



CERTIFICATE OF ACCREDITATION

The ANSI National Accreditation Board

Hereby attests that

Transcat Biomedical

1228 State Route 487

Paxinos, PA 17860

Fulfills the requirements of

ISO/IEC 17025:2017

and national standard

ANSI/NCSL Z540-1-1994 (R2002)

In the field of

CALIBRATION

This certificate is valid only when accompanied by a current scope of accreditation document.
The current scope of accreditation can be verified at www.anab.org.

Jason Stine, Vice President

Expiry Date: 09 August 2028

Certificate Number: AC-2489.19



This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017.
This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory
quality management system (refer to joint ISO-ILAC-IAF Communiqué dated April 2017).

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

AND

ANSI/NCSL Z540-1-1994 (R2002)

Transcat Biomedical

1228 State Route 487

Paxinos, PA 17860

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CALIBRATION

ISO/IEC 17025 Accreditation Granted: **21 August 2026**

Certificate Number: **AC-2489.19**

Certificate Expiry Date: **09 August 2028**

Electrical – DC/Low Frequency

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
AC Current – Measure ¹	Up to 100 μ A		Comparison to Keysight 3458A opt 002 8.5 Digit Multimeter
	(10 to 20) Hz	0.46 % of reading + 35 nA	
	(20 to 45) Hz	0.17 % of reading + 35 nA	
	(45 to 100) Hz	0.072 % of reading + 35 nA	
	100 Hz to 5 kHz	0.072 % of reading + 35 nA	
	(0.1 to 1) mA		
	(10 to 20) Hz	0.46 % of reading + 0.23 μ A	
	(20 to 45) Hz	0.17 % of reading + 0.23 μ A	
	(45 to 100) Hz	0.071 % of reading + 0.23 μ A	
	100 Hz to 5 kHz	0.038 % of reading + 0.23 μ A	
	(1 to 10) mA		
	(10 to 20) Hz	0.46 % of reading + 2.3 μ A	
	(20 to 45) Hz	0.17 % of reading + 2.3 μ A	
	(45 to 100) Hz	0.071 % of reading + 2.3 μ A	
	100 Hz to 5 kHz	0.038 % of reading + 2.3 μ A	
	(10 to 100) mA		
	(10 to 20) Hz	0.48 % of reading + 23 μ A	
	(20 to 45) Hz	0.17 % of reading + 23 μ A	
	(45 to 100) Hz	0.071 % of reading + 23 μ A	
	100 Hz to 5 kHz	0.037 % of reading + 23 μ A	

Electrical – DC/Low Frequency

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
AC Current – Measure ¹	100 mA to 1 A (10 to 20) Hz (20 to 45) Hz (45 to 100) Hz 100 Hz to 5 kHz	0.46 % of reading + 0.23 mA 0.19 % of reading + 0.23 mA 0.097 % of reading + 0.23 mA 0.12 % of reading + 0.23 mA	Comparison to Keysight 3458A opt 002 8.5 Digit Multimeter
AC Current – Measure ¹	(1 to 3) A (3 to 5) Hz (5 to 10) Hz 10 Hz to 5 kHz	0.74 % of reading + 1.8 mA 0.24 % of reading + 0.6 mA 0.11 % of reading + 0.6 mA	Comparison to Agilent 34401A 6.5 Digit Multimeter
AC Current – Measure ¹	(3 to 5) A 3 Hz to 5 kHz (5 to 10) A 3 Hz to 5 kHz	0.17 % of reading + 4 mA 0.37 % of reading + 4 mA	Comparison to Keysight 34465A 6.5 Digit Multimeter
AC Current – Source ¹	Up to 120 μ A (3 to 45) Hz 45 Hz to 1 kHz (1 to 5) kHz (5 to 10) kHz (10 to 30) kHz (0.12 to 1.2) mA (3 to 45) Hz 45 Hz to 1 kHz (1 to 5) kHz (5 to 10) kHz (10 to 30) kHz (1.2 to 12) mA (3 to 45) Hz 45 Hz to 1 kHz (1 to 5) kHz (5 to 10) kHz (10 to 30) kHz (12 to 120) mA (3 to 45) Hz 45 Hz to 1 kHz (1 to 5) kHz (5 to 10) kHz (10 to 30) kHz	0.02 % of reading + 7.8 nA 0.02 % of reading + 7.8 nA 0.02 % of reading + 7.8 nA 0.12 % of reading + 32 nA 0.39 % of reading + 0.78 μ A 0.02 % of reading + 78 nA 0.02 % of reading + 78 nA 0.02 % of reading + 78 nA 0.12 % of reading + 78 nA 0.39 % of reading + 3.9 μ A 0.02 % of reading + 0.78 μ A 0.02 % of reading + 0.78 μ A 0.02 % of reading + 0.78 μ A 0.12 % of reading + 0.78 μ A 0.39 % of reading + 7.8 μ A 0.02 % of reading + 7.8 μ A 0.012 % of reading + 3.9 μ A 0.02 % of reading + 6.3 μ A 0.12 % of reading + 7.8 μ A 0.39 % of reading + 78 μ A	Comparison to Fluke 5560A Multiproduct Calibrator

