National Voluntary Laboratory Accreditation Program

CALIBRATION LABORATORIES **NVLAP LAB CODE 201046-0**

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

Fluke Calibration – Wuhu Laboratory	**Fields of Calibration**
Fluke/Anhui SHIFU Instrument No. 66 LONGTENG Road, JIUJIANG Economic Development Zone Wuhu, Anhui, 241000 China Mr. Noah Guan Phone: +86 18505535278 E-mail: noah.guan@fluke.com URL: www.flukecal.com	DC/Low Frequency Electromagnetics Thermodynamic

CALIBRATION AND MEASUREMENT CAPABILITIES (CMC) [Notes 1,2]

Measured Parameter or Device Calibrated	**Range**	**Expanded Uncertainty (k=2)** [Notes 3, 5]	**Remarks**
DC/LOW FREQUENCY ELECTROMAGNETICS			
DC CURRENT and RESISTANCE (20/E05)			
DC Current – Source	0 mA to 22 mA > 22 mA to 24 mA	11 µA/A + 0.6 µA 1.5 µA	Fluke 5730A
DC VOLTAGE (20E/06)			
DC Voltage – Source	0 V to 30 V	0.61 mV	Fluke 5730A
THERMODYNAMIC			
PRESSURE (20/T05)			
Pressure, Pneumatic Gauge Mode	> 0 kPa to 380 kPa > 380 kPa to 3.8 MPa > 3.8 MPa to 7.6 MPa > 7.6 MPa to 20 MPa > 20 MPa to 103 MPa > 0 kPa to 10.3 kPa > 10.3 kPa to 41.34 kPa > 41.34 kPa to 103.4 kPa > 103.4 kPa to 248.0 kPa	0.0020 % + 0.10 Pa 0.0019 % + 1.0 Pa 0.0022 % + 2.0 Pa 0.0037 % + 3.0 Pa 0.0037 % + 15 Pa 0.0034 % + 0.66 Pa 0.0057 % + 0.41 Pa 0.0057 % + 1.0 Pa 0.0057 % + 2.5 Pa	PG7601 with AMH PG7202 with AMH 7252i Gauge mode

2023-05-31 through 2024-06-30
Effective dates

For the National Institute of Standards and Technology

CALIBRATION LABORATORIES **NVLAP LAB CODE 201046-0**

CALIBRATION AND MEASUREMENT CAPABILITIES (CMC) [Notes 1,2]

Measured Parameter or Device Calibrated	Range	Expanded Uncertainty (k=2) [Notes 3, 5]	Remarks
	> 248.0 kPa to 689.0 kPa	0.0059 % + 7.1 Pa	
	> 689.0 kPa to 2.067 MPa	0.0057 % + 21 Pa	
	> 2.067 MPa to 3.45 MPa	0.0057 % + 34 Pa	
	> 3.45 MPa to 6.89 MPa	0.0058 % + 69 Pa	
	> 6.89 MPa to 10.34 MPa	0.0065 % + 165 Pa	
Negative Gauge Mode	0 kPa to -7 kPa	0.14 Pa	Ruska 2465
	< -7 kPa to -100 kPa	0.0019 % + 0.05 Pa	
	0 kPa to -41.34 kPa	0.0026 % + 5.2 Pa	7252i Negative Gauge
	<-41.34 kPa to -100 kPa	0.0026 % + 5.3 Pa	
Bi-Directional Gauge Mode	0 Pa to 750 Pa	0.0077 % + 0.051 Pa [Note 7]	Ruska 7250LP
	> 750 Pa to 2.9 kPa	0.0091 % [Note 7]	
	> 2.9 kPa to 7.5 kPa	0.0092 % [Note 7]	
Absolute Mode	0 Pa to 133 Pa	0.35 % + 0.15 Pa	Capacitance Diaphragm Transducer
	1.4 kPa to 140 kPa	0.0020 % + 3.5 Pa	PG7601 with AMH
	> 140 kPa to 3.8 MPa	0.0019 % + 3.7 Pa	
	> 3.8 MPa to 7.6 MPa	0.0021 % + 4.0 Pa	
	> 7.6 MPa to 20 MPa	0.0037 % + 10 Pa	PG7202 with AMH
	> 20 MPa to 103 MPa	0.0037 % + 18 Pa	
	> 0 kPa to 25.84 kPa	0.0027 % + 2.1 Pa	7252i Absolute mode
	> 25.84 kPa to 103.4 kPa	0.0057 % + 1.7 Pa	
	> 103.4 kPa to 248.0 kPa	0.0057 % + 2.8 Pa	
	> 248.0 kPa to 689.0 kPa	0.0059 % + 7.1 Pa	
END			

2023-05-31 through 2024-06-30
Effective dates

For the National Institute of Standards and Technology

CALIBRATION LABORATORIES **NVLAP LAB CODE 201046-0**

Notes

Note 1: A Calibration and Measurement Capability (CMC) is a description of the best result of a calibration or measurement (result with the smallest uncertainty of measurement) that is available to the laboratory's customers under normal conditions, when performing more or less routine calibrations of nearly ideal measurement standards or instruments. The CMC is described in the laboratory's scope of accreditation by: the measurement parameter/device being calibrated, the measurement range, the uncertainty associated with that range (see note 3), and remarks on additional parameters, if applicable.

Note 2: Calibration and Measurement Capabilities are traceable to the national measurement standards of the U.S. or to the national measurement standards of other countries and are thus traceable to the internationally accepted representation of the appropriate SI (Système International) unit.

Note 3: The uncertainty associated with a measurement in a CMC is an expanded uncertainty with a level of confidence of approximately 95 %, typically using a coverage factor of $k = 2$. However, laboratories may report a coverage factor different than $k = 2$ to achieve the 95 % level of confidence. Units for the measurand and its uncertainty are to match. Exceptions to this occur when marketplace practice employs mixed units, such as when the artifact to be measured is labeled in non-SI units and the uncertainty is given in SI units (Example: 5 lb weight with uncertainty given in mg).

Note 3a: The uncertainty of a specific calibration by the laboratory may be greater than the uncertainty in the CMC due to the condition and behavior of the customer's device and specific circumstances of the calibration. The uncertainties quoted do not include possible effects on the calibrated device of transportation, long term stability, or intended use.

Note 3b: As the CMC represents the best measurement results achievable under normal conditions, the accredited calibration laboratory shall not report smaller uncertainty of measurement than that given in a CMC for calibrations or measurements covered by that CMC.

Note 3c: As described in Note 1, CMCs cover calibrations and measurements that are available to the laboratory's customers under *normal conditions.* However, the laboratory may have the capability to offer special tests, employing special conditions, which yield calibration or measurement results with lower uncertainties. Such special tests are not covered by the CMCs and are outside the laboratory's scope of accreditation. In this case, NVLAP requirements for the labeling, on calibration reports, of results outside the laboratory's scope of accreditation apply. These requirements are set out in Annex A.5 of NIST Handbook 150, Procedures and General Requirements.

Note 4: Uncertainties associated with field service calibration may be greater as they incorporate on-site environmental contributions, transportation effects, or other factors that affect the measurements. (This note applies only if marked in the body of the scope.)

Note 5: Values listed with percent (%) are percent of reading or generated value unless otherwise noted.

Note 6: NVLAP accreditation is the formal recognition of specific calibration capabilities. Neither NVLAP nor NIST guarantee the accuracy of individual calibrations made by accredited laboratories.

Note 7: Uncertainty applies to negative equivalent pressures.

2023-05-31 through 2024-06-30
Effective dates

For the National Institute of Standards and Technology