

CERTIFICATE OF CALIBRATION



Issued by: **Gemini Data Loggers (UK) Ltd**

Date of Issue: **30-11-2020**

Certificate Name: **TCAL-848219-101**

Operator Name: **Carey Oliver**

Customer Name: **Berman S.I.**

Instrument: **TGP-4500 Plus 2 temperature/relative humidity data logger**

Serial Number: **848219**

Order Number: **93479**

Gemini Data Loggers (UK) Ltd
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Method of Calibration

The unit under test was set to record data and placed in a controlled environmental chamber, which was held at a constant 25°C while the relative humidity was varied. After the chamber had been stabilised for a period of not less than 20 minutes at each setting, the humidity of the chamber was measured using the laboratory standard. At the end of the calibration the corresponding readings from the unit under test were recorded.

The overall expanded uncertainty estimate for the calibration process is $\pm 0.9\%RH$ at 20%RH, $\pm 1.2\%RH$ at 50%RH, and $\pm 1.5\%RH$ at 80%RH

Laboratory Standard

Rotronic HF556WD9 relative humidity meter S/N 61105166 (CAL077) with UKAS calibration certificate number 36698 from accredited calibrator number 0766.

Measurements

Measurements Before Adjustments

Channel	Applied	Measured	Error
Humidity	18.03 %RH	20.66 %RH	2.63 %RH
Humidity	78.88 %RH	86.22 %RH	7.34 %RH

The measurements were all taken on **18-11-2020**

Measurements After Adjustments

Channel	Applied	Measured	Error
Humidity	18.03 %RH	17.89 %RH	-0.14 %RH
Humidity	78.88 %RH	78.69 %RH	-0.19 %RH

The measurements were all taken on **18-11-2020**

Certified by:  [Carey Oliver]

This product is calibrated by Gemini Data Loggers (UK) Ltd in accordance with their business management system which conforms to ISO9001.

Notes:

1. Calibration uncertainties quoted are for a confidence probability of not less than 95%.
2. Indicated values on the laboratory standard were corrected where necessary using data from the calibration certificate. Linear interpolation between calibration points is assumed.
3. This certificate may only be reproduced in full.

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CERTIFICATE OF CALIBRATION



Issued by: **Gemini Data Loggers (UK) Ltd**

Date of Issue: **30-11-2020**

Certificate Name: **TCAL-848219-102**

Operator Name: **Carey Oliver**

Customer Name: **Berman S.I.**

Instrument: **TGP-4500 Plus 2 temperature/relative humidity data logger**

Serial Number: **848219**

Order Number: **93479**

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Method of Calibration

The unit under test was set to record data and its sensor submersed in a high stability temperature bath. After a period at each setting of not less than 60 minutes for internal sensor data loggers or 10 minutes for data logger probes, to allow the temperature to equilibrate, the temperature of the bath was measured using the laboratory standard. At the end of the calibration the corresponding readings from the unit under test were recorded.

The calibration uncertainty for the temperature standard was $\pm 0.020^{\circ}\text{C}$.

Laboratory Standard

Ametek Jofra DTI-1000 high precision temperature indicator S/N 511629-01523 (CAL087) with primary PT100 probe S/N CAL087/b. The indicator and probe are UKAS calibrated as a system with certificate number UK20621 from accredited calibrator number 0807.

Measurements

Channel	Applied	Measured	Error
Temperature	0.16 °C	0.01 °C	-0.15 °C
Temperature	30.09 °C	30.04 °C	-0.05 °C

The measurements were all taken on **18-11-2020**

Certified by:  [Carey Oliver]

This product is calibrated by Gemini Data Loggers (UK) Ltd in accordance with their business management system which conforms to ISO9001.

Notes:

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