Schedule of Accreditation

issued by

United Kingdom Accreditation Service

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

10354

Accredited to ISO/IEC 17025:2017

AML Instruments Limited

Issue No: 007 **Issue date:** 16 December 2024

Eco One Highcliffe Business Park **The Cliff** **Ingham** **Lincolnshire** **LN1 2WE** **United Kingdom**	**Contact: Rebecca Leeson** **Tel: +44 (0)152 278 9375** **E-Mail**: **Rebecca@amlinstruments.co.uk** **Website: amlinstruments.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 Eco One Highcliffe Business Park The Cliff Ingham Lincoln LN1 2WE United Kingdom **Local contact** Rebecca Leeson	Calibration of Non Automatic Weighing Machine Temperature Electrical simulation	P

Site activities performed away from the locations listed above:

Location details	Activity	Location code
At Customers Premises Calibration Engineer The customers' site or premises must be suitable for the nature of the particular calibrations undertaken and will be the subject of contract review arrangements between the laboratory and the customer.	Calibration of Non Automatic Weighing Machine Temperature Electrical simulation	S

10354
Accredited to
ISO/IEC 17025:2017

AML Instruments Limited

Issue No: 007 **Issue date:** 16 December 2024

Calibration performed by the Organisation at the locations specified

Calibration and Measurement Capability (CMC)

Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty (k = 2)	Remarks	Location Code
WEIGHING INSTRUMENTS				
Non-automatic weighing machines (From 1 mg to 1000 kg)	200 mg 500 mg 1 g 5 g 10 g 20 g 50 g 100 g 200 g 500 g 1 kg 2 kg 5 kg 10 kg 20 kg 50 kg 100 kg 200 kg 500 kg 1000 kg	0.009 mg 0.012 mg 0.020 mg 0.025 mg 0.033 mg 0.046 mg 0.074 mg 0.14 mg 0.28 mg 0.70 mg 1.4 mg 2.8 mg 38.6 mg 77.2 mg 150 mg 390 mg 7.7 g 16 g 39 g 77 g	1. Weights are available in OIML Class: E2 from 1 g to 500 g, Max. grouped load 2 kg F1 from 1 g to 10 kg, Max. grouped load 50 kg M1 from 10 kg to 20 kg. Max grouped load 1000 kg. 2. Other loads within the overall listed range may also be used. 3. Calibration method in line with the requirements of Euramet guide cg-18	S
TEMPERATURE				
Probes with or without indicators	-40 °C to 155 °C	0.09 °C	Calibration in a dry block	P & S
Dry Block Calibrators	-40 °C to 155 °C	0.09 °C		
ELECTRICAL				
Simulation of Base Metal Thermocouples			Including reference junction compensation	P & S
Type K	-200 °C to -100 °C -100 °C to 1370 °C	1.2 °C 0.44 °C		
Type J	-200 °C to -100 °C -100 °C to 1200 °C	1.1 °C 0.38 °C		
Type T	-200 °C to -100 °C -100 °C to 400 °C	1.3 °C 0.33 °C		
Type N,	-200 °C to -100 °C -100 °C to 1300 °C	1.3 °C 0.34 °C		
Type E	-100 °C to 0 °C 0 °C to 1000 °C	0.60 °C 0.35 °C		

Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty (k = 2)	Remarks	Location Code
ELECTRICAL (continued)				
Simulation of Noble Metal Thermocouples			Including reference junction compensation	P & S
Type R	-20 °C to 100 °C 100 ° to 1760 °C	0.88 °C 0.37 °C		
Type S	-20 °C to 100 °C 100 ° to 1760 °C	0.82 °C 0.41 °C		
Measurement of Base Metal Thermocouples			Including reference junction compensation	P & S
Type K	-200 °C to -100 °C -100 °C to 1370 °C	1.4 °C 0.50 °C		
Type J	-200 °C to -100 °C -100 °C to 1200 °C	1.2 °C 0.40 °C		
Type T	-200 °C to -100 °C -100 °C to 400 °C	1.5 °C 0.37 °C		
Type N	-200 °C to -100 °C -100 °C to 1300 °C	1.3 °C 0.42 °C		
Type E	-100 °C to 0 °C 0 °C to 1000 °C	0.65 °C 0.37 °C		
Measurement of Noble Metal Thermocouples			Including reference junction compensation	P & S
Type R	-20 °C to 100 °C 100 ° to 1760 °C	2.3 °C 0.79 °C		
Type S	-20 °C to 100 °C 100 ° to 1760 °C	2.2 °C 0.91 °C		
Simulation of RTD sensors	-200 °C to 0 °C 0 °C to 200°C 200 °C to 400°C 400 °C to 600°C 600 °C to 800°C	0.077 °C 0.086 °C 0.095 °C 0.11 °C 0.12 °C	For 4 wire devices. 2 and 3 wire devices may be calibrated with greater uncertainties	P & S
Measurement of RTD sensors	-200 °C to 0 °C 0 °C to 200°C 200 °C to 400°C 400 °C to 600°C 600 °C to 800°C	0.093 °C 0.11 °C 0.12 °C 0.14 °C 0.16 °C	For 4 wire devices. 2 and 3 wire devices may be calibrated with greater uncertainties	P & S
Measurement or Sourcing of DC Current	4 mA to 24 mA	0.08 mA	May be reported as eviquivalent temperature value for scaled indicators or transmitters	P & S

END

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: $Q[a, b] = [a^2 + b^2]^{1/2}$