



PERRY JOHNSON LABORATORY ACCREDITATION, INC.

Certificate of Accreditation

Perry Johnson Laboratory Accreditation, Inc. has assessed the Laboratory of:

TESCO-The Eastern Specialty Company
925 Canal Street, Bristol, PA 19007

(Hereinafter called the Organization) and hereby declares that Organization 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 (as outlined by the joint ISO-ILAC-IAF Communiqué dated April 2017):

Electrical Calibration
(As detailed in the supplement)

Accreditation claims for such testing and/or calibration services shall only be made from addresses referenced within this certificate. This Accreditation is granted subject to the system rules governing the Accreditation referred to above, and the Organization hereby covenants with the Accreditation body's duty to observe and comply with the said rules.

For PJLA:

Tracy Szerszen
President

Perry Johnson Laboratory
Accreditation, Inc. (PJLA)
755 W. Big Beaver, Suite 1325
Troy, Michigan 48084

Initial Accreditation Date:

April 11, 2019

Revision Date:

June 22, 2020

Issue Date:

April 11, 2019

Accreditation No.:

101105

Expiration Date:

July 31, 2021

Certificate No.:

L19-196-R2

The validity of this certificate is maintained through ongoing assessments based on a continuous accreditation cycle. The validity of this certificate should be confirmed through the PJLA website: www.pjilabs.com



Certificate of Accreditation: Supplement

TESCO-The Eastern Specialty Company

925 Canal Street, Bristol, PA 19007

Contact Name: Edward Otte Phone: 609-752-1238

Accreditation is granted to the facility to perform the following calibrations:

Electrical

| MEASURED INSTRUMENT, QUANTITY OR GAUGE | RANGE OR NOMINAL DEVICE SIZE AS APPROPRIATE | CALIBRATION AND MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY (\pm) | CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED |
|--|---|--|--|
| Watt-Hour Standards ^F | 0.01 A to 2 A unity (10 mWh to 2.016 kWh) | 18 μ Wh/VAh | Fluke 6105A opt 80A TESCO WI: WI-19-10-029; Z540.1 |
| | 2 A to 5 A unity (2.016 mWh to 5.04 kWh) | 20 μ Wh/VAh | |
| | 5 A to 80 A unity (5.04 kWh to 80.64 kWh) | 21 μ Wh/VAh | |
| | 0.01A to 2 A 60 degrees lag (10 mWh to 2.016 kWh) | 26 μ Wh/VAh | |
| | 2 A to 5 A 60 degrees lag (2.016 Wh to 5.04 kWh) | 27 μ Wh/VAh | |
| | 5 A to 80 A 60 degrees lag (5.04 kWh to 80.64 kWh) | 28 μ Wh/VAh | |
| Equipment to Output AC Phase (at the listed frequencies) ^F | | | |
| 16 Hz to 45 Hz | 0.25 A to 50 A | 0.003 $^{\circ}$ | |
| 45 Hz to 65 Hz | 0.25 A to 50 A | 0.002 3 $^{\circ}$ | |
| 65 Hz to 69 Hz | 0.25 A to 50 A | 0.003 $^{\circ}$ | |
| 69 Hz to 180 Hz | 0.25 A to 50 A | 0.007 $^{\circ}$ | |
| 180 Hz to 450 Hz | 0.25 A to 50 A | 0.018 $^{\circ}$ | |
| 450 Hz to 850 Hz | 0.25 A to 50 A | 0.033 $^{\circ}$ | |
| 850 Hz to 3 kHz | 0.25 A to 50 A | 0.115 $^{\circ}$ | |
| 3 kHz to 6 kHz | 0.25 A to 50 A | 0.23 $^{\circ}$ | |
| Equipment to Output AC Phase (at the listed frequencies) ^F | | | |
| 16 Hz to 45 Hz | 50 A to 80 A | 0.003 $^{\circ}$ | |
| 45 Hz to 65 Hz | 50 A to 80 A | 0.003 $^{\circ}$ | |
| 65 Hz to 69 Hz | 50 A to 80 A | 0.003 $^{\circ}$ | |
| 69 Hz to 180 Hz | 50 A to 80 A | 0.008 $^{\circ}$ | |
| 180 Hz to 450 Hz | 50 A to 80 A | 0.025 $^{\circ}$ | |
| 450 Hz to 850 Hz | 50 A to 80 A | 0.05 $^{\circ}$ | |
| 850 Hz to 3 kHz | 50 A to 80 A | 0.05 $^{\circ}$ | |
| 3 kHz to 6 kHz | 50 A to 80 A | 0.003 $^{\circ}$ | |
| Equipment to Output AC Voltage (at the listed frequencies) ^F | | | |
| 16 Hz to 45 Hz | 0.1 V to 90 V | 60 μ V/V + 0.8 mV | |
| 45 Hz to 65 Hz | 0.1 V to 90 V | 42 μ V/V + 0.2 mV | |
| 65 Hz to 850 Hz | 0.1 V to 90 V | 60 μ V/V + 0.8 mV | |



