



CERTIFICATE OF ACCREDITATION

ANSI-ASQ National Accreditation Board

500 Montgomery Street, Suite 625, Alexandria, VA 22314, 877-344-3044

This is to certify that

Premier Scales & Systems, Inc.

4901 N. St. Joseph Avenue

Evansville, IN 47720

has been assessed by ANAB
and meets the requirements of international standard

ISO/IEC 17025:2005

and national standard

ANSI/NCSL Z540-1-1994

while demonstrating technical competence in the field of

CALIBRATION

Refer to the accompanying Scope of Accreditation for information regarding the types of calibrations to which this accreditation applies.

AC-1222

Certificate Number


ANAB Approval

Certificate Valid: 05/16/2016-05/17/2018
Version No. 002 Issued: 05/16/2016



This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005. 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 January 2009).



ANSI-ASQ National Accreditation Board

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005 & ANSI/NCSL Z540-1-1994

Premier Scales & Systems, Inc.³

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CALIBRATION

Valid to: May 17, 2018

Certificate Number: AC-1222

I. Mechanical

PARAMETER / EQUIPMENT	RANGE	CALIBRATION AND MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY (±)]	REFERENCE STANDARD OR EQUIPMENT	METHOD(S)
Class I & Unclassified Balances ⁵	Up to 100 g (0.01 mg) Up to 100 g (0.02 mg) Up to 100 g (0.05 mg) Up to 200 g (0.1 mg) Up to 200 g (0.2 mg) Up to 200 g (0.5 mg)	0.034 mg 0.036 mg 0.045 mg 0.089 mg 0.13 mg 0.30 mg	ASTM Class 1 Weights	NIST Handbook 44 and WI-09
Class II & Unclassified Balances ⁵	Up to 100 g (0.001 g) Up to 200 g (0.002 g) Up to 500 g (0.005 g) Up to 1 kg (0.01 g) Up to 2 kg (0.02 g) Up to 5 kg (0.05 g) Up to 10 kg (0.1 g) Up to 20 kg (0.2 g) Up to 50 kg (0.5 g) Up to 50 kg (1 g) Up to 50 kg (2 g) Up to 50 kg (5 g)	0.58 mg 1.2 mg 2.9 mg 5.8 mg 12 mg 29 mg 58 mg 0.12 g 0.29 g 0.58 g 1.2 g 2.9 g	ASTM Class 1 or 2 Weights	NIST Handbook 44 and WI-09
Class III & Unclassified Light Capacity Scales ⁵	Up to 1 lb (0.0001 lb) Up to 2 lb (0.0002 lb) Up to 5 lb (0.0005 lb) Up to 10 lb (0.001 lb) Up to 20 lb (0.002 lb) Up to 50 lb (0.005 lb) Up to 100 lb (0.01 lb) Up to 200 lb (0.02 lb)	0.026 g 0.054 g 0.13 g 0.26 g 0.54 g 1.3 g 2.6 g 5.4 g	NIST Class F Weights	NIST Handbook 44 and WI-09
Class III & Unclassified Medium Capacity Scales ⁵	Up to 500 lb (0.05 lb) Up to 1 000 lb (0.1 lb) Up to 2 000 lb (0.2 lb) Up to 5 000 lb (0.5 lb) Up to 10 000 lb (1 lb) Up to 20 000 lb (2 lb) Up to 50 000 lb (5 lb)	0.029 lb 0.058 lb 0.12 lb 0.29 lb 0.58 lb 1.2 lb 2.9 lb	NIST Class F Weights	NIST Handbook 44 and WI-09



