# Schedule of Accreditation

**issued by**

# United Kingdom Accreditation Service

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

**5963**

**Accredited to ISO/IEC 17025:2017**

## Vehicle Certification Agency

**Issue No:** 001 **Issue date:** 07 February 2025


**Vehicle Certification Agency (VCA)**
**1 Eastgate Office Centre**
**Eastgate Road**
**Bristol**
**BS5 6XX**
**United Kingdom**

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**Calibration performed by the Organisations at the locations specified below**

| Location details | Activity |
|---|---|
| **Address**<br>Vehicle Certification Agency<br>(VCA) Midland Centre<br>Watling Street<br>Nuneaton<br>CV10 0UA<br>United Kingdom | Calibration of DC Voltage measuring and generating equipment (up to 48V), GPS Receivers, Frequency generating devices and Electrical Simulation for Temperature Displays. |

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Calibration and Measurement Capability (CMC)

| Measured Quantity Instrument or Gauge | Range | Expanded Measurement Uncertainty ($k$ = 2) | Remarks |
|---|---|---|---|
| **ELECTRICAL MEASUREMENTS** | | | |
| **Measurements are made by direct comparison unless otherwise stated** | | | |
| **DC VOLTAGE** | | | |
| Measurement and generation | 0 V to 10 mV<br>10 mV to 100 mV<br>100 mV to 1 V<br>1 V to 10 V<br>10 V to 30 V | 20 µV<br>40 µV<br>52 µV<br>39 µV<br>54 mV | For the calibration of measuring instruments and those with a Voltage output |
| Measurement only | 30 V to 100 V | 54 mV | For Instruments with Voltage outputs |
| **FREQUENCY** | | | |
| Measurement | 1 mHz to 1 MHz<br>1 MHz to 400 MHz | 1.3 mHz<br>5.8 in $10^{10}$ | For the calibration of instruments with frequency outputs. May be reported as events per unit time or RPM |
| **TIME** | | | |
| Electronically triggered start stop | 1 s to 100 s | 13 µs | |
| Manually timed events | 1 s to 1 hr | 0.15 s | |
| **DISTANCE** Over a measured kilometer | 1 kilometre | 240 cm | |
| Speed | | | |
| Over a measured km | 1 km/h to 300 km/h | 0.085 % | |
| Simulated | 1 km/h to 300 km/h | 0.086 % | |
| ELECTRICAL SIMULATION OF TEMPERATURE<br>Thermocouple capabilities listed below are given for type T Base, using EMF sensitivity values as listed in BS EN 60584-1:2013. Other Thermocouple types can be calibrated, the uncertainties will correspond to the appropriate sensitivities listed. Calibrations which include the internal reference junction (CJC) are available for types: J, K, N and T. | | | |
| **Temperature indicators and calibrators; calibration by electrical simulation** | | | |
| Base Metal Thermocouples | -20 °C to +100 °C | 0.58 °C | Including automatic CJC |
| 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: $Q[a, b] = [a^2 + b^2]^{1/2}$