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|--|---|---|---|
| Equipment to Output AC Voltage (at the listed frequencies) ^F | | | Fluke 6105A opt 80A TESCO WI: WI-19-10-029; Z540.1 |
| 16 Hz to 45 Hz | 90 V to 180 V | 60 μ V/V + 0.16 mV | |
| 45 Hz to 65 Hz | 90 V to 180 V | 44 μ V/V + 0.16 mV | |
| 65 Hz to 850 Hz | 90 V to 180 V | 60 μ V/V + 0.16 mV | |
| Equipment to Output AC Voltage (at the listed frequencies) ^F | | | |
| 16 Hz to 45 Hz | 180 V to 215 V | 61 μ V/V + 3.2 mV | |
| 45 Hz to 65 Hz | 180 V to 215 V | 61 μ V/V + 3.2 mV | |
| 65 Hz to 850 Hz | 180 V to 215 V | 61 μ V/V + 3.2 mV | |
| Equipment to Output AC Voltage (at the listed frequencies) ^F | | | |
| 45 Hz to 65 Hz | 215 V to 246 V | 44 μ V/V + 0.16 mV | |
| Equipment to Output AC Voltage (at the listed frequencies) ^F | | | |
| 16 Hz to 45 Hz | 246 V to 425 V | 61 μ V/V + 5.8 mV | |
| 45 Hz to 65 Hz | 246 V to 425 V | 61 μ V/V + 5.8 mV | |
| 65 Hz to 850 Hz | 246 V to 425 V | 61 μ V/V + 5.8 mV | |
| Equipment to Output AC Voltage (at the listed frequencies) ^F | | | |
| 45 Hz to 65 Hz | 425 V to 490 V | 44 μ V/V + 5.8 mV | |
| Equipment to Output AC Voltage (at the listed frequencies) ^F | | | |
| 16 Hz to 45 Hz | 490 V to 740 V | 61 μ V/V + 5.8 mV | |
| 45 Hz to 65 Hz | 490 V to 740 V | 61 μ V/V + 5.8 mV | |
| 65 Hz to 850 Hz | 490 V to 740 V | 61 μ V/V + 5.8 mV | |
| Equipment to Output AC Voltage (at the listed frequencies) ^F | | | |
| 45 Hz to 65 Hz | 740 V to 850 V | 44 μ V/V + 5.8 mV | |
| Equipment to Output AC Voltage (at the listed frequencies) ^F | | | |
| 16 Hz to 45 Hz | 850 V to 1 008 V | 61 μ V/V + 10 mV | |
| 45 Hz to 65 Hz | 850 V to 1 008 V | 61 μ V/V + 10 mV | |
| 65 Hz to 850 Hz | 850 V to 1 008 V | 61 μ V/V + 10 mV | |



