



User Manual GS21CL12 & GS21CL13

version 1.2

User Manual

Climate Sensor HT & Climate Sensor HT + CO2 GS21CL12 & GS21CL13

Introduction

The GS21CL12 (Climate Sensor HT) and GS21CL13 (Climate Sensor HT + CO2) are part of the Grodan GroSens sensor platform. This sensor enables growers to read out climate information from their growing rooms and view this data in our mobile phone app-desktop or laptop.

The GS21CL12 and GS21CL13 have been certified for the European (including Turkey), USA, UK, Australian, New Zealand and Canadian markets.

Onboarding

For onboarding the sensor in the platform, please download the “e-Gro Companion” App from the App Store or Google Play Store.



e-Gro Companion

2.3.2 by ROCKWOOL International A/S

Jun 12, 2023

Follow the instructions in the app to configure and connect the sensor.

Placement

Sensors can be placed freely in your growing room or greenhouse. They can be mounted to a pole or hung by utilizing the suspension hole. To achieve the best accuracy, the ventilation openings at the back of the sensor should be kept free, to allow air circulation.

Radio Frequency - declaration of Conformity

European Union

This device complies with RED articles 3.1.a, 3.1.b and 3.2.

North America

FCC Declaration of Conformity (for USA)

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.



FCC ID: 2AUKP-CLC001

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense

The provided antenna must be used with this unit to ensure compliance.

Canada

Industry Canada Declaration of Conformity

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence.

L'exploitation est autorisée aux deux conditions suivantes: (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement

IC ID: 25447-CLC001

Product Details

Applicable Product Number: RZ21CL12 - Climate Sensor HT

RZ21CL13 - Climate Sensor HT + CO2

LoRa

Operating Frequency Range: 863 – 870 MHz (EU)
902 – 928 MHz (USA, CAN)
915 – 928 MHz (Australia, New Zealand)

Maximum Output Power: 14 dBm (EU)
22 dBm (USA, CAN)
16 dBm (Australia, New Zealand)

BLE

Operating Frequency Range: 2402-2480 MHz

Maximum Output Power: 4 dBm

Power

Operating voltage: 4.5V DC (3 Alkaline batteries)

Standby current: 0.1 mA Maximum

Operating current: 120 mA Maximum

Warranty

For Warranty information, please contact our Customer Service Departments.

Europe

Rockwool B.V. - Grodan
Industrieweg 15
6045 JG Roermond
The Netherlands
+31 475 353 020

USA, Canada

Roxul Inc. - Grodan
8024 Esquesing Line
Milton ON L9T 6W3
Canada
Phone : +1 905 636 0611

EU Declaration of Conformity (DoC)

Hereby we,

Name of manufacturer: Rockwool b.v. – Grodan

Address: Industrieweg 15

Zip code & City: 6045 JG Roermond

Country: The Netherlands

Telephone number: +31 475 353 020

declare that this DoC is issued under our sole responsibility and that this product:

Product description: Climate sensor, temperature, relative humidity and CO2

Type designation(s): GS21CL13

Trademark: Grodan GroSens

is in conformity with the relevant Union harmonization legislation:

- 2014/53/EU - Radio Equipment Directive
- 2011/65/EU - RoHS Directive
- 1907/2006/EC - REACH Regulation
- 2012/19/EC - WEEE Directive

with reference to the following standards applied:

- Safety - EN/IEC 62368-1:2014/A11:2017
- EMF assessment - EN 62479:2010
- EMC - EN 301 489 V2.2.3, part 1 & 3 (V2.1.1), 17 (V3.2.4)
- Radio - EN 300 328 v2.2.2
- Radio - EN 300 220-1 V3.1.1, EN 300 220-2 v3.2.1

Where applicable:

The issued EU-type examination certificate:

- CB test certificate: NL2-020164/A1

Description of accessories and components, including software, which allow the radio equipment to operate as intended and covered by the DoC:

- set of 3 AA batteries

Signed for and on behalf of:
Roermond, 4-6-2021



Edwin Duffing, project manager

Place and date of issue

Name, Function, signature

FCC

FEDERAL COMMUNICATIONS COMMISSION

DECLARATION OF CONFORMITY (DoC)

Equipment: **Climate sensor**
Trademark(s) and Model(s): **Grodan GroSens GS21CL12, GS21CL13**
Manufacturer: **Rockwool b.v. - Grodan**
FCC ID in case other parts of this equipment are subject to certification: **2AUKP-CL002**

This device complies with Part 15 of the FCC Rules.