Electrical – DC/Low Frequency

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
AC Current – Source ¹	(0.12 to 1.2) A		Comparison to Fluke 5560A Multiproduct Calibrator
	(3 to 45) Hz	0.02 % of reading + 78 μ A	
	45 Hz to 1 kHz	0.02 % of reading + 39 μ A	
	(1 to 5) kHz	0.02 % of reading + 63 μ A	
	(5 to 10) kHz	0.12 % of reading + 0.24 mA	
	(10 to 30) kHz	0.39 % of reading + 0.24 mA	
	(1.2 to 3.1) A		
	(3 to 45) Hz	0.03 % of reading + 0.39 mA	
	45 Hz to 1 kHz	0.024 % of reading + 0.24 mA	
	(1 to 5) kHz	0.03 % of reading + 0.24 mA	
	(5 to 10) kHz	0.2 % of reading + 0.39 mA	
	(3.1 to 12) A		
AC Power – Source ^{1,2} (10 to 65) Hz PF = 1	(3 to 45) Hz	0.03 % of reading + 0.78 mA	Comparison to Fluke 5520A Multiproduct Calibrator
	45 Hz to 1 kHz	0.024 % of reading + 0.39 mA	
	(1 to 5) kHz	0.03 % of reading + 0.63 mA	
	(5 to 10) kHz	0.2 % of reading + 0.78 mA	
	(12 to 30.2) A		
	(3 to 45) Hz	0.078 % of reading + 7.8 mA	
	45 Hz to 1 kHz	0.055 % of reading + 6.3 mA	
	(1 to 5) kHz	0.39 % of reading + 6.3 mA	
	(3.3 to 9) mA	0.13 % of reading	
	(0.11 to 3) mW	0.077 % of reading	
	3 mW to 9 W		
	(9 to 33) mA		
(33 to 330) mV (0.33 to 1 020) V	(0.3 to 10) mW	0.089 % of reading	Comparison to Fluke 5520A Multiproduct Calibrator
	10 mW to 33 W	0.077 % of reading	
	(33 to 90) mA		
	(1 to 30) mW	0.071 % of reading	
	30 mW to 90 W	0.057 % of reading	

Electrical – DC/Low Frequency

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
AC Power – Source ^{1,2} (10 to 65) Hz PF = 1	(90 to 330) mA		Comparison to Fluke 5520A Multiproduct Calibrator
(33 to 330) mV	(3 to 100) mW	0.089 % of reading	
(0.33 to 1 020) V	100 mW to 300 W	0.078 % of reading	
(0.33 to 0.9) A			
(33 to 330) mV	(11 to 300) mW	0.071 % of reading	
(0.33 to 1 020) V	300 mW to 900 W	0.081 % of reading	
(0.9 to 2.2) A			
(33 to 330) mV	30 mW to 0.72 W	0.089 % of reading	
(0.33 to 1 020) V	0.72 W to 2 kW	0.079 % of reading	
(2.2 to 4.5) A			
(33 to 330) mV	80 mW to 1.4 W	0.088 % of reading	Comparison to Keysight 3458A opt 002 8.5 Digit Multimeter
(0.33 to 1 020) V	1.4 W to 4.5 kW	0.18 % of reading	
(4.5 to 20.5) A			
(33 to 330) mV	(0.15 to 6.7) W	0.17 % of reading	
(0.33 to 1 020) V	6.7 W to 20 kW	0.17 % of reading	
(1 to 10) mV			
(1 to 40) Hz		0.04 % of reading + 3.5 μ V	
40 Hz to 1 kHz		0.03 % of reading + 1.2 μ V	
(1 to 20) kHz		0.04 % of reading + 1.2 μ V	
(20 to 50) kHz		0.15 % of reading + 1.2 μ V	
(50 to 100) kHz		0.59 % of reading + 1.2 μ V	
(100 to 300) kHz		4.6 % of reading + 2.3 μ V	
300 kHz to 1 MHz		1.5 % of reading + 5.8 μ V	
(1 to 4) MHz		8.1 % of reading + 8.1 μ V	
(10 to 100) mV			
(1 to 40) Hz		0.013 % of reading + 4.6 μ V	
40 Hz to 1 kHz		0.009 7 % of reading + 2.3 μ V	
(1 to 20) kHz		0.017 % of reading + 2.3 μ V	
(20 to 50) kHz		0.038 % of reading + 2.3 μ V	
(50 to 100) kHz		0.093 % of reading + 2.3 μ V	
(100 to 300) kHz		0.36 % of reading + 12 μ V	
300 kHz to 1 MHz		1.2 % of reading + 12 μ V	
(1 to 2) MHz		1.8 % of reading + 12 μ V	
(2 to 4) MHz		4.7 % of reading + 81 μ V	
(4 to 8) MHz		4.7 % of reading + 92 μ V	
(8 to 10) MHz		17 % of reading + 0.12 mV	

Electrical – DC/Low Frequency

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
AC Voltage – Measure ¹	(0.1 to 1) V		Comparison to Keysight 3458A opt 002 8.5 Digit Multimeter
	(1 to 40) Hz	0.008 8 % of reading + 46 μ V	
	40 Hz to 1 kHz	0.008 3 % of reading + 23 μ V	
	(1 to 20) kHz	0.017 % of reading + 23 μ V	
	(20 to 50) kHz	0.036 % of reading + 23 μ V	
	(50 to 100) kHz	0.093 % of reading + 23 μ V	
	(100 to 300) kHz	0.35 % of reading + 0.12 mV	
	300 kHz to 1 MHz	1.2 % of reading + 0.12 mV	
	(1 to 2) MHz	1.8 % of reading + 0.12 mV	
	(2 to 4) MHz	4.6 % of reading + 0.81 mV	
	(4 to 8) MHz	4.6 % of reading + 0.92 mV	
	(8 to 10) MHz	17 % of reading + 1.2 mV	
	(1 to 10) V		
	(1 to 40) Hz	0.009 5 % of reading + 0.46 mV	
	40 Hz to 1 kHz	0.023 % of reading + 0.23 mV	
	(1 to 20) kHz	0.017 % of reading + 0.23 mV	
	(20 to 50) kHz	0.036 % of reading + 0.23 mV	
	(50 to 100) kHz	0.093 % of reading + 0.23 mV	
	(100 to 300) kHz	0.35 % of reading + 1.2 mV	
	300 kHz to 1 MHz	1.2 % of reading + 1.2 mV	
	(1 to 2) MHz	1.8 % of reading + 1.2 mV	
	(2 to 4) MHz	4.6 % of reading + 8.1 mV	
	(4 to 8) MHz	4.6 % of reading + 9.2 mV	
	(8 to 10) MHz	17 % of reading + 12 mV	
	(10 to 100) V		
	(1 to 40) Hz	0.024 % of reading + 4.6 mV	
	40 Hz to 1 kHz	0.024 % of reading + 2.3 mV	
	(1 to 20) kHz	0.024 % of reading + 2.3 mV	
	(20 to 50) kHz	0.041 % of reading + 2.3 mV	
	(50 to 100) kHz	0.14 % of reading + 2.3 mV	
	(100 to 300) kHz	0.46 % of reading + 12 mV	
	300 kHz to 1 MHz	1.7 % of reading + 12 mV	
	(100 to 700) V		
	(1 to 40) Hz	0.048 % of reading + 46 mV	
	40 Hz to 1 kHz	0.048 % of reading + 23 mV	
	(1 to 20) kHz	0.071 % of reading + 23 mV	
	(20 to 50) kHz	0.19 % of reading + 23 mV	
	(50 to 100) kHz	0.35 % of reading + 23 mV	

