

FCC SAR Exclusion Report

Product name : DFGT-03MC18

Applicant : Airios

FCC ID : 2A2RK-DFGT

Test report No. : 210300087 002 FCC RF exposure Ver 1.00

Laboratory information

Accreditation

Telefication 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 L021 and is granted on 30 November 1990 by the Dutch Council For Accreditation (RvA: Raad voor Accreditatie).

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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 Telefication Netherlands.

Testing Location

Test Site	Kiwa Telefication BV
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
v1.00	15-06-2021	Release version	K.K.

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1 General Description

1.1 Applicant

Client name: AIRIOS BV
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Telephone: +31621915110
E-mail: Gokhun.selcuk@airios.eu
Contact name: Gökhan Selçuk

1.2 Manufacturer

Manufacturer name: AIRIOS BV
Address: Peter Zuidlaan 10
Zip code: 5502 NH
Telephone: +31621915110
E-mail: Gokhun.selcuk@airios.eu
Contact name: Gökhan Selçuk

1.3 Tested Equipment Under Test (EUT)

Product name: DFGT-03MC18
Brand name: AIRIOS BV
Product type: Fire gas valve controller
FCC ID: 2A2RK-DFGT
Model(s): DFGT- 03MC18
DFGT- 03MCB23
Software version: 13
Hardware version: 02

1.4 SAR Measurement Evaluation

1.4.1 Maximum Output Power

The maximum radiated power including tune-up tolerance is shown as below.

Technology	Max power level (dBm)
BLE	-0.64

* from Telefication report 210300087 001

1.4.2 SAR Testing Exclusions

According to KDB 447498 D01, the SAR test exclusion condition is based on source-based time-averaged maximum conducted output power, adjusted for tune-up tolerance, and the minimum test separation distance required for the exposure conditions. The SAR exclusion threshold is determined by the following formula.

- For the test separation distance ≤ 50 mm

$$\frac{\text{Max. Tune up Power}_{(\text{mW})}}{\text{Min. Test Separation Distance}_{(\text{mm})}} \times \sqrt{f_{(\text{GHz})}} \leq 3.0$$

When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion.

- For the test separation distance > 50 mm, and the frequency at 100 MHz to 1500 MHz

$$\left[(\text{Threshold at 50 mm in Step 1}) + (\text{Test Separation Distance} - 50 \text{ mm}) \times \left(\frac{f_{(\text{MHz})}}{150} \right) \right]_{(\text{mW})}$$

- For the test separation distance > 50 mm, and the frequency at > 1500 MHz to 6 GHz

$$[(\text{Threshold at 50 mm in Step 1}) + (\text{Test Separation Distance} - 50 \text{ mm}) \times 10]_{(\text{mW})}$$

Mode	Max. Tune-up Power (dBm)	Max. Tune-up Power (mW)	Ant. to Surface (mm)	Calculated Result	Require SAR Testing?
BLE	-0.64	0.86	50	0.26	No

Note:

- When separation distance ≤ 50 mm and the calculated result shown in above table is ≤ 3.0 , the SAR testing exclusion is applied.
- When separation distance > 50 mm and the device output power is less than the calculated result (power threshold, mW) shown in above table, the SAR testing exclusion is applied.

1.5 Summary

SAR testing for this device is not required.