Schedule of Accreditation

issued by

United Kingdom Accreditation Service

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

0772

Accredited to ISO/IEC 17025:2017

Scientific Electro Systems Limited

Issue No: 020 **Issue date**: 31 August 2026

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Calibration performed at the above address only

Calibration and Measurement Capability (CMC)

Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty (k = 2)	Remarks
TORQUE			
Static and Rotary Torque Transducers in clockwise and/or anti-clockwise direction in increasing torque only.	0.05 N·m to 1500 N·m To BS 7882:2017	0.050 %	Calibrated statically using un-supported Beam and Masses.
Static and Rotary Torque Transducers in clockwise and/or anti-clockwise direction in increasing torque only.	0.2 N·m to 1500 N·m To BS 7882:2017	0.20 %	Calibrated statically by comparison to a reference transducer
Hand torque tools (excluding torque screwdrivers)	0.1 N·m to 1500 N·m To BS EN ISO 6789-2:2017	1.0 %	Calibrated statically by comparison to a reference transducer
	0.1 N·m to 1500 N·m To BS EN ISO 6789-2:2003 (Withdrawn)	1.0 %	
Torque measuring device angle parameters	0° to 360° To VDI/VDE2648-1:2024	0.50°	Calibrated statically by comparison to a reference angle encoder.
Electrically powered and controlled Torque devices	0.2 N·m to 1500 N·m To in House method	1.5 %	Static calibration against reference torque transducer. This does not include Pneumatic and Hydraulic powered devices Notes: 1 The uncertainties quoted are for both the application of the calibration torque and the characteristics of the device being calibrated. 2. Calibrations may also be given in units of electrical signal output. 3. Calibration results may also be given in imperial units, lbf·in and lbf·ft.

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