


Schedule of Accreditation

issued by

United Kingdom Accreditation Service

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

 <p>0310</p> <p>Accredited to ISO/IEC 17025:2017</p>	<p>RS Calibration a trading name of RS Components Ltd</p> <p>Issue No: 057 Issue date: 07 July 2022</p>	
	<p>DPN 175 Birchington Road Corby Northamptonshire NN17 5JF</p>	<p>Contact: Sean Smith Tel: +44 (0)1536 405500 E-Mail: Sean.smith@rs-components.com Website: http://uk.rs-online.com/web/</p>
<p>Calibration performed at the above address only</p>		

CALIBRATION AND MEASUREMENT CAPABILITY (CMC)

Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty ($k = 2$)	Remarks
ELECTRICAL MEASUREMENTS			
DC RESISTANCE			
Specific values Generation	1 mΩ 10 mΩ 100 mΩ 1 Ω 10 Ω 100 Ω 1 kΩ 10 kΩ 100 kΩ 1 MΩ 10 MΩ 100 MΩ 1 GΩ	130 μΩ/Ω 52 μΩ/Ω 52 μΩ/Ω 6.0 μΩ/Ω 12 μΩ/Ω 5.0 μΩ/Ω 5.8 μΩ/Ω 11 μΩ/Ω 53 μΩ/Ω 53 μΩ/Ω 53 μΩ/Ω 54 μΩ/Ω 300 μΩ/Ω	Known values of resistance for application to resistance measuring instruments. Specific values are those which fall within ± 0.5% of the stated values.
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	20 μΩ/Ω + 4.0 μΩ 12 μΩ/Ω + 14 μΩ 10 μΩ/Ω + 50 μΩ 10 μΩ/Ω + 0.50 mΩ 10 μΩ/Ω + 5.0 mΩ 10 μΩ/Ω + 50 mΩ 12 μΩ/Ω + 1.0 Ω 27 μΩ/Ω + 100 Ω 150 μΩ/Ω + 10 kΩ 0.18 % + 1.0 MΩ	Using digital multimeter. Generation of these values may also be undertaken however the uncertainties may be increased.
DC VOLTAGE			
Measurement	0 V to 200 mV 200 mV to 2 V 2 V to 20 V 20 V to 200 V 200 V to 1 kV	8.0 μV/V + 0.10 μV 5.0 μV/V + 0.40 μV 5.0 μV/V + 4.0 μV 7.0 μV/V + 40 μV 7.0 μV/V + 500 μV	Using digital multimeter. Generation of these values may also be undertaken however the uncertainties may be increased.



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Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty ($k = 2$)	Remarks
DC CURRENT			
Generation	20 A to 500 A 500 A to 2500 A	590 μ A/A 490 μ A/A	Calibration of clamp-on ammeters and similar devices using multi-turn technique.
Measurement	0 μ A to 200 μ A 200 μ A to 2 mA 2 mA to 20 mA 20 mA to 200 mA 200 mA to 2 A 2 A to 20 A	16 μ A/A + 0.40 nA 16 μ A/A + 4.0 nA 17 μ A/A + 40 nA 56 μ A/A + 800 nA 220 μ A/A + 16 μ A 470 μ A/A + 400 μ A	Using digital multimeter. Generation of these values may also be undertaken however the uncertainties may be increased.
	2 A to 10 A 10 A to 20 A 20 A to 100 A	320 μ A/A 330 μ A/A 75 μ A/A	Using digital multimeter and shunt. Generation of these values may also be undertaken however the uncertainties may be increased.
AC VOLTAGE Specific Values			Using AC Measurement Standard.

Expanded uncertainty ($k = 2$) expressed in terms of (μ V/V + μ V)

Generation of these values may also be undertaken, with increased uncertainties and with the following limitations:

600 μ V to 220 V, 10 Hz to 1 MHz: A maximum volt-Hertz product of 2.2×10^7 applies.

