Motor System Certificates

ML497

PART B

Important Note
Refer to the system manual for applicable certificates.

CONTENTS

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Expo Technologies China
T: +86 532 8906 9858
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1 **EU-TYPE EXAMINATION CERTIFICATE**

2 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU

3 Certificate Number: **Sira 02ATEX1129** Issue: **8**

4 Equipment: **Minipurge Interface Unit Type MIU/d**

5 Applicant: **Expo Technologies Limited**

6 Address: Unit 2, The Summit
Hanworth Road
Sunbury on Thames
Surrey TW16 5DB
UK

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

8 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.

9 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/A11:2013 EN 60079-1:2014 EN 60079-31:2014

10 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.

11 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.

12 The marking of the equipment shall include the following:

For Types dA, dX and dT	For Types dK and dN	Breather drain installed
II 2 G D Ex db IIC T* Gb Ex tb IIIC T*°C Db Ta = -20°C to +*°C	II 2 G D Ex db IIB + H_2 T* Gb Ex tb IIIC T*°C Db Ta = -20°C to +*°C	II 2 G Ex db IIB+H_2 T3 Gb Ta = -20°C to +55°C

Signed: Michelle Halliwell

Title: Director of Operations

PRODUCTS RvA C 652

SCHEDULE

EU-TYPE EXAMINATION CERTIFICATE **Sira 02ATEX1129**
Issue 8

13 **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 lusion 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-Telektron 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.

Ex II 2 G Ex d IIB+H_2 T3 Ta = -20°C to +55°C.

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 Annexe.

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.

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: • 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. • The company name was changed to Expo Technologies Ltd. The introduction of Variation 3.
4	05 October 2012	R29097A/00	The introduction of Variation 4.
5	30 June 2015	R70006555A	The introduction of Variation 5.
6	31 July 2015	R70006555B	The introduction of Variation 6.
7	15 October 2019	1571	• Transfer of certificate Sira 02ATEX1129 from Sira Certification Service to CSA Group Netherlands B.V. • 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.)*
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**

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

17.2 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.

17.3 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, EP90-8T and SD7529.

SCHEDULE

EU-TYPE EXAMINATION CERTIFICATE **Sira 02ATEX1129**
Issue 8

17.4 The scope of this certificate, though allowing 'intrinsically safe equipment' to be installed in accordance with condition 17.3, does not imply compliance with EN 60079-11: 2007 for either the installation or output parameters of such equipment.

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
EP90-2dT	1 of 1	2	21 Nov 06	dT Box
EP90-8T	1 of 1	4	05 Feb 07	dT 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
EP90-5	1 of 1	4	05 Feb 07	Earthing and Other Details
SD7485	1 of 1	2	15 Mar 07	Ex d Box Sealing for Dust Certification
EP90-10	1 of 1	3	27 Feb 07	Linear Feedthrough C9L
EP90-4dA	1 to 9	5	20 Feb 07	d Series Boxes Data Sheets
EP90-6	1 of 1	6	20 Feb 07	Permitted Contents for MIU/d
SD7526	1 of 1	1	20 Feb 07	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.

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IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification Scheme for Explosive Atmospheres

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

Certificate No.: IECEx SIR 07.0008 issue No.:4

Status: **Current**

Date of Issue: **2015-08-25** Page 1 of 4

Certificate history:
Issue No. 4 (2015-8-25)
Issue No. 3 (2015-6-30)
Issue No. 2 (2012-11-27)
Issue No. 1 (2012-10-23)
Issue No. 0 (2007-5-4)

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

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

Type of Protection: **Flameproof and Dust**

Marking:

For Types dA, dX and dT	For Types dK and dN	Breather drain installed
Ex db IIC T* Gb	Ex db IIB + H_2 T* Gb	Ex db IIB+H_2 T3 Gb
Ex tb IIIC T*°C Db Ta = -20°C to +*°C	Ex tb IIIC T*°C Db Ta = -20°C to +*°C	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

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

Position: 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

CSA Group

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
Hanworth 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 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 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 Edition: 6.0	Explosive atmospheres - Part 0: General requirements
IEC 60079-1 : 2014-06 Edition: 7.0	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
IEC 60079-31 : 2013 Edition: 2	Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"

*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/ExTR12.0251/01 GB/SIR/ExTR15.0139/00
GB/SIR/ExTR15.0222/00

Quality Assessment Report:

GB/SIR/QAR07.0012/00

IECEx Certificate of Conformity

Certificate No.: IECEx SIR 07.0008

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

Schedule

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

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, see detailed description in the certificate Annexe.