PARAMETER / EQUIPMENT	RANGE	CALIBRATION AND MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY (±)]	REFERENCE STANDARD OR EQUIPMENT	METHOD(S)
Class III & Unclassified Heavy Capacity Scales ⁵	Up to 50 000 lb (10 lb) Up to 200 000 lb (20 lb) Up to 400 000 lb (50 lb)	5.8 lb 12 lb 29 lb	NIST Class F Weights	NIST Handbook 44 and WI-09
Class IV & Unclassified Scales ⁵	Up to 12 000 lb (10 lb) Up to 24 000 lb (20 lb) Up to 60 000 lb (50 lb)	5.8 lb 12 lb 29 lb	NIST Class F Weights	NIST Handbook 44 and WI-09
Mass - Avoirdupois lb	25 lb 50 lb 250 lb 500 lb 1 000 lb 2 500 lb 3 000 lb 5 000 lb	0.10 g 0.13 g 0.54 g 6.4 g 7.2 g 50 g 50 g 54 g	NIST Class F Weights	NISTIR 6969 SOP 4, SOP 7 or SOP 8
Mass - Avoirdupois lb	1 lb 2 lb 3 lb 5 lb 10 lb 20 lb 30 lb	0.16 mg 0.23 mg 0.64 mg 1.0 mg 1.5 mg 8.6 mg 31 mg	ASTM Class 4 Weights	NISTIR 6969 SOP 4, SOP 7 or SOP 8
Mass - oz	1/32 oz 1/16 oz 1/8 oz 1/4 oz 1/2 oz 1 oz 2 oz 4 oz 8 oz	3.7 µg 5.1 µg 5.1 µg 13 µg 24 µg 0.040 mg 0.034 mg 0.22 mg 0.22 mg	ASTM Class 4 Weights	NISTIR 6969 SOP 4, SOP 7 or SOP 8
Mass - Metric	20 kg 25 kg 200 kg	0.18 g 0.17 g 5.1 g	NIST Class F Weights	NISTIR 6969 SOP 4, SOP 7 or SOP 8
Mass - Metric	100 g 200 g 300 g 500 g 1 kg 2 kg 3 kg 4 kg 5 kg 10 kg	0.034 mg 0.10 mg 0.10 mg 0.076 mg 0.19 mg 0.41 mg 0.79 mg 0.68 mg 0.84 mg 38 mg	ASTM Class 0 Weights	NISTIR 6969 SOP 4, SOP 7 or SOP 8

PARAMETER / EQUIPMENT	RANGE	CALIBRATION AND MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY (±)]	REFERENCE STANDARD OR EQUIPMENT	METHOD(S)
Mass - Metric (Cont.)	1 mg 2 mg 3 mg 5 mg 10 mg 20 mg 30 mg 50 mg 100 mg 200 mg 300 mg 500 mg 1 g 2 g 3 g 5 g 10 g 20 g 30 g 50 g	1.1 µg 1.1 µg 1.1 µg 1.1 µg 1.1 µg 1.1 µg 1.1 µg 1.1 µg 1.1 µg 1.1 µg 1.1 µg 1.1 µg 3.8 µg 2.3 µg 3.3 µg 3.6 µg 7.4 µg 7.6 µg 11 µg 17 µg	ASTM Class 0 Weights	NISTIR 6969 SOP 4, SOP 7 or SOP 8
Force ⁵	Up to 200 lbf (200 to 10 000) lbf (10 000 to 100 000) lbf	0.030 % of reading 0.039 % of reading 0.039 % of reading	Dead Weights Load Cells	OEM, GIDEP Sourced Procedures
Pressure Gauges ⁵	Up to 3 000 psi	0.93 psi	Pressure Calibrator	OEM, GIDEP Sourced Procedures
Torque Tools ⁵	(Up to 50) lbf·in (50 to 250) lbf·in (250 to 400) lbf·in (400 to 1000) lbf·in (1000 to 2500) lbf·in (Up to 100) lbf·ft (100 to 250) lbf·ft (250 to 600) lbf·ft	0.07 lbf·in 0.44 lbf·in 1.2 lbf·in 2.9 lbf·in 7.2 lbf·in 0.22 lbf·ft 1.7 lbf·ft 4.1 lbf·ft	Torque Transducers	OEM, GIDEP Sourced Procedures
Torque Transducers	Up to 2000 lbf·ft	0.012 % of Reading	Radius Arms w/Class F Weights	OEM, GIDEP Sourced Procedures

II. Electrical

PARAMETER / EQUIPMENT	RANGE	CALIBRATION AND MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY (±)]	REFERENCE STANDARD OR EQUIPMENT	METHOD(S)
DC Voltage - Source	Up to 330 mV 330 mV to 3.3 V (3.3 to 33) V (33 to 330) V (100 to 1 000) V	1.6 µV 16 µV 0.13 mV 1.3 mV 3.1 mV	Fluke 5520A	OEM, GIDEP, Met/Cal Sourced Procedures

