



CERTIFICATE OF CALIBRATION

ACCREDITED CERTIFICATE NUMBER: NC-25-07-28-238

Device Name: Cryo-Temp
Serial Number: T38142

Device ID: Temp
Issued to: Wessex Power Technology Ltd
Blandford Forum, Dorset DT11 9EX
United Kingdom

Calibration laboratory environmental conditions: 18 °C – 25 °C, 20 %RH – 55 %RH
Calibration Date: 2025-07-24

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: ± 1.0 °C
Calibrated Accuracy Range: -86 °C to 35 °C

Channel 1 - Units of °C

Expanded Uncertainty is not applied to Device Error

Temperature Env. Temperature	Standard Actual Test Point	DUT Corrected Device As Left	Device Error = Device - Standard	Expanded Uncertainty 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:

Calibrated By: Daniel Woods

Approved By Quality Inspector: *James Howe*

Date: 2025-07-31

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

Page 2 of 3

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

Model: Cryo-Temp

Serial Number: S42587

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: $40\%\text{RH} \pm 25\%\text{RH}$

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

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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

End of Results

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*



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The Old Silk Mill, Bury Lane, Withnell,
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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

Page 2 of 3

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

Model: Cryo-Temp

Serial Number: S42594

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: $40\%\text{RH} \pm 25\%\text{RH}$

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

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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

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*



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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

Page 2 of 3

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

Model: Cryo-Temp

Serial Number: S42598

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: $40\%\text{RH} \pm 25\%\text{RH}$

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

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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

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 S42625.25042025

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



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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

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

Model: Cryo-Temp

Serial Number: S42625

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: $40\%\text{RH} \pm 25\%\text{RH}$

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

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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

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 S42950.25042025

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



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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

Page 2 of 3

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

Model: Cryo-Temp

Serial Number: S42950

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: $40\%\text{RH} \pm 25\%\text{RH}$

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

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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

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 S42295.25042025

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



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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	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

Page 2 of 3

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

Model: Cryo-Temp

Serial Number: S42295

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: $40\%\text{RH} \pm 25\%\text{RH}$

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

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 8 May 2025
Certificate Number S42304.25042025

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



Withnell Sensors Ltd
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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

Page 2 of 3

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

Model: Cryo-Temp

Serial Number: S42304

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: $40\%\text{RH} \pm 25\%\text{RH}$

Reference Standards

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

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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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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*



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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

Page 2 of 3

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

Model: Cryo-Temp

Serial Number: S42311

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: $40\%\text{RH} \pm 25\%\text{RH}$

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

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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

End of Results

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 S42314.25042025

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



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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

Page 2 of 3

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

Model: Cryo-Temp

Serial Number: S42314

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: $40\%\text{RH} \pm 25\%\text{RH}$

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

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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

End of Results

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 ± 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

ACCREDITED CERTIFICATE NUMBER: NC-25-06-25-309

 Device Name: Cryo-Temp
 Serial Number: T33050

 Calibration laboratory environmental conditions: 18 °C – 25 °C, 20 %RH – 55 %RH
 Calibration Date: 2025-06-24

 Device ID: Temp
 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: ± 1.0 °C
Calibrated Accuracy Range: -86 °C to 35 °C

Channel 1 - Units of °C

Expanded Uncertainty is not applied to Device Error

Temperature Env. Temperature	Standard Actual Test Point	DUT Corrected Device As Left	Device Error = Device - Standard	Expanded Uncertainty 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:

Calibrated By: Daniel Woods

Approved By Quality Inspector:



Date:

2025-06-26

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