serial No.	32408697
Client Reference	N/A
Procedure ID.	X01_8728_(Total_Lab_Services_Ltd)_(SYSC2_95%) Rev. P1
Probe Stock No.	620-1944
Probe Description	VWR PTX 341 PT100 type general purpose probe
Date of Calibration	13 Nov 2023

Equipment Used to Carry Out Calibration	Equipment ID.
Fluke 1586A Precision Temperature Scanner	Cal 1337
Fluke 1586-2588 DAQ-STAQ multiplexer	Cal 1338
HART 7340 high precision bath	Cal 1160
Platinum Resistance Probe	CAL 898, 1153

The measurements reported in this certificate were carried out using equipment whose values are traceable to national standards.

The management controls of the RS Calibration Laboratory are registered under the British Standard BS EN ISO 9001 : 2015 No. RS 00362.

### Uncertainties

The reported expanded uncertainties are based on a standard uncertainty multiplied by a coverage factor  $k = 2$ , providing a level of confidence of approximately 95%.

This certificate reports recorded values for the instrument 'As Received'.

For certificate statements of conformity see Appendix SCQAR 533

The following calibration results relate only to the items defined above.

This certificate may not be reproduced other than in full, except with the prior written approval of the issuing laboratory.

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## Environment

The ambient temperature and relative humidity throughout the calibration were  $(21 \pm 3) ^\circ\text{C}$  and  $(50 \pm 20) \%RH$  respectively.

## Method

The instrument was calibrated by comparison with reference resistance probes in a stirred liquid medium bath set to  $20^\circ\text{C}$ ,  $30^\circ\text{C}$ ,  $40^\circ\text{C}$  and  $50^\circ\text{C}$ .

The reference resistance probes were measured with resistance bridges to determine the true temperature of the test medium.

Prior to the calibration the instrument was allowed to stabilise in the laboratory for a period of not less than 30 minutes.

The immersion depth of the probe was not less than: 90 mm in a stirred bath

The tested resolution of the instrument is as the displayed result.

Reference Measured Temperature	Instrument Indicated	Instrument Error	Measurement Uncertainties	Specification allowance
20.046 °C	19.98 °C	-0.066 °C	$\pm 0.037 ^\circ\text{C}$	$\pm 0.220 ^\circ\text{C}$
30.068 °C	30.00 °C	-0.068 °C	$\pm 0.037 ^\circ\text{C}$	$\pm 0.240 ^\circ\text{C}$
40.080 °C	40.02 °C	-0.060 °C	$\pm 0.037 ^\circ\text{C}$	$\pm 0.260 ^\circ\text{C}$
50.052 °C	50.00 °C	-0.052 °C	$\pm 0.037 ^\circ\text{C}$	$\pm 0.280 ^\circ\text{C}$

**CALIBRATED BY:- BBK**

## Reported values

The uncertainties quoted refer to the recorded values, which include any identified contribution of the instrument under test and not to the ability of the instrument to maintain its calibration.

## Compliance to Specification

The specification used for the probe is found in :

BS EN 60751:2022, Table 2- Tolerance class of thermometers, Class A

is used in combination with the specification published by the manufacturer as found in the instrument's handbook and has been used to determine performance at the measured points.

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## Reported values not annotated

The instrument complies with the stated specification, due allowance having been made for the uncertainty of measurement which carries no implication regarding the long term stability of the instrument.

END OF CALIBRATION

## Appendix SCQAR533 Certificate Statements of conformity

RS Components is standardising how it reports conformity across all disciplines in line with requirements within **ISO/IEC: 17025:2017**.

Where the laboratory reports a statement of conformity to a specification, guidance has been drawn on reporting structure and decision rules from ILAC document series **ILAC-G8:09/2019**.

Unless otherwise instructed by you the Customer, acceptance limits applied are derived from the manufacturers specification or applicable standard (e.g. DIN, EEC, BS etc.) or where applicable: SCQAR532\_RS Standard Limits for Calipers, available on request.

The statements found on this certificate produced by RS Components Laboratory are as follow:

### 1) Reported values with **No Annotation**:

The instrument **passed** the stated specification, even with allowance having been made for the uncertainty of measurement, which carries no implication regarding the long-term stability of the instrument.

### 2) Reported values annotated with **"#"**

The measured result is a **conditional pass** to the limit but by a margin less than the measurement uncertainty, it is therefore not possible to state compliance based on the stated level of confidence.

### 3) Reported values annotated with **"##"**

The measured result is a **conditional fail** to the limit but by a margin less than the measurement uncertainty, it is therefore not possible to state compliance based on the stated level of confidence.

### 4) Reported values annotated with **"###"**

The measured result **failed** the stated specification, even with allowance having been made for the measurement uncertainty.