PARAMETER / EQUIPMENT	RANGE	CALIBRATION AND MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY (\pm)]	REFERENCE STANDARD OR EQUIPMENT	METHOD(S)
DC Voltage - Measure	Up to 100 mV 100 mV to 1 V (1 to 10) V (10 to 100) V (100 to 1 000) V	2.4 μ V 6.4 μ V 0.052 mV 0.67 mV 9.6 mV	Fluke 8846A	OEM, GIDEP, Met/Cal Sourced Procedures
DC Current - Source	Up to 330 μ A 330 μ A to 3.3 mA (3.3 to 33) mA (33 to 330) mA 330 mA to 1.1 A (1.1 to 3) A (3 to 11) A (11 to 20.5) A	0.014 μ A 0.19 μ A 0.48 μ A 4.4 μ A 77 μ A 310 μ A 1.5 mA 23 mA	Fluke 5520A	OEM, GIDEP, Met/Cal Sourced Procedures
DC Current - Source for Clamp on Current Meters	(20 to 200) A (200 to 500) A (500 to 1000) A	0.41 A 1.1 A 2.1 A	Fluke 5520A w/ 50 turn coil.	OEM, GIDEP, Met/Cal Sourced Procedures
DC Current - Measure	Up to 100 μ A 100 μ A to 1 mA (1 to 10) mA (10 to 100) mA (100 to 400) mA 400 mA to 1 A (1 to 3) A (3 to 10) A	0.018 μ A 0.67 μ A 1.7 μ A 6.7 μ A 20 μ A 0.27 mA 1.1 mA 3.5 mA	Fluke 8846A	OEM, GIDEP, Met/Cal Sourced Procedures
Resistance - Source	Up to 11 Ω (11 to 33) Ω (33 to 110) Ω (110 to 330) Ω (0.33 to 1.1) k Ω (1.1 to 3.3) k Ω (3.3 to 11) k Ω (11 to 33) k Ω (33 to 110) k Ω (110 to 330) k Ω (0.33 to 1.1) M Ω (1.1 to 3.3) M Ω (3.3 to 11) M Ω (11 to 33) M Ω (33 to 110) M Ω (110 to 330) M Ω (330 to 1 100) M Ω	0.67 m Ω 1.4 m Ω 1.7 m Ω 3.4 m Ω 9.6 m Ω 38 m Ω 96 m Ω 0.39 Ω 0.99 Ω 3.8 Ω 32 Ω 79 Ω 0.39 k Ω 3.5 k Ω 13 k Ω 0.29 M Ω 3.7 M Ω	Fluke 5520A	OEM, GIDEP, Met/Cal Sourced Procedures

PARAMETER / EQUIPMENT	RANGE	CALIBRATION AND MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY (\pm)]	REFERENCE STANDARD OR EQUIPMENT	METHOD(S)
Resistance - Measure	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	2.0 m Ω 3.6 m Ω 14 m Ω 0.14 Ω 1.4 Ω 14 Ω 3.3 k Ω 60 k Ω 1.4 M Ω	Fluke 8846A	OEM, GIDEP, Met/Cal Sourced Procedures
AC Voltage - Source	<p>(1 to 33) mV</p> <p>(10 to 45) Hz 45 Hz to 10 kHz (10 to 20) kHz (20 to 50) kHz (50 to 100) kHz (100 to 500) kHz</p> <p>(33 to 330) mV</p> <p>(10 to 45) Hz 45 Hz to 10 kHz (10 to 20) kHz (20 to 50) kHz (50 to 100) kHz (100 to 500) kHz</p> <p>(0.33 to 3.3) V</p> <p>(10 to 45) Hz 45 Hz to 10 kHz (10 to 20) kHz (20 to 50) kHz (50 to 100) kHz (100 to 500) kHz</p> <p>(3.3 to 33) V</p> <p>(10 to 45) Hz 45 Hz to 10 kHz (10 to 20) kHz (20 to 50) kHz (50 to 100) kHz</p> <p>(33 to 330) V</p> <p>45 Hz to 1 kHz 1 kHz to 10 kHz (10 to 20) kHz (20 to 50) kHz (50 to 100) kHz</p> <p>(330 to 1 020) V</p> <p>45 Hz to 1 kHz (1 to 5) kHz (5 to 10) kHz</p>	<p>4.7 μV 4.1 μV 4.2 μV 4.8 μV 10 μV 39 μV</p> <p>15 μV 11 μV 14 μV 15 μV 39 μV 92 μV</p> <p>0.12 mV 0.086 mV 0.090 mV 0.16 mV 0.28 mV 0.93 mV</p> <p>1.2 mV 1.2 mV 1.7 mV 1.5 mV 3.1 mV</p> <p>8.7 mV 9.1 mV 11 mV 12 mV 78 mV</p> <p>73 mV 63 mV 73 mV</p>	Fluke 5520A	OEM, GIDEP, Met/Cal Sourced Procedures

