



INTERNATIONAL
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CERTIFICATE OF ACCREDITATION

This is to attest that

UNDERWRITERS LABORATORIES OF CANADA INC.

7 UNDERWRITERS ROAD
TORONTO, ONTARIO M1R 3A9, CANADA

Calibration Laboratory CL-223

has met the requirements of AC204, *IAS Accreditation Criteria for Calibration Laboratories*, and has demonstrated compliance with ISO/IEC Standard 17025:2017, *General requirements for the competence of testing and calibration laboratories*. This organization is accredited to provide the services specified in the scope of accreditation.

Effective Date July 23, 2024

Expiration Date January 1, 2025



A handwritten signature in black ink, reading "Raj Nathan".

President

SCOPE OF ACCREDITATION

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UNDERWRITERS LABORATORIES OF CANADA INC.

www.ul.com

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Accredited to ISO/IEC 17025:2017

Effective Date July 23, 2024

CALIBRATION AND MEASUREMENT CAPABILITY (CMC)*

MEASURED QUANTITY or DEVICE TYPE CALIBRATED	RANGE	UNCERTAINTY ^{1,2} (±)	CALIBRATION METHOD OR PROCEDURE, STANDARD EQUIPMENT (OPTIONAL)
Dimensional			
Calipers	0 in to 6 in	290 µin	Grade '0' inch gage blocks Procedure: CP000010
Micrometers	0 in to 1 in	59 µin	Grade '0' inch gage blocks Procedure: CP000008
Thermal			
Temperature - Generate Simulation - Thermocouple			Fluke 5522A Procedure: VP000044CMC
Type J	-210 °C to -100 °C -100 °C to -30 °C -30 °C to 150 °C 150 °C to 760 °C 760 °C to 1200 °C	0.22 °C 0.14 °C 0.12 °C 0.14 °C 0.19 °C	
Type K	-200 °C to -100 °C -100 °C to -25 °C -25 °C to 120 °C 120 °C to 1000 °C 1000 °C to 1372 °C	0.26 °C 0.15 °C 0.14 °C 0.21 °C 0.33 °C	
Type T	-250 °C to -150 °C -150 °C to 0 °C 0 °C to 120 °C 120 °C to 400 °C	0.39 °C 0.19 °C 0.25 °C 0.25 °C	
Temperature - Generate ³	35 °C to 370 °C	1.0 x 10 ⁻³ + 0.35 °C	Hart Scientific 9100S Dry Block Procedure: CP000054
	0 °C to 60 °C	0.27 °C	Rotronic HG2-S CP000129

* If information in this CMC is presented in non-SI units, the conversion factors stated in NIST Special Publication 811 "Guide for the Use of the International System of Units (SI)" apply.