Electrical – DC/Low Frequency

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
AC Voltage – Source ¹	Up to 12 mV		Comparison to Fluke 5560A Multiproduct Calibrator
	(3 to 5) Hz	0.2 % of reading + 5.5 μ V	
	(5 to 10) Hz	0.068 % of reading + 5.5 μ V	
	10 Hz to 20 kHz	0.012 % of reading + 4.7 μ V	
	(20 to 50) kHz	0.03 % of reading + 4.7 μ V	
	(50 to 100) kHz	0.12 % of reading + 12 μ V	
	(100 to 300) kHz	0.63 % of reading + 24 μ V	
	(300 to 500) kHz	0.63 % of reading + 24 μ V	
	(12 to 120) mV		
	(3 to 5) Hz	0.2 % of reading + 5.5 μ V	
	(5 to 10) Hz	0.068 % of reading + 5.5 μ V	
	10 Hz to 20 kHz	0.011 % of reading + 4.7 μ V	
	(20 to 50) kHz	0.028 % of reading + 6.3 μ V	
	(50 to 100) kHz	0.063 % of reading + 16 μ V	
	(100 to 300) kHz	0.16 % of reading + 24 μ V	
	(300 to 500) kHz	0.16 % of reading + 24 μ V	
	(0.12 to 1.2) V		
	(3 to 5) Hz	0.2 % of reading + 59 μ V	
	(5 to 10) Hz	0.068 % of reading + 55 μ V	
	(10 to 40) Hz	0.011 % of reading + 47 μ V	
	40 Hz to 20 kHz	0.011 % of reading + 6.3 μ V	
	(20 to 50) kHz	0.024 % of reading + 11 μ V	
	(50 to 100) kHz	0.055 % of reading + 32 μ V	
	(100 to 300) kHz	0.15 % of reading + 63 μ V	
	(300 to 500) kHz	0.15 % of reading + 63 μ V	
	(1.2 to 12) V		
	(3 to 5) Hz	0.2 % of reading + 0.59 mV	
	(5 to 10) Hz	0.068 % of reading + 0.59 mV	
	(10 to 40) Hz	0.011 % of reading + 0.28 mV	
	40 Hz to 20 kHz	0.011 % of reading + 39 μ V	
	(20 to 50) kHz	0.024 % of reading + 39 μ V	
	(50 to 100) kHz	0.055 % of reading + 98 μ V	
	(100 to 300) kHz	0.16 % of reading + 0.47 mV	
	(300 to 500) kHz	0.16 % of reading + 0.47 mV	

Electrical – DC/Low Frequency

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
AC Voltage – Source ¹	(12 to 70) V		Comparison to Fluke 5560A Multiproduct Calibrator
	(3 to 5) Hz	0.2 % of reading + 5.9 mV	
	(5 to 10) Hz	0.068 % of reading + 5.9 mV	
	(10 to 40) Hz	0.011 % of reading + 2.8 mV	
	40 Hz to 20 kHz	0.011 % of reading + 0.39 mV	
	(20 to 50) kHz	0.024 % of reading + 0.39 mV	
	(50 to 100) kHz	0.055 % of reading + 0.97 mV	
	(100 to 300) kHz	0.14 % of reading + 16 mV	
	(70 to 120) V		
	(3 to 5) Hz	0.2 % of reading + 5.9 mV	
	(5 to 10) Hz	0.068 % of reading + 5.9 mV	
	(10 to 40) Hz	0.011 % of reading + 2.8 mV	
	40 Hz to 20 kHz	0.011 % of reading + 0.39 mV	
	(20 to 50) kHz	0.024 % of reading + 0.39 mV	
	(50 to 100) kHz	0.055 % of reading + 0.97 mV	
	(120 to 330) V		
	(3 to 5) Hz	0.2 % of reading + 59 mV	
	(5 to 10) Hz	0.068 % of reading + 59 mV	
	10 Hz to 20 kHz	0.011 % of reading + 6.3 mV	
	(20 to 50) kHz	0.024 % of reading + 6.3 mV	
	(50 to 100) kHz	0.12 % of reading + 9.7 mV	
	(330 to 1 020) V		
	(3 to 5) Hz	0.2 % of reading + 59 mV	
	(5 to 10) Hz	0.068 % of reading + 59 mV	
	10 Hz to 10 kHz	0.011 % of reading + 63 mV	
Capacitance – Source ¹ (Simulation)	Up to 1.2 nF		Comparison to Fluke 5560A Multiproduct Calibrator
	(20 to 40) Hz	0.87 % of reading + 1.6 pF	
	(40 to 100) Hz	0.49 % of reading + 1.6 pF	
	100 Hz to 10 kHz	0.094 % of reading + 1.6 pF	
	(10 to 12) kHz	0.48 % of reading + 1.6 pF	
	(12 to 14) kHz	0.87 % of reading + 1.6 pF	
	(1.2 to 3) nF		
	(10 to 150) Hz	0.49 % of reading + 3.9 pF	
	150 Hz to 5 kHz	0.09 % of reading + 3.9 pF	
	(5 to 6) kHz	0.48 % of reading + 3.9 pF	
	(6 to 8) kHz	0.87 % of reading + 3.9 pF	
	(3 to 12) nF		
	10 Hz to 5 kHz	0.09 % of reading + 3.9 pF	
	(5 to 6) kHz	0.48 % of reading + 3.9 pF	
	(6 to 8) kHz	0.87 % of reading + 3.9 pF	