CONDITIONS OF CERTIFICATION: NO

IECEx Certificate of Conformity

Certificate No.: IECEx SIR 07.0008

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

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

Issue 1 – 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.
Issue 2 – this Issue introduced the following changes:	
1	Issued to allow GB/SIR/ExTR12.0251/00 to be replaced by GB/SIR/ExTR12.0251/00
Issue 3 – 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_2 T3 Ta = -20°C to +55°C.
Issue 4 – this Issue introduced the following changes:	
1	Following appropriate 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 SIR 07.0008
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Annexe to: **IECEx SIR 07.0008 Issue 4 Annexe**

Applicant: **Expo Technologies Limited**

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

CSA Group

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 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 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 EP90-8A, EP90-8X, EP90-8T 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

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Hawarden, CH5 3US, United Kingdom

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ExVeritas®

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, Hanworth 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:

DANAK
PROD Reg.No. 7044
Member of EA MLA

On behalf of ExVeritas

ExVeritas OFFICIAL SIGNATORY

Peter Lauritzen
Managing Director

ExVeritas®

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 ExV19ATEX0454U. 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:

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

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 2585 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	17th Oct 2019	0	Initial issue of the Prime Certificate
EXV3094A	12th Jan 2021	1	Issue of the first variation, see section 13.1.

14.2 Compliance Drawings:

Issue 0

Title:	Drawing No.:	Rev. Level:	Date:
MIU/e 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.

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IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification System for Explosive Atmospheres

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

Certificate No.:	**IECEx EXV 19.0057X**	Page 1 of 3	Certificate history:
Status:	**Current**	Issue No: 0	
Date of Issue:	2019-11-12		
Applicant:	**EXPO Technologies Limited** Unit 2, The Summit Hanworth Road Sunbury on Thames Surrey TW16 5DB **United Kingdom**		
Equipment:	**Minipurge Interface Units MIUe**		
Optional accessory:			
Type of Protection:	**Increased Safety Ex 'eb' Protection by Enclosure Ex 'tb'**		
Marking:	Ex eb IIC T5/4* Gb Ta = -20°C to +55/60* °C *Manual override (MO) models exempt Ex tb 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.iecex.com or use of this QR Code.

Certificate issued by:

ExVeritas Limited
Units 16-18 Abenbury Way
Wrexham Ind. Est.
Wrexham LL 139UZ
United Kingdom

ExVeritas®

IECEx Certificate of Conformity

Certificate No.:	**IECEx EXV 19.0057X**	Page 2 of 3
Date of issue:	2019-11-12	Issue No: 0

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

Additional manufacturing locations:

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 "t"
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/EXV/ExTR19.0059/00

Quality Assessment Report:

GB/SIR/QAR07.0012/15

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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 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 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. Three 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

Annex to: IECEx EXV 19.0057X Issue 0

Manufacturer's documents:				
Title:	Drawing No.:	Rev	Sheets	Date:
MIU/e Permitted Contents	SD7623	2	1 of 1	02/10/19
MIU IECEX & ATEX Certificate label	SD7624	4	2 of 2	02/10/19
MIU User Instructions	SD7644	3	3 of 3	02/10/19
Minipurge Interface Unit	SD7850	3	1 of 1	02/10/19
Minipurge Interface Unit	SD7851	3	1 of 1	02/10/19
MIU with manual override	SD7861	3	1 of 1	02/10/19

ExVeritas, Units 16-18, Abenbury Way, Wrexham Industrial Estate, Wrexham, United Kingdom LL13 9UZ.

