


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: 018 Issue date: 02 September 2021	
	Unit B1A Maven House Rudford Industrial Estate Ford Arundel West Sussex BN18 0BD	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 Unit B1A Maven House Rudford Industrial Estate Ford Arundel West Sussex BN18 0BD	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 (<i>k</i> = 2)	Remarks	Location Code	
TEMPERATURE					
Temperature indicators with sensors	-196 °C	0.30 °C	Liquid Nitrogen	Lab	
	0 °C	0.050 °C	Ice point		
	-90 °C to +125 °C	0.05 °C	Calibration in metal block baths		
	Temperature calibration in air chamber	-90 °C to +0 °C	0.15 °C	Sensors with suitable dimensions	Site
		0 °C to 232 °C	0.10 °C		
		232 °C to 420 °C	0.12 °C		
		420 °C to 640 °C	0.46 °C		
Temperature calibration in air chamber	640 °C to 650 °C	1.0 °C	Uncertainty will depend on stability of the ambient conditions	Site	
	5 °C to 18 °C	0.45 °C			
	18 °C to 24 °C	0.30 °C			
In-situ temperature calibration in air	24 °C to 50 °C	0.40 °C	Multiple point measurements	Site	
	Ambient temperature	0.70 °C			
Temperature controlled fridges, freezers, incubators, ovens and environmental chambers, including associated recorders, indicators and controllers	-90 °C to +125 °C	1.0 °C	Single point measurement	Site	
	5 °C to 50 °C	0.3 °C			
HUMIDITY					
Hygrometers	Calibration by comparison with reference instruments		Lab & site		
	10 %rh to 95 %rh	2.3 %rh			
	Temperature range 5 °C to 18 °C	1.8 %rh			
	10 %rh to 80 % rh	2.2 %rh			
	80 %rh to 95 %rh	2.2 %rh			
Humidity controlled chambers, including associated recorders, indicators and controllers	Temperature range 18 °C to 24 °C	2.2 %rh	Single point measurement	Site	
	10 %rh to 80 %rh	2.0 %rh			
	Temperature range 24 °C to 50 °C	3.0 %rh			
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 25 mV to 75 mV 75 mV to 20 V 20 V to 30 V	16 µV 21 µV 15 mV 15 mV	Measure and source Measure only	Lab & site
DC Current	0 A to 24 mA	15 µA		
Resistance	0 Ω to 400 Ω 400 Ω to 4 kΩ	10 mΩ 300 mΩ		Lab & site
TEMPERATURE MEASUREMENT BY ELECTRICAL SIMULATION				
Temperature indicators				
Thermocouple Type				
K	-200 °C to 1200 °C	0.45 °C	Including reference junction compensation	
N	-0 °C to 1200 °C	0.45 °C		
R	0 °C to 1600 °C	1.0 °C		
T	0 °C to 390 °C	0.35 °C		
S	0 °C to 1000 °C	0.45 °C		
B	800 °C to 1600 °C	1.2 °C		
E	0 °C to 990 °C	0.80 °C		
PRT Indicators PT 100				
	-200 °C to 500 °C	0.35 °C		
Temperature calibrators				
Thermocouple Type				
K	-200 °C to 1200 °C	0.40 °C	Including reference junction compensation	
N	-0 °C to 1200 °C	0.40 °C		
R	0 °C to 1600 °C	0.75 °C		
T	0 °C to 390 °C	0.35 °C		
S	0 °C to 1000 °C	0.45 °C		
B	800 °C to 1600 °C	1.1 °C		
E	0 °C to 990 °C	0.80 °C		
PRT Indicators PT 100				
	-200 °C to 500 °C	0.30 °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: $Q[a, b] = [a^2 + b^2]^{1/2}$