

# Schedule of Accreditation

issued by

## United Kingdom Accreditation Service

21 - 47 High Street, Feltham, Middlesex, TW13 4UN, UK

 <p style="text-align: center;"><b>0125</b></p> <p style="text-align: center;">Accredited to ISO/IEC 17025:2005</p>	<h3>Universal Instrument Services Ltd</h3> <p>Issue No: 037    Issue date: 13 January 2012</p>	
	<p><b>Standards Laboratory</b> The Whittle Estate Cambridge Road Whetstone Leicestershire LE8 6PA</p>	<p><b>Contact: Hazel Horn</b> Tel: +44 (0)116 275 0123 Fax: +44 (0)116 275 0262 E-Mail: sales@uisca.co.uk Website: www.uisca.com</p>
<p><b>Calibration performed by the Organisations at the locations specified below</b></p>		

### Locations covered by the organisation and their relevant activities

**Laboratory locations:**

Location details	Activity	Location code		
<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;"><b>Address</b> Standards Laboratory The Whittle Estate Cambridge Road Whetstone Leicestershire LE8 6PA</td> <td style="width: 50%; border: none;"><b>Local contact</b> Hazel Horn  Tel: +44 (0)116-275 0123 Fax: +44 (0)116-275 0262 Email: sales@uisca.co.uk Website: www.uisca.com</td> </tr> </table>	<b>Address</b> Standards Laboratory The Whittle Estate Cambridge Road Whetstone Leicestershire LE8 6PA	<b>Local contact</b> Hazel Horn  Tel: +44 (0)116-275 0123 Fax: +44 (0)116-275 0262 Email: sales@uisca.co.uk Website: www.uisca.com	Dimensional Electrical Pressure Temperature Torque	P
<b>Address</b> Standards Laboratory The Whittle Estate Cambridge Road Whetstone Leicestershire LE8 6PA	<b>Local contact</b> Hazel Horn  Tel: +44 (0)116-275 0123 Fax: +44 (0)116-275 0262 Email: sales@uisca.co.uk Website: www.uisca.com			

**Site activities performed away from the locations listed above:**

Location details	Activity	Location code		
<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;">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.</td> <td style="width: 50%; border: none;">Contact as above</td> </tr> </table>	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.	Contact as above	Dimensional Electrical Pressure Temperature Torque	S
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DETAIL OF ACCREDITATION

Measured Quantity Instrument or Gauge	Range	Calibration and Measurement Capability (CMC) Expressed as an Expanded Uncertainty ( $k=2$ )	Remarks	Location Code
DIMENSIONAL CALIBRATION				
RANGES IN MILLIMETRES AND UNCERTAINTIES IN MICROMETRES UNLESS STATED OTHERWISE				
LENGTH				
Plain plug gauges (parallel) Cylindrical setting standards and rollers	2 mm to 10 mm	1.0		P
	10 mm to 50 mm	1.0		
	50 mm to 100 mm	1.5		
	100 mm to 150 mm	2.0		
	150 mm to 200 mm	2.0		
Plain ring gauges (parallel)	2 mm to 10 mm	2.0		P
	10 mm to 50 mm	1.5		
	50 mm to 100 mm	2.0		
	100 mm to 200 mm	3.0		
Length gauges, flat and spherical ended	0 mm to 1000 mm	1.0 + (8.0 x length in m)		P
Measuring Instruments				
Micrometers External Internal Depth	As BS 870:2008	Heads: 2.0 between any points Setting and extension rods 1.0 + (8.0 x length in m)		P
	As BS 959:2008			
	As BS 6468:2008			
Micrometer heads	As BS 1734:1951	1.0		P
Bore micrometers (three points)	0 mm to 150 mm diameter	Overall performance 5.0		P
	150 mm to 200 mm	Overall performance 8.0		
Vernier/digital gauges Caliper, Height Depth	As BS 887:2008	Overall performance 10 + (30 x length in m)		P
	As BS 1643:2008			
	As BS 6365:2008			
Dial gauges and dial test indicators	As BS 907:2008 and BS 2795:1981	1.0		P
Height setting micrometer	0 mm to 300 mm	Heads 1.0 Stepped column 1.6 Overall performance 3.0		P
Riser blocks for above	150 mm	2.5 $\mu$ m		P
	300 mm	5.0 $\mu$ m		
Protractors	As BS1685:2008	1 minute + 1 Vernier division		P
Feeler gauges	As BS 957:2008	3.0		P



