DEKRA Testing and Certification, S.A.U.
Parque Tecnológico de Andalucía,
c/ Severo Ochoa nº 2 · 29590 Campanillas · Málaga · España

Test report No:

NIE: 56256RMV.001

Test Report
LoRa Alliance End Device Certification Requirements

Identification of item tested.....:	Gas cylinder monitoring device
Trade .....:	Connit
Model and /or type reference .....:	Click click
Final HW version .....:	3.2
Final SW version .....:	3.4
Features.....:	LoRaWAN, Sigfox
Manufacturer.....:	CONNIT 231 rue Pierre et Marie Curie 31670 Labege,France
Test method requested .....:	Lora Alliance Certification Program
Standard .....:	LoRaWAN v1.0.2
Test procedure(s) .....:	LoRa Alliance End-Device Certification Requirements for EU 868VMHz ISM Band Devices.v1.5
Approved by (name / position & signature).....:	Noemí Pérez IoT Lab Manager NOEMÍ PÉREZ DANS Firmado digitalmente por NOEMÍ PÉREZ DANS Fecha: 2018.03.27 13:43:09 +02'00'
Date of issue .....:	2018-03-27

LoRa accredited Test Lab

Index

Competences and guarantees

DEKRA Testing and Certification, S.A.U. is a testing laboratory competent to carry out the tests described in this report.

In order to assure the traceability to other national and international laboratories, DEKRA Testing and Certification, S.A.U. has a calibration and maintenance program for its measurement equipment.

DEKRA Testing and Certification, S.A.U. guarantees the reliability of the data presented in this report, which is the result of the measurements and the tests performed to the item under test on the date and under the conditions stated on the report and, it is based on the knowledge and technical facilities available at DEKRA Testing and Certification, S.A.U. at the time of performance of the test.

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The results presented in this Test Report apply only to the particular item under test established in this document.

General conditions

1. This report is only referred to the item that has undergone the test.
2. This report does not constitute or imply on its own an approval of the product by the Certification Bodies or competent Authorities.
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Uncertainty

Uncertainty (factor k=2) was calculated according to the DEKRA internal document PODT000.

Usage of samples

Samples undergoing test have been selected by: Connit.

Following samples have been used:

Control Nº	Description	Model	HW version	SW version	Serial Nº	Date of reception
56256_5.1	Gas cylinder monitoring device	Click click	3.2	3.4	DevEUI: 70B3D56AD0002B07	26/03/2018

All Samples have undergone total or partially the test(s) specified in subclause “Test method requested”.

Test sample description

The test sample consists of a gas cylinder monitoring device.

Aplicant

CONNIT

231 rue Pierre et Marie Curie

31670 Labege, France

Testing period

The performed test started on 2018-03-26 and finished on 2018-03-26.

Environmental conditions

The testing has been performed within the following limits:

	NORMAL
Temperature	Min. = 15 ºC Max. = 35 ºC
Relative humidity	Min. = 25 % Max. = 75 %

Remarks and comments

The tests have been performed by the technical personnel: José Gómez Ramírez.

Testing verdicts

Not applicable ..... :	N/A
Pass ..... :	P
Fail ..... :	F
Not measured ..... :	N/M

