

# CERTIFICATE OF CALIBRATION

Device Name:	Cryo-Temp	ACCREDITED CERTIFICATE NUMBER:	NC-25-07-28-238
Serial Number:	T38142	Calibration laboratory environmental conditions:	18 °C – 25 °C, 20 %RH – 55 %RH
Device ID:	Temp	Calibration Date:	2025-07-24
Issued to:	Wessex Power Technology Ltd Blandford Forum, Dorset DT11 9EX United Kingdom	MadgeTech Calibration Laboratory uses the shared risk approach as defined in ILAC G8 when making compliance statements	

**Cryo-Temp** **- Temperature -** **Serial Number: T38142**

**Published Device Specifications**

**Calibrated using MadgeTech WI No:** 320409

**Calibrated Accuracy:**  $\pm 1.0 \text{ }^{\circ}\text{C}$   
**Calibrated Accuracy Range:** -86 °C to 35 °C

Channel 1 - Units of °C

Expanded Uncertainty is not applied to Device Error

Temperature	Standard	DUT Corrected	Device Error	Expanded Uncertainty
Env. Temperature	Actual Test Point	Device As Left	= Device - Standard	Expressed at approx. 95% confidence level using coverage factor k = 2
-	-79.921	-79.9	0.021	0.067
-	25.03	25.0	-0.03	0.32

**Applied Correction Values**

**Gain:** 1.0032939  
**Offset:** -0.12 °C

Reference Equipment	Serial #	Certificate #	Last Calibration Date	Next Calibration Due
Fluke / Hart 1502A / 5615	B41516 / 905885	2025003658	2025-03-04	2025-09-04
Vaisala HMP155	V3430350	2025005556	2025-03-27	2025-09-27

**Calibration Notes:**

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Calibrated By:

Daniel Woods

Approved By Quality Inspector:

*James Howe*

Date:

2025-07-31

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MadgeTech, Inc. Calibration laboratory located at 6 Warner Road Warner, NH 03278 603-456-2011  
The instrument identified was calibrated as a direct comparison to the reference standards listed which are traceable to the International System of Units (SI) through NIST or other National Metrology Institute and did not involve any sampling. Results reported on this certificate relate only to the serial number referenced at the time of calibration and do not imply certification of the device, process, system or technician by ANAB, NIST or any other federal agency. No allowance has been made for the stability of the device due to use, time, or wear. Such allowances would be made by the user. This certificate may not be reproduced, except in full, without written approval by MadgeTech, Inc.

# Certificate of Calibration

Page 1 of 3

Issued By Withnell Sensors Ltd  
Date of Issue 7 May 2025  
Certificate Number S42587.25042025

Approved Signatory  
Name Anne-Marie Goldie  
Signatory *A. Goldie*



Withnell Sensors Ltd  
The Old Silk Mill, Bury Lane, Withnell,  
Chorley, Lancashire PR6 8RX  
Tel: +44 (0)1254-831375  
Fax: +44 (0)1254-919403  
Email: service@withnellsensors.co.uk  
Web: www.withnellsensors.co.uk



4595

## Company Information

Deva Medical Electronics  
1 Chanders Court  
Picow Farm Road  
Runcorn  
WA7 4UH Cheshire  
United Kingdom

Order No BACS

Manufacturer MadgeTech

Model Cryo-Temp

Serial Number S42587

Description MadgeTech Ultra Low Temperature Logger

Calibration/Activity Date 23 April 2025 - 25 April 2025

Check In Date 09 April 2025

Performed By Tom Elstone

Location Withnell Sensors Ltd

Notes No comments

Identification Number SET33, P10

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# Certificate of Calibration

Withnell Sensors Ltd, The Old Silk Mill, Bury Lane,  
Withnell, Chorley, Lancashire PR6 8RX

Model: Cryo-Temp

Serial Number: S42587

Page 2 of 3

Certificate Number

S42587.25042025

Calibration Procedure

WSWI50 Datalogger

Calibration Method

The unit under test was calibrated by comparison using a high accurate temperature reference standard of known and traceable values of uncertainty. The measuring sensor(s) was placed in a liquid temperature bath and allowed to equilibrate for a period of 30 mins or more at each setpoint. Then a collection of samples were recorded and the average sample reported.

Calibration Remarks

Due to no adjustments being made, the AsLeft is equal to the AsFound.