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|--|---|---|---|
| Equipment to Output AC Current (at the listed frequencies) ^F | | | Fluke 6105A opt 80A TESCO WI: WI-19-10-029; Z540.1 |
| 16 Hz to 850 Hz | 0.01 A to 0.1 A | 60 μ A/A + 5 μ A | |
| Equipment to Output AC Current (at the listed frequencies) ^F | | | |
| 16 Hz to 45 Hz | 0.1 A to 0.25 A | 60 μ A/A + 5 μ A | |
| 45 Hz to 65 Hz | 0.1 A to 0.25 A | 46 μ A/A + 2.5 μ A | |
| 65 Hz to 850 Hz | 0.1 A to 0.25 A | 60 μ A/A + 5 μ A | |
| Equipment to Output AC Current (at the listed frequencies) ^F | | | |
| 16 Hz to 45 Hz | 0.25 A to 0.5 A | 61 μ A/A + 10 μ A | |
| 45 Hz to 65 Hz | 0.25 A to 0.5 A | 46 μ A/A + 3 μ A | |
| 65 Hz to 850 Hz | 0.25 A to 0.5 A | 61 μ A/A + 10 μ A | |
| Equipment to Output AC Current (at the listed frequencies) ^F | | | |
| 16 Hz to 45 Hz | 0.5 A to 1 A | 61 μ A/A + 10 μ A | |
| 45 Hz to 65 Hz | 0.5 A to 1 A | 47 μ A/A + 6 μ A | |
| 65 Hz to 850 Hz | 0.5 A to 1 A | 61 μ A/A + 10 μ A | |
| Equipment to Output AC Current (at the listed frequencies) ^F | | | |
| 16 Hz to 45 Hz | 1 A to 2 A | 61 μ A/A + 40 μ A | |
| 45 Hz to 65 Hz | 1 A to 2 A | 46 μ A/A + 20 μ A | |
| 65 Hz to 850 Hz | 1 A to 2 A | 61 μ A/A + 40 μ A | |
| Equipment to Output AC Current (at the listed frequencies) ^F | | | |
| 16 Hz to 45 Hz | 2 A to 5 A | 64 μ A/A + 100 μ A | |
| 45 Hz to 65 Hz | 2 A to 5 A | 49 μ A/A + 50 μ A | |
| 65 Hz to 850 Hz | 2 A to 5 A | 64 μ A/A + 100 μ A | |
| Equipment to Output AC Current (at the listed frequencies) ^F | | | |
| 16 Hz to 45 Hz | 5 A to 10 A | 65 μ A/A + 200 μ A | |
| 45 Hz to 65 Hz | 5 A to 10 A | 49 μ A/A + 100 μ A | |
| 65 Hz to 850 Hz | 5 A to 10 A | 65 μ A/A + 200 μ A | |
| Equipment to Output AC Current (at the listed frequencies) ^F | | | |
| 16 Hz to 45 Hz | 10 A to 21 A | 69 μ A/A + 400 μ A | |
| 45 Hz to 65 Hz | 10 A to 21 A | 49 μ A/A + 200 μ A | |
| 65 Hz to 850 Hz | 10 A to 21 A | 69 μ A/A + 400 μ A | |

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| Equipment to Output AC Current (at the listed frequencies) ^F | | | Fluke 6105A opt 80A TESCO WI: WI-19-10-029; Z540.1 |
| 40 Hz to 45 Hz | 21 A to 50 A | 74 μ A/A + 1 000 μ A | |
| 45 Hz to 65 Hz | 21 A to 50 A | 49 μ A/A + 500 μ A | |
| 65 Hz to 850 Hz | 21 A to 50 A | 74 μ A/A + 1 000 μ A | |
| Equipment to Output AC Current (at the listed frequencies) ^F | | | |
| 40 Hz to 450 Hz | 50 A to 80 A | 106 μ A/A + 2 800 μ A | |
| 450 Hz to 850 Hz | 50 A to 80 A | 118 μ A/A + 2 800 μ A | HP 3325A opt. WI-00-10-010 |
| Equipment to Output AC Sinwave (at the listed frequencies) ^F | | | |
| 0.001 Hz to 100 Hz | 0.1 V to 3.535 Vrms | 3.76 mV/V | |
| 100 Hz to 100 kHz | 0.1 V to 3.535 Vrms | 2.62 mV/V | |
| Equipment to Output AC Squarewave (at the listed frequencies) ^F | | | |
| 0.001 Hz to 100 Hz | 0.1 V to 5 Vrms | 2.15 mV/V | |
| 100 Hz to 100 kHz | 0.1 to 5 Vrms | 4.5 mV/V | |
| Equipment to Output AC Trianglewave (at the listed frequencies) ^F | | | |
| 0.001 Hz to 100 Hz | 0.1 V to 2.88 Vrms | 1.31 mV/V | |
| 0.01 Hz to 1.9 kHz | 0.1 V to 2.88 Vrms | 1.667 mV/V | |
| 1.9 k Hz to 10 kHz | 0.1 V to 2.88 Vrms | 0.15 mV/V | |
| Equipment to Generate AC Frequency ^F | 0.1 Hz to 20 MHz | 2.3 μ Hz/Hz | |
| Equipment to Output AC High Voltage (at the listed frequencies) ^F | | | 1G2-S8 WI-00-10-004 |
| 60 Hz | 1 000 Vrms to 4 200 Vrms | 0.12 mV/V | |
| 60 Hz | 4 200 Vrms to 4 800 Vrms | 0.37 mV/V | |
| 60 Hz | 4 800 Vrms to 8 400 Vrms | 0.14 mV/V | |
| 60 Hz | 8 400 Vrms to 14 400 Vrms | 0.16 mV/V | |
| Equipment to Output AC High Current (at the listed frequencies) ^F | | | GCT-1-S4 WI-19-10-021 |
| 60 Hz | 1 A to 6 000 A | 46.2 μ A/A | |



