

# Motor System Certificates

**ML497**

**PART B**

**Important Note**

Refer to the system manual for applicable certificates.

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**EU-TYPE EXAMINATION CERTIFICATE**

Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU  
 Certificate Number: **Sira 02ATEX1129** Issue: **8**  
 Equipment: **Minipurge Interface Unit Type MIU/d**  
 Applicant: **Expo Technologies Limited**  
 Address: Unit 2, The Summit  
 Hanworth Road  
 Sunbury on Thames  
 Surrey TW16 5DB  
 UK

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

CSA Group Netherlands B.V., notified body number 2813 in accordance with Articles 17 and 21 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential reports listed in Section 14.2. Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the schedule to this certificate, has been assured by compliance with the following documents:  
 EN 60079-0:2012/A1:2013 EN 60079-1:2014 EN 60079-31:2014

If the sign 'X' is placed after the certificate number, it indicates that the equipment is subject to Specific Conditions of Use identified in the schedule to this certificate.

This EU-Type Examination Certificate relates only to the design and construction of the specified equipment. If applicable, further requirements of this Directive apply to the manufacture and supply of this equipment.

The marking of the equipment shall include the following:

- For Types dA, dX and dT II 2 G D  
 Ex db IIC T\* Gb  
 Ex tb IIC T\*°C Db  
 Ta = -20°C to +\*°C
- For Types dK and dN II 2 G D  
 Ex db IIB + H<sub>2</sub> T\* Gb  
 Ex tb IIB + H<sub>2</sub> T3 Gb  
 Ta = -20°C to +55°C



Signed: Michelle Halliwell   
 Title: Director of Operations

Project Number: 70006555  
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 DQD 544.09 Issue Date: 2022-04-14 Page 1 of 8



**SCHEDULE**

**EU-TYPE EXAMINATION CERTIFICATE**

Sira 02ATEX1129  
 Issue 8

**DESCRIPTION OF EQUIPMENT**

The Minipurge Interface Units comprise a flameproof enclosure with various internal equipment dependent upon the application. The enclosures used are either Expo dA, dX, dT, dK or dN depending upon the size or type required.  
 The range of enclosures have the same basic geometry but are of differing sizes. The enclosures are all essentially square in profile with a circular lid. The joint between the lid and the enclosure forms a threaded flamepath; the lid is secured by means of a locking device. There is an option to include bosses for the installation of internal apparatus. Mounting is by means of two or more tapped holes in the rear face or by the use of mounting pads. Two or more protruding mounting lugs are optional.

External earthing facilities comprise M4 (or larger) earth studs on the surface of the box or mounting pads; the studs are equipped with nuts, washers and anti-rotation lugs. Alternatively or additionally, external earthing may be provided at the mounting lug(s). Tapped holes in the earth lugs between anti-rotation ribs are optional.

Internal earthing is provided either by a tapped hole in the internal rear face or by means of conventional rail-mounted earth terminals secured to the internal rear face.

"O" ring seals may be used to enhance the ingress protection rating.  
 The enclosures may be manufactured from copper-free aluminium, grey iron, S.G. iron, phosphor bronze, gunmetal or stainless steel.

Cable entry facilities are provided on the sides and rear of the enclosure.  
 To allow the control of the internal equipment, linear feed through devices, Type C9L, may be utilised as required. These are installed in the areas designated for cable entry devices. The feed through device comprises a threaded barrel with a central shaft secured with circlips at each end. The device is secured in the wall (or rear) of the enclosure by means of a locknut and optional thread sealing washer. An optional external "O" ring seal around the shaft, outside the flamepath, can improve the IP rating. The feed through can be fitted with unspecified external operators, e.g. push-buttons.

The scope of this certificate covers a range of internal components which may be installed within the flameproof enclosure, including limitations with respect to their location. Typical internal equipment comprises terminals, switches, contactors, relays and some intrinsically safe equipment. Although this certificate allows the inclusion of this intrinsic safety equipment, it does not endorse their intrinsic safety properties (see certificate conditions).

**Variation 1**

- This variation introduced the following changes:
- i. The company name was changed from Expo-Teletron Safety Systems Ltd. to Expo Technologies Ltd. together with a change of company logo.
  - ii. The Minipurge Interface Unit Type MIU/d was allowed to be used in the presence of combustible dust; the marking of the equipment to include the following:  
 II 2 G D IP6X

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**SCHEDULE**

**EU-TYPE EXAMINATION CERTIFICATE**

Sira 02ATEX1129  
Issue 8

**Variation 2**

This variation introduced the following change:

- i. The Minipurge Interface Unit Type MIU/d was allowed to be used in a maximum upper ambient temperature of +55°C with a temperature classification of T5.

**Variation 3**

This variation introduced the following changes:

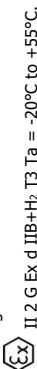
- i. The Minipurge Interface Unit Type MIU/d was assessed and found to comply with the requirements of EN 60079-0:2006, EN 60079-1:2004, EN 61241-0: 2006 and EN 61241-1: 2004.
- ii. The type dK and dN enclosures were introduced.

**Variation 4** - This variation introduced the following change:

- i. The recognition of the Applicant's address change from Summer Road, Thames Ditton, Surrey KT7 0RH to Unit 2, The Summit, Hanworth Road, Sunbury on Thames, Surrey TW16 5DB.

**Variation 5** - This variation introduced the following change:

- i. The option of using a Killark Type KDB breather drain was introduced resulting in an alternative marking.



**Variation 6** - This variation introduced the following change:

- i. Following appropriate assessment to demonstrate compliance with the latest technical knowledge, EN 60079-0:2006, EN 60079-1:2004, EN 61241-0:2006 and EN 61241-1:2004 were replaced by EN 60079-0:2012/A11:2013, EN 60079-1:2014 and EN 60079-31:2014, the markings were updated accordingly, and removed from the description.

14 **DESCRIPTIVE DOCUMENTS**

14.1 **Drawings**

Refer to Certificate Annexes.

14.2 **Associated Reports and Certificate History**

Issue	Date	Report number	Comment
0	7 June 2002	R51A7166A	The release of prime certificate.
1	15 August 2005	R51A11088A	The introduction of Variation 1.
2	2 September 2005	R51A13816A	The introduction of Variation 2.

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**SCHEDULE**

**EU-TYPE EXAMINATION CERTIFICATE**

Sira 02ATEX1129  
Issue 8

Issue	Date	Report number	Comment
3	27 April 2007	R51L15967A	This Issue covers the following changes: <ul style="list-style-type: none"> <li>• All previously issued certification was rationalised into a single certificate, Issue 3, Issues 0 to 2 referenced above are only intended to reflect the history of the previous certification and have not been issued as documents in this format.</li> <li>• The company name was changed to Expo Technologies Ltd.</li> </ul>
4	05 October 2012	R29097A/00	The introduction of Variation 3.
5	30 June 2015	R70006555A	The introduction of Variation 4.
6	31 July 2015	R70006555B	The introduction of Variation 5.
7	15 October 2019	1571	<ul style="list-style-type: none"> <li>• Transfer of certificate Sira 02ATEX1129 from Sira Certification Service to CSA Group Netherlands B.V.</li> <li>• EC Type-Examination Certificate in accordance with 94/9/EC updated to EU Type-Examination Certificate in accordance with Directive 2014/34/EU. (In accordance with Article 41 of Directive 2014/34/EU, EC Type-Examination Certificates referring to 94/9/EC that were in existence prior to the date of application of 2014/34/EU (20 April 2016) may be referenced as if they were issued in accordance with Directive 2014/34/EU. Variations to such EC Type-Examination Certificates may continue to bear the original certificate number issued prior to 20 April 2016.)</li> </ul>
8	31 May 2023	N/A	Issued to correct the marking of the Unit with a Breather Drain Installed

15 **SPECIFIC CONDITIONS OF USE** (denoted by X after the certificate number)

15.1 None.

16 **ESSENTIAL HEALTH AND SAFETY REQUIREMENTS OF ANNEX II** (EHSRs)

The relevant EHSRs that are not addressed by the standards listed in this certificate have been identified and individually assessed in the reports listed in Section 14.2.

17 **CONDITIONS OF MANUFACTURE**

The use of this certificate is subject to the Regulations Applicable to Holders of CSA Group Netherlands B.V. certificates.

17.1 Holders of EU-Type Examination Certificates are required to comply with the conformity to type requirements defined in Article 13 of Directive 2014/34/EU.

17.2 Only the internal components listed in the manufacturer's drawing EP90-6 may be installed in the Minipurge Interface Units, in accordance with the geometrical restrictions laid down in manufacturer's drawings EP90-8A, EP90-8X, EP90-8Y and SD7/529.

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**Certificate Annexe**

**Certificate Number:** CSANE##ATEX###

**Equipment:**

**Applicant:**

**Issue 0**

The drawings associated with this Issue were replaced by those listed in Issue 3.

**Issue 1**

The drawings associated with this Issue were replaced by those listed in Issue 3.

**Issue 2**

The drawings associated with this Issue were replaced by those listed in Issue 3.

**Issue 3**

Drawing No.	Sheet	Rev.	Date	Description
EP90-3dA	1 of 1	6	21 Nov 06	Ex d Boxes Dimensions Key
EP90-2dA	1 of 1	3	21 Nov 06	dA Box
EP90-8A	1 of 1	4	05 Feb 07	dA Box Contents
EP90-2dX	1 of 1	2	21 Nov 06	dX Box
EP90-8X	1 of 1	4	05 Feb 07	dX Box Contents
EP90-2dI	1 of 1	2	21 Nov 06	dI Box
EP90-8I	1 of 1	4	05 Feb 07	dI Box Contents
SD7528	1 of 1	1	22 Feb 07	Key to Dimensions dK and dN Boxes
SD7529	1 of 1	1	22 Feb 07	dK and dN Boxes Contents
SD7485	1 of 1	2	15 Mar 07	Earthing and Other Details
EP90-10	1 of 1	3	27 Feb 07	Ex d Box Sealing for Dust Certification
EP90-4dA	1 to 9	5	20 Feb 07	Linear Feedthrough C9L
EP90-6	1 of 1	6	20 Feb 07	d Series Boxes Data Sheets
SD7526	1 of 1	1	20 Feb 07	Permitted Contents for MIU/d
				MIU/d Certification Label ATEX/IECEX

**Issue 4**

Drawing No.	Sheets	Rev.	Date (Sira stamp)	Title
SD7526	1 of 1	2	05 Oct 12	MIU/d Certification Label

**Issue 5**

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
EP90-4dA	1 to 9	6	10 Apr 15	d-Series Boxes Data Sheets
SD7526	1 to 2	3	10 Apr 15	MIU/d Certification Label ATEX / IECEX

**Issue 6**

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
EP90-4dA	1 to 9	7	30 Jul 2015	d-Series Boxes Data Sheets
SD7526	1 to 2	4	30 Jul 2015	MIU/d Certification Label ATEX/IECEX

**Issues 7 & 8.** No new drawings were introduced.




**SCHEDULE**

**EU-TYPE EXAMINATION CERTIFICATE**

Sira 02ATEX1129  
Issue 8

17.4 The scope of this certificate, though allowing 'inherently safe equipment' to be installed in accordance with condition 17.3, does not imply compliance with EN 60079-1-1: 2007 for either the installation or output parameters of such equipment.