Operation is subject to the following two conditions:

- (1) this device may not cause harmful interference, and**
- (2) this device must accept any interference received, including interference that may cause undesired operation.**

The following test reports are subject to this declaration:

Test report number:	Issue date:
200701991 004 ver 1.00	04-06-2021
200701991 005 ver 1.00	04-06-2021
200701991 007 ver 1.00	28-05-2021

The following manufacturer/importer/entity (located in the USA) is responsible for this declaration:

Company name:	Rockwool b.v. – Grodan
Name/Title (legal representative):	Edwin Dilling / Project manager
Address:	Industrieweg 15, 6045 JG Roermond
Phone:	+31 472 353 020
E-mail:	edwin.dilling@grodan.com
Date:	22-06-2021
Signature:	

Supplier's declaration of conformity



As required by the following Notices:

- *Radiocommunications (Compliance Labelling - Devices) Notice 2014* made under section 182 of the *Radiocommunications Act 1992*;
- *Radiocommunications Labelling (Electromagnetic Compatibility) Notice 2017* made under section 182 of the *Radiocommunications Act 1992*;
- *Radiocommunications (Compliance Labelling – Electromagnetic Radiation) Notice 2014* made under section 182 of the *Radiocommunications Act 1992*; and
- *Telecommunications (Labelling Notice for Customer Equipment and Customer Cabling) Instrument 2015* made under section 407 of the *Telecommunications Act 1997*.

Instructions for completion

Do not return this form to the ACMA. This completed form must be retained by the supplier as part of the documentation required for the compliance records and must be made available for inspection by the ACMA when requested.

Supplier's details

Company Name (OR INDIVIDUAL)

Braco Compliance Pty Ltd

RCM Responsible Supplier Number

E304

Street Address (Australian)

Unit 308, 469-481 High St

Northcote, VIC 3070

OR

ACN/ARBN

84156023504

Product details

Product description – brand name, type, current model, lot, batch or serial number (if available), software/firmware version (if applicable)



Climate Sensor, Models GS21CL12 & GS21CL13.

Compliance – applicable standards and other supporting documents

Evidence of compliance with applicable standards may be demonstrated by test reports, endorsed/accredited test reports, certification/competent body statements. Having had regard to these documents, I am satisfied the above mentioned product complies with the requirements of the relevant ACMA Standards made under the Radiocommunications Act 1992 and the Telecommunications Act 1997.

List the details of the documents the above statement was made, including the standard title, number and, if applicable, number of the test report/endorsed test report or certification/competent body statement.

Radiocommunications (Short Range Devices) Standard 2014, refer telefication by EN 300 328 v2.2.2 test report No 200701991 006 Ver 1.00, ETSI EN 300 220-1 v3.1.1 / EN 300 220-2 v3.2.1 test report No 200701991 002 Ver 1.00, both dated 28 May 2021, and Rockwool B.V. Frequency Declaration dated 22 June 2021.

Radiocommunications (Electromagnetic Radiation – Human Exposure) Standard 2014, refer power levels measured in telefication by EN 300 328 v2.2.2 test report No 200701991 006 Ver 1.00 and ETSI EN 300 220-1 v3.1.1 / EN 300 220-2 v3.2.1 test report No 200701991 002 Ver 1.00, both dated 28 May 2021.

Declaration

I hereby declare that:

1. I am authorised to make this declaration on behalf of the Company mentioned above,
2. the contents of this form are true and correct, and
3. the product mentioned above complies with the applicable above mentioned standards and all products supplied under this declaration will be identical to the product identified above.

Note: Under section 137.1 of the *Criminal Code Act 1995*, it is an offence to knowingly provide false or misleading information to a Commonwealth entity.

