

RF Exposure and Maximum ERP/EIRP Assessment

For

VEGAPULS AIR41

FCC ID: O6QAIR4142

IC: 3892A-AIR4142

Assessment Reference: MDE_VEGA_1905_MPE_06

Test Laboratory:

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Note:

The following test results relate only to the devices specified in this document. This report shall not be reproduced in parts without the written approval of the test laboratory.

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1. Administrative Data

Laboratory

Company Name: 7layers GmbH
Address Borsigstr. 11
40880 Ratingen
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Project Data

Responsible for assessment and report: Mr. Abdellah Ahakki
Date of Report: 2021-11-22

Applicant Data

Company Name: VEGA Grieshaber KG
Address: Am Hohenstein 113
77761 Schiltach
Germany
Contact Person: Mr. Patrick Friedmann

Manufacturer Data

Company Name: please see applicant data
Address:
Contact Person:

2. Test object Data

General EUT Description

Kind of Device product description	The EUT is an autarkic radar sensor with radio technology for continuous level measurement on vessels and tanks. The device is suitable for almost all liquids as well as for bulk solids
Product name	VEGAPULS
Type	VEGAPULS Air 41

The main components of the EUT are listed and described in chapter 3.2 EUT Main components.

EUT Main components

Sample Name	Sample Code	Description
EUT A	DE1373009aa01	
Sample Parameter	Value	
Serial No.	50363983	
HW Version	1.3.0	
SW Version	1.1.0	
Comment	-	

3. Evaluation Results

RF According to the RSS-102, issue 5 Standard and to FCC §15.247(b)(4) and §1.1307(b)(1), systems operation under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

MPE Prediction

Frequency range (MHz)	Power density (mW/cm ²)
400 – 1500	f/1500
1500 - 100000	1 mW/cm ²

Equation for calculation

$$S = P * G / (4\pi R^2)$$

Where: S – Power density
P – Power input to antenna
G – Antenna gain relative to isotropic radiator
R – Distance to antenna

Maximum peak output power at antenna terminal: 26.3 dBm

Antenna gain: 0 dBi

Prediction distance: 20 cm

MPE limit for General Population/Uncontrolled Exposure: 1 mW/cm²

Calculation's results:

Power density at 20cm distance: **0.1081 mW/cm²**

Abdellah Ahakki

