



CERTIFICATE OF ACCREDITATION

ANSI-ASQ National Accreditation Board/AClass
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 AClass
and meets the requirements of international standard

ISO/IEC 17025:2005 & ANSI/NCSL Z540-1-1994

while demonstrating technical competence in the field(s) of

CALIBRATION

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

AC-1222

Certificate Number

AClass Approval

Certificate Valid: 05/14/2010-05/17/2012

Version No. 001



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).



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

Premier Scales & Systems, Inc.³

4901 N. St. Joseph Avenue, Evansville, IN 47720
Daniel Walker Phone: 812-422-9838

CALIBRATION

Valid to: May 17, 2012

Certificate Number: AC-1222

I. Mechanical

PARAMETER / EQUIPMENT	RANGE	CALIBRATION AND MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY(±)]	REFERENCE STANDARD OR EQUIPMENT	METHOD(S)
Class I 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)	0.29 mg 0.29 mg 0.30 mg 0.60 mg 0.63 mg 0.82 mg	ASTM Class 1 Weights	NIST Handbook 44
Class II 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)	0.0012 g 0.0024 g 0.0060 g 0.013 g 0.026 g 0.065 g 0.13 g 0.26 g 0.65 g 1.2 g 2.4 g 5.8 g	ASTM Class 1 or 2 Weights	NIST Handbook 44
Class III 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)	0.00021 lb 0.00033 lb 0.00082 lb 0.0017 lb 0.0033 lb 0.0082 lb 0.017 lb 0.033 lb	NIST Class F Weights	NIST Handbook 44
Class III 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)	0.068 lb 0.12 lb 0.24 lb 0.59 lb 1.2 lb 2.4 lb 5.9 lb	NIST Class F Weights	NIST Handbook 44



PARAMETER / EQUIPMENT	RANGE	CALIBRATION AND MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY(±)]	REFERENCE STANDARD OR EQUIPMENT	METHOD(S)
Class III 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)	12 lb 24 lb 59 lb	NIST Class F Weights	NIST Handbook 44
Class IV Scales ⁵	Up to 12 000 lb (10 lb) Up to 24 000 lb (20 lb) Up to 60 000 lb (50 lb)	12 lb 23 lb 58 lb	NIST Class F Weights	NIST Handbook 44
Unclassified Scales/Balances ⁵	Up to 200 000 lb	1.154 (d)	NIST Class F Weights	NIST Handbook 44
Mass - Avoirdupois lb ⁸	5 000 lb 3 000 lb 2 500 lb 1 000 lb 500 lb 250 lb 50 lb 25 lb	0.27 lb 0.18 lb 0.06 lb 0.0091 lb 0.0073 lb 0.0063 lb 0.00029 lb 0.00025 lb	NIST Class F Weights	NISTIR 6969 SOP 7 or SOP 8
Mass - Avoirdupois lb ⁸	30 lb 20 lb 10 lb 5 lb 3 lb 2 lb 1 lb	0.00022 lb 0.00017 lb 0.000051 lb 0.000029 lb 0.000020 lb 0.0000089 lb 0.0000051 lb	ASTM Class 4 Weights	NISTIR 6969 SOP 7 or SOP 8
Mass - oz ⁸	8 oz 4 oz 2 oz 1 oz 1/2 oz 1/4 oz 1/8 oz 1/16 oz 1/32 oz	0.000053 oz 0.000075 oz 0.000028 oz 0.000011 oz 0.0000074 oz 0.0000048 oz 0.0000026 oz 0.0000025 oz 0.0000035 oz	ASTM Class 4 Weights	NISTIR 6969 SOP 7 or SOP 8
Mass - Metric ⁸	200 kg 25 kg 20 kg	2.8 g 0.15 g 0.15 g	NIST Class F Weights	NISTIR 6969 SOP 7 or SOP 8
Mass - Metric ⁸	10 kg 5 kg 4 kg 3 kg 2 kg 1 kg 500 g 300 g 200 g 100 g 50 g	50 mg 1.0 mg 0.91 mg 0.77 mg 0.64 mg 0.34 mg 0.22 mg 0.19 mg 0.28 mg 0.028 mg 0.022 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 ⁸ (cont.)	30 g 20 g 10 g 5 g 3 g 2 g 1 g 500 mg 300 mg 200 mg 100 mg 50 mg 30 mg 20 mg 10 mg 5 mg 3 mg 2 mg 1 mg	0.011 mg 0.011 mg 0.0084 mg 0.0060 mg 0.0040 mg 0.0039 mg 0.0019 mg 0.0018 mg 0.0018 mg 0.0018 mg 0.0018 mg 0.0018 mg 0.0018 mg 0.0018 mg 0.0018 mg 0.0018 mg 0.0018 mg 0.0018 mg 0.0018 mg	ASTM Class 0 Weights	NISTIR 6969 SOP 4, SOP 7 or SOP 8
Force ⁵	Up to 100 000 lbf	1.154 (d)	Dead Weights Load Cells	OEM, GIDEP Sourced Procedures
Pressure Gauges	Up to 3 000 psi	1.8 psi	Pressure Calibrator	OEM, GIDEP Sourced Procedures
Torque Tools	(4 to 50) lbf·in (30 to 400) lbf·in (80 to 1000) lbf·in (20 to 250) lbf·ft (60 to 600) lbf·ft	0.03 lbf·in 0.11 lbf·in 0.67 lbf·in 0.20 lbf·ft 0.31 lbf·ft	Torque Transducers	OEM, GIDEP Sourced Procedures
Torque Transducers	Up to 2000 lbf·ft	0.059% of Reading	Torque 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 V to 330) V (100 V to 1 000) V	20 µV/V + 1 µV 11 µV/V + 2 µV 12 µV/V + 20 µV 18 µV/V + 150 µV 18 µV/V + 1.5 mV	Fluke 5520A	OEM, GIDEP, Met/Cal Sourced Procedures

