



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

Certificate No.: IECEX ITS 16.0016X

Issue No: 1

Certificate history:

Issue No. 1 (2018-08-29)

Issue No. 0 (2017-06-21)

Status: **Current**

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Date of Issue: **2018-08-29**

Applicant: **Tideland Signal Corporation**
4310 Directors Row
Houston
Texas
77092-8708
USA
United States of America

Equipment: **SS-1000X Battery Box**

Optional accessory:

Type of Protection: **Ex eb**

Marking:

Ex eb IIC T5 Gb

T_{amb} -20°C to +55°C

IECEX ITS 16.0016X

Approved for issue on behalf of the IECEX

P Moss

Certification Body:

Position:

Certification Officer

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:

Intertek Testing & Certification Limited
ITS House, Cleeve Road,
Leatherhead,
Surrey, KT22 7SA
United Kingdom





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Manufacturer: **Tideland Signal Corporation**
4310 Directors Row
Houston
Texas
77092-8708
USA
United States of America

Additional Manufacturing location(s):

Tideland Signal Ltd	Aanderaa Data Instrument A/S
Unit E, Kendal House	Danddalsringen 5
Victoria Way	N-5225
Burgess Hill	Nettsun
RH15 9NF	Norway
United Kingdom	

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 apparatus 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 : 2011	Explosive atmospheres - Part 0: General requirements
Edition:6.0	
IEC 60079-7 : 2015	Explosive atmospheres – Part 7: Equipment protection by increased safety "e"
Edition:5.0	

*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 equipment listed has successfully met the examination and test requirements as recorded in

Test Report:

[GB/ITS/ExTR16.0018/00](#)

Quality Assessment Report:

[GB/ITS/QAR12.0012/03](#)

[GB/ITS/QAR12.0015/02](#)

[NO/NEM/QAR14.0006/04](#)



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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The SS-1000x battery box consists of a range of options of different batteries that are fitted into a large capacity 316 stainless steel battery box measuring approximately 1300mm x 1015mm x 590mm and 946mm in its standard form. In its non-standard form it has a height extension which increases the overall height of the box by 356mm to facilitate the taller batteries. Multiple variations of the battery box are allowed each providing the possibility to house different battery combinations as follows;

48v 32Ah – capacity from a Ni-Cad battery – 060.8049-04

24v 800Ah – Lead Acid battery in extended height box – 060.8049-06

24v 510Ah – Ni-cad battery split over 2 enclosures – 060.8049-07

24v 224Ah – Lead Acid battery in extended height box – 060.8049-13

12v 510Ah – Ni-cad battery – 060.8049-14

24v 500Ah – Lead Acid battery – 060.8049-16

24v 1413Ah – Lead Acid battery in extended height box – 060.8049-17

24v 238Ah – Ni-cad battery in extended height box – 060.8049-18

24v 426Ah – Ni-cad battery split over 2 enclosures – 060.8049-19

24v 170/190Ah – Ni cad battery – 060.8049-22

24V 190Ah – Lead Acid battery – 060.8049-23

24V 220/320Ah – Ni-cad battery – 060.8049-24

Each battery box is provided with four external fixing holes in mounting flanges at each side of the enclosure base. The battery box does not need to be opened to secure it to the floor.

See Annex for full details

SPECIFIC CONDITIONS OF USE: YES as shown below:

1. The battery container shall be positioned so that the ventilation of the container remains unobstructed in service.
2. The battery terminal connections and associated wiring shall be installed such that the cell vents remain unobstructed as shown on the certified drawings.
3. The battery container shall only be used in fixed installations and as such shall not be exposed to mechanical shock.
4. Conductors used must be suitably sized for the rated current.
5. The charging system shall be such that, even with one fault condition on the charging system, the charger voltage and current do not exceed the limits specified on the certification label.



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Conditions of Manufacture:

1. The battery container is subject to a routine dielectric strength test in accordance with clause 7.2 of IEC 60079-7:2007. The results of the test will be recorded.



