



CERTIFICATE OF ACCREDITATION

ANSI-ASQ National Accreditation Board

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

This is to certify that

Signal Instrumentation cc
Unit 12, Van Biljon Park, 1 Winelands Close
Stikland, 7530, Western Cape, South Africa

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

ISO/IEC 17025:2005

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.

L2423

Certificate Number


ANAB Approval

Certificate Valid: 07/13/2018-07/15/2021
Version No. 002 Issued: 07/13/2018



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 April 2017).

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

Signal Instrumentation cc
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CALIBRATION

Valid to: **July 15, 2021**

Certificate Number: **L2423**

Electrical – DC/Low Frequency

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
DC Current – Source	(0 to 20) mA (20 to 99) mA	0.005 4 mA 0.015 % of reading + 0.1mA	Process Calibrator
DC Current – Measure	(0 to 20) mA (20 to 200) mA	0.004 3 mA 0.064 mA	Process Calibrator
Resistance – Source	(0 to 500) Ω	0.24 Ω	Process Calibrator
Resistance - Measure	(0 to 500) Ω	0.24 Ω	Process Calibrator
RTD Temperature Simulation	PT 100 – 385 (-200 to 800) °C	0.82 °C	Process Calibrator
DC Voltage – Source	(0 to 200) mV (200 to 2 000) mV (2 000 to 20 000) mV	0.053 mV 0.54 mV 5.2 mV	Process Calibrator
DC Voltage – Measure	(0 to 200) mV (200 to 2 000) mV (2 000 to 20 000) mV	0.053 mV 0.54 mV 5.2 mV	Process Calibrator
Electrical Temperature Simulation	Type K (-200 to 1 370) °C Type J (-210 to 1 200) °C Type R/S (-50 to 1 760) °C	0.61 °C 0.6 °C 0.81 °C	Process Calibrator



Mass and Mass Related

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Vacuum	(-95 to 0) kPa	0.24 kPa	Standard Digital Pressure CONST 211
Pneumatic Gauge Pressure	(0 to 2) MPa (2 to 4) MPa	0.83 kPa 0.94 kPa	Standard Digital Pressure CONST 211
Hydraulic Gauge Pressure	(0 to 60) MPa	32 kPa	Standard Digital Pressure Additel
Scales and Balances (Resolution – 0.001 kg)	(0 to 2) kg (2 to 5) kg	1.7 g 3.4 g	OIML Class M1 Mass Pieces
	(5 to 20) kg	3.6 g	OIML Class M1& M2 Mass Pieces
	(20 to 200) kg	35 g	OIML Class M2 Mass Pieces

Thermodynamic

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Humidity – Source	(33, 53, 75) %RH @ (23 ± 5) °C	1.5 %RH	Reference Hygrometer
Humidity Uniformity Surveys ¹ - Chambers, Cold rooms, Incubators	(11 to 90) %RH	3.5 %RH	Reference Dataloggers
IR Thermometry Measurement Equipment	(50 to 200) °C (200 to 500) °C	2 °C 5 °C	Portable IR Calibrator (8 to 14) μm, ε = 0.95
Digital and Mechanical Thermometry systems	0 °C	0.071 °C	Ice Point with Reference PRT
	-21 °C	0.32 °C	H ₂ O/NaCl slurry with PRT
	(-30 to 125) °C	0.11 °C	Reference PRT and Micro Bath
	(50 to 150) °C (150 to 600) °C	0.37 °C (0.15% of reading + 0.29 °C)	Dryblock calibrator
Liquid in Glass Thermometers (Partial immersion)	(-30 to 150) °C	0.3 °C	Reference PRT and Baths



Thermodynamic

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
System Accuracy Test – Chamber, Cold rooms, Incubators, Autoclaves and Retorts	(-30 to 150) °C	0.35 °C	Reference PRT
Temperature Uniformity Surveys – Chambers, Cold rooms, Incubators, Autoclaves and Retorts	(25 to 80) °C	0.52 °C	Reference Dataloggers

Time and Frequency

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Frequency – Source or Measure	(1 to 200) Hz (200 to 2 000) Hz (2 000 to 20 000) Hz	0.58 Hz 0.66 Hz 1.7 Hz	Process 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.
2. This scope is formatted as part of a single document including Certificate of Accreditation No. L2423.



 Vice President

