IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification System for Explosive Atmospheres

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Certificate No.: **IECEx ETL 21.0072X**

Certificate history:
Issue 0 (2022-03-07)

Status: **Current**

Issue No: 1

Date of Issue: 2023-08-10

Applicant: **SulfiLogger A/S**
Stokagervej 8G
8240 Risskov
Denmark

Equipment: **Gas Sensing Device Model SulfiLogger™ X1 (See Annex for model details)**

Optional accessory:

Type of Protection: **Intrinsic Safety 'ia'**

Marking: Ex ia IIC T4 Ga

-20°C to +60°C

IECEx ETL 21.0072X

Approved for issue on behalf of the IECEx Certification Body: **Todd L. Relyea**

Position: **Certification Officer**

Signature:
(for printed version)

Date:
(for printed version)

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Certificate issued by:

Intertek
3933 US Route 11 South
Cortland NY 13045-2995
United States of America

IECEx Certificate of Conformity

Certificate No.: **IECEx ETL 21.0072X**

Date of issue: 2023-08-10 Issue No: 1

Manufacturer: **SulfiLogger A/S**
Stokagervej 8G
8240 Risskov
Denmark

Manufacturing locations: **SulfiLogger A/S**
Stokagervej 8G
8240 Risskov
Denmark

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements.This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended

STANDARDS :
The equipment and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards

IEC 60079-0:2017 Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

IEC 60079-11:2011 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:6.0

This Certificate **does not** indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

TEST & ASSESSMENT REPORTS:
A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in:

Test Reports:

US/ETL/ExTR21.0074/00 US/ETL/ExTR21.0074/01

Quality Assessment Report:

GB/EXV/QAR18.0003/02

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EQUIPMENT:
Equipment and systems covered by this Certificate are as follows:

The product covered by this report is a Gas Sensing Device Model SulfiLogger™ X1. 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 SulfiLogger™ X1 sensor can be used in different configurations, such as, (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 in the back end of the sensor housing. An outer stainless steel metal enclosure protects the device against mechanical impact.

SPECIFIC CONDITIONS OF USE: YES as shown below:

- The sensor has been considered an isolated metal part and has a max capacitance of 97.2 pF on the screws of the enclosure body. The end user shall ensure that this part is incapable of being charged, either through grounding or installation conditions. Please refer to the installation manual for details on the mitigation of electrostatic charging.
- The sensor must not be disassembled.
- It is the end user’s responsibility to select proper barriers for the sensor.

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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)
Issue 01 changes under project# G104799609:

Updated drawings:

- Added drawing 1908d026 revision V03-110 date 02/24/2022
- Added drawing C00021V03_Assembly instructions_107 revision V03_107 date 02/22/2022
- Added drawing C00021V03_BOM_104 revision V03_104 date 02/24/2022
- Updated drawing SulfiLogger™ sensor and PowerCom Box Installation Manual from " revision 110 date January 2022" to " revision 111 date March 2022"
- Updated drawing F00001_Label marking from " revision 201 date 01/04/2022" to " revision 202 date 03/16/2022"

Issue 01 changes under project# 105152243DAL-001:

- Updated address from: "Tueager 1, Aarhus N, 8200, Denmark" to "Stokagervej 8G, 8240 Risskov, Denmark" and updated below drawings accordingly:

- "F00001_Label marking" and "SulfiLoggerTM sensor and PowerCom Box_Inst. Manual".

- Added alternate resistance value of R36: 270 Ohm, changed R21,R22 and R23 values from 0R, 0R, NM to NM, NM, 0R and updated below drawings accordingly:

- Added drawing "C00042_v2r3_BOM", revision level: v2r3_101, date: 8/19/2022.

- Added drawing "1908d026", ", revision level: V03-112, date: 06/29/2022.

- Added drawing "C00021V03_Assembly instructions_108" revision V03_108, date: 07/06/2022.

- Added drawing "C00021V03_BOM_105" revision V03_105, date: 07/06/2022.

- Added drawing "C00042_v2r3", revision level v2r3, date: 08/23/2022.

- Performed measurement capacitance test and updated special condition of use from "The SulfiLogger™ X1 sensor must be grounded." to "The probe has been considered an isolated metal part and has a max capacitance of 97.2pF on enclosure body screws. The end user shall ensure that this part is incapable of being charged, either through grounding or installation conditions. Please refer to the manufacturer's instruction manual for details on the mitigation of electrostatic charging" and updated manual revision level and date to : 25, April 2023.
- C2, C3, C4 and C5 have been added to suppress burst signal. D6 and D7 have been added to protect RS232 lines. Capacitance does not exceed 22nF.

Annex:

104799609DAL-002-3-Annex for IECEx ETL 21.0072X.pdf

Annex to IECEx Certificate of Conformity

Certificate No:	IECEx ETL 21.0072X	Issue No. 01
Annex No. 1		

Technical Documents			
Title:	Drawing No.:	Rev. Level:	Date:
*Core PCB + Battery	1908d026	V03-113	06/29/2022
Core PCB	1908d027	V03-108	10/01/2021
C00021V03_Assembly instructions_106	C00021V03_Assembly instructions_106	V03_106	12/03/2021
*C00021V03_Assembly instructions_107	C00021V03_Assembly instructions_107	V03_107	02/22/2022
*C00021V03_Assembly instructions_108	C00021V03_Assembly instructions_108	V03_108	07/06/2022
C00021V03_BOM_103	C00021V03_BOM_103	V03_103	10/07/2021
*C00021V03_BOM_104	C00021V03_BOM_104	V03_104	02/24/2022
*C00021V03_BOM_105	C00021V03_BOM_105	V03_105	07/06/2022
X1-BCDE-F	1902d001	V01-106	09/29/2021
Overview Core PCB	C00042_v2r0	v2r0	04/09/2019
C00042_v2r02_BOM	C00042_v2r02	C00042_v2r02	01/27/2022
Specification Page 1	C00042_v2r0-00.art	--	04/08/2019
Overview Core PCB	C00042_v2r2	v2r2	09/14/2021
*Overview Core PCB	C00042_v2r3	v2r3	08/23/2022
C00042_v2r2_BOM	C00042_v2r2_BOM	v2r2_103	01/27/2022
*C00042_v2r3_BOM	C00042_v2r3_BOM	v2r3_101	08/19/2022
Specification Page 1	C00042_v2r2-00.art	--	09/26/2021
*IECEx Installation Drawing	F00001QIX01	100	04/17/2023
*F00001_Label marking	F00001_Label marking	204	04/25/2023

Note: An * is included before the title of documents that are new or revised.

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;
- 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