

Electroservices (Midlands) Ltd

Traceable Best Measurement Capabilities

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Issue No.14
Issue Date: 7th October 2010

SUMMARY OF CAPABILITIES

Accelerometry

Accelerometers
Charge Amplifiers
Voltage Amplifiers

Crimp

Electrical Crimp
Hand Crimp Tools
Hydraulic Crimp

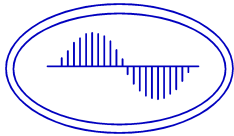
Electrical

Adaptors, Coaxial
Ammeters, ac
Ammeters, dc
Amplifiers, rf
Amplifiers Transconductance
Attenuators, dc
Attenuators, lf
Attenuators, rf/microwave
Bridges and Similar Instruments, Capacitance
Bridges and Similar Instruments, Inductance
Bridges and Similar Instruments, Resistance
Burst Pulse Generators
Calibrators, Multimeter
Calibrators, Oscilloscope
Calibrators, Temperature Simulation
Capacitance Boxes
Capacitance Meters
Capacitors
Charge Amplifiers
Coupling/Decoupling Networks
Current Clamps, dc
Current Clamps, lf
Current Clamps, rf
Current Coils
Current Probes, EMC
Current Transformer Test Sets
Current Transformers
Directional Couplers
Dividers, High Voltage dc
Field Strength Meters
Filters, rf/microwave
Frequency Counters
Frequency Meters
Frequency Standards
Inductance Boxes
Inductive Voltage Dividers
Inductors
Insulation Testers
Line Impedance Stabilization Networks (LISNs)
Mismatches
Modulation Meters
Multimeters, Analogue
Multimeters, Digital

Acoustics

Sound Calibrators
Sound Level Meters

Network Analysers
Noise Figure Indicators
Oscilloscope Calibrators
Oscilloscopes
Phase Generators
Phase Meters
Phase Standards
Potentiometers
Power Factors Meters
Power Meters, rf/microwave
Power Reference Sources
Power Sensors
Power Supply Units
Pulse Generators
Ratio Transformers
Receivers, Measuring
Receivers, EMC
Resistance Boxes
Resistance Meters
Resistors, ac
Resistors, dc
Shunts
Signal Generators, lf
Signal Generators, rf
Spectrum Analysers
Tachometers, Optical
Temperature Indicators, Electrical Calibration
Terminations and Mismatches, rf/microwave
Thermal Mounts
Timers
Voltage Dividers and Volt Ration Boxes, dc
Voltage Measurement Standards, ac
Voltage Standards, ac
Voltage Standards, dc
Voltmeters, ac
Voltmeters, dc
Voltmeters, rf
Voltmeters, vlf ac
VSWR Bridges
Wattmeter Calibrators
Wattmeters, lf
Wattmeters, rf
Waveform Analysers



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Fibre optic

CW light sources
Fibre optic attenuators
Fibre optic power meters
Optical time domain reflectometers

Force

Force Gauges, Lever and Push Pull Types

Humidity

Relative Humidity Instruments, Temperature Sensors incorporated

Mass

Weighing machines
Mass

Power Flux Density

Non-Ionising radiation probes
Non-Ionising radiation meters
Single-axis electric field strength sensors
Multi-axis electric field strength sensors
Personal protection monitors

Pressure

Gas absolute, Devices with an Electrical Output
Gas absolute, Indicating Instruments
Gas Gauge, Devices with an Electrical Output
Gas Gauge, Indicating Instruments
Gas Negative Gauge, Devices with an Electrical Output
Gas Negative Gauge, Indicating Instruments
Hydraulic Absolute, Indicating Instruments
Hydraulic Differential, Devices with an Electrical Output
Hydraulic Gauge, Devices with an Electrical Output
Hydraulic Gauge, Indicating Instruments