Appendix A – Test result

Test Results

EU 863-870MHz ISM

TC ID	Packet Version	Name	Date	Test sample	Result
TC_A_EU868_ED_MAC_BV_000	5.0.0_R1	Device Activation	2018-03-26	56256_5.1	PASS
TC_A_EU868_ED_MAC_BV_001	5.0.0_R1	Test application functionality	2018-03-26	56256_5.1	PASS
TC_A_EU868_ED_MAC_BV_002	5.0.0_R1	Over The Air Activation	2018-03-26	56256_5.1	PASS
TC_A_EU868_ED_MAC_BV_003	5.0.0_R1	Packet Error Rate Part 1	2018-03-26	56256_5.1	PASS
TC_A_EU868_ED_MAC_BV_004	5.0.0_R1	Cryptography	2018-03-26	56256_5.1	PASS
TC_A_EU868_ED_MAC_BV_005	5.0.0_R1	Downlink window timing	2018-03-26	56256_5.1	PASS
TC_A_EU868_ED_MAC_BV_006	5.0.0_R1	Frame sequence number	2018-03-26	56256_5.1	PASS
TC_A_EU868_ED_MAC_BV_007	5.0.0_R1	DevStatusReq MAC command	2018-03-26	56256_5.1	PASS
TC_A_EU868_ED_MAC_BV_008	5.0.0_R1	MAC commands	2018-03-26	56256_5.1	PASS
TC_A_EU868_ED_MAC_BV_009	5.0.0_R1	NewChannelReq MAC command	2018-03-26	56256_5.1	PASS
TC_A_EU868_ED_MAC_BV_010	5.0.0_R1	Confirmed packets	2018-03-26	56256_5.1	PASS
TC_A_EU868_ED_MAC_BV_011	5.0.0_R1	RXParamSetupReq MAC command	2018-03-26	56256_5.1	PASS
TC_A_EU868_ED_MAC_BV_012	5.0.0_R1	RXTimingSetupReq MAC command	2018-03-26	56256_5.1	PASS
TC_A_EU868_ED_MAC_BV_014A	5.0.0_R1	LinkADRReq MAC command	2018-03-26	56256_5.1	PASS
TC_A_EU868_ED_MAC_BV_014B	5.0.0_R1	LinkADRReq MAC command	2018-03-26	56256_5.1	PASS
TC_A_EU868_ED_MAC_BV_015	5.0.0_R1	Packet Error Rate RX1	2018-03-26	56256_5.1	PASS
TC_A_EU868_ED_MAC_BV_015	5.0.0_R1	Packet Error Rate RX2	2018-03-26	56256_5.1	PASS

Appendix B – Test Systems

ITEM	EU868 SETUP	
TEST SYSTEM	TACS4 LPWAN	
	Equipment	**Serial Nº**
	Semtech GW IOT SX1301 Starter Kit	PCB_E340V02A 0915
	Equipment	
	TACS4 LORA GUI v1.10.0 TACS4 LORA Reporting Module v1.5.0 TACS4 LORA Technology Package v5.0.0_r1 TACS4 LORA ED Certification EU v1.5	

Appendix C – ICS

NAME	DESCRIPTION	VALUE
C_ED_ADR	DUT supports Adaptative Data Rate (ADR) feature	TRUE
C_ED_ADR_BLOCK	DUT supports LinkADRDReq block	TRUE
C_ED_DL_CHAN	DUT supports DlChannelReq MAC Command	TRUE
C_ED_OTAA	DUT supports Over-The-Air Activation (OTAA) mechanism	TRUE
C_ED_RESET	DUT needs a reset after deactivating Test Mode	TRUE
C_ED_TM_TRI	DUT supports Trigger Join request command in Test Mode.	FALSE

Appendix D – IXIT

NAME	DESCRIPTION	VALUE
I_ED_APPEUI	Application identifier (AppEUI)	70B3D56AD0000100
I_OTAA_APPKEY	Application Key (AppKey)	BDE2D109F1ED3B1B58FF506E1781CBBC
I_ED_APPEUI	Application Identifier (AppEUI)	BDE2D109F1ED3B1B58FF506E1781CBBC
I_ABP_ADDR	End-Device Address (DevAddr)	D0002B07
I_ABP_NWKSKEY	Network Session Key (NwkSKEY)	C05BA7FB4FCFD62D9175D9836F6E25C7
I_ABP_APPSKEY	Application Session Key (AppSKEY)	8C24AC678F93DD408A4DC5573DF2A044

Appendix E – Photographs

FRONT VIEW

REAR VIEW