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Certificado de Conformidade

Certificate of Conformity

Certificado: TÜV 12.1463
Certificate

Revisão: 04
Review

Solicitante:
Applicant
EXPO TECHNOLOGIES LTD.
Rua Amália de Noronha, 151
05410-010 – São Paulo – SP
CNPJ: 69.060.820/0001-75

Fabricante:
Manufacturer
EXPO TECHNOLOGIES LTD.
Unit 2, The Summit – Hanworth Road
Sunbury on Thames – Surrey – TW16 5DB – Reino Unido

Fornecedor / Representante Legal:
Supplier / Legal Representative
Não aplicável

Modelo de Certificação:
Certification Model
Modelo de Certificação 5, conforme cláusula 6.1 do Regulamento de Avaliação da Conformidade, anexo à Portaria nº 115 do INMETRO, publicada em 21 de março de 2022.

Regulamento / Normas:
Regulation / Standards
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 115 de 21/03/2022.

Produto:
Product
UNIDADE DE INTERFACE MINIPURGE
Certificação por família.

Emissão e Validade:
Issued and Validity
Emissão em: 28/09/2010.
Esta revisão é válida de 09/05/2024 até 28/09/2027.

A validade deste Certificado de Conformidade está atrelada à realização das atividades de manutenção, de acordo com os requisitos previstos no esquema de certificação 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.
The validity of this Certificate of Conformity is conditioned to the execution of maintenance activities, in accordance with the applicable requirements of the specific certification scheme. To confirm the regularity status of this Certificate of Conformity, the Inmetro's database of certified products and services must be consulted.

Igor Moreno
Local Field Manager

Digitally signed by TUV RHEINLAND DO BRASIL LTDA:01950467000165
DN: c=BR, o=ICP-Brasil, st=SP, l=Sao Paulo, ou=Array, cn=TUV RHEINLAND DO BRASIL LTDA:01950467000165
Reason: Digital Signature
Location: Sao Paulo/SP/BR
Date: 09.05.2024 21:32:24 +0000

Endereço Escritório: Avenida Francisco Matarazzo, 1400
Água Branca – São Paulo – SP – CEP: 05001-903
CNPJ: 01.950.467/0001-65 – Tel.: 55 11 3514.5700
https://www.tuv.com/brasil/br/ - MS-0032142 Rev.10

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CERTIFICAÇÃO DE PRODUTO
OCP 0004
ACREDITADO DESDE 1993

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Certificado de Conformidade

Certificate of Conformity

Certificado: TÜV 12.1463
Certificate

Revisão: 04
Review

Item *Item*	Marca *Brand*	Modelo / Versão *Model / Version*	Descrição *Description*	Código de Barras GTIN *GTIN Barcode*
1	**Expo Technologies**	MIU/e	UNIDADE DE INTERFACE MINIPURGE	Não existente

Laboratório, Relatório de Ensaios e Data:
Laboratory, Test Report and Date
Intertek Testing & Certification Ltd.
GB/ITS/ExTR10.0029/00 de 26/08/2010.

Relatório de Auditoria e Data:
Audit Report and Date
Auditoria realizada em 07/05/2019 – PO-0260-19

Este certificado está vinculado ao projeto:
This certificate is related to project
P00893221

Especificações:
Description

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 PE2E 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

Análises realizadas:

As análises realizados encontram-se no relatório de análise nº CC-121463/04.

Marcação:

As unidades de interface MiniPurge modelo MIU/e foram aprovadas nos ensaios e análise, nos termos das normas adotadas, devendo receber a marcação, levando-se em consideração o item observações.

