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**MASTERTECH
SYSTEMS**
WHEN QUALITY MATTERS

CALIBRATION CERTIFICATE

Certificate No. :- 2223/0211/08-02 **ULR No.** :- CC291123 000008019 F

Date of Calibration :- 11-Feb-2023 **Calibration Due Date** :- 10-Feb-2024

1.Customer Name & Address : **SRF No.** :- 2223/0211/08

Health Horizon Diagnostics **Date of Received** :- 11-Feb-2023

Varun Capital, Flat No.401 & 402, **Cal. Cert. Issue Date** :- 14-Feb-2023

CTS No.364,365/13,FP No.713,714/13,Shivaji Na **Condition of UUC** :- OK

Pune-411005 **Location of calibration** :- In Lab

Calibration Procedure No. :- MTS/TH/WI-03

Ref.IS Used :- IS 2848

2.Environmental Conditions: **Temperature:** 23.3 °C **Relative Humidity:** 57 % RH

3. Description of UUC

Name :- Thermometer **Range** :- -30 to 300 Deg C

Make :- Multi **Resolution** :- 0.1 Deg C

I.D No. :- HHD/IN/RF/T-02 **Model/Sr.No.** :- NA

Type :- Digital **Location** :- —

Accuracy :- NA

4. Reference Standards used for calibration:

Name :- 4- Wire RTD Sensor With Indicator R Type Thermocouple With Indicator

Make / Model :- Tempens, 4 Wire/Tempmet Tempens, R Type/Tempmet

I.D No./Sr. No. :- MTS/TIS-01/867,0042 MTS/TIS-02 / 1296,0042

Certificate No. :- NI/2206/016/001 FCS/2205/0603/001

Calibration Validity :- 05-06-2023 02-06-2023

Certified By :- Nishitronics (CC-2294) Fine Calibration (CC-3378)

Range/Uncertainty :- 250 Deg C./(+/-) 0.09 Deg C. 1200 Deg C./(+/-) 1.9 Deg C.

5. Calibration Results

Sr.No.	Calibration Point Deg C	UUC Reading Deg C	Standard Reading Deg C	Deviation Deg C	Expanded Uncertainty ± Deg C
1	-30	-30.6	-30.28	-0.32	0.28
2	100	101.1	100.22	0.88	0.28
3	300	301.3	300.20	1.10	0.85


- NOTES:**
- The value measured of uuc & standard are mean of 5 reading.
 - The reported uncertainty is the expanded uncertainty in measurement obtained by multiplying the standard uncertainty by coverage factor K=2, which corresponds to a coverage probability of approximately 95.45% for normal distribution
 - This certificate refers only to the particular UUC submitted for calibration. UUC stands for Unit Under Calibration.
 - The calibration results reported in the certificate are valid at the time of and under the stated conditions of measurement.
 - This certificate shall not be reproduced, except in full unless written permission for the publication of an approved abstract has been obtained from "Mastertech Systems" Pune.
 - The Instruments used for calibration are traceable to National/International standards and their calibrations are valid.
 - International Temp. Scale-1990 (ITS-90) is followed during calibration of above instrument.

Calibrated By


Mr. Parshuram Mundhekar
Calibration Engineer



Approved By


Mr. Daulat Shete
Technical Manager

End of Certificate
Calibration services for



**Nishitronics
Instrumentation**

► Service Engineers

► Calibration Services in Industrial Process Control

We work for Customers Satisfaction

CALIBRATION CERTIFICATE

CUSTOMER :- Mastertech Systems Anjani Niketan, Flat No-3, 2nd Floor, Viveknagar, Akurdi, Pune -411035	Page No. :- 1 of 1 ULR No. :- ULR-CC229422000002460F Disciplin :- Thermal calibration Certificate No :- NI/2206/016/001 Date of issue :- 14/06/2022 Date of receipt :- 06/06/2022 Date of calibration :- 06/06/2022 Cal. Req. No. :- NI/2206/016/001 Next Due Date :- 05/06/2023 Parameter :- Temperature Calibration method no. :- NI / CP / T / 01
Amb. Temp :- $25 \pm 2^{\circ}\text{C}$ Rh. :- 45 to 75 %RH Location of calibration :- LAB Characteristic and :- OK Condition of items	

Details of Items

Name :- 4 -Wire RTD Sensor With Indicator	Sr.No.(Sensor) :- 867
Make (Indicator) :- Tempens	Range :- -30 to 300°C
Make (Sensor) :- Tempens	L.C. :- 0.01°C
Model (Indicator) :- Tempmet	Type :- PT 100
ID No. (Indicator) :- MTS/TIS-01	
Sr.No. (Indicator) :- 0042	

Details of Equipment used for Calibration

Name :- SSPRT WITH INDICATOR
Calibrated by :- Nishitronics Instrumentation
Certificate No. :- NI/INH/PRT/200322/001
Validity :- 19/03/2023

OBSERVATION

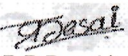
Cal. Point $^{\circ}\text{C}$	Std. Reading $^{\circ}\text{C}$	UUC Reading $^{\circ}\text{C}$	Error In $^{\circ}\text{C}$	Expanded Uncertainty
-30	-30.068	-29.98	0.088	$\pm 0.06^{\circ}\text{C}$
0	0.031	0.18	0.149	$\pm 0.06^{\circ}\text{C}$
100	99.869	100.06	0.191	$\pm 0.09^{\circ}\text{C}$
200	199.858	200.08	0.222	$\pm 0.09^{\circ}\text{C}$
250	249.741	250.03	0.289	$\pm 0.09^{\circ}\text{C}$

The reported measurement uncertainty is estimated at a level of confidence of approximately 95 % with a coverage factor $k = 2$.

Remarks :-

- 1) Result are related only to the item calibrated .
- 2) This certificate refers only to the particular items submitted for calibration .
- 3) This certificate shall not be reproduced except in full without our prior permission in writing.
- 4) The calibration results reported in this particular certificate are valid at the time of an under stated condition of measurement.
- 5) Standard used for calibration were traceable to National / International standard.
- 6) Readings given above are as on received condition of an instrument.
- 7) Immersion Depth of UUC was 160 mm in CTB9100 Oil Bath.
- 8) Length of Sensor = 400 mm.
- 9) Diameter of Sensor = 6.5 mm.

Calibrated by


(P.B.Desai)
(Technical Assistant)



Authorized Signatory


(V.B.Hingmire) / (S.B.Hingmire)
(Technical Manager)

Form No. : NI/F/7.8/T/01

Form Rev. No. : 0

Effective Form Date :20/11/2019

Issue No : 03

Issue Date :20/11/2019