



IECEX Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Ex COMPONENT CERTIFICATE

Certificate No.: IECEx SIR 11.0103U Issue No: 2 Certificate history:
Status: **Current** Page 1 of 4 Issue No. 2 (2019-06-07)
Date of Issue: **2019-06-07** Issue No. 1 (2017-04-05)
Applicant: **Aanderaa Data Instruments AS** Issue No. 0 (2012-06-27)
Sanddalsringen 5b
N-5225 Nesttun
Norway
Ex Component: **ULD-35W-AC and ULD-35W-DC Encapsulated Driver Circuits**

This component is NOT intended to be used alone and requires additional consideration when incorporated into other equipment or systems for use in explosive atmospheres (refer to IEC 60079-0).

Type of Protection: **Encapsulation and Dust**

Marking:

Ex mb IIC Gb
Ex mb IIIC Db

Approved for issue on behalf of the IECEx
Certification Body:

N Jones

Position:

Certification Manager

Signature:
(for printed version)

Date:

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the [Official IECEx Website](http://www.iecex.com).

Certificate issued by:

SIRA Certification Service
CSA Group
Unit 6, Hawarden Industrial Park
Hawarden, Deeside, CH5 3US
United Kingdom

sira
CERTIFICATION





IECEX Certificate of Conformity

Certificate No: IECEX SIR 11.0103U Issue No: 2

Date of Issue: 2019-06-07 Page 2 of 4

Manufacturer: **Aanderaa Data Instruments AS**
Sanddalsringen 5b
N-5225 Nesttun
Norway

Additional Manufacturing location(s):

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 Component 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 Ex Component 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 : 2007-10 Explosive atmospheres - Part 0:Equipment - General requirements
Edition:5

IEC 60079-18 : 2009 Explosive atmospheres Part 18: Equipment protection by encapsulation "m"
Edition:3

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

TEST & ASSESSMENT REPORTS:

A sample(s) of the Ex Component listed has successfully met the examination and test requirements as recorded in

Test Report:

[GB/SIR/ExTR12.0157/00](#)

[GB/SIR/ExTR17.0068/00](#)

[GB/SIR/ExTR19.0149/00](#)

Quality Assessment Report:

[NO/NEM/QAR14.0006/05](#)



IECEX Certificate of Conformity

Certificate No: IECEx SIR 11.0103U

Issue No: 2

Date of Issue: 2019-06-07

Page 3 of 4

Schedule

Ex Component(s) covered by this certificate is described below:

The product is an 'Ex' component that consists of an aluminium housing which has a cover secured in each corner by four screws and nuts. Inside the housing, there is a PCB which is fixed in position by two plates either side. The aluminium housing is completely filled with potting compound, exiting the compound are three leads for supply and earth connections and six leads for the output channels and data input.

There are two versions of the driver, one which is supplied with AC, ULD-35W-AC, and one which is supplied with DC, ULD-35W-DC. The supply and output ratings are as noted below, although, for full details, refer to Special Conditions of Safe Use applied to this Certificate:

Supply ratings:

AC unit: 90 to 250 V, 40 W

DC unit: 24 V \pm 10%, 40 W

Maximum Output ratings (for both the AC and the DC units): 48 V, 1.5A, 35W

There are two output channels. The output ratings of these channels are set by the manufacturer using software. The circuit controls the output voltage and current so that the rated power of 35 W cannot be exceeded. An internal thermal fuse, set to 110°C is fitted on the supply to control temperature.

Refer to Annexe for CONDITIONS OF MANUFACTURE.

SCHEDULE OF LIMITATIONS:

Refer to Annexe.



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Certificate No: IECEx SIR 11.0103U

Issue No: 2

Date of Issue: 2019-06-07

Page 4 of 4

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

Issue 1 - this Issue introduced the following changes:

1. The recognition of an additional manufacturing location: Aanderaa Data Instruments AS, Sanddalsringen 5b, N-5225 Nesttun, Norway.

Issue 2 - this Issue introduced the following changes:

1. Change of applicant and manufacturer's name and address from IMT B.V., Pascalweg 10A, 4104 BG Culemborg, The Netherlands to Aanderaa Data Instruments AS, Sanddalsringen 5b, N-5225 Nesttun, Norway.
2. Include updated label material.
3. Minor administrative drawing changes.

Annex:

[IECEX SIR 11.0103U Issue 2_Annexe.pdf](#)

Annexe to: IECEx SIR 11.0103U Issue 2
Applicant: Aanderaa Data Instruments AS
Apparatus: ULD-35W-AC and ULD-35W-DC Encapsulated Driver Circuits



Schedule Of Limitations

The User/Installer shall comply with the following:

1. The Ex mb driver shall not be used alone and shall be used as part of equipment and installed within an approved enclosure that is suitable for the application. Mechanical protection of cables shall be provided and all cables shall be connected to suitable termination facilities, including the earth connection which must be electrically in contact with the external enclosure.
2. The permitted service temperature range is -40°C to +110°C.
3. When being used as part of equipment, the required temperature test shall be done in the worst case conditions defined by the intended load, if there the defined load is unknown, then the test shall be done in the following conditions; note that the output electrical ratings are controlled by software:

AC:

Supply: 81 V
Outputs: 11 V, 1.5 A (on each output channel)
Output load: 7.7 Ω (on each output channel)
Permanently on (not flashing)

DC:

Supply: 31.6 V
Outputs: 11 V, 1.5 A (on each output channel)
Output load: 7.7 Ω (on each output channel)
Permanently on (not flashing)

Conditions Of Manufacture

The Manufacturer shall comply with the following:

1. The encapsulated parts of the apparatus shall be subjected to a visual inspection. No visible damage of the compound shall be evident, such as cracks, exposure of the encapsulated parts, flaking, impermissible shrinkage, discolouration, swelling decomposition or softening, as required by IEC 60079-18:2009 clause 9.1.
2. A dielectric strength test according to IEC 60079-18:2009 clause 8.2.4 shall be applied for at least 1 second. Alternatively, 1.2 x test voltage may be applied and maintained for at least 100 ms.
3. The software controlling the output ratings of the drivers must be set by the manufacturer within the output ratings specified on this certificate. Once the output ratings have been set, the end user shall not have the ability to adjust these.