Temperature

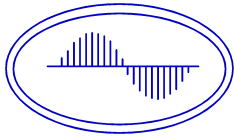
Block calibrators
Infra-red radiation pyrometers
Liquid-in-glass thermometers, mercury filled
Liquid-in-glass thermometers, spirit filled
Resistance Thermometers, Calibration by Comparison
Temperature controlled chambers, ovens and furnaces
Temperature controlled chambers, refrigerators and freezers
Temperature data loggers
Temperature Indicators and Recorders, Electrical Calibration without Sensor
Temperature Indicators and Recorders, with Temperature Sensor
Thermocouples, base metal types, e.g. K, N, T

Torque

Torque Wrench
Torque Analysers
Torque Multipliers
Torque Indicators
Torque Screwdrivers

Dimensional

Angle plates, box angle plates



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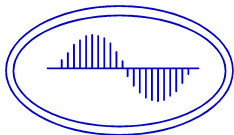
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Bench centres
Clinometers
Comparators
Combination sets
Cylindrical setting standards
Dial gauges, lever
Dial gauges, plunger
Feeler gauges
Height gauges, electronic
Length gauges, flat & spherical ended
Micrometer heads
Micrometers, 3 point bore
Micrometers, depth
Micrometers, external
Micrometers, height setting
Micrometers, height setting riser blocks
Micrometers, internal
Parallels, engineers
Plain gap gauges, parallel
Plain plug gauges, parallel
Plain plug gauges, taper
Plain ring gauges, parallel
Plain ring gauges, taper
Profile projector
Protractors, bevel
Sine bars, centres, tables
Squares, blade
Squares, block
Squares, cylindrical
Straightedges
Steel rules, engineers
Surface plates & tables
Test blocks, ultrasonic
Transducers, displacement
Thread measuring cylinders
Vee blocks
Vernier gauges, caliper
Vernier gauges, depth
Vernier gauges, height



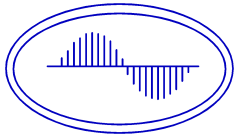
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ACCELEROMETRY				
Maximum Normal Peak Acceleration 98 ms ⁻²	5 Hz to 20Hz 20 Hz to 5 KHz	3% 2%	See note 10	
ACOUSTIC				
Electrical performance tests				
Sound level meters Types 1,2 & 3	30 dB to 130 dB	0.2 dB		
Acoustic performance tests				
Sound level meters Types 1,2 & 3	65 dB to 120 dB	0.2 dB		
ELECTRICAL				
DC RESISTANCE				
Decade Values				
	1 mΩ	7.5 ppm + 0.25μΩ	See note 1	
	10 mΩ	7.5 ppm		
	100 mΩ	7.5 ppm		
	1 Ω	5 ppm		
	10 Ω	5 ppm		
	100 Ω	5 ppm		
	1 kΩ	5 ppm		
	10 kΩ	5 ppm		
	100 kΩ	5 ppm		
	1 MΩ	5 ppm		
	10 MΩ	7.2 ppm		
	100 MΩ	30 ppm		
	1 GΩ	0.50%		
	10 GΩ	0.50%		
	100 GΩ	0.50%		
	1 TΩ	0.65%		
Measurement				
	0 Ω to 0.5 Ω	7.5 ppm + 0.25 μΩ		
	0.5 Ω to 5 Ω	7.4 ppm		
	5 Ω to 50 Ω	5.4 ppm		
	50 Ω to 500 Ω	5.4 ppm		
	500 Ω to 5 kΩ	5.4 ppm		
	5 kΩ to 50 kΩ	5.4 ppm		
	50 kΩ to 500 kΩ	5.4 ppm		
	500 kΩ to 1 MΩ	5.4 ppm		
	1 MΩ to 10 MΩ	7.2 ppm		
	10 MΩ to 100 MΩ	0.04%		
	100 MΩ to 1 GΩ	0.10%		
	1 GΩ to 10 GΩ	0.10%		
	10 GΩ to 100 GΩ	0.20%		
	100 GΩ to 1T Ω	0.45%		