## IECEx Certificate of Conformity

Certificate No.: IECEx SIR 07.0008  
 Date of Issue: 2015-08-25  
 Issue No.: 4  
 Page 2 of 4

**Manufacturer:** EXPO Technologies Limited  
 Unit 2, The Summit  
 Hinworth Road  
 Sunbury on Thames  
 Surrey TW16 5DB  
 United Kingdom

**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 listed below, in order to certify the safety of the Ex products covered by the certificate. The certificate is issued in accordance with the IECEx Quality System requirements. The certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

**STANDARDS:**  
 The electrical 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 60079-1 : 2014-06** Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"  
 Edition: 7.0  
**IEC 60079-31 : 2013** Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "i"  
 Edition: 2

*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/SIR/EXTR07.0032/00  
 GB/SIR/EXTR15.0222/00  
 GB/SIR/EXTR15.0139/00

**Quality Assessment Report:**  
 GB/SIR/QAR07.0012/00



## IECEx Certificate of Conformity

Certificate No.: IECEx SIR 07.0008  
 Issue No.: 4  
 Status: Current  
 Date of Issue: 2015-08-25  
 Page 1 of 4

**Applicant:** EXPO Technologies Limited  
 Unit 2, The Summit  
 Hinworth Road  
 Sunbury on Thames  
 Surrey TW16 5DB  
 United Kingdom

**Certificate history:**  
 Issue No. 4 (2015-08-25)  
 Issue No. 3 (2015-06-30)  
 Issue No. 2 (2012-11-27)  
 Issue No. 1 (2012-10-23)  
 Issue No. 0 (2007-5-4)

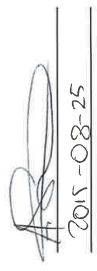
**Electrical Apparatus:** Minipurge Interface Unit Type MIU/d  
*Optional accessory.*

**Type of Protection:** Flameproof and Dust

**Marking:** For Types dA, dX and dT  
 Ex db IIC T<sup>+</sup> Gb  
 Ex db IIB + H<sub>2</sub> T<sup>+</sup> Gb  
 Ex tb IIC T<sup>+</sup> C Db  
 Ta = -20°C to +55°C  
 \* The temperature markings are T6 and T80°C for an ambient temperature range of -20°C to +40°C or T5 and T95°C for an ambient temperature range of -20°C to +55°C


**Breather drain installed**  
 Ex db IIB+H<sub>2</sub> T3 Gb  
 Ta = -20°C to +55°C

**Approved for issue on behalf of the IECEx** A C Smith  
**Certification Body:** Certification Manager


**Signature:**   
 (for printed version)  
**Date:** 2015-08-25

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.

**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 07.0008  
 Issue No.: 4  
 Date of Issue: 2015-08-25  
 Page 4 of 4

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

<b>Issue 1</b>	This issue introduced the following changes: 1. The recognition of the Applicant's address change from Summer Road, Thames Ditton, Surrey KT7 0RH to Unit 2, The Summit, Hanworth Road, Sunbury on Thames, Surrey TW16 5DB.
<b>Issue 2</b>	This issue introduced the following changes: 1. Issued to allow GB/SIR/EXTR12.0251/00 to be replaced by GB/SIR/EXTR12.0251/00.
<b>Issue 3</b>	This issue introduced the following changes: 1. The option of using a Killark Type KDB breather drain was introduced resulting in an alternative marking, Ex d IIB+H, T3 Ta = -20°C to +55°C.
<b>Issue 4</b>	This issue introduced the following changes: 1. Following periodic assessment to demonstrate compliance with the latest technical knowledge, IEC 60079-0:2004 Ed 4, IEC 60079-1:2003 Ed 5, IEC 61241-0:2004, and IEC 61241-1:2004 were replaced by IEC 60079-0:2011 Ed 6, IEC 60079-1:2014 Ed 7 and IEC 60079-31:2013 Ed 2, the markings were updated accordingly, and removed from the description.

Annex: IECEx SIR 07 0008\_Issue 4\_Annexe.pdf



**IECEX Certificate of Conformity**

Certificate No.: IECEx SIR 07.0008  
 Issue No.: 4  
 Date of Issue: 2015-08-25  
 Page 3 of 4

**Schedule**

**EQUIPMENT:**  
 Equipment and systems covered by this certificate are as follows:

The Miupingu Interface Units comprise a flameproof enclosure with various internal equipment dependent upon the application. The enclosures used are either Exo dA, dX, dT, dK or dN depending upon the size or type required, see detailed description in the certificate Annex.

**CONDITIONS OF CERTIFICATION: NO**



**Annexe to:** IECEx SIR 07.0008 Issue 4 Annexe

**Applicant:** Expo Technologies Limited

**Apparatus:** Minipurge Interface Unit Type MIU/d

**Description of Apparatus**

The range of enclosures have the same basic geometry but are of differing sizes. The enclosures are all essentially square in profile with a circular lid. The joint between the lid and the enclosure forms a threaded flamepath; the lid is secured by means of a locking device. There is an option to include bosses for the installation of internal apparatus. Mounting is by means of two or more tapped holes in the rear face or by the use of mounting pads. Two or more protruding mounting lugs are optional.

External earthing facilities comprise M4 (or larger) earth studs on the surface of the box or mounting pads; the studs are equipped with nuts, washers and anti-rotation lugs. Alternatively or additionally, external earthing may be provided at the mounting lug(s). Tapped holes in the earth lugs between anti-rotation ribs are optional.

Internal earthing is provided either by a tapped hole in the internal rear face or by means of conventional rail-mounted earth terminals secured to the internal rear face.

"O" ring seals may be used to enhance the ingress protection rating.

The enclosures may be manufactured from copper-free aluminium, grey iron, S.G. iron, phosphor bronze, gunmetal or stainless steel.

Cable entry facilities are provided on the sides and rear of the enclosure.

To allow the control of the internal equipment, linear feed through devices, Type C9L, may be utilised as required. These are installed in the areas designated for cable entry devices. The feed through device comprises a threaded barrel with a central shaft secured with clips at each end. The device is secured in the wall (or rear) of the enclosure by means of a locknut and optional thread sealing washer. An optional external "O" ring seal around the shaft, outside the flamepath, can improve the IP rating. The feed through can be fitted with unspecified external operators, e.g. push-buttons.

The scope of this certificate covers a range of internal components which may be installed within the flameproof enclosure, including limitations with respect to their location. Typical internal equipment comprises terminals, switches, contactors, relays and some intrinsically safe equipment. Although this certificate allows the inclusion of this intrinsic safety equipment, it does not endorse their intrinsic safety properties (see conditions of manufacture below).

The manufacturer shall note the following conditions of manufacture:

- i. Only the internal components listed in the manufacturer's drawing EP90-6 may be installed in the Minipurge Interface Units, in accordance with the geometrical restrictions laid down in manufacturer's drawings EP90-6A, EP90-6X, EP90-6T and SD7529.
- ii. The scope of this certificate, though allowing 'intrinsically safe equipment' to be installed in accordance with condition i, does not imply compliance with IEC 60079-11:2006 for either the installation or output parameters of such equipment.

**Date:** 31 July 2015

Page 1 of 1

**Sira Certification Service**

Unit 6, Hawarden Industrial Park,  
Hawarden, CH5 3US, United Kingdom

Tel: +44 (0) 1244 670 900  
Fax: +44 (0) 1244 539 301  
Email: ukinfo@csagroup.org  
Web: www.csagroupuk.org



- 1 **EU - Type Examination Certificate**
- 2 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU
- 3 Certificate Number: ExVeritas 19ATEX0542X Issue: 1
- 4 Equipment: MiniPurge Interface Units MIUe
- 5 Manufacturer: Expo Technologies Ltd
- 6 Address: Unit 2, The Summit, Hamworth Road, Sunbury on Thames, Surrey, TW16 5DB, UK
- 7 This equipment and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.
- 8 ExVeritas, Notified Body number 2804 in accordance with Article 17 of the Council Directive 2014/34/EU of 26 February 2014, certifies that this equipment or protective system has been found to comply with the Essential Health and Safety Requirements relating to design and construction of equipment and protective systems for use in potentially explosive atmospheres given in Annex II to the Directive
- 9 Compliance with the applicable Essential Health and Safety Requirements has been assured by compliance with the following Standards and section 16 of this certificate:  
EN IEC 60079-0: 2018 EN 60079-7: 2015+A1: 2018 EN 60079-31: 2014
- 10 If the sign "X" is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule to this certificate.
- 11 This EU-Type Examination Certificate relates only to the design, construction, examination and tests of the specified equipment or protective system in accordance to the Directive 2014/34/EU. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by this certificate.
- 12 The marking of the equipment shall include the following:  
 $\text{Ex} \text{ II } 2 \text{ G Ex eb IIC T5/4* Gb T}_{\text{amb}} -20^{\circ}\text{C to } +55/60^{\circ}\text{ } ^{\circ}\text{C}$   
 $\text{Ex} \text{ II } 2 \text{ D Ex tb IIC T100}^{\circ}\text{C Db T}_{\text{amb}} -20^{\circ}\text{C to } +55^{\circ}\text{ } ^{\circ}\text{C}$



On behalf of ExVeritas



Peter Lauritzen  
Managing Director

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ExVeritas A/S, Sørensensvej 61, 4420 Røgestrup, Denmark.  
ExVeritas® is a registered trademark, unauthorised use will lead to prosecution.



- 13 Description of Equipment or Protective System  
The MiniPurge Interface Units are part of a series of IP66 rated enclosures that are used as Junction Boxes. The construction of the boxes has been assessed under the component certificate ExV19ATEX0454LU. A permitted content of the boxes is specified on drawing SD7623. The current rating and maximum voltage for each terminal box is specified on the label and the general assembly drawings. Three types of boxes have been covered by this certificate:  
MIUe1 – 7A, 400V, IP66 assembly drawing SD7851  
MIUe2 – 7A, 400V, IP66 assembly drawing SD7850  
MIUe1/IMO – 2A, 400V, IP66 assembly drawing SD7861  
13.1 Details of change:  
The following changes are introduced in issue 1 of the certificate:  
  - Transfer of the certificate from ExVeritas UK, Notified Body number 2685 to ExVeritas Denmark, Notified Body number 2804. Certificate number remains unchanged.
- 14 Descriptive Documents
- 14.1 Associated Report and Certificate History:

Report Number	Cert Issue Date	Issue	Comment
R2328/A/1	17 <sup>th</sup> Oct 2019	0	Initial issue of the Prime Certificate
EXV3094A	12 <sup>th</sup> Jan 2021	1	Issue of the first variation, see section 13.1.

- 14.2 Compliance Drawings:
- Issue 0

Title:	Drawing No.:	Rev. Level:	Date:
MIUe Permitted Contents	SD7623	2	02/10/19
MIU IECEx & ATEX Certificate label	SD7624	4	02/10/19
MIU User Instructions	SD7644	3	02/10/19
MiniPurge Interface Unit	SD7850	3	02/10/19
MiniPurge Interface Unit	SD7851	3	02/10/19
MIU with manual override	SD7861	3	02/10/19


- 15 Conditions of Certification
- 15.1 Special Conditions for Safe Use
  - Cable glands, breathers, drains and plugs shall be appropriately ATEX certified types, suitable for the cable and conditions for use and installed in accordance with their manufacturers' instructions. They shall maintain the IP66 rating of the enclosure.
- 15.2 Conditions for Use (Routine tests)
  - None
- 16 Essential Health and Safety Requirements

Essential Health and Safety Requirements are addressed by the standards listed in section 9 and where required the report listed in section 14.1

The manufacturer shall inform the Notified Body of any modifications to the design of the product described by this schedule.

Certificate: ExVeritas 19ATEX0542X Issue 1

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For help or assistance relating to this certificate, contact [info@exveritas.com](mailto:info@exveritas.com).  
ExVeritas A/S, Sørensensvej 61, 4420 Røgestrup, Denmark.  
ExVeritas® is a registered trademark, unauthorised use will lead to prosecution.



**IECEX Certificate of Conformity**

Certificate No.: **IECEX-EXV 19.0057X**

Date of issue: **2019-11-12**

Manufacturer: **EXPO Technologies Limited**  
Unit 2, The Summit  
Hanworth Road  
Surrey TW16 5DB  
**United Kingdom**

Additional manufacturing locations:

Page 2 of 3  
Issue No: 0

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 60079-31:2013 Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "r" Edition:2

IEC 60079-7:2015 Explosive atmospheres – Part 7: Equipment protection by increased safety "e" Edition:5.0

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 Report:  
GB/EX/EX:TR19.0059/00

Quality Assessment Report:  
GB/SIR/QAR07.0112/15



**IECEX Certificate of Conformity**

**INTERNATIONAL ELECTROTECHNICAL COMMISSION  
IEC Certification System for Explosive Atmospheres**

for rules and details of the IECEX Scheme visit [www.ieceex.com](http://www.ieceex.com)

Page 1 of 3  
Issue No: 0

Certificate No.: **IECEX-EXV 19.0057X**

Status: **Current**

Date of issue: **2019-11-12**

Applicant: **EXPO Technologies Limited**  
Unit 2, The Summit  
Hanworth Road  
Surrey TW16 5DB  
**United Kingdom**

Equipment: **Mini-purge Interface Units MIUe**

Optional accessory:

Type of Protection: **Increased Safety Ex 'ib' Protection by Enclosure Ex 'ib'**

Marking: Ex eb IIC T54° Gb Ta = -20°C to +55/60° °C  
\*Manual override (MO) models exempt  
Ex ib IIIC T100°C Db Ta = -20°C to +55°C

Approved for issue on behalf of the IECEX Certification Body: **Sean Clarke CEng MSc FIET**

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 [www.ieceex.com](http://www.ieceex.com) or use of this QR Code.