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DIMENSIONAL CALIBRATION (continued)				
RANGES IN MILLIMETRES AND UNCERTAINTIES IN MICROMETRES UNLESS STATED OTHERWISE				
LENGTH (continued)				
Profile projectors	0 to 100 magnifications  Angular Linear	125/ $M$ , where $M$ is the magnification 5 minutes of arc 4.0 $\mu$ m		S
Orifice plates	As EN ISO 5167-2:2003 Orifice plates with the following bore 'd' diameters 12.5 mm to 100 mm 100 mm to 750 mm	2.0 on diameter 'd' 4.5 + (3.0 x length in m) on diameter 'd'		P
ELECTRICAL CALIBRATION				
DC RESISTANCE				
Measurement	0 $\Omega$ to 20 $\Omega$ 20 $\Omega$ to 200 $\Omega$ 200 $\Omega$ to 2 k $\Omega$ 2 k $\Omega$ to 20 k $\Omega$ 20 k $\Omega$ to 200 k $\Omega$ 200 k $\Omega$ to 2 M $\Omega$ 2 M $\Omega$ to 20 M $\Omega$ 20 M $\Omega$ to 200 M $\Omega$	25 ppm + 20 $\mu\Omega$ 16 ppm + 60 $\mu\Omega$ 15 ppm + 0.60 m $\Omega$ 15 ppm + 6.0 m $\Omega$ 16 ppm + 60 m $\Omega$ 27 ppm + 1.4 $\Omega$ 50 ppm + 80 $\Omega$ 0.040 % + 9.0 k $\Omega$		P
	0 $\Omega$ to 200 $\Omega$ 200 $\Omega$ to 2 k $\Omega$ 2 k $\Omega$ to 20 k $\Omega$ 20 k $\Omega$ to 200 k $\Omega$ 200 k $\Omega$ to 2 M $\Omega$ 2 M $\Omega$ to 20 M $\Omega$ 20 M $\Omega$ to 30 M $\Omega$ 30 M $\Omega$ to 300 M $\Omega$	150 ppm + 5.0 m $\Omega$ 150 ppm + 40 m $\Omega$ 150 ppm + 400 m $\Omega$ 150 ppm + 4.0 $\Omega$ 200 ppm + 40 $\Omega$ 450 ppm + 500 $\Omega$ 0.30 % + 4.0 k $\Omega$ 2.1 % + 0.10 M $\Omega$		S
Generation				
Specific Values	100 $\mu\Omega$ 1 m $\Omega$ , 10 m $\Omega$ and 100 m $\Omega$	0.040 % 0.015 %		P
	1 $\Omega$ 10 $\Omega$ 100 $\Omega$ 1 k $\Omega$ 10 k $\Omega$ 100 k $\Omega$ 1 M $\Omega$ 10 M $\Omega$ 100 M $\Omega$	3.0 ppm 4.0 ppm 4.0 ppm 4.0 ppm 4.0 ppm 4.0 ppm 15 ppm 15 ppm 140 ppm		