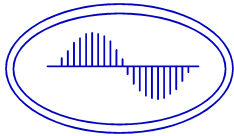
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DC VOLTAGE			
Standard Cells		2.0 μ V	See note 2
	1.018 V to 1.019 V	2.0 μ V	
Other Values			
	10 μ V to 1.1 V	2.8 ppm + 0.3 uV	
	1.1 V to 11 V	2.8 ppm	
	11 V to 100 V	2.8 ppm	
	100 V to 1100 V	3.5 ppm	
	1100 V to 15 kV	0.10%	
	15 kV to 100 kV	0.10%	
DC CURRENT			
	100 nA to 10 μ A	13 ppm + 5pA	See note 6
	10 μ A to 10 mA	7 ppm	
	10 mA to 100 mA	7 ppm	
	100 mA to 2 A	7 ppm	
	2 A to 10 A	60 ppm	
	10 A to 300 A	0.30%	
	300 A to 1000 A	0.5% + 0.5A	See note 9
AC VOLTAGE			
	50 Hz to 10 kHz		See note 6
	1 mV to 250 mV	80 ppm + 4 μ V	
	20 Hz to 20 kHz		
	5 uV to 1 mV	1% + 1 μ V	
	1 mV to 250 mV	0.015% + 10 μ V	
	250 mV to 1 V	60 ppm	
	1 V to 50 V	60 ppm	
	50 V to 200 V	60 ppm	
	200 V to 500 V	180 ppm	
	500 V to 1 kV	180 ppm	
	20 kHz to 50 kHz		
	250 mV to 1 V	60 ppm	
	1 V to 50 V	60 ppm	
	50 kHz to 100 KHz		
	250 mV to 1 V	90 ppm	
	1 V to 50 V	90 ppm	
	100 kHz to 1 MHz		
	250 mV to 1 V	0.08%	
	1 V to 50 V	0.10%	
	50 Hz to 60 Hz		
	1 kV to 10 kV	0.10%	
	10 kV to 20 kV	0.60%	
	20 kV to 30 kV	1.2%	



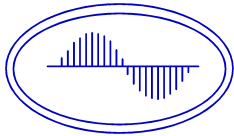
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AC CURRENT	20 Hz to 1 kHz 10 uA to 250 µA 250 µA to 2 A 20 Hz to 400 Hz 2 A to 10 A 10 A to 50 A 50 Hz to 60 Hz 50 A to 600 A	0.03% 0.03% 0.03% 0.17% 0.5% + 0.5 A	See note 6	
AC POWER	50 Hz to 60 Hz 0.05 W to 4 kW 4 kW to 20 kW	0.13% 0.60%	See notes 3 & 4	
PHASE ANGLE	20 Hz to 10 kHz 0° to 360°	0.01°	See note 5	
FREQUENCY	1 Hz to 10 Hz 10 Hz to 100 Hz 100 Hz to 1 kHz 1 kHz to 10 kHz 10 kHz to 100 kHz 100 kHz to 1 MHz 1 MHz to 10 MHz 10 MHz to 26.5 GHz	6 in 10 ⁷ 6 in 10 ⁸ 6 in 10 ⁸ 3 in 10 ⁹ 2 in 10 ⁹ 1 in 10 ⁹ 1 in 10 ¹⁰ 1 in 10 ⁹		
AC RESISTANCE	1 Ω, 10 Ω, 100 Ω 1 kΩ, 10 kΩ, 100 kΩ 1 MΩ	50 Hz to 2 kHz 0.02% 50 Hz to 2 kHz 0.03%	See note 6	
CAPACITANCE	10 pF 100 pF 1 nF 10 nF 100 nF 1 µF 1 µF 10 µF 100 µF	1 kHz 1 kHz 100 Hz, 1 kHz, 10 kHz 100 Hz, 1 kHz, 10 kHz 100 Hz, 1 kHz, 10 kHz 100 Hz, 1 kHz 10 kHz 100 Hz, 1 kHz 100 Hz, 1 kHz	0.20% 0.20% 0.03% 0.03% 0.03% 0.03% 0.04% 0.05% 0.05%	See note 6
Other values	1 pF to 100 pF 100 pF to 1 µF 1 µF to 100 µF	1 kHz to 100 kHz 50 Hz to 20 kHz 50 Hz to 1 kHz	0.20% 0.10% 0.10%	