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| Equipment to Generate DC Voltage ^F | 0.1 μ V to 0.019 99 V | 5.68 μ V/V + 5 μ V | Fluke 5100B opt 3, WI-00-10-030 |
| | > 0.01999 V to 0.199 9 V | 2.58 μ V/V + 5 μ V | |
| | > 0.1999 V to 1.999 V | 11.8 μ V/V + 5 μ V | |
| | > 1.999V to 199.9 V | 16.4 μ V/V + 5 μ V | |
| | > 199.9 V to 1 000 VDC | 31.6 μ V/V + 5 μ V | |
| Equipment to Generate AC Voltage ^F | 0.1 μ V to 1 000V 50 Hz to 1 kHz | 0.024 4 % + 50 μ V | |
| | 0.1 μ V to 1 000V 1 k Hz to 10k Hz | 0.032 % +50 μ V | |
| | 0.1 μ V to 1 000V >10 k Hz to 50 k Hz | 0.044 6 % + 50 μ V | |
| | | | |
| Equipment to Generate Resistance ^F | 1 Ω to 10 Ω | 0.004 56 % | |
| | 10 Ω to 100 Ω | 0.005 66 % | |
| | 100 Ω to 1 k Ω | 0.000 756 % | |
| | 1 k Ω to 100 k Ω | 0.001 97 % | |
| | 100 k Ω to 10 M Ω | 0.005 7 % | |
| Equipment to Generate DC Current ^F | 10 μ A to 0.199 999 mA | 21.6 μ A + 0.02 μ A | |
| | > 0.199 999 mA to 1.999 99 mA | 18.9 μ A + 0.02 μ A | |
| | > 1.999 99 mA to 19.999 9 mA | 38.2 μ A + 0.02 μ A | |
| | > 19.999 9 mA to 199.999 mA | 16.2 μ A + 0.02 μ A | |
| | > 199.999 mA to 1.999 99 A | 86.6 μ A + 0.02 μ A | |
| Equipment to Generate AC Current ^F | 10 μ A to 0.2 mA 50 Hz to 1 kHz | 842 μ A/A +0.02 μ A | |
| | >0.2 mA to 2 mA 50 Hz to 1 kHz | 936 μ A/A +0.02 μ A | |
| | >2 mA to 20 mA 50 Hz to 1 kHz | 864 μ A/A +0.02 μ A | |
| | >20 mA to 200 mA 50 Hz to 1 kHz | 188 μ A/A +0.02 μ A | |
| | 200 mA to 1.999 99A 50 Hz to 1 kHz | 636 μ A/A +0.02 μ A | |
| | | | |
| Equipment to Generate Capacitance ^F | 0.000 01 μ F to 10 μ F @ 1 kHz | 20 nF/ μ F | IET CS-301, WI-00-10-031 |
| | >10 μ F to 99.999 9 μ F @ 1 kHz | 40 nF/ μ F | |