PARAMETER / EQUIPMENT	RANGE	CALIBRATION AND MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY (\pm)]	REFERENCE STANDARD OR EQUIPMENT	METHOD(S)
AC Voltage - Measure	<p>Up to 100 mV (3 to 5) Hz (5 to 10) Hz 10 Hz to 20 kHz (20 to 50) kHz (50 to 100) kHz (100 to 300) kHz</p> <p>100 mV to 1 V (3 to 5) Hz (5 to 10) Hz 10 Hz to 20 kHz (20 to 50) kHz (50 to 100) kHz (100 to 300) kHz</p> <p>(1 to 10) V (3 to 5) Hz (5 to 10) Hz 10 Hz to 20 kHz (20 to 50) kHz (50 to 100) kHz (100 to 300) kHz</p> <p>(10 to 100) V (3 to 5) Hz (5 to 10) Hz 10 Hz to 20 kHz (20 to 50) kHz (50 to 100) kHz (100 to 300) kHz</p> <p>(100 to 1000) V (3 to 5) Hz (5 to 10) Hz 10 Hz to 20 kHz (20 to 50) kHz (50 to 100) kHz (100 to 300) kHz</p>	<p>0.027 mV 0.027 mV 0.027 mV 0.033 mV 0.053 mV 0.33 mV</p> <p>0.87 mV 0.43 mV 0.24 mV 0.41 mV 0.93 mV 6.0 mV</p> <p>8.7 mV 4.3 mV 2.4 mV 4.1 mV 9.3 mV 60 mV</p> <p>87 mV 43 mV 24 mV 41 mV 93 mV 0.60 V</p> <p>0.82 V 0.38 V 0.19 V 0.33 V 0.80 V 5.2 V</p>	Fluke 8846A	OEM, GIDEP, Met/Cal Sourced Procedures
AC Current - Source	<p>(29 to 330) μA (10 to 20) Hz (20 to 45) Hz 45 Hz to 1 kHz (1 to 5) kHz (5 to 10) kHz (10 to 30) kHz</p> <p>(0.33 to 3.3) mA (10 to 20) Hz (20 to 45) Hz 45 Hz to 1 kHz (1 to 5) kHz (5 to 10) kHz (10 to 30) kHz</p>	<p>0.11 μA 0.10 μA 0.096 μA 0.16 μA 0.29 μA 0.58 μA</p> <p>0.55 μA 0.39 μA 0.40 μA 0.61 μA 1.4 μA 2.6 μA</p>	Fluke 5520A	OEM, GIDEP, Met/Cal Sourced Procedures

PARAMETER / EQUIPMENT	RANGE	CALIBRATION AND MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY (\pm)]	REFERENCE STANDARD OR EQUIPMENT	METHOD(S)
AC Current - Source (Cont.)	<p>(3.3 to 33) mA (10 to 20) Hz (20 to 45) Hz 45 Hz to 1 kHz (1 to 5) kHz (5 to 10) kHz (10 to 30) kHz</p> <p>(33 to 330) mA (10 to 20) Hz (20 to 45) Hz 45 Hz to 1 kHz (1 to 5) kHz (5 to 10) kHz (10 to 30) kHz</p> <p>(0.33 to 1.1) A (10 to 45) Hz 45 Hz to 1kHz (1 to 5) kHz (5 to 10) kHz</p> <p>(1.1 to 3) A (10 to 45) Hz 45 Hz to 1kHz (1 to 5) kHz (5 to 10) kHz</p> <p>(3 to 11) A (45 to 100) Hz 100 Hz to 1 kHz (1 to 5) kHz</p> <p>(11 to 20.5) A (45 to 100) Hz 100 Hz to 440 Hz</p>	<p>5.3 μA 3.3 μA 3.2 μA 3.7 μA 7.0 μA 12 μA</p> <p>0.055 mA 0.037 mA 0.030 mA 0.056 mA 0.11 mA 0.22 mA</p> <p>0.47 mA 0.18 mA 2.0 mA 8.8 mA</p> <p>1.4 mA 0.60 mA 8.0 mA 22 mA</p> <p>2.7 mA 3.4 mA 61 mA</p> <p>17 mA 18 mA</p>	Fluke 5520A	OEM, GIDEP, Met/Cal Sourced Procedures
AC Current - Source for Clamp on Current Meters	<p>(20 to 200) A (45 to 440) Hz</p> <p>(200 to 500) A (45 to 200) Hz</p> <p>(500 to 1000) A (45 to 200) Hz</p>	<p>0.44 A</p> <p>1.2 A</p> <p>2.5 A</p>	Fluke 5520A w/ 50 turn coil	OEM, GIDEP, Met/Cal Sourced Procedures

