Certificate of Calibration

Model Name:	Precision Handheld Thermometer Readout	**Procedure Number:**	ECI 103.1
Model Number:	P795 (System)	**Certificate Number:**	C051414R00
Manufacturer:	Dostmann	**Calibration Date:**	4/18/2024
Serial Number:	79515041200 / 21B24	**Calibration Due:**	4/18/2025
As-Found Condition:	In Tolerance	**Lab Temperature:**	23.0 °C ± 2.0 °C
As-Left Condition:	Same	**Lab RH:**	20.0 %RH to 55 %RH
Customer:	Metlab SAS / Bogota / Colombia	**Customer ID:**	5334817
PO Number:	N/A	**RMA or SO:**	RMA-265294

The instrument described above was calibrated by comparison to laboratory reference standards. The reference standards utilized in the calibration are shown in the table below. The calibration data and measurement uncertainties are shown in the tables on the following page(s) of this certificate. This calibration is traceable to standards maintained at NIST and is in compliance with ISO 17025:2017 and ANSI/NCSL Z540.1. The calibration has been carried out in accordance with the written calibration instruction (procedure) shown above and completed in accordance with the ThermoWorks Quality Manual QPD-001. This certificate applies solely to the instrument identified above and shall not be reproduced, other than in full, without the specific written consent of ThermoWorks, Inc. Calibration certificates without signatures are not valid. This certificate shall not be used to claim product endorsement by the accreditation body.

A note pertaining to measurement uncertainties: The measurement uncertainties provided with the calibration data represent the uncertainties present at the time of calibration. The uncertainty evaluation considers all known, significant, and relevant sources of uncertainty involved in the calibration, including reference measurement, process, and device under test contributions. The uncertainties are calculated in accordance with the methods described in the ISO Guide to the Expression of Uncertainty in Measurement (GUM). This document is available through the BIPM as JCGM 100:2008 and through the NCSL as ANSI/NCSL Z540.2-1997 (R2012).The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor k = 2, providing a coverage probability of approximately 95%.

Reference Standards Used — **Traceable to NIST**

Model Number	Serial Number	Manufacturer	Description	Due Date
1595A	B06025	Fluke	Super-Thermometer	1/4/2025
AM1950	1620490	Accumac	SPRT	3/3/2025
5628	3393	Fluke	Platinum Resistance Thermometer	6/13/2024
5628	0218	Fluke	Platinum Resistance Thermometer	8/1/2024

Calibration performed by:

Ramon A Perez

Approved by:

Adam J Whetton

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CERTIFICATE #4024.01

ThermoWorks

Certificate Number: C051414R00 **Certificate Date: 4/18/2024**

Instrument Specifications	
Parameter	**Stated Accuracy**
Temperature: -200 °C to 850 °C (readout)	±0.025 % of reading (from -200 °C to -50.0 °C) ±0.015 °C (from -50 °C to 199.99 °C) ±0.025 % of reading (from 200 °C to 850.0 °C) (most PT100 probes are limited to 450 °C)

Calibration Data - As Found								
Parameter	**Nominal Value**	**Actual Value**	**DUT Data**	**DUT Error**	**DUT Tolerance**	**Acceptance Tolerance***	**Pass Fail**	**Uncertainty (K = 2)**
CH1, °C	-40.0 °C	-40.024	-40.02	0.00	0.01	0.01	P	0.006
CH1, °C	0.0 °C	0.0276	0.039	0.011	0.015	0.014	P	0.0050
CH1, °C	50.0 °C	50.0329	50.030	-0.003	0.015	0.014	P	0.0060
CH1, °C	100.0 °C	100.0423	100.034	-0.008	0.015	0.014	P	0.0060
CH1, °C	150.0 °C	150.2524	150.260	0.008	0.015	0.013	P	0.0080
CH1, °C	250.0 °C	250.014	250.03	0.02	0.06	0.06	P	0.010
CH1, °C	400.0 °C	399.772	399.72	-0.05	0.10	0.10	P	0.016
Calibration was performed using CH1. New probe has been installed in the unit.								

Calibration Data - As Left								
Parameter	**Nominal Value**	**Actual Value**	**DUT Data**	**DUT Error**	**DUT Tolerance**	**Acceptance Tolerance***	**Pass Fail**	**Uncertainty (K = 2)**
Same	Same	Same	Same	Same	Same	Same	Same	Same
Same	Same	Same	Same	Same	Same	Same	Same	Same
Same	Same	Same	Same	Same	Same	Same	Same	Same
Same	Same	Same	Same	Same	Same	Same	Same	Same
Same	Same	Same	Same	Same	Same	Same	Same	Same
Same	Same	Same	Same	Same	Same	Same	Same	Same
Same	Same	Same	Same	Same	Same	Same	Same	Same

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* The DUT acceptance tolerance is based on the DUT specifications, the measurement uncertainty, the resulting test uncertainty ratio (TUR), and the maximum allowable probability of false accept risk (PFA, assumed to be 2%). In cases where the TUR ≥ 4:1, the acceptance tolerance = the DUT tolerance (referred to as simple acceptance). In cases where the TUR < 4:1, the acceptance limits are reduced by guard bands calculated using method 6 of NCSL Z540.3.