PARAMETER / EQUIPMENT	RANGE	CALIBRATION AND MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY(±)]	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	3.7 mV/V + 3.5 μV 2.5 mV/V + 7 μV 2.4 mV/V + 50 μV 4.5 mV/V + 0.6 mV 4.1 mV/V + 10 mV	Fluke 8846A	OEM, GIDEP, Met/Cal Sourced Procedures
DC Current - Source	Up to 330 μA 330 μA 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	150 μA/A + 0.02 μA 100 μA/A + 0.05 μA 100 μA/A + 0.25 μA 100 μA/A + 2.5 μA 200 μA/A + 40 μA 380 μA/A + 40 μA 500 μA/A + 0.5 mA 1 mA/A + 0.75 mA	Fluke 5520 A	OEM, GIDEP, Met/Cal Sourced Procedures
DC Current - Source for Clamp on Current meters	10 to 150 A 150 to 1 000 A	2.5 mA/A + 2 mA 2.5 mA/A + 50 mA	Fluke 5520A w/ 50 turn coil.	OEM, GIDEP, Met/Cal Sourced Procedures
DC Current - Measure	Up to 100 μA 100 μA 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	0.5 mA/A + 25 nA 0.5 mA/A + 50 nA 0.5 mA/A + 2 μA 0.5 mA/A + 5 μA 0.5 mA/A + 20 μA 0.5 mA/A + 200 μA 1 mA/A + 600 μA 1.5 mA/A + 800 μA	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) kΩ (1.1 to 3.3) kΩ (3.3 to 11) kΩ (11 to 33) kΩ (33 to 110) kΩ (110 to 330) kΩ (0.33 to 1.1) MΩ (1.1 to 3.3) MΩ (3.3 to 11) MΩ (11 to 33) MΩ (33 to 110) MΩ (110 to 330) MΩ (330 to 1 100) MΩ	40 μΩ/Ω + 1 mΩ 30 μΩ/Ω + 1.5 mΩ 28 μΩ/Ω + 1.4 mΩ 28 μΩ/Ω + 2 mΩ 28 μΩ/Ω + 2 mΩ 28 μΩ/Ω + 20 mΩ 28 μΩ/Ω + 20 mΩ 28 μΩ/Ω + 0.2 Ω 28 μΩ/Ω + 0.2 Ω 32 μΩ/Ω + 2 Ω 32 μΩ/Ω + 2 Ω 60 μΩ/Ω + 30 Ω 130 μΩ/Ω + 50 Ω 250 μΩ/Ω + 2.5 kΩ 500 μΩ/Ω + 3 kΩ 3 mΩ/Ω + 100 kΩ 15 mΩ/Ω + 500 kΩ	Fluke 5520A	OEM, GIDEP, Met/Cal Sourced Procedures