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DC RESISTANCE (continued)				
Generation (continued)				
Specific Values (continued)	100 M $\Omega$ 1 G $\Omega$ 10 G $\Omega$ 100 G $\Omega$ 1 T $\Omega$	0.040 % 0.50 % 0.50 % 1.5 % 1.8 %	Applied voltages in the range 100 V to 500 V	P
	10 M $\Omega$ 100 M $\Omega$ 1 G $\Omega$ 10 G $\Omega$	0.60 % 0.60 % 0.60 % 1.0 %	Applied voltages up to 5 kV	P and S
Other values	0 $\Omega$ to 11 $\Omega$ 11 $\Omega$ to 33 $\Omega$ 33 $\Omega$ to 330 $\Omega$ 330 $\Omega$ to 3.3 k $\Omega$ 3.3 k $\Omega$ to 33 k $\Omega$ 33 k $\Omega$ to 330 k $\Omega$ 330 k $\Omega$ to 3.3 M $\Omega$ 3.3 M $\Omega$ to 11 M $\Omega$ 11 M $\Omega$ to 33 M $\Omega$ 33 M $\Omega$ to 110 M $\Omega$	150 ppm + 6.2 m $\Omega$ 160 ppm + 12 m $\Omega$ 120 ppm + 12 m $\Omega$ 120 ppm + 72 m $\Omega$ 120 ppm + 0.72 $\Omega$ 150 ppm + 7.2 $\Omega$ 180 ppm + 67 $\Omega$ 650 ppm + 670 $\Omega$ 0.13% + 10 k $\Omega$ 0.55% + 11 k $\Omega$		S
DC VOLTAGE				
Voltage Reference Values	1 V 10 V	3.1 ppm 2.5 ppm	For calibration of voltage references of suitable stability	P
Measurement	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 1 kV to 15 kV 15 kV to 40 kV	12 ppm + 1.0 $\mu$ V 9.0 ppm + 1.0 $\mu$ V 8.0 ppm + 8.0 $\mu$ V 13 ppm + 80 $\mu$ V 13 ppm + 0.80 mV 0.30 % + 1.0 V 0.30 % + 10 V	Generation of DC voltages for this range can also be undertaken	P
	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	100 ppm + 6.0 $\mu$ V 60 ppm + 40 $\mu$ V 70 ppm + 0.40 mV 70 ppm + 4.0 mV 90 ppm + 40 mV		S



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DC VOLTAGE (continued)				
Generation	0 mV to 220 mV 220 mV to 2.2 V 2.2 V to 22 V 22 V to 220 V 220 V to 1100 V	12 ppm + 1.0 $\mu$ V 10 ppm+ 1.5 $\mu$ V 10 ppm + 10 $\mu$ V 10 ppm + 120 $\mu$ V 12 ppm + 0.80 mV		P
	0 mV to 330 mV 330 mV to 3.3 V 3.3 V to 33 V 33 V to 330 V 330 V to 1020 V	70 ppm + 4.0 $\mu$ V 60 ppm + 6.0 $\mu$ V 60 ppm + 60 $\mu$ V 65 ppm + 0.60 mV 65 ppm + 2.0 mV		S
DC CURRENT				
Measurement	0 $\mu$ A to 20 $\mu$ A 20 $\mu$ A to 200 mA 200 mA to 2 A 2 A to 10 A 10 A to 100 A	40 ppm + 200 pA 40 ppm 100 ppm 150 ppm 120 ppm		P
	0 $\mu$ A to 30 mA 30 mA to 100 mA 100 mA to 1 A 1 A to 2 A 2 A to 10 A	0.065 % + 4.0 $\mu$ A 0.065 % + 25 $\mu$ A 0.06 % + 65 $\mu$ A 0.12 % + 90 $\mu$ A 0.25 % + 6.0 mA		S
Generation	10 $\mu$ A to 220 $\mu$ A 220 $\mu$ A to 2.2 mA 2.2 mA to 22 mA 22 mA to 220 mA 220 mA to 2.2 A 2.2 A to 100 A	70 ppm + 11 nA 70 ppm + 12 nA 70 ppm + 120 nA 100 ppm + 1.2 $\mu$ A 180 ppm + 32 $\mu$ A 100 ppm		P
	100 A to 2 kA	0.020 %	For the calibration of clamp-on ammeters	
	0 $\mu$ A to 3.3 mA 3.3 mA to 33 mA 33 mA to 330 mA 330 mA to 2.2 A 2.2 A to 11 A 11 A to 100 A	160 ppm + 0.060 $\mu$ A 130 ppm + 0.31 $\mu$ A 130 ppm + 4.0 $\mu$ A 400 ppm + 45 $\mu$ A 710 ppm + 340 $\mu$ A 200 ppm		S
AC RESISTANCE				
Specific Values	50 Hz 0.2 $\Omega$ , 0.5 $\Omega$ , 1 $\Omega$ , 5 $\Omega$ , 47 $\Omega$ , 100 $\Omega$ and 1 k $\Omega$	0.10 % + 0.010 $\Omega$	For the calibration of loop testers	P