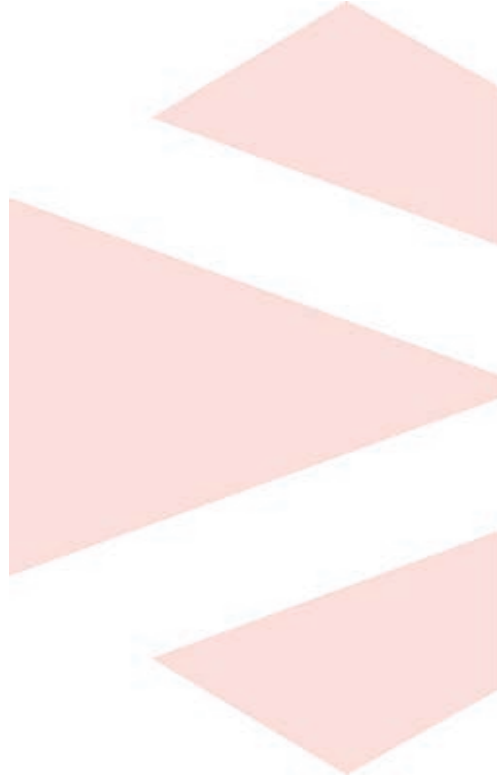


Certificate issued by:  
**ExVeritas Limited**  
Units 16-18 Abernury Way  
Wrexham Ind. Est.  
Wrexham LL 139UZ  
**United Kingdom**



Annex to: IECEx EXV 19.0057X Issue 0

Manufacturer's documents:			
Title:	Drawing No.:	Rev	Sheets
MIU/e Permitted Contents	SD7623	2	1 of 1
MIU IECEx & ATEX Certificate label	SD7624	4	2 of 2
MIU User Instructions	SD7644	3	3 of 3
Mimpurge Interface Unit	SD7850	3	1 of 1
Mimpurge Interface Unit	SD7851	3	1 of 1
MIU with manual override	SD7861	3	1 of 1



IECEx Certificate of Conformity



Certificate No.: IECEx EXV 19.0057X Page 3 of 3  
 Date of issue: 2019-11-12 Issue No: 0

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

The Mimpurge Interface Units are part of a series of IP66 rated enclosures that are used as Junction Boxes. The construction of the boxes has been assessed under the component certificate IECEx EXV 19.0010U. A permitted content of the boxes is specified on drawing SD7623. The current rating and maximum voltage for each terminal box is specified on the label and the general assembly drawings. These types of boxes have been covered by this certificate:

- MIU/e1 – 7A, 400V, IP66 assembly drawing SD7851
- MIU/e2 – 7A, 400V, IP66 assembly drawing SD7850
- MIU/e1/MO – 2A, 400V, IP66 assembly drawing SD7861

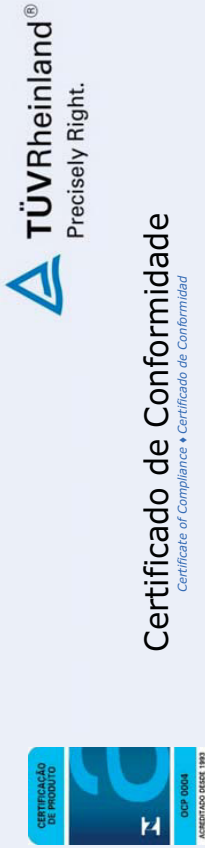
**SPECIFIC CONDITIONS OF USE: YES as shown below:**

- Cable glands, breathers, drains and plugs shall be appropriately IECEx certified types, suitable for the cable and conditions for use and installed in accordance with their manufacturers' instructions. They shall maintain the IP66 rating of the enclosure.

**Annex:**

EXV 19.0057X IECEx Annex.pdf





# Certificado de Conformidade

Certificate of Compliance • Certificado de Conformidade

Revisão: **03**  
Review • Revisión:

Certificado N.º: **TÜV 12.1463**  
Certificate No. • Certificado N.º:

Emiúdo em: **27/10/2021**  
Issued • Emiúdo:

Válido até: **28/09/2024**  
Valid until • Válido hasta:

**Lista de Modelos**

Marca Brand • Marca	Modelo Model • Modelo	Descrição Description • Descripción	Código de Barras GTIN GTIN Barcode • Código de Barras GTIN
Expo Technologies	MIU/e	UNIDADE DE INTERFACE MINIPURGE	Não existente

**Especificações:**

As unidades de interface MiniPurge modelo MIU/e fazem parte de uma série de invólucros utilizados como caixas de ligação fabricados em aço inoxidável ou aço carbono modelo PEZE pela Expo Technologies Ltd (Certificado de conformidade IECEx ITS 08.0043U). O conteúdo das caixas de ligação está especificado no desenho SD7623.

As unidades de interface MiniPurge incluem três modelos de caixas de ligação:

- MIU/e1
- MIU/e2
- MIU/e1/MO

A tensão máxima das caixas de ligação é de 400 V.

O número máximo de conectores dentro da caixa terminal:

- MIU/e1 é de 18
- MIU/e2 é de 33
- MIU/e1/MO é de 13.

A corrente máxima para a caixa de ligação (por conector):

- MIU/e1 é 7 A
- MIU/e2 é 7 A
- MIU/e1/MO é 6 A

**Análise e ensaios realizados:**

As análises e os ensaios realizados encontram-se no relatório de análise nº CC\_121463/03.

**Documentação descritiva do produto:**

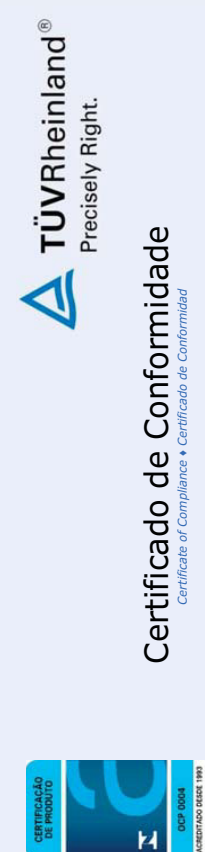
Relatório de ensaios Intertek nº GB/TTS/EXTR10.0029/00 de 26/08/2010.

Documento	Descrição	Rev.	Data
SD7850	Minipurge Interface Unit	2	10/12/2013
SD7851	Minihuros Interface Unit	2	10/12/2013
SD7861	MIU with Manual Override	2	10/12/2013
SD7623	MIU/e Permitted Contents	1	19/08/2010
SD7624	MIU IECEx & ATEX Certificate Label	3	06/02/2014
SD7644	MIU User Instructions	2	06/02/2014
SD7648	MIU/e TÜV Certification Label	5	02/07/2015
SD7653	MIU/e Portuguese Handbook Extracts	4	02/07/2015

100 12 1463 - Rev.03 - 27/10/2021 - Página 3 de 4  
Endereço Escritório: Av. Quarenta e Nove, 769 - Vila Hambúrguesa - São Paulo - SP - CEP: 05319-000  
CNPJ: 01.950.467/0001-06 - Tel.: 55 11 3514.5700 - [www.tuv.com.br](http://www.tuv.com.br) - MS-003242 Rev.5

Para confirmar sua autenticidade acesse <https://ivv.3dds.digital/check/552019657986236466>

Conforme o art. 10.º § 1.º da Medida Provisória nº 2.200-2, de 24 de agosto de 2001, as declarações em forma eletrônica produzidas com a utilização de processo de Certificação Digital disponibilizada pelo CP-Brasil possuem a mesma validade em relação aos signatários.



# Certificado de Conformidade

Certificate of Compliance • Certificado de Conformidade

Revisão: **03**  
Review • Revisión:

Certificado N.º: **TÜV 12.1463**  
Certificate No. • Certificado N.º:

Emiúdo em: **27/10/2021**  
Issued • Emiúdo:

Válido até: **28/09/2024**  
Valid until • Válido hasta:

**Produto:**

UNIDADE DE INTERFACE MINIPURGE  
MIU/e

**Solicitante:**

EXPO TECHNOLOGIES LTD,  
Unit 2, The Summit  
Hanworth Road, Sunbury on  
Thames, TW16 5DB, UK

**Fabricante:**

EXPO TECHNOLOGIES LTD,  
Unit 2, The Summit  
Hanworth Road, Sunbury on  
Thames, TW16 5DB, UK

**Fornecedor / Representante Legal:**

Não aplicável.

**Normas Técnicas / Regulamento:**

ABNT NBR IEC 60079-0:2020;  
ABNT NBR IEC 60079-7:2018;  
ABNT NBR IEC 60079-31:2014;  
ABNT NBR IEC 60529:2017;  
Portaria INMETRO nº 179 de 18/05/2010.

**Modelo de Certificação:**

Certificação Model • Modelo de Certificação:  
Modelo de Avaliação do Sistema de Gestão da Qualidade do Fabricante e Ensaios no Produto, conforme cláusula 6.1 do Regulamento de Avaliação da Conformidade, anexo à Portaria nº 179 do INMETRO, publicada em 18 de maio de 2010.

**Laboratório, N.º do Relatório de Ensaios e Data:**

Intertek Testing & Certification Ltd.  
GB/TTS/EXTR10.0029/00 de 26/08/2010.

**Relatório de Auditoria e Data:**

Auditoria realizada em 07/05/2019 – PO-0260-19.

**Notas:**

Notes • Anotações:  
"A validade deste Certificado de Conformidade está atrelada à realização das avaliações de manutenção e tratamento de possíveis não conformidades de acordo com as orientações do OCP previstas no RAC específico. Para verificação da condição atualizada de regularidade deste Certificado de Conformidade deve ser consultado o banco de dados de produtos e serviços certificados do INMETRO".  
Este certificado está vinculado à proposta 27127343, de 21/09/2021.

Igor Moreno  
Local Field Manager

"Este documento é composto de 04 páginas e é válido quando exibido com todas as suas páginas. Demais informações e notas estão contidas nas páginas subsequentes."

100 12 1463 - Rev.03 - 27/10/2021 - Página 3 de 4  
Endereço Escritório: Av. Quarenta e Nove, 769 - Vila Hambúrguesa - São Paulo - SP - CEP: 05319-000  
CNPJ: 01.950.467/0001-06 - Tel.: 55 11 3514.5700 - [www.tuv.com.br](http://www.tuv.com.br) - MS-003242 Rev.5

Para confirmar sua autenticidade acesse <https://ivv.3dds.digital/check/552019657986236466>

Conforme o art. 10.º § 1.º da Medida Provisória nº 2.200-2, de 24 de agosto de 2001, as declarações em forma eletrônica produzidas com a utilização de processo de Certificação Digital disponibilizada pelo CP-Brasil possuem a mesma validade em relação aos signatários.





CERTIFICATE FOR CHINA COMPULSORY PRODUCT CERTIFICATION

No.: 2020312303000422

**Applicant Address**  
 EXPO Technologies Limited  
 Unit 2, The Summit, Hanworth Road, Sunbury on Thames Surrey  
 TW16 5DB, United Kingdom

**Manufacturer Address**  
 EXPO Technologies Limited  
 Unit 2, The Summit, Hanworth Road, Sunbury on Thames Surrey  
 TW16 5DB, United Kingdom

**Production Factory Address**  
 EXPO Technologies Limited  
 Unit 2, The Summit, Hanworth Road, Sunbury on Thames Surrey  
 TW16 5DB, United Kingdom

**Product Model/Type**  
 MIU/e1, MIU/e2, MIU/e1/MO

**Ex marking**  
 Ex eb IIC T5/T4 Gb, Ex tb IIIC T100°C Db

**Reference Standards**  
 GB/T 3836.1-2021, GB/T 3836.3-2021, GB/T 3836.31-2021

**Certification mode** Type Test + Initial Factory Inspection + Post-Certification Surveillance

The product(s) is verified and certified according to CNCA-C23-01; 2019 China Compulsory Certification Implementation Rule on Explosion Protected Electrical Product and CNEC-C2301-2019 Guideline of China Compulsory Certification Implementation Rule on Explosion Protected Electrical Product.

See Annex for the detailed product information (1 page).

Initial issue date: 2020-11-04  
 Issued date: 2023-02-07  
 Valid to: 2025-11-03

The validity of this certificate is maintained through the regular supervision of the issuing authority during the validity period.

Where any discrepancy arises between the English translation and the original Chinese version, the Chinese version shall prevail.