Electrical – DC/Low Frequency

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Capacitance – Source ¹ (Simulation)	(12 to 30) nF		Comparison to Fluke 5560A Multiproduct Calibrator
	(20 to 200) Hz	0.49 % of reading + 24 pF	
	200 Hz to 1.3 kHz	0.1 % of reading + 24 pF	
	(1.3 to 2.7) kHz	0.49 % of reading + 24 pF	
	(2.7 to 3.7) kHz	0.88 % of reading + 24 pF	
	(30 to 120) nF		
	10 Hz to 1.3 kHz	0.1 % of reading + 24 pF	
	(1.3 to 2.7) kHz	0.49 % of reading + 24 pF	
	(2.7 to 3.7) kHz	0.88 % of reading + 24 pF	
	(0.12 to 1.2) μF		
	(2 to 310) Hz	0.1 % of reading + 0.24 nF	
	(310 to 800) Hz	0.49 % of reading + 0.24 nF	
	800 Hz to 1.1 kHz	0.88 % of reading + 0.24 nF	
	(1.2 to 12) μF		
	500 mHz to 110 Hz	0.1 % of reading + 2.4 nF	
	(110 to 250) Hz	0.49 % of reading + 2.4 nF	
	(250 to 350) Hz	0.88 % of reading + 2.4 nF	
	(12 to 120) μF		
	(100 to 500) mHz	0.5 % of reading + 20 nF	
	500 mHz to 40 Hz	0.12 % of reading + 20 nF	
	(40 to 80) Hz	0.5 % of reading + 20 nF	
	(80 to 110) Hz	0.89 % of reading + 20 nF	
	(0.12 to 1.2) mF		
	100 mHz to 11 Hz	0.2 % of reading + 0.2 μF	
	(11 to 18) Hz	0.58 % of reading + 0.2 μF	
	(18 to 25) Hz	1 % of reading + 0.2 μF	
	(1.2 to 12) mF		
	30 mHz to 4 Hz	0.19 % of reading + 2.4 μF	
	(4 to 6) Hz	0.58 % of reading + 2.4 μF	
	(6 to 8) Hz	1 % of reading + 2.4 μF	
	(12 to 120) mF		
	10 mHz to 1.3 Hz	0.39 % of reading + 24 μF	
	(1.3 to 1.7) Hz	0.78 % of reading + 24 μF	
	(1.7 to 2.5) Hz	1.2 % of reading + 24 μF	
Inductance – Source ¹ (Simulation)	Up to 120 μH		Comparison to Fluke 5560A Multiproduct Calibrator
	(490 to 550) Hz	0.93 % of reading + 0.16 μH	
	550 Hz to 1 kHz	0.35 % of reading + 0.16 μH	
	1 kHz	0.16 % of reading + 0.16 μH	
	(1 to 13) kHz	0.35 % of reading + 0.16 μH	
	(13 to 17) kHz	0.93 % of reading + 0.16 μH	

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Inductance – Source ¹ (Simulation)	(0.12 to 1.2) mH		Comparison to Fluke 5560A Multiproduct Calibrator
	(260 to 330) Hz	0.87 % of reading + 0.78 μ H	
	330 Hz to 1 kHz	0.29 % of reading + 0.78 μ H	
	1 kHz	0.094 % of reading + 0.78 μ H	
	(1 to 1.6) kHz	0.29 % of reading + 0.78 μ H	
	(1.6 to 2.5) kHz	0.87 % of reading + 0.78 μ H	
	(1.2 to 3.3) mH		
	500 mHz to 110 Hz	0.3 % of reading + 7.8 μ H	
	110 Hz	0.094 % of reading + 7.8 μ H	
	(110 to 800) Hz	0.29 % of reading + 7.8 μ H	
	(800 to 980) Hz	0.87 % of reading + 7.8 μ H	
	(3.3 to 12) mH		
	500 mHz to 110 Hz	0.29 % of reading + 7.8 μ H	
	110 Hz	0.093 % of reading + 7.8 μ H	
	110 Hz to 1 kHz	0.29 % of reading + 7.8 μ H	
	(1 to 1.4) kHz	0.87 % of reading + 7.8 μ H	
	(12 to 83) mH		
	100 mHz to 100 Hz	0.29 % of reading + 78 μ H	
	100 Hz	0.093 % of reading + 78 μ H	
	(100 to 180) Hz	0.29 % of reading + 78 μ H	
	(180 to 230) Hz	0.87 % of reading + 78 μ H	
	(83 to 120) mH		
	100 mHz to 100 Hz	0.29 % of reading + 78 μ H	
	100 Hz	0.093 % of reading + 78 μ H	
	(100 to 320) Hz	0.3 % of reading + 78 μ H	
	320 Hz to 1 kHz	0.87 % of reading + 78 μ H	
	(120 to 650) mH		
	50 mHz to 10 Hz	0.32 % of reading + 0.78 mH	
	10 Hz	0.14 % of reading + 0.78 mH	
	(10 to 30) Hz	0.32 % of reading + 0.78 mH	
	(30 to 55) Hz	0.9 % of reading + 0.78 mH	
	(0.65 to 1.2) H		
	50 mHz to 10 Hz	0.32 % of reading + 0.78 mH	
	10 Hz	0.14 % of reading + 0.78 mH	
	(10 to 100) Hz	0.32 % of reading + 0.78 mH	
	(100 to 170) Hz	0.9 % of reading + 0.78 mH	
	(1.2 to 5.5) H		
	10 mHz to 3 Hz	0.36 % of reading + 7.8 mH	
	3 Hz	0.17 % of reading + 7.8 mH	
	(3 to 8) Hz	0.36 % of reading + 7.8 mH	
	(8 to 16) Hz	0.93 % of reading + 7.8 mH	