PARAMETER / EQUIPMENT	RANGE	CALIBRATION AND MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY(±)]	REFERENCE STANDARD OR EQUIPMENT	METHOD(S)
Resistance - Measure	Up to 10 Ω (10 to 100) Ω (0.1 to 1) kΩ (1 to 10) kΩ (10 to 100) kΩ (0.1 to 1) MΩ (1 to 10) MΩ (10 to 100) MΩ (0.1 to 1) GΩ	0.1 mΩ/Ω + 3 mΩ 0.1 mΩ/Ω + 4 mΩ 0.1 mΩ/Ω + 10 mΩ 0.1 mΩ/Ω + 100 mΩ 0.1 mΩ/Ω + 1 Ω 0.1 mΩ/Ω + 10 Ω 0.4 mΩ/Ω + 100 Ω 8 mΩ/Ω + 10 kΩ 20 mΩ/Ω + 100 kΩ	Fluke 8846A	OEM, GIDEP, Met/Cal Sourced Procedures
AC Voltage - Source	(1 to 33) mV (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 (33 to 330) mV (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 (0.33 to 3.3) V (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 (3.3 to 33) V (10 to 45) Hz 45 Hz to 10 kHz (10 to 20) kHz (20 to 50) kHz (50 to 100) kHz (33 to 330) V 45 Hz to 1 kHz 1 kHz to 10 kHz (10 to 20) kHz (20 to 50) kHz (50 to 100) kHz (330 to 1 020) V 45 Hz to 1 kHz (1 to 5) kHz (5 to 10) kHz	800 μV/V + 6 μV 150 μV/V + 6 μV 200 μV/V + 6 μV 1 mV/V + 6 μV 3.5 mV/V + 12 μV 8.0 mV/V + 50 μV 300 μV/V + 8 μV 145 μV/V + 8 μV 160 μV/V + 8 μV 350 μV/V + 8 μV 800 μV/V + 32 μV 2 mV/V + 70 μV 300 μV/V + 50 μV 150 μV/V + 60 μV 190 μV/V + 60 μV 300 μV/V + 50 μV 700 μV/V + 125 μV 2.4 mV/V + 600 μV 300 μV/V + 650 μV 150 μV/V + 600 μV 240 μV/V + 600 μV 350 μV/V + 600 μV 900 μV/V + 1.6 mV 190 μV/V + 2 mV 200 μV/V + 6 mV 250 μV/V + 6 mV 300 μV/V + 6 mV 2 mV/V + 50 mV 300 μV/V + 10 mV 250 μV/V + 10 mV 300 μV/V + 10 mV	Fluke 5520A	OEM, GIDEP, Met/Cal Sourced Procedures