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MEASURED QUANTITY or DEVICE TYPE CALIBRATED	RANGE	UNCERTAINTY ^{1,2} (±)	CALIBRATION METHOD OR PROCEDURE, STANDARD EQUIPMENT (OPTIONAL)
Temperature - Measure ⁴	-50 °C to 370 °C	0.74 °C	Omega CL26 with Type T Probe Procedure: CP000005
Humidity Generate ³	5 %RH to 65 %RH at 23 °C	1.5 %RH	Rotronic HG2-S CP000129
	65 %RH to 95 %RH at 23 °C	1.8 %RH	
Humidity - Measure ⁴	10 %RH to 90 %RH (at 10 °C to 30 °C) (at 30 °C to 60 °C)	1.7 %RH 1.8 %RH	Vaisala MI70 with HMP76 Probe Procedure: CP000015
	90 %RH to 95 %RH (at 10 °C to 30 °C) (at 30 °C to 60 °C)	2.7 %RH 2.8 %RH	
Electrical – DC/LF			
DC Voltage - Generate ³	0 mV to 329.9999 mV 0 V to 3.299999 V 0 V to 32.99999 V 30 V to 329.9999 V 100 V to 1020.000 V	1.5 x 10 ⁻⁵ + 0.77 µV 8.5 x 10 ⁻⁶ + 1.5 µV 9.3 x 10 ⁻⁶ + 15 µV 1.3 x 10 ⁻⁵ + 0.11 mV 1.3 x 10 ⁻⁵ + 1.1 mV	Fluke 5522A Procedure: VP000040CMC
AC Voltage - Generate ³	1.0 mV to 32.999 mV (0.01 Hz to 9.99 Hz) (10 Hz to 45 Hz) (45 Hz to 10 kHz) (10 kHz to 20 kHz) (20 kHz to 50 kHz) (50 kHz to 100 kHz) (100 kHz to 500 kHz)	3.8 x 10 ⁻² + 0.12 mV 6.2 x 10 ⁻⁴ + 4.6 µV 1.1 x 10 ⁻⁴ + 4.6 µV 1.5 x 10 ⁻⁴ + 4.6 µV 7.7 x 10 ⁻⁴ + 4.6 µV 2.7 x 10 ⁻³ + 9.3 µV 6.2 x 10 ⁻³ + 38 µV	Fluke 5522A Procedure: VP000040CMC
	33 mV to 329.999 mV (0.01 Hz to 9.99 Hz) (10 Hz to 45 Hz) (45 Hz to 10 kHz) (10 kHz to 20 kHz) (20 kHz to 50 kHz) (50 kHz to 100 kHz) (100 kHz to 500 kHz)	3.8 x 10 ⁻² + 1.2 mV 2.3 x 10 ⁻⁴ + 6.2 µV 1.1 x 10 ⁻⁴ + 6.2 µV 1.2 x 10 ⁻⁴ + 6.2 µV 2.7 x 10 ⁻⁴ + 6.2 µV 6.2 x 10 ⁻⁴ + 24 µV 1.5 x 10 ⁻³ + 54 µV	
	0.33 V to 3.29999 V (0.01 Hz to 9.99 Hz) (10 Hz to 45 Hz) (45 Hz to 10 kHz) (10 kHz to 20 kHz) (20 kHz to 50 kHz) (50 kHz to 100 kHz) (100 kHz to 500 kHz)	3.8 x 10 ⁻² + 12 mV 2.3 x 10 ⁻⁴ + 38 µV 1.1 x 10 ⁻⁴ + 46 µV 1.4 x 10 ⁻⁴ + 46 µV 2.3 x 10 ⁻⁴ + 38 µV 5.4 x 10 ⁻⁴ + 96 µV 1.8 x 10 ⁻³ + 0.46 mV	

