

Prüfbericht-Nr.: Test report no.:	CN26B33F 003	Auftrags-Nr.: Order no.:	27231104	Seite 1 von 9 Page 1 of 9
Kunden-Referenz-Nr.: Client reference no.:	N/A	Auftragsdatum: Order date:	2026-04-23	
Auftraggeber: Client:	Schneider Electric USA, Inc. 201 Washington Street, One Boston Place, Suite 2700, Boston, Massachusetts, 02108 United States			
Prüfgegenstand: Test item:	Temperature/Humidity Sensor			
Bezeichnung / Typ-Nr.: Identification / Type no.:	SAH232111 (Trademark: )			
Auftrags-Inhalt: Order content:	Test Report			
Prüfgrundlage: Test specification:	CFR Title 47 FCC Part 1.1310 CFR Title 47 FCC Part 2.1091			
Wareneingangsdatum: Date of sample receipt:	2026-09-14	(Please refer to Photo Document)		
Prüfmuster-Nr.: Test sample no.:	A004291725-002			
Prüfzeitraum: Testing period:	2026-09-14 - 2026-09-28			
Ort der Prüfung: Place of testing:	TÜV Rheinland (Shenzhen) Co., Ltd.			
Prüflaboratorium: Testing laboratory:	TÜV Rheinland (Shenzhen) Co., Ltd.			
Prüfergebnis*: Test result*:	Pass			
geprüft von: tested by:	<u>X  Hardy Suo</u>		genehmigt von: authorized by:	<u>X  Lin Lin</u>
Datum: Date:	2026-10-10		Ausstellungsdatum: Issue date:	2026-10-10
Stellung / Position:	Sachverständige(r)/Expert		Stellung / Position:	Sachverständige(r)/Expert
Sonstiges / Other:	FCC ID: 2AODLH23211			
Zustand des Prüfgegenstandes bei Anlieferung: Condition of the test item at delivery:	Prüfmuster vollständig und unbeschädigt Test item complete and undamaged			
* Legende:	P(ass) = entspricht o.g. Prüfgrundlage(n)	F(ail) = entspricht nicht o.g. Prüfgrundlage(n)	N/A = nicht anwendbar	N/T = nicht getestet
* Legend:	P(ass) = passed a.m. test specification(s)	F(ail) = failed a.m. test specification(s)	N/A = not applicable	N/T = not tested
Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens. <i>This test report only relates to the above mentioned test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark.</i>				

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Anmerkungen
Remarks

1	Alle eingesetzten Prüfmittel waren zum angegebenen Prüfzeitraum gemäß eines festgelegten Kalibrierungsprogramms unseres Prüfhauses kalibriert. Sie entsprechen den in den Prüfprogrammen hinterlegten Anforderungen. Die Rückverfolgbarkeit der eingesetzten Prüfmittel ist durch die Einhaltung der Regelungen unseres Managementsystems gegeben. Detaillierte Informationen bezüglich Prüfkonditionen, Prüfequipment und Messunsicherheiten sind im Prüflabor vorhanden und können auf Wunsch bereitgestellt werden. <i>The equipment used during the specified testing period was calibrated according to our test laboratory calibration program. The equipment fulfils the requirements included in the relevant standards. The traceability of the test equipment used is ensured by compliance with the regulations of our management system. Detailed information regarding test conditions, equipment and measurement uncertainty is available in the test laboratory and could be provided on request.</i>
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3	Prüfklausel mit der Note * wurden an qualifizierte Unterauftragnehmer vergeben und sind unter der jeweiligen Prüfklausel des Berichts beschrieben. Abweichungen von Prüfspezifikation(en) oder Kundenanforderungen sind in der jeweiligen Prüfklausel im Bericht aufgeführt. <i>Test clauses with remark of * are subcontracted to qualified subcontractors and described under the respective test clause in the report.</i> <i>Deviations of testing specification(s) or customer requirements are listed in specific test clause in the report.</i>
4	Die Entscheidungsregel für Konformitätserklärungen basierend auf numerischen Messergebnissen in diesem Prüfbericht basiert auf der "Null-Grenzwert-Regel" und der "Einfachen Akzeptanz" gemäß ILAC G8:2019 und IEC Guide 115:2021, es sei denn, in der auf Seite 1 dieses Berichts genannten angewandten Norm ist etwas anderes festgelegt oder vom Kunden gewünscht. Dies bedeutet, dass die Messunsicherheit nicht berücksichtigt wird und daher auch nicht im Prüfbericht angegeben wird. Zu weiteren Informationen bezüglich des Risikos durch diese Entscheidungsregel siehe ILAC G8:2019. <i>The decision rule for statements of conformity, based on numerical measurement results, in this test report is based on the "Zero Guard Band Rule" and "Simple Acceptance" in accordance with ILAC G8:2019 and IEC Guide 115:2021, unless otherwise specified in the applied standard mentioned on Page 1 of this report or requested by the customer. This means that measurement uncertainty is not taken in account and hence also not declared in the test report. For additional information to the resulting risk based of this decision rule please refer to ILAC G8:2019.</i>