Test Conditions

Ambient Temperature:  $22^{\circ}\text{C} \pm 4^{\circ}\text{C}$

Relative Humidity: 40%RH  $\pm 25\%$ RH

Reference Standards

[1] SN: AD014, Cert No: 02091\_AD014, Cal Due Date:  
06-August-2025

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# Certificate of Calibration

Withnell Sensors Ltd, The Old Silk Mill, Bury Lane,  
Withnell, Chorley, Lancashire PR6 8RX

Model: Cryo-Temp

Serial Number: S42587

Page 3 of 3

Certificate Number

S42587.25042025

## CHANNEL 1

### AS FOUND

Set-Point °C	Spec ±°C	Standard °C	UUT °C	Error °C	Measurement Uncertainty ±°C
-85	1.00	-85.005	-84.8	0.2	0.110

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## End of Results

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The results relate only to the items tested, calibrated or sampled. Unless specified, tolerances will be taken from the manufacturer's current specification.

If a pass/fail statement has been reported on this certificate it has been done on the basis of whether the limit was breached by the measured result, extended by the measurement uncertainty interval at a confidence level of 95% ( $k=2$ ). The statement of conformity is applicable only to the measurements where a pass/fail statement has been reported.

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# Certificate of Calibration

Page 1 of 3

Issued By Withnell Sensors Ltd  
Date of Issue 8 May 2025  
Certificate Number S42594.25042025

Approved Signatory  
Name Anne-Marie Goldie  
Signatory *A. Goldie*



Withnell Sensors Ltd  
The Old Silk Mill, Bury Lane, Withnell,  
Chorley, Lancashire PR6 8RX  
Tel: +44 (0)1254-831375  
Fax: +44 (0)1254-919403  
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Web: www.withnellsensors.co.uk



4595

## Company Information

Deva Medical Electronics  
1 Chanders Court  
Picow Farm Road  
Runcorn  
WA7 4UH Cheshire  
United Kingdom

Order No BACS

Manufacturer MadgeTech

Model Cryo-Temp

Serial Number S42594

Description MadgeTech Ultra Low Temperature Logger

Calibration/Activity Date 23 April 2025 - 25 April 2025

Check In Date 09 April 2025

Performed By Tom Elstone

Location Withnell Sensors Ltd

Notes No comments

Identification Number SET 33, P05

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# Certificate of Calibration

Withnell Sensors Ltd, The Old Silk Mill, Bury Lane,  
Withnell, Chorley, Lancashire PR6 8RX

Model: Cryo-Temp

Serial Number: S42594

Page 2 of 3

Certificate Number

S42594.25042025

Calibration Procedure

WSWI50 Datalogger

Calibration Method

The unit under test was calibrated by comparison using a high accurate temperature reference standard of known and traceable values of uncertainty. The measuring sensor(s) was placed in a liquid temperature bath and allowed to equilibrate for a period of 30 mins or more at each setpoint. Then a collection of samples were recorded and the average sample reported.

Calibration Remarks

Due to no adjustments being made, the AsLeft is equal to the AsFound.

Test Conditions

Ambient Temperature:  $22^{\circ}\text{C} \pm 4^{\circ}\text{C}$

Relative Humidity: 40%RH  $\pm 25\%$ RH

Reference Standards

[1] SN: AD014, Cert No: 02091\_AD014, Cal Due Date:  
06-August-2025

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# Certificate of Calibration

Withnell Sensors Ltd, The Old Silk Mill, Bury Lane,  
Withnell, Chorley, Lancashire PR6 8RX

Model: Cryo-Temp

Serial Number: S42594

Page 3 of 3

Certificate Number

S42594.25042025

## CHANNEL 1

### AS FOUND

Set-Point °C	Spec ±°C	Standard °C	UUT °C	Error °C	Measurement Uncertainty ±°C
-85	1.00	-84.998	-84.7	0.3	0.095

---

## End of Results

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The results relate only to the items tested, calibrated or sampled. Unless specified, tolerances will be taken from the manufacturer's current specification.

If a pass/fail statement has been reported on this certificate it has been done on the basis of whether the limit was breached by the measured result, extended by the measurement uncertainty interval at a confidence level of 95% ( $k=2$ ). The statement of conformity is applicable only to the measurements where a pass/fail statement has been reported.

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# Certificate of Calibration

Page 1 of 3

Issued By Withnell Sensors Ltd  
Date of Issue 7 May 2025  
Certificate Number S42598.25042025

Approved Signatory  
Name Anne-Marie Goldie  
Signatory *A. Goldie*



Withnell Sensors Ltd  
The Old Silk Mill, Bury Lane, Withnell,  
Chorley, Lancashire PR6 8RX  
Tel: +44 (0)1254-831375  
Fax: +44 (0)1254-919403  
Email: service@withnellsensors.co.uk  
Web: www.withnellsensors.co.uk



4595

## Company Information

Deva Medical Electronics  
1 Chanders Court  
Picow Farm Road  
Runcorn  
WA7 4UH Cheshire  
United Kingdom

