



Certificate of Calibration

CUSTOMER: TOTAL LABORATORY SERVICES LTD JOB No: 0549470
 ORDER NO: 2024219 CUST. REF: NO CUST REF
 MAKE: EXTECH TYPE: SDL800
 DESCRIPTION: VIBRATION METER SERIAL No: A.031598

AMBIENT TEMPERATURE*: 20 ± °C HUMIDITY: ± %RH

This is to certify the above instrument has been calibrated in accordance with a relevant specification and at those points tested the result(s) were*:

Found to meet that specification on receipt [<input checked="" type="checkbox"/>]	Found to meet that specification after adjustment/repair []	Measurements recorded in absence of relevant specification []	Found NOT to meet that specification – Calibration restrictions apply []
Pre-Calibration repair performed []	Optimising adjustment performed []	Calibration performed away from laboratory* []	Calibration performed by subcontractor* [<input checked="" type="checkbox"/>]

Absolute Calibration Complies with BS EN ISO 17025 and BS EN ISO 9001

*For calibration performed away from our laboratory or by a subcontractor please see the attached certificate for environmental conditions and calibration/measurement details.

The above statement of conformity (e.g. Pass/Fail) to specification is made without taking measurement uncertainty into account unless stated otherwise in the report.

In order to comply with the above standards Absolute Calibration has to ensure that all measurements carried out in its laboratories are traceable to national standards.

Approved Signatory

DATE: 12.11.24

Absolute Calibration Limited

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CERTIFICATE OF CALIBRATION

ISSUED BY: **CALIBRATION MAINTENANCE & REPAIR LTD**

DATE OF ISSUE: 12 November 2024 CERTIFICATE NUMBER: **1171428**

BS EN ISO
9001:2015
APPROVED
BY
LRQA

CERT No 10045223



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Approved Signatory
Electronically Authorised Document

P K CLARK J FRYER
 R J WADE M FOY
 M A FROST
 M S PARDOE

Customer	ABSOLUTE CALIBRATION LTD
	O/B OF TOTAL LABORATORY SERVICES LTD
Order No	0000104774
Equipment Description	VIBRATION METER
Manufacturer	EXTECH INSTRUMENTS
Model	SDL800
Serial No	A.031598
Ident No	NOT KNOWN
Calibrated By	Richard Wade
Date Of Calibration	12 November 2024

INSTRUMENT CONDITION

Adjustments Made	NO
Repairs Made	NO

ENVIRONMENT

The instrument was placed in the laboratory environment for a minimum period of 4 hours and was operated prior to calibration.

Measurements were made in ambient conditions of 22 °C ± 3 °C and 45 %RH ± 15 %RH.

PROCEDURE

Measurements were performed in accordance with the in house laboratory procedure 3858 All equipment used has been calibrated/verified against measurement standards or reference equipment traceable to International or National Measurement Standards as specified in our control procedure WI64

The results attached to this certificate refer to measurements made at the time of test and not to the instrument's ability to maintain calibration.

The attached results are a true record of the levels required to confirm the instrument meets the original stated manufacturer's specification and accuracy where shown.

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BS EN ISO 9001:2015 APPROVAL CERTIFICATE No. 10045223

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Calibration Equipment Used:

Cert Number	Ident Number	Model	Serial Number	Test Equipment Calibration Due
1137681IH	182	Laser	11633408	20 Dec 2024
1154040IH	149	301A11	1934	1 Dec 2024

Notes:

Measurement Uncertainties

The expanded uncertainty quoted refers to the measured values only, with no account being taken of the instruments ability to maintain its calibration. The expanded uncertainties are based on a standard uncertainty multiplied by a coverage factor $k = 2$, providing a level of confidence of approximately 95%.

PARAMETER	RANGE	EXPANDED UNCERTAINTY
d.c. Resistance	0.01 Ω - 400M Ω 400M Ω - 1T Ω	\pm 409ppm \pm 1%
d.c. Voltage	0V - 1kV	\pm 79ppm
d.c. Voltage	1.01kV-15kV	\pm 2.2%
d.c. Current	0mA - 20A	\pm 437ppm
a.c. Voltage	0mV - 1.05kV	\pm 1.2%
a.c. Current	0mA - 20A	\pm 0.5%
Frequency	0.5Hz - 20GHz	\pm 0.1ppm
Capacitance	0.5nF - 40mF	\pm 1.1%
Time	0 - 1 Hour	\pm 1s
Distortion	10mV - 100V	\pm 1.4mV
Temperature (Dry Block)	-30 $^{\circ}$ C - 350 $^{\circ}$ C	\pm 1%
Temperature (Simulation)	-270 $^{\circ}$ C - 1800 $^{\circ}$ C	\pm 0.57%
Pressure	10mBar - 35Bar	\pm 0.04%
Dynamic Pressure	1.38 - 103.5MPa	\pm 5.0%
Torque	0.1 - 1100Nm	\pm 1.5%
Weight	2g - 157kg	\pm 0.03%
Humidity	0% - 90%	\pm 1%
Shock & Impulse Hammers		\pm 4%
Spring Hammers		\pm 0.015J
Sound	Frequency	\pm 0.06%
Sound	Level	\pm 0.16dB
Tachometers	60rpm - 96000rpm	\pm 0.1%
Anemometers	2.5m/s to 15m/s	\pm 2.0%
Vibration Meters	10Hz - 1kHz	\pm 5%
Vibration Calibrators		\pm 3%
Mechanical Measurement	<200mm	\pm 0.01 μ m
	>200mm	\pm 0.002mm
Inductance		\pm 0.1%
Power (VA)		\pm 1%
Power (RF)		\pm 0.5dB
Light Meters	20-2000Lux	\pm 3.5%
Force (Compression)	0.25N - 50kN	\pm 0.25%

These uncertainties are only applicable if no uncertainties are shown on the result sheet.

This certificate may not be reproduced other than in full, except with the prior written approval of the issuing laboratory.

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RESULT SHEET 3858 – SDL800 VIBRATION METER

AS FOUND

1) ACCELERATION

Frequency	Level	Limits	Measured	Units	Error %
10Hz	1.0	±7%	0.98	g RMS	-2.00
80Hz	1.0	±7%	0.99	g RMS	-1.00
160Hz	1.0	±7%	0.99	g RMS	-1.00
800Hz	1.0	±7%	0.97	g RMS	-3.00

2) VELOCITY

Frequency	Level	Limits	Measured	Units	Error %
80Hz	10.00	±7%	9.97	mm/sec RMS	-0.30

3) DISPLACEMENT

Frequency	Level	Limits	Measured	Units	Error %
80Hz	1.00	±25%	1.009	mm pk-pk	0.90

COMMENTS

Vibration Meter Serial No. A.031598 and supplied accelerometer are calibrated as a unit, the results are only valid when they are used together.

Calibration carried out in accordance with ISO 2954:2012