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AC Voltage - Generate ³ (continued)	3.3 V to 32.9999 V (0.01 Hz to 9.99 Hz) (10 Hz to 45 Hz) (45 Hz to 10 kHz) (10 kHz to 20 kHz) (20 kHz to 50 kHz) (50 kHz to 100 kHz)	3.8 x 10 ⁻² + 0.12 V 2.3 x 10 ⁻⁴ + 0.50 mV 1.1 x 10 ⁻⁴ + 0.46 mV 1.8 x 10 ⁻⁴ + 0.46 mV 2.7 x 10 ⁻⁴ + 0.46 mV 6.9 x 10 ⁻⁴ + 1.2 mV	Fluke 5522A Procedure: VP000040CMC
	33 V to 329.999 V (45 Hz to 1 kHz) (1 kHz to 10 kHz) (10 kHz to 20 kHz) (20 kHz to 50 kHz) (50 kHz to 100 kHz)	1.4 x 10 ⁻⁴ + 1.5 mV 1.5 x 10 ⁻⁴ + 4.6 mV 1.9 x 10 ⁻⁴ + 4.6 mV 2.3 x 10 ⁻⁴ + 4.6 mV 1.5 x 10 ⁻³ + 38 mV	
	330 V to 1020 V (45 Hz to 1 kHz) (1 kHz to 5 kHz) (5 kHz to 10 kHz)	2.3 x 10 ⁻⁴ + 7.7 mV 1.9 x 10 ⁻⁴ + 7.7 mV 2.3 x 10 ⁻⁴ + 7.7 mV	
DC Current - Generate ³	0 µA to 329.999 µA 0 mA to 3.29999 mA 0 mA to 32.9999 mA 0 mA to 329.999 mA 0 A to 1.09999 A 1.1 A to 2.99999 A 0 A to 10.9999 A 11 A to 20.5 A	1.1 x 10 ⁻⁴ + 15 nA 7.7 x 10 ⁻⁵ + 38 nA 7.7 x 10 ⁻⁵ + 0.19 µA 7.7 x 10 ⁻⁵ + 1.9 µA 1.5 x 10 ⁻⁴ + 31 µA 2.9 x 10 ⁻⁴ + 31 µA 3.8 x 10 ⁻⁴ + 0.38 mA 7.7 x 10 ⁻⁴ + 0.58 mA	Fluke 5522A Procedure: VP000040CMC
	20 A to 120 A	7.8 x 10 ⁻⁵ + 4.7 mA	
AC Current - Generate ³	29.00 µA to 329.99 µA (10 Hz to 20 Hz) (20 Hz to 45 Hz) (45 Hz to 1 kHz) (1 kHz to 5 kHz) (5 kHz to 10 kHz) (10 kHz to 30 kHz)	1.5 x 10 ⁻³ + 77 nA 1.1 x 10 ⁻³ + 77 nA 9.6 x 10 ⁻⁴ + 77 nA 2.3 x 10 ⁻³ + 0.11 µA 6.2 x 10 ⁻³ + 0.15 µA 1.2 x 10 ⁻² + 0.31 µA	Fluke 5522A Procedure: VP000040CMC
	0.33 mA to 3.29999 mA (10 Hz to 20 Hz) (20 Hz to 45 Hz) (45 Hz to 1 kHz) (1 kHz to 5 kHz) (5 kHz to 10 kHz) (10 kHz to 30 kHz)	1.5 x 10 ⁻³ + 0.11 µA 9.6 x 10 ⁻⁴ + 0.11 µA 7.7 x 10 ⁻⁴ + 0.11 µA 1.5 x 10 ⁻³ + 0.15 µA 3.8 x 10 ⁻³ + 0.23 µA 7.7 x 10 ⁻³ + 0.46 µA	
	3.3 mA to 32.9999 mA		