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AC RESISTANCE (continued) Specific Values (continued)	1 $\Omega$ 100 Hz to 1 kHz 10 kHz	0.40 % 0.60 %	Resistance values available for the calibration of resistance measuring devices			
	10 $\Omega$ 100 Hz to 1 kHz 10 kHz	0.25 % 0.40 %				
	100 $\Omega$ 100 Hz to 1 kHz 10 kHz	0.15 % 0.40 %				
	1 k $\Omega$ 100 Hz to 1 kHz 10 kHz	0.15 % 0.20 %				
	10 k $\Omega$ 100 Hz to 1 kHz 10 kHz	0.15 % 0.20 %				
	100 k $\Omega$ 100 Hz to 10 kHz	0.20 %				
	1 M $\Omega$ 100 Hz to 10 kHz	0.30 %				
	10 M $\Omega$ 100 Hz to 1 kHz	1.3 %				
Other Values	10 m $\Omega$ to 1.1 $\Omega$ 50 Hz	0.10 % + 0.50 m $\Omega$			For the calibration of loop testers	S
	0.2 $\Omega$ to 1 k $\Omega$ 50 Hz	0.10 % + 0.50 m $\Omega$				
AC VOLTAGE Measurement	20 mV to 200 mV 50 Hz to 10 kHz 10 kHz to 30 kHz 30 kHz to 100 kHz	290 ppm + 4.0 $\mu$ V 530 ppm + 8.0 $\mu$ V 930 ppm + 20 $\mu$ V		P		
	200 mV to 2 V 50 Hz to 10 kHz 10 kHz to 30 kHz 30 kHz to 100 kHz	200 ppm + 20 $\mu$ V 300 ppm + 40 $\mu$ V 620 ppm + 0.20 mV				
	2 V to 20 V 50 Hz to 10 kHz 10 kHz to 30 kHz 30 kHz to 100 kHz	190 ppm + 0.20 mV 300 ppm + 0.40 mV 620 ppm + 2.0 mV				



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AC VOLTAGE (continued) Measurement (continued)	20 V to 200 V 50 Hz to 10 kHz 10 kHz to 30 kHz 30 kHz to 100 kHz	200 ppm + 2.0 mV 310 ppm + 4.0 mV 650 ppm + 20 mV		P
	200 V to 300 V 50 Hz to 10 kHz	200 ppm + 20 mV		
	300 V to 1000 V 50 Hz to 10 kHz	0.15% + 20 mV		
	500 V 50 Hz to 10 kHz	250 ppm		
	1000 V 50 Hz to 10 kHz	500 ppm		
	1 kV to 10 kV 50 Hz	1.1 % + 10 V	Generation of AC voltages over these ranges can also be undertaken	
	10 kV to 50 kV 50 Hz	1.1 % + 40 V		
	20 mV to 200 mV 45 Hz to 100 Hz 100 Hz to 20 kHz 20 kHz to 50 kHz	0.42 % + 120 $\mu$ V 0.18 % + 120 $\mu$ V 0.30 % + 450 $\mu$ V		S
	200 mV to 2 V 45 Hz to 100 Hz 100 Hz to 20 kHz 20 kHz to 50 kHz	0.42 % + 1.0 mV 0.18 % + 1.0 mV 0.30 % + 480 $\mu$ V		
	2 V to 20 V 45 Hz to 100 Hz 100 Hz to 20 kHz 20 kHz to 50 kHz	0.42 % + 10 mV 0.18 % + 10 mV 0.23 % + 10 mV		
	20 V to 200 V 45 Hz to 100 Hz 100 Hz to 20 kHz 20 kHz to 50 kHz	0.42 % + 110 mV 0.18 % + 110 mV 0.25 % + 210 mV		
	200 V to 700 V 45 Hz to 100 Hz 100 Hz to 1 kHz	0.42 % + 1.0 V 0.18 % + 1.0 V		