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

- Updated manufacturing address in the UK; and corrected manufacturing address in Norway;
- Added Notified Body numbers 0359 for UK and US manufacturing address, and 0470 for Norway manufacturing address;
- Updated note 10 on drawing number 060.8049-14, Sheet 1 of 2, only;
- Added "II 2 G" to coding.

Annex:

[IEC C of C annex.pdf](#)

Schedule of Drawings for Certificate: IECEx ITS 16.0016X Issue 1

Manufacturer:

Tideland Signal Corporation
4310 Directors Row,
Houston,
TX 77092
USA

Tideland Signal Limited
Suite E, KBF House,
Victoria Road,
Burgess Hill,
West Sussex,
RH15 9LH, UK

Aanderaa Data Instruments AS
Sanddalsringen 5b, N-5225 Nesttun, Norway

Technical Description

The SS-1000x battery box consists of a range of options of different batteries that are fitted into a large capacity 316 stainless steel battery box measuring approximately 1300mm x 1015mm x 530mm in its standard form. In its non-standard form it has a height extension which increases the overall height of the box by 64.5mm to facilitate the taller batteries. Multiple variations of the battery box are allowed each providing the possibility to house different battery combinations as follows;

48v 32Ah capacity from a Ni-Cad battery – 060.8049-04
24v 800Ah Lead Acid battery in extended height box – 060.8049-06
24v 498Ah Ni-cad battery split over 2 enclosures – 060.8049-07
24v 224Ah Lead Acid battery in extended height box – 060.8049-13
12v 498Ah Ni-cad battery – 060.8049-14
24v 500Ah Lead Acid battery – 060.8049-16
24v 1413Ah Lead Acid battery in extended height box – 060.8049-17
24v 238Ah Ni-cad battery – 060.8049-18
24v 426Ah – Ni-cad battery split over 2 enclosures – 060.8049-19
24v 170/190Ah – Ni cad battery – 060.8049-22
24V 190Ah – Lead Acid battery – 060.8049-23

Each battery box is provided with four external fixing holes in mounting flanges at each side of the enclosure base. The battery box does not need to be opened to secure it to the floor.

The charging parameters for the variants covered by the existing certification are limited as detailed below.

060.8049-04 Box Voltage – 58v Current – 6.4A	060.8049-06 Box Voltage – 28.8v Current – 85A	060.8049-07 Box Voltage – 29v Current – 85A	060.8049-13 Box Voltage – 28.8v Current – 78.4A
060.8049-14 Box Voltage – 14.5v Current – 85A	060.8049-16 Box Voltage – 28v Current – 85A	060.8049-17 Box Voltage – 28.8v Current – 85A	060.8049-18 Box Voltage – 28.8v Current – 48A
060.8049-19 Box Voltage – 28.8v Current – 85A	060.8049-22 Box Voltage – 29v Current – 34A for XHP-170 38A for XHP-190	060.8049-23 Voltage – 29V Current 38A	060.8049-24 Voltage – 29V Current 38A

Cable glands and blanks are to be in accordance with IEC 60079-14. Enclosure is to be padlocked shut when in service.

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Intertek House, Cleeve Road, Leatherhead, Surrey, KT22 7SA
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<http://www.intertek.com>
Registered No 3272281. Registered Office: 1-9 Academy Place, Brook Street, Brentwood, CM14 5NQ

This certificate may only be reproduced in its entirety and without change, schedule included and is subject to Intertek Testing & Certification Conditions for granting certification.

