

Calibration Certificate No.: TL/022/1068.2.1
 ULR No.: CC284022000007063F

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Discipline: Thermal

M/S NATIONAL CENTRE FOR QUALITY CALIBRATION 4, ABHISHREE CORPORATE PARK, NR SWAGAT BUNGALOWS,BRTS, ISKCON-AMBLI ROAD, AMBLI AHMEDABAD-380058, GUJARAT, INDIA	J.O.NO.	: T/222/2/21130
	Received Date	: 25/09/2022
	Calibration Date	: 26/09/2022
	Next Cali. Due On	: 25/09/2023
	Issue Date	: 27/09/2022

Sample Description :

Calibration Required At	: -196, -80, 0, 100, 200 & 400°C
Item	: PT100X1, SIMPLEX, 4 WIRE RTD WITH INDICATOR
Sensor Sr. No. & ID. No.	: 23000299 & NCQC/T-235
Sensor Make/Model	: TEMPESENS
Indi. Sr. No. & ID. No.	: T0064 & NCQC/T-236
Indi. Make & Model	: TEMPESENS & TEMPMET 09-02
Length & Dia	: 450MM & 4MM
Resolution	: 0.001°C
Identification of Calibration	: INITIAL
Accuracy	: CLASS A
Range	: -196 TO 400°C
Location	: AT Lab
Condition of item	: GOOD

Calibration Procedure : The UUC was allowed to be stable at specified temperature points. The reading of Standard and UUC was recorded. This Certificate Format No. F-LAB-6. The report provides the reading and deviation. As per work instruction no. WI-LAB-16 Temperature (in °C) against RTD reading (in Ohms) are calculated by using ASTM E-1137/E1137M-04. Minimum Immersion depth for RTD is 100mm.

The UUC has been compared with the following working standards of sensor & measuring instrument.

Standards	Traceable To	Certificate No.	Valid Up to
SSPRT	TEMPESENS, UDAIPUR	TL/022/579.3.1	26.05.2023
PRECISION THERMOMETER	YMPL, UDAIPUR	YMPL/335943/126362	06.07.2023
LN2 APP			
CALSYS -80/50			
CALSYS 300			
CALSYS 650			

NCQC
 Valid up to 25/09/2023
 Reviewed *[Signature]*

The Standards used for calibration is traceable to National / International Standard. The results of calibration are as under :

As Found

Sr. No.	Standard Sensor °C	UUC °C	Correction Factors °C	Expanded uncertainty (±°C)
1	-195.368	-195.705	0.337	0.10
2	-79.651	-79.881	0.230	0.10
3	0.128	0.011	0.117	0.10
4	99.846	99.604	0.242	0.10
5	199.645	199.294	0.351	0.20
6	399.532	399.036	0.496	0.20

As Left : No Adjustment done, As found data is left as it is
 ** Correction Factors = Standard Readings - UUC Readings

Temperature Scale: ITS - 90

Ambient Temp. : 25±2°C

Relative Humidity : 50±20%RH

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[Signature]
 Calibrated By

[Signature]
 Checked By

[Signature]
 Certified By

NCQC System Certificate No. 435

Note:

- The calibration results reported in this certificate are valid at the time of and under the stated condition of measurement for the particular sample.
- The report shall not be reproduced except in full, without written permission of the laboratory
- Coverage factor "k" = 2 at approx 95.45% confidence level.
- Next Calibration Due Date mentioned as per customer requirement