

CERTIFICATE OF CALIBRATION

ISSUED BY 01dB

DATE OF ISSUE 02 April 2020

CERTIFICATE NUMBER 140909



CRplc c/o: 01dB-Metravib SAS
Acoustic House
YO14 0PH

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Approved signatory

T. Goodrich

Electronically signed:

A handwritten signature in black ink that reads 'T. A. Goodrich'.

Sound Calibrator : IEC 60942:2003

Instrument information

Manufacturer: 01dB
Model: CAL31
Serial number: 92209
Class: 1

Notes:

Test summary

Date of calibration: 30 March 2020

The sound calibrator detailed above has been calibrated to the published data as described in the operating manual and in the half-inch configuration. The procedures and techniques used are as described in IEC 60942:2003 Annex B – Periodic Tests and three determinations of the sound pressure level, frequency and total distortion were made.

The sound pressure level was measured using a WS2F condenser microphone type MK:224 manufactured by Cirrus Research plc.

The results have been corrected to the reference pressure of 101.33 kPa using the manufacturer's data.

The manufacturer's product information indicates that this model of sound calibrator has been formally pattern approved to IEC 60942:2003 Annex A to Class 1. This has been confirmed with the Physikalisch-Technische Bundesanstalt (PTB) and Laboratoire National d'Essais (LNE).

As public evidence was available, from a testing organisation responsible for approving the results of pattern evaluation tests, to demonstrate that the model of sound calibrator fully conformed to the requirements for pattern evaluation described in Annex A of IEC 60942:2003, the sound calibrator tested is considered to conform to all the Class 1 requirements of IEC 60942:2003.

Notes:

This certificate provides traceability of measurement to the SI system of units and/or to units of measurement realised at the National Physical Laboratory or other recognised national metrology institutes. This certificate may not be reproduced other than in full, except with the prior written approval of the issuing laboratory. The results within this certificate relate only to the items calibrated. The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor $k=2$, providing a coverage probability of approximately 95%.

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Environmental conditions

The following conditions were recorded at the time of the test:

Pressure: 102.72 kPa

Temperature: 23.8 °C

Humidity: 39.7 %

Test equipment

Equipment	Manufacturer	Model	Serial number
Acoustic Calibrator	Bruel and Kjaer	4231	2610257
Distortion Meter	Keithley	2015	1063074
Multimeter	Fluke	8845A	1520023

Results

	Expected	Sample 1	Sample 2	Sample 3	Average	Deviation	Limits	Uncertainty
Level (dB)	94.00	93.99	93.99	93.99	93.99	-0.01	±0.40	0.11 dB
Distortion (%)	< 3.00	0.20	0.22	0.22	0.21	0.21	+3.00	0.13 %
Frequency (Hz)	1000.0	1000.3	1000.3	1000.3	1000.3	0.3	±10.0	0.1 Hz

The measured quantities or deviations (as applicable), extended by the expanded combined uncertainty of measurement, must not exceed the corresponding tolerance.

End of results