



1 **EU-TYPE EXAMINATION CERTIFICATE**

2 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU

3 Certificate Number: **KIWA 18ATEX0011X** Issue: **4**

4 Equipment: **Modem – Datalogger Type UNICOM 300 N5X**

5 Applicant: **Wigersma & Sikkema**

6 Address: **Leigraafseweg 4  
6983 BP Doesburg  
The Netherlands**

7 This equipment and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

8 CSA Group Netherlands B.V., notified body number 2813 in accordance with Articles 17 and 21 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential reports listed in Section 14.2.

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the schedule to this certificate, has been assured by compliance with the following documents:

EN IEC 60079-0:2018 EN 60079-11:2012

10 If the sign 'X' is placed after the certificate number, it indicates that the equipment is subject to Specific Conditions of Use identified in the schedule to this certificate.

11 This EU-Type Examination Certificate relates only to the design and construction of the specified equipment. If applicable, further requirements of this Directive apply to the manufacture and supply of this equipment.

12 The marking of the equipment shall include the following:



II 1 G  
II (1) G  
Ex ia IIB T3 Ga  
[Ex ia Ga] IIC  
Ta = -40°C to +60°C

Signed: Michelle Halliwell

Title: Director of Operations



Project Number 80132725

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## SCHEDULE

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#### 13 DESCRIPTION OF EQUIPMENT

The battery powered Modem – Datalogger Type UNICOM 300 N5X is used for wireless communication of data from and to equipment to which it is connected via a pulse or serial interface.

The unit is provided with a number of indicator LED's, a key for control, an infrared service interface and a pulse output.

Ambient temperature range -40 °C to +60 °C.

##### Supply:

one or two battery packs (indicated as type UNICOM 300 N51 or type UNICOM 300 N52 respectively) with a nominal supply voltage of 10.8 V, consisting of three Lithium Thionyl cells, size D, in series of type:

- SL-2780 manufactured by Tadiran or;
- LS33600 manufactured by Saft.

Radio interface (GSM): Transmitted power < 3.5 W.

##### Electrical data

##### Namur circuit (terminal 1 and 2):

in type of protection intrinsic safety Ex ia IIC or IIB, with the following maximum values:

$U_o = 9,6 \text{ V}$ ;  $I_o = 10 \text{ mA}$ ;  $P_o = 24 \text{ mW}$ ;  $C_o = 3 \text{ }\mu\text{F}$ ;  $L_o = 100 \text{ mH}$ .

and/or

in type of protection intrinsic safety Ex ia IIC or IIB, only for connection to a certified intrinsically safe circuit, with the following maximum values:

$U_i = 9,6 \text{ V}$ ;  $I_i = 10 \text{ mA}$ ;  $P_i = 10 \text{ mW}$ ;  $C_i = 0 \text{ }\mu\text{F}$ ;  $L_i = 0 \text{ mH}$ .

##### Pulse input circuit (terminal 3, 4 and 5):

in type of protection intrinsic safety Ex ia IIC or IIB, with the following maximum values:

$U_o = 6,5 \text{ V}$ ;  $I_o = 12 \text{ mA}$ ;  $P_o = 20 \text{ mW}$ ;  $C_o = 24 \text{ }\mu\text{F}$ ;  $L_o = 100 \text{ mH}$ .

and/or

in type of protection intrinsic safety Ex ia IIC or IIB, only for connection to a certified intrinsically safe circuit, with the following maximum values:

$U_i = 6,5 \text{ V}$ ;  $I_i = 10 \text{ mA}$ ;  $P_i = 10 \text{ mW}$ ;  $C_i = 0 \text{ }\mu\text{F}$ ;  $L_i = 0 \text{ mH}$ .

##### DATA circuit (terminal 6 and 7), for connection to a passive intrinsically safe circuit:

in type of protection intrinsic safety Ex ia IIC or IIB, with the following maximum values:

$U_o = 6,5 \text{ V}$ ;  $I_o = 13 \text{ mA}$ ;  $P_o = 21 \text{ mW}$ ;  $C_o = 24 \text{ }\mu\text{F}$ ;  $L_o = 100 \text{ mH}$ .

##### REQ circuit (terminal 7 and 8) , for connection to a passive intrinsically safe circuit:

in type of protection intrinsic safety Ex ia IIC or IIB, with the following maximum values:

$U_o = 6,5 \text{ V}$ ;  $I_o = 5 \text{ mA}$ ;  $P_o = 8 \text{ mW}$ ;  $C_o = 24 \text{ }\mu\text{F}$ ;  $L_o = 100 \text{ mH}$ .