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|--|---|--|--|---|
| Equipment to Output Frequency ^F | 16 Hz to 850 Hz | 50 μ Hz/Hz + 10 μ Hz/Hz of range | Fluke 6105A opt 80A TESCO WI: WI-19-10-029; Z540.1 | |
| Equipment to Output DC Voltage ^F | 0 V to 11.5 V | 91 μ V/V + 2 mV | | |
| | 11.5 V to 22.5 V | 91 μ V/V + 4 mV | | |
| | 22.5 V to 45 V | 91 μ V/V + 8 mV | | |
| | 45 V to 90 V | 91 μ V/V + 16 mV | | |
| | 90 V to 180 V | 91 μ V/V + 32 mV | | |
| | 180 V to 325 V | 92 μ V/V + 60 mV | | |
| | 325 V to 504 V | 92 μ V/V + 100 mV | | |
| Equipment to Output DC Current ^F | 0.01 A to 0.25 A | 89 μ A/A + 25 μ A | | |
| | 0.25 A to 0.5 A | 89 μ A/A + 50 μ A | | |
| | 0.5 A to 1 A | 89 μ A/A + 100 μ A | | |
| | 1 A to 2 A | 89 μ A/A + 200 μ A | | |
| | 2 A to 5 A | 89 μ A/A + 500 μ A | | |
| | 5 A to 10 A | 89 μ A/A + 1 000 μ A | | |
| Equipment to Generate AC Current ^F (at the listed frequencies) | | | | Fluke 9100-200 & Fluke 5100B, WI-00-10-031 |
| 50 Hz | 1 A to 200 A | 242 μ A/A | | |
| 60 Hz | 1 A to 200 A | 244 μ A/A | | |
| 400 Hz | 1 A to 200 A | 310 μ A/A | | |
| Equipment to Generate AC Current ^F (at the listed frequencies) | | | | |
| 50 Hz | >200 A to 1 000 A | 316 μ A/A | | |
| 60 Hz | >200 A to 1 000 A | 290 μ A/A | | |
| 400 Hz | >200 A to 1 000 A | 350 μ A/A | | |
| Equipment to Measure Frequency ^F | 1 Hz to 40 Hz | 500 μ Hz/Hz | Agilent 3458A opt 001 & opt 002 TESCO WI: WI-19-10-029; Z540.1 | |
| | 40 Hz to 10 MHz | 100 μ Hz/Hz | | |
| Equipment to Measure DC Voltage ^F | 0.01 μ V to 100 mV | 4 μ V/V + 2 μ V/V of range | | |
| | 100 mV to 1 V | 4 μ V/V + 0.3 μ V/V of range | | |
| | 1 V to 10 V | 4 μ V/V + 0.05 μ V/V of range | | |
| | 10 V to 100 V | 5 μ V/V + 0.3 μ V/V of range | | |
| | 100 V to 1 000 V | 5 μ V/V + 0.1 μ V/V of range | | |