220 V to 750 V: The applied frequency will be in the range 40 Hz to 100 kHz.

750 V to 1000 V: The applied frequency will be in the range 40 Hz to 30 kHz.

Voltage Range	10 Hz to 20 Hz	20 Hz to 40 Hz	40 Hz to 20 kHz	20 kHz to 50 kHz	50 kHz to 100 kHz	100 kHz to 300 kHz	300 kHz to 500 kHz	500 kHz to 1 MHz
600 μ V to 2.2 mV	1500 + 1.3	850 + 1.3	710 + 1.3	890 + 2.0	1200 + 2.5	1900 + 4.0	2100 + 8.0	3500 + 8.0
2.2 mV to 7 mV	710 + 1.3	390 + 1.3	270 + 1.3	370 + 2.0	510 + 2.5	990 + 4.0	1200 + 8.0	2800 + 8.0
7 mV to 22 mV	260 + 1.3	190 + 1.3	140 + 1.3	200 + 2.0	270 + 2.5	660 + 4.0	870 + 8.0	2500 + 8.0
22 mV to 70 mV	210 + 1.5	130 + 1.5	100 + 1.5	130 + 2.0	220 + 2.5	440 + 4.0	740 + 8.0	2300 + 8.0
70 mV to 220 mV	180 + 1.5	100 + 1.5	80 + 1.5	90 + 2.0	150 + 2.5	270 + 4.0	600 + 8.0	2300 + 8.0
220 mV to 700 mV	180 + 1.5	100 + 1.5	80 + 1.5	90 + 2.0	100 + 2.5	230 + 4.0	570 + 8.0	750 + 8.0
700 mV to 2.2 V	160 + 0	60 + 0	30 + 0	40 + 0	60 + 0	130 + 0	210 + 0	700 + 0
2.2 V to 7 V	160 + 0	60 + 0	30 + 0	40 + 0	70 + 0	150 + 0	320 + 0	940 + 0
7 V to 22 V	160 + 0	60 + 0	30 + 0	40 + 0	70 + 0	150 + 0	320 + 0	940 + 0
22 V to 70 V	160 + 0	60 + 0	30 + 0	50 + 0	80 + 0			
70 V to 220 V	160 + 0	60 + 0	30 + 0	60 + 0	90 + 0			
220 V to 700 V	160 + 0	80 + 0	40 + 0	110 + 0	390 + 0			
700 V to 1000 V	160 + 0	80 + 0	40 + 0	110 + 0	390 + 0			



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Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty ($k = 2$)	Remarks
AC VOLTAGE (continued) Other values Measurement			
	<i>10 Hz to 40 Hz</i> 1 mV to 200 mV 200 mV to 2 V 2 V to 20 V 20 V to 200 V	170 $\mu\text{V/V} + 4.0 \mu\text{V}$ 140 $\mu\text{V/V} + 20 \mu\text{V}$ 140 $\mu\text{V/V} + 200 \mu\text{V}$ 140 $\mu\text{V/V} + 2.0 \text{ mV}$	Using digital multimeter. Generation of these values may also be undertaken however the uncertainties may be increased.
	<i>40 Hz to 100 Hz</i> 1 mV to 200 mV 200 mV to 2 V 2 V to 20 V 20 V to 200 V 200 V to 1000 V	140 $\mu\text{V/V} + 4.0 \mu\text{V}$ 110 $\mu\text{V/V} + 20 \mu\text{V}$ 110 $\mu\text{V/V} + 200 \mu\text{V}$ 110 $\mu\text{V/V} + 2.0 \text{ mV}$ 140 $\mu\text{V/V} + 20 \text{ mV}$	
	<i>100 Hz to 2 kHz</i> 1 mV to 200 mV 200 mV to 2 V 2 V to 20 V 20 V to 200 V 200 V to 1000 V	140 $\mu\text{V/V} + 2.0 \mu\text{V}$ 90 $\mu\text{V/V} + 20 \mu\text{V}$ 90 $\mu\text{V/V} + 200 \mu\text{V}$ 94 $\mu\text{V/V} + 2.0 \text{ mV}$ 140 $\mu\text{V/V} + 20 \text{ mV}$	
	<i>2 kHz to 10 kHz</i> 1 mV to 200 mV 200 mV to 2 V 2 V to 20 V 20 V to 200 V 200 V to 1000 V	160 $\mu\text{V/V} + 4.0 \mu\text{V}$ 130 $\mu\text{V/V} + 20 \mu\text{V}$ 130 $\mu\text{V/V} + 200 \mu\text{V}$ 130 $\mu\text{V/V} + 2.0 \text{ mV}$ 140 $\mu\text{V/V} + 20 \text{ mV}$	
	<i>10 kHz to 30 kHz</i> 1 mV to 200 mV 200 mV to 2 V 2 V to 20 V 20 V to 200 V 200 V to 1000 V	400 $\mu\text{V/V} + 8.0 \mu\text{V}$ 260 $\mu\text{V/V} + 40 \mu\text{V}$ 260 $\mu\text{V/V} + 400 \mu\text{V}$ 260 $\mu\text{V/V} + 4.0 \text{ mV}$ 270 $\mu\text{V/V} + 40 \text{ mV}$	
	<i>30 kHz to 100 kHz</i> 1 mV to 200 mV 200 mV to 2 V 2 V to 20 V 20 V to 200 V 200 V to 1000 V	900 $\mu\text{V/V} + 20 \mu\text{V}$ 660 $\mu\text{V/V} + 200 \mu\text{V}$ 660 $\mu\text{V/V} + 2.0 \text{ mV}$ 660 $\mu\text{V/V} + 20 \text{ mV}$ 680 $\mu\text{V/V} + 200 \text{ mV}$	
	<i>100 kHz to 300 kHz</i> 200 mV to 2 V 2 V to 20 V 20 V to 200 V	0.35 % + 2.0 mV 0.35 % + 20 mV 0.35 % + 200 mV	
	<i>300 kHz to 1 MHz</i> 200 mV to 2 V 2 V to 20 V	1.2 % + 20 mV 1.2 % + 200 mV	