## SCHEDULE

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Pulse Output circuit (terminal 9, 10 and 11):

in type of protection intrinsic safety Ex ia IIC or IIB, only for connection to a certified intrinsically safe circuit, with the following maximum values:

$U_i = 24 \text{ V}$ ;  $I_i = 600 \text{ mA}$ ;  $P_i = 450 \text{ mW}$ ;  $C_i = 113 \text{ nF}$ ;  $L_i = 0 \text{ mH}$ ;

or

if installed outside the hazardous area, the following electrical data apply:

$U_n = 20 \text{ Vdc}$  ;  $U_m = 250 \text{ Vac}$ .

**Variation 1** - This variation introduced the following changes:

- i. Following appropriate assessment to demonstrate compliance with the latest technical knowledge, EN 60079-0: 2012 + A11: 2013 was replaced by EN IEC 60079-0: 2018.
- ii. The report is also to facilitate the transfer of certificates KIWA 18ATEX0011 X from Kiwa Nederland B.V., Unit Kiwa ExVision, Wilmersdorf 50, 7327 AC Apeldoorn, The Netherlands to CSA Group.

**Variation 2** - This variation introduced the following changes:

- i. Introduction of an alternate modem module type.
- ii. Update to Product description due to the deletion of 'EVE' battery pack.

## 14 DESCRIPTIVE DOCUMENTS

### 14.1 Drawings

Refer to Certificate Annexe.

### 14.2 Associated Reports and Certificate History

Issue	Date	Report number	Comment
1	28 June 2018	171200226	The release of the prime certificate.
2	25 April 2019	171200226	The release of the Second Issue
3	02 February 2022	R80093867A	The introduction of Variation 1.
4	08 February 2023	R80132726A	The introduction of Variation 2.

## 15 SPECIFIC CONDITIONS OF USE (denoted by X after the certificate number)

15.1 The equipment, if placed in a hazardous area, shall be installed and maintained such that hazards caused by electrostatic discharge are excluded. Only clean with a damp cloth.

## 16 ESSENTIAL HEALTH AND SAFETY REQUIREMENTS OF ANNEX II (EHSRs)

The relevant EHSRs that are not addressed by the standards listed in this certificate have been identified and individually assessed in the reports listed in Section 14.2.

## 17 CONDITIONS OF MANUFACTURE

17.1 The use of this certificate is subject to the Regulations Applicable to Holders of CSA Group Netherlands B.V. certificates.

17.2 Holders of EU-Type Examination Certificates are required to comply with the conformity to type requirements defined in Article 13 of Directive 2014/34/EU.

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# Certificate Annexe



Certificate Number: KIWA 18ATEX0011X  
Equipment: Modem – Datalogger Type UNICOM 300 N5X  
Applicant: Wigersma & Sikkema

Issues 1 & 2: Refer to the report stated in section 14.2

## Issue 3

Drawing	Rev.	Drawing Date	Date (Stamp)	Title
	9	19-11-2021	08-Dec-21	*EX account UNICOM 300 N5X
	7	28-07-2021	08-Dec-21	*EX account PCB UNICOM 300 N5X
1017_A_1000	7	14-10-2021	08-Dec-21	*UNICOM 300 Assembly
1017_A_1200	5	14-10-2021	08-Dec-21	*PCA modem assembly
1017_A_1300	3	13-10-2021	08-Dec-21	* Battery pack Assembly (Saft)
1017_A_1400	3	13-10-2021	08-Dec-21	* Battery pack Assembly (Tadiran)
1017_A_2001	3	12-10-2021	08-Dec-21	* Type label Battery pack Tadiran
1017_A_2002	3	13-10-2021	08-Dec-21	* Type label Battery pack Saft
WSU0621I	I	18-06-2021	08-Dec-21	* Modem BOM list
WSU0621I_sch	I	18-06-2021	08-Dec-21	* Modem circuit diagram
303682006	I	18-06-2021	08-Dec-21	* Printed circuit board datasheet
WSU0622G	G	16-06-2021	08-Dec-21	* Logger BOM list
WSU0622G_sch	G	16-06-2021	08-Dec-21	* Logger circuit diagram
303681006	G	16-06-2021	08-Dec-21	* Printed circuit board datasheet

## Issue 4

Drawing	Sheets	Rev.	Date (Stamp)	Title
WSU0621 BOM 250802309c EU	1 to 2	I	20 Jan 23	Bill of Material dated 14/07/2022
WSU0621 BOM 250805501a WW	1 to 2	I	20 Jan 23	Bill of Material dated 14/07/2022
1017_A_1000	1 of 1	9	19 Jan 23	UNICOM 300 Assembly
1017_A_1200	1 of 1	6	19 Jan 23	PCA modem assembly UNICOM300 battery supplied EU
1017_A_1200C	1 of 1	1	20 Jan 23	PCA modem assembly UNICOM300 battery supplied WW
1017_A_1201	1 of 1	2	20 Jan 23	Heatsink UNICOM

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