Penalty: 12 months imprisonment

Bruce Maule

Director

23 June 2021

The *Privacy Act 1988* (Cth) (the Privacy Act) imposes obligations on the ACMA in relation to the collection, security, quality, access, use and disclosure of personal information. These obligations are detailed in the Australian Privacy Principles.

The ACMA may only collect personal information if it is reasonably necessary for, or directly related to, one or more of the ACMA's functions or activities.

The purpose of collecting the personal information in this form is to ensure the supplier is identified in the 'Declaration of conformity'. If this Declaration of Conformity is not completed and the requested information is not provided, a compliance label cannot be applied.

Further information on the Privacy Act and the ACMA's Privacy Policy is available at www.acma.gov.au/privacypolicy. The Privacy Policy contains details about how you may access personal information about you that is held by the ACMA, and seek the correction of such information. It also explains how you may complain about a breach of the Privacy Act and how we will deal with such a complaint.

Should you have any questions in this regard, please contact the ACMA's privacy contact officer on telephone on 1800 228 667 or by email at privacy@acma.gov.au.

RADIO SPECTRUM MANAGEMENT



MINISTRY OF BUSINESS,
INNOVATION & EMPLOYMENT
HIKINA WHAKATUTUKI

Supplier's declaration of conformity

As required by notices under:

- Section 134 (1) (g) of the New Zealand Radiocommunications Act 1989.

Supplier's details

Name (name of manufacturer, importer or agent), Company number

Braco Compliance Limited, # 2157405

ERAC Responsible Supplier registration number

E178

Address (address of agent)

9 Braco Place, Ilam
Christchurch 8041

Contact Information

Telephone: +64 21 208 4303
Email: admin@bracocompliance.com

Product details

Product description – brand name, type, model, lot, batch or serial number (if available)



Climate Sensor, Models GS21CL12 & GS21CL13.

Applicable standards

Standard title, number and, if applicable, number of the test report

EN 300 328 v2.2.2, refer telefication by test report No 200701991 006 Ver 1.00 dated 28 May 2021.

ETSI EN 300 220-1 v3.1.1 / EN 300 220-2 v3.2.1, refer telefication by test report No 200701991 002 Ver 1.00 dated 28 May 2021.

900MHz LoRA frequency limits and Special Condition 23 limits specified in Radiocommunications Regulations (General User Radio Licence for Short Range Devices) Notice 2020, refer Rockwool B.V. Frequency Declaration dated 22 June 2021.

Declaration

I hereby declare that the product mentioned above complies with the above mentioned standards, and all products supplied under this declaration will be identical to the sample identified above.

Bruce Maule

Director

23 June 2021



Number: 222340020/AA/00
Issue Date: 17 May 2022
Expiration Date: -
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UKCA TYPE EXAMINATION CERTIFICATE (Module B)

In compliance with the procedure specified in M009, Kiwa Ltd. declares as approved body for UKCA 0558 for the Radio Equipment Regulation 2017, that the stated product, complies with the essential requirements, in accordance with part 2 (chapter 1) of Radio Equipment Regulation, as indicated under Annex 1 of this certificate, based on the applicable Technical Standards and Specifications as listed under Annex 2 of this Certificate.

Product description:	Climate sensor, temperature, relative humidity
Trademark:	ROCKWOOL, Grodan, GroSens
Type designation:	GS21CL12
Hardware version:	6043-1900-34
Variants:	GS21CL13

This certificate is granted to manufacturer:

Name:	Rockwool BV
Address:	Industrieweg 15
City:	6045 JG Roermond
Country:	The Netherlands

This certificate remains valid as long as the stated product stays in compliance with the essential requirements of the Radio Equipment Regulation 2017.

This certificate has THREE Annexes.

Signed on behalf of Kiwa Ltd.
(UK Approved Body Number 0558)

Geesje Geers
Product Assessor

CERTIFICATE

Kiwa Gastec
Kiwa House
Malvern View Business Park
Stella Way
Bishops Cleeve
Cheltenham
GL52 7DQ
United Kingdom
T +44 (0)1242 677877
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www.kiwa.co.uk

UK
CA



UKCA Type Examination Certificate (page 2 of 5)

Annex 1 to certificate 222340020/AA/00

General Conditions

For each product to which this type examination relates, it has complied to the essential requirements as follows:

Article 6.1

Radio equipment shall be constructed so as to ensure:

- C (a) The protection of health and safety of persons and of domestic animals and the protection of property, including the objectives with respect to safety requirements set out in Directive 2014/35/EU, but with no voltage limit applying;
- C (b) An adequate level of electromagnetic compatibility as set out in Directive 2014/30/EU.