Order No BACS

Manufacturer MadgeTech

Model Cryo-Temp

Serial Number S42598

Description MadgeTech Ultra Low Temperature Logger

Calibration/Activity Date 23 April 2025 - 25 April 2025

Check In Date 09 April 2025

Performed By Tom Elstone

Location Withnell Sensors Ltd

Notes No comments

Identification Number SET33, P08

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# Certificate of Calibration

Withnell Sensors Ltd, The Old Silk Mill, Bury Lane,  
Withnell, Chorley, Lancashire PR6 8RX

Model: Cryo-Temp

Serial Number: S42598

Page 2 of 3

Certificate Number

S42598.25042025

Calibration Procedure

WSWI50 Datalogger

Calibration Method

The unit under test was calibrated by comparison using a high accurate temperature reference standard of known and traceable values of uncertainty. The measuring sensor(s) was placed in a liquid temperature bath and allowed to equilibrate for a period of 30 mins or more at each setpoint. Then a collection of samples were recorded and the average sample reported.

Calibration Remarks

Due to no adjustments being made, the AsLeft is equal to the AsFound.

Test Conditions

Ambient Temperature:  $22^{\circ}\text{C} \pm 4^{\circ}\text{C}$

Relative Humidity: 40%RH  $\pm 25\%$ RH

Reference Standards

[1] SN: AD014, Cert No: 02091\_AD014, Cal Due Date:  
06-August-2025

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# Certificate of Calibration

Withnell Sensors Ltd, The Old Silk Mill, Bury Lane,  
Withnell, Chorley, Lancashire PR6 8RX

Model: Cryo-Temp

Serial Number: S42598

Page 3 of 3

Certificate Number

S42598.25042025

## CHANNEL 1

### AS FOUND

Set-Point °C	Spec ±°C	Standard °C	UUT °C	Error °C	Measurement Uncertainty ±°C
-85	1.00	-85.005	-84.9	0.1	0.110

---

## End of Results

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The results relate only to the items tested, calibrated or sampled. Unless specified, tolerances will be taken from the manufacturer's current specification.

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# Certificate of Calibration

Page 1 of 3

Issued By Withnell Sensors Ltd  
Date of Issue 7 May 2025  
Certificate Number S42625.25042025

Approved Signatory  
Name Anne-Marie Goldie  
Signatory *A. Goldie*



Withnell Sensors Ltd  
The Old Silk Mill, Bury Lane, Withnell,  
Chorley, Lancashire PR6 8RX  
Tel: +44 (0)1254-831375  
Fax: +44 (0)1254-919403  
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Web: www.withnellsensors.co.uk



4595

## Company Information

Deva Medical Electronics  
1 Chanders Court  
Picow Farm Road  
Runcorn  
WA7 4UH Cheshire  
United Kingdom

Order No BACS

Manufacturer MadgeTech

Model Cryo-Temp

Serial Number S42625

Description MadgeTech Ultra Low Temperature Logger

Calibration/Activity Date 23 April 2025 - 25 April 2025

Check In Date 09 April 2025

Performed By Tom Elstone

Location Withnell Sensors Ltd

Notes No comments

Identification Number SET 33, P04

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# Certificate of Calibration

Withnell Sensors Ltd, The Old Silk Mill, Bury Lane,  
Withnell, Chorley, Lancashire PR6 8RX

Model: Cryo-Temp

Serial Number: S42625

Page 2 of 3

Certificate Number

S42625.25042025

Calibration Procedure

WSWI50 Datalogger

Calibration Method

The unit under test was calibrated by comparison using a high accurate temperature reference standard of known and traceable values of uncertainty. The measuring sensor(s) was placed in a liquid temperature bath and allowed to equilibrate for a period of 30 mins or more at each setpoint. Then a collection of samples were recorded and the average sample reported.

Calibration Remarks

Due to no adjustments being made, the AsLeft is equal to the AsFound.

Test Conditions

Ambient Temperature:  $22^{\circ}\text{C} \pm 4^{\circ}\text{C}$

Relative Humidity: 40%RH  $\pm 25\%$ RH

Reference Standards

[1] SN: AD014, Cert No: 02091\_AD014, Cal Due Date:  
06-August-2025

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# Certificate of Calibration

Withnell Sensors Ltd, The Old Silk Mill, Bury Lane,  
Withnell, Chorley, Lancashire PR6 8RX

Model: Cryo-Temp

Serial Number: S42625

Page 3 of 3

Certificate Number

S42625.25042025

## CHANNEL 1

### AS FOUND

Set-Point °C	Spec ±°C	Standard °C	UUT °C	Error °C	Measurement Uncertainty ±°C
-85	1.00	-85.005	-84.9	0.1	0.110

---

## End of Results

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The results relate only to the items tested, calibrated or sampled. Unless specified, tolerances will be taken from the manufacturer's current specification.