Director:

李天玉



Nanyang Explosion Protected Electrical Apparatus Research Institute Co., Ltd.



http://www.ccc-cnex.com  
 ccc.china-ex.com  
 Add: No. 20, North Zhongjing Road, Nanyang, Henan, P. R. China  
 P.C.: 473008  
 Email: ccc@cn-ex.com  
 Tel: 0377-63239734

CN 0001571



CERTIFICATE FOR CHINA COMPULSORY PRODUCT CERTIFICATION  
 (Annex)

No.: 2020312303000422

Page 1 of 1

**Product information:**

- This certificate covers the following models:
  - MIU/e1, MIU/e2, MIU/e1/MO

**Parameters:**  
 MIU/e1, MIU/e2: 7A, 400V, IP66  
 MIU/e1/MO: 2A, 400V, IP66

**Ex marking:**  
 MIU/e1, MIU/e2: Ex eb IIC T5/T4 Gb, Ex tb IIIC T100°C Db (Ta: -20°C...+55/60°C)  
 MIU/e1/MO: Ex eb IIC T5 Gb, Ex tb IIIC T100°C Db (Ta: -20°C...+55°C)

  - Producers should organize production in accordance with the technical documents approved by the certification body.
  - Specific conditions of safety use:
    - Cable glands and plugs shall be appropriately certified CCC types, suitable for the cable and conditions for use and installed in accordance with their manufacturers' instructions. They shall maintain the IP66 rating of the enclosure.
    - See instruction for other information.
- Certificate related report(s):
  - Type test report: CQST2009C580, CQST2009C580/01
  - Factory inspection report: CN2020Q010175
- Certificate change information:
  - 1st change on February 07, 2023: Updated the standards for certification.

Issued on: 2023-02-07



Director:

李天玉



Nanyang Explosion Protected Electrical Apparatus Research Institute Co., Ltd.



http://www.ccc-cnex.com  
 ccc.china-ex.com  
 Add: No. 20, North Zhongjing Road, Nanyang, Henan, P. R. China  
 P.C.: 473008  
 Email: ccc@cn-ex.com  
 Tel: 0377-63239734



Member of the FM Global Group

**SCHEDULE**

to EU-Type Examination Certificate No. FM10ATEX0003X

**13 Description of Equipment or Protective System:**

The ETM-IS is a powered electronic timer module. The Timer module is designed to be supplied from either a self contained battery pack or an IS certified Power Supply. The battery pack contains a non-rechargeable battery together with current limiting resistors. The timer settings are controlled by two BCD switches located on the main part of the timer. Connections from the timer to a solenoid valve and switch are also provided. The solenoid is supplied as part of the timer circuit. Four LED's are used to indicate the status of the timer circuit.

The Timer module and Solenoid Valve are designed to be installed within another enclosure.

**Electronic Timer Module ETM-IS-sub-cde**

- a = sub module
  - 1 = Timer Module powered by Expo Battery Pack
  - 2 = Timer module powered by IS power supply
  - 3 = Expo IS Battery Pack
  - 4 = Expo IS remote Battery Pack
  - 5 = Timer module powered by E.P.P.S.

**b = Mounting Style**

- 1 = Plate mounted
- 2 = Panel mounted
- c = LED connection
  - 1 = LED's on Timer surface
  - 2 = LED's on flying leads
- de = Maximum Time
  - d = Reference Value 1 to 9
  - e = Multiplying digit 1, 2, 3 or 4

The input parameters for the power supply option are:

Ui = 11.1V Ii = 340 mA Pi = 2.613 W (non linear) Ci = 363 nF Li = 0

The input parameters for the E.P.P.S. option are:

Ui = 10.8V Ii = 3.28 A Pi = 1.46 W Ci = 363 nF Li = 0

The temperature class is dependant on the ambient temperature:

Ambient Tamb =	Temperature Class		
	Group II	Group III	
-20 °C to +60 °C	T4	T101 °C	
-20 °C to +53 °C	T5	T100 °C	
-20 °C to +44 °C	T6	T85 °C	

**14 Specific Conditions of Use:**

1. The Electronic Timer shall not be used where UV light or radiation may impinge the Electronic Timer System.
2. The Electronic Timer shall be installed within an enclosure which provides protection against impact.
3. The Enclosure shall be metallic providing a minimum IP20.
4. For light alloy enclosures, materials shall not contain, by mass, more than 7.5% in total of magnesium, titanium and zirconium. Where more than 10% in total of aluminium, magnesium, titanium and zirconium the user shall take special precautions to avoid ignition hazard due to impact or friction.

**15 Essential Health and Safety Requirements:**

The relevant EHSRs that have not been addressed by the standards listed in this certificate have been identified and assessed in the confidential report identified in item 8.

**THIS CERTIFICATE MAY ONLY BE REPRODUCED IN ITS ENTIRETY AND WITHOUT CHANGE**

FM Approvals Europe Ltd, One Georges Quay Plaza, Dublin, Ireland. D02 E440  
T: +353 (0) 1761 4200 E-mail: [alex@fmapprovals.com](mailto:alex@fmapprovals.com) [www.fmapprovals.com](http://www.fmapprovals.com)

F ATEX 020 (Mar/2019)

Page 2 of 3



**1 EU-TYPE EXAMINATION CERTIFICATE**

2 Equipment or Protective systems intended for use in Potentially

Explosive Atmospheres - Directive 2014/34/EU

3 EU-Type Examination Certificate No: FM10ATEX0003X

4 Equipment or protective system: Electronic Timer Module ETM-IS-\*,\*\*

(Type Reference and Name)

5 Name of Applicant: Expo Technologies Ltd

6 Address of Applicant: Unit 2, The Summit  
Hanworth Road  
Sunbury on Thames  
TW16 5DB  
United Kingdom

7 This equipment or protective system and any acceptable variation thereto is specified in the schedule to this certificate and documents therein referred to.

8 FM Approvals Europe Ltd, notified body number 2809 in accordance with Article 17 of Directive 2014/34/EU of 26 February 2014, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in confidential report number:

3036907EC dated 12<sup>th</sup> November 2010

9 Compliance with the Essential Health and Safety Requirements, with the exception of those identified in item 15 of the schedule to this certificate, has been assessed by compliance with the following documents:

EN60079-0:2012+A11:2013, and EN 60079-11:2012

10 If the sign 'X' is placed after the certificate number, it indicates that the equipment is subject to specific conditions of use specified in the schedule to this certificate.

11 This EU-Type Examination certificate relates only to the design, examination and tests of the specified equipment or protective system in accordance to the directive 2014/34/EU. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by this certificate.

12 The marking of the equipment or protective system shall include:

II 1 G Ex ia IIC T\* Ga  
II 1 D Ex ia IIC T\* Da

\* See Description



Richard Zammit  
Certification Manager, FM Approvals Europe Ltd.

Issue Date: 13<sup>th</sup> March 2019

**THIS CERTIFICATE MAY ONLY BE REPRODUCED IN ITS ENTIRETY AND WITHOUT CHANGE**

FM Approvals Europe Ltd, One Georges Quay Plaza, Dublin, Ireland. D02 E440  
T: +353 (0) 1761 4200 E-mail: [alex@fmapprovals.com](mailto:alex@fmapprovals.com) [www.fmapprovals.com](http://www.fmapprovals.com)

F ATEX 020 (Mar/2019)

Page 1 of 3

**Blueprint Report**  
**Expo Technologies Ltd (1000002806)**

Class No - 3610

**Expo Technologies Ltd (1000002806)**

Class No 3610

Original Project I.D. 3036907

Certificate I.D. FM10ATEX0003X

Drawings	Revision Level	Drawings Title	Last Report	Electronic Drawings
EPC-B000-114	1	Electronic Timer Timer Main PCB Layout	3049400	Yes (msw6)
EPC-B000-115	1	Electronic Timer Battery Main PCB Layout	3036907	Yes (pdf)
EPC-B000-116	1	Electronic Timer Battery Connector PCB Layout	3036907	Yes (pdf)
EPC-B000-117	1	Electronic Timer BCD PCB Layout	3049400	Yes (msw6)
EPC-B000-147	1	Electronic Timer Battery Pack PCB	3049400	Yes (zfp_hhm)
EPC-BB00-010	3	Timer Module Parts List	16-Oct-14	Yes (pdf)
EPC-BB00-011	1	Battery pack Parts List	3049400	Yes (msw6)
EPC-BB00-015	1	ETMAS31-001 Battery Pack Parts List.doc	3049400	Yes (msw6)
SD7607	3	Electronic Timer Schematic	RR209962	Yes (pdf)
SD7608	3	Electronic Timer Module - Design Document.doc	3055146	Yes (msw6)
SD7610	1	Timer Module Schematic	3049400	Yes (pdf)
SD7611	5	Electronic Timer ELECTRONIC TIMER - BLOCK DIAGRAM	RR209962	Yes (pdf)
SD7616	5	Electronic Timer ATEX/ IECX CERTIFICATION LABEL	RR209962	Yes (pdf)
SD7620	4	Electronic Timer - FN (USA, Canada) Label	RR209962	Yes (msw6)
SD7621	5	Electronic Timer - Manual Extracts	3055146	Yes (pdf)
SD7622	2	Electronic Timer - Model Number designation	RR209962	Yes (pdf)
SD7642	5	Electronic Timer - Model Number designation	RR209962	Yes (pdf)
SD7835	1	Electronic Timer Assembly	3036907	Yes (pdf)
SD7841	4	Electronic Timer Interconnection	RR209962	Yes (pdf)
SD7842	3	Electronic Timer - Encapsulation	3055146	Yes (msw6)
SD7848	3	Electronic Timer	3049400	Yes (pdf)
SD7898	1	Electronic Timer System Certification Label.doc	3049400	Yes (msw6)
SD8095	1	Electronic Timer Assembly.pdf	3049400	Yes (pdf)
SD8222	2	Description of proposal changes for E-timer	RR209962	Yes (pdf)
SD8255	1	EPPS - Timer with EPPS Assembly	RR209962	Yes (pdf)
SD8266	1	EPPS - IS Barrier Schematic	RR209962	Yes (pdf)
Timer Module	1	General title of Timer PWM	3036907	Yes (zfp_hhm)

**SCHEDULE**

to EU-Type Examination Certificate No. FM10ATEX0003X

**16 Test and Assessment Procedure and Conditions:**

This EU-Type Examination Certificate is the result of testing of a sample of the product submitted, in accordance with the provisions of the relevant specific standard(s), and assessment of supporting documentation. It does not imply an assessment of the whole production.

Whilst this certificate may be used in support of a manufacturer's claim for CE Marking, FM Approvals Europe Ltd accepts no responsibility for the compliance of the equipment against all applicable Directives in all applications.

This Certificate has been issued in accordance with FM Approvals Europe Ltd's ATEX Certification Scheme.

**17 Schedule Drawings**

A list of the significant parts of the technical documentation is annexed to this certificate and a copy has been kept by the Notified Body.


**18 Certificate History**

Details of the supplements to this certificate are described below:

Date	Description
12 <sup>th</sup> November 2010	Original Issue.
30 <sup>th</sup> January 2013	Supplement 1: Report Reference: 3036907rev130109 dated 25 <sup>th</sup> January 2013. Description of the Change: 1. Change of address 2. Addition of IS power Supply option.
22 <sup>nd</sup> October 2013	Supplement 2: Report Reference: 3049400 dated 18 <sup>th</sup> October 2013 Description of the Change: Addition of ETM-IS31-001 battery pack module. (This corresponds to a =3. No change to the model code).
08 <sup>th</sup> December 2014	Supplement 3: Report Reference: 3036907rev141016 dated 04 <sup>th</sup> December 2014 Description of the Change: Change to Valve part number and update of Valve certificate number (DEKRA 11ATEX0273X).
20 <sup>th</sup> July 2015	Supplement 4: Report Reference: 3055146 dated 15 <sup>th</sup> July 2015 Description of the Change: Update to the standards used.
25 <sup>th</sup> November 2016	Supplement 5: Report Reference: RR206511 dated 23 <sup>rd</sup> November 2016 Description of the Change: Change of T-Class due to solenoid. Updated certificate to EU format.
24 <sup>th</sup> July 2017	Supplement 6: Report Reference: RR209962 dated 22 <sup>nd</sup> June 2017 Description of the Change: Addition of EPPS pneumatically powered generator (this corresponds to a =5 in model number).
13 <sup>th</sup> March 2019	Supplement 7: Description of the Change: Certificate transferred from FM Approvals Ltd., notified body no. 1725, to FM Approvals Europe Ltd., notified body no. 2809.