PARAMETER / EQUIPMENT	RANGE	CALIBRATION AND MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY (\pm)]	REFERENCE STANDARD OR EQUIPMENT	METHOD(S)
AC Current – Measure	Up to 100 μA (3 to 5) Hz (5 to 10) Hz 10 Hz to 5 kHz (5 to 10) kHz	0.29 μ A 0.14 μ A 0.041 μ A 0.47 μ A	Fluke 8846A	OEM, GIDEP, Met/Cal Sourced Procedures
	100 μA to 1 mA (3 to 5) Hz (5 to 10) Hz 10 Hz to 5 kHz (5 to 10) kHz	6.0 μ A 0.74 μ A 0.34 μ A 1.8 μ A		
	(1 to 10) mA (3 to 5) Hz (5 to 10) Hz 10 Hz to 5 kHz (5 to 10) kHz	0.12 mA 0.012 mA 0.0050 mA 0.049 mA		
	(10 to 100) mA (3 to 5) Hz (5 to 10) Hz 10 Hz to 5 kHz (5 to 10) kHz	0.81 mA 0.13 mA 0.23 mA 0.18 mA		
	(100 to 400) mA (3 to 5) Hz (5 to 10) Hz 10 Hz to 1 kHz (1 to 10) kHz	0.93 mA 0.49 mA 0.33 mA 2.0 mA		
	400 mA to 1 A (3 to 5) Hz (5 to 10) Hz 10 Hz to 5 kHz (5 to 10) kHz	5.3 mA 1.7 mA 0.53 mA 5.6 mA		
	(1 to 3) A (3 to 5) Hz (5 to 10) Hz 10 Hz to 5 kHz (5 to 10) kHz	8.5 mA 3.5 mA 2.3 mA 16 mA		
	(3 to 10) A (3 to 5) Hz (5 to 10) Hz 10 Hz to 5 kHz (5 to 10) kHz	26 mA 11 mA 7.3 mA 54 mA		

PARAMETER / EQUIPMENT	RANGE	CALIBRATION AND MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY (±)]	REFERENCE STANDARD OR EQUIPMENT	METHOD(S)
Capacitance – Source 10 Hz to 10 kHz 10 Hz to 10 kHz 10 Hz to 3 kHz 10 Hz to 1 kHz 10 Hz to 1 kHz 10 Hz to 1 kHz 10 Hz to 1 kHz (10 to 600) Hz (10 to 300) Hz (10 to 150) Hz (10 to 120) Hz (10 to 80) Hz Up to 50 Hz Up to 20 Hz Up to 6 Hz Up to 2 Hz Up to 0.6 Hz Up to 0.2 Hz	(0.19 to 0.40) nF (0.40 to 1.1) nF (1.1 to 3.3) nF (3.3 to 11) nF (11 to 33) nF (33 to 110) nF (110 to 330) nF (0.33 to 1.1) μF (1.1 to 3.3) μF (3.3 to 11) μF (11 to 33) μF (33 to 110) μF (110 to 330) μF (0.33 to 1.1) mF (1.1 to 3.3) mF (3.3 to 11) mF (11 to 33) mF (33 to 110) mF	0.0073 nF 0.0099 nF 0.012 nF 0.060 nF 0.12 nF 0.60 nF 0.69 nF 0.0061 μF 0.0069 μF 0.059 μF 0.076 μF 0.60 μF 0.78 μF 0.0060 mF 0.012 mF 0.061 mF 0.14 mF 0.38 mF	Fluke 5520A	OEM, GIDEP, Met/Cal Sourced Procedures
Capacitance – Measure	Up to 1 nF (1 to 10) nF (10 to 100) nF (0.1 to 1) μF (1 to 10) μF (10 to 100) μF (0.1 to 1) mF (1 to 10) mF (10 to 100) mF	0.017 nF 0.041 nF 0.40 nF 0.0040 μF 0.040 μF 0.40 μF 0.0041 mF 0.040 mF 1.6 mF	Fluke 8846A	OEM, GIDEP, Met/Cal Sourced Procedures
DC Power to Source	(33 mv to 1020 V) (0.33 to 330) mA (0.33 to 3) A (3 to 20.5) A	0.052 % of watts out 0.45 % of watts out 9.8 % of watts output	Fluke 5520A	OEM, GIDEP, Met/Cal Sourced Procedures
Electrical Simulation of Thermocouple Devices ⁵ Type B Type C	(600 to 800) °C (800 to 1 000) °C (1 000 to 1 550) °C (1 550 to 1 820) °C (0 to 150) °C (150 to 650) °C (650 to 1 000) °C (1 000 to 1 800) °C (1 800 to 2 316) °C	0.52 °C 0.23 °C 0.21 °C 0.27 °C 0.35 °C 0.20 °C 0.21 °C 0.34 °C 0.56 °C	Fluke 5520A	OEM, GIDEP, Met/Cal Sourced Procedures