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# Certificate of Calibration

Page 1 of 3

Issued By Withnell Sensors Ltd  
Date of Issue 7 May 2025  
Certificate Number S42950.25042025

Approved Signatory  
Name Anne-Marie Goldie  
Signatory *A. Goldie*



Withnell Sensors Ltd  
The Old Silk Mill, Bury Lane, Withnell,  
Chorley, Lancashire PR6 8RX  
Tel: +44 (0)1254-831375  
Fax: +44 (0)1254-919403  
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Web: www.withnellsensors.co.uk



4595

## Company Information

Deva Medical Electronics  
1 Chanders Court  
Picow Farm Road  
Runcorn  
WA7 4UH Cheshire  
United Kingdom

Order No BACS

Manufacturer MadgeTech

Model Cryo-Temp

Serial Number S42950

Description MadgeTech Ultra Low Temperature Logger

Calibration/Activity Date 23 April 2025 - 25 April 2025

Check In Date 09 April 2025

Performed By Tom Elstone

Location Withnell Sensors Ltd

Notes No comments

Identification Number SET 33, P06

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# Certificate of Calibration

Withnell Sensors Ltd, The Old Silk Mill, Bury Lane,  
Withnell, Chorley, Lancashire PR6 8RX

Model: Cryo-Temp

Serial Number: S42950

Page 2 of 3

Certificate Number

S42950.25042025

Calibration Procedure

WSWI50 Datalogger

Calibration Method

The unit under test was calibrated by comparison using a high accurate temperature reference standard of known and traceable values of uncertainty. The measuring sensor(s) was placed in a liquid temperature bath and allowed to equilibrate for a period of 30 mins or more at each setpoint. Then a collection of samples were recorded and the average sample reported.

Calibration Remarks

Due to no adjustments being made, the AsLeft is equal to the AsFound.

Test Conditions

Ambient Temperature:  $22^{\circ}\text{C} \pm 4^{\circ}\text{C}$

Relative Humidity: 40%RH  $\pm 25\%$ RH

Reference Standards

[1] SN: AD014, Cert No: 02091\_AD014, Cal Due Date:  
06-August-2025

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# Certificate of Calibration

Withnell Sensors Ltd, The Old Silk Mill, Bury Lane,  
Withnell, Chorley, Lancashire PR6 8RX

Model: Cryo-Temp

Serial Number: S42950

Page 3 of 3

Certificate Number

S42950.25042025

## CHANNEL 1

### AS FOUND

Set-Point °C	Spec ±°C	Standard °C	UUT °C	Error °C	Measurement Uncertainty ±°C
-85	1.00	-85.005	-84.8	0.2	0.110

---

## End of Results

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The results relate only to the items tested, calibrated or sampled. Unless specified, tolerances will be taken from the manufacturer's current specification.

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Date of Issue 8 May 2025  
Certificate Number S42295.25042025

Approved Signatory  
Name Anne-Marie Goldie  
Signatory *A. Goldie*



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The Old Silk Mill, Bury Lane, Withnell,  
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## Company Information

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1 Chanders Court  
Picow Farm Road  
Runcorn  
WA7 4UH Cheshire  
United Kingdom

Order No BACS

Manufacturer MadgeTech

Model Cryo-Temp

Serial Number S42295

Description MadgeTech Ultra Low Temperature Logger

Calibration/Activity Date 23 April 2025 - 25 April 2025

Check In Date 09 April 2025

Performed By Tom Elstone

Location Withnell Sensors Ltd

Notes No comments

Identification Number SET 33, P07

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# Certificate of Calibration

Withnell Sensors Ltd, The Old Silk Mill, Bury Lane,  
Withnell, Chorley, Lancashire PR6 8RX

Model: Cryo-Temp

Serial Number: S42295

Page 2 of 3

Certificate Number

S42295.25042025

Calibration Procedure

WSWI50 Datalogger

Calibration Method

The unit under test was calibrated by comparison using a high accurate temperature reference standard of known and traceable values of uncertainty. The measuring sensor(s) was placed in a liquid temperature bath and allowed to equilibrate for a period of 30 mins or more at each setpoint. Then a collection of samples were recorded and the average sample reported.

Calibration Remarks

Due to no adjustments being made, the AsLeft is equal to the AsFound.