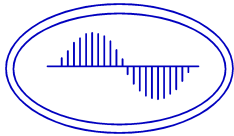
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INDUCTANCE				
1 µH	1 kHz,	0.05% + 0.02 µH	See note 6	
5 µH	1 kHz,10 kHz	0.50%		
10 µH	1 kHz,10 kHz	0.25%		
100 µH	1 kHz,10 kHz	0.06%		
1 mH	100 Hz	0.07%		
1 mH	1 kHz,10 kHz	0.05%		
10 mH	1 kHz,10 kHz	0.05%		
100 mH	100 Hz,1 kHz,10 kHz	0.07%		
1 H	100 Hz,1 kHz	0.25%		
10 H	100 Hz	0.50%		
Other Values				
1 µH to 1 mH	1 kHz to 10 kHz	0.25%		
1 mH to 100 mH	50 Hz to 10 kHz	0.15%		
100 mH to 1 H	50 Hz to 1 kHz	0.25%		
1 H to 10 H	100 Hz to 1 KHz	0.30%		
RF POWER				
	100 pW to 10 uW		See note 6	
	50 MHz to 26.5 GHz	6%		
	1 uW to 100 mW			
	30 kHz to 100 kHz	1.10%		
	100 kHz to 2 GHz	0.70%		
	2 GHz to 4 GHz	1.20%		
	4 GHz to 10 GHz	1.40%		
	10 GHz to 18 GHz	1.60%		
	18 GHz to 26.5 GHz	2.40%		
	100 mW to 10 W			
	30 kHz to 1 GHz	1%		
	100 mW to 5 W			
	1 GHz to 2 GHz	1%		
	5 W to 50 W			
	30 kHz to 2 GHz	1.20%		
	1.7 GHz to 1.9 GHz	1%		
	50 W to 100 W			
	30 kHz to 2 GHz	1.90%		
	250 W to 800 W			
	5 MHz to 100 MHz	1.50%		



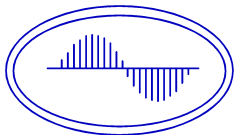
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RF VOLTAGE			
30 nV to 300 nV	100 kHz to 110 MHz	2.1% to 0.6%	See note 6
300 nV to 300 mV	100 kHz to 110 MHz	0.60%	
100 uV to 10 mV	10 MHz to 1.2 GHz	0.8% to 2%	
10 mV to 3 V	100 kHz to 100 MHz	0.50%	
	100 MHz to 1.2 GHz	0.80%	
0.25 V to 10 V	100 kHz to 1 MHz	0.10%	
AMPLITUDE MODULATION			
Depth	Carrier		See note 6
0% to 95%	50 kHz to 2 GHz	1% + 0.1%	
	Modulation		
	50 Hz to 15 kHz		
	Carrier		
	50 kHz to 2 GHz	1.50%	
	Modulation		
	30 Hz to 50 kHz		
FREQUENCY MODULATION			
Deviation	Carrier		See note 6
10 Hz to 99 kHz	1.5 MHz to 2 GHz		
	Modulation		
	50 Hz to 15 kHz	0.5% + 0.01 kHz	
Deviation	Carrier		
99 kHz to 600 kHz	1.5 MHz to 2 GHz		
	Modulation		
	50 Hz to 15 kHz	0.5% + 0.1 kHz	
VSWR			
	10 MHz to 12.4 GHz		
	1 to 1.2	0.01	
	1.2 to 2	0.01 to 0.03	
	2 to 3	0.03 to 0.08	
	3 to 4	0.08 to 0.16	
	12.4 GHz to 26.5 GHz		
	1 to 1.2	0.01 to 0.02	
	1.2 to 2	0.02 to 0.04	
	2 to 3	0.04 to 0.11	
	3 to 4	0.11 to 0.21	



