Schedule of Accreditation

issued by

United Kingdom Accreditation Service

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

UKAS CALIBRATION **0199** **Accredited to ISO/IEC 17025:2017**	**Avon-Dynamic Calibration Limited** **Issue No:** 070 **Issue date**: 19 February 2026	
	Units 1 & 2 **The Old Mill** **Chapel lane** **Warmley** **Bristol** **BS15 4NQ**	**Contact: Ashley Pedley** **Tel: +44 (0)117-9477846** **Fax: +44 (0)117-9477831** **E-Mail: info@avon-dynamic.co.uk** **Website: www.avon-dynamic.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 Units 1 & 2The Old Mill Chapel lane Warmley Bristol BS15 4 NQ	**Local contact** Ashley Pedley	Dimensional Electrical Pressure Temperature Torque	A A A A A

Site activities performed away from the locations listed above:

Location details		Activity	Location code
At customers premises	Ashley Pedley	Dimensional Pressure Temperature Electrical	B B B B

CALIBRATION AND MEASUREMENT CAPABILITY (CMC)

Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty (k = 2)	Remarks	Location Code
RANGE IN MILLIMETRES AND UNCERTAINTY IN MICROMETRES UNLESS OTHERWISE STATED				
LENGTH				
Gauge blocks		Class (see Notes)		
Millimetre (steel, tungsten carbide, ceramic)	As BS EN ISO 3650:1999 0.1 to 10 10 to 25 Sizes 30, 40, 50, 60, 70, 75, 80, 90, 100 100 to 1000 Flatness 0.05 to 100 100 to 1000 Variation in length 0.05 to 10 10 to 100 100 to 1000	A B C D 0.030 0.050 0.080 0.10 0.040 0.060 0.10 0.13 0.060 0.090 0.12 0.17 0.070 0.11 0.15 0.21 0.090 0.13 0.18 0.25 0.20 + (.0.70 x length in m) 0.050 0.17 0.050 0.060 0.41		A
Inch (steel, tungsten carbide, ceramic)	As BS 4311:Part 1:2007 0.010 in to 0.4 in 0.4 in to 1 in Size 2 in Size 3 in Size 4 in Flatness 0.01 to 4 in 4 to 40 in Variation in length 0.01 to 0.4 0.4 to 4.0 in 4.0 to 40 in	microinches A B C D 1.0 2.0 3.0 4.0 1.5 2.5 4.0 5.0 2.5 3.5 5.0 7.0 3.0 4.5 6.0 8.0 3.5 5.0 7.0 10.0 2.0 7.0 2.0 2.5 16.0		A

Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty (k = 2)	Remarks	Location Code
Class A uncertainties apply to the measurement of length by interferometry of grade K standards of length to BS 4311:2007 and BS EN ISO 3650:1999 when they are measured twice, wrung to a platen by each of the two measuring faces in turn, and the mean of these two measurements stated. **Class B** uncertainties apply to the measurement of length by interferometry of grade K standards of length to BS 4311:2007 and BS EN ISO 3650:1999 when they are measured once, wrung to a platen by, if not otherwise specified, the left hand (unmarked) measuring face. **Comparison** **Class C** uncertainties apply to the measurement of length of gauges by comparison with grade K standards of length of a similar material. Class C uncertainties apply to new and used grade 0, 1 and 2 gauges to BS 4311:2007 and BS EN ISO 3650:1999. Class D uncertainties represent the best capability for the measurement of length of gauges by comparison with K grade standards of length of a dissimilar material.				
Length bars Grades 1 and 2 Inspection and workshop	BS 5317:1976 and BS 1790:1961 10 to 1000	0.20 + (0.70 x length in m)		A
	Flatness Parallelism	0.17 0.30		
Gauge blocks accessories	As BS 4311:Part 2: 2009 0.1 to 12.5	0.30		A
Length bar accessories	As BS 1790:1961 and BS 5317:1976 10 to 25	0.30		A
Precision pins See Note 10	0.05 to 10 diameter	0.50		A
Thread measuring cylinders See Note 10	As BS 5590:1978 and specials 0.1 to 5	0.50 on diameter		A
Plain plug gauges (parallel), cylindrical standards and rollers. See Note 10	1 to 50 diameter 50 to 100 diameter 100 to 150 diameter 150 to 200 diameter 200 to 300 diameter	0.80 1.0 1.5 2.0 2.5		A
Reference setting rings	1 to 50	0.30		A
Plain ring gauges (parallel) and setting standards See Note 10	1 to 50 50 to 100 100 to 275	0.80 0.90 1.3		
Precision balls - Various materials See Note 10	1 to 50	1.0		A

Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty (k = 2)	Remarks	Location Code
Plain gap gauges (parallel) See Note 10	0.5 to 100 100 to 200 200 to 300	3.0 5.0 8.0		A
Screw plug gauges (parallel) including check and setting plugs See Notes 3 and 10	1 to 150 diameter	3.0 on pitch diameter		A
Screw plug gauges (taper) including check plugs See Notes 2 and 10	1 to 100 diameter	4.0		A
Screw ring gauges (parallel) See Notes 3, 4 and 10	1 to 100 diameter	5.0 on pitch diameter		A
Screw ring gauges (taper) See Notes 2, 5 and 10	5 to 150 diameter	7.0 on pitch diameter		A
Screw pitch See Note 10	0.2 to 8	1.5		A
Screw flank angle See Note 11	0° to 52°	5.0 minutes of arc		A
Screw thread adjustable calliper gauges (parallel) See Note 3	3 to 50 diameter	See Note 6		A
Length gauges, flat and spherical ended See Note 10	1 to 1000	1.0 + (8.0 x length in m)		A
Engineers parallels	As BS 906:1972 5 to 50 x 100 x 400	1.5 to 5.0		A
Vee blocks	As BS 3731:1987 20 to 150	2.5 to 5.0		A
Receiver, position and profile gauges, jigs and fixtures	0 to 1000 x 600 x 600 (using a coordinate measuring machine, when appropriate)	8.0 + 3.0 x length in m See also Note 7		A
ANGLE				
Squares				
Blade type	As BS 939:2007 50 to 300 300 to 600	 3.0 5.0		A
Cylindrical	As BS 939:2007 75 to 300 300 to 600	 2.0 5.0		A

Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty (k = 2)	Remarks	Location Code
Block	As BS 939:2007 50 to 300 300 to 600	 3.0 5.0 All on squareness See note 1		A
Right angle and box angle plates	As BS 5535:1978 50 to 600	Squareness: 3.0 + (1.0 per 100 mm) Parallelism: 1.0 + (1.0 per 100 mm) See Note 1		A
Sine bars and tables	As BS 3064:1978 0 to 250 length	Linear dimensions 1.0 + (10 x length in m) Overall performance 3.0 seconds of arc		A
Electronic indicating levels	0 minutes of arc to 20 minutes of arc	1.0 % of range Minimum 0.50 seconds of arc	Calibrated using a small angle generator	A
Spirit levels	As BS 3509:1962 and BS 958:1968 5 seconds of arc to 60 minutes of arc nominal sensitivity	Mean sensitivity 10% of nominal Minimum 0.50 seconds of arc		A
Clinometers	0° to 360°	10 seconds of arc	Calibrated using a sine bar or table and gauge blocks	A
Thread measuring vee pieces (prisms)	As NPL Schedule MOY/SCMI/60 0 to 4.5	0.50		A
FORM				
Surface plates Granite Cast iron	 As BS 817:2008 160 x 100 to 4000 x 3000			A, B
	Flatness of working surface	1.5 + (0.80 x diagonal in m) See Note 1		
	Local variation of working surface	1.9		
Straightedges Cast iron Steel Granite	 As BS 5204:Part 1:1975 As BS 5204:Part 2:1977 Up to1800	1.0 + (2.0 x length in m) See Note 1		A
Optical flats	10 to 100 diameter	0.042 See Note 1		A
Optical parallels	10 to 100 diameter	0.042 on flatness and parallelism 0.10 on length See Note 1		A

Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty (k = 2)	Remarks	Location Code
MEASURING INSTRUMENTS AND MACHINES				
External micrometer	Based on BS 870:2008 0 to 600			A
	Heads: (Zero) Setting, 0 to 25: (Zero) Setting, 25 to 600: Spindle alignment:	2.0 between any two points 1.0 2.0 + (7.0 x length in m) 10		
Internal micrometer	Based on BS 959:2008 0 to 900	Heads: 2.0 Setting and Extension rods: 2.0 + (7.0 x length in m)		A
Depth micrometer	Based on BS 6468:2008 0 to 300	Heads: 2.0 Setting and Extension rods: 2.0 + (7.0 x length in m)		A
Micrometer heads	As BS 1734:1951 0 to 100	Traverse 1.0 Flatness 0.20 Squareness 0.60		A
Bore micrometers (three point)	0 to 150 diameter Heads: (Zero) Setting:	4.0 between any two points 3.0	By comparison with setting rings	A
Bench micrometers	As NPL MOY/SCMI 22 0 to 100	Overall performance 2.0		A
Height setting micrometer	0 to 300	Heads:1.2 Stepped column 2.0 Overall performance 2.5	By comparison with end standards.	A
Stepped column instrument checking artefacts	0 to 1000	1.0 + 3.0 x l in m		
Riser blocks for above	150 300	1.0 2.0	By comparison with end standards.	A
Comparators (external)	As BS 1054:1975 250 to 10 000 magnifications	1.0 % of range Minimum 0.20		A
Dial gauges and dial test indicators	As BS 907:2008 and BS 2795:1981 0 to 50 50 to 100	 1.0 1.4		A
Feeler Gauges	As BS 975:Part 1:1941 BS 957:Part 2:1969 0.025 to 1	2.0		A

Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty (k = 2)	Remarks	Location Code
MEASURING INSTRUMENTS AND MACHINES continued				
Vernier type gauges including dial and digital				
Caliper	BS 887:2008 0 to 1000 Overall performance: Flatness: Parallelism: Squareness: Co-Planer: Width of internal jaws:	 10 + (30 x length in m) 3.0 3.0 3.0 4.2 4.0		A
Height	Based on BS 1643:2008 0 to 1000 Overall performance: Flatness: Parallelism: Depth of Jaw / Scriber:	 10 + (30 x length in m) 3.0 3.0 4.0		A
Depth	Based on BS 6365:2008 0 to 600 Overall performance: Flatness / Straightness: Parallelism:	 10 + (30 x length in m) 3.0 3.0		A
Height gauges - (Simple) including vernier, dial and digital types (See note 8 and note 9)	As BS EN ISO 13225:2012 0 to 1000	Length measurement error (E): 10 + (30 x length in m)		A
Bevel protractors	As BS 1685:2008 0° to 360° Flatness: Parallelism: Straightness: Lateral squareness:	 6 0 minutes of arc 5.2 5.0 1.8 + (1.1 x length in m) 15		A
Thread diameter measuring	As NPL Schedules MOY/SCMI/1/ 9 and MOY/SCMI1 //12 0 to 200 capacity	Overall performance 1.5		A
Steel Rules	As BS 4372:1968 0 to 1000	16 + (15 x length in m)		A
Coating thickness shims	0 to 10	1.5	By comparison with end standards	A
Linear displacement transducers	0 to 20 20 to 100	0.40 + resolution 0.65 + resolution	By comparison with end standards	A
Electronic Height Gauges with microprocessor control	0 to 1000	1.0 + (8.0 x length in m)	By comparison with end standards	A, B

Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty (k = 2)	Remarks	Location Code
Performance verification of Cartesian co-ordinate measuring machines (CMM)	Length measurement: E_L 0 to 1500 mm (longest diagonal)	2.0 + (2.0 x length in m) µm	ISO 10360-2:2009 Using end standards.	B
	Single stylus probing test: $P_{Form.Sph.1×25:SS:Tact}$ $P_{Size.Sph.1×25:SS:Tact}$	0.70 µm 0.70 µm	ISO 10360-5:2020 Using a 10 mm to 51 mm diameter test sphere.	
	Single stylus probing test: P_{FTU}	0.70 µm	ISO 10360-5:2010 (withdrawn) Using a 10 mm to 50 mm test sphere.	
MEASURING INSTRUMENTS AND MACHINES continued				
Articulated Arm Coordinate measuring machines (CMM)	As ISO 10360-12:2016			A, B
	Length measurement - E_{Bi} E_{Uni} 0 to 2750 (diameter using end standards)	2.2 + (1.7 x length in m) 3.6 + (1.7 x length in m)		
	Probing measurement - $P_{Size.SPH.1x25}$ $P_{Form.SPH.1x25}$ Using a 10 mm to 51 mm diameter test sphere	2.7 2.6		
	Articulated location measurement - $L_{Dia.5x5:Art}$ Using a 10 mm to 51 mm diameter test sphere	2.6		
Profile projectors	10 to 100 magnification Linear 0 to 300 Angular 0° to 360°	125 at the screen 5.0 3.0 minutes of arc	By comparison with length and angle standards	B
ANCILLERY MEASUREMENTS (unless otherwise stated)			See Note 12	A
Flatness		0.2		
Parallelism		0.6		
Squareness		3.0		
Straightness		1.0 + (0.8 x length in m)		
Angular		5 second of arc		

Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty (k = 2)	Remarks	Location Code

NOTES

1 The uncertainty quoted is for the departure from either flatness, straightness, parallelism planes, which just enclose the surface under consideration.

2. Single start, symmetrical thread forms only.

3. Single start symmetrical and asymmetrical thread forms only.

4. Includes use of check plugs for screw rings from 1 mm to 6mm diameter

5. Includes use of check plugs for screw rings (taper) from 5 mm to 50 mm diameter

6. Functional test of size using setting plugs calibrated.

7. Features and associated parts of these gauges can be measured to the uncertainties given

8. Simple height gauges
- vernier, dial and digital instruments designed only for measuring distances parallel to the beam.

Notes cont.

9. Conformance statements cannot be made against specifications whose magnitudes are smaller than the specified CMC values

10. Calibrated using length measuring machine and/or end standards.

11. Calibrated using a projector

12 Ancillery measurements made for completeness of calibration. Best CMC's are dependent on methodology and range.

Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty (k = 2)	Remarks	Location Code
ELECTRICAL : Electrical values and uncertainties listed below are applicable for the calibration of both measuring instruments and for instruments with an output. The method used is by direct comparison against laboratory standards unless otherwise stated in the remarks column.				
DC VOLTAGE Measurement and Generation	0 mV to 200 mV 200 mV to 2 V 2 V to 20 V 20 V to 200 V 200 V to 1 kV 1.1 kV to 30 kV	8.5 µV/V + 0.31 µV 3.1 µV/V + 0.38 µV 3.0 µV/V + 5.8 µV 5.0 µV/V + 65 µV 4.8 µV/V + 0.76 mV 0.33 %		A
AC VOLTAGE Measurement and Generation	1 mV to 12 mV 10 Hz to 2 kHz 2 kHz to 30 kHz 30 kHz to 100 kHz 100 kHz to 300 kHz 300 kHz to 1 MHz 10 mV to 120 mV 10 Hz to 2 kHz 2 kHz to 10 kHz 10 kHz to 30 kHz 30 kHz to 100 kHz 100 kHz to 300 kHz 300 kHz to 1 MHz 100 mV to 1.2 V 10 Hz to 2 kHz 2 kHz to 10 kHz 10 kHz to 30 kHz 30 kHz to 100 kHz 100 kHz to 300 kHz 300 kHz to 1 MHz 1 V to 12 V 10 Hz to 2 kHz 2 kHz to 10 kHz 10 kHz to 30 kHz 30 kHz to 100 kHz 100 kHz to 300 kHz 300 kHz to 1 MHz 10 V to 120 V 10 Hz to 2 kHz 2 kHz to 10 kHz 10 kHz to 30 kHz 30 kHz to 100 kHz 100 kHz to 300 kHz 100 V to 1000 V 10 Hz to 10 kHz 10 kHz to 30 kHz 1 kV to 6 kV 50 Hz	 360 µV/V + 1.1 µV 430 µV/V + 1.1 µV 0.30 % 1.0 % 2 % 94 µV/V + 0.5 µV 130 µV/V + 0.5 µV 230 µV/V + 1.0 µV 530 µV/V + 5.0 µV 0.21 % + 30 µV 1.1 % + 100µV 80 µV/V + 5 µV 120 µV/V + 5 µV 230 µV/V + 10 µV 550 µV/V +50 µV 0.22 % + 0.30 mV 1.0 % + 1.0 mV 79 µV/V + 50 µV 120 µV/V + 50 µV 230 µV/V + 100 µV 540 µV/V + 500 µV 0.22% + 3.0 mV 1.0 % + 10 mV 95 µV/V + 0.5 mV 110 µV/V + 0.5 mV 250 µV/V + 1.0 mV 620 µV/V + 5mV 0.37 % + 50 mV 110 µV/V + 25 mV 240 µV/V + 25 mV 0.9 %		A

Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty (k = 2)	Remarks	Location Code
DC CURRENT Measurement and Generation	0 µA to 20 µA 20 µA to 200 µA 200 µA to 2 mA 2 mA to 20 mA 20 mA to 200 mA 200 mA to 2 A 2 A to 10 A 10 A to 30 A 10 A to 50 A 50 A to 300 A	27 µA/A + 0.42 nA 12 µA/A + 0.41 nA 11 µA/A + 4.0 nA 15 µA/A + 40 nA 58 µA/A + 0.12 µA 130 µA/A + 100 µA 240 µA/A + 400 µA 560 µA/A + 3.0 mA 420 µA/A 0.21 %		A
AC CURRENT Measurement and Generation	1 µA to 20 µA 10 Hz to 30 kHz 20 µA to 200 µA 10 Hz to 2 kHz 2 kHz to 10 kHz 10 kHz to 30kHz 200 µA to 2 mA 10 Hz to 2 kHz 2 kHz to 10 kHz 10 kHz to 30kHz 2 mA to 20 mA 10 Hz to 2 kHz 2 kHz to 10 kHz 10 kHz to 30kHz 20 mA to 200 mA 10 Hz to 2 kHz 2 kHz to 10 kHz 10 kHz to 30kHz 200 mA to 2 A 10 Hz to 2 kHz 2 kHz to 10 kHz 10 kHz to 30kHz 2 A to 10 A 10 Hz to 10 kHz 10 A to 30 A 10 Hz to 2 kHz	0.21 % + 2.5 nA 320 µA/A + 5.0 nA 550 µA/A + 5.0 nA 0.80 % + 5.0 nA 290 µA/A + 50 nA 540 µA/A + 50 nA 0.75 % + 50 nA 290 µA/A + 500 nA 540 µA/A + 500 nA 0.75 % + 500 nA 290 µA/A + 5.0 µA 530 µA/A + 5.0 µA 0.75 % + 5.0 µA 310 µA/A + 100 µA 570 µA/A + 100 µA 0.80 % + 100 µA 0.85 % + 500 µA 0.87% + 28 mA		A

Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty (k = 2)	Remarks	Location Code
RESISTANCE Measurement	0 Ω to 2 Ω 2 Ω to 20 Ω 20 Ω to 200 Ω 200 Ω to 2 kΩ 2 kΩ to 20 kΩ 20 kΩ to 200 kΩ 200 kΩ to 2 MΩ 2 MΩ to 20 MΩ 20 MΩ to 200 MΩ 200 MΩ to 2 GΩ 2 GΩ to 20 GΩ	18 µΩ/Ω + 4.0 µΩ 11 µΩ/Ω + 14 µΩ 9.4 µΩ/Ω + 50 µΩ 9.2 µΩ/Ω + 500 µΩ 9.4 µΩ/Ω + 5 mΩ 9.7 µΩ/Ω + 50 mΩ 12 µΩ/Ω + 1.0 Ω 21 µΩ/Ω + 10 Ω 76 µΩ/Ω + 1.0 kΩ 240 µΩ/Ω + 100 kΩ 0.27 % + 10 MΩ		A
Current Shunts Measurement and Generation	100mΩ - 1A 100mΩ - 10A 10mΩ - 1A 10mΩ - 10A 10mΩ - 20A 1mΩ - 1A 1mΩ - 10A 1mΩ - 20A 5mΩ @ 1A 5mΩ @ 10A 3mΩ @ 1A 3mΩ @ 10A 100µΩ @ 10A 250µΩ @ 10A	33 µΩ/Ω 27 µΩ/Ω 71 µΩ/Ω 33 µΩ/Ω 42 µΩ/Ω 380 µΩ/Ω 55 µΩ/Ω 45 µΩ/Ω 90 µΩ/Ω 80 µΩ/Ω 130 µΩ/Ω 35 µΩ/Ω 330 µΩ/Ω 150 µΩ/Ω		A
Simulated Current	10 A to 200 A 200 A to 1000 A 1000 A to 1500 A	0.08 % + 24 mA 0.010 % + 120 mA 0.39 % +1 mA	For the Calibration of clamp meters only	
Simulated AC Current	*10 A to 200 A* *40 Hz to 440 Hz* 200 A to 1500 A *40 Hz to 440 Hz*	0.16 % +100 mA 0.39 % +170 mA	Multi turn coil For the calibration of clamp meters only	A
RESISTANCE Generation Spot Values	0 Ω 1 Ω 1.9 Ω 10 Ω 19 Ω 100 Ω 190 Ω 1 kΩ 1.9 kΩ 10 kΩ 19 kΩ 100 kΩ 190 kΩ 1 MΩ 1.9 MΩ 10 MΩ 19 MΩ 100 MΩ	50 µΩ 110 µΩ 213 µΩ 280 µΩ 551 µΩ 1.3 mΩ 2.7 mΩ 11 mΩ 21 mΩ 0.11 Ω 0.21 Ω 1.4 Ω 2.85 Ω 24 Ω 55 Ω 470 Ω 1.14 kΩ 12.4 kΩ		A

Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty (k = 2)	Remarks	Location Code
CAPACITANCE				A
Measurement	0.2 nF to 2 nF	0.19 % + 1 pF		
	2 nF to 20 nF	860 µF/F + 2.0 pF		
	20. nF to 200 nF	520 µF/F + 10 pF		
	200 nF to 2 µF	420 µF/F + 100 pF		
Measure and Generate	2 µF to 20 µF	480 µF/F + 1.0 nF		
	20 µF to 200 µF	660 µF/F + 10 nF		
	200 µF to 2000 µF	660 µF/F + 100 nF		
Measurement	1 pF to 1 µF *@ 1 kHz*	54 µF/F		
Attenuation	1 kHz to 20 kHz Set ref nominal 5 V 0 dB to 60 dB	0.0067 dB		A
Distortion	*20 Hz to 20 kHz 50 mV to 300 V*	1.3 dB		A
	20 kHz to 100 kHz *50 mV to 300 V*	2.4 dB		
Phase angle				A
Voltage Voltage and Voltage Current:	10 Hz to 65 Hz	0.13 °		
	65 Hz to 500 Hz	0.35 °		
	500 Hz to 1 kHz	0.60 °		
AC Power				A
Unity PF to 0.25 PF	45 Hz to 65 Hz 330 mV to 1 kV			
	3.3 mA to 2.2 A	0.35 % + 1.2 mW		
	2.2 A to 20.5 A	0.45 % + 1.2 mW		
DC Power	33 mV to 1 kV			A
	330 µA to 3 A	500 µA/A		
	3 A to 20.5 A	0.12 %		

Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty (k = 2)	Remarks	Location Code
FREQUENCY RESPONSE Set points at 1 kHz	20 µV to 1.1 mV 1.1 mV to 3 mV 3 mV to 11 mV 11 mV to 33 mV 33 mV to 110 mV 110 mV to 330 mV 330 mV to 1.1 V 1.1 V to 3.5 V	1.0 % + 2.4 µV 0.90 % + 3.5 µV 0.90 % + 9.3 µV 0.80 % + 19 µV 0.80 % + 46 µV 0.70 % + 120 µV 0.70 % + 460 µV 0.62 % + 580 µV	For the calibration of AC voltmeters	A
Frequency Response Including set point	20 µV to 1.1 mV 10 Hz to 30 Hz 30 Hz to 120 Hz 120 Hz to 1.2 kHz 1.2 kHz to 12 kHz 12 kHz to 120 kHz 120 kHz to 1.2 MHz 1.2 MHz to 2 MHz 2 MHz to 10 MHz 10 M Hz to 20 MHz 20 MHz to 30 MHz *1.1 mV to 3 mV* 10 Hz to 30 Hz 30 Hz to 120 Hz 120 Hz to 1.2 kHz 1.2 kHz to 12 kHz 12 kHz to 120 kHz 120 kHz to 1.2 MHz 1.2 MHz to 2 MHz 2 MHz to 10 MHz 10 M Hz to 20 MHz 20 MHz to 30 MHz *3 mV to 11 mV* 10 Hz to 30 Hz 30 Hz to 120 Hz 120 Hz to 1.2 kHz 1.2 kHz to 12 kHz 12 kHz to 120 kHz 120 kHz to 1.2 MHz 1.2 MHz to 2 MHz 2 MHz to 10 MHz 10 M Hz to 20 MHz 20 MHz to 30 MHz *11 mV to 33 mV* 10 Hz to 30 Hz 30 Hz to 120 Hz 120 Hz to 1.2 kHz 1.2 kHz to 12 kHz 12 kHz to 120 kHz 120 kHz to 1.2 MHz 1.2 MHz to 2 MHz 2 MHz to 10 MHz 10 M Hz to 20 MHz 20 MHz to 30 MHz	 1.1 % + 2.4 µV 1.1 % + 2.4 µV 1.1 % + 2.4 µV 1.1 % + 2.4 µV 1.1 % + 2.4 µV 1.1 % + 4.2 µV 1.1 % + 4.2 µV 1.3 % + 4.2 µV 1.3 % + 4.2 µV 2.0% + 18 µV 1.0 % + 3.5 µV 0.95 % + 3.5 µV 0.95 % + 3.5 µV 0.95 % + 3.5 µV 0.95 % + 3.5 µV 0.95 % + 5.0 µV 0.95 % + 5.0 µV 1.0 % + 5.0 µV 1.1 % + 5.0 µV 2.0 % + 5.0 µV 1.0 % + 9.3 µV 0.95 % + 9.3 µV 0.95 % + 9.3 µV 0.95 % + 9.3 µV 0.95 % + 9.3 µV 0.95 % + 9.9 µV 0.95 % + 9.9 µV 0.95 % + 9.9 µV 1.1 % + 9.9 µV 1.5 % + 9.9 µV 0.90 % + 19 µV 0.85 % + 19 µV 0.85 % + 19 µV 0.85 % + 19 µV 0.85 % + 19 µV 0.85 % + 19 µV 0.85 % + 19 µV 0.85 % + 19 µV 0.95% + 19 µV 1.4 % + 19 µV		A

Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty (k = 2)	Remarks	Location Code
Frequency Response Including set point (cont'd)				A
	33 mV to 110 mV			
	10 Hz to 30 Hz	0.90 % + 47 µV		
	30 Hz to 120 Hz	0.85 % + 47 µV		
	120 Hz to 1.2 kHz	0.85 % + 47 µV		
	1.2 kHz to 12 kHz	0.85 % + 47 µV		
	12 kHz to 120 kHz	0.85 % + 47 µV		
	120 kHz to 1.2 MHz	0.85 % + 47 µV		
	1.2 MHz to 2 MHz	0.85 % + 47 µV		
	2 MHz to 10 MHz	0.85 % + 47 µV		
	10 M Hz to 20 MHz	0.95 % + 47 µV		
	20 MHz to 30 MHz	1.4 % + 47 µV		
	110 mV to 330 mV			
	10 Hz to 30 Hz	0.80 % + 120 µV		
	30 Hz to 120 Hz	0.75 % + 120 µV		
	120 Hz to 1.2 kHz	0.75 % + 120 µV		
	1.2 kHz to 12 kHz	0.75 % + 120 µV		
	12 kHz to 120 kHz	0.75 % + 120 µV		
	120 kHz to 1.2 MHz	0.75 % + 120 µV		
	1.2 MHz to 2 MHz	0.75 % + 120 µV		
	2 MHz to 10 MHz	0.75 % + 120 µV		
	10 MHz to 20 MHz	0.85 % + 120 µV		
	20 MHz to 30 MHz	1.4 % + 120 µV		
	330 mV to 1.1 V			
	10 Hz to 30 Hz	0.70 % + 460 µV		
	30 Hz to 120 Hz	0.80 % + 460 µV		
	120 Hz to 1.2 kHz	0.75 % + 460 µV		
	1.2 kHz to 12 kHz	0.75 % + 460 µV		
	12 kHz to 120 kHz	0.75 % + 460 µV		
	120 kHz to 1.2 MHz	0.75 % + 460 µV		
	1.2 MHz to 2 MHz	0.75 % + 460 µV		
	2 MHz to 10 MHz	0.75 % + 460 µV		
	10 MHz to 20 MHz	0.85 % + 460 µV		
	20 MHz to 30 MHz	1.4 % + 460 µV		
	1.1 V to 3.5 V			
	10 Hz to 30 Hz	0.75 % + 580 µV		
	30 Hz to 120 Hz	0.65 % + 580 µV		
	120 Hz to 1.2 kHz	0.65 % + 580 µV		
	1.2 kHz to 12 kHz	0.65 % + 580 µV		
	12 kHz to 120 kHz	0.65 % + 580 µV		
	120 kHz to 1.2 MHz	0.65 % + 580 µV		
	1.2 MHz to 2 MHz	0.65 % + 580 µV		
	2 MHz to 10 MHz	0.70 % + 580 µV		
	10 MHz to 20 MHz	0.80 % + 580 µV		
	20 MHz to 30 MHz	1.3 % + 580 µV		

Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty (k = 2)	Remarks	Location Code
OSCILLOSOPE with respect to set point into 50 Ω				A
	50 kHz to 10 MHz *50 mV to 5.5 V peak to peak*	1.8 %		
	10 MHz to 600 MHz *50 Mv to 5.5 V peak to peak*	3.6 %		
	600 Mhz to 1.1 GHz *50 mV to 5.5 V peak to peak*	4.7 %		
	1.1 Ghz to 2.1 Ghz *50 mV to 5.5 V peak to peak*	5.9 %		
Timebase accuracy	1 ns to 20 ms 20 ms to 2 s	3.0 µs/s 0.20 %		A
RISE TIME	Nominal 1 ns	120 ps		A
FREQUENCY				A
	10 MHz	4.5 in 10^{11}	For stable oscillators by direct comparison	
	1 Hz to 18 GHz	4.6 in 10^{11} + 100 µHz		
TIME INTERVAL	1 s to 24 hours	2.0 ms 200 ms	Electronically triggered. Manual triggered	A
Optical Tachometry	30 rpm to 99,000 rpm	0.12 rpm	Optical simulation	A
ELECTRICAL SIMULATION OF TEMPERATURE MEASURING and READING INSTRUMENTS	Ambient 20 °C ± 3 °C	0.15 °C	Support measurement suitable for measurement of reference junction compensation devices	A
Thermocouple displays **Including** Reference Junction compensation.				
Base Metal Thermocouples	-250 °C to +1375 °C	0.26 °C to 0.76 °C		A
Noble Metal Thermocouples	0 °C to +1767 °C	0.58 °C to 0.79 °C		A
Thermocouple displays **Excluding** Reference Junction compensation.				
Base Metal Thermocouples	-250 °C to +1375 °C	0.012 °C to 0.028 °C		A
Noble Metal Thermocouples	0 °C to +1767 °C	0.059 °C to 0.092 °C		A
Resistance			(PT 100 & PT1000)	
Temperature simulators Temperature indicators	-200 °C to 800 °C -200 °C to 800 °C	0.0036 °C to 0.011 °C 0.0036 °C to 0.011 °C		

Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty (k = 2)	Remarks	Location Code
ADDITIONAL MEASUREMENTS IN SUPPORT OF IEE 17TH EDITION TEST EQUIPMENT				
RCD				
Trip current	3 mA to 10 mA 10 mA to 30 mA 30 mA to 100 mA 100 mA to 300 mA 300 mA to 2 A	400 µA 830 µA 2.2 mA 8.3 mA 45 mA		
Trip time	20 ms to 390 ms 390 ms to 900 ms	500 µs 2.0 ms		
AC RESISTANCE FOR LOOP 50 Hz			Laboratory loop nominally 0.46 Ω	
Nominal Ranges	0.05 Ω to 0.1 Ω 0.1 Ω to 0.22 Ω 0.22 Ω to 0.33 Ω 0.33 Ω to 0.5 Ω 0.5 Ω to 1 Ω 1 Ω to 5 Ω 5 Ω to 10 Ω 10 Ω to 100 Ω 100 Ω to 1 k Ω	1.7 mΩ 4.0 mΩ 4.0 mΩ 6.0 mΩ 7.0 mΩ 6.0 mΩ 8.0 mΩ 25 mΩ 480 m Ω		
EARTH BOND RESISTANCE	0 Ω to 1 Ω 1 Ω to 10 Ω 10 Ω to 100 Ω 100 Ω to 1 kΩ	4.0 mΩ 15 mΩ 23 mΩ 170 mΩ		
EARTH BOND CURRENT 50 Hz	100 mA 100 mA to 8 A 8 A to 40 A	3.0 mA 21 mA 88 mA		
DC VOLTAGE	0 µV to 10 mV 10 mV to 200 mV 200 mV to 2 V 2 V to 20 V 20 V to 200 V 200 V to 1 kV 1 kV to 19 kV	80 µV/V + 1µV 8.5 µV/V + 1µV 5.0 µV/V + 1µV 6.9 µV/V + 1µV 8.0 µV/V 7.5 µV/V 1.6 % + 1 V	These values can be measured	B

Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty (k = 2)	Remarks	Location Code
AC VOLTAGE	1 mV to 20 mV			B
	30 Hz to 10 kHz	0.14 %		
	10 kHz to 100 kHz	0.2 %		
	20 mV to 200 mV			
	30 Hz to 10 kHz	0.10 %		
	10 kHz to 100 kHz	0.10 %		
	200 mV to 2 V			
	30 Hz to 10 kHz	0.03 %		
	10 kHz to 100 kHz	0.05 %		
	2 V to 20 V			
	30 Hz to 10 kHz	0.03 %		
	10 kHz to 100 kHz	0.05 %		
	100 kHz to 330 kHz	0.15 %		
	20 V to 200 V			
	30 Hz to 10 kHz	0.03 %		
	10 kHz to 100 kHz	0.05 %		
	200 V to 1000 V			
	30 Hz to 10 kHz	0.04 %		
	1 kV to 5 kV	1.8 % + 1 V		
	50 hz			
DC CURRENT Measurement	10 µA to 100 µA	80 µA/A		B
	100 µA to 1 mA	50 µA/A		
	1 mA to 10 mA	50 µA/A		
	10 mA to 100 mA	56 µA/A		
	100 mA to 1 A	150 µA/A		
	1A to 10 A	200 µA/A		
	10 A to 50 A	420 µA/A		
AC CURRENT Measurement	10 µA to 100 µA			B
	40 Hz to 5 kHz	0.03 %		
	100 µA to 1 mA			
	40 Hz to 5 kHz	0.03 %		
	1m A to 10 mA			
	40 Hz to 5 kHz	0.03 %		
	10 mA to 100 mA			
	40 Hz to 5 kHz	0.03 %		
	100 mA to 1 A			
	40 Hz to 5 kHz	0.087 %		
Measurement and Generation	1 A to 10 A			B
	50 Hz to 400 Hz	0.050 %		

Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty (k = 2)	Remarks	Location Code
RESISTANCE Measurement				B
	0 Ω to 10 Ω	20 μΩ/Ω + 70 μΩ		
	10 Ω to 100 Ω	15 μΩ/Ω + 700 μΩ		
	100 Ω to 1 kΩ	13 μΩ/Ω + 700 μΩ		
	1 kΩ 10 kΩ	13 μΩ/Ω + 6.3 mΩ		
	10 kΩ to 100 kΩ	13 μΩ/Ω + 70 mΩ		
	100 kΩ to 1 MΩ	22 μΩ/Ω + 2.6 Ω		
	1 MΩ to 10 MΩ	82 μΩ/Ω + 130 Ω		
	10 MΩ to 100 MΩ	0.08 %		
	100 MΩ to 1 GΩ	1.00 %		
DC VOLTAGE Generation				B
	0 V to 220 mV	15 μV/V		
	220 mV to 2.2 V	10 μV/V		
	2.2 V to 22 V	8.5 μV/V		
	22 V to 220 V	13 μV/V		
	220 V to 1.1 kV	16 μV/V		
AC VOLTAGE Generation	2 mV to 200 mV			B
	10 Hz to 10 kHz	0.07 %		
	10 kHz to 100 kHz	0.15 %		
	200 mV to 2 V			
	10 Hz to 10 kHz	0.05 %		
	10 kHz to 100 kHz	0.15 %		
	2 V to 20 V			
	10 Hz to 10 kHz	0.06 %		
	10 kHz to 100 kHz	0.12 %		
	100 kHz to 330 kHz	0.40 %		
	20 V to 200 V			
	10 Hz to 10 kHz	0.05 %		
	10 kHz to 100 kHz	0.16 %		
	200 V to 1000 V			
	50 Hz to 10 kHz	0.07 %		
	10 kHz to 100 kHz	0.16 %		
DC CURRENT Generation	0 A to 200 μA	85 μA/A		B
	200 μA to 2 mA	75 μA/A		
	2 mA to 20 mA	72 μA/A		
	20 mA to 200 mA	85 μA/A		
	200 mA to 2 A	230 μA/A		
	2.2 A to 3 A	440 μA/A + 1.2 mA		
	3 A to 10 A	580 μA/A + 12 mA		
	10 A to 50 A	420 μA/A		
Simulated current	10 A to 100 A	500 μA/A + 12 mA	For the calibration of clamp meters only	
	100 A to 1000 A	0.14 % + 700 mA		

Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty (k = 2)	Remarks	Location Code
AC CURRENT				B
Generation	2 µA to 200 µA			
	10 Hz to 5kHz	0.08 %		
	200 µA to 2 mA			
	10 Hz to 5kHz	0.03 %		
	2 mA to 20 mA			
	10 Hz to 5kHz	0.03 %		
	20 mA to 200 mA			
	10 Hz to 5kHz	0.03 %		
	200 mA to 2.A			
	10 Hz to 5kHz	0.06 %		
	2.2 A to 3 A			
	10 Hz to 45 Hz	0.35 % + 1.2 mA		
	45 Hz to 1 kHz	0.15 % + 0.70 mA		
	1 kHz to 5 kHz	0.40 % + 4.9 mA		
	5 kHz to 10 kHz	3.7 % + 24 mA		
	3 A to 11 A			
	45 Hz to 100 Hz	0.25 % + 4.5 mA		
	100 Hz to 1 kHz	0.17 % + 4.5 mA		
	1 kHz to 5 kHz	3.6 % + 15 mA		
Simulated AC Current				
	10 A to 100 A			B
	40 Hz to 100 Hz	0.10 %	Multi turn coil	
	100 Hz to 440 Hz	0.50 %	For the calibration of clamp meters only	
	100 A to 1000 A			
	40 Hz to 100 Hz	0.20 %		
RESISTANCE				B
Generation				
Spot Values	10 Ω	0.32 mΩ		
	100 Ω	1.4 mΩ		
	1 kΩ	19 mΩ		
	10 kΩ	120 mΩ		
	100 kΩ	3.8 Ω		
	1 MΩ	40 Ω		
	10 MΩ	0.60 kΩ		
	100 MΩ	18 kΩ		
OSCILLOSCOPE BANDWIDTH AND FREQUENCY RESPONSE				B
Set points at 1 kHz	40 Hz to 600 MHz			
	100 mV to 3.5 V peak to peak	2.0 %		
Timebase accuracy				B
	1 ns to 20 ms	3.0 µs/s		
	20 ms to 2 s	0.20 %		
RISE TIME				B
	Nominal 1 ns	120 ps		

Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty (k = 2)	Remarks	Location Code
ELECTRICAL SIMULATION OF TEMPERATURE INSTRUMENTS				
Type K	-200 °C to -100 °C -100 °C to -25 °C -25 °C to 120 °C 120 °C to 1000 °C 1000 °C to 1372 °C	0.36 °C 0.23 °C 0.22 °C 0.30 °C 0.43 °C	Thermocouple displays Including Reference Junction compensation	
Type J	-210 °C to -100 °C -100 °C to -30 °C -30 °C to 150 °C 150 °C to 760 °C 760 °C to 1200 °C	0.35 °C 0.25 °C 0.25 °C 0.25 °C 0.30 °C		
Type R	0 °C to 250 °C 250 °C to 400 °C 400 °C to 1000 °C 1000 °C to 1767 °C	0.76 °C 0.56 °C 0.55 °C 0.60 °C		
Type S	0 °C to 250 °C 250 °C to 400 °C 400 °C to 1000 °C 1000 °C to 1767 °C	0.66 °C 0.56 °C 0.57 °C 0.65 °C		
Type T	-250 °C to -150 °C -150 °C to 0 °C 0 °C to 120 °C 120 °C to 400 °C	0.75 °C 0.35 °C 0.25 °C 0.25 °C		
Type K	-200 °C to -100 °C -100 °C to -25 °C -25 °C to 120 °C 120 °C to 1000 °C 1000 °C to 1372 °C	0.35 °C 0.22 °C 0.21 °C 0.29 °C 0.43 °C	Thermocouple displays Excluding Reference Junction compensation	
Type J	-210 °C to -100 °C -100 °C to -30 °C -30 °C to 150 °C 150 °C to 760 °C 760 °C to 1200 °C	0.34 °C 0.24 °C 0.24 °C 0.24 °C 0.29 °C		
Type R	0 °C to 250 °C 250 °C to 400 °C 400 °C to 1000 °C 1000 °C to 1767 °C	0.76 °C 0.56 °C 0.55 °C 0.60 °C		
Type S	0 °C to 250 °C 250 °C to 400 °C 400 °C to 1000 °C 1000 °C to 1767 °C	0.66 °C 0.56 °C 0.57 °C 0.65 °C		
Type T	-250 °C to -150 °C -150 °C to 0 °C 0 °C to 120 °C 120 °C to 400 °C	0.75 °C 0.34 °C 0.24 °C 0.24 °C		

Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty (k = 2)	Remarks	Location Code
Resistance			(PT 100)	B
Temperature simulators	-200 °C to 800 °C	0.050 °C		
Temperature indicators	-200 °C to 800 °C	0.080 °C		
ADDITIONAL MEASUREMENTS IN SUPPORT OF IEE 17TH EDITION TEST EQUIPMENT				B
RCD				
Trip current	3 mA to 10 mA	400 µA		
	10 mA to 30 mA	830 µA		
	30 mA to 100 mA	2.2 mA		
	100 mA to 300 mA	8.3 mA		
	300 mA to 2 A	45 mA		
Trip time	20 ms to 390 ms	500 µs		
	390 ms to 900 ms	2.0 ms		
AC RESISTANCE FOR LOOP 50 Hz				
Nominal Ranges	0.05 Ω to 0.1 Ω	1.7 mΩ		
	0.1 Ω to 0.22 Ω	4.0 mΩ		
	0.22 Ω to 0.33 Ω	4.0 mΩ		
	0.33 Ω to 0.5 Ω	6.0 mΩ		
	0.5 Ω to 1 Ω	7.0 mΩ		
	1 Ω to 5 Ω	6.0 mΩ		
	5 Ω to 10 Ω	8.0 mΩ		
	10 Ω to 100 Ω	25 mΩ		
	100 Ω to 1 k Ω	480 mΩ		
EARTH BOND RESISTANCE	0 Ω to 1 Ω	4.0 mΩ		
	1 Ω to 10 Ω	15 mΩ		
	10 Ω to 100 Ω	23 mΩ		
	100 Ω to 1 kΩ	170 mΩ		
EARTH BOND CURRENT 50 Hz	100 mA	3.0 mA		
	100 mA to 8 A	21 mA		
	8 A to 40 A	88 mA		

Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty (k = 2)	Remarks	Location Code
PRESSURE				
Gas Pressure Gauge			Methods consistent with EURAMET CG17	
Calibration of pressure indicating instruments and gauges	-90 kPa to +400 kPa 400 kPa to 2 MPa 2 MPa to 7 MPa	120 Pa 200 Pa 660 Pa	Calibrations of pressure devices with an electrical output may be undertaken.	A
	-90 kPa to 2 MPa 2 MPa to 7 MPa	0.50 kPa 1.1 kPa		B
Hydraulic Pressure Gauge				
Calibration of pressure indicating instruments and gauges	500 kPa to 60 MPa 60 MPa to 140 MPa 140 MPa to 280 MPa	0.014 % + 1.0 kPa 70 kPa 80 kPa		A
	0 MPa to 140 MPa 140 MPa to 280 MPa	80 kPa 110 kPa		B
TEMPERATURE				A
Resistance thermometers	-80 °C to 0 °C 0 °C to 100 °C 100 °C to 200 °C 200 °C to 500 °C 500 °C to 650 °C	0.040 °C 0.035 °C 0.045 °C 0.16 °C 0.26 °C	Comparison in liquid bath and dry media	
Temperature indicating instruments with probes	-80 °C to 0 °C 0 °C to 100 °C 100 °C to 200 °C 200 °C to 500 °C 500 °C to 650 °C	0.040 °C 0.035 °C 0.045 °C 0.16 °C 0.26 °C	Comparison in liquid bath and dry media Calibrations of temperature transmitters may be undertaken.	
Thermocouples			Comparison in liquid bath and dry media	
Base Metal	-80 °C to 350 °C 350 °C to 650 °C	0.27 °C to 0.39 °C 0.39 °C to 0.58 °C		
Noble Metal	0 °C to 500 °C 500 °C to 650 °C	0.60 °C 0.65 °C		
Temperature controlled environmental chambers, fridges/refrigerators, freezers, incubators, ovens and furnaces	-80 °C to +250 °C 250 °C to 500 °C 500 °C to 700 °C 700 °C to 1000 °C 1000 °C to 1300 °C	1.1 °C 2.3 °C 3.1 °C 4.0 °C 5.0 °C	Single and multipoint time dependent temperature profiling using thermocouples, also referred to as spatial temperature surveying or mapping	B
Dry Block Calibrators	-80 °C to 140 °C 140 °C to 650 °C	0.050 °C 0.13 °C	Method consistent with Euramet CG 13	A

Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty (k = 2)	Remarks	Location Code
TORQUE				A
Hand Torque Tools (Torque wrenches and Torque screwdrivers)	BS EN ISO 6789-2:2017 0.04 N·m to 1500 N·m	1.0 %	Calibration results may also be reported in units of lbf·in and lbf·ft. The uncertainty quoted is for both the application of the calibration torque and the characteristics of the device being calibrated.	
	BS EN ISO 6789:2003 (Withdrawn) 0.04 N·m to 1500 N·m	1.0 %		
Static Torque Transducers Transducers in clockwise and/or anti-clockwise direction	BS 7882:2017 0.04 to 3 N·m 0.1 to 60 N·m 0.2 to 150 N·m 0.4 to 1500 N·m	 0.070 % 0.060 % 0.040 % 0.030 %	Calibrations may also be given in units of electrical signal output. Calibrated statically using un-supported Beam and Masses.	A
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: $Q[a, b] = [a^2 + b^2]^{1/2}$