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AC Current - Generate ³ (continued)	(10 Hz to 20 Hz)	$1.3 \times 10^{-3} + 1.5 \mu\text{A}$	Fluke 5522A Procedure: VP000040CMC
	(20 Hz to 45 Hz)	$6.9 \times 10^{-4} + 1.5 \mu\text{A}$	
	(45 Hz to 1 kHz)	$3.1 \times 10^{-4} + 1.5 \mu\text{A}$	
	(1 kHz to 5 kHz)	$6.2 \times 10^{-4} + 1.5 \mu\text{A}$	
	(5 kHz to 10 kHz)	$1.5 \times 10^{-3} + 2.3 \mu\text{A}$	
	(10 kHz to 30 kHz)	$3.1 \times 10^{-3} + 3.1 \mu\text{A}$	
	33 mA to 329.999 mA		
	(10 Hz to 20 Hz)	$1.3 \times 10^{-3} + 15 \mu\text{A}$	
	(20 Hz to 45 Hz)	$6.9 \times 10^{-4} + 15 \mu\text{A}$	
	(45 Hz to 1 kHz)	$3.1 \times 10^{-4} + 15 \mu\text{A}$	
(1 kHz to 5 kHz)	$7.7 \times 10^{-4} + 38 \mu\text{A}$		
(5 kHz to 10 kHz)	$1.5 \times 10^{-3} + 77 \mu\text{A}$		
(10 kHz to 30 kHz)	$3.1 \times 10^{-3} + 0.15 \text{ mA}$		
0.33 A to 1.09999 A			
(10 Hz to 45 Hz)	$1.3 \times 10^{-3} + 77 \mu\text{A}$		
(45 Hz to 1 kHz)	$3.8 \times 10^{-4} + 77 \mu\text{A}$		
(1 kHz to 5 kHz)	$4.6 \times 10^{-3} + 0.77 \text{ mA}$		
(5 kHz to 10 kHz)	$1.9 \times 10^{-2} + 3.8 \text{ mA}$		
1.1 A to 2.99999 A			
(10 Hz to 45 Hz)	$1.3 \times 10^{-3} + 77 \mu\text{A}$		
(45 Hz to 1 kHz)	$4.6 \times 10^{-4} + 77 \mu\text{A}$		
(1 kHz to 5 kHz)	$4.6 \times 10^{-3} + 0.77 \text{ mA}$		
(5 kHz to 10 kHz)	$1.9 \times 10^{-2} + 3.8 \text{ mA}$		
3 A to 10.9999 A			
(45 Hz to 100 Hz)	$4.6 \times 10^{-4} + 1.5 \text{ mA}$		
(100 Hz to 1 kHz)	$7.7 \times 10^{-4} + 1.5 \text{ mA}$		
(1 kHz to 5 kHz)	$2.3 \times 10^{-2} + 1.5 \text{ mA}$		
11 A to 20.5 A			
(45 Hz to 100 Hz)	$9.3 \times 10^{-4} + 3.8 \text{ mA}$		
(100 Hz to 1 kHz)	$1.1 \times 10^{-3} + 3.8 \text{ mA}$		
(1 kHz to 5 kHz)	$2.3 \times 10^{-2} + 3.8 \text{ mA}$		
20 A to 120 A			
(50 Hz to 60 Hz)	$1.2 \times 10^{-4} + 0.47 \text{ A}$	Fluke 52120A (Sourced by 5522A) Procedure: CP000068	
DC Voltage - Measure ⁴	0 mV to 200 mV	$4.6 \times 10^{-6} + 93 \text{ nV}$	Fluke 8508A Procedure: VP000040CMC
	200 mV to 2 V	$3.1 \times 10^{-6} + 0.38 \mu\text{V}$	
	2 V to 20 V	$3.1 \times 10^{-6} + 3.8 \mu\text{V}$	
	20 V to 200 V	$4.6 \times 10^{-6} + 38 \mu\text{V}$	
	200 V to 1000 V	$4.6 \times 10^{-6} + 0.93 \text{ mV}$	