**THIS CERTIFICATE MAY ONLY BE REPRODUCED IN ITS ENTIRETY AND WITHOUT CHANGE**

FM Approvals Europe Ltd, One Georges Quay Plaza, Dublin, Ireland, D02 E440  
 T: +353 (0) 1761 94200 E-mail: [atex@fmapprovals.com](mailto:atex@fmapprovals.com) [www.fmapprovals.com](http://www.fmapprovals.com)



**IECEX Certificate  
of Conformity**

Certificate No: IECEX FME 10.0001X Issue No: 6  
 Date of Issue: 2017-07-24 Page 2 of 5  
 Manufacturer: **Expo Technologies Ltd**  
 Unit 2, The Summit  
 Hanworth Road  
 Sunbury on Thames  
 TW16 5DB  
 United Kingdom

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 EC Standard listed 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 electrical 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 60079-11: 2011** Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"  
 Edition:6.0

*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/FM/EXTR10.0006/00	SB/FM/EXTR10.0006/02
	GB/FM/EXTR10.0006/03	SB/FM/EXTR10.0006/04
	GB/FM/EXTR10.0006/06	SB/FM/EXTR10.0006/05

Quality Assessment Report  
 GB/SIR/QAR07.0012/10



**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](http://www.iecex.com)

Certificate No.: IECEX FME 10.0001X Issue No.: 6  
 Status: **Current** Issue No. 6 (2017-07-24)  
 Date of Issue: 2017-07-24 Page 1 of 5 Issue No. 5 (2016-11-25)  
 Applicant: **Expo Technologies Ltd** Issue No. 4 (2015-07-20)  
 Unit 2, The Summit Issue No. 3 (2014-12-08)  
 Hanworth Road Issue No. 2 (2013-10-22)  
 Sunbury on Thames Issue No. 1 (2013-01-30)  
 TW16 5DB Issue No. 0 (2010-11-05)  
 United Kingdom

Equipment: **Electronic Timer Module ETM-1S**  
 Optional accessory:  
 Type of Protection: **Intrinsic Safety**  
 Marking:  
 Ex ia IIC T4 Ga Ta = -20°C to +60°C  
 Ex ia III C T101°C Da Ta = -20°C to +60°C  
 Ex ia IIC T5 Ga Ta = -20°C to +59°C  
 Ex ia III C T100°C Da Ta = -20°C to +59°C  
 Ex ia IIC T6 Ga Ta = -20°C to +44°C  
 Ex ia III C T85°C Da Ta = -20°C to +44°C

Approved for issue on behalf of the IECEX: Mick Gower  
 Certification Body: Certification Manager  
 Position: \_\_\_\_\_  
 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.

Certificate issued by  
**FIM Approvals Ltd**  
 1 Windsor Cells  
 SL4 1RS Windsor  
 United Kingdom  
Member of the FIM Global Group




**IECEX Certificate  
of Conformity**

Issue No: 6  
Page 4 of 5

Certificate No: IECEX FME 10.0001X  
Date of Issue: 2017-07-24

**DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):**  
Issue 6: Addition of EPPS pneumatically powered generator.



**IECEX Certificate  
of Conformity**

Issue No: 6  
Page 3 of 5

Certificate No: IECEX FME 10.0001X  
Date of Issue: 2017-07-24

**Schedule**

**EQUIPMENT:**  
*Equipment and systems covered by this certificate are as follows:*

The ETW/S is battery powered electronic timer module. The Timer module is designed to be supplied from a self contained battery pack or separately certified AIS power supply. This battery pack contains a non-rechargeable battery together with current limiting resistors. The timer settings are controlled by two BCD switches located on the main part of the timer. Connections from the timer to a solenoid valve and switch are also provided. The solenoid is supplied as part of the timer circuit. Four LEDs are used to indicate the status of the timer circuit. The Timer module and Solenoid Valve are designed to be installed within another enclosure.

a = sub module 1 = Timer Module powered by Expo Battery Pack  
 2 = Timer module powered by IS power supply  
 3 = Expo IS Battery Pack  
 4 = Expo IS remote Battery Pack  
 5 = Timer module powered by E.P.P.S.  
 2 = Mounting Style 1 = Plate mounter.  
 2 = Panel mounter.  
 2 = LED connection 1 = LED's on Timer surface  
 2 = LED's on flying leads  
 de = Maximum Time d = Reference Value 1 to 9  
 e = Multiplying digit 1, 2, 3 or 4

**SPECIFIC CONDITIONS OF USE: YES as shown below:**

1. The Electronic Timer shall not be used where UV light or radiation may impinge the Electronic Timer System.
2. The Electronic Timer shall be installed within an enclosure which provides protection against impact.
3. The Enclosure shall be metallic providing a minimum ingress protection of IP20.
4. For light alloy enclosures, materials shall not contain, by mass, more than 7.5% in total of magnesium, titanium and zirconium. Where more than 10% in total of aluminum, magnesium, titanium and zirconium the user shall take special precautions to avoid gnilton hazard due to impact or friction.

**IECEX Certificate  
of Conformity**



Certificate No: IECEX FME 10.0001X Issue No.: 6  
 Date of Issue: 2017-07-24 Page 5 of 5

**Additional information:**

<b>Electronic Timer Module ETM-Sub-cde</b>	
a = sub module	
1 = Timer Module powered by Expo Battery Pack	
2 = Timer module powered by IS power supply	
3 = Expo IS Battery Pack	
4 = Expo IS remote Battery Pack	
5 = Timer module powered by E.P.P.S	
b = Mounting Style	
1 = Plate mounted	
2 = Panel mounted	
c = LED connection	
1 = LED's on Timer surface	
2 = LED's on flying leads	
de = Maximum Time	
d = Reference Value 1 to 9	
e = Multiplying digit 1, 2, 3 or 4	



Member of the FM Global Group

# SCHEDULE



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Canadian Certificate Of Conformity No: FM16CA0176X

11. The marking of the equipment shall include:
  - Class I Division 1, Groups A, B, C, D;
  - Class II, Division 1, Groups E, F, G;
  - Class III, Division 1;
  - T4 Ta = -20°C to +60 °C; T5 Ta = -20°C to +59 °C T6 Ta = -20°C to +44 °C
12. **Description of Equipment:**

**General** - The Timer module is designed to be supplied from either from a self contained battery pack or from an intrinsically safe power supply. The battery pack contains a non-rechargeable battery together with current limiting resistors.

**Construction** - The Timer module and Solenoid Valve are designed to be installed within another enclosure.

**Ratings - Input Parameters for when a = 2**

U<sub>i</sub> = 11.1 V  
 I<sub>i</sub> = 340 mA  
 P<sub>i</sub> = 2.613 W (non linear)

**Electronic Timer Module ETM/Sab-ede**  
 IS / I, II, III / I / ABCDEFG / T Ta = -20°C to \*

a = sub module  
 1 = Timer Module powered by Expo Battery Pack  
 2 = IS Power Supply  
 3 = Expo IS Battery Pack  
 4 = Expo IS remote Battery Pack

b = Mounting Style  
 1 = Plate mounted  
 2 = Panel mounted

c = LED connection  
 1 = LED's on Timer surface  
 2 = LED's on living lead  
 d = Maximum Time  
 e = Reference Value 1, 2, 3 or 4

\*T4 Ta = +60°C  
 T5 Ta = +59°C  
 T4 Ta = +44°C
13. **Specific Conditions of Use:**
  1. The Electronic Timer shall not be used where UV light or radiation may impinge the Electronic Timer System.

**THIS CERTIFICATE MAY ONLY BE REPRODUCED IN ITS ENTIRETY AND WITHOUT CHANGE**

FM Approvals LLC, 1151 Boston-Providence Turnpike, Norwood, MA 02062 USA  
 T: +1 (781) 762 4300 F: +1 (781) 762 3975 E-mail: [inform@fmapprovals.com](mailto:inform@fmapprovals.com) [www.fmapprovals.com](http://www.fmapprovals.com)  
 F 348 (Mar 16) Page 2 of 3



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# CERTIFICATE OF CONFORMITY



Member of the FM Global Group

HAZARDOUS LOCATION ELECTRICAL EQUIPMENT PER CANADIAN REQUIREMENTS

1. **Certificate No:** FM16CA0176X
2. **Equipment:** (Type Reference and Name) Electronic Timer Module ETM-IS\*\*-\*\*\*
3. **Name of Listing Company:** Expo Technologies Ltd  
 Unit 2, The Summit  
 Hanworth Road  
 Sunbury on Thames  
 TW16 5DB  
 United Kingdom
4. **Address of Listing Company:**
5. The examination and test results are recorded in confidential report number: 3036907 dated 21<sup>st</sup> October 2010
6. FM Approvals LLC, certifies that the equipment described has been found to comply with the following Approval standards and other documents:
  - CAN-CSA C22.2 No. 157:1992 (R2012), CAN-CSA C22.2 No. 61010-1:1992 (R1999)
7. If the sign 'X' is placed after the certificate number, it indicates that the equipment is subject to specific conditions of use specified in the schedule to this certificate.
8. This certificate relates to the design, examination and testing of the products specified herein. The FM Approvals surveillance audit program has further determined that the manufacturing processes and quality control procedures in place are satisfactory to manufacture the product as examined, tested and Approved.
9. **Equipment Ratings:**

Intrinsically safe for Class I, II and III, Division 1, Groups A, B, C, D, E, F, and G indoor hazardous (Classified) locations. Temperature Class T6 at Ta = +44 °C, T5 at Ta = +59 °C and T4 at Ta = 60 °C.
10. **Certificate issued by:** *J.E. Marquardt*  
 J.E. Marquardt  
 Manager, Electrical Systems  
 Date: 23 November 2016

To verify the availability of the Approved product, please refer to [www.approvalsguide.com](http://www.approvalsguide.com)

**THIS CERTIFICATE MAY ONLY BE REPRODUCED IN ITS ENTIRETY AND WITHOUT CHANGE**

FM Approvals LLC, 1151 Boston-Providence Turnpike, Norwood, MA 02062 USA  
 T: +1 (781) 762 4300 F: +1 (781) 762 3975 E-mail: [inform@fmapprovals.com](mailto:inform@fmapprovals.com) [www.fmapprovals.com](http://www.fmapprovals.com)  
 F 348 (Mar 16) Page 1 of 3



**SCHEDULE**

Canadian Certificate Of Conformity No: FM16CA0176X

2. The Electronic Timer shall be installed within an enclosure which provides protection against impact.  
 3. The Enclosure shall be metallic providing a minimum IP20.  
 4. For light alloy enclosures, materials shall not contain, by mass, more than 7.5% in total of magnesium, titanium and zirconium. Where more than 10% in total of aluminium, magnesium, titanium and zirconium the user shall take special precautions to avoid ignition hazard due to impact or friction.

**14. Test and Assessment Procedure and Conditions:**  
 This Certificate has been issued in accordance with FM Approvals Canadian Certification Scheme.

**15. Schedule Drawings**  
 A copy of the technical documentation has been kept by FM Approvals.

**16. Certificate History**  
 Details of the supplements to this certificate are described below:

Date	Description
21 <sup>st</sup> October 2010	Original issue.
25 <sup>th</sup> January 2013	Supplement 1: Report Reference: 3036907/RR130109 Dated 25 <sup>th</sup> January 2013 Description of the Change: Addition of IS Power Supply.
18 <sup>th</sup> October 2013	Supplement 2: Report Reference: – 3049400 dated 18 <sup>th</sup> October 2013 Description of the Change: Additional cell types for the battery pack and alternate power source.
23 <sup>rd</sup> November 2016	Supplement 3: Report Reference: – RR206511 dated 23 <sup>rd</sup> November 2016 Description of the Change: Change in T-Class.



**THIS CERTIFICATE MAY ONLY BE REPRODUCED IN ITS ENTIRETY AND WITHOUT CHANGE**

Page 3 of 3

FM Approvals LLC, 1151 Boston-Providence Turnpike, Norwood, MA 02062 USA  
 T: +1 (1) 781 762 4300 F: +1 (1) 781 762 8375 E-mail: [info@mail.com](mailto:info@mail.com) [www.fmapprovals.com](http://www.fmapprovals.com)  
 F 348 (Mar 16)



**SCHEDULE**

US Certificate Of Conformity No: FM16US0373X

11. The marking of the equipment shall include:

- Class I Division 1, Groups A, B, C, D;
- Class II, Division 1, Groups E, F, G;
- Class III, Division 1;
- T4 Ta = -20°C to +60 °C; T5 Ta = -20°C to +59 °C T6 Ta = -20°C to +44 °C

**Description of Equipment:**

**General** - The Timer module is designed to be supplied from either from a self contained battery pack or from an intrinsically safe power supply. The battery pack contains a non-rechargeable battery together with current limiting resistors.