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AC VOLTAGE (continued)				
Generation	100 mV to 2.2 V 40 Hz to 20 kHz 20 kHz to 500 kHz	110 ppm + 9.0 $\mu$ V 0.14 % + 410 $\mu$ V		P
	2.2 V to 22 V 40 Hz to 100 kHz 100 kHz to 500 kHz	110 ppm + 82 $\mu$ V 0.20 % + 6.0 mV		
	22 V to 220 V 40 Hz to 50 kHz 50 kHz to 100 kHz	120 ppm + 2.0 mV 0.030 % + 5.0 mV		
	220 V to 1000 V 50 Hz to 1 kHz	120 ppm + 5.0 mV		
	3 mV to 33 mV 50 Hz to 10 kHz	0.18 % + 24 $\mu$ V		S
	33 mV to 330 mV 50 Hz to 10 kHz	0.065 % + 24 $\mu$ V		
	330 mV to 3.3 V 50 Hz to 10 kHz 10 kHz to 50 kHz	0.045 % + 80 $\mu$ V 0.18 % + 0.40 mV		
	3.3 V to 33 V 50 Hz to 10 kHz 10 kHz to 50 kHz	0.055 % + 0.80 mV 0.23 % + 7.0 mV		
	33 V to 330 V 50 Hz to 1 kHz 1 kHz to 10 kHz	0.065 % + 9.0 mV 0.10 % + 18 mV		
	330 V to 1020 V 50 Hz to 1 kHz	0.065 % + 90 mV		
AC CURRENT				
Measurement	1 mA to 2 A 50 Hz to 1 kHz	0.070 %		P
	2A to 100 A 50 Hz to 400 Hz	0.070 %		
	50 Hz to 10 kHz 3 mA to 30 mA 30 mA to 100 mA	0.60 % + 12 $\mu$ A 0.60 % + 120 $\mu$ A		S



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AC CURRENT (continued)				
Measurement (continued)	100 mA to 2 A 50 Hz to 100 Hz 100 Hz to 1 kHz	0.60 % + 1.0 mA 0.50 % + 1.0 mA		S
Generation	2 A to 10 A 50 Hz to 2 kHz	1.1 % + 12 mA		P
	100 $\mu$ A to 22 mA 50 Hz to 1 kHz	200 ppm + 410 nA		P
	22 mA to 220 mA 50 Hz to 1 kHz	400 ppm + 4.0 $\mu$ A		
	220 mA to 2.2 A 50 Hz to 1 kHz 1 kHz to 5 kHz 5 kHz to 10 kHz	0.080 % + 40 $\mu$ A 0.090 % + 100 $\mu$ A 1.1 % + 200 $\mu$ A		
	2.2 A to 100 A 50 Hz to 400 Hz	0.065 %		
	100 A to 1 kA 50 Hz	0.13 %	For the calibration of clamp-on ammeters	
	0.3 mA to 3.3 mA 50 Hz to 1 kHz	0.14 % + 32 $\mu$ A		S
	3.3 mA to 33 mA 50 Hz to 1 kHz	0.13 % + 3.2 $\mu$ A		
	33 mA to 330 mA 50 Hz to 1 kHz	0.13 % + 32 $\mu$ A		
	2.2 A to 11 A 50 Hz to 400 Hz	0.14 % + 2.1 mA		
	11 A to 100 A 50 Hz to 400 Hz	0.30 %		
AC POWER	1 W to 100 kW 50 Hz to 400 Hz	0.15 %		P
	100 kW to 1 MW 50 Hz	0.25 %	At unity power factor only. Voltages will be in the range 10 V to 1000 V and currents will be in the range 100 mA to 1000 A. The applied frequency is limited to 50 Hz at currents above 100 A.	