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DC Current - Measure ⁴	0 µA to 200 µA 200 µA to 2 mA 2 mA to 20 mA 20 mA to 200 mA 200 mA to 2 A 2 A to 20 A	1.1 x 10 ⁻⁵ + 0.31 nA 1.1 x 10 ⁻⁵ + 3.1 nA 1.2 x 10 ⁻⁵ + 31 nA 3.4 x 10 ⁻⁵ + 0.62 µA 1.6 x 10 ⁻⁴ + 12 µA 3.5 x 10 ⁻⁴ + 0.31 mA	Fluke 8508A Procedure: VP000040CMC
AC Voltage - Measure ⁴	0 mV to 200 mV (10 Hz to 40 Hz) (40 Hz to 100 Hz) (100 Hz to 2 kHz) (2 kHz to 10 kHz) (10 kHz to 30 kHz) (30 kHz to 100 kHz) 200 mV to 2 V (10 Hz to 40 Hz) (40 Hz to 100 Hz) (100 Hz to 2 kHz) (2 kHz to 10 kHz) (10 kHz to 30 kHz) (30 kHz to 100 kHz) (100 kHz to 300 kHz) (300 kHz to 1 MHz) 2 V to 20 V (10 Hz to 40 Hz) (40 Hz to 100 Hz) (100 Hz to 2 kHz) (2 kHz to 10 kHz) (10 kHz to 30 kHz) (30 kHz to 100 kHz) (100 kHz to 300 kHz) (300 kHz to 1 MHz) 20 V to 200 V (10 Hz to 40 Hz) (40 Hz to 100 Hz) (100 Hz to 2 kHz) (2 kHz to 10 kHz) (10 kHz to 30 kHz) (30 kHz to 100 kHz) (100 kHz to 300 kHz) (300 kHz to 1 MHz) 200 V to 1000 V (10 Hz to 40 Hz) (40 Hz to 10 kHz) (10 kHz to 30 kHz)	1.1 x 10 ⁻⁴ + 3.8 µV 9.7 x 10 ⁻⁵ + 3.8 µV 9.7 x 10 ⁻⁵ + 1.8 µV 9.7 x 10 ⁻⁵ + 3.8 µV 2.6 x 10 ⁻⁴ + 7.7 µV 5.8 x 10 ⁻⁴ + 18 µV 9.3 x 10 ⁻⁵ + 18 µV 7.3 x 10 ⁻⁵ + 18 µV 5.8 x 10 ⁻⁵ + 18 µV 7.3 x 10 ⁻⁵ + 18 µV 1.8 x 10 ⁻⁴ + 38 µV 4.3 x 10 ⁻⁴ + 0.18 mV 2.3 x 10 ⁻³ + 1.8 mV 7.7 x 10 ⁻³ + 18 mV 9.3 x 10 ⁻⁵ + 0.18 mV 7.3 x 10 ⁻⁵ + 0.18 mV 5.8 x 10 ⁻⁵ + 0.18 mV 7.3 x 10 ⁻⁵ + 0.18 mV 1.8 x 10 ⁻⁴ + 0.38 mV 4.3 x 10 ⁻⁴ + 1.8 mV 2.3 x 10 ⁻³ + 18 mV 7.7 x 10 ⁻³ + 0.18 V 9.3 x 10 ⁻⁵ + 1.8 mV 7.3 x 10 ⁻⁵ + 1.8 mV 5.8 x 10 ⁻⁵ + 1.8 mV 7.3 x 10 ⁻⁵ + 1.8 mV 1.8 x 10 ⁻⁴ + 3.8 mV 4.3 x 10 ⁻⁴ + 18 mV 2.3 x 10 ⁻³ + 0.18 V 7.7 x 10 ⁻³ + 1.8 V 1.0 x 10 ⁻⁴ + 38 mV 8.5 x 10 ⁻⁵ + 38 mV 1.9 x 10 ⁻⁴ + 77 mV	Fluke 8508A Procedure: VP000040CMC

