



MICRO PRECISION CALIBRATION PTE LTD
BLOCK 5008 ANG MO KIO AVENUE 5 #07-02/03
TECHPLACE II SINGAPORE 569874
65 67484384



Certificate of Calibration

Date: March 22, 2021

Customer:

GES SINGAPORE PTE LTD
28 MARSILING LANE
SINGAPORE 739152

Cert No. 551220084172300

Work Order #: SG-111017295

MPC Control #:	1Q538RT4WS1P	Serial Number:	1Q538RT4WS1P
Asset ID:	N/A	Department:	N/A
Gage Type:	WIRELESS ENVIRONMENTAL MONITORING	Performed By:	FRANKE DAI
Manufacturer:	UBIBOT	Received Condition:	IN TOLERANCE
Model Number:	WS1 PRO	Returned Condition:	IN TOLERANCE
Size:	N/A	Cal. Date:	March 22, 2021
Temp/RH:	21°C / 50 %	Cal. Interval:	12 MONTHS
Location:	Calibration performed at MPC facility	Cal. Due Date:	March 22, 2022

Calibration Notes:

Performance test passed. See attached data (1 Page).

Standards Used to Calibrate Equipment

I.D.	Description.	Model	Serial	Manufacturer	Cal. Due Date	Traceability #
CC8451	HUMIDITY/TEMP INDICATOR & PROBE	HMI41 / HMP46	V0330143 / V0920024	VAISALA	Sep 14, 2021	551220083824675

Procedures Used in this Event

Procedure Name	Description
MPC-THD-001 Rev. 01	Temperature, Humidity and Dew Point Devices, General, rev01, Jan-21-2020

Calibrating Technician:

Franke Dai

FRANKE DAI

QC Approval:

Jun Calimag

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STATEMENTS OF PASS OR FAIL CONFORMANCE: The uncertainty of measurement has been taken into account when determining compliance with specification. All measurements and test results guard banded to ensure the probability of false-accept does not exceed 2% in compliance with ANSI/NCCL 2540.3-2008 and in case without guard banded the probability of false-accept depending on test uncertainty ratio.

THE CALIBRATION REPORT STATUS:

PASS- Term used when compliance statement is given, and the measurement result is PASS.

PASS+ Term used when compliance statement is given, and the measurement result is conditional passed or PASS².

FAIL- Term used when compliance statement is given, and the measurement result is FAIL.

FAIL+ Term used when compliance statement is given, and the measurement result is conditional failed or FAIL².

REPORT OF VALUE - Term used when reported measurement is not requiring compliance statement in report.

ADJUSTED- When adjustments are made to an instrument which changes the value of measurement from what was measured as found to new value as left.

LIMITED - When an instrument fails calibration but is still functional in a limited manner.

The expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor $k=2$, which for a normal distribution corresponds to a coverage probability of approximately 95%, unless otherwise stated. This calibration report complies with ISO/IEC 17025:2017 and ANSI/NCCL 2540.3. Calibration cycles and resulting due dates were submitted/approved by the customer. Any number of factors may cause an instrument to drift out of tolerance before the next scheduled calibration. Recalibration cycles should be based on frequency of use, environmental conditions and customer's established systematic accuracy. All standards are traceable to SI through the National Institute of Standards and Technology (NIST) and/or recognized national or international standards laboratories. Services rendered include proper manufacture's service instruction and are warranted for no less than thirty (30) days. The information on this report pertains only to the instrument identified, this may not be reproduced in part or in a whole without the prior written approval of the Issuing MP Calibration Laboratory.

Calimag
25.3.21



Calibration Report of Ubibot WS1 Pro Wireless Environmental Monitoring

MPC Control #:	1Q538RT4WS1P	Serial Number:	1Q538RT4WS1P
Asset ID:	N/A	Calibration Date:	March 22, 2021

Temperature Accuracy @ 40%RH

Range	Nominal	Lower Limit	As Found	As Left	Error	Upper Limit	Result	Uncertainty ($\pm$)
-20 to 60 °C	10.0 °C	9.7 °C	10.1 °C	10.1 °C	0.5 %	10.3 °C	PASS	0.069 °C
-20 to 60 °C	20.0 °C	19.7 °C	19.8 °C	19.8 °C	1.0 %	20.3 °C	PASS	0.069 °C
-20 to 60 °C	30.0 °C	29.7 °C	29.8 °C	29.8 °C	0.7 %	30.3 °C	PASS	0.069 °C

Relative Humidity Accuracy @ 20°C

Range	Nominal	Lower Limit	As Found	As Left	Error	Upper Limit	Result	Uncertainty ($\pm$)
10 to 90 %RH	40.0 %RH	37.0 %RH	42.0 %RH	42.0 %RH	5.0 %	43.0 %RH	PASS	0.57 %RH
10 to 90 %RH	50.0 %RH	47.0 %RH	51.4 %RH	51.4 %RH	2.8 %	53.0 %RH	PASS	0.57 %RH
10 to 90 %RH	75.0 %RH	72.0 %RH	73.0 %RH	73.0 %RH	2.7 %	78.0 %RH	PASS	0.57 %RH

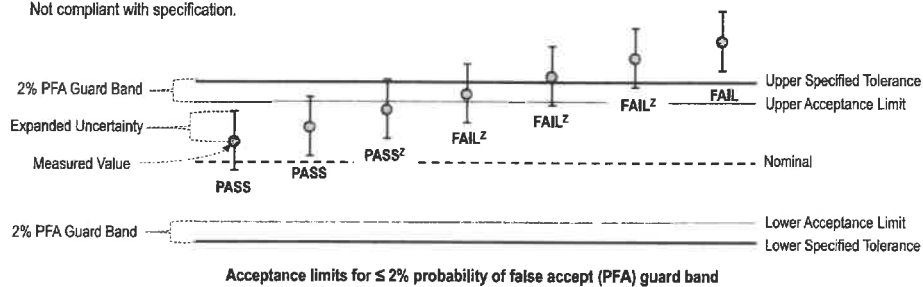
Statements of Pass or Fail Conformance

The uncertainty of measurement has been taken into account when determining compliance with specification.

All measurements and test results guard banded to ensure the probability of false-accept does not exceed 2% in compliance with ANSI/NCCL Z540.3-2006

The status of compliance with the acceptance criteria is reported as:

- PASS** — Compliant with specification.
- PASS^z** — The measured value is within acceptance limits.
However, a portion of the expanded uncertainty of measurement at 95% exceeds the specified tolerance.
- FAIL^z** — The measured value is not within the acceptance limits.
However, a portion of the expanded uncertainty of measurement at 95% is within the specified tolerance.
- FAIL** — Not compliant with specification.



The expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor $k = 2$, which for a normal distribution corresponds to a coverage probability of approximately 95%, unless otherwise stated.

This calibration report complies with ISO/IEC 17025:2017 and ANSI/NCCL Z540.3-2006, Method 6 — Guard Bands Based on Test Uncertainty Ratio.

- End of Calibration Report -