Test Conditions

Ambient Temperature:  $22^{\circ}\text{C} \pm 4^{\circ}\text{C}$

Relative Humidity: 40%RH  $\pm 25\%$ RH

Reference Standards

[1] SN: AD014, Cert No: 02091\_AD014, Cal Due Date: 06-August-2025

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# Certificate of Calibration

Withnell Sensors Ltd, The Old Silk Mill, Bury Lane,  
Withnell, Chorley, Lancashire PR6 8RX

Model: Cryo-Temp

Serial Number: S42295

Page 3 of 3

Certificate Number

S42295.25042025

## CHANNEL 1

### AS FOUND

Set-Point °C	Spec ±°C	Standard °C	UUT °C	Error °C	Measurement Uncertainty ±°C
-85	1.00	-84.998	-84.8	0.2	0.095

---

## End of Results

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# Certificate of Calibration

Page 1 of 3

Issued By Withnell Sensors Ltd  
Date of Issue 8 May 2025  
Certificate Number S42304.25042025

Approved Signatory  
Name Anne-Marie Goldie  
Signatory *A. Goldie*



Withnell Sensors Ltd  
The Old Silk Mill, Bury Lane, Withnell,  
Chorley, Lancashire PR6 8RX  
Tel: +44 (0)1254-831375  
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Web: www.withnellsensors.co.uk



4595

## Company Information

Deva Medical Electronics  
1 Chanders Court  
Picow Farm Road  
Runcorn  
WA7 4UH Cheshire  
United Kingdom

Order No BACS

Manufacturer MadgeTech

Model Cryo-Temp

Serial Number S42304

Description MadgeTech Ultra Low Temperature Logger

Calibration/Activity Date 23 April 2025 - 25 April 2025

Check In Date 09 April 2025

Performed By Tom Elstone

Location Withnell Sensors Ltd

Notes No comments

Identification Number SET 33, P03

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# Certificate of Calibration

Withnell Sensors Ltd, The Old Silk Mill, Bury Lane,  
Withnell, Chorley, Lancashire PR6 8RX

Model: Cryo-Temp

Serial Number: S42304

Page 2 of 3

Certificate Number

S42304.25042025

Calibration Procedure

WSWI50 Datalogger

Calibration Method

The unit under test was calibrated by comparison using a high accurate temperature reference standard of known and traceable values of uncertainty. The measuring sensor(s) was placed in a liquid temperature bath and allowed to equilibrate for a period of 30 mins or more at each setpoint. Then a collection of samples were recorded and the average sample reported.

Calibration Remarks

Due to no adjustments being made, the AsLeft is equal to the AsFound.

Test Conditions

Ambient Temperature:  $22^{\circ}\text{C} \pm 4^{\circ}\text{C}$

Relative Humidity: 40%RH  $\pm 25\%$ RH

Reference Standards

[1] SN: AD014, Cert No: 02091\_AD014, Cal Due Date: 06-August-2025

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Withnell, Chorley, Lancashire PR6 8RX

Model: Cryo-Temp

Serial Number: S42304

Page 3 of 3

Certificate Number

S42304.25042025

## CHANNEL 1

### AS FOUND

Set-Point °C	Spec ±°C	Standard °C	UUT °C	Error °C	Measurement Uncertainty ±°C
-85	1.00	-84.998	-84.7	0.3	0.095

---

## End of Results

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The results relate only to the items tested, calibrated or sampled. Unless specified, tolerances will be taken from the manufacturer's current specification.

If a pass/fail statement has been reported on this certificate it has been done on the basis of whether the limit was breached by the measured result, extended by the measurement uncertainty interval at a confidence level of 95% ( $k=2$ ). The statement of conformity is applicable only to the measurements where a pass/fail statement has been reported.

This certificate is issued in accordance with the laboratory accreditation requirements of the United Kingdom Accreditation Service. It provides traceability of measurement to the SI system of units and/or to units of measurement realised at the National Physical Laboratory or other recognised national metrology institutes. This certificate may not be reproduced other than in full, except with the prior written approval of the issuing laboratory.

# Certificate of Calibration

Page 1 of 3

Issued By Withnell Sensors Ltd  
Date of Issue 8 May 2025  
Certificate Number S42311.25042025

Approved Signatory  
Name Anne-Marie Goldie  
Signatory *A. Goldie*



Withnell Sensors Ltd  
The Old Silk Mill, Bury Lane, Withnell,  
Chorley, Lancashire PR6 8RX  
Tel: +44 (0)1254-831375  
Fax: +44 (0)1254-919403  
Email: service@withnellsensors.co.uk  
Web: www.withnellsensors.co.uk



4595

## Company Information

Deva Medical Electronics  
1 Chanders Court  
Picow Farm Road  
Runcorn  
WA7 4UH Cheshire  
United Kingdom

Order No BACS

Manufacturer MadgeTech

Model Cryo-Temp

Serial Number S42311

Description MadgeTech Ultra Low Temperature Logger

Calibration/Activity Date 23 April 2025 - 25 April 2025

Check In Date 09 April 2025

Performed By Tom Elstone

Location Withnell Sensors Ltd

Notes No comments

Identification Number SET 33, P11

This certificate is issued in accordance with the laboratory accreditation requirements of the United Kingdom Accreditation Service. It provides traceability of measurement to the SI system of units and/or to units of measurement realised at the National Physical Laboratory or other recognised national metrology institutes. This certificate may not be reproduced other than in full, except with the prior written approval of the issuing laboratory.