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AC Voltage - Measure ⁴ (continued)	200 V to 1000 V (30 kHz to 100 kHz)	$4.7 \times 10^{-4} + 0.38 \text{ V}$	Fluke 8508A Procedure: VP000040CMC
AC Current - Measure ⁴	0 μA to 200 μA (10 Hz to 10 kHz)	$4.5 \times 10^{-4} + 18 \text{ nA}$	Fluke 8508A Procedure: VP000040CMC
	200 μA to 2 mA (10 Hz to 10 kHz)	$2.6 \times 10^{-4} + 0.18 \mu\text{A}$	
	200 μA to 20 mA (10 Hz to 10 kHz)	$2.6 \times 10^{-4} + 1.8 \mu\text{A}$	
	20 mA to 200 mA (10 Hz to 10 kHz)	$2.3 \times 10^{-4} + 18 \mu\text{A}$	
	200 mA to 2 A (10 Hz to 2 kHz) (2 kHz to 10 kHz)	$5.4 \times 10^{-4} + 0.18 \text{ mA}$ $6.3 \times 10^{-4} + 0.18 \text{ mA}$	
	2 A to 20 A (10 Hz to 2 kHz) (2 kHz to 10 kHz)	$6.9 \times 10^{-4} + 1.8 \text{ mA}$ $1.9 \times 10^{-3} + 1.8 \text{ mA}$	
DC Resistance - Generate ³	0 Ω to 10.9999 Ω 11 Ω to 32.9999 Ω 33 Ω to 109.9999 Ω 110 Ω to 329.9999 Ω 330 Ω to 1.099999 k Ω 1.1 k Ω to 3.299999 k Ω 3.3 k Ω to 10.99999 k Ω 11 k Ω to 32.99999 k Ω 33 k Ω to 109.9999 k Ω 110 k Ω to 329.9999 k Ω 330 k Ω to 1.099999 M Ω 1.1 M Ω to 3.299999 M Ω 3.3 M Ω to 10.99999 M Ω 11 M Ω to 32.99999 M Ω 33 M Ω to 109.9999 M Ω 110 M Ω to 329.9999 M Ω 330 M Ω to 1100 M Ω	$3.1 \times 10^{-5} + 0.77 \text{ m}\Omega$ $2.3 \times 10^{-5} + 1.1 \text{ m}\Omega$ $2.1 \times 10^{-5} + 1.0 \text{ m}\Omega$ $2.1 \times 10^{-5} + 1.5 \text{ m}\Omega$ $2.1 \times 10^{-5} + 1.5 \text{ m}\Omega$ $2.1 \times 10^{-5} + 15 \text{ m}\Omega$ $2.1 \times 10^{-5} + 15 \text{ m}\Omega$ $2.1 \times 10^{-5} + 0.15 \Omega$ $2.1 \times 10^{-5} + 0.15 \Omega$ $2.4 \times 10^{-5} + 1.5 \Omega$ $2.4 \times 10^{-5} + 1.5 \Omega$ $4.6 \times 10^{-5} + 23 \Omega$ $1.0 \times 10^{-4} + 39 \Omega$ $1.9 \times 10^{-4} + 1.9 \text{ k}\Omega$ $3.8 \times 10^{-4} + 2.3 \text{ k}\Omega$ $2.3 \times 10^{-3} + 78 \text{ k}\Omega$ $1.1 \times 10^{-2} + 0.39 \text{ M}\Omega$	Fluke 5522A Procedure: VP000040CMC
DC Resistance - Measure ⁴	0 Ω to 2 Ω 2 Ω to 20 Ω 20 Ω to 200 Ω 200 Ω to 2 k Ω 2 k Ω to 20 k Ω 20 k Ω to 200 k Ω 200 k Ω to 2 M Ω 2 M Ω to 20 M Ω	$1.4 \times 10^{-5} + 3.8 \mu\Omega$ $8.9 \times 10^{-6} + 13 \mu\Omega$ $7.3 \times 10^{-6} + 46 \mu\Omega$ $7.3 \times 10^{-6} + 0.46 \text{ m}\Omega$ $7.3 \times 10^{-6} + 4.6 \text{ m}\Omega$ $7.3 \times 10^{-6} + 46 \text{ m}\Omega$ $8.1 \times 10^{-6} + 0.93 \Omega$ $1.5 \times 10^{-5} + 93 \Omega$	Fluke 8508A Procedure: VP000040CMC