Technical Documents			
Title:	Drawing No.:	Rev. Level:	Date:
*Detail drawing nameplate type SS1000X Exe Battery Pack – 48V 32Ah	304.8042-04-CD	K	10 JUL 18
*Detail drawing nameplate type SS1000X Exe Battery Pack – 24V 800Ah	304.8042-06-CD	L	10 JUL 18
*Detail drawing nameplate type SS1000X Exe Battery Pack – 24V 510Ah	304.8042-07-CD	K	10 JUL 18
*Detail drawing nameplate type SS1000X Exe Battery Pack – 24V 224Ah	304.8042-13-CD	G	10 JUL 18
*Detail drawing nameplate type SS1000X Exe Battery Pack – 12V 510Ah	304.8042-14-CD	H	10 JUL 18
*Detail drawing nameplate type SS1000X Exe Battery Pack – 24V 500Ah	304.8042-16-CD	I	10 JUL 18
*Detail drawing nameplate type SS1000X Exe Battery Pack – 24V 1413Ah	304.8042-17-CD	J	10 JUL 18
*Detail drawing nameplate type SS1000X Exe Battery Pack – 24V 238Ah	304.8042-18-CD	I	10 JUL 18
*Detail drawing nameplate type SS1000X Exe Battery Pack – 24V 426Ah	304.8042-19-CD	I	10 JUL 18
*Detail drawing nameplate type SS1000X Exe Battery Pack – 24V 170/190Ah	304.8042-22-CD	H	10 JUL 18
*Detail drawing nameplate type SS1000X Exe Battery Pack – 24V 190Ah	304.8042-23-CD	H	10 JUL 18
*Detail drawing nameplate type SS1000X Exe Battery Pack – 24V 220-320Ah	304.8042-24-CD	G	10 JUL 18
General Arrangement Aids to Navigation SS-1000 X Exe Battery Box and Batteries (sheets 1 to 2)	060.8049-04	B	12 SEP 16
General Arrangement Aids to Navigation SS-1000 X Exe Battery Box and Batteries (sheets 1 to 2)	060.8049-06	B	12 SEP 16
General Arrangement Aids to Navigation SS-1000 X Exe Dual Battery Box 498-HBL (sheets 1 to 2)	060.8049-07	C	10 APR 17
General Arrangement Aids to Navigation SS-1000 X Exe Battery Box and Batteries (sheets 1 to 2)	060.8049-13	B	12 SEP 16
*General Arrangement Aids to Navigation SS-1000 X Exe Dual Battery Box 498-HBL 12V (sheets 1 to 2)	060.8049-14	E	15 DEC 17
General Arrangement Aids to Navigation SS-1000 X Exe Battery Box and Batteries (sheets 1 to 2)	060.8049-16	B	12 SEP 16
General Arrangement Aids to Navigation SS-1000 X Exe Battery Box and Batteries (sheets 1 to 2)	060.8049-17	B	12 SEP 16

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General Arrangement Aids to Navigation SS-1000 X Exe Battery Box and Batteries (sheets 1 to 2)	060.8049-18	B	12 SEP 16
General Arrangement Aids to Navigation SS-1000 X Exe Battery Box and Batteries (sheets 1 to 2)	060.8049-19	E	12 SEP 16
General Arrangement Aids to Navigation SS-1000 X Exe Battery Box and Batteries (sheets 1 to 2)	060.8049-22	E	16 MAR 17
General Arrangement Aids to Navigation SS-1000 X Exe Battery Box and Batteries (sheets 1 to 2)	060.8049-23	B	13 SEP 16
General Arrangement Aids to Navigation SS-1000 X Exe Battery Box and Batteries (sheets 1 to 2)	060.8049-24	B	13 SEP 16
Instructions for installation and safe operation Tideland SS-1000x Battery Box		15	18-Apr-17

Conditions of Certification

(a). Specific Conditions of Safe Use

- The battery container shall be positioned so that the ventilation of the container remains unobstructed in service;
- The battery terminal connections and associated wiring shall be installed such that the cell vents remain unobstructed as shown on the certified drawings;
- The battery container shall only be used in fixed installations and as such shall not be exposed to mechanical shock;
- The charging system shall be such that the charging voltage and current listed on the certification label cannot be exceeded even with one fault condition on the charging system;
- Conductors used shall be suitably sized for the rated current.

(b). Conditions of Manufacture - Routine Tests

- The battery container is subject to an insulation resistance test in accordance with clause 7.2 & 6.6.2 of IEC 60079-7:2015. Results shall be recorded.

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