# Certificate of Calibration

Withnell Sensors Ltd, The Old Silk Mill, Bury Lane,  
Withnell, Chorley, Lancashire PR6 8RX

Model: Cryo-Temp

Serial Number: S42311

Page 2 of 3

Certificate Number

S42311.25042025

Calibration Procedure

WSWI50 Datalogger

Calibration Method

The unit under test was calibrated by comparison using a high accurate temperature reference standard of known and traceable values of uncertainty. The measuring sensor(s) was placed in a liquid temperature bath and allowed to equilibrate for a period of 30 mins or more at each setpoint. Then a collection of samples were recorded and the average sample reported.

Calibration Remarks

Due to no adjustments being made, the AsLeft is equal to the AsFound.

Test Conditions

Ambient Temperature:  $22^{\circ}\text{C} \pm 4^{\circ}\text{C}$

Relative Humidity: 40%RH  $\pm 25\%$ RH

Reference Standards

[1] SN: AD014, Cert No: 02091\_AD014, Cal Due Date: 06-August-2025

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# Certificate of Calibration

Withnell Sensors Ltd, The Old Silk Mill, Bury Lane,  
Withnell, Chorley, Lancashire PR6 8RX

Model: Cryo-Temp

Serial Number: S42311

Page 3 of 3

Certificate Number

S42311.25042025

## CHANNEL 1

### AS FOUND

Set-Point °C	Spec ±°C	Standard °C	UUT °C	Error °C	Measurement Uncertainty ±°C
-85	1.00	-84.998	-84.6	0.4	0.095

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## End of Results

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The results relate only to the items tested, calibrated or sampled. Unless specified, tolerances will be taken from the manufacturer's current specification.

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# Certificate of Calibration

Page 1 of 3

Issued By Withnell Sensors Ltd  
Date of Issue 7 May 2025  
Certificate Number S42314.25042025

Approved Signatory  
Name Anne-Marie Goldie  
Signatory *A. Goldie*



Withnell Sensors Ltd  
The Old Silk Mill, Bury Lane, Withnell,  
Chorley, Lancashire PR6 8RX  
Tel: +44 (0)1254-831375  
Fax: +44 (0)1254-919403  
Email: service@withnellsensors.co.uk  
Web: www.withnellsensors.co.uk



4595

## Company Information

Deva Medical Electronics  
1 Chanders Court  
Picow Farm Road  
Runcorn  
WA7 4UH Cheshire  
United Kingdom

Order No BACS

Manufacturer MadgeTech

Model Cryo-Temp

Serial Number S42314

Description MadgeTech Ultra Low Temperature Logger

Calibration/Activity Date 23 April 2025 - 25 April 2025

Check In Date 09 April 2025

Performed By Tom Elstone

Location Withnell Sensors Ltd

Notes No comments

Identification Number SET33, P09

This certificate is issued in accordance with the laboratory accreditation requirements of the United Kingdom Accreditation Service. It provides traceability of measurement to the SI system of units and/or to units of measurement realised at the National Physical Laboratory or other recognised national metrology institutes. This certificate may not be reproduced other than in full, except with the prior written approval of the issuing laboratory.

# Certificate of Calibration

Withnell Sensors Ltd, The Old Silk Mill, Bury Lane,  
Withnell, Chorley, Lancashire PR6 8RX

Model: Cryo-Temp

Serial Number: S42314

Page 2 of 3

Certificate Number

S42314.25042025

Calibration Procedure

WSWI50 Datalogger

Calibration Method

The unit under test was calibrated by comparison using a high accurate temperature reference standard of known and traceable values of uncertainty. The measuring sensor(s) was placed in a liquid temperature bath and allowed to equilibrate for a period of 30 mins or more at each setpoint. Then a collection of samples were recorded and the average sample reported.

Calibration Remarks

Due to no adjustments being made, the AsLeft is equal to the AsFound.