MIU/e1 e MIU/e2 :

Ex e IIC T5 Gb
Ex tb IIIC T100ºC Db IP66
-20 ºC ≤ T_a ≤ +55 ºC
Ex e IIC T4 Gb
-20 ºC ≤ T_a ≤ +60 ºC

Endereço Escritório: Avenida Francisco Matarazzo, 1400
Água Branca – São Paulo – SP – CEP: 05001-903
CNPJ: 01.950.467/0001-65 – Tel.: 55 11 3514.5700
https://www.tuv.com/brasil/br/ - MS-0032142 Rev.10

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OCP 0004
ACREDITADO DESDE 1993

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Certificado de Conformidade

Certificate of Conformity

Certificado: **TÜV 12.1463** *Certificate*

Revisão: **04** *Review*

MIU/e1/MO :

Ex e IIC T5 Gb
Ex tb IIIC T100 ºC Db IP66
-20 ºC ≤ T_a ≤ +55 ºC
U_N = (conforme modelo)
I_N = (conforme modelo)

Observações:

1. Este Certificado de Conformidade é válido para os produtos de modelo e tipo idêntico ao protótipo ensaiado. Qualquer modificação de projeto ou utilização de componentes e materiais diferentes daqueles descritos na documentação deste processo, sem autorização prévia da TÜV Rheinland, invalidará o certificado.

2. É de responsabilidade de o fabricante assegurar que os produtos estejam de acordo com as especificações do protótipo ensaiado, através de inspeções visuais e dimensionais.

3. Os produtos devem ostentar, na sua superfície externa e em local visível, a Marca de Conformidade e as características técnicas da mesma de acordo com as especificações da ABNT NBR IEC 60079-0 / ABNT NBR IEC 60079-7 / ABNT NBR IEC 60079-31 e Regulamento de Avaliação da Conformidade, anexo à Portaria nº 115 do INMETRO, publicada em 21 de março de 2022. Esta marcação deve ser legível e durável, levando-se em conta possível corrosão química.

4. Os produtos devem ostentar, em lugar visível e de forma indelével, a seguinte advertência:

   "ATENÇÃO – NÃO ABRA QUANDO ENERGIZADO"

5. Os prensa-cabos e os bujões para fechar as aberturas não utilizadas devem ser certificados e compatível com o grau de proteção da unidade de interface, adequados para as condições de uso e corretamente instalados.

6. Os produtos devem ser instalados em atendimento às normas pertinentes em instalações elétricas em atmosferas explosivas. As atividades de instalação, inspeção, manutenção, reparo, revisão e recuperação dos produtos são de responsabilidade do usuário e devem ser executadas de acordo com os requisitos das normas técnicas vigentes e com as recomendações do fabricante.

Natureza das Revisões e Data:
Nature of Reviews e Date

Revisão: *Review*	**00 – 28/09/2010**	**Certificação inicial.**
	25/04/2012	**Adequação do Certificado AEX-13099 à Portaria nº 179.**
	01 – 16/09/2015	**Revalidação.**
	02 – 25/08/2018	**Revalidação.**
	03 – 27/10/2021	**Revalidação.**
	04 – 09/05/2024	**Indicação do solicitante brasileiro e ajuste da validade conforme Art. 10 da Portaria nº 115 do INMETRO, publicada em 21 de março de 2022 e atualização do Solicitante.**

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CERTIFICAÇÃO DE PRODUTO
OCP 0004
ACREDITADO DESDE 1993

CERTIFICATE FOR CHINA COMPULSORY PRODUCT CERTIFICATION

No.: 2020312303000422

Applicant	EXPO Technologies Limited
Address	Unit 2, The Summit, Hanworth Road, Sunbury on Thames Surrey TW16 5DB, United Kingdom
Manufacturer	EXPO Technologies Limited
Address	Unit 2, The Summit, Hanworth Road, Sunbury on Thames Surrey TW16 5DB, United Kingdom
Production Factory	EXPO Technologies Limited
Production Address	Unit 2, The Summit, Hanworth Road, Sunbury on Thames Surrey TW16 5DB, United Kingdom
Product	Minipurge Interface Units
Model/Type	MIU/e1, MIU/e2, MIU/e1/MO
Ex marking	Ex eb IIC T5/T4 Gb，Ex tb IIIC T100℃ 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 CNEX-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:

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
Tel: 0377-63239734 Email: ccc@cn-ex.com

CN 0001571

CERTIFICATE FOR CHINA COMPULSORY PRODUCT CERTIFICATION

(Annex)

No.: 2020312303000422

Product information:

1. 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℃ Db (Ta: -20℃...+55/60℃)
   MIU/e1/MO: Ex eb IIC T5 Gb，Ex tb IIIC T100℃ Db (Ta: -20℃...+55℃)

   - Producers should organize production in accordance with the technical documents approved by the certification body.