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<b>CAPACITANCE</b>				
Generation	<i>At 1 kHz and 10 kHz</i> 100 pF 1 nF 10 nF 100 nF 1 $\mu$ F	0.15 % 0.030 % 0.030 % 0.030 % 0.030 %		P
Measurement	<i>At 1 kHz, 1 V</i> 10 pF to 1 $\mu$ F	0.68 % + 3 digits	On a 3½ digit display	P
<b>INDUCTANCE</b>				
	<i>At 1 kHz and 10 kHz</i> 10 $\mu$ H 100 $\mu$ H 1 mH 10 mH 100 mH 1 H at 1 kHz only	0.60 % 0.10 % 0.10 % 0.10 % 0.10 % 0.10 %	For the calibration of inductance measuring devices	P
<b>FREQUENCY</b>				
Measurement	0.1 Hz to 2 GHz	2.0 in $10^6$	Periodic time of repetitive waveforms may be expressed in terms of $1/f$ or as events per unit time such as RPM.	P
Generation	0.01 Hz to 2.4 GHz 0.02 Hz to 500 MHz	2.0 in $10^9$ 0.010 %	Periodic time of repetitive waveforms may be expressed in terms of $1/f$ or as events per unit time such as RPM.	P S
<b>TIME INTERVAL</b>				
Single events	5 ms to 50 ms 50 ms to 2.2 s	0.20 ms 2.5 ms	For the calibration of RCD testers	P & S
Stopwatches (Mechanical)	0 s to 3 hours 3 hours to 30 hours	0.25 s 0.50 s	Stopwatches with electronic triggers as per $1/f$ frequency measurement above.	P & S



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Temperature indicators, calibration by electrical simulation				
Base metal thermocouples	- 200 °C to 1600 °C	0.20 °C	including cold junction compensation	P
	- 200 °C to 1600 °C	0.50 °C	Including cold junction compensation	S
Noble metal thermocouples	- 50 °C to 1760 °C	0.30 °C	including cold junction compensation	P
	- 50 °C to 1760 °C	1.2 °C	Including cold junction compensation	S
Resistance thermometers (Pt 100)	- 200 °C to 800 °C	0.15 °C		P and S
<b>PRESSURE CALIBRATION</b> Gas pressure (gauge)			Calibrations of devices with an electrical output may be undertaken	
Calibration of pressure indicating instruments and gauges	- 100 kPa to - 7 kPa - 7 kPa to - 7 kPa 7 kPa to 62 kPa 62 kPa to 700 kPa 700 kPa to 4.3 MPa 4.3 MPa to 10 MPa	48 Pa 6.7 Pa 23 Pa 0.0065 % 0.012 % + 35 Pa 0.14 % + 5.5 kPa		P
	- 100 kPa to - 2.5 kPa - 2.5 kPa to - 200 Pa - 200 Pa to + 200 Pa 200 Pa to 2.5 kPa 2.5 kPa to 2 MPa 2 MPa to 20 MPa	93 Pa 12 Pa 2.7 Pa 12 Pa 81 Pa 9.8 kPa		S
Gas pressure (absolute)				
Calibration of pressure indication instruments and gauges	30 Pa to 80 kPa 80 kPa to 115 kPa 115 kPa to 160 kPa 160 kPa to 800 kPa 800 kPa to 4.3 MPa	53 Pa 22 Pa 32 Pa 0.0065 % + 22 Pa 0.011 % + 40 Pa		P