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AC CURRENT Generation	20 A to 250 A 50 Hz to 800 Hz	0.090 %	Calibration of clamp-on ammeters and similar devices using multi-turn technique.
	250 A to 1750 A 50 Hz to 100 Hz	0.090 %	
	1750 A to 2500 A 50 Hz to 60 Hz	0.090 %	
Measurement	10 Hz to 2 kHz 1 μ A to 200 μ A 200 μ A to 2 mA 2 mA to 20 mA 20 mA to 200 mA 200 mA to 2 A 2 A to 20 A	600 μ A/A + 20 nA 360 μ A/A + 200 nA 350 μ A/A + 2.0 μ A 340 μ A/A + 20 μ A 720 μ A/A + 200 μ A 950 μ A/A + 2.0 mA	Using digital multimeter. Generation of these values may also be undertaken however the uncertainties may be increased.
	2 kHz to 10 kHz 1 μ A to 200 μ A 200 μ A to 2 mA 2 mA to 20 mA 20 mA to 200 mA 200 mA to 2 A	600 μ A/A + 20 nA 360 μ A/A + 200 nA 350 μ A/A + 2.0 μ A 340 μ A/A + 20 μ A 850 μ A/A + 200 μ A	
	50 Hz to 800 Hz 20 A to 50 A 50 A to 100 A	0.11 % 0.11 %	Using digital multimeter and shunt. Generation of these values may also be undertaken however the uncertainties may be increased.
INDUCTANCE Generation	At 1 kHz: 100 μ H 1 mH 10 mH 100 mH 1 H	330 μ H/H 490 μ H/H 500 μ H/H 470 μ H/H 470 μ H/H	Known inductance values for the calibration of inductance measuring instruments



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CAPACITANCE			
Generation	At 1 kHz: 1 nF 2 nF 3 nF 4 nF 5 nF 6 nF to 9 nF 10 nF 20 nF to 80 nF 90 nF 100 nF to 900 nF 1 μ F 2 μ F 3 μ F and 4 μ F 5 μ F and 9 μ F 10 μ F to 30 μ F 40 μ F and 50 μ F 60 μ F and 80 μ F 90 μ F and 100 μ F	0.092 % 0.064 % 0.057 % 0.055 % 0.053 % 0.050 % 0.050 % 0.031 % 0.037 % 0.042 % 0.12 % 0.12 % 0.098 % 0.12 % 0.12 % 0.18 % 0.18 % 0.18 %	Known capacitance values for the calibration of capacitance measuring instruments
FREQUENCY			
Measurement	10 Hz to 100 kHz 100 kHz to 1 MHz 1 MHz to 6 GHz	3.0 in 10^9 2.0 in 10^{10} 5.0 in 10^{10}	Using counter timer and off-air standard.
Timer and stopwatch calibrations	5 s to 99 999s	0.10 s	Manual calibration.
OSCILLOSCOPE CALIBRATION			
Horizontal deflection coefficients	500 ps to 10 ms	0.29 μ s/s	Using time markers. The uncertainty quoted will be particularly dependent on the horizontal resolution of the oscilloscope being calibrated.
Vertical deflection coefficients	6 mV to 60 mV 60 mV to 600 mV 600 mV to 60 V 60 V to 100 V 100 V to 120 V	0.33 % 0.14 % 0.12 % 0.31 % 0.31 %	Using chopped waveforms of known peak to peak amplitude. The uncertainty quoted will be particularly dependent on the vertical resolution of the oscilloscope being calibrated.