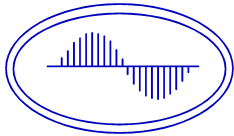
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VOLTAGE REFLECTION CO-EFFICIENT			
0 to 0.1	45 MHz to 6 GHz	0.015	
	6 GHz to 12 GHz	0.04	
	12 GHz to 18 GHz	0.04	
	18 GHz to 26.5 GHz	0.09	
0.1 to 1	45 MHz to 6 GHz	0.022	
	6 GHz to 12 GHz	0.038	
	12 GHz to 18 GHz	0.038	
	18 GHz to 26.5 GHz	0.1	
RF ATTENUATION			See notes 6 & 8
	45 MHz to 6 GHz		
	0 dB to 40 dB	0.05 dB	
	40 dB to 60 dB	0.10 dB	
	60 dB to 70 dB	0.18 dB	
	70 dB to 80 dB	0.5 dB	
	80 dB to 90 dB	1.5 dB	
	6 GHz to 12 GHz		
	0 dB to 40 dB	0.10 dB	
	40 dB to 60 dB	0.10 dB	
	60 dB to 70 dB	0.20 dB	
	70 dB to 80 dB	0.5 dB	
	80 dB to 90 dB	1.5 dB	
	12 GHz to 18 GHz		
	0 dB to 40 dB	0.12 dB	
	40 dB to 60 dB	0.20 dB	
	60 dB to 70 dB	0.5 dB	
	70 dB to 80 dB	2.0 dB	
	18 GHz to 26.5 GHz		
	0 dB to 40 dB	0.15 dB	
	40 dB to 60 dB	0.22 dB	
	60 dB to 70 dB	0.6 dB	



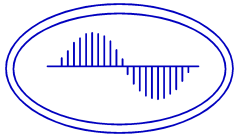
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OSCILLOSCOPE CALIBRATION				
Vertical Deflection	100 μ V to 60 mV	0.25% + 1 μ V	See note 7	
	60 mV to 200 V	0.25%		
DC Levels	6 mV to 60 mV	1%		
	60 mV to 200 V	0.50%		
Bandwidth	1 kHz to 100 MHz	4%		
	100 MHz to 500 MHz	5%		
	500 MHz to 2 GHz	6%		
Timebase Sweep Rate	10 ns to 50 ms	0.40%		
	50 ms to 5 s	0.20%		
Period measurement	10 ns to 50 ms	0.1 ppm + 0.2 ps		
	50 ms to 5 s	0.01%		
POWER FLUX DENSITY				
	0.01 W/m ² to 30 W/m ² 10 kHz to 250 MHz	1.0 dB		
	0.01 W/m ² to 10 W/m ² 250 MHz to 18 GHz	2.0 dB		
FIELD STRENGTH				
Electric Field	0.05 V/m to 100 V/m 10 kHz to 250 MHz	1.0 dB		
	0.05 V/m to 50 V/m 250 MHz to 18 GHz	2.0 dB		