**Construction** - The Timer module and Solenoid Valve are designed to be installed within another enclosure.

**Ratings** - Input Parameters for when a = 2

U<sub>i</sub> = 11.1V  
 I<sub>i</sub> = 340 mA  
 P<sub>i</sub> = 2.613 W (non linear)

**Electronic Timer Module ETM(S) Sub-code**  
 IS / I, II, III / 1 / ABCDEFG / T\* Ta = -20°C to \*

a = sub module  
 1 = Timer Module powered by Expo Battery Pack  
 2 = IS Power Supply Pack  
 3 = Expo IS Battery Pack  
 4 = Expo IS remote Battery Pack

b = Mounting Style  
 1 = Plate mounted  
 2 = Panel mounted

c = LED connection  
 1 = LED's on Timer surface  
 2 = LED's on flying lead  
 de = Maximum Time  
 d = Reference Value 1 to 9  
 e = Multiplying digit 1, 2, 3 or 4

\*T4 Ta = +60°C  
 T5 Ta = +59°C  
 T4 Ta = +44°C

13. **Specific Conditions of Use:**

1. The Electronic Timer shall not be used where UV light or radiation may impinge the Electronic Timer System.

**THIS CERTIFICATE MAY ONLY BE REPRODUCED IN ITS ENTIRETY AND WITHOUT CHANGE**




FM Approvals LLC, 1151 Boston-Providence Turnpike, Norwood, MA 02062 USA  
 T: +1 (1) 781 762 4300 F: +1 (1) 781 762 9375 E-mail: [info@fmapprovals.com](mailto:info@fmapprovals.com) [www.fmapprovals.com](http://www.fmapprovals.com)

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**CERTIFICATE OF CONFORMITY**

HAZARDOUS (CLASSIFIED) LOCATION ELECTRICAL EQUIPMENT PER US REQUIREMENTS

FM16US0373X  
 Electronic Timer Module ETM(S)\*-\*\*\*

1. **HAZARDOUS (CLASSIFIED) LOCATION ELECTRICAL EQUIPMENT PER US REQUIREMENTS**

2. Certificate No: FM16US0373X

3. Equipment: (Type Reference and Name) Electronic Timer Module ETM(S)\*-\*\*\*

4. Name of Listing Company: Expo Technologies Ltd  
 Unit 2, The Summit  
 Hanworth Road  
 Sunbury on Thames  
 TW16 5DB  
 United Kingdom

5. Address of Listing Company:

6. The examination and test results are recorded in confidential report number: 3036907 dated 21<sup>st</sup> October 2010

7. FM Approvals LLC, certifies that the equipment described has been found to comply with the following Approval standards and other documents:

FM Class 3600-2011, FM Class 3610-2010, FM Class 3810-2005,  
 ANSII/ISA 60079-0-2009, ANSII/ISA 60079-11:2011

8. If the sign 'X' is placed after the certificate number, it indicates that the equipment is subject to specific conditions of use specified in the schedule to this certificate.

9. This certificate relates to the design, examination and testing of the products specified herein. The FM Approvals surveillance audit program has further determined that the manufacturing processes and quality control procedures in place are satisfactory to manufacture the product as examined, tested and Approved.

10. Equipment Ratings:  
 Intrinsically safe for Class I, II and III, Division 1, Groups A, B, C, D, E, F, and G indoor hazardous (Classified) locations. Temperature Class T6 at Ta = +44 °C, T5 at Ta = +59 °C and T4 at Ta = 60 °C.

**Certificate issued by:** *J.E. Marquardt*  
 J.E. Marquardt  
 Manager, Electrical Systems

23 November 2016  
 Date

To verify the availability of the Approved product, please refer to [www.approvalsguide.com](http://www.approvalsguide.com)

**THIS CERTIFICATE MAY ONLY BE REPRODUCED IN ITS ENTIRETY AND WITHOUT CHANGE**




FM Approvals LLC, 1151 Boston-Providence Turnpike, Norwood, MA 02062 USA  
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**SCHEDULE**

US Certificate of Conformity No: FM16US0373X

- 2. The Electronic Timer shall be installed within an enclosure which provides protection against impact.
- 3. The Enclosure shall be metallic providing a minimum IP20.
- 4. For light alloy enclosures, materials shall not contain, by mass, more than 7.5% in total of magnesium, titanium and zirconium. Where more than 10% in total of aluminum, magnesium, titanium and zirconium the user shall take special precautions to avoid ignition hazard due to impact or friction.

**14. Test and Assessment Procedure and Conditions:**

This Certificate has been issued in accordance with FM Approvals US Certification Requirements.

**15. Schedule Drawings**

A copy of the technical documentation has been kept by FM Approvals.

**16. Certificate History**

Details of the supplements to this certificate are described below:

Date	Description
21 <sup>st</sup> October 2010	Original Issue.
25 <sup>th</sup> January 2013	Supplement 1: Report Reference: 3036907RR130109 Dated 25 <sup>th</sup> January 2013 Description of the Change: Addition of IS Power Supply.
18 <sup>th</sup> October 2013	Supplement 2: Report Reference: -- 3049400 dated 18 <sup>th</sup> October 2013 Description of the Change: Additional cell types for the battery pack and alternate power source.
23 <sup>rd</sup> November 2016	Supplement 3: Report Reference: -- RR206511 dated 23 <sup>rd</sup> November 2016 Description of the Change: Change in T-Class.

**THIS CERTIFICATE MAY ONLY BE REPRODUCED IN ITS ENTIRETY AND WITHOUT CHANGE**

FM Approvals LLC, 1151 Boston-Providence Turnpike, Norwood, MA 02062 USA  
T: +1 (1) 781 762 4300 F: +1 (1) 781 762 9375 E-mail: [info@fmapprovals.com](mailto:info@fmapprovals.com) [www.fmapprovals.com](http://www.fmapprovals.com)

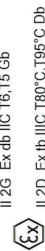
F 347 (Mar 16)

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**EU - Type Examination Certificate**

- (1) Equipment and protective systems intended for use in potentially explosive atmospheres – Directive 2014/34/EU
- (2) EU - Type Examination Certificate Number  
EPS 14 ATEX 1 766 X
- (3) Equipment: Limit switch type 07-25\*1-\*\*\*\*/\*\*\*\* and Position switch type 07-291\*-\*\*\*\*/\*\*\*\*
- (4) Manufacturer: BARTEC GmbH  
Max-Eyth-Strasse 16  
97980 Bad Mergentheim  
Germany
- (5) This equipment and any acceptable variation thereto are specified in the annex to this certificate and the documentation therein referred to.
- (6) Bureau Veritas Consumer Products Services Germany GmbH, notified body No. 2004, in accordance with Article 21 given in the Directive 2014/34/EU of the European Parliament and of the Council of 26 February 2014, certifies that this equipment has been found to comply with the essential health and safety requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres, given in Annex II of the Directive. The examination and test results are recorded in the confidential documentation under the reference number 14TH0090.
- (7) Compliance with the essential health and safety requirements has been assured by compliance with:  
EN 60079-0:2012+A11:2013  
EN 60079-1:2014  
EN 60079-2:2017 (IEC 60079-0:2017)  
EN 60079-31:2014
- (8) If the sign "X" is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the annex to this certificate.
- (9) This EU - Type Examination Certificate relates only to the design and examination of the specified equipment in accordance with Directive 2014/34/EU. Further requirements of this Directive apply to the manufacture of this equipment and its placing on the market. Those requirements are not covered by this certificate.
- (10) The marking of the equipment shall include the following:  
II 2G Ex db IIC T6, T5 Gb  
II 2D Ex tb IIIC T80°C, T95°C Db
- (11) Certification department of explosion protection  
Nuremberg, 2015-06-22
- (12) Certificates without signature and seal are void. This certificate is allowed to be distributed only if not modified. Extracts or modifications must be authorized by Bureau Veritas Consumer Products Services Germany GmbH, EPS 17 ATEX 1 766 X, Revision 1.



Page 1 of 3  
BUREAU VERITAS  
Consumer Products Services Germany GmbH  
Thurn-und-Taxis-Strasse 18, 90411 Nuremberg, Germany  
Phone: +49 40 74041-0  
cps-nuernberg@bureauveritas.com  
www.bureauveritas.de/gps



**Annex**

- (13) Revision 1
- (14) EU - Type Examination Certificate EPS 14 ATEX 1 766 X
- (15) Description of equipment:

The limit switch type 07-2511-\*\*\*\*/\*\*\*\* and 07-2581-\*\*\*\*/\*\*\*\* as well as the position switch type 07-291\*-\*\*\*\*/\*\*\*\* is used as equipment or utility power switch for signal and control circuits. The connection is made by cemented hose cables. The position switch is designed with a guard (protective enclosure) which protects against the risk of high mechanical hazards according to the EN 60079-0, Table 13b, group II.

Electrical data:

Type	max. Rated current <sup>(1)</sup>	max. Rated voltage
07-2511-1****/****, 07-2581-1****/****, 07-2511-5****/****, 07-2581-5****/****, 07-2511-7****/****, 07-2581-7****/****, 07-2911-****/****, 07-2915-****/****, 07-2917-****/****	AC 2 A AC 7 A DC 0,5 A DC 7 A	AC 400 V AC 250 V DC 250 V DC 30 V
07-2511-3****/****, 07-2581-3****/****, 07-2511-6****/****, 07-2581-6****/****, 07-2511-8****/****, 07-2581-8****/****, 07-2913-****/****, 07-2916-****/****, 07-2918-****/****	0,4 A	30 V

- Number of hose cables<sup>(1)</sup>: 1 or 2
- Cross section<sup>(1)</sup>: 0,5 mm<sup>2</sup> up to 1,5 mm<sup>2</sup>
- Ambient temperature range<sup>(1)</sup>: Max. -60 °C ≤ T<sub>a</sub> ≤ +75 °C (T6), Max. -60 °C ≤ T<sub>a</sub> ≤ +90 °C (T6)
- <sup>(1)</sup> = type depending values

The classification of a specific temperature class depends on ambient temperature, current load, cable type and cross section. These data are defined on the marking plate and they are also provided by the manufacturer within the technical documents and instruction manual.

Page 2 of 3  
BUREAU VERITAS  
Consumer Products Services Germany GmbH  
Thurn-und-Taxis-Strasse 18, 90411 Nuremberg, Germany  
Phone: +49 40 74041-0  
cps-nuernberg@bureauveritas.com  
www.bureauveritas.de/gps



BUREAU VERITAS



EU-Type Examination Certificate EPS 14 ATEX 1 766 X

Rev. 0

- (16) Reference number: 14TH0090
- (17) Special conditions for safe use:

The limit switch and position switch shall be used within its operating range and rating according to manufacturer's documents and marking.

The limit switch shall be installed that it is protected by a guard against the risk of high mechanical danger, which meets at least the requirements of IEC 60079-0, Table 13 b), group II. Resistance to light exposure is fulfilled by the housing material according to EN 60079-0.

The specific installation standards and manufacturer's instructions must be respected.

- (18) Essential health and safety requirements:  
Met by compliance with standards.



Certification department of explosion protection


H. Scheifer

Nuremberg, 2018-06-22

Certificates without signature and seal are void. This certificate is allowed to be distributed only if not modified. Extracts or modifications must be authorized by Bureau Veritas Consumer Products Services Germany GmbH, EPS 17 ATEX 1766 X, Revision 1.

