

FCC RF Exposure Report



Product name : Dräger Bluetooth module 9x11
Applicant : Dräger Safety AG & Co. KGaA
FCC ID : X6O-BT01
IC ID : 5895F-BT01

Test report No. : P000538015 001 Ver 1.0

Laboratory information

Accreditation

Kiwa Nederland B.V. complies with the accreditation criteria for test laboratories as laid down in ISO/IEC 17025:2017. The accreditation covers the quality system of the laboratory as well as the specific activities as described in the authorized annex bearing the accreditation number L015 and is granted by the Dutch Council For Accreditation (RvA: Raad voor Accreditatie).

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Kiwa Nederland B.V. is a Wireless Device Testing laboratory recognized by Innovation, Science and Economic Development Canada to test to Canadian radio equipment requirements.
The Industry Canada company number for Kiwa Nederland B.V. is: 4173A. The CABID is NL0001.

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Documentation

The test report must always be reproduced in full; reproduction of an excerpt only is subject to written approval of the testing laboratory. The documentation of the testing performed on the tested devices is archived for 10 years at Kiwa Nederland B.V.

Testing Location

Test Site	Kiwa Nederland B.V.
Test Site location	Wilmersdorf 50 7327 AC Apeldoorn The Netherlands Tel. +31 88998 3393
Test Site FCC	NL0001
CABID	NL0001

Revision History

Version	Date	Remarks	By
v0.50	26/08/2025	First draft	AWM
v1.00	01-10-2025	Final release	PvW

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1 General Description

1.1 Applicant

Client name:	Dräger Safety AG & Co. KGaA
Address:	Revalstr. 1 23560 Lübeck Germany
Telephone:	+49 (0)4501 882 1623
E-mail:	Lutz.rueffert@draeger.com
Contact name:	Lutz Rüffert

1.2 Manufacturer

Manufacturer name:	Dräger Safety AG & Co. KGaA
Address:	Revalstr. 1 23560 Lübeck Germany
Telephone:	+49 (0)4501 882 1623
E-mail:	Lutz.rueffert@draeger.com
Contact name:	Lutz Rüffert

1.3 Tested Equipment Under Test (EUT)

Product name:	Dräger Safety
Brand name:	Dräger Safety
FCC ID:	X6O-BT01
IC:	5895F-BT01
Product description:	Dräger Bluetooth module 9x11
Variant model(s):	--
Batch and/or serial No.	BT01
Software version:	Zephyr OS 2.2,1
Hardware version:	3711863-02
Date of receipt	02-02-2021
Tests started:	12-02-2021
Testing ended:	19-02-2021

1.4 Applicable standards

47 CFR § 1.1307 (b)(1)(i)(A)

1.5 Conclusions

The sample of the product showed **NO NON-COMPLIANCES** to the specifications stated in paragraph 1.4 of this report.

The results of the test as stated in this report, are exclusively applicable to the product items as identified in this report. Kiwa Nederland B.V. accepts no responsibility for any properties of product items in this test report, which are not supported by the tests as specified in paragraph 1.4 "*Applicable standards*".

Assessment is performed by:

Name : ing. A. W. Mostert

Review of assessment methods and report by:

Name : P. van Wanrooij, BASc

The above conclusions have been verified by the following signatory:

Date : 01-10-2025

Name : P. van Wanrooij

Function : Test Engineer

Signature :



2 SAR exclusion Evaluation

2.1 Transmitter specifications

To comply for SAR exemption the host device incorporating the BT01 must ensure a separation distance with at least of 6.5436 mm measured between the Antenna and outside of the housing.

Transmitter 1

Variable (unit)	Value	Symbol
Conducted time-averaged output power (mW)	4.645	P
Time-averaged output power ERP (mW)	4.645	P _{ERP}
Operating frequency range (MHz)	2402	f
Separation distance (cm)	0.654	d
Separation distance (m)	0.00654	R

2.2 Evaluation calculations

Transmitter 1

Transmitter 1 is evaluated according to method B of KDB 447498 D04 v01

Method B:

$$P_{th}(mW) = \begin{cases} ERP_{20cm} \left(\frac{d}{20cm} \right)^x & d \leq 20 \text{ cm} \\ ERP_{20cm} & 20 \text{ cm} < d \leq 40 \text{ cm} \end{cases}$$

Where:

$$x = -\log_{10} \left(\frac{60}{ERP_{20cm} * \sqrt{f}} \right)$$

$$ERP_{20cm}(mW) = \begin{cases} 2040 * f & 0.3 \text{ GHz} \leq f < 1.5 \text{ GHz} \\ 3060 & 1.5 \text{ GHz} \leq f \leq 6.0 \text{ GHz} \end{cases}$$

Filling in the values of d (cm) and f (GHz) as reported in clause 2.1 in the equations above gives the result:

P_{th} = 4.64516 mW

P or P_{ERP} = 4.6451527 mW which is less than the calculated P_{th} so the EUT complies with the SAR based exemption requirement.

2.3 Conclusion

Since the EUT does not cause exposure in excess of the general population limit (defined in 47 CFR 1.1310 e) (ii)), no additional mitigation actions are required.

<<END OF REPORT>>