PARAMETER / EQUIPMENT	RANGE	CALIBRATION AND MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY (±)]	REFERENCE STANDARD OR EQUIPMENT	METHOD(S)
Electrical Simulation of Thermocouple Devices ⁵ (Cont.)				
Type E	(-250 to -100) °C (-100 to -25) °C (-25 to 350) °C (350 to 650) °C (650 to 1 000) °C	0.34 °C 0.11 °C 0.11 °C 0.12 °C 0.15 °C		
Type J	(-210 to -100) °C (-100 to -30) °C (-30 to 150) °C (150 to 760) °C (760 to 1 200) °C	0.18 °C 0.11 °C 0.094 °C 0.12 °C 0.16 °C		
Type K	(-200 to -100) °C (-100 to -25) °C (-25 to 120) °C (120 to 1 000) °C (1 000 to 1 372) °C	0.24 °C 0.12 °C 0.11 °C 0.17 °C 0.27 °C		
Type L	(-200 to -100) °C (-100 to 800) °C (800 to 900) °C	0.26 °C 0.17 °C 0.12 °C		
Type N	(-200 to -100) °C (-100 to -25) °C (-25 to 120) °C (120 to 410) °C (410 to 1 300) °C	0.56 °C 0.16 °C 0.13 °C 0.14 °C 0.19 °C	Fluke 5520A	OEM, GIDEP, Met/Cal Sourced Procedures
Type R	(0 to 250) °C (250 to 400) °C (400 to 1 000) °C (1 000 to 1 767) °C	0.39 °C 0.25 °C 0.22 °C 0.27 °C		
Type S	(0 to 250) °C (250 to 1000) °C (1 000 to 1 400) °C (1 400 to 1 767) °C	0.47 °C 0.28 °C 0.25 °C 0.31 °C		
Type T	(-250 to -150) °C (-150 to 0) °C (0 to 120) °C (120 to 400) °C	0.68 °C 0.20 °C 0.13 °C 0.14 °C		
Type U	(-200 to 0) °C (0 to 600) °C	0.39 °C 0.23 °C		

PARAMETER / EQUIPMENT	RANGE	CALIBRATION AND MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY (\pm)]	REFERENCE STANDARD OR EQUIPMENT	METHOD(S)
Electrical Simulation of RTD Devices ⁵				
Pt 385, 100 Ω	(-200 to -80) $^{\circ}\text{C}$	0.034 $^{\circ}\text{C}$	Fluke 5520A	OEM, GIDEP, Met/Cal Sourced Procedures
	(-80 to 0) $^{\circ}\text{C}$	0.034 $^{\circ}\text{C}$		
	(0 to 100) $^{\circ}\text{C}$	0.047 $^{\circ}\text{C}$		
	(100 to 300) $^{\circ}\text{C}$	0.060 $^{\circ}\text{C}$		
	(300 to 400) $^{\circ}\text{C}$	0.068 $^{\circ}\text{C}$		
	(400 to 630) $^{\circ}\text{C}$	0.080 $^{\circ}\text{C}$		
	(630 to 800) $^{\circ}\text{C}$	0.15 $^{\circ}\text{C}$		
Pt 3926, 100 Ω	(-200 to -80) $^{\circ}\text{C}$	0.033 $^{\circ}\text{C}$		
	(-80 to 0) $^{\circ}\text{C}$	0.036 $^{\circ}\text{C}$		
	(0 to 100) $^{\circ}\text{C}$	0.047 $^{\circ}\text{C}$		
	(100 to 300) $^{\circ}\text{C}$	0.060 $^{\circ}\text{C}$		
	(300 to 400) $^{\circ}\text{C}$	0.067 $^{\circ}\text{C}$		
	(400 to 630) $^{\circ}\text{C}$	0.080 $^{\circ}\text{C}$		
Pt 3916, 100 Ω	(-200 to -190) $^{\circ}\text{C}$	0.17 $^{\circ}\text{C}$		
	(-190 to -80) $^{\circ}\text{C}$	0.027 $^{\circ}\text{C}$		
	(-80 to 0) $^{\circ}\text{C}$	0.030 $^{\circ}\text{C}$		
	(0 to 100) $^{\circ}\text{C}$	0.040 $^{\circ}\text{C}$		
	(100 to 260) $^{\circ}\text{C}$	0.050 $^{\circ}\text{C}$		
	(260 to 300) $^{\circ}\text{C}$	0.050 $^{\circ}\text{C}$		
	(300 to 400) $^{\circ}\text{C}$	0.060 $^{\circ}\text{C}$		
	(400 to 600) $^{\circ}\text{C}$	0.070 $^{\circ}\text{C}$		
Pt 385, 200 Ω	(600 to 630) $^{\circ}\text{C}$	0.20 $^{\circ}\text{C}$		
	(-200 to -80) $^{\circ}\text{C}$	0.027 $^{\circ}\text{C}$		
	(-80 to 0) $^{\circ}\text{C}$	0.027 $^{\circ}\text{C}$		
	(0 to 100) $^{\circ}\text{C}$	0.027 $^{\circ}\text{C}$		
	(100 to 260) $^{\circ}\text{C}$	0.034 $^{\circ}\text{C}$		
	(260 to 300) $^{\circ}\text{C}$	0.080 $^{\circ}\text{C}$		
	(300 to 400) $^{\circ}\text{C}$	0.088 $^{\circ}\text{C}$		
Pt 385, 500 Ω	(400 to 600) $^{\circ}\text{C}$	0.094 $^{\circ}\text{C}$		
	(600 to 630) $^{\circ}\text{C}$	0.11 $^{\circ}\text{C}$		
	(-200 to -80) $^{\circ}\text{C}$	0.027 $^{\circ}\text{C}$		
	(-80 to 0) $^{\circ}\text{C}$	0.034 $^{\circ}\text{C}$		
	(0 to 100) $^{\circ}\text{C}$	0.034 $^{\circ}\text{C}$		
	(100 to 260) $^{\circ}\text{C}$	0.041 $^{\circ}\text{C}$		
	(260 to 300) $^{\circ}\text{C}$	0.054 $^{\circ}\text{C}$		
Pt 385, 1000 Ω	(300 to 400) $^{\circ}\text{C}$	0.053 $^{\circ}\text{C}$		
	(400 to 600) $^{\circ}\text{C}$	0.064 $^{\circ}\text{C}$		
	(600 to 630) $^{\circ}\text{C}$	0.073 $^{\circ}\text{C}$		
	(-200 to -80) $^{\circ}\text{C}$	0.020 $^{\circ}\text{C}$		
	(-80 to 0) $^{\circ}\text{C}$	0.020 $^{\circ}\text{C}$		
	(0 to 100) $^{\circ}\text{C}$	0.027 $^{\circ}\text{C}$		
	(100 to 260) $^{\circ}\text{C}$	0.033 $^{\circ}\text{C}$		
	(260 to 300) $^{\circ}\text{C}$	0.040 $^{\circ}\text{C}$		
	(300 to 400) $^{\circ}\text{C}$	0.047 $^{\circ}\text{C}$		
	(400 to 600) $^{\circ}\text{C}$	0.047 $^{\circ}\text{C}$		
	(600 to 630) $^{\circ}\text{C}$	0.15 $^{\circ}\text{C}$		