Page 3 of 3

BUREAU VERITAS Consumer Products Services Germany GmbH Thurn- und Taxis-Strasse 16, 91041 Nuremberg, Germany Phone: +49 49 74041 0 cps-nuernberg@de.bureauveritas.com www.bureauveritas.de/cps



**IECEX Certificate  
of Conformity**

Certificate No: IECEX EPS 14.0092X Issue No: 1  
Date of Issue: 2016-06-20 Page 2 of 4  
Manufacturer: **BARTEC GmbH**  
Max-Eyth-Strasse 16  
97980 Bad Mergentheim  
Germany  
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 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 : 2017** Explosive atmospheres -Part 0: Equipment - General requirements  
Edition:7.0  
**IEC 60079-1 : 2014-06** Explosive atmospheres -Part 1: Equipment protection by flameproof enclosures "d"  
Edition:7.0  
**IEC 60079-31 : 2013** Explosive atmospheres -Part 31: Equipment dust ignition protection by enclosure "t"  
Edition:2

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: DE/EPSExTR14.0093/01  
DE/EPSExTR14.0093/00  
Quality Assessment Report: DE/TUN/CAR06.0017/06



**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](http://www.iecex.com)


Certificate No.: IECEX EPS 14.0092X Issue No.: 1  
Status: **Current** Issue No. 1 (2015-06-20)  
Date of Issue: 2016-06-20 Issue No. 0 (2014-12-03)  
Applicant: **BARTEC GmbH**  
Max-Eyth-Strasse 16  
97980 Bad Mergentheim  
Germany  
Equipment: **Limit switch type 07-25\*1-\*\*\*j\*\*\* and Position switch type 07-291\*...j\*\*\***  
Optional accessory:  
Type of Protection: **"db", "tb"**  
Marking: Ex db IIC T6, T5 Gb  
Ex tb IIC T8\* C, T95\* C Db


Approved for issue on behalf of the IECEX Certification Body: **Holger Schaefer**  
Position: Certification manager

Signature: \_\_\_\_\_  
(or 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.

Certificate issued by:  
**Bureau Veritas Consumer Products Services Germany GmbH**  
Businesspark A96  
86842 Türkheim  
Germany





## IECEx Certificate of Conformity

Issue No: 1  
Page 4 of 4


Certificate No: IECEx EPS 14.0092X

Date of Issue: 2016-06-20

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

Update of standards

**Annex:**  
IECEx:EPS14.0092X-Annex.pdf



## IECEx Certificate of Conformity

Issue No: 1  
Page 3 of 4

Certificate No: IECEx EPS 14.0092X

Date of Issue: 2016-06-20

**Schedule**

**EQUIPMENT:**  
*Equipment and systems covered by this certificate are as follows:*

The limit switch type 07-2511,\*\*\*/\* \*\* and 07-2581,\*\*\*/\* \*\* as well as the position switch type 07-291,\*\*\*/\* \*\* is used as equipment or utility power switch for signal and control circuits. The connection is made by cemented hose cables. The position switch is designed with a guard (protective enclosure) which protects against the risk of high mechanical hazards according to the IEC 60079-0, Table 13b, group II.

**SPECIFIC CONDITIONS OF USE: YES as shown below:**

The limit switch and position switch shall be used within its operating range and rating according to manufacturer's documents and marking.

The limit switch shall be installed that it is protected by a guard against the risk of high mechanical danger, which meets at least the requirements of IEC 60079-0, Table 13 b), group II. Resistance to light exposure is fulfilled by the housing material according to IEC 60079-0.

The specific installation standards and manufacturer's instructions must be respected.

CERTIFICATE FOR CHINA COMPULSORY PRODUCT CERTIFICATION



CERTIFICATE NO: 2020322304000843

APPLICANT: BARTEC Explosion Proof Appliances (Shanghai) Co. Ltd
ADDRESS: New Building 7.101, 401 No. 188, Xinjun Ring Rd., Shanghai
Pujiang Hi-Tech Park(Pu Dong Area), Minhang
District, Shanghai China

MANUFACTURER: BARTEC GmbH
ADDRESS: Max-Eyth-Str. 16 97980 Bad Mergentheim Germany
FACTORY: BARTEC GmbH
ADDRESS: Max-Eyth-Str. 16 97980 Bad Mergentheim Germany

PRODUCTNAME: Limit and Position Switch
SERIES/SPECIFICATION/MODEL: 07-25 Series, 07-291 Series
STANDARDS: GB 3836.1-2010, GB 3836.2-2010, GB 12476.1-2013, GB 12476.5-2013

This is to certify that the above mentioned product(s) complies with the requirements of implementation rules for compulsory certification (REFNO. CNCA-C23-01:2019).

Valid from: August 28, 2020 Valid until: August 27, 2025
Date of original certification: August 28, 2020

The validity of this certificate is subject to positive result of the regular follow up inspection by issuing certification body until the expiry date.

This certificate is available through CNCA's website: www.cnca.gov.cn

APPROVAL: Xu JianPing



Shanghai Inspection and Testing Institute of Instruments and Automation Systems Co., Ltd.

Building 9, 103 Cao Bao Road, Shanghai 200233, China Tel: +86 21 64510844

S 0000517

中国国家强制性产品认证证书



证书编号: 2020322304000843

认证委托人名称: 博太科防爆设备(上海)有限公司
认证委托人地址: 上海市闵行区浦江高科技园F区新骏环路188号7号楼101、401

生产者名称: BARTEC GmbH
生产者地址: Max-Eyth-Str. 16 97980 Bad Mergentheim Germany
生产企业名称: BARTEC GmbH
生产企业地址: Max-Eyth-Str. 16 97980 Bad Mergentheim Germany

产品名称: 限位及行程开关
系列、规格、型号: 07-25系列, 07-291系列
标准: GB 3836.1-2010, GB 3836.2-2010, GB 12476.1-2013, GB 12476.5-2013

上述产品符合强制性产品认证实施规则 CNCA-C23-01:2019 的要求, 特此发证。

发证日期: 2020年8月28日 有效期至: 2025年8月27日
首次发证日期: 2020年8月28日

证书有效期内本证书的有效性依据发证机构的定期监督获得保持。

本证书的相关信息可通过国家认监委网站 www.cnca.gov.cn 查询

批准: Xu JianPing



上海仪器仪表自控系统检验测试所有限公司

http://www.sitiilas.com.cn 中国·上海·漕宝路103号200233 电话: +86 21 64510844

S 0000882



中国国家强制性产品认证证书



证书编号: 2020322304000843

附件

产品名称: 限位及行程开关

型号规格:

07-25 **a** 1 - **b** **c** **d** **e** / **f** **g** **h** **i**, 其中  
**a** 代表外形类型, 可选代码为: 1, 8  
**b** 代表应用环境, 可选代码为: 1, 3, 5, 6, 7, 8  
**c** 代表导线长度, 可选代码为: 0~9  
**d** 代表 1 号腔室触点类型, 可选代码为: 1, 2, 3, 4, 6, 7  
**e** 代表 2 号腔室触点类型, 可选代码为: 0, 1, 2, 3, 4, 6, 7, A, B, C, D  
**f**: **g**, **h**, **i** 为与防爆无关代码

07-291 **a** - **b** **c** **d** **e** / **f** **g** **h** **i**

**a** 代表应用环境, 可选代码为: 1, 3, 5, 6, 7, 8  
**b** 代表材料保护外壳, 可选代码为: 1  
**c** 代表导线长度, 可选代码为: 0~9  
**d** 代表 1 号腔室触点类型, 可选代码为: 1, 2, 3, 4  
**e** 代表 2 号腔室触点类型, 可选代码为: 1, 2, 3, 4  
**f**: **g**, **h**, **i** 为与防爆无关代码

防爆标志:

Ex d IIC T6/T5 Gb, Ex td A21 T80°C/T95°C

电气参数:

最大额定电压 AC 400V, DC 250V, 最大额定电流 AC 7A, DC 7A。

批准:



上海仪器仪表自控系统检验测试所有限公司

http://www.sitiias.com.cn

中国·上海·漕宝路103号200233

电话: +86 21 64510844

第 1 页 共 1 页





**ЕВРАЗИЙСКИЙ ЭКОНОМИЧЕСКИЙ СОЮЗ**

**ПРИЛОЖЕНИЕ**

**К СЕРТИФИКАТУ СООТВЕТСТВИЯ № ЕАЭС RU C-DE.AH07.B.04162/22**  
Серия **RU** № **0782241**

сертифицированного электрооборудования, соответствующего требованиям одного из стандартов на виды взрывозащиты, перечисленных в ГОСТ 31610.0-2014 (IEC 60079-0:2011).

**5.7 Специальные условия применения для переключателей прецизионные концевые типа 07-296\*.**

Переключатели выполнены с постоянно присоединенными проводниками. Присоединение свободных концов проводников переключателей должно осуществляться либо за пределами взрывоопасной зоны, либо с помощью сертифицированного электрооборудования, соответствующего требованиям одного из стандартов на виды взрывозащиты, перечисленных в ГОСТ 31610.0-2014 (IEC 60079-0:2011).

Емкость направляющей розетки и привода составляет  $4,5 \pm 0,5$  нФ.

При использовании в газовой группе IIC должно быть гарантировано расстояние не менее 4 мм между направляющей муфтой и окружающими металлическими поверхностями.

Руководитель (уполномоченное лицо) органа по сертификации  
Эксперт (эксперт-аудитор)  
(эксперты (эксперты-аудиторы))

Галина Александровна (И.О.)  
Литмирый Олегovich (И.О.)



**ЕВРАЗИЙСКИЙ ЭКОНОМИЧЕСКИЙ СОЮЗ**

**ПРИЛОЖЕНИЕ**

**К СЕРТИФИКАТУ СООТВЕТСТВИЯ № ЕАЭС RU C-DE.AH07.B.04162/22**  
Серия **RU** № **0782240**

обеспечивается материалом корпуса сертифицированного взрывозащищенного оборудования, в котором устанавливается переключатель встраиваемый.

Необходимо соблюдать стандарты, условия и инструкции изготовителя.

Присоединительные проводники переключателя встраиваемого должны быть защищены от растянывающихся нагрузок и скручивания.

**5.3 Шкала ограничений для переключателей миниатюрных встраиваемых типа 07-1501-\*\*\*\*/\*\*\*\***

Переключатель миниатюрный встраиваемый должен применяться в пределах своего рабочего диапазона температур и номинальных значений, указанных в эксплуатационной документации изготовителя и на заводской табличке с маркировкой.

Переключатель миниатюрный встраиваемый должен быть установлен внутри корпуса сертифицированного взрывозащищенного оборудования, который соответствует требованиям одного из стандартов на виды взрывозащиты, перечисленных в ГОСТ 31610.0-2014 (IEC 60079-0:2011). Стойкость к воздействию УФ-света обеспечивается материалом корпуса сертифицированного взрывозащищенного оборудования, в котором устанавливается переключатель встраиваемый.

Необходимо соблюдать стандарты, условия и инструкции изготовителя.

Присоединительные проводники переключателя миниатюрного встраиваемого должны быть защищены от растянывающихся нагрузок и скручивания.

**5.4 Специальные условия применения для переключателей миниатюрных встраиваемых типа 07-2401-\*\*\*\*/\*\*\*\*.**

Переключатель миниатюрный встраиваемый должен применяться в пределах своего рабочего диапазона температур и номинальных значений, указанных в эксплуатационной документации изготовителя и на заводской табличке с маркировкой.

Переключатель миниатюрный встраиваемый должен быть установлен внутри корпуса сертифицированного взрывозащищенного оборудования, который соответствует требованиям одного из стандартов на виды взрывозащиты, перечисленных в ГОСТ 31610.0-2014 (IEC 60079-0:2011). Стойкость к воздействию УФ-света обеспечивается материалом корпуса сертифицированного взрывозащищенного оборудования, в котором устанавливается переключатель встраиваемый. Необходимо соблюдать стандарты, условия и инструкции изготовителя.

Присоединительные проводники переключателя миниатюрного встраиваемого должны быть защищены от растянывающихся нагрузок и скручивания.

Температурный класс переключателя миниатюрного встраиваемого зависит от температуры окружающей среды, токовой нагрузки, типа и сечения кабеля. Эти данные указаны на заводской табличке с маркировкой, а также предоставляются изготовителем в технической и эксплуатационной документации.

**5.5 Специальные условия применения для переключателей концевых типа 07-25\*1-\*\*\*\*/\*\*\*\* и переключателей позиционных типа 07-291\*1-\*\*\*\*/\*\*\*\*.**

Переключатель концевой типов 07-25\*1-\*\*\*\*/\*\*\*\* и переключатель позиционный типа 07-291\*1-\*\*\*\*/\*\*\*\* должны применяться в пределах своего рабочего диапазона температуры и номинальных значений, указанных в эксплуатационной документации изготовителя и на заводской табличке с маркировкой.

Переключатели должны быть установлены в корпусе сертифицированного взрывозащищенного оборудования с высокой степенью ошестости от механических повреждений согласно ГОСТ 31610.0-2014 (IEC 60079-0:2011) таблица 13. Стойкость к воздействию УФ-света обеспечивается материалом корпуса сертифицированного взрывозащищенного оборудования, в котором устанавливаются переключатели.