Electrical – DC/Low Frequency

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Inductance – Source ¹ (Simulation)	(5.5 to 12) H 10 mHz to 3 Hz 3 Hz (3 to 19) Hz (19 to 37) Hz (12 to 30) H 5 mHz to 2 Hz 2 Hz (2 to 4) Hz (4 to 9) Hz (30 to 120) H 5 mHz to 2 Hz 2 Hz (2 to 7) Hz (7 to 14) Hz	0.36 % of reading + 7.8 mH 0.17 % of reading + 7.8 mH 0.36 % of reading + 7.8 mH 0.93 % of reading + 7.8 mH 0.39 % of reading + 78 mH 0.21 % of reading + 78 mH 0.39 % of reading + 78 mH 1 % of reading + 78 mH 0.39 % of reading + 78 mH 0.21 % of reading + 78 mH 0.39 % of reading + 78 mH 1 % of reading + 78 mH	Comparison to Fluke 5560A Multiproduct Calibrator
DC Current – Measure ¹	(0 to 100) μ A (0.1 to 1) mA (1 to 10) mA (10 to 100) mA (0.1 to 1) A	0.003 3 % of reading + 0.92 nA 0.002 9 % of reading + 5.8 nA 0.002 9 % of reading + 58 nA 0.004 6 % of reading + 0.58 μ A 0.013 % of reading + 12 μ A	Comparison to Keysight 3458A opt 002 8.5 Digit Multimeter
DC Current – Measure ¹	(1 to 3) A	0.08 % of reading + 0.2 mA	Comparison to Keysight 34401A 6.5 Digit Multimeter
DC Current – Measure ¹	(3 to 5) A (5 to 10) A	0.13 % of reading + 1 mA 0.32 % of reading + 1.5 mA	Comparison to Keysight 34465A 6.5 Digit Multimeter
DC Current – Source ¹	(0 to 120) μ A (0.12 to 1.2) mA (1.2 to 12) mA (12 to 120) mA (0.12 to 1.2) A (1.2 to 3.1) A (3.1 to 12) A (12 to 30.2) A	0.009 8 % of reading + 4.7 nA 0.007 8 % of reading + 12 nA 0.007 8 % of reading + 63 nA 0.007 8 % of reading + 0.63 μ A 0.013 % of reading + 7.8 μ A 0.024 % of reading + 0.12 mA 0.024 % of reading + 0.2 mA 0.078 % of reading + 0.39 mA	Comparison to Fluke 5560A Multiproduct Calibrator
DC Power – Source ¹ 33 mV to 1 020 V	(0.33 to 330) mA 11 μ W to 1.1 mW (1.1 to 110) mW 110 mW to 110 W (110 to 330) W	0.024 % of reading 0.027 % of reading 0.024 % of reading 0.018 % of reading	Comparison to Fluke 5520A Multiproduct Calibrator

Electrical – DC/Low Frequency

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
DC Power – Source ¹ 33 mV to 1 020 V	(0.33 to 3) A 11 μ W to 110 mW 110 mW to 990 W 990 W to 3 kW (3 to 20.5) A (99 to 990) mW 990 mW to 6.8 kW (6.8 to 20.5) kW	0.044 % of reading 0.053 % of reading 0.009 6 % of reading 0.088 % of reading 0.07 % of reading 0.04 % of reading	Comparison to Fluke 5520A Multiproduct Calibrator
DC Resistance – Source ¹ (Fixed Artifacts)	0 Ω 1 Ω 1.9 Ω 10 Ω 19 Ω 100 Ω 190 Ω 1 k Ω 1.9 k Ω 10 k Ω 19 k Ω 100 k Ω 190 k Ω 1 M Ω 1.9 M Ω 10 M Ω 19 M Ω 100 M Ω	50 $\mu\Omega$ 98 $\mu\Omega/\Omega$ 96 $\mu\Omega/\Omega$ 29 $\mu\Omega/\Omega$ 29 $\mu\Omega/\Omega$ 18 $\mu\Omega/\Omega$ 18 $\mu\Omega/\Omega$ 14 $\mu\Omega/\Omega$ 14 $\mu\Omega/\Omega$ 13 $\mu\Omega/\Omega$ 13 $\mu\Omega/\Omega$ 15 $\mu\Omega/\Omega$ 15 $\mu\Omega/\Omega$ 21 $\mu\Omega/\Omega$ 22 $\mu\Omega/\Omega$ 41 $\mu\Omega/\Omega$ 47 $\mu\Omega/\Omega$ 0.13 m Ω/Ω	Comparison to Fluke 5700A Multiproduct Calibrator
DC Resistance – Source ¹ (Simulation)	(0 to 12) Ω (12 to 120) Ω (0.12 to 1.2) k Ω (1.2 to 12) k Ω (12 to 120) k Ω (0.12 to 1.2) M Ω (1.2 to 12) M Ω (12 to 120) M Ω (0.12 to 1.2) G Ω	0.002 % of reading + 0.78 m Ω 0.002 % of reading + 0.78 m Ω 0.002 % of reading + 1.6 m Ω 0.002 % of reading + 16 m Ω 0.002 % of reading + 0.16 Ω 0.002 % of reading + 1.6 Ω 0.002 8 % of reading + 24 Ω 0.034 % of reading + 2 k Ω 0.32 % of reading + 78 k Ω	Comparison to Fluke 5560A Multiproduct Calibrator (4-wire Configuration)