PARAMETER / EQUIPMENT	RANGE	CALIBRATION AND MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY (\pm)]	REFERENCE STANDARD OR EQUIPMENT	METHOD(S)
Electrical Simulation of RTD Devices (Cont.) PtNi 385, 120 Ω Cu 427, 10 Ω	(-80 to 0) $^{\circ}\text{C}$ (0 to 100) $^{\circ}\text{C}$ (100 to 260) $^{\circ}\text{C}$ (-100 to 260) $^{\circ}\text{C}$	0.053 $^{\circ}\text{C}$ 0.053 $^{\circ}\text{C}$ 0.093 $^{\circ}\text{C}$ 0.20 $^{\circ}\text{C}$	Fluke 5520A	OEM, GIDEP, Met/Cal Sourced Procedures
AC Power – Source @ (45 to 65) Hz, PF = 1	(33 to 330) mV (3.3 to 9) mA (9 to 33) mA (33 to 90) mA (90 to 330) mA (0.33 to 0.9) A (0.9 to 2.2) A (2.2 to 4.5) A (4.5 to 20.5) A 33 mV to 1020 V (3.3 to 9) mA (9 to 33) mA (33 to 90) mA (90 to 330) mA (0.33 to 0.9) A (0.9 to 2.2) A (2.2 to 4.5) A (4.5 to 20.5) A	0.0028 % of watts output 0.0073 % of watts output 0.028 % of watts output 0.073 % of watts output 0.26 % of watts output 0.53 % of watts output 0.0013 % of watts output 0.0050 % of watts output 0.0073 % of watts output 0.018 % of watts output 0.073 % of watts output 0.18 % of watts output 0.67 % of watts output 1.4 % of watts output 3.7 % of watts output 14 % of watts output	Fluke 5520A	OEM, GIDEP, Met/Cal Sourced Procedures

III. Time and Frequency

PARAMETER / EQUIPMENT	RANGE	CALIBRATION AND MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY (\pm)]	REFERENCE STANDARD OR EQUIPMENT	METHOD(S)
Stopwatches/Timers	Up to 86 400 s	3.5 s / 24 hours	US National Time Stopwatch	NIST SP 960-12
Frequency – Source ⁵	(0.01 to 120) Hz (120 to 1200) Hz (1.2 to 12) kHz (12 to 120) kHz (120 to 1200) kHz (1.2 to 2) MHz	0.18 mHz 0.20 mHz 0.059 Hz 0.12 Hz 0.66 Hz 0.058 kHz	Fluke 5520A	OEM, GIDEP, Met/Cal Sourced Procedures
Frequency – Measure ⁵	(3 to 5) Hz (5 to 10) Hz (10 to 40) Hz (40 to 1000) Hz (1 to 300) kHz 300 kHz to 1 MHz	3.6 mHz 6.9 mHz 16 mHz 19 mHz 0.16 kHz 0.16 kHz	Fluke 8846A	OEM, GIDEP, Met/Cal Sourced Procedures