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Bandwidth	<i>Input VSWR up to 1.2:1</i> 50 kHz to 550 MHz 550 MHz to 1 GHz	0.29 dB 0.38 dB	Relative to a low frequency reference. The uncertainty quoted will be dependent on the vertical resolution of the oscilloscope being calibrated.
	<i>Input VSWR from 1.2:1 to 1.6:1</i> 50 kHz to 550 MHz 550 MHz to 1 GHz	0.43 dB 0.53 dB	
Rise and fall times	Using 150 ps edge Using 500 ps edge	21 ps 50 ps	Using fast rise pulses. The uncertainty quoted will be dependent on the vertical and horizontal resolution of the oscilloscope being calibrated.
Input resistance (DC)	50 Ω 1 M Ω	0.13 % 0.13 %	For values within 20% of the nominal values shown.
CALIBRATION OF MULTI-FUNCTION CALIBRATORS			
DC RESISTANCE			
Specific Values	0 Ω 1 Ω 10 Ω 100 Ω 1 k Ω 10 k Ω 100 k Ω 1 M Ω 10 M Ω 100 M Ω	70 $\mu\Omega$ 70 $\mu\Omega/\Omega$ 20 $\mu\Omega/\Omega$ 13 $\mu\Omega/\Omega$ 12 $\mu\Omega/\Omega$ 12 $\mu\Omega/\Omega$ 19 $\mu\Omega/\Omega$ 32 $\mu\Omega/\Omega$ 49 $\mu\Omega/\Omega$ 640 $\mu\Omega/\Omega$	Using automated system. Generation of these parameters up to and including 100 kHz may also be undertaken but the uncertainties may be increased
DC VOLTAGE Specific Values	0 V 100 mV 1 V 10 V 19 V 100 V 1000 V	1.1 μ V 12 μ V/V 7.0 μ V/V 6.0 μ V/V 6.0 μ V/V 8.0 μ V/V 8.0 μ V/V	



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DC CURRENT Specific Values	0 μ A 100 μ A 1 mA 10 mA 100 mA 1 A 10 A	5.0 nA 48 μ A/A 45 μ A/A 45 μ A/A 46 μ A/A 70 μ A/A 100 μ A/A	
AC VOLTAGE	<p>At 10 Hz, 20 Hz, 30 Hz, 40 Hz, 50 Hz, 55 Hz, 60 Hz, 300 Hz, 1 kHz, 10 kHz and 20 kHz:</p> <p>1 mV 10 mV 100 mV</p> <p>At 30 kHz and 50 kHz:</p> <p>1 mV 10 mV 100 mV</p> <p>At 100 kHz:</p> <p>1 mV 10 mV 100 mV</p> <p>1 V and 10 V: 10 Hz, 20 Hz and 30 Hz 40 Hz, 50 Hz, 55 Hz, 60 Hz, 300 Hz, 1 kHz, 10 kHz, 20 kHz and 30 kHz 50 kHz 100 kHz 300 kHz 500 kHz 1 MHz</p> <p>19 V: 1 kHz</p> <p>100 V: 10 Hz, 20 Hz and 30 Hz 40 Hz, 50 Hz, 55 Hz, 60 Hz, 300 Hz, 1 kHz, 10 kHz, 20 kHz and 30 kHz 50 kHz 100 kHz</p> <p>1000 V: 50 Hz, 55 Hz, 60 Hz, 300 Hz and 1 kHz</p>	<p>0.80 % 800 μV/V 170 μV/V</p> <p>0.80 % 810 μV/V 230 μV/V</p> <p>1.1 % 0.13 % 440 μV/V</p> <p>49 μV/V 44 μV/V 80 μV/V 110 μV/V 270 μV/V 480 μV/V 0.11 %</p> <p>44 μV/V</p> <p>55 μV/V 49 μV/V 80 μV/V 130 μV/V</p> <p>70 μV/V</p>	1 mV and 10 mV are not available at 10 Hz