Electrical – DC/Low Frequency

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
DC Resistance – Source/Measure ¹ (Variable Artifact)	Up to 10 Ω (10 to 100) Ω (0.1 to 1) k Ω (1 to 10) k Ω (10 to 100) k Ω (0.1 to 1) M Ω (1 to 10) M Ω (10 to 100) M Ω (0.1 to 1) G Ω	0.001 8 % of reading + 58 $\mu\Omega$ 0.001 5 % of reading + 0.58 m Ω 0.001 3 % of reading + 0.58 m Ω 0.001 2 % of reading + 5.8 m Ω 0.001 3 % of reading + 58 m Ω 0.002 1 % of reading + 2.3 Ω 0.006 2 % of reading + 0.12 k Ω 0.059 % of reading + 1.2 k Ω 0.82 % of reading + 12 k Ω	Comparison to Keysight 3458A opt 002 8.5 Digit Multimeter, Decade Resistor
Electrical Simulation of RTD Indicating Devices – Source ¹	Pt 385, 100 Ω (-200 to -80) $^{\circ}\text{C}$ (-80 to 0) $^{\circ}\text{C}$ (0 to 100) $^{\circ}\text{C}$ (100 to 300) $^{\circ}\text{C}$ (300 to 400) $^{\circ}\text{C}$ (400 to 630) $^{\circ}\text{C}$ (630 to 800) $^{\circ}\text{C}$ Pt 385, 200 Ω (-200 to -80) $^{\circ}\text{C}$ (-80 to 0) $^{\circ}\text{C}$ (0 to 100) $^{\circ}\text{C}$ (100 to 260) $^{\circ}\text{C}$ (260 to 300) $^{\circ}\text{C}$ (300 to 400) $^{\circ}\text{C}$ (400 to 600) $^{\circ}\text{C}$ (600 to 630) $^{\circ}\text{C}$ Pt 385, 500 Ω (-200 to -80) $^{\circ}\text{C}$ (-80 to 0) $^{\circ}\text{C}$ (0 to 100) $^{\circ}\text{C}$ (100 to 260) $^{\circ}\text{C}$ (260 to 300) $^{\circ}\text{C}$ (300 to 400) $^{\circ}\text{C}$ (400 to 600) $^{\circ}\text{C}$ (600 to 630) $^{\circ}\text{C}$	0.039 $^{\circ}\text{C}$ 0.039 $^{\circ}\text{C}$ 0.054 $^{\circ}\text{C}$ 0.07 $^{\circ}\text{C}$ 0.078 $^{\circ}\text{C}$ 0.093 $^{\circ}\text{C}$ 0.18 $^{\circ}\text{C}$ 0.031 $^{\circ}\text{C}$ 0.031 $^{\circ}\text{C}$ 0.031 $^{\circ}\text{C}$ 0.039 $^{\circ}\text{C}$ 0.093 $^{\circ}\text{C}$ 0.1 $^{\circ}\text{C}$ 0.11 $^{\circ}\text{C}$ 0.12 $^{\circ}\text{C}$ 0.031 $^{\circ}\text{C}$ 0.039 $^{\circ}\text{C}$ 0.039 $^{\circ}\text{C}$ 0.047 $^{\circ}\text{C}$ 0.062 $^{\circ}\text{C}$ 0.062 $^{\circ}\text{C}$ 0.07 $^{\circ}\text{C}$ 0.085 $^{\circ}\text{C}$	Comparison to Fluke 5560A Multiproduct Calibrator

Electrical – DC/Low Frequency

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Electrical Simulation of RTD Indicating Devices – Source ¹	Pt 385, 1 000 Ω		Comparison to Fluke 5560A Multiproduct Calibrator
	(-200 to -80) °C	0.023 °C	
	(-80 to 0) °C	0.023 °C	
	(0 to 100) °C	0.031 °C	
	(100 to 260) °C	0.039 °C	
	(260 to 300) °C	0.047 °C	
	(300 to 400) °C	0.054 °C	
	(400 to 600) °C	0.054 °C	
	(600 to 630) °C	0.18 °C	
	Pt 3916, 100 Ω		
	(-200 to -190) °C	0.19 °C	
	(-190 to -80) °C	0.031 °C	
	(-80 to 0) °C	0.039 °C	
	(0 to 100) °C	0.047 °C	
	(100 to 260) °C	0.054 °C	
	(260 to 300) °C	0.062 °C	
	(300 to 400) °C	0.07 °C	
	(400 to 600) °C	0.078 °C	
	(600 to 630) °C	0.18 °C	
	Pt 3926, 100 Ω		
	(-200 to -80) °C	0.039 °C	
	(-80 to 0) °C	0.039 °C	
	(0 to 100) °C	0.054 °C	
	(100 to 300) °C	0.07 °C	
	(300 to 400) °C	0.078 °C	
	(400 to 630) °C	0.093 °C	
	Ni 672, 120 Ω		
	(-80 to 0) °C	0.06 °C	
	(0 to 100) °C	0.06 °C	
	(100 to 260) °C	0.11 °C	
	Cu 427, 10 Ω		
	(-80 to 260) °C	0.23 °C	
	Cu 428, 50 Ω		
	(-180 to 200) °C	0.31 °C	
	Cu 428, 100 Ω		
	(-180 to 40) °C	0.31 °C	
	(40 to 200) °C	0.5 °C	

Electrical – DC/Low Frequency

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
PRT/RTD Indicator Simulation ¹ (Source)	Pt 3926, 100 Ω (-200 to -80) $^{\circ}\text{C}$ (-80 to 0) $^{\circ}\text{C}$ (0 to 100) $^{\circ}\text{C}$ (100 to 300) $^{\circ}\text{C}$ (300 to 400) $^{\circ}\text{C}$ (400 to 630) $^{\circ}\text{C}$ PtNi 385, 120 Ω (-80 to 0) $^{\circ}\text{C}$ (0 to 100) $^{\circ}\text{C}$ (100 to 260) $^{\circ}\text{C}$ Cu 427, 10 Ω (-100 to 260) $^{\circ}\text{C}$	0.039 $^{\circ}\text{C}$ 0.039 $^{\circ}\text{C}$ 0.054 $^{\circ}\text{C}$ 0.07 $^{\circ}\text{C}$ 0.078 $^{\circ}\text{C}$ 0.093 $^{\circ}\text{C}$ 0.062 $^{\circ}\text{C}$ 0.062 $^{\circ}\text{C}$ 0.1 $^{\circ}\text{C}$ 0.23 $^{\circ}\text{C}$	Comparison to Fluke 5520A Multiproduct Calibrator
DC Voltage – Measure ¹	(0 to 100) mV (0.1 to 1) V (1 to 10) V (10 to 100) V (100 to 500) V (500 to 800) V (800 to 1 000) V	0.000 83 % of reading + 0.58 μV 0.000 53 % of reading + 0.58 μV 0.000 53 % of reading + 0.58 μV 0.000 77 % of reading + 35 μV 0.001 5 % of reading + 0.12 mV 0.001 8 % of reading + 0.12 mV 0.002 1 % of reading + 0.12 mV	Comparison to Keysight 3458A opt 002 8.5 Digit Multimeter
DC Voltage – Source ¹	(0 to 120) mV (0.12 to 1.2) V (1.2 to 12) V (12 to 120) V (120 to 1 020) V	0.000 93 % of reading + 0.62 μV 0.000 64 % of reading + 0.78 μV 0.000 62 % of reading + 7.8 μV 0.000 85 % of reading + 78 μV 0.000 86 % of reading + 0.78 mV	Comparison to Fluke 5560A Multiproduct Calibrator
Electrical Simulation of Thermocouple Indicating Devices – Source/Measure ¹	Type B (600 to 800) $^{\circ}\text{C}$ (800 to 1 000) $^{\circ}\text{C}$ (1 000 to 1 550) $^{\circ}\text{C}$ (1 550 to 1 820) $^{\circ}\text{C}$ Type C (0 to 150) $^{\circ}\text{C}$ (150 to 650) $^{\circ}\text{C}$ (650 to 1 000) $^{\circ}\text{C}$ (1 000 to 1 800) $^{\circ}\text{C}$ (1 800 to 2 315) $^{\circ}\text{C}$	0.34 $^{\circ}\text{C}$ 0.26 $^{\circ}\text{C}$ 0.23 $^{\circ}\text{C}$ 0.26 $^{\circ}\text{C}$ 0.19 $^{\circ}\text{C}$ 0.16 $^{\circ}\text{C}$ 0.2 $^{\circ}\text{C}$ 0.35 $^{\circ}\text{C}$ 0.61 $^{\circ}\text{C}$	Comparison to Fluke 5560A Multiproduct Calibrator