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| Equipment to Measure DC Current ^F | 0.01 nA to 100 nA | 30 μ A/A + 400 μ A/A of range | Agilent 3458A opt 001 & opt 002 TESCO WI: WI-19-10-029; Z540.1 |
| | 100 nA to 1 μ A | 20 μ A/A + 40 μ A/A of range | |
| | 1 μ A to 10 μ A | 20 μ A/A + 10 μ A/A of range | |
| | 10 μ A to 100 μ A | 20 μ A/A + 8 μ A/A of range | |
| | 100 μ A to 1 mA | 20 μ A/A + 5 μ A/A of range | |
| | 1 mA to 10 mA | 20 μ A/A + 5 μ A/A of range | |
| | 10 mA to 100 mA | 35 μ A/A + 5 μ A/A of range | |
| | 100 mA to 1 A | 600 μ A/A + 10 μ A/A of range | |
| Equipment to Measure DC Resistance ^F | 0.01 $\mu\Omega$ to 10 Ω | 15 $\mu\Omega/\Omega$ + 5 $\mu\Omega/\Omega$ of range | |
| | 10 Ω to 100 Ω | 12 $\mu\Omega/\Omega$ + 5 $\mu\Omega/\Omega$ of range | |
| | 100 Ω to 1 k Ω | 10 $\mu\Omega/\Omega$ + 0.5 $\mu\Omega/\Omega$ of range | |
| Equipment to Measure DC Resistance ^F | 1 k Ω to 10 k Ω | 10 $\mu\Omega/\Omega$ + 0.5 $\mu\Omega/\Omega$ of range | Agilent 3458A opt 001 & opt 002 TESCO WI: WI-19-10-029; Z540.1 |
| | 10 k Ω to 100 k Ω | 10 $\mu\Omega/\Omega$ + 0.5 $\mu\Omega/\Omega$ of range | |
| | 100 k Ω to 1 M Ω | 15 $\mu\Omega/\Omega$ + 2 $\mu\Omega/\Omega$ of range | |
| | 1 M Ω to 10 M Ω | 50 $\mu\Omega/\Omega$ + 10 $\mu\Omega/\Omega$ of range | |
| | 10 M Ω to 100 M Ω | 500 $\mu\Omega/\Omega$ + 10 $\mu\Omega/\Omega$ of range | |
| | 100 M Ω to 1 G Ω | 5 000 $\mu\Omega/\Omega$ + 10 $\mu\Omega/\Omega$ of range | |
| AC Energy - Watt-Hour Measure ^F | Up to 5 MHz | 10 μ Wh/VAh + 100 nWh | Fluke 6105A TESCO WI: WI-19-10-029 Z540.1 |
| Equipment to Measure AC Current (at the listed frequencies) ^F | | | Agilent 3458A opt 001 & opt 002 TESCO WI: WI-19-10-029; Z540.1 |
| 10 Hz to 20 Hz | 0 μ A to 100 μ A | 4 000 μ A/A + 0.03 % of range | |
| 20 Hz to 45 Hz | 0 μ A to 100 μ A | 1 500 μ A/A + 0.03 % of range | |
| 45 Hz to 100 Hz | 0 μ A to 100 μ A | 600 μ A/A + 0.03 % of range | |
| 100 Hz to 5 kHz | 0 μ A to 100 μ A | 600 μ A/A + 0.03 % of range | |
| Equipment to Measure AC Current (at the listed frequencies) ^F | | | |
| 10 Hz to 20 Hz | 100 μ A to 100 mA | 4 000 μ A/A + 0.22 % of range | |
| 20 Hz to 45 Hz | 100 μ A to 100 mA | 1 500 μ A/A + 0.02 % of range | |
| 45 Hz to 100 Hz | 100 μ A to 100 mA | 600 μ A/A + 0.03 % of range | |
| 100 Hz to 5 kHz | 100 μ A to 100 mA | 300 μ A/A + 0.02 % of range | |
| 5 kHz to 20 kHz | 100 μ A to 100 mA | 600 μ A/A + 0.02 % of range | |
| 20 kHz to 50 kHz | 100 μ A to 100 mA | 4 000 μ A/A + 0.04 % of range | |
| 50 kHz to 100 kHz | 100 μ A to 100 mA | 5 500 μ A/A + 0.15 % of range | |



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| Equipment to Measure AC Current (at the listed frequencies) ^F | | | Agilent 3458A opt 001 & opt 002 TESCO WI: WI-19-10-029; Z540.1 |
| 10 Hz to 20 Hz | 100 mA to 1 A | 4 000 μ A/A + 0.22 % of range | |
| 20 Hz to 45 Hz | 100 mA to 1 A | 1 500 μ A/A + 0.02 % of range | |
| 45 Hz to 100 Hz | 100 mA to 1 A | 600 μ A/A + 0.02 % of range | |
| 100 Hz to 5 kHz | 100 mA to 1 A | 1 000 μ A/A + 0.02 % of range | |
| Equipment to Measure AC Voltage (at the listed frequencies) ^F | | | HP 3458A Opt 001 & 002, WI-00-10-032 |
| 1 Hz to 1 kHz | 100 μ V to 120 V | 20.8 μ V/ V | |
| 1 kHz to 20 kHz | 100 μ V to 120 V | 90 μ V/ V | |
| Equipment to Measure AC Voltage (at the listed frequencies) ^F | | | |
| >20 k Hz to 50 k Hz | 100 μ V to 120 V | 208 μ V/ V | |
| >50 k Hz to 100 k Hz | 100 μ V to 120 V | 1.41 mV/ V | |
| >100 k Hz to 300 k Hz | 100 μ V to 120 V | 9.6 mV/ V | |
| Equipment to Measure AC Voltage (at the listed frequencies) ^F | | | |
| >300 k Hz to 1 M Hz | > 12 m V to 12 V | 9.88 mV/ V | |
| Equipment to Measure AC Voltage (at the listed frequencies) ^F | | | |
| 1 Hz to 1 k Hz | > 120 V to 1 000 V | 508 μ V/ V | |
| >1 k H to 20 k Hz | > 120 V to 1 000 V | 716 μ V/ V | |
| >20 k Hz to 50 k Hz | > 120 V to 1 000 V | 141 μ V/ V | |
| >50 k Hz to 100 k Hz | > 120 V to 1 000 V | 348 μ V/ V | |
| Equipment to Measure High AC Voltage (at the listed frequencies) ^F | | | Fluke 80K-6 & HP 3458A, WI-00-10-034 |
| 60 Hz | 1 000 V to 4 800 V | 3.1 mV/V | |
| 60 Hz | 4 800 V to 14 400 V | 0.03 V/V | |
| 60 Hz | 14 00 V to 40 000 V | 0.02 V/V | Fluke 80K-15 & HP 3458A WI-00-10-034 |
| Temperature Calibration, Equipment used with Thermocouple Type K ^{F0} | -190 °C to 1 350 °C | (0.13°mK/°C·(x) + 624.7) °mK | Keithley 2015 WI-00-10-011 |