PARAMETER / EQUIPMENT	RANGE	CALIBRATION AND MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY(±)]	REFERENCE STANDARD OR EQUIPMENT	METHOD(S)
AC Voltage - Measure (Cont.)	<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>10 mV/V + 40 μV 3.5 mV/V + 40 μV 0.6 mV/V + 40 μV 1.2 mV/V + 50 μV 0.6 mV/V + 80 μV 40 mV/V + 500 μV</p> <p>10 mV/V + 300 μV 3.5 mV/V + 300 μV 0.6 mV/V + 300 μV 1.2 mV/V + 500 μV 0.6 mV/V + 800 μV 40 mV/V + 5 mV</p> <p>10 mV/V + 3 mV 3.5 mV/V + 3 mV 0.6 mV/V + 3 mV 1.2 mV/V + 5 mV 0.6 mV/V + 8 mV 40 mV/V + 50 mV</p> <p>10 mV/V + 30 mV 3.5 mV/V + 30 mV 0.6 mV/V + 30 mV 1.2 mV/V + 50 mV 0.6 mV/V + 80 mV 40 mV/V + 500 mV</p> <p>10 mV/V + 225 mV 3.5 mV/V + 225 mV 0.6 mV/V + 225 mV 1.2 mV/V + 375 mV 0.6 mV/V + 600 mV 40 mV/V + 3.75 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>2 mA/A + 0.1 μA 1.5 mA/A + 0.1 μA 1.25 mA/A + 0.1 μA 0.3 mA/A + 0.15 μA 8 mA/A + 0.2 μA 16 mA/A + 0.4 μA</p> <p>2 mA/A + 0.15 μA 1.25 mA/A + 0.15 μA 1 mA/A + 0.15 μA 2 mA/A + 0.2 μA 5 mA/A + 0.3 μA 10 mA/A + 0.6 μA</p>	Fluke 5520A	OEM, GIDEP, Met/Cal Sourced Procedures

PARAMETER / EQUIPMENT	RANGE	CALIBRATION AND MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY(±)]	REFERENCE STANDARD OR EQUIPMENT	METHOD(S)
AC Current - Source (Cont.)	(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 (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 (0.33 to 1.1) A (10 to 45) Hz 45 Hz to 1kHz (1 to 5) kHz (5 to 10) kHz (1.1 to 3) A (10 to 45) Hz 45 Hz to 1kHz (1 to 5) kHz (5 to 10) kHz (3 to 11) A (45 to 100) Hz 100 Hz to 1 kHz (1 to 5) kHz (11 to 20.5) A (45 to 100) Hz 100 Hz to 1 kHz (1 to 5) kHz	1.8 mA/A + 2 µA 0.9 mA/A + 2 µA 0.4 mA/A + 2 µA 0.8 mA/A + 2 µA 2 mA/A + 3 µA 4 mA/A + 4 µA 1.8 mA/A + 20 µA 0.9 mA/A + 20 µA 0.4 mA/A + 20 µA 1 mA/A + 50 µA 2 mA/A + 100 µA 4 mA/A + 200 µA 1.8 mA/A + 100 µA 0.5 mA/A + 100 µA 6 mA/A + 100 µA 25 mA/A + 5 mA 1.8 mA/A + 100 µA 0.6 mA/A + 100 µA 6 mA/A + 100 µA 25 mA/A + 5 mA 0.6 mA/A + 2 mA 1 mA/A + 2 mA 30 mA/A + 2 mA 1.2 mA/A + 5 mA 1.5 mA/A + 5 mA 30 mA/A + 5 mA	Fluke 5520A	OEM, GIDEP, Met/Cal Sourced Procedures
AC Current - Source for Clamp on Current Meters	(20 to 1 000) A (45 to 440) Hz	2.8 mA/A + 3 mA	Fluke 5520A w/ 50 turn coil	OEM, GIDEP, Met/Cal Sourced Procedures
AC Current - Measure	Up to 100 µA (3 to 5) Hz (5 to 10) Hz 10 Hz to 5 kHz (5 to 10) kHz 100 µA to 1 mA (3 to 5) Hz (5 to 10) Hz 10 Hz to 5 kHz (5 to 10) kHz	11 mA/A + 0.06 µA 3.5 mA/A + 0.06 µA 1.5 mA/A + 0.06 µA 3.5 mA/A + 0.7 µA 10 mA/A + 0.4 µA 3 mA/A + 0.4 µA 1 mA/A + 0.4 µA 2 mA/A + 2.5 µA	Fluke 8846A	OEM, GIDEP, Met/Cal Sourced Procedures