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Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty (k = 2)	Remarks
AC CURRENT	100 µA: 10 Hz and 20 Hz 30 Hz 40 Hz, 50 Hz, 55 Hz, 60 Hz, 300 Hz and 1 kHz 5 kHz 1 mA: 10 Hz and 20 Hz 30 Hz 40 Hz, 50 Hz, 55 Hz, 60 Hz, 300 Hz and 1 kHz 5 kHz 10 mA: 10 Hz and 20 Hz 30 Hz 40 Hz, 50 Hz, 55 Hz, 60 Hz, 300 Hz and 1 kHz 5 kHz 100 mA: 10 Hz and 20 Hz 30 Hz 40 Hz, 50 Hz, 55 Hz, 60 Hz, 300 Hz and 1 kHz 5 kHz 1 A: 10 Hz and 20 Hz 30 Hz 40 Hz, 50 Hz, 55 Hz, 60 Hz, 300 Hz and 1 kHz 5 kHz 10 A: 40 Hz, 55 Hz, 300 Hz and 1 kHz	230 µA/A 220 µA/A 210 µA/A 380 µA/A 190 µA/A 190 µA/A 180 µA/A 290 µA/A 190 µA/A 190 µA/A 180 µA/A 280 µA/A 190 µA/A 190 µA/A 230 µA/A 220 µA/A 190 µA/A 330 µA/A 800 µA/A	Application or measurement of DC voltages equivalent to those for the thermocouple types indicated, with cold junction compensation enabled.
ELECTRICAL SIMULATION OF TEMPERATURE (Base metal thermocouple indicators)			
K type	-200 °C to -190 °C	0.18 °C	
	-190 °C to -100 °C	0.11 °C	
	-100 °C to +1300 °C	0.085 °C	
T Type	-150 °C to -100 °C	0.12 °C	
	-100 °C to 0 °C	0.090 °C	
	0 °C to 400 °C	0.069 °C	
J Type	-100 °C to 0 °C	0.088 °C	
	0 °C to 1000 °C	0.080 °C	



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Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty ($k = 2$)	Remarks
CALIBRATION OF 16TH/17TH EDITION TEST EQUIPMENT			Using dedicated calibration system.
Insulation Resistance	10 k Ω to 5 M Ω 5 M Ω to 100 M Ω 100 M Ω to 1 G Ω	0.16 % 1.2 % 1.4 %	
Continuity Resistance	900 m Ω to 2 Ω 2 Ω to 6 Ω 6 Ω to 20 Ω 100 Ω 1 k Ω	3.5 % 1.1 % 0.67 % 0.32 % 1.2 %	
Continuity Current	100 mA 200 mA 300 mA	2.2 % 1.9 % 1.7 %	
Insulation Voltage	50 V 100 V 250 V 500 V 1000 V	3.0 % 2.1 % 1.5 % 1.3 % 1.3 %	
Current on Insulation resistance function			
1000 V range	0.5 mA 1.0 mA	3.1 % 2.1 %	
500 V range	0.5 mA 1.0 mA	3.1 % 2.1 %	
Loop Resistance at 50 Hz	0.33 Ω 0.5 Ω 1 Ω 5 Ω 10 Ω 100 Ω 1000 Ω	10 % 6.7 % 3.5 % 1.2 % 1.0 % 0.87 % 0.87 %	
RCD Current at 50 Hz	10 mA to 30 mA 30 mA to 300 mA 300 mA to 2 A	2.1 % 1.9 % 1.6 %	
RCD Trip Time	20 ms to 40 ms 40 ms to 200 ms 200 ms to 390 ms 390 ms to 900 ms	4.8 % 2.4 % 0.48 % 0.90 %	



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PAT Insulation Resistance	1 M Ω to 4 M Ω 4 M Ω to 10 M Ω	0.16 % 1.2 %	
PAT Earth Bond Resistance at 50 Hz	0.1 Ω 0.22 Ω 0.33 Ω 0.5 Ω 1 Ω 5 Ω 10 Ω 100 Ω 1000 Ω	8.0 % 4.1 % 3.0 % 2.3 % 1.6 % 1.0 % 0.94 % 0.87 % 0.87 %	
PAT Earth Bond Current at 50 Hz	0 mA to 100 mA 100 mA to 10 A 10 A to 30 A	2.1 % + 6 mA 1.7 % + 60 mA 1.7 % + 60 mA	
PAT Leakage Current Test	2.7 mA at 240 V 4.7 mA at 240 V 7.7 mA at 240 V	1.9 % 1.8 % 1.8 %	
PAT Flash Voltage Test At 50 Hz	1000 V (Class 1) 1500 V (Class 1) 1000 V (Class 2) 3000 V (Class 2)	5.8 % 5.4 % 5.8 % 5.0 %	
PAT Flash Current Test At 50 Hz	0.67 mA at 1000 V (Class 1) 1.00 mA at 1500 V (Class 1) 0.34 mA at 1000 V (Class 2) 1.00 mA at 3000 V (Class 2)	6.0 % 5.9 % 6.8 % 5.9 %	
TEMPERATURE CALIBRATION			Unless otherwise stated the calibration is performed by comparison with reference standards. Other units other than Celsius can be reported.
Temperature indicators and recorders with temperature sensor(s)	-20 $^{\circ}$ C to -10 $^{\circ}$ C -10 $^{\circ}$ C to +50 $^{\circ}$ C 50 $^{\circ}$ C to 100 $^{\circ}$ C 100 $^{\circ}$ C to 200 $^{\circ}$ C	0.045 $^{\circ}$ C 0.040 $^{\circ}$ C 0.049 $^{\circ}$ C 0.051 $^{\circ}$ C	Calibration performed within Liquid Baths.
	50 $^{\circ}$ C to 200 $^{\circ}$ C 200 $^{\circ}$ C to 550 $^{\circ}$ C	0.058 $^{\circ}$ C 0.19 $^{\circ}$ C	Calibration performed within Metal Block Baths.



