# SINGAPORE LABORATORY ACCREDITATION SCHEME



## Schedule

ETS Solutions Asia Pte Ltd 1 Kaki Bukit Road 1 #03-20 Enterprise One Singapore 415934 Certificate No. : LA-2017-0656-C

Issue No. : 4

Date : 21 June 2021

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FIELD OF TESTING: Calibration and Measurement

MEASURED QUANTITIES / INSTRUMENTS / RANGE TO BE CALIBRATED	METHOD	CALIBRATION AND MEASUREMENT CAPABILITY (CMC*)
VIBRATION		
Accelerometer  1. Voltage Sensitivity  1 Hz to 5 Hz  > 5 Hz to 10 Hz  > 10 Hz to < 100 Hz  100 Hz to 2000 Hz  > 2000 Hz to 5000 Hz  > 5000Hz to < 8000 Hz  > 8000Hz to 10000 Hz	ETS In-house Procedure: SOP-2017-CA-02 (Rev B, 19/09/2019)	4.2 % 3.3 % 2.1 % 1.7 % 3.0 % 3.2 % 3.8 %
2. Charge Accelerometer 1 Hz to < 4 Hz 4 Hz to 10 Hz > 10 Hz to < 3000 Hz 3000 Hz to < 7000 Hz 7000 Hz to 10000 Hz		4.6 % 3.6 % 2.3 % 3.5 % 4.1 %
Electrodynamic Shaker Controller (AC Voltage, Charge)  1. Input Channel 1 Hz to < 10 Hz 10 Hz to < 2000 Hz 2 kHz to < 8 kHz 8 kHz to < 10 kHz 10 kHz to <15 kHz 15 kHz to 20 kHz	ETS In-house Procedure: SOP-2017-CA-01 (Rev B, 03/12/2019)	0.4 % 0.2 % 0.5 % 0.7 % 1.2 % 1.8 %

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MEASURED QUANTITIES / INSTRUMENTS / RANGE TO BE CALIBRATED	METHOD	CALIBRATION AND MEASUREMENT CAPABILITY (CMC*)
2. Output Channel  1 Hz to < 10 Hz  10 Hz to < 10000 Hz  10 kHz to < 15 kHz  15 kHz to 20 kHz		0.4 % 1.8 % 2.0 % 2.0 %

\* CMC is expressed as an expanded uncertainty estimated at a level of confidence of approximately 95 %.

#### Approved signatories

Mr Miko Trisetya Judiutama

### Note:

This laboratory is accredited in accordance with the recognised International Standard ISO/IEC 17025. A laboratory's fulfilment of the requirements of ISO/IEC 17025 means the laboratory meets both the technical competence requirements and **management system requirements** that are necessary for it to consistently deliver technically valid calibration results. The **management system requirements** in ISO/IEC 17025 are written in language relevant to laboratory operations and operate generally in accordance with the principles of ISO 9001.