

Schedule of Accreditation

issued by

United Kingdom Accreditation Service

2 Pine Trees, Chertsey Lane, Staines-upon-Thames, TW18 3HR, UK

 UKAS CALIBRATION 4372 Accredited to ISO/IEC 17025:2017	Intech Calibration Ltd Issue No: 023 Issue date: 02 January 2024	
	Old Customs House Wharf Road Littlehampton West Sussex BN17 5DD	Contact: Mr J du Plessis Tel: +44 (0)1903 772 859 Fax: +44 (0)1903 754 437 E-Mail: info@intechcalibration.co.uk Website: www.intechcalibration.co.uk

Calibration performed by the Organisations at the locations specified below

Locations covered by the organisation and their relevant activities

Laboratory locations:

Location details	Activity	Location code
Address Intech Calibration Ltd. Old Customs House Wharf Road Littlehampton West Sussex BN17 5DD Local contact Mr J du Plessis Tel: +44 (0)1903 772 859 Fax: +44 (0) 903 754 437 Email: info@intechcalibration.co.uk Website: www.intechcalibration.co.uk	Temperature, Humidity and Electrical Calibration	Lab

Site activities performed away from the locations listed above:

Location details	Activity	Location code
Customer Premises, e.g. Hospitals, Laboratories and Manufacturing & Processing Plants	Temperature, Humidity and Electrical Calibration	Site



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Calibration and Measurement Capability (CMC)

Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty ($k = 2$)	Remarks	Location Code
TEMPERATURE			Calibration by comparison with reference instruments	
Temperature indicators with sensors	-196 °C -196 °C	0.040 °C 0.080 °C	Liquid Nitrogen	Lab Site
	0 °C	0.050 °C	Ice point	Lab & Site
	-100 °C to +155 °C	0.050 °C	Calibration in metal block baths	Lab & Site
	-100 °C to +0 °C 0 °C to 232 °C 232 °C to 420 °C 420 °C to 650 °C	0.15 °C 0.10 °C 0.12 °C 0.16 °C	Sensors with suitable dimensions	Lab & Site
Temperature calibration in air chamber, for instruments such as dataloggers	-40 °C to 0 °C 0 °C to 22 °C 22 °C to 60 °C 60 °C to 90 °C 90 °C to 100 °C 100 °C to 180 °C	0.45 °C 0.08 °C 0.09 °C 0.12 °C 0.59 °C 1.00 °C		Lab
	0 °C to 22 °C 22 °C to 60 °C	0.19 °C 0.22 °C		Lab & Site
	Ambient temperature	0.70 °C	Uncertainty will depend on stability of the ambient conditions	Site
	Temperature controlled fridges, freezers, incubators, ovens and environmental chambers, including associated recorders, indicators and controllers	-90 °C to +200 °C	1.0 °C	Multiple point measurements
0 °C to 60 °C		0.3 °C	Single point measurement	Site



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Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty ($k = 2$)	Remarks	Location Code
HUMIDITY				
Dew point	-30 °C to +90 °C	0.14 °C	By comparison with dew-point hygrometer and Platinum Resistance Thermometers	Lab
Relative humidity	Example conditions		Corresponding to above dew-point and temperature uncertainties	Lab
	Temperature range 0 °C to 22 °C 5 %rh to 50 %rh 50 %rh to 95 %rh	0.08 °C 0.20 %rh to 0.70 %rh 0.70 %rh to 1.20 %rh		
	Temperature range 22 °C to 60 °C 5 %rh to 50 %rh 50 %rh to 95 %rh	0.09 °C 0.20 %rh to 0.50 %rh 0.50 %rh to 0.90 %rh		
	Temperature range 60 °C to 90 °C 5 %rh to 50 %rh 50 %rh to 96 %rh	0.12 °C 0.20 %rh to 0.40 %rh 0.40 %rh to 0.80 %rh		
	Temperature range 0 °C to 22 °C 5 %rh to 50 %rh 50 %rh to 95 %rh	0.19 °C 0.20 %rh to 1.80 %rh 1.80 %rh to 2.40 %rh	By comparison with reference instruments	Lab & Site
	Temperature range 22 °C to 60 °C 5 %rh to 50 %rh 50 %rh to 95 %rh	0.22 °C 0.20 %rh to 1.90 %rh 1.90 %rh to 2.10 %rh		
Humidity controlled chambers, including associated recorders, indicators and controllers	Temperature range 0 °C to 60 °C 5 %rh to 95 %rh	2.0 %rh	Single point measurement	Site
In-situ humidity calibration in air	Ambient humidity	3.0 %rh	Uncertainty will depend on stability of the ambient conditions	Site