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DEW POINT and RELATIVE HUMIDITY			
Dew-point	1°C to 40°C	0.12°C to 0.26°C	Calibration by comparison with a reference dew point hygrometer and reference PRTs.
Temperature probes in air and Temperature probes associated with hygrometers	10 °C to 20 °C 20 °C to 25 °C 25 °C to 50 °C	0.19 °C 0.080 °C 0.29 °C	
Relative humidity instruments	Example conditions At 10 °C 53 %rh to 85 %rh At 23 °C 24 %rh to 85 %rh At 30 °C 16 %rh to 85 %rh At 60 °C 10 %rh to 37 %rh	Corresponding to above dew-point and temperature uncertainties 0.80 %rh to 1.2 %rh 0.60 %rh to 0.93 %rh 0.43 %rh to 0.93 %rh 0.30 %rh to 1.1 %rh	
DIMENSIONAL MEASUREMENTS Unless otherwise stated, the ranges are presented in millimetres (mm) and the uncertainties in micrometres (µm).			
MEASURING INSTRUMENTS AND MACHINES			
Micrometers			
External	BS 870:2008 0 to 600	Heads: 2.0 Setting and extension rods: 1.0 + (8.0 x length in m)	Calibration performed within an air chamber.
Internal	BS 959:2008 0 to 600		
Depth	BS 6468:2008 0 to 300		
Vernier Gauges			
Calipers	BS 887:2008 0 to 600	Overall performance 10 + (30 x length in m)	
Height gauges	BS 1643:2008 0 to 600		
Depth gauges	BS 6365:2008 0 to 300		
Dial gauges and dial test indicators	BS 907:2008 and BS 2795:1981 0 to 100	1.0	



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MEASURING INSTRUMENTS AND MACHINES (Cont'd)			
Road measuring wheels			Using procedure MLCP 52
Derived calibration factor	0.95 to 1.05	0.0014	
Diameter	200 to 350	0.12 mm	
Circumference	600 to 1050	0.37 mm	
Counter distance	29.9 to 30.1 revolutions	0.030 m	
LENGTH			
Length gauges, flat and spherical ended (excluding length bars)	BS 870:2008 0 to 600	1.0 + (8.0 x length in m)	
Feeler gauges	BS 957:2008 0.03 to 1	1.5	
Steel rules, engineers	0 to 1200	8.0 + (10 x length in metres)	Using procedure MLCP 57
ANGLE			
Squares Blades Type	BS 939:2007 0 to 300	3.0	The uncertainty quoted is for the departure from flatness, straightness, or squareness, i.e. the distance separating the two parallel planes that just enclose the surface under consideration.
PRESSURE CALIBRATION			
Gas pressure (gauge)			
Calibration of pressure indicating instruments and gauges	-90 kPa to 100 kPa 100 kPa to 250 kPa 250 kPa to 2 MPa 2 MPa to 10 MPa	14 Pa 33 Pa 0.33 kPa 1.3 kPa	Methods consistent with EURAMET CG17
Hydraulic pressure (gauge)			
Calibration of pressure indicating instruments and gauges	0.6 MPa to 6 MPa 6 MPa to 16 MPa 16 MPa to 40 MPa 40 MPa to 60 MPa 60 MPa to 100 MPa	0.020 % 0.013 % + 6.6 kPa 0.010 % + 43 kPa 0.020 % 0.0090 % + 65 kPa	
END			



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RS Calibration
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Calibration performed at main address only

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