REP086868B

RF Exposure Assessment

Product	Wireless temperature and humidity sensor
Name and address of the applicant	Disruptive technologies Research AS Strandveien 17 1366 Lysaker, Norway
Name and address of the manufacturer	Disruptive technologies Research AS Strandveien 17 1366 Lysaker, Norway
Model	102895
Rating	3.0 V DC (Primary Battery, BR1632A Lithium Cell)
Trademark	Disruptive
Additional information	None
Evaluated according to	**FCC Part 1.1310(e)** RF Exposure Assessment **FCC KDB 447498 D01 v06** General RF Exposure Guidance
Order number	**PRJ0065558**
Issue date	**2025-03-19**
Name and address of the testing laboratory	Nemko Scandinavia AS Instituttveien 6 2007 Kjeller, Norway www.nemko.com CAB Number: FCC: NO0001 ISED: NO0470 ISED No: 2040D-1 **An accredited technical test executed under the Norwegian accreditation scheme**

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Template version: B

Revision history

Revision	Date	Comment	Sign
A	2025-03-11	First Edition	FS
B	2025-03-19	Changed to Fixed Device	FS

GENERAL REMARKS

This report applies only to the sample(s) tested. It is the manufacturer's responsibility to ensure the additional production units of this product are manufactured with identical electrical and mechanical components. The manufacturer is solely responsible for any modifications to the product that could result in non-compliance with the relevant regulations.

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1 Exposure Evaluation

1.1 EUT Technical Information

Product	Wireless temperature and humidity sensor
Manufacturer	Disruptive Technologies Research AS
Model	102895
FCC ID	2AFTX-102895
ISED ID	25087-102895
Serial number	HUMIDITY_US1 HUMIDITY_US2
Hardware version	0.5
Software version	1.8.1
Frequency Range	903.250 – 926.750 MHz
Operating Modes	Frequency Hopping
Type of Power Supply	Primary Battery (BR1632A Lithium Cell)
Antenna Type	Integral Antenna
Number of Antennas	1
Device Category	Fixed Device
Reference to RF Test Report	Nemko REP078715
Prediction Distance (declared)	20 cm

1.2 Evaluation Summary

Maximum whole body power density is calculated using formula 3) from OET Bulletin 65 Edition 97-01 (page 19):

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

Where: S = power density
P = power input to the antenna
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

Determination of Exemption for Single RF Sources		
Conducted Power including Tune Up Tolerance	12.5	dBm
Antenna Gain	-5.4	dBi
Separation Distance	20	cm
Frequency Range Evaluated	903-927	MHz
Duty Cycle	100	%
Calculated Power Density	0.035	W/m²
Power density Limit ref. FCC §1.1310(e), Table 1	6.02	W/m²
Margin on Compliance	22.31	dB
CONCLUSION	EXEMPTED	

Antenna Gain is maximum measured antenna gain. Power Density value is based on conducted power only.

References

1) OET Bulletin 65 Edition 97-01, August 1997
2) KDB 447498 D01 General RF Exposure Guidance v06, October 23, 2015
3) Code of Federal Regulations, Title 47, FCC §1.1310
4) Code of Federal Regulations, Title 47, FCC Part 15, Subpart E