Schedule of Accreditation

issued by

United Kingdom Accreditation Service

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

UKAS CALIBRATION **0767** **Accredited to ISO/IEC 17025:2017**	**HORIBA UK Ltd** **Issue No:** 043 **Issue date:** 17 September 2026	
	Kyoto Close **Moulton Park Industrial Park** **Northampton** **NN3 6FL**	**Contact: Mr Neil Kempson** **Tel: +44 (0) 1604 542500** **E-Mail: neil.kempson@horiba.com**

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 Kyoto Close Moulton Park Industrial Park Northampton NN3 6FL **Local contact** Mr Neil Kempson	Pressure Temperature Humidity Flow Electrical	Permanent

Site activities performed away from the locations listed above:

Location details	Activity	Location code
The customer's 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	Pressure Temperature Humidity Electrical Force Speed Air Velocity	Site

Calibration and Measurement Capability (CMC)

Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty (k = 2)	Remarks	Location Code
PRESSURE			Methods consistent with EURAMET CG17	Perm and site
<u>Gas Pressure Gauge</u> Calibration of pressure indicating instruments and gauges	-95 kPa to 0 kPa 0 kPa to 500 kPa 500 kPa to 1 MPa 1 MPa to 2 MPa	Q [0.038 %, 89 Pa] Q [0.038 %, 97 Pa] Q [0.038 %, 151 Pa] Q [0.038 %, 210 Pa]		
<u>Gas Pressure Differential</u> Calibration of pressure indicating instruments and gauges	± 3 kPa ± (3 to 12) kPa ± 2 kPa ± (2 to 20) kPa	Q [0.30 %, 0.84 Pa] Q [0.30 %, 0.89 Pa] Q [0.48 %, 0.86 Pa] Q [0.44 %, 6.8 Pa]		
<u>Gas Pressure Absolute</u> Calibration of pressure indicating instruments and gauges	30 kPa to 200 kPa	82 Pa		
TEMPERATURE				
Temperature indicating instruments with resistance thermometer sensors	0 ºC to 100 ºC	0.11 ºC	Direct comparison with a reference probe using a block bath calibrator	Perm
	0 ºC to 100 ºC	0.20 ºC	Direct comparison with a reference probe using a block bath calibrator	Site
	1 °C to 60 °C	0.39 °C	Direct comparison with a reference probe performed in air	
HUMIDITY				
Relative humidity instruments	1 °C to 10 °C 5 %rh to 90 %rh	2.7 %rh	Direct comparison with a reference hygrometer	Perm
	10 °C to 17 °C 5 %rh to 95 %rh	2.7 %rh		
	17 °C to 23 °C 5 %rh to 95 %rh	1.8 %rh		
	23 °C to 50 °C 5 %rh to 95 %rh	2.7 %rh		
	50 °C to 60 °C 5 %rh to 90 %rh	2.7 %rh		

Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty (k = 2)	Remarks	Location Code
HUMIDITY (continued)				
Relative humidity instruments	1 °C to 10 °C 5 %rh to 90 %rh 10 °C to 50 °C 5 %rh to 95 %rh 50 °C to 60 °C 5 %rh to 90 %rh	 2.7 %rh 2.7 %rh 2.7 %rh	Direct comparison with a reference hygrometer	Site
FORCE				
Dynamometer load cells in tension and compression.	500 N to 7500 N 1.5 kN to 20 kN	7.0 N 8.0 N	Calibration using masses and lever amplification	Site
SPEED				
Dynamometer speed	14 km/h to 200 km/h	0.21 km/h	Calibration by diameter and rotational speed	Site
FLOW				
<u>Gas Flow – volume</u>				Perm only
Calibration of Critical Flow Orifices	400 ml/min to 1.2 l/min	0.76 %	Calibration gas – propane (prover method)	
Calibration of gas dividers	5 ml/min to 50 ml/min 50 ml/min to 5 l/min 5 l/min to 30 l/min 30 l/min to 60 l/min	0.40 % 0.42 % 0.56 % 1.03 %	Calibration gas – nitrogen (mass flowmeter method) Calibration gas – nitrogen (mass flowmeter method)	
Calibration of pitot tubes	20 l/min to 100 l/min 100 l/min to 1000 l/min 1000 l/min to 10000 l/min 3000 l/min to 30000 l/min 30000 l/min to 45000 l/min	1.9 % 1.9 % 1.9 % 2.0 % 1.9 %	Calibration gas – air (subsonic nozzle method)	

Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty (k = 2)	Remarks	Location Code
ELECTRICAL			Calibration of measuring devices by direct comparison with a reference meter or calibrator.	Perm and site
<u>Generation</u>				
DC Voltage	0 V to 100 mV 100 mV to 1 V 1 V to 10 V 10 V to 100 V 100 V to 1000 V	Q [0.0059 %, 5 µV] Q [0.0036 %, 17 µV] Q [0.0036 %, 170 µV] Q [0.0036 %, 1.7mV] Q [0.0036 %, 17 mV]		
DC Current	0 A to 100 mA 100 mA to 1 A 1 A to 19 A 19 A to 500 A	Q [0.0042 %, 5.6 µA] Q [0.025 %, 50 µA] Q [0.050 %, 8.9 mA] Q [0.38 %, 490 mA]	For the calibration of clamp on ammeters, using a 50-turn coil	
Resistance	0 Ω to 400 Ω 400 Ω to 4000 Ω	Q [0.010 %, 13 mΩ] Q [0.010 %, 140 mΩ]		
Frequency	40 mHz to 1 kHz 1 kHz to 50 kHz	40 mHz 290 mHz		
AC Voltage	100 V to 700 V, 60 Hz	Q [0.14 %, 230 mV]		
AC Current	5 A to 60 A, 55 Hz	Q [0.058 %, 72 mA]		
ELECTRICAL				Perm and site
<u>Measurement</u>			Using a digital multimeter	
DC Voltage	0 mV to 200 mV 200 mV to 2 V 2 V to 20 V 20 V to 200 V 200 V to 1000 V	Q [0.014 %, 18 µV] Q [0.013 %, 140 µV] Q [0.017 %, 12 mV] Q [0.017 %, 17 mV] Q [0.017 %, 130 mV]		
DC Current	100 µA to 200 mA 2000 mA to 2 A 2 A to 10 A	Q [0.035 %, 37 µA] Q [0.063 %, 170 mA] Q [0.18 %, 3.0 mA]		
AC Voltage	60 mV to 200 mV, 55 Hz 20 V to 200 V, 55 Hz 200 V to 700 V, 55 Hz	Q [0.13 %, 76 µV] Q [0.13 %, 170 mV] Q [0.13 %, 410 mV]		
AC Current	2 A to 60 A, 55 Hz	Q [0.44 %, 1.1 A]	Using a shunt and digital multimeter	

Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty (k = 2)	Remarks	Location Code
ELECTRICAL Temperature simulation: Temperature simulators and indicators, calibration by electrical simulation				Perm and site
Base metal thermocouple	- 100 °C to 1370 °C	0.60 °C	Including cold junction compensation	
PRT Simulation (PT 100)	- 200 °C to 800 °C	0.12 °C		
GAS CONCENTRATION	Concentration (molar)		Blending of CRM gases with a nitrogen base gas using a Gas Divider Checker (GDC)	Perm and site
Carbon monoxide	0.018% to 9%	2.2% of conc.	MEXA and OBS analysers	
Carbon dioxide	0.038% to 19%	2.1% of conc.		
Nitric Oxide	0.0006% to 0.3%	2.2% of conc.		
Propane	0.0006% to 0.33%	2.3% of conc.		
Methane	0.0019% to 0.95%	2.3% of conc.		
AIR VELOCITY				
Calibration of vehicle cooling fans	0 m/s to 5 m/s 5 m/s to 20 m/s 20 m/s to 40 m/s	0.59 m/s 1.2 m/s 3.7 m/s	By comparison with a vane anemometer array.	Site
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: $Q[a, b] = [a^2 + b^2]^{1/2}$