Test Conditions

Ambient Temperature:  $22^{\circ}\text{C} \pm 4^{\circ}\text{C}$

Relative Humidity: 40%RH  $\pm 25\%$ RH

Reference Standards

[1] SN: AD014, Cert No: 02091\_AD014, Cal Due Date:  
06-August-2025

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# Certificate of Calibration

Withnell Sensors Ltd, The Old Silk Mill, Bury Lane,  
Withnell, Chorley, Lancashire PR6 8RX

Model: Cryo-Temp

Serial Number: S42314

Page 3 of 3

Certificate Number

S42314.25042025

## CHANNEL 1

### AS FOUND

Set-Point °C	Spec ±°C	Standard °C	UUT °C	Error °C	Measurement Uncertainty ±°C
-85	1.00	-85.005	-84.8	0.2	0.110

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## End of Results

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The results relate only to the items tested, calibrated or sampled. Unless specified, tolerances will be taken from the manufacturer's current specification.

If a pass/fail statement has been reported on this certificate it has been done on the basis of whether the limit was breached by the measured result, extended by the measurement uncertainty interval at a confidence level of 95% ( $k=2$ ). The statement of conformity is applicable only to the measurements where a pass/fail statement has been reported.

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# CERTIFICATE OF CALIBRATION



Deva Medical  
1 Chandlers Court, Picow Farm Road, Runcorn, Cheshire  
Tel 01928 567571  
calibration@devamedical.co.uk  
www.devamedical.co.uk



9385

**Certificate No:** UKAS 35336  
**Date Of Issue:** 2nd May 2025  
**Date Of Calibration:** 2nd May 2025  
**Issue No:** 1  
**Issued By:** L Atherton  
**Page:** 1 of 1

Authorised Signatory

N Gargan

**Customer:** Deva Calibration Lab  
**Equipment:** Set 33  
**Calibration Location:** Deva Calibration Lab  
**Job Number:** 35336

**Procedure Number:** ICM005 Rev C

## Test Conditions:

**Ambient Temperature:** 22 °C

*\*The results stated on this certificate relate only to the equipment listed above*

## Calibration Results:

Datalogger	Serial Number	-40°C Range		0°C Range		35°C Range	
		Applied	Indicated	Applied	Indicated	Applied	Indicated
MadgeTech Cryo-Temp	S42304	-39.98	-40.1	-0.44	-0.5	34.51	34.4
MadgeTech Cryo-Temp	S42625	-39.98	-40.1	-0.44	-0.4	34.51	34.5
MadgeTech Cryo-Temp	S42594	-39.98	-40.1	-0.44	-0.5	34.51	34.5
MadgeTech Cryo-Temp	S42950	-39.98	-40.0	-0.44	-0.3	34.51	34.6
MadgeTech Cryo-Temp	S42295	-39.98	-40.0	-0.44	-0.3	34.51	34.6
MadgeTech Cryo-Temp	S42598	-39.98	-39.9	-0.44	-0.3	34.51	34.5
MadgeTech Cryo-Temp	S42314	-39.98	-40.0	-0.44	-0.5	34.51	34.3
MadgeTech Cryo-Temp	S42587	-39.98	-40.0	-0.44	-0.5	34.51	34.3
MadgeTech Cryo-Temp	S42311	-39.98	-40.1	-0.44	-0.6	34.51	34.2

The measurement uncertainty on this certificate is  $\pm 0.27$  °C

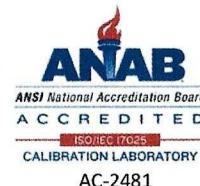
The Logger Set is placed in a Climate Chamber and ran over the desired temperature range(s) for approximately 4 hours per temperature range. The data from the logger is downloaded and inserted in the Data Template. The data recorded by the UKAS certified Picolog Thermometer is also downloaded and inserted to the same template. The Data Template will calculate the Mean Value for the Applied and Indicated Temperature, and produce a Certificate.

## END OF RESULTS

*This certificate is issued in accordance with the laboratory accreditation requirements of the United Kingdom Accreditation Service.*

*It provides traceability of measurement to the SI system of units and / or units of measurement realised at the National Physical Laboratory or other recognised national metrology institutes. This certificate may not be reproduced other than in full, except with the prior written approval of the issuing laboratory.*

*The reported uncertainty is based on a standard uncertainty multiplied by a coverage factor k=2, providing a level of confidence of approximately 95%*



# CERTIFICATE OF CALIBRATION

Device Name:	Cryo-Temp	ACCREDITED CERTIFICATE NUMBER: NC-25-06-25-309
Serial Number:	T33050	Calibration laboratory environmental conditions: 18 °C – 25 °C, 20 %RH – 55 %RH
Device ID:	Temp	Calibration Date: 2025-06-24
Issued to:	Wessex Power Technology Ltd Blandford Forum, Dorset DT11 9EX United Kingdom	MadgeTech Calibration Laboratory uses the shared risk approach as defined in ILAC G8 when making compliance statements