Необходимо соблюдать стандарты, условия и инструкции изготовителя.

Температурный класс переключателей зависит от температуры окружающей среды, токовой нагрузки, типа и сечения кабеля. Эти данные указаны на заводской табличке с маркировкой, а также предоставляются изготовителем в технической и эксплуатационной документации.

**5.6 Специальные условия применения для переключателей прецизионных концевых типа 07-295\*1-\*\*\*\*/\*\*\*\*.**

Переключатели выполнены с постоянно присоединенными проводниками. Присоединение свободных концов проводников переключателей должно осуществляться либо за пределами взрывоопасной зоны, либо с помощью

Руководитель (уполномоченное лицо) органа по сертификации  
Эксперт (эксперт-аудитор)  
(эксперты (эксперты-аудиторы))

Галина Александровна (И.О.)  
Литмирый Олегovich (И.О.)



**EU-TYPE EXAMINATION CERTIFICATE**



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

EU-Type Examination Certificate Number: **DEMKO 17 ATEX 1795X Rev. 3**

Product: **Electro Pneumatic Power Supplies (EPSS)**

Manufacturer: **Expo Technologies Limited**

Address: **Unit 2 The Summit, Hanworth Road, Sunbury on Thames, Surrey, TW16 5DB, United Kingdom**

[1] This product and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.  
[2] UL International/Denko A/S, notified body number 0539 in accordance with Article 17 of the Council Directive 2014/34/EU of 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to design and construction of products intended for use in potentially explosive atmospheres given in Annex I to the Directive.

[3] The examination and test results are recorded in confidential report no. **US/UL/EXTR17.0016/03**.

[4] Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

- EN IEC 60079-0:2018    EN 60079-1:2014    EN 60079-11:2012
- EN 60079-31:2014    IEC 60079-31, 3rd Edition (2022-01)

[5] If the sign "X" is placed after the certificate number, it indicates that the product is subject to special conditions for safe use specified in the schedule to this certificate.

[6] 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 the certificate.

[7] The marking of the product shall include the following:

II 2 (1) G Ex db [ia Ga] IIC T6 Gb  
 II 2 (1) D Ex tb [ia Da] IIIC T65°C Db

**Certification Manager**  
Thomas Wilson

**Date of issue:** 2017-05-19  
**Re-issued:** 2023-06-15

**Notified Body**    UL International Denko A/S, Borupvang 5A, 2750 Ballerup, Denmark  
Tel. +45 44 85 65 65, [info.dk@ul.com](mailto:info.dk@ul.com), [www.ul.com](http://www.ul.com)

Accredited by DANAK under registration number 7011 to certification of products.



**Schedule**  
**EU-TYPE EXAMINATION CERTIFICATE No.**  
**DEMKO 17 ATEX 1795X Rev. 3**

**Description of Product**  
These devices are electro pneumatic power supplies (EPSS), electric generators for use in hazardous locations, providing intrinsically safe outputs for connection to intrinsically safe devices. The EPSS flameproof protection method comprises a cylindrical main body that houses a generator and I.S. Barrier with a lead seal and shaft joint which completes the flameproof enclosure. The dust ignition protection by enclosure comprises the cylindrical main body with a lead seal and cooling. These devices use a limited amount of compressed air, 4 bar max., to provide intrinsically safe output.

**Nomenclature:**

E	P	W	-	E	P	S	-	0	0	1
I	II	III	IV	V	VI	VII	VIII	IX	X	

I – E – Model Designation Given as E

II – P – Model Designation Given as P

III – W – Model Designation Given as W

IV – E – Electro

V – P – Pneumatic

VI – P – Power

VII – S – Supply

VIII – 0 – Numerical Value Given as 0

IX – 0 – Numerical Value Given as 0

X – Output Entity Parameter Designations Given as 0, 1, or 2

**Temperature range**  
The ambient temperature range is -50°C to +65°C.

**Electrical data**  
Input Pressure Rating: 4.0 bar (58 psi)  
Input Pressure Temperature: 65°C max

The output entity parameters assigned to the models are as follows:

Output Entity Parameters	
EPW-EPSS-000	EPW-EPSS-001
U <sub>0</sub> : 10.8 V	U <sub>0</sub> : 14.3 V
I <sub>0</sub> : 3.28 A	I <sub>0</sub> : 1.085 A
P <sub>0</sub> : 1.46 W	P <sub>0</sub> : 1.942 W
L <sub>0</sub> : 3.10 uH	L <sub>0</sub> : 30.00 uH
C <sub>0</sub> : 2.14 uF	C <sub>0</sub> : 0.68 uF
	ERW-EPSS-002
	U <sub>0</sub> : 7.0 V
	I <sub>0</sub> : 3.316 A
	P <sub>0</sub> : 1.885 W
	L <sub>0</sub> : 3.03 uH
	C <sub>0</sub> : 15.7 uF

**Routine tests**  
Routine tests according to EN 60079-1 cl. 16 are not required.

[16]

**Descriptive Documents**  
The scheduled drawings are listed in the report no. provided under item no. [ 8 ] on page 1 of this EU-Type Examination Certificate.

[17]

**Specific conditions of use:**

- The EPSS shall be installed within an enclosure which provides protection against impact. The enclosure must have a minimum IP20 rating.
- The flameproof joints are not intended to be repaired, contact Expo for further information.

[18]

**Essential Health and Safety Requirements (EHSRs)** covered by the standards listed at item 9. The Essential Health and Safety Requirements (EHSRs) covered by the standards listed at item 9.

Accredited by DANAK under registration number 7011 to certification of products.



**Schedule**  
**EU-TYPE EXAMINATION CERTIFICATE No.**  
**DEMKO 17 ATEX 1795X Rev. 3**


[13]  
[14]

Additional Information



The trademark **Expo Technologies** may be used as the company identifier on the marking label.  
The manufacturer shall inform the notified body concerning all modifications to the technical documentation as described in Annex III to Directive 2014/34/EU of the European Parliament and the Council of 26 February 2014.

Accredited by DANAK under registration number 7011 to certification of products.  
  
Form-ULID-000217 (DCS-00-C-F0066-1) – Issue 27.0 Page 3 of 3  
This certificate may only be reproduced in its entirety and without any change, schedule included.



## IECEX Certificate of Conformity

Page 2 of 4  
Issue No: 3

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**Certificate No.:** IECEX UL 17.0016X  
**Date of issue:** 2023-06-15

**Manufacturer:**  
Expo Technologies Limited  
Unit 2 The Summit  
Hanworth Road  
Sunbury on Thames  
Surrey  
TW16 5DB  
United Kingdom

**Manufacturing locations:**  
Qingdao Expo Mechanical and Electrical Technologies Ltd.  
617 Shilin Er Lu  
Jimo District  
Qingdao City  
Shandong Province 266200  
China

**Expo Technologies, Inc.**  
9140 Ravenna Road  
Unit 3  
Twinsburg OH 44087  
United States of America

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 60079-1:2014-06** Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"  
Edition:7.0

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


**IEC 60079-31:2022-01** Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"  
Edition:3.0

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/UL/EXTR17.0016/00 US/UL/EXTR17.0016/01  
US/UL/EXTR17.0016/03 US/UL/EXTR17.0016/02

**Quality Assessment Report:**  
GB/SIR/QAR07.0012/20



## IECEX Certificate of Conformity

Page 1 of 4  
Issue No: 3

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**Certificate No.:** IECEX UL 17.0016X  
**Status:** Current  
**Date of issue:** 2023-06-15

**Applicant:**  
Expo Technologies Limited  
Unit 2 The Summit  
Hanworth Road  
Sunbury on Thames  
Surrey  
TW16 5DB  
United Kingdom

**Equipment:**  
Electro Pneumatic Power Supplies (EPSS), Models EPW-EPSS-000, EPW-EPSS-001, EPW-EPSS-002

**Optional accessory:**

**Type of Protection:**  
Flameproof "db", Intrinsic safety "ia", Dust Ignition Protection by Enclosure "tb"

**Marking:**  
Ex db [ia Ga] IIC T6 Gb  
Ex tb [ia Da] IIC T65°C Db  
-50°C to +65°C

**Certificate history:**  
Issue 2 (2021-09-22)  
Issue 1 (2018-05-11)  
Issue 0 (2017-05-19)

for rules and details of the IECEX Scheme visit [www.iecex.com](http://www.iecex.com)


**INTERNATIONAL ELECTROTECHNICAL COMMISSION**  
**IEC Certification System for Explosive Atmospheres**

**Approved for issue on behalf of the IECEX Certification Body:**  
**Katy A. Holdridge**  
Senior Staff Engineer  
*Katy A. Holdridge*  
2023-06-15


**Position:** Senior Staff Engineer

**Signature:** (for printed version)  
**Date:** (for printed version)

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



**Certificate issued by:**  
**UL LLC**  
333 Pfingsten Road  
Northbrook IL 60062-2096  
United States of America






## IECEx Certificate of Conformity

Page 4 of 4  
Issue No: 3

Certificate No.: **IECEx UL 17.0016X**  
Date of issue: 2023-06-15

**DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)**  
 Issue 1: Update of drawing list, rating and model nomenclature.  
 Issue 2: Update to IEC 60079-0 7th Edition. Labels and instructions updated.  
 Issue 3: Revision of scheduled documents detailing construction changes and update of IEC 60079-31 2nd to 3rd Edition.

**Annex:**  
[Annex to IECEx UL 17.0016X Issue 3.pdf](#)



## IECEx Certificate of Conformity

Page 3 of 4  
Issue No: 3

Certificate No.: **IECEx UL 17.0016X**  
Date of issue: 2023-06-15

**EQUIPMENT:**  
 Equipment and systems covered by this Certificate are as follows:  
 These devices are Electro Pneumatic Power Supplies (EPPS), electric generators for use in hazardous locations, providing intrinsically safe outputs for connection to intrinsically safe devices. The EPPS flameproof protection method comprises a cylindrical main body that houses a generator and I.S. Barrier with a lead seal and shaft joint which completes the flameproof enclosure. The dust ignition protection by enclosure comprises the cylindrical main body with a lead seal and cowling. These devices use a limited amount of compressed air, 4 bar max, to provide intrinsically safe output.

**Please see Annex for additional information.**

**SPECIFIC CONDITIONS OF USE: YES as shown below:**

- The EPPS shall be installed within an enclosure which provides protection against impact. The enclosure must have a minimum IP20 rating.
- The flameproof joints are not intended to be repaired, contact Expo for further information.



# IECEX Certificate of Conformity

Annex to Certificate No.: IECEX UL 17.0016X

Issue No.: 3

Page 1 of 2

### TYPE DESIGNATION

Nomenclature:

E P W - E P P S - 0 0 1  
 I II III IV V VI VII VIII IX X

I - E - Model Designation Given as E

II - P - Model Designation Given as P

III - W - Model Designation Given as W

IV - E - Electro

V - P - Pneumatic

VI - P - Power

VII - S - Supply

VIII - 0 - Numerical Value Given as 0

IX - 0 - Numerical Value Given as 0

X - Output Entity Parameter Designations Given as 0, 1, or 2

### PARAMETERS RELATING TO THE SAFETY

Model	Uo (V)	Io (A)	Po (W)	Lo (µH)	Co (µF)
EPW-EPPS-000	10.8	3.28	1.46	3.10	2.14
EPW-EPPS-001	14.3	1.085	1.942	30.00	0.68
EPW-EPPS-002	7.0	3.316	1.885	3.03	15.7



# IECEX Certificate of Conformity

Annex to Certificate No.: IECEX UL 17.0016X

Issue No.: 3

Page 2 of 2

### MARKING

Marking has to be readable and indelible; it has to include the following indications:

**EPPS**

Model: EPW-EPPS-000 Serial No. YYYVNNNN  
 Uo=10.8V Io=3.28A Po=1.46W Co=2.14µF Lo=3.10µH  
 INSTALL TO EXPO DRAWING SDB131

IECEX UL 17.0016X  
 Ex db Ia Ga Gb Gc Gd Gf Gg Gd  
 Ex db Ia Da J IIC T65°C Db  
 T amb -50°C to +65°C

DENKO 17ATEX1795X  
 CE 2813 II 2(I) GD

UKA UUL 21LUKEX242X 0518 II 2(I) GD

Ex db Ia Ga J IIC T6 Gb  
 Ex db Ia Da J IIC T65°C Db  
 T amb -50°C to +65°C

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 Sunbury-on-Thames, TW16 5DB, U.K.

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