Electrical – DC/Low Frequency

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Electrical Simulation of Thermocouple Indicating Devices – Source/Measure ¹	Type D		Comparison to Fluke 5560A Multiproduct Calibrator
	(0 to 150) °C	0.19 °C	
	(150 to 650) °C	0.16 °C	
	(650 to 1 000) °C	0.2 °C	
	(1 000 to 1 800) °C	0.34 °C	
	(1 800 to 2 315) °C	0.61 °C	
	Type E		
	(-250 to -150) °C	0.31 °C	
	(-150 to -25) °C	0.11 °C	
	(-25 to 350) °C	0.09 °C	
	(350 to 650) °C	0.12 °C	
	(650 to 1 000) °C	0.16 °C	
	Type G		
	(0 to 150) °C	0.39 °C	
	(150 to 650) °C	0.26 °C	
	(650 to 1 000) °C	0.2 °C	
	(1 000 to 1 800) °C	0.33 °C	
	(1 800 to 2 315) °C	0.6 °C	
	Type J		
	(-210 to -100) °C	0.19 °C	
	(-100 to -30) °C	0.1 °C	
	(-30 to 150) °C	0.09 °C	
	(150 to 760) °C	0.11 °C	
	(760 to 1 200) °C	0.16 °C	
	Type K		
	(-200 to -100) °C	0.22 °C	
	(-100 to -25) °C	0.1 °C	
	(-25 to 120) °C	0.09 °C	
	(120 to 1 000) °C	0.16 °C	
	(1 000 to 1 372) °C	0.27 °C	
	Type L		
	(-200 to -100) °C	0.24 °C	
	(-100 to 800) °C	0.16 °C	
	(800 to 900) °C	0.09 °C	
	Type N		
	(-200 to -100) °C	0.26 °C	
	(-100 to -25) °C	0.12 °C	
	(-25 to 120) °C	0.09 °C	
	(120 to 410) °C	0.09 °C	
	(410 to 1 300) °C	0.16 °C	

Electrical – DC/Low Frequency

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Electrical Simulation of Thermocouple Indicating Devices – Source/Measure ¹	Type R (0 to 250) °C	0.4 °C	Comparison to Fluke 5560A Multiproduct Calibrator
	(250 to 400) °C	0.23 °C	
	(400 to 1 000) °C	0.21 °C	
	(1 000 to 1 767) °C	0.26 °C	
	Type S (0 to 250) °C	0.33 °C	
	(250 to 400) °C	0.24 °C	
	(400 to 1 000) °C	0.25 °C	
	(1 000 to 1 767) °C	0.32 °C	
	Type T (-250 to -150) °C	0.47 °C	
	(-150 to 0) °C	0.16 °C	
	(0 to 120) °C	0.1 °C	
	(120 to 400) °C	0.09 °C	
	Type U (-200 to 0) °C	0.31 °C	
	(0 to 600) °C	0.09 °C	
	Type BP (0 to 1 000) °C	0.31 °C	
	(1 000 to 2 000) °C	0.47 °C	
	(2 000 to 2 500) °C	0.62 °C	
	Type XK (-200 to 300) °C	0.16 °C	
	(300 to 800) °C	0.23 °C	
LF Phase – Source ¹	Up to 180°		Comparison to Fluke 5522A Multiproduct Calibrator
	(10 to 65) Hz	0.11°	
	(65 to 500) Hz	0.21°	
	500 Hz to 1 kHz	0.39°	
	(1 to 5) kHz	1.9°	
	(5 to 10) kHz	3.9°	
	(10 to 20) kHz	7.8°	

Electrical – DC/Low Frequency

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Oscilloscopes ¹			Comparison to Fluke 55xxA/11 Multiproduct Calibrator with 1.1 GHz Scope Option
Amplitude – DC			
into 50 Ω load	(-6.6 to 6.6) V	0.23 % of reading + 31 μ V	
into 1 M Ω load	(-130 to 130) V	0.12 % of reading + 31 μ V	
Amplitude – Square Wave			
into 50 Ω load	10 Hz to 100 kHz 1 mVp-p to 6.6 Vp-p	0.23 % of reading + 31 μ V	
into 1 M Ω load	10 Hz to 1 kHz 1 mVp-p to 130 Vp-p (1 to 10) kHz 1 mVp-p to 130 Vp-p	0.14 % of reading + 31 μ V 0.23 % of reading + 31 μ V	
Time Markers			
into 50 Ω load	1 ns to 20 ms 50 ms 0.1 s 0.2 s 0.5 s 1 s 2 s 5 s	0.000 22 % of reading 0.005 9 % of reading 0.009 8 % of reading 0.018 % of reading 0.041 % of reading 0.08 % of reading 0.16 % of reading 0.39 % of reading	
Rise Time			
into 50 Ω load	5 mVp-p to 2.5 Vp-p		
Rate: 1 kHz to 2 MHz	250 ps (nominal)	120 ps	
Rate: 2 MHz to 10 MHz	250 ps (nominal)	120 ps	
Leveled Sine Wave			
into 50 Ω load	5 mVp-p to 5.5 Vp-p 50 kHz 50 kHz to 100 MHz (100 to 300) MHz (300 to 600) MHz 5 mVp-p to 3.5 Vp-p (600 to 1 100) MHz	1.6 % of reading + 0.23 mV 2.8 % of reading + 0.23 mV 3.2 % of reading + 0.23 mV 4.7 % of reading + 0.23 mV 5.5 % of reading + 0.23 mV	