**Cryo-Temp****- Temperature -****Serial Number: T33050****Published Device Specifications****Calibrated using MadgeTech WI No: 320409**

**Calibrated Accuracy:**  $\pm 1.0 \text{ }^{\circ}\text{C}$   
**Calibrated Accuracy Range:** -86 °C to 35 °C

Channel 1 - Units of °CExpanded Uncertainty is not applied to Device Error

Temperature	Standard	DUT Corrected	Device Error	Expanded Uncertainty
Env. Temperature	Actual Test Point	Device As Left	= Device - Standard	Expressed at approx. 95% confidence level using coverage factor k = 2
-	-79.914	-79.9	0.014	0.067
-	25.01	25.0	-0.01	0.32

**Applied Correction Values**

**Gain:** 1.0045557  
**Offset:** -0.12 °C

Reference Equipment	Serial #	Certificate #	Last Calibration Date	Next Calibration Due
Fluke / Hart 1502A / 5615	B41516 / 905885	2025003658	2025-03-04	2025-09-04
Vaisala HMP155	V3430350	2025005556	2025-03-27	2025-09-27

**Calibration Notes:**

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Calibrated By: Daniel Woods

Approved By Quality Inspector: 

Date: 2025-06-26

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MadgeTech, Inc. Calibration laboratory located at 6 Warner Road Warner, NH 03278 603-456-2011

The instrument identified was calibrated as a direct comparison to the reference standards listed which are traceable to the International System of Units (SI) through NIST or other National Metrology Institute and did not involve any sampling. Results reported on this certificate relate only to the serial number referenced at the time of calibration and do not imply certification of the device, process, system or technician by ANAB, NIST or any other federal agency. No allowance has been made for the stability of the device due to use, time, or wear. Such allowances would be made by the user. This certificate may not be reproduced, except in full, without written approval by MadgeTech, Inc.

# CERTIFICATE OF CALIBRATION



Deva Medical  
1 Chandlers Court, Picow Farm Road, Runcorn, Cheshire  
Tel 01928 567571  
calibration@devamedical.co.uk  
www.devamedical.co.uk



9385

**Certificate No:** UKAS 36060  
**Date Of Issue:** 25 July 2025  
**Date Of Calibration:** 25 July 2025  
**Issue No:** 1  
**Issued By:** M Rigby  
**Page:** 1 of 1

Authorised Signatory

N Gargan

**Customer:** Deva Calibration Lab  
**Equipment:** SET 33  
**Calibration Location:** Deva Calibration Lab  
**Job Number:** 36060

**Procedure Number:** ICM005 Rev C

## Test Conditions:

**Ambient Temperature:** 22 °C

*\*The results stated on this certificate relate only to the equipment listed above*

## Calibration Results:

Datalogger	Serial Number	-40°C Range		0°C Range		35°C Range	
		Applied	Indicated	Applied	Indicated	Applied	Indicated
MadgeTech CryoTemp	S42295	-39.6	-39.9	0.6	0.5	36.1	36.1
MadgeTech CryoTemp	S42304	-39.6	-39.8	0.6	0.5	36.1	36.0
MadgeTech CryoTemp	S42311	-39.6	-39.9	0.6	0.4	36.1	36.0
MadgeTech CryoTemp	S42314	-39.6	-39.7	0.6	0.5	36.1	36.0
MadgeTech CryoTemp	S42587	-39.6	-39.8	0.6	0.5	36.1	36.2
MadgeTech CryoTemp	S42594	-39.6	-39.5	0.6	0.7	36.1	36.3
MadgeTech CryoTemp	S42598	-39.6	-39.7	0.6	0.5	36.1	36.1
MadgeTech CryoTemp	S42625	-39.6	-39.5	0.6	0.6	36.1	36.2
MadgeTech CryoTemp	S42950	-39.6	-39.7	0.6	0.4	36.1	35.9
MadgeTech CryoTemp	T25344	-39.6	-39.5	0.6	0.6	36.1	36.1
MadgeTech CryoTemp	T33050	-39.6	-39.8	0.6	0.5	36.1	36.0

The measurement uncertainty on this certificate is  $\pm 0.27$  °C

The Logger Set is placed in a Climate Chamber and ran over the desired temperature range(s) for approximately 4 hours per temperature range. The data from the logger is downloaded and inserted in the Data Template. The data recorded by the UKAS certified Picolog Thermometer is also downloaded and inserted to the same template. The Data Template will calculate the Mean Value for the Applied and Indicated Temperature, and produce a Certificate.

## END OF RESULTS

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