

Certificate of Calibration

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Issued By Withnell Sensors Ltd
Date of Issue 8 May 2025
Certificate Number S42215.25042025

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 Chandlers Court Picow Farm Road Runcorn WA7 4UH Cheshire United Kingdom
Order No	BACS
Manufacturer	MadgeTech
Model	Cryo-Temp
Serial Number	S42215
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 35, 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

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

Model: Cryo-Temp

Serial Number: S42215

Certificate Number

S42215.25042025

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: S42215

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Certificate Number

S42215.25042025

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.

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

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Issued By Withnell Sensors Ltd
Date of Issue 8 May 2025
Certificate Number S42441.25042025

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	S42441
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 32, P06

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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: S42441

Certificate Number

S42441.25042025

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: S42441

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Certificate Number

S42441.25042025

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

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Issued By Withnell Sensors Ltd
Date of Issue 7 May 2025
Certificate Number S42448.25042025

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	S42448
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 32, P03

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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: S42448

Certificate Number

S42448.25042025

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: S42448

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Certificate Number

S42448.25042025

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

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Issued By Withnell Sensors Ltd
Date of Issue 7 May 2025
Certificate Number S43066.25042025

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	S43066
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 32, P07

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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: S43066

Certificate Number

S43066.25042025

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: S43066

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Certificate Number

S43066.25042025

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

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Issued By Withnell Sensors Ltd
Date of Issue 8 May 2025
Certificate Number S43072.25042025

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	S43072
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 32, P08

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

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

Model: Cryo-Temp

Serial Number: S43072

Certificate Number

S43072.25042025

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: S43072

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Certificate Number

S43072.25042025

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

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Issued By Withnell Sensors Ltd
Date of Issue 7 May 2025
Certificate Number S43077.25042025

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	S43077
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	SET32, P04

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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: S43077

Certificate Number

S43077.25042025

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: S43077

Page 3 of 3

Certificate Number

S43077.25042025

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 S46614.25042025

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	S46614
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 32, P02

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: S46614

Certificate Number

S46614.25042025

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: S46614

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Certificate Number

S46614.25042025

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 8 May 2025
Certificate Number S46734.25042025

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	S46734
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 32, P01

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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: S46734

Certificate Number

S46734.25042025

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: S46734

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Certificate Number

S46734.25042025

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 8 May 2025
Certificate Number S46738.25042025

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	S46738
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 32, P05

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

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

Model: Cryo-Temp

Serial Number: S46738

Certificate Number

S46738.25042025

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: S46738

Page 3 of 3

Certificate Number

S46738.25042025

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 S46739.25042025

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	S46739
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	SET32, 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: S46739

Certificate Number

S46739.25042025

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: S46739

Page 3 of 3

Certificate Number

S46739.25042025

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 7 May 2025
Certificate Number S46740.25042025

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	S46740
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 32, P10

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: S46740

Certificate Number

S46740.25042025

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

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: S46740

Page 3 of 3

Certificate Number

S46740.25042025

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



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 34909
Date Of Issue: 09 June 2025
Date Of Calibration: 06 June 2025
Issue No: 1
Issued By: L Atherton
Page: 1 of 1

Authorised Signatory

N Gargan

Customer: Deva Calibration Lab
Equipment: Set 32
Calibration Location: Deva Calibration Lab
Job Number: 34909

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		36°C Range	
		Applied	Indicated	Applied	Indicated	Applied	Indicated
MadgeTech CryoTemp	(P01) S46734	-39.6	-39.6	0.6	0.5	36.2	36.1
MadgeTech CryoTemp	(P02) S46614	-39.6	-39.8	0.6	0.5	36.2	36.0
MadgeTech CryoTemp	(P03) S42448	-39.6	-39.6	0.6	0.5	36.2	36.1
MadgeTech CryoTemp	(P04) S43077	-39.6	-39.8	0.6	0.5	36.2	36.1
MadgeTech CryoTemp	(P05) S46738	-39.6	-40.0	0.6	0.5	36.2	36.1
MadgeTech CryoTemp	(P06) S42441	-39.6	-39.9	0.6	0.5	36.2	36.1
MadgeTech CryoTemp	(P07) S43066	-39.6	-40.0	0.6	0.4	36.2	36.0
MadgeTech CryoTemp	(P08) S43072	-39.6	-39.6	0.6	0.5	36.2	36.1
MadgeTech CryoTemp	(P09) S46739	-39.6	-39.7	0.6	0.5	36.2	36.1
MadgeTech CryoTemp	(P10) S46740	-39.6	-40.1	0.6	0.4	36.2	36.1
MadgeTech CryoTemp	(P11) S42215	-39.6	-39.8	0.6	0.4	36.2	36.1

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.

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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%