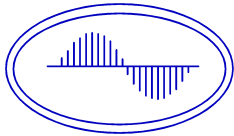
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FIBRE OPTICS			
OPTICAL POWER METER			
Absolute responsivity of fibre optic power meters with FC/PC connectors	Wavelength and power levels:		
	850 nm, -10, -20, -23 dBm	0.18 dB	Multi mode fibre
	1300 nm -10, -20, -23 dBm	0.18 dB	Single mode fibre
	1550 nm -10, -20, -23 dBm	0.18 dB	Single mode fibre
Linearity of response of fibre optic power meters with FC/PC connectors	850 nm, -10 dBm to -70 dBm	0.07 dB	Multi mode fibre
	1300 nm, -5 dBm to -70 dBm	0.07 dB	Single mode fibre
	1550 nm, 5 dBm to -70 dBm	0.07 dB	Single mode fibre
OPTICAL ATTENUATORS			
Attenuation setting	850 nm, 0 dB to -60 dB	0.18 dB	
	1300 nm, 0 dB to -65 dB	0.18 dB	
	1550 nm, 0 dB to -70 dB	0.18 dB	
Repeatability of attenuation setting	850 nm, 0 dB to -60 dB	0.05 dB	
	1300 nm, 0 dB to -65 dB	0.05 dB	
	1550 nm, 0 dB to -70 dB	0.05 dB	
OPTICAL TIME DOMAIN REFLECTOMETERS(OTDR) (Single mode fibre)			
Distance scale error	1310, 1550 nm, 4 km	0.12 m	
Distance scale deviation	1310, 1550 nm, 4 km	0.03 m/km	
Locational readout error		1 LS Digit + 0.03 m	
CW FIBRE OPTIC LIGHT SOURCE			
Output power	850 nm to 1650 nm	0.3 dBm	CW source with RMS spectral width of less than 25 nm
	Except where the following wavelength conditions are met:		
	850 nm, -5 dBm to -70 dBm	0.18 dBm	
	1300 nm, -5 dBm to -70 dBm	0.18 dBm	
	1550 nm, 5 dBm to -70 dBm	0.18 dBm	
Wavelength	600 nm to 1700 nm	0.5 nm	CW source with RMS spectral width of less than 25 nm
Spectral width	0.1 nm to 5.9 nm	0.5 nm	
	6 nm to 25 nm	1 nm	



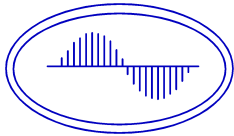
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FORCE			
Calibration of lever and push pull force measuring devices in tension and compression	Up to 1,000 N	0.30%	
Tensile	Up to 10,000 N	0.30%	
HUMIDITY			
Generation	11.30%	1.1%	
	33.00%	1.1%	
	75.40%	1.1%	
	97.10%	1.1%	
Measurement	0% to 90%	2%	
	90% to 100%	2%	
MASS			
	1 mg to 0.1 g	0.10%	
	0.1 g to 1g	0.001%	
	1 g to 1kg	0.0001%	
	1 kg to 5 kg	0.0005%	
	5 kg to 20 kg	0.00005%	
	5 kg to 100 kg	0.05%	
PRESSURE			
	-1 bar to 20 bar (air/oil)	0.05%	
	20 bar to 700 bar(oil)	0.08%	
	0 to 350 mbar absolute	0.05%	
	800 to 1150 mbar absolute	0.15 mbar	
TEMPERATURE			
Generation	-30 °C to 148 °C	0.1 °C	
	148 °C to 650 °C	0.6 °C	
Measurement	-100 °C to 250 °C	0.04 °C	
	250 °C to 650 °C	0.08 °C	
Electrical Simulation of temperature	-250 °C to 2316 °C	0.17 °C to 0.5 °C	
TORQUE			
	1 Ncm to 35 Ncm	0.06%	
	35 Ncm to 5 Nm	0.10%	
	5 Nm to 23 Nm	0.10%	
	23 Nm to 50 Nm	0.25%	
	50 Nm to 500 Nm	0.17%	
	500 Nm to 1000 Nm	0.20%	



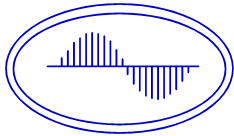
Electroservices (Midlands) Ltd
Traceable Best Measurement Capabilities

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Issue No.14
 Issue Date: 7th October 2010