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TEST SUMMARY

3.1.1 RF EXPOSURE COMPLIANCE
RESULT: Pass

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1. Test Sites

1.1 Test Facilities

TÜV Rheinland (Shenzhen) Co., Ltd.

2-3F, 101 & 102, No.2, Nuclear Power Industrial Park, Fuming Community, Fucheng Street, Longhua District, Shenzhen 518000, People's Republic of China

A2LA Certificate Number: 5162.01

FCC Test Site Number: CN1260

ISED Test Lab CAB identifier: CN0078

1.2 Traceability

All measurement equipment calibrations are traceable to NIST or where calibration is performed outside the United States, to equivalent nationally recognized standards organizations.

1.3 Calibration

Equipment requiring calibration is calibrated periodically by the manufacturer or according to manufacturer's specifications. Additionally all equipment is verified for proper performance on a regular basis using in house standards or comparisons.

1.4 Location of Original Data

The original copies of all test data taken during actual testing were attached at Appendixes of this report and delivered to the applicant. A copy has been retained in the TÜV Rheinland (Shenzhen) file for certification follow-up purposes.

1.5 Status of Facility Used for Testing

The TÜV Rheinland (Shenzhen) Co., Ltd. Test facility located at 2-3F, 101 & 102, No.2, Nuclear Power Industrial Park, Fuming Community, Fucheng Street, Longhua District, Shenzhen 518000, People's Republic of China is listed on the US Federal Communications Commission list of facilities approved to perform measurements.

2. General Product Information

2.1 General Description

The Product is a Temperature/Humidity Sensor which supports Bluetooth LE, 2.4GHz Thread and NFC passive.

Note: NFC function is used to achieve 2.4GHz Thread pairing. It does not use SAH232111's source of power, but send data by passively returning energy received from a NFC reader's interrogating signal via load modulation.

For details refer to the User Manual, Technical Description and Circuit Diagram.

2.2 Rating and System details

Table 1: Technical Specification of EUT

General Information of EUT	Value
Kind of Equipment:	Temperature/Humidity Sensor
Type Designation:	SAH232111
Trademark:	
FCC ID:	2AODLH23211
Operating Voltage:	DC 3V (via build-in battery CR2450)
Testing Voltage:	DC 3V (via build-in battery CR2450)
Operating Temperature Range:	-10 °C ~ +50 °C
Radiofrequency operating mode:	1) Bluetooth LE: operating within 2400-2483.5 MHz 2) 2.4GHz Thread: operating within 2400-2483.5 MHz 3) NFC (passive): operating within 13.553-13.567 MHz
Technical Specification of Bluetooth (Bluetooth LE)	
Operating Frequency:	2402 MHz to 2480 MHz
Type of Modulation:	GFSK
Channel Number:	40 channels
Channel Separation:	2MHz
Data Rate:	1Mbps
Antenna Type:	Integral Antenna
Antenna Number:	1
Antenna Gain:	0.17dBi (Provided by the client)
The type of wideband data transmission equipment:	Non-FHSS
Technical Specification of 2.4GHz Thread	
Operating Frequency:	2405 MHz to 2480 MHz
Type of Modulation:	OQPSK
Channel Number:	16 channels
Channel Separation:	5MHz
Data Rate:	250kbps

