EU-TYPE EXAMINATION
CERTIFICATE

Equipment or Protective System Intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU

1. **EU-Type Examination Certificate Number:** **ETL21ATEX0085X** **Issue 00**

2. **Product:** Gas Sensing Device
   Model SulfiLoggerTM X1 Series (See Description of Product for details)

3. **Manufacturer:** SulfiLogger A/S

4. **Address:** Tueager 1, Aarhus N, 8200, Denmark

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

6. Intertek Testing Services NA Ltd., Notified Body number 2903 in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council dated 26 February 2014, certifies that the product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II of the Directive.

7. Compliance with the Essential Health and Safety Requirements has been assured by compliance with EN IEC 60079-0:2018 and EN 60079-11:2012 except in respect of those requirements referred to within item 14 of the Schedule.

8. If the sign “X” is placed after the certificate number, it indicates that the product is subject to the special conditions of use specified in the Schedule to this certificate.

9. This EU-Type Examination Certificate relates only to the design and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.

10. The marking of the product shall include the following:

II 1 G Ex ia IIC T4 Ga

-20°C ≤ Ta ≤ +60°C

Certification Officer: Kevin J. Wolf **Date:** 7 March 2022

Kevin J. Wolf

[Document Control No. TF-CA.ATEX-OP-23a – May 13, 2021]

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11. Description of Equipment or Protective System

The product covered by this report is a Gas Sensing Device Model SulfiLoggerTM X1 series. The gas sensing device is designed to quantify the concentration of a specific gas, e.g. H2S, O2, or H2. The device can be used in several media such as air, natural gas, oil or water.

The SulfiLoggerTM X1 series will primarily be used in four different configurations, (a) free hanging, (b) fixed – liquid phase measurement, (c) inline installation, and (d) fixed – gas phase measurement. Each configuration can have subvariants, e.g. different insertion lengths or thread types.

The product is supplied through a barrier module located in the ordinary location. It is also possible to connect to an RS-232 communication port through a barrier. M12 connectors for power/4-20mA supply and RS-232 communication are located in the back end of the sensor housing. The product contains four 1.5V cells connected in series, with a total nominal voltage of 6 V used for powering essential parts of the sensor when the product is not connected through a barrier. The main PCB is partially encapsulated by a casting compound (Wacker SilGel 612) that ensures that all internal distances of the electronics fulfill the requirements for intrinsically safe circuits. An outer stainless steel metal enclosure protects the device against mechanical impact. During production, the device can be fitted with different sensor heads targeting different gases. The sensor head contains two types of sensing devices: one or two gas sensors and a temperature sensor. The user is not allowed to disassemble the device and replace batteries.

Model Similarity:

SulfiLogger™ X1-BCDE-F, where:

X1 for devices for Ex applications.

B is the analyte:

- 1: H2S
- 2: O2
- 3: H2
- 4: NO
- 5: N2O
- 6-9: Other gas

C is the mechanical design of the sensor:

- 0: Flush front;
- 1: Threaded front (G1”) – type A;
- 2: Threaded front (G1”) – type B;
- 3: Flush front and conduit through sensor;

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- 4: Threaded front (G1") and conduit through sensor

- 5-9: other sensors

D is a number 0-9 defining the sensor/software configuration

E is 0

F is the maximum concentration including unit

12. Report Number

Intertek Report: 104799609DAL-003 Issue: 00 Dated: 2022-03-03.

13. Special Conditions of Certification

(a). Special Conditions of Use

- The SulfiLogger™ X1 sensor must be grounded.
- The SulfiLogger™ X1 sensor must not be disassembled.
- It is the end user's responsibility to select proper barriers for the SulfiLogger™ X1 sensor.

(b). Conditions of Manufacture - Routine Tests

- N/A

14. Essential Health and Safety Requirements (EHSRs)

The relevant Essential Health and Safety Requirements (EHSRs) have been identified and assessed in Intertek Report: 104799609DAL-003 Issue: 00 Dated: 2022-03-03.

15. Drawings and Documents

Title:	Drawing No.:	Rev. Level:	Date:
Core PCB + Battery	1908d026	V03-109	10/01/2021
		V03-110	02/24/2022
Core PCB	1908d027	V03-108	10/01/2021
C00021V03_Assembly instructions_106	C00021V03_Assembly instructions_106	V03_106	12/3/2021
C00021V03_Assembly instructions_107	C00021V03_Assembly instructions_107	V03_107	02/22/2022
C00021V03_BOM_103	C00021V03_BOM_103	V03_103	10/7/2021
C00021V03_BOM_104	C00021V03_BOM_104	V03_104	02/24/2022
X1-BCDE-F	1902d001	V01-106	9/29/2021
Overview SulfiLogger X1 Core PCB	C00042_v2r0	v2r0	4/9/2019
C00042_v2r02_BOM	C00042_v2r02	C00042_v2r02	1/27/2022
Specification Page 1	C00042_v2r0-00.art	--	4/8/2019
Specification Page 2 Build-up	C00042_v2r0-00.art	--	4/8/2019
Overview SulfiLogger X1 Core PCB	C00042_v2r2	v2r2	9/14/2021

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C00042_v2r2_BOM	C00042_v2r2_BOM	v2r2_103	1/27/2022
Specification Page 1	C00042_v2r2-00.art	--	9/26/2021
Specification Page 2 Build-up	C00042_v2r2-00.art	--	9/26/2021
SulfiLogger™ sensor and PowerCom Box Installation Manual	SulfiLogger™ sensor and PowerCom Box Installation Manual	111	March 2022
F00001_Label marking	F00001_Label marking	202	03/16/2022