PARAMETER / EQUIPMENT	RANGE	CALIBRATION AND MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY(±)]	REFERENCE STANDARD OR EQUIPMENT	METHOD(S)
AC Current – Measure (Cont.)	<p>(1 to 10) mA (3 to 5) Hz (5 to 10) Hz 10 Hz to 5 kHz (5 to 10) kHz</p> <p>(10 to 100) mA (3 to 5) Hz (5 to 10) Hz 10 Hz to 5 kHz (5 to 10) kHz</p> <p>(100 to 400) mA (3 to 5) Hz (5 to 10) Hz 10 Hz to 5 kHz (5 to 10) kHz</p> <p>400 mA to 1 A (3 to 5) Hz (5 to 10) Hz 10 Hz to 5 kHz (5 to 10) kHz</p> <p>(1 to 3) A (3 to 5) Hz (5 to 10) Hz 10 Hz to 5 kHz (5 to 10) kHz</p> <p>(3 to 10) A (3 to 5) Hz (5 to 10) Hz 10 Hz to 5 kHz (5 to 10) kHz</p>	<p>11 mA/A + 6 μA 3.5 mA/A + 6 μA 1.5 mA/A + 6 μA 3.5 mA/A + 70 μA</p> <p>10 mA/A + 40 μA 3 mA/A + 40 μA 1 mA/A + 40 μA 2 mA/A + 250 μA</p> <p>10 mA/A + 400 μA 3 mA/A + 400 μA 1 mA/A + 400 μA 2 mA/A + 2.8 mA</p> <p>10 mA/A + 400 μA 3 mA/A + 400 μA 1 mA/A + 400 μA 3.5 mA/A + 7 mA</p> <p>11 mA/A + 1.8 mA 3.5 mA/A + 1.8 mA 1.5 mA/A + 1.8 mA 3.5 mA/A + 21 mA</p> <p>11 mA/A + 6 mA 3.5 mA/A + 6 mA 1.5 mA/A + 6 mA 3.5 mA/A + 70 mA</p>	Fluke 8846A	OEM, GIDEP, Met/Cal Sourced Procedures
Capacitance - Source	<p>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 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</p> <p>(0.19 to 1.1) nF (1.1 to 3.3) nF (3.3 to 11) nF (11 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</p>	<p>5 mF/F + 0.01 nF 5 mF/F + 0.01 nF 2.6 mF/F + 0.01 nF 2.6 mF/F + 0.1 nF 2.5 mF/F + 0.3 nF 2.6 mF/F + 1 nF 2.5 mF/F + 3 nF 2.6 mF/F + 10 nF 4 mF/F + 30 nF 4.5 mF/F + 100 nF 4.5 mF/F + 300 nF 4.5 mF/F + 1 μF 4.5 mF/F + 3 μF 4.5 mF/F + 10 μF 7.5 mF/F + 30 μF 11 mF/F + 100 μF</p>	Fluke 5520A	OEM, GIDEP, Met/Cal Sourced Procedures