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MEASURED QUANTITY or DEVICE TYPE CALIBRATED	RANGE	UNCERTAINTY ^{1,2} (±)	CALIBRATION METHOD OR PROCEDURE, STANDARD EQUIPMENT (OPTIONAL)
DC Resistance - Measure ⁴ (continued)	20 MΩ to 200 MΩ 200 MΩ to 2 GΩ	5.8 x 10 ⁻⁵ + 9.3 kΩ 5.2 x 10 ⁻⁴ + 0.93 MΩ	Fluke 8508A Procedure: VP000040CMC
Capacitance - Generate ^{3,5}	220 pF to 399.9 pF 0.4 nF to 1.0999 nF 1.1 nF to 3.2999 nF 3.3 nF to 10.9999 nF 11 nF to 32.9999 nF 33 nF to 109.999 nF 110 nF to 329.999 nF 0.33 μF to 1.09999 μF 1.1 μF to 3.29999 μF 3.3 μF to 10.9999 μF 11 μF to 32.9999 μF 33 μF to 109.999 μF 110 μF to 329.999 μF 0.33 mF to 1.09999 mF 1.1 mF to 3.29999 mF 3.3 mF to 10.9999 mF 11 mF to 32.9999 mF 33 mF to 110 mF	3.8 x 10 ⁻³ + 7.7 pF 3.8 x 10 ⁻³ + 7.7 pF 3.8 x 10 ⁻³ + 7.7 pF 1.9 x 10 ⁻³ + 7.7 pF 1.9 x 10 ⁻³ + 77 pF 1.9 x 10 ⁻³ + 77 pF 1.9 x 10 ⁻³ + 0.23 nF 1.9 x 10 ⁻³ + 0.77 nF 1.9 x 10 ⁻³ + 2.3 nF 1.9 x 10 ⁻³ + 7.7 nF 3.1 x 10 ⁻³ + 23 nF 3.4 x 10 ⁻³ + 77 nF 3.4 x 10 ⁻³ + 0.23 μF 3.4 x 10 ⁻³ + 0.77 μF 3.4 x 10 ⁻³ + 2.3 μF 3.4 x 10 ⁻³ + 7.7 μF 5.8 x 10 ⁻³ + 23 μF 8.5 x 10 ⁻³ + 77 μF	Fluke 5522A Procedure: VP000043CMC
Time and Frequency			
Frequency Generate ³	0.01 Hz to 119.99 Hz 120.0 Hz to 1199.9 Hz 1.200 kHz to 11.999 kHz 12.00 kHz to 119.99 kHz 120.0 kHz to 1199.9 kHz 1.200 MHz to 2.000 MHz	1.9 x 10 ⁻⁶ + 3.8 μHz 1.9 x 10 ⁻⁶ + 3.8 μHz 1.9 x 10 ⁻⁶ + 3.8 μHz 1.9 x 10 ⁻⁶ + 3.8 μHz 1.9 x 10 ⁻⁶ + 3.8 μHz 1.9 x 10 ⁻⁶ + 3.8 μHz	Fluke 5522A VP000040CMC
Frequency Measure ⁴	10 Hz to 19.52 Hz 19.53 Hz to 195.2 Hz 195.3 Hz to 1.952 kHz 1.953 kHz to 19.52 kHz 19.53 kHz to 195.2 kHz 195.3 kHz to 1 MHz	7.7 x 10 ⁻⁶ + 15 μHz 7.7 x 10 ⁻⁶ + 0.15 mHz 7.7 x 10 ⁻⁶ + 1.5 mHz 7.7 x 10 ⁻⁶ + 15 mHz 7.7 x 10 ⁻⁶ + 0.15 Hz 7.7 x 10 ⁻⁶ + 1.5 Hz	Fluke 8508A VP000040CMC
Timer / Stopwatch	Deviation per day	0.040 s/24 h	Helmut Klein Timometer 4500 CP000020

¹The uncertainty covered by the Calibration and Measurement Capability (CMC) is expressed as the expanded uncertainty having a coverage probability of approximately 95 %. It is the smallest measurement uncertainty that a laboratory can achieve within its scope of accreditation when performing calibrations of a best existing device. The measurement uncertainty reported on a calibration certificate may be greater than that provided in the CMC due to the behavior of the calibration item and other factors that may contribute to the uncertainty of a specific calibration.

²When uncertainty is stated in relative terms (such as percent, a multiplier expressed as a decimal fraction or in scientific notation), it is in relation to instrument reading or instrument output, as appropriate, unless otherwise indicated.

³Capability is suitable for the calibration of measuring devices in the stated ranges.

⁴Capability is suitable for the calibration of devices intended to generate the indicated quantity in the stated ranges.

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⁵Stated uncertainties are valid for the ranges of frequencies given in the calibrator's manufacturer's specifications, but the actual frequency applied by the calibrator may be dependent on the measurement device under calibration.