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Hydraulic pressure (gauge)				
Calibration of pressure indicating instruments and gauges	0 kPa to 60 kPa 60 kPa to 600 kPa 600 kPa to 6 MPa 6 MPa to 70 MPa	0.040 % + 110 Pa 0.0068 % + 33 Pa 0.012 % 0.011 %		P
Hydraulic Pressure (absolute)	0 MPa to 20 MPa 20 MPa to 70 MPa	9.8 kPa 22 kPa		S
Calibration of pressure indicating instruments and gauges	160 kPa to 800 kPa 800 kPa to 6.1 MPa 6.1 MPa to 70 MPa	0.0068 % + 40 Pa 0.011 % + 22 Pa 0.010 % + 22 Pa		P
<b>TEMPERATURE</b>				
Liquid-in-glass thermometers	Ice-point (0 °C) - 80 °C to +5 °C 5 °C to 50 °C 50 °C to 250 °C	0.013 °C 0.020 °C 0.016 °C 0.028 °C		P
Resistance thermometers	Nitrogen boiling point (- 196 °C) Ice point (0 °C) Triple point of water (0.01 °C) - 80 °C to 5 °C 5 °C to 250 °C 150 °C to 660 °C	0.013 °C 0.012 °C 0.005 °C 0.010 °C 0.014 °C 0.086 °C		P
Platinum thermocouples	- 50 °C to 0 °C 0 °C to 80 °C 80 °C to 250 °C 250 °C to 650 °C 650 °C to 1100 °C	0.81 °C 0.62 °C 0.56 °C 0.63 °C 1.3 °C		P
Base metal thermocouples	Nitrogen boiling point (- 196 °C) - 80 °C to 0 °C 0 °C to 250 °C 250 °C to 350 °C 350 °C to 650 °C 650 °C to 1100 °C	0.19 °C 0.17 °C 0.18 °C 0.19 °C 0.36 °C 1.3 °C		P
Compensating and extension cables	- 25 °C to + 200 °C	1.0 °C		P
Electronic Thermometers with probes	Nitrogen boiling point (- 196 °C) - 80 °C to 250 °C Ice point (0 °C) 250 °C to 650 °C 650 °C to 1100 °C	0.011 °C 0.012 °C 0.014 °C 0.11 °C 1.4 °C		P



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Calibration performed by the Organisation at the locations specified

Measured Quantity Instrument or Gauge	Range	Calibration and Measurement Capability (CMC) Expressed as an Expanded Uncertainty ( $k=2$ )	Remarks	Location Code
Calibration of Temperature Data loggers, Electronic Temperature Indicators and Recorders in Air	- 40 °C to + 40 °C 40 °C to 80 °C	0.35 °C 0.44 °C		P
Block calibrators	-50 °C to + 660 °C	0.12 °C		P
Liquid-in-glass thermometers	- 30 °C to 0 °C 0 °C to 40 °C 40 °C to 100 °C 100 °C to 150 °C 150 °C to 200 °C	0.031 °C 0.030 °C 0.032 °C 0.079 °C 0.11 °C	In stirred liquid bath	S
	- 40 °C to + 80 °C 80 °C to 250 °C	0.030 °C 0.036 °C	In customer's stirred liquid bath	S
Temperature sensors with indicators	- 30 °C to + 50 °C 50 °C to + 100 °C 100 °C to 125 °C 125 °C to 150 °C 150 °C to 200 °C	0.028 °C 0.032 °C 0.056 °C 0.080 °C 0.11 °C	In stirred liquid bath	S
	-25 °C to + 140 °C 140 °C to 250 °C 250 °C to 350 °C	0.039 °C 0.072 °C 0.11 °C	In block calibrator	S
Liquid baths				
Temperature measurement	- 40 °C to 250 °C	0.048 °C		S
Gradient measurement	- 40 °C to + 80 °C 80 °C to 250 °C	0.011 °C 0.015 °C		S
Temperature controlled chambers, ovens	- 80 °C to + 300 °C 300 °C to 1100 °C	0.55 °C 3.6 °C		S
TORQUE				
Wrenches and Screwdrivers	0.1 N·m to 1000 N·m	1.6%		P and S
END				