Measured Quantity Instrument or Range	Range	Best Measurement Capability Expressed as An Expanded Uncertainty (k=2)	Statements
RANGE IN MILLIMETRES AND UNCERTAINTY IN MICROMETRES UNLESS OTHERWISE STATED			
DIMENSIONAL			
LENGTH			
Thread measuring cylinders	As BS 5590:1978	1	
Plain plug gauges (parallel), rollers and cylindrical setting standards	1 to 100 Diameter	1	
	100 to 300 Diameter	1.5	
Plain plug gauges (taper)	Up to 100 Diameter	3	
Plain ring gauges (parallel)	Up to 300 Diameter	1	
Length gauges (Flat & Spherical)	Up to 1.2 m	3.5	
Plain gap gauges (parallel)	Up to 600	2	
Profile gauges, jig and fixtures	Up to 600 x 600 x 300		
Parallels	As BS 906:1972		
	Up to 50 x 100 x 400	2.5	
Vee blocks	As BS 3731:1987 Up to 150	6	
ANGLE			
Squares (Blade type)	As BS 939:2007		
	Up to 600	4	
Squares (Cylindrical)	As BS 939:2007		
	Up to 600	4	
Squares (Block)	As BS 939:2007		
	Up to 600	4	
Angle plates and box angle plates	AS BS 5535:1978		
	Up to 500 length	5	
Sine bars and tables	As BS 3064:1978		
	Up to 500 Length	3	
Sine centres	Up to 500 Length or between centres	3	



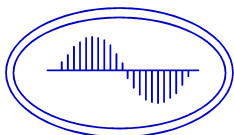
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RANGE IN MILLIMETRES AND UNCERTAINTY IN MICROMETRES UNLESS OTHERWISE STATED			
FORM			
Suface plates (granite and cast iron)	As BS 817:2008	1.5 + (0.8 x diagonal in m)	See note 11
Straight Edges			
Cast iron	As BS 5204:Part 1:1975 Up to 1500	1 + (2 x length in m)	See note 11
Steel	As BS 5204:Part 2:1977 Up to 1500	1 + (2 x length in m)	See note 11
Granite	As BS 5204:Part 2:1977 Up to 1500	1 + (2 x length in m)	See note 11
MEASURING INSTRUMENTS AND MACHINES			
Micrometer			
External	As BS 870:2008	2	
Internal	As BS 959:2008	4	
Depth	As BS 6468:2008	3.5	
Micrometer heads	As BS 1734:1951	1	
Bench micrometer			
Height setting micrometer	Up to 300	5	
Riser blocks for above	Up to 600	3	
Bore micrometer	Up to 150	3	
Vernier gauges			
Caliper	As BS 887:1982	4	
Height	As BS 1643:1983	2.5	
Depth	As BS 6365:1983	6	
Dial gauges and dial test indicators	As BS 907:2008 and BS 2795:1981	2	
Electronic microprocessor controlled height gauge	Up to 1 m	1 + (5 x length in m)	
Bench centres	Up tp 1 m between centres	4.5	
Thread diameter measuring	As NPL schedules MOY/SCM 1/9 Up to 300	3	
Profile projectors	Up to 100 magnification	125 at the screen	
Bevel projectors	As BS 1685:2008	3.5	
Comparators (external)	As BS 1054:1975 Up to 10,000 magnification	1% of range Minimum of 0.2	
Steel rules	Up to 1 m	10 + (10 x length in m)	



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Spirit levels	As BS 3509:1962 and BS 958:1968	Mean sensitivity 10% of nominal. Minimum 0.5 seconds of arc	
Feeler gauges	BS 957:Part 1:2008 BS 957:Part 2:2008	2	

NOTES

1. These values are available for the verification of measuring instruments.
2. The stated uncertainty for standard cells can only be given with those in a temperature controlled enclosure.
3. At unity power factor.
4. Power can also be measured at power factor settings of 0.1,0.5 and 0.9 with increased uncertainties.
5. Phase angle can also be generated for the calibration of phasemeters.
6. These measured quantities can be measured outside of these ranges with increased uncertainties.
7. Calibration timemark generators.
8. For coaxial 50Ω systems fitted with a VSWR of <1.5.
9. Current generated using 100 turn coil.
10. Maximum Mass for Accelerometer under test: 100 g.
11. The uncertainty quoted is for the departure from flatness, straightness, parallelism, or squareness, is the parallel planes which just enclose the surface under conderation.