

## FCC SAR Exclusion Report

Product name : CWS4-S8  
Applicant : CowManager B.V.  
FCC ID : Y8K-CWS4

Test report No. : P000130374 002 Ver 1.00



Report number: P000130374 002 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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Telefication 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 Telefication is: 4173A.

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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

<b>Test Site</b>	Kiwa Telefication BV
<b>Test Site location</b>	Wilmersdorf 50 7327 AC Apeldoorn The Netherlands  Tel. +31 88998 3393
<b>Test Site FCC</b>	NL0001
<b>CABID</b>	NL0001

## Revision History

Version	Date	Remarks	By
V0.50	15-08-2022	Draft	KK
V1.00	14-09-2022	Initial release	KK

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## 1 General Description

### 1.1 Applicant

**Client name:** CowManager B.V.  
**Address:** Gerverscop 9, Harmelen The Netherlands  
**Telephone:** +31 (0)348443840  
**E-mail:** j.vanhusen@cowmanager.com  
**Contact name:** Jan van Husen

### 1.2 Manufacturer

**Manufacturer name:** CowManager B.V.  
**Address:** Gerverscop 9, Harmelen The Netherlands  
**Telephone:** +31 (0)348443840  
**E-mail:** j.vanhusen@cowmanager.com  
**Contact name:** Jan van Husen

### 1.3 Tested Equipment Under Test (EUT)

**Product name:** CWS4-S8  
**Brand name:** CowManager B.V.  
**Product type:** Sensor for measuring bovine behaviour.  
**FCC ID:** Y8K-CWS4  
**Software version:** 8.10  
**Hardware version:** 4.1

### 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. Telefication 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 : Koray Korcum, MSc

Review of assessment methods and report by:

Name : ing. R. van Barneveld

The above conclusions have been verified by the following signatory:

Date : 17-11-2022

Name : ing. R. van Barneveld

Function : Test Engineer

Signature :

A handwritten blue ink signature consisting of several intersecting, fluid lines that form a stylized, abstract shape.

## 2 SAR exclusion Evaluation

### 2.1 Transmitter specifications

Transmitter 1

Variable (unit)	Value	Symbol
Conducted time-averaged output power (mW)	<b>5.52</b>	<b>P</b>
Time-averaged output power ERP (mW)	<b>8.92</b>	<b>P<sub>ERP</sub></b>
Operating frequency range (MHz)	<b>2405</b>	<b>f</b>
Separation distance (cm)	<b>20</b>	<b>d</b>
Separation distance (m)	<b>0.2</b>	<b>R</b>

## 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:

$P_{th} = 3060 \text{ mW}$

$P$  or  $P_{ERP} = 8.92 \text{ mW}$  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, no additional mitigation actions are required.