2. 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.

3. Certificate related report(s):

   - Type test report: CQST2009C580, CQST2009C580/01

   - Factory inspection report: CN2020Q010175

4. Certificate change information:

   - 1st change on February 07, 2023: Updated the standards for certification.

Issued on: 2023-02-07

Director:

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

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Tel: 0377-63239734 Email: ccc@cn-ex.com

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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: (Type Reference and Name)** **Electronic Timer Module ETM-IS**-***

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 12th 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 IIIC T* Da
* See Description

Digitally signed by Richard.Zammitt DN: cn=Richard Zammitt, o, ou=FM Approvals Europe Limited, email=richard.zammitt@fmapprovals.com, c=IE

Richard Zammitt
Certification Manager, FM Approvals Europe Ltd.

Issue Date: 13th March 2019

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

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-ISab-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 dependednt on the ambient temperature;

Ambinent	Temperature Class	
Tamb =	Group II	Group III
-20 °C to +60 °C	T4	T101 °C
-20 °C to +59 °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

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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
12th November 2010	Original Issue.
30th January 2013	Supplement 1: Report Reference: 3036906rev130109 dated 25th January 2013. Description of the Change: 1. Change of address 2. Addition of IS power Supply option.
22nd October 2013	Supplement 2: Report Reference: 3049400 dated 18th 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.)
08th December 2014	Supplement 3: Report Reference: 3036907rev141016 dated 04th December 2014 Description of the Change: Change to Valve part number and update of Valve certificate number (DEKRA 11ATEX0273X).
20th July 2015	Supplement 4: Report Reference: 3055146 dated 15th July 2015 Description of the Change: Update to the standards used.
25th November 2016	Supplement 5: Report Reference: RR206511 dated 23rd November 2016 Description of the Change: Change of T-Class due to solenoid. Updated certificate to EU format.
24th July 2017	Supplement 6: Report Reference: RR209962 dated 22nd June 2017 Description of the Change: Addition of EPPS pneumatically powered generator (this corresponds to a =5 in model number).
13th 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.

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

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

Drawing No.	Revision Level	Drawing Title	Last Report	Electronic Drawing
EPC-B000-114	1	Electronic Timer Timer Main PCB Layout	3049400	Yes (msw8)
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 (msw8)
EPC-B000-147	1	Electronic Timer Battery Pack PCB	3049400	Yes (zip_html)
EPC-BBM0-010	3	Timer Module Parts List	16-Oct-14	Yes (pdf)
EPC-BBM0-011	1	Battery pack Parts List	3049400	Yes (msw8)
EPC-BBM0-015	1	ETM-IS31-001 Battery Pack Parts List.doc	3049400	Yes (msw8)
SD7607	3	Electronic Timer Schematic	RR209962	Yes (pdf)
SD7608	3	Electronic Timer Module - Design Document.doc	3055146	Yes (msw8)
SD7610	1	Timer Module Schematic	3049400	Yes (pdf)
SD7611	5	Electronic Timer ELECTRONIC TIMER - BLOCK DIAGRAM	RR209962	Yes (pdf)
SD7616	5	Electronic Timer ATEX / IECEX CERTIFICATION LABEL	RR206511	Yes (pdf)
SD7620	4	Electronic Timer - FM (USA, Canada) Label	RR206511	Yes (pdf)
SD7621	5	Electronic Timer - Manual Extracts	3055146	Yes (msw8)
SD7622	2	Electronic Timer – Model Number designation	RR209962	Yes (pdf)
SD7642	5	Electronic Timer Installation	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 (msw8)
SD7848	3	Electronic Timer	3049400	Yes (pdf)
SD7898	1	Electronic Timer System Certification Label.doc	3049400	Yes (msw8)
SD8085	1	Electronic Timer Assembly.pdf	3049400	Yes (pdf)
SD8222	2	Description of proposal changes for E-timer	RR209962	Yes (pdf)
SD8255	1	Electronic Timer with EPPS Assembly	RR209962	Yes (pdf)
SD8256	1	EPPS – IS Barrier Schematic	RR209962	Yes (pdf)
Timer Module	1	Gerber files of Timer PWB	3036907	Yes (zip_html)