PARAMETER / EQUIPMENT	RANGE	CALIBRATION AND MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY(±)]	REFERENCE STANDARD OR EQUIPMENT	METHOD(S)
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	2 mF/F + 0.025 nF 1 mF/F + 0.05 nF 1 mF/F + 0.5 nF 1 mF/F + 5 nF 1 mF/F + 50 nF 1 mF/F + 0.5 μF 1 mF/F + 5 μF 1 mF/F + 50 μF 4 mF/F + 200 μF	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	0.023% of watts out 0.022% of watts out 0.07% of watts output	Fluke 5520A	OEM, GIDEP, Met/Cal Sourced Procedures
Electrical Simulation of Thermocouple Devices				
Type B	(600 to 800) °C (800 to 1 000) °C (1 000 to 1 550) °C (1 550 to 1 820) °C	0.44 °C 0.34 °C 0.30 °C 0.33 °C		
Type 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	0.30 °C 0.26 °C 0.31 °C 0.50 °C 0.84 °C		
Type E	(-250 to -100) °C (-100 to -25) °C (-25 to 350) °C (350 to 650) °C (650 to 1 000) °C	0.50 °C 0.16 °C 0.14 °C 0.16 °C 0.21 °C	Fluke 5520A	OEM, GIDEP, Met/Cal Sourced Procedures
Type J	(-210 to -100) °C (-100 to -30) °C (-30 to 150) °C (150 to 760) °C (760 to 1 200) °C	0.27 °C 0.16 °C 0.14 °C 0.17 °C 0.23 °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	0.33 °C 0.18 °C 0.16 °C 0.26 °C 0.40 °C		
Type L	(-200 to -100) °C (-100 to 800) °C (800 to 900) °C	0.37 °C 0.26 °C 0.17 °C		

PARAMETER / EQUIPMENT	RANGE	CALIBRATION AND MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY(±)]	REFERENCE STANDARD OR EQUIPMENT	METHOD(S)
Electrical Simulation of Thermocouple Devices				
Type N	(-20 to -100) °C (-100 to -25) °C (-25 to 120) °C (120 to 410) °C (410 to 1 300) °C	0.40 °C 0.22 °C 0.19 °C 0.18 °C 0.27 °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	0.57 °C 0.35 °C 0.33 °C 0.40 °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 0.36 °C 0.37 °C 0.46 °C		
Type T	(-250 to -150) °C (-150 to 0) °C (0 to 120) °C (120 to 400) °C	0.63 °C 0.24 °C 0.16 °C 0.14 °C		
Type U	(-200 to 0) °C (0 to 600) °C	0.56 °C 0.27 °C		
Electrical Simulation of RTD Devices				
Pt 385, 100 Ω	(-200 to 0) °C (0 to 100) °C (100 to 400) °C (400 to 630) °C (630 to 800) °C	0.05 °C 0.07 °C 0.10 °C 0.12 °C 0.23 °C	Fluke 5520A	OEM, GIDEP, Met/Cal Sourced Procedures
Pt 3926, 100 Ω	(-200 to 0) °C (0 to 100) °C (100 to 400) °C (400 to 630) °C	0.05 °C 0.07 °C 0.10 °C 0.12 °C		
Pt 3916, 100 Ω	(-200 to -190) °C (-190 to 100) °C (100 to 260) °C (260 to 400) °C (400 to 600) °C (600 to 630) °C	0.25 °C 0.05 °C 0.07 °C 0.09 °C 0.10 °C 0.23 °C		

PARAMETER / EQUIPMENT	RANGE	CALIBRATION AND MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY(±)]	REFERENCE STANDARD OR EQUIPMENT	METHOD(S)
Electrical Simulation of RTD Devices (Cont.)				
Pt 385, 200 Ω	(-200 to 260) °C (260 to 300) °C (300 to 600) °C (600 to 630) °C	0.05 °C 0.12 °C 0.14 °C 0.16 °C	Fluke 5520A	OEM, GIDEP, Met/Cal Sourced Procedures
Pt 385, 500 Ω	(-200 to 260) °C (260 to 600) °C (600 to 630) °C	0.06 °C 0.09 °C 0.11 °C		
Pt 385, 1000 Ω	(-200 to 260) °C (0 to 300) °C (260 to 600) °C (600 to 630) °C	0.05 °C 0.06 °C 0.07 °C 0.23 °C		
PtNi 385, 120 Ω	(-80 to 100) °C (100 to 260) °C	0.08 °C 0.14 °C		
Cu 427, 10 Ω	(-100 to 260) °C	0.3 °C		
AC Power - Source @ (45 to 65) Hz, PF = 1				
(33 to 330) mV Out	(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	0.14 % of watts output 0.10 % of watts output 0.14 % of watts output 0.10 % of watts output 0.13 % of watts output 0.11 % of watts output 0.13 % of watts output 0.11 % of watts output	Fluke 5520A	OEM, GIDEP, Met/Cal Sourced Procedures
(0.33 to 1 020) V Out	(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	0.12 % of watts output 0.08 % of watts output 0.12 % of watts output 0.08 % of watts output 0.11 % of watts output 0.09 % of watts output 0.12 % of watts output 0.10% of watts output		

