

1 **EU - TYPE EXAMINATION CERTIFICATE** Rev 01

2 **Equipment or protective System intended for use in potentially explosive atmospheres Directive 2014/34/EU**

3 EU - Type Examination Certificate Number: DTI 20ATEX0121X

4 Product: Intrinsically safe power supply for "SulfiLogger X1"
Type: "PowerCom Box"

5 Manufacturer: SulfiLogger A/S

6 Address: Tueager 1, DK-8200 Aarhus N, Denmark

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

8 Danish Technological Institute, Notified Body number 0396, in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this 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 to the Directive.

The examination and test results are recorded in confidential Report No. DTI 20ATEX0121 Rev 01 order no: J954915-1

9 Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

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

except in respect of those requirements listed at item 18 of the Schedule.

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

11 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.

12 The marking of the product shall include the following :

Ex II 2(1) G Ex ib [ia IIC Ga] IIC T4 Gb or
Ex II (1) G [Ex ia Ga] IIC

Danish Technological Institute
Certification & Inspection

Date: 2020-11-20


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13

Schedule

Rev. 01

14

Certificate Number DTI 20ATEX0121X, Rev 01

15 Description of Product

The "PowerCom Box" is designed for use in explosion hazardous areas and work as an Ex barrier module for the Sul-fiLogger X1 certified by DTI 18ATEX0087. The PowerCom Box is a power supply and a radio communication device designed to power and deliver data, to the cloud, from the SulfiLogger™ X1-sensor.

The PowerCom Box can be installed both as "Associated Apparatus" in the safe area working as a normal barrier module or it can be installed as Category 2 equipment in Zone 1 – in this case it is battery operated.

Changes introduced by this Revision 01 of the Certificate

The wiring board has been modified with respect to fuse sizes, choice of diodes and alternative cable gland, The modifications are specified in confidential report no.: 20ATEX0121X, Revision 01.

All other specifications remain unchanged

Type designation

The certification covers the Intrinsically safe power supply for SulfiLogger X1
Type: "PowerCom Box"

30 wiring boards in stock are modified to mirror the changes specified above. These 30 wiring boards are identified by the serial numbers:

1000300885, 1000300892, 1000300887, 1000300888, 1000300889, 1000300890, 1000300903, 1000300886, 1000300893, 1000300894, 1000300895, 1000300896, 1000300897, 1000300898, 1000300899, 1000300900, 1000300904, 1000300902, 1000300891, 1000300901, 1000300905, 1000300906, 1000300907, 1000300908, 1000300909, 1000300910, 1000300911, 1000300912, 1000300913, 1000300914.

Intrinsically safe specifications

Power / 4-20 mA: Uo: 28,5 V, Io: 85 mA, Po: 0,61W
RS232 : Uo : 12,0 V, Io: 85 mA, Po: 0,26W
Um: 60 V

Ambient temperature area: T_{amb}: -20°C to +40°C

16 Report Number

DTI 20ATEX0121 Rev 01, order no: J954915-1

17 Specific Conditions of Use

1. Since the product can be installed both in the "safe area" as "associated apparatus" or as intrinsically safe apparatus in zone 1 with intrinsically safe output to zone 0 - it

is essential for the safety that the manufacturers installation manual are followed in detail.

2. The checkboxes on the marking plate indicate which marking the product is compliant with. The marking will by default be for installation in safe zone. If the DC and SCADA connections are not used, a flip cover can be closed, and the other marking will be highlighted which will allow for installation in Zone 1. This system guarantees that the marking is correct even if the flip cover is unintentionally removed.
3. Only batteries with part number S00098 delivered by "SulfiLogger A/S" may be used. Use of other batteries may have impact on the Ex-safety and voids ATEX certification.
4. The PowerCom Box is only for fixed installation. Due to potential electrostatic charging hazard the box is marked: *"Do only clean the PowerCom Box with a moist cloth"*.
5. Battery replacement: *"WARNING – Do not replace battery when an explosive atmosphere is present"*.

18 Essential Health and Safety Requirements

In addition to the Essential Health and Safety Requirements (EHSRs) covered by the standards listed at item 9, the following are considered relevant to this product, and conformity is demonstrated in the report:

None

19 Drawings and Documents

PowerCom Box – ATEX protection overview

Filename: S00074V02_ATEX protection overview_103

Electronics:

Revision 000:

- C00154V02_ATEX calculations_000.xlsx, is the power calculations for the design.
- C00154V02_BOM_000.xlsx, is the complete BOM for the design.
- C00154V02_000.pdf, is the schematic for the design
- C00154V02_000.zip, is the production Gerber files.
- C00154V02_000.brd, is the board layout.

Revision 200:

- C00154V02_ATEX calculations_200.xlsx, is the power calculations for the design.
- C00154V02_BOM_200.xlsx, is the complete BOM for the design.
- C00154V02_200.pdf, is the schematic for the design
- C00154V02_200.zip, is the production Gerber files.
- C00154V02_200.brd, is the board layout.
- C00154V02_EX Overview_200.brd, is the board layout with Ex areas highlighted.

Revision 300:

- C00154V02_300: Circuit diagram, Nov 06, 2020
- C00154V02_300.zip, is the production Gerber files.
- S00074V02_ATEX protection overview_104
- C00154V02_ATEX calculations_300
- C00154V02_BOM_300



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Mechanics:

- S00074V02_2001d017_104.pdf

Assembly drawing of mechanics. Includes list of related drawings

Taastrup, 2020-11-20

Danish Technological Institute
Certification & Inspection


Jakob Nittegaard
ATEX Manager



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