Electrical – DC/Low Frequency

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Oscilloscopes ¹ Bandwidth/Flatness (50 kHz Reference) into 50 Ω load	5 mVp-p to 5.5 Vp-p 50 kHz to 100 MHz (100 to 300) MHz (300 to 600) MHz 5 mVp-p to 3.5 Vp-p (600 to 1 100) MHz	1.2 % of reading + 78 μ V 1.6 % of reading + 78 μ V 2.3 % of reading + 78 μ V 3.9 % of reading + 78 μ V	Comparison to Fluke 55xxA/11 Multiproduct Calibrator with 1.1 GHz Scope Option
Input Impedance – Measure	(40 to 60) Ω (0.5 to 1.5) M Ω	0.09 % of reading 0.09 % of reading	
Input Capacitance – Measure	(5 to 50) pF	3.9 % of reading + 0.39 pF	
Waveform Generator (Sine, Square, Triangle) Amplitude into 50 Ω load into 1 M Ω load	10 Hz to 10 kHz 1.8 mVp-p to 2.5 Vp-p 1.8 mVp-p to 55 Vp-p	2.3 % of reading + 78 μ V 2.3 % of reading + 78 μ V	
Frequency	10 Hz to 10 kHz	0.001 9 % of reading + 12 mHz	

Mass and Mass Related

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Pneumatic Absolute Pressure Devices ¹	Up to 25 psia (25 to 87.5) psia (87.5 to 160) psia	0.002 9 psi 0.012 % of reading + 0.012 psi 0.016 % of reading + 0.007 9 psi	Comparison to Mensor CPG2500 Pneumatic Pressure Controller/Calibrator
Pneumatic Gauge Pressure Devices ¹	(-10 to 10) inH ₂ O	0.034 inH ₂ O	Comparison to Mensor CPG2500 Pneumatic Pressure Controller/Calibrator

Mass and Mass Related

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Pneumatic Gauge Pressure Devices ¹	(-14.7 to 10) psig (10 to 30) psig (30 to 72.5) psig (72.5 to 145) psig (145 to 150) psig (150 to 300) psig	0.001 2 psi 0.003 7 psi 0.012 psi 0.012 % of reading + 0.008 3 psi 0.041 psi 0.012 % of reading + 0.038 psi	Comparison to Mensor CPG2500 Pneumatic Pressure Controller/Calibrator
Scales and Balances ^{1,3} (SI)	Up to 500 mg (0.5 to 5) g (5 to 10) g (10 to 20) g 20 g to 40 kg	12 µg 40 µg 60 µg 90 µg 0.000 31 % of reading	ASTM E617 Class 1 weights and internal calibration procedure utilized in the calibration of the weighing system.
Torque Tools ¹	(0.2 to 5) lbf·in (5 to 10) lbf·in	2.5 % of reading + 0.000 58 lbf·in 1.8 % of reading + 0.005 8 lbf·in	Comparison to Tohnichi Torque Transducers with Display
Torque Tools ¹	(10 to 100) lbf·in (100 to 120) lbf·in (10 to 100) lbf·ft (100 to 1 000) lbf·ft	1.2 % of reading 0.56 % of reading + 0.14 lbf·in 0.83 % of reading 0.83 % of reading	Comparison to AKO Torque Transducers with Display

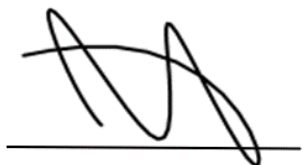
Time and Frequency

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Frequency – Measure ¹	1 Hz to 10 kHz 10 kHz to 10 MHz (10 to 225) MHz 225 MHz to 3 GHz	8.6 µHz/Hz + 4.5 µHz 8.6 µHz/Hz + 10 µHz 8.6 µHz/Hz + 0.28 mHz 8.6 µHz/Hz	Comparison to Agilent 53131A Universal Counter
Frequency – Source ¹	1 Hz to 80 MHz	58 nHz/Hz	Comparison to Agilent 33250A Function Generator
Frequency – Source ¹	80 MHz to 3.2 GHz	1.2 µHz/Hz + 0.58 mHz	Comparison to R&S MC100A Signal Generator
AC Duty Cycle – Source ^{1,4} Square Wave Freq.: 10 mHz to 100 kHz	(10 to 49) % Duty Cycle 10 µs to 100 s 50 % Duty Cycle 10 µs to 100 s (51 to 90) % Duty Cycle 10 µs to 100 s	0.039 % of period + 78 ns 0.016 % of period + 78 ns 0.039 % of period + 78 ns	Comparison to Fluke 5560A Multiproduct Calibrator

Calibration and Measurement Capability (CMC) is expressed in terms of the measurement parameter, measurement range, expanded uncertainty of measurement and reference standard, method, and/or equipment. The expanded uncertainty of measurement is expressed as the standard uncertainty of the measurement multiplied by a coverage factor of 2 ($k=2$), corresponding to a confidence level of approximately 95%.

Notes:

1. On-site calibration service is available for this parameter, since on-site conditions are typically more variable than those in the laboratory, larger measurement uncertainties are expected on-site than what is reported on the accredited scope. CMC is for a controlled laboratory environment of 18 °C to 28 °C (65 °F to 82 °F), when outside of this environment, larger measurement uncertainties are expected than what is reported on the accredited scope.
2. The stated uncertainty is the laboratory's ability to source a fast rise pulse that is approximately 250 ps. In the typical application of measuring rise time of an oscilloscope, this value is one of the contributing factors, but other factors are derived from the DUT.
3. The CMC for scales and balances is highly dependent upon the resolution of the unit under test. The CMC presented here does not include the resolution of the unit under test. The resolution will be included in the reported measurement uncertainty at the time of calibration.
4. The CMC for AC Duty Cycle – Source is defined relative to the period of the sourced signal. The reported percent duty cycle measurement uncertainty will be determined and applied at the time of calibration.
5. Unless otherwise specified in the far-right column, the calibration procedure or method was written and validated internally.
6. The legal entity of this location is Transcat, Inc.



Jason Stine, Vice President