III. Dimensional

PARAMETER / EQUIPMENT	RANGE	CALIBRATION AND MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY(±)]	REFERENCE STANDARD OR EQUIPMENT	METHOD(S)
Gage Blocks ⁹	(0.05 to 4) in	(1.6 + 6.5L) μin	Dual Head Comparator Grade 00 Gage Blocks	ASTM B89.1.9
Plain Ring Gages ⁹	(0.4 to 4) in	(10.2 + 4.3L) μin	ULM XXX Master Rings	OEM, GIDEP Sourced Procedures
Micrometers, ID, OD & Depth	Up to 6 in (6 to 60) in	(56 + 2.4L) μin (25 + 6.4L) μin	Gage Blocks Federal Grade 2 / ASME Grade 0	OEM, GIDEP Sourced Procedures
Calipers, ID, OD & Depth	Up to 80 in	(544 + 3L) μin	Gage Blocks Federal Grade 2 / ASME Grade 0	OEM, GIDEP Sourced Procedures
Indicators	Up to 2 in	(13.8 + 0.4L) μin	ULM	OEM, GIDEP Sourced Procedures
Pin Gages ⁹	Up to 1.0005 in	(3.5 + 6.5L) μin	ULM	OEM, GIDEP Sourced Procedures
Plain Plug Gages ⁹	Up to 2 in (2 to 4) in	(6.9 + 4.4L) μin (10.2 + 4.3L) μin	ULM ULM, Gage Blocks	OEM, GIDEP Sourced Procedures

IV. Thermodynamic

PARAMETER / EQUIPMENT	RANGE	CALIBRATION AND MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY(±)]	REFERENCE STANDARD OR EQUIPMENT	METHOD(S)
Relative Humidity Sensors	5 to 95 % RH	2.2 % RH	Humidity Chamber w/ Reference Probe	OEM, GIDEP Sourced Procedures
Temperature -Infrared Non-Contact Measuring Equipment	(35 to 500) °C	0.42 °C	Blackbody Source	OEM, MET/CAL, GIDEP Sourced Procedures
Temperature - Measure	(-200 to 660) °C (0 to 1 100) °C (1 100 to 1 450) °C	0.0074 °C 1.1 °C 1.7 °C	Hart 1529 w/ 5628 PRT Hart 1529 w/ 5650 Type S Thermocouple	OEM, MET/CAL, GIDEP Sourced Procedures
Temperature - Source	(-45 to 140) °C (150 to 660) °C (150 to 1 100) °C (1 100 to 1 200) °C	0.015 °C 1.2 °C 1.6 °C 2.1 °C	Dry Well and Hart 1529 w/ 5628 PRT Dry Well and Hart 1529 w/ 5650 Type S Thermocouple	OEM, MET/CAL, GIDEP Sourced Procedures

Notes:

1. *Calibration and Measurement Uncertainties (Expanded Uncertainty) are based on approximately a 95% confidence interval, using a coverage 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. *This organization maintains satellite organization(s) where no key activities are performed. The accredited corporate site with the above address is also accredited for satellite site(s). Only one certificate and scope of accreditation is issued with the corporate organization's address.*
4. *This organization maintains the following satellite site(s): 7133 Global Drive, Louisville, KY 40258.*
5. *Parameters have been verified and authorized for accredited calibrations by Premier Scales & Systems Inc., satellite site.*
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 not available. Items must be calibrated at Premier's metrology laboratory.*
10. *This scope is part of and must be included with the Certificate of Accreditation No. AC-1222.*



Vice President