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IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification Scheme for Explosive Atmospheres

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

Certificate No.: IECEx FME 10.0001X

Issue No: 6

Status: **Current**

Page 1 of 5

Date of Issue: **2017-07-24**

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

Certificate history:
Issue No. 6 (2017-07-24)
Issue No. 5 (2016-11-25)
Issue No. 4 (2015-07-20)
Issue No. 3 (2014-12-08)
Issue No. 2 (2013-10-22)
Issue No. 1 (2013-01-30)
Issue No. 0 (2010-11-05)

Equipment: **Electronic Timer Module ETM-IS**

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 Certification Body: Mick Gower

Position: Certification Manager

Signature:
(for printed version)

Date:

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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

FM Approvals Ltd
1 Windsor Dials
SL4 1RS Windsor
United Kingdom

FM Approvals
Member of the FM Global Group

IECEx Certificate of Conformity

Certificate No: IECEx FME 10.0001X

Issue No: 6

Date of Issue **2017-07-24**

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 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 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/FME/ExTR10.0006/00 GB/FME/ExTR10.0006/01 GB/FME/ExTR10.0006/02
GB/FME/ExTR10.0006/03 GB/FME/ExTR10.0006/04 GB/FME/ExTR10.0006/05
GB/FME/ExTR10.0006/06

Quality Assessment Report:

GB/SIR/QAR07.0012/10

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IECEx Certificate of Conformity

Certificate No: IECEx FME 10.0001X Issue No: 6

Date of Issue: **2017-07-24** Page 3 of 5

Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The ETM-IS 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 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

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 mountec
2 = Panel mountec
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

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 aluminium, magnesium, titanium and zirconium the user shall take special precautions to avoid ignition 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 4 of 5

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

Issue 6: Addition of EPPS pneumatically powered generator.

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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:

Electronic Timer Module ETM-|Sab-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

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CERTIFICATE OF CONFORMITY

1. **HAZARDOUS LOCATION ELECTRICAL EQUIPMENT PER CANADIAN REQUIREMENTS**
2. **Certificate No:** **FM16CA0176X**
3. **Equipment: (Type Reference and Name)** **Electronic Timer Module ETM-IS**-***
4. **Name of Listing Company:** **Expo Technologies Ltd**
5. **Address of Listing Company:** **Unit 2, The Summit**
   Hanworth Road
   Sunbury on Thames
   TW16 5DB
   United Kingdom
6. The examination and test results are recorded in confidential report number:

   3036907 dated 21st October 2010
7. 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)
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. Marquedant
Manager, Electrical Systems

23 November 2016
Date

To verify the availability of the Approved product, please refer to www.approvalguide.com

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

SCHEDULE

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
    Ui = 11.1V
    Ii = 340 mA
    Pi = 2.613 W (non linear)

    Electronic Timer Module ETM-ISab-cde
    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
    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

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

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CERTIFICATE OF CONFORMITY

1. **HAZARDOUS (CLASSIFIED) LOCATION ELECTRICAL EQUIPMENT PER US REQUIREMENTS**
2. **Certificate No:** **FM16US0373X**
3. **Equipment: (Type Reference and Name)** **Electronic Timer Module ETM-IS**-***
4. **Name of Listing Company:** **Expo Technologies Ltd**
5. **Address of Listing Company:** **Unit 2, The Summit**
   Hanworth Road
   Sunbury on Thames
   TW16 5DB
   United Kingdom
6. The examination and test results are recorded in confidential report number:

   3036907 dated 21st 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,
   ANSI/ISA 60079-0:