IV. Dimensional

PARAMETER / EQUIPMENT	RANGE	CALIBRATION AND MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY (\pm)]	REFERENCE STANDARD OR EQUIPMENT	METHOD(S)
Gage Blocks	Up to 4 in	(2.9 + 1.2L) μ in	Dual Head Comparator Grade 00 Gage Blocks	ASTM Procedure
Gage Balls	(0.03937 to 2) in	(12.7 + 0.4L) μ in	ULM	GIDEP Sourced Procedures
Plain Ring Gages	(0.4 to 4) in	(10.2 + 4.3L) μ in	ULM XXX Master Rings	OEM, GIDEP Sourced Procedures
Micrometers, ID, OD & Depth ⁵	Up to 6 in (6 to 60) in	(20.7 + 9.8L) μ in (34.4 + 6.0L) μ in	Gage Blocks Federal Grade 2 / ASME Grade 0	OEM, GIDEP Sourced Procedures
Calipers, ID, OD & Depth ⁵	Up to 6 in (6 to 84) in	(57.0 + 0.96L) μ in (30.2 + 3.1L) μ in	Gage Blocks Federal Grade 2 / ASME Grade 0	OEM, GIDEP Sourced Procedures
Indicators	Up to 2 in	(9.5 + 0.5L) μ in	ULM	OEM, GIDEP Sourced Procedures
Pin Gages	Up to 2 in (2 to 4) in	(10.6 + 1.5L) μ in (3.5 + 6.5L) μ in	ULM	OEM, ASME Standards, GIDEP Sourced Procedures
Plain Plug Gages	Up to 2 in (2 to 4) in	(10.6 + 1.5L) μ in (3.5 + 6.5L) μ in	ULM ULM, Gage Blocks	OEM, ASME Standards, GIDEP Sourced Procedures
Rulers	Up to 24 in	0.0096 in	Master Steel Ruler	OEM, GIDEP Sourced Procedures
Height Gauges	Up to 24 in	(43.7 + 2.09L) μ in	Gage Blocks Federal Grade 2 / ASME Grade 0	OEM, GIDEP Sourced Procedures

V. Thermodynamic

PARAMETER / EQUIPMENT	RANGE	CALIBRATION AND MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY (\pm)]	REFERENCE STANDARD OR EQUIPMENT	METHOD(S)
Relative Humidity Sensors ⁵	5 to 95 % RH	1.9 % RH	Humidity Chamber w/ Reference Probe Thermohygrometer	OEM, GIDEP Sourced Procedures
Temperature -Infrared Non-Contact Measuring Equipment	(35 to 500) °C	1.2 °C	Blackbody Source	OEM, GIDEP, Met/Cal, Sourced Procedures
Temperature - Measure ⁵	(-40 to 660) °C (660 to 1 450) °C	0.0089 °C 3.8 °C	Hart 1529 w/ 5628 PRT Hart 1529 w/ 5650 Type S Thermocouple Thermohygrometer	OEM, GIDEP, Met/Cal, Sourced Procedures
Temperature - Source ⁵	(-40 to 660) °C (660 to 1 200) °C	0.028 °C 4.8 °C	Dry Well and Hart 1529 w/ 5628 PRT Dry Well and Hart 1529 w/ 5650 Type S Thermocouple	OEM, GIDEP, Met/Cal, Sourced Procedures

Notes:

1. Calibration and Measurement Capabilities (Expanded Uncertainty) are based on approximately a 95% confidence interval, using a coverage factor of $k=2$.
2. The uncertainty associated with calibration is dependent on local conditions, such as the resolution of the unit being calibrated and the environment in which the instrument is operating. The uncertainty listed in the scope here represents the best uncertainty for equipment and devices which the organization typically calibrates in its laboratory. Since field (on-site) conditions are typically more variable than those in the laboratory, larger measurement uncertainties are expected.
3. The accredited corporate site with the above address is also accredited for its facility in Louisville, KY, with a known address of 7133 Global Drive, Louisville, KY. One certificate and scope of accreditation is issued with the corporate organization address.
4. This organization maintains a facility to dispatch technicians for on-site calibrations from the following site: 7133 Global Drive, Louisville, KY.
5. Parameters have been verified and authorized for accredited calibrations by Premier Scales & Systems Inc.'s facility in Louisville, KY.
6. Calibration is accomplished under controlled conditions, with access limited to the laboratory to preclude interference from outside factors.
7. The use of (L) signifies an expression of length in inches.
8. The use of (d) signifies division size (resolution) of unit under test. This is expressed in the same units of measure as the unit under test.
9. On-site calibrations are not available for Mass, Gage Blocks, Gage Balls, Plain Ring Gages, Pin Gages, and Plain Plug Gages. These items must be calibrated at Premier's metrology laboratory.
10. This scope is formatted as part of a single document including the Certificate of Accreditation No. AC-1222.



Vice President