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Antenna Type:	Integral Antenna
Antenna Number:	1
Antenna Gain:	0.17dBi (Provided by the client)
The type of wideband data transmission equipment:	Non-FHSS

Table 2: RF Channel and Frequency of Bluetooth LE

RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)
0	2402	10	2422	20	2442	30	2462
1	2404	11	2424	21	2444	31	2464
2	2406	12	2426	22	2446	32	2466
3	2408	13	2428	23	2448	33	2468
4	2410	14	2430	24	2450	34	2470
5	2412	15	2432	25	2452	35	2472
6	2414	16	2434	26	2454	36	2474
7	2416	17	2436	27	2456	37	2476
8	2418	18	2438	28	2458	38	2478
9	2420	19	2440	29	2460	39	2480

Table 3: RF Channel and Frequency of 2.4GHz Thread

RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)
11	2405	15	2425	19	2445	23	2465
12	2410	16	2430	20	2450	24	2470
13	2415	17	2435	21	2455	25	2475
14	2420	18	2440	22	2460	26	2480

3. Test Results

3.1 RF Exposure Evaluation

3.1.1 RF Exposure Compliance

RESULT:
Pass

Test standard : CFR Title 47 FCC Part 2.1091
KDB 447498 D01 General RF Exposure Guidance v06

Limit : Table 1 of CFR Title 47 FCC Part 1.1310

3.1.1.1 RF Exposure Compliance Requirement

a) Radio Frequency Exposure Limit

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Average Time (minutes)
(A) Limits for Occupational/Controlled Exposure				
0.3-3.0	614	1.63	*100	<6
3.0-30	1842/f	4.89/f	*(900/f ²)	<6
30-300	61.4	0.163	1.0	<6
300-1,500	--	--	f/300	<6
1,500-100,000	--	--	1.0	<6
(B) Limits for General Population/Uncontrolled Exposure				
0.3-3.0	614	1.63	*100	<30
3.0-30	824/f	2.19/f	*(180/f ²)	<30
30-300	27.5	0.073	0.2	<30
300-1,500	--	--	f/1500	<30
1,500-100,000	--	--	1.0	<30

f = frequency in MHz. * = Plane-wave equivalent power density.

b) Descriptions of Antennas

According to the manufacturer declared, the EUT has one integral antenna for Bluetooth LE / 2.4GHz Thread, and one loop integral antenna for NFC passive. The maximum directional gain is 0.17 dBi for Bluetooth LE / 2.4GHz Thread.

c) Radio Frequency Exposure Calculation Formula

$$S = \frac{PG}{4\pi R^2}$$

where: S = power density (in appropriate units, e.g. mW/cm²)
P = power input to the antenna (in appropriate units, e.g., mW)
G = power gain of the antenna in the direction of interest relative to an isotropic radiator
R = distance to the center of radiation of the antenna (appropriate units, e.g., cm)

or:

$$S = \frac{EIRP}{4\pi R^2}$$

where: EIRP = equivalent (or effective) isotropically radiated power

d) RF Exposure Calculation, stand-alone mode

Mode	Max. power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm ²)	FCC Limit (mW/cm ²)
Bluetooth	5.59	0.17	20	0.001	1.0
2.4GHz Thread	7.71	0.17	20	0.001	1.0

Note:

- 1) The calculated distance is 20cm.
- 2) Output power refers to the test reports below:
 - i. Report number of Bluetooth, 2.4GHz Thread: CN26B33F 002

e) Simultaneous Transmission Scenario

N/A.

f) Conclusion

Therefore the maximum calculations result of above are meet the requirement of Radio Frequency Exposure (MPE) limit. This Transmitter must be installed to provide a separation distance of at least 20 cm from all persons.