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ELECTRICAL				
All electrical measurements, including temperature simulation are carried out using the method of direct comparison or transfer to laboratory reference standards unless otherwise determined in the remarks column.				
DC Voltage	0 V to 25 mV	14 µV	Measure	Lab & site
	25 mV to 75 mV	20 µV		
	75 mV to 30 V	13 mV		
DC Current	0V to 25 mV	17 µV	Source	Lab & site
	25 mV to 75 mV	27 µV		
	75 mV to 20 V	15 mV		
Resistance	0 A to 24 mA	15 µA	Measure and Source	
Resistance	0 Ω to 400 Ω	42 mΩ	Measure 2,3 & 4 wire	Lab & site
	400 Ω to 4 kΩ	300 mΩ		
	5 Ω to 400 Ω	120 mΩ	Source 2 wire	
	400 Ω to 4 kΩ	400 mΩ		
TEMPERATURE MEASUREMENT BY ELECTRICAL SIMULATION				
Temperature indicators Thermocouple Type				
K	-200 °C to 1200 °C	0.52 °C	Including reference junction compensation	Lab & site
N	-0 °C to 1200 °C	0.53 °C		
R	0 °C to 1600 °C	0.76 °C		
T	0 °C to 390 °C	0.35 °C		
J	0 °C to 1000 °C	0.45 °C		
S	0 °C to 1000 °C	0.80 °C		
B	800 °C to 1600 °C	1.4 °C		
E	0 °C to 990 °C	0.72 °C		
PRT Indicators PT100	-200 °C to 500 °C	0.25 °C		
Temperature calibrators Thermocouple Type				
K	-200 °C to 1200 °C	0.64 °C	Including reference junction compensation	Lab & site
N	-0 °C to 1200 °C	0.53 °C		
R	0 °C to 1600 °C	1.3 °C		
T	0 °C to 390 °C	0.38 °C		
J	0 °C to 1000 °C	0.50 °C		
S	0 °C to 1000 °C	1.2 °C		
B	800 °C to 1600 °C	1.0 °C		
E	0 °C to 990 °C	0.74 °C		
PRT Indicators PT 100	-200 °C to 500 °C	0.28 °C		
Internal reference junction calibration	Ambient	0.12 °C		

END



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Appendix - Calibration and Measurement Capabilities

Introduction

The definitive statement of the accreditation status of a calibration laboratory is the Accreditation Certificate and the associated Schedule of Accreditation. This Schedule of Accreditation is a critical document, as it defines the measurement capabilities, ranges and boundaries of the calibration activities for which the organisation holds accreditation.

Calibration and Measurement Capabilities (CMCs)

The capabilities provided by accredited calibration laboratories are described by the Calibration and Measurement Capability (CMC), which expresses the lowest measurement uncertainty that can be achieved during a calibration. If a particular device under calibration itself contributes significantly to the uncertainty (for example, if it has limited resolution or exhibits significant non-repeatability) then the uncertainty quoted on a calibration certificate will be increased to account for such factors.

The CMC is normally used to describe the uncertainty that appears in an accredited calibration laboratory's schedule of accreditation and is the uncertainty for which the laboratory has been accredited using the procedure that was the subject of assessment. The measurement uncertainty is calculated according to the procedures given in the GUM and is normally stated as an expanded uncertainty at a coverage probability of 95 %, which usually requires the use of a coverage factor of $k = 2$. An accredited laboratory is not permitted to quote an uncertainty that is smaller than the published measurement uncertainty in certificates issued under its accreditation.

Expression of CMCs - symbols and units

It should be noted that the percentage symbol (%) represents the number 0.01. In cases where the measurement uncertainty is stated as a percentage, this is to be interpreted as meaning percentage of the measurand. Thus, for example, a measurement uncertainty of 1.5 % means $1.5 \times 0.01 \times q$, where q is the quantity value.

The notation $Q[a, b]$ stands for the root-sum-square of the terms between brackets: $Q[a, b] = [a^2 + b^2]^{1/2}$