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|---|---|--|--|
| Equipment to Measure Hi AC Voltage Phase (at the listed frequencies) ^F | | | |
| 60 Hz | 0.1 V to 14 400 V | 0.170 169 64 mR | 1G2-S8, & KACT-V WI-19-10-021 |
| Equipment to Measure Hi AC Current Amplitude (at the listed frequencies) ^F | | | |
| 60 Hz | 1 A to 5 000 A | 0.08 mA/A | GCT-1-S4 & LFR 6/60/500, WI-19-10-021 |
| Equipment to Measure Hi AC Current Ratio Error (at the listed frequencies) ^F | | | |
| 60 Hz | 1A to 5 000 A | 0.047 6 mA/A | GCT-1-S4 & & KATC-C, WI-19-10-021 |
| Equipment to Measure Hi AC Current Phase Angle (at the listed frequencies) ^F | | | |
| 60 Hz | 1 A to 5 000 A | 0.189 077 mR | |

Time and Frequency

| MEASURED INSTRUMENT, QUANTITY OR GAUGE | RANGE OR NOMINAL DEVICE SIZE AS APPROPRIATE | CALIBRATION AND MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY (\pm) | CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED |
|---|---|--|--|
| Equipment to Measure Frequency ^F | 1 Hz to 1 MHz | 6.1 μ Hz/Hz | Agilent 54181A WI-00-10-012 |
| | 1 MHz to 100 MHz | 8.4 mHz/Hz | |
| | 100 MHz to 200 MHz | 15.7 mHz/Hz | |
| | 200 MHz to 225 MHz | 19.1 mHz/Hz | |
| | 225 MHz to 3 GHz | 16.3 mHz/Hz | |
| | 0.01 Hz to 3 GHz | 2.1 μ Hz / Hz | Agilent 54181A WI-00-10-012 |

- 1 The CMC (Calibration and Measurement Capability) stated for calibrations included on this scope of accreditation represents the smallest measurement uncertainty attainable by the laboratory when performing a more or less routine calibration of a nearly ideal device under nearly ideal conditions. It is typically expressed at a confidence level of 95 % using a coverage factor k (usually equal to 2). The actual measurement uncertainty associated with a specific calibration performed by the laboratory will typically be larger than the CMC for the same calibration since capability and performance of the device being calibrated and the conditions related to the calibration may reasonably be expected to deviate from ideal to some degree.
- 2 The laboratories range of calibration capability for all disciplines for which they are accredited is the interval from the smallest calibrated standard to the largest calibrated standard used in performing the calibration. The low end of this range must be an attainable value for which the laboratory has or has access to the standard referenced. Verification of an indicated value of zero in the absence of a standard is common practice in the procedure for many calibrations but by its definition it does not constitute calibration of zero capacity.
- 3 The presence of a superscript F means that the laboratory performs calibration of the indicated parameter at its fixed location. Example: Outside Micrometer^F would mean that the laboratory performs this calibration at its fixed location.