Article 6.2

- C Radio equipment shall be so constructed that it both effectively uses and supports the efficient use of radio spectrum in order to avoid harmful interference.

Legend

- C = Conform
- NC = Not Conform
- NA = Not applicable (for this equipment)
- NP = Not performed (in this statement)

UKCA Type Examination Certificate (page 3 of 5)

Annex 1 to certificate 222340020/AA/00

- This UKCA-type examination certificate is limited to the Radio Equipment Regulation.
- This UKCA-type examination certificate is part of the Conformity Assessment procedure Module B, as described in annex III of the Radio Equipment Regulation.
- The validity of this UKCA type examination certificate is limited to products, which are equal to the one(s) assessed for this type Examination.
- The manufacturer has to draw up and issue a self Declaration of Conformity, declaring that the product(s) described in this UKCA-type examination certificate, are in compliance with Radio Equipment Regulation 2017 and any other applicable harmonization legislation.
- Each product shall be identified by means of type, batch and/or serial numbers and the name of the manufacturer and/or importer.
- If the equipment is to be modified, Kiwa Ltd. shall be notified immediately. Depending on the modifications, Kiwa Ltd. may have additional examinations carried out in consultation with the applicant.
- Enforcement of a new amending directive voids the validity of this UKCA-type examination certificate.
- In case any referenced standard in this UKCA-type examination certificate is withdrawn or superseded and the presumption of conformity with the essential requirements has ceased, investigation by Kiwa Ltd. is needed to determine the validity of this type examination.

Remarks and observations

The following conditions are applicable:

Variant has CO2 sensor added.

UKCA Type Examination Certificate (page 4 of 5)

Annex 2 to certificate 222340020/AA/00

Documentation lodged for this type examination

Test Reports:

- Kiwa Telefication BV: 200701991 006 Ver 2.00, 23 August 2021
- Kiwa Telefication BV: 200701991 002 Ver 2.00, 23 August 2021
- Kiwa Telefication BV: 200701991 003 Ver 2.00, 23 August 2021
- Kiwa Telefication BV: 200701991 001 Ver 2.00, 23 August 2021
- Kiwa Nederland B.V.: 200701991, 25 March 2021

Product Documentation:

- Assembly drawings
- Bill of materials
- Block diagram
- Electrical diagrams
- Internal photos
- External photos
- Manual
- Label and label placement
- Test setup photos

Technical Standards and Specifications

The product is compliant with:

EN 301 489-17	September , 2020	V3.2.4
EN 300 220-1	February, 2017	V3.1.1
EN 300 220-2	June, 2018	V3.2.1
EN 300 328	July, 2019	V2.2.2
EN 301 489-1	November, 2019	V2.2.3
EN 301 489-3	March, 2019	V2.1.1
EN 62311	January, 2020	
EN 62368-1	August, 2014	
EN 62368-1/A11	January, 2017	

Technical features and characteristics

The product includes the following features and characteristics:

868 MHz equipment

- Operating frequency range: 868.0-868.6 MHz
- Maximum output power: 11.55 dBm ERP
- Maximum antenna gain: -6.53 dBi

Bluetooth LE

- Operating frequency range: 2402-2480 MHz (40 channels)
- Maximum output power: 4.3 dBm EIRP average (calculated)
- Maximum antenna gain: 0 dBi

UKCA Type Examination Certificate (page 5 of 5)

Annex 3 to certificate 222340020/AA/00

The product as described in this type examination includes the following type designations:

- Product description: Climate sensor, temperature, relative humidity
- Trademark: ROCKWOOL, Grodan, GroSens
- Type designation: GS21CL12
- Hardware version: 6043-1900-34

- Product description: Climate sensor, temperature, relative humidity and CO2
- Trademark: ROCKWOOL, Grodan, GroSens
- Type designation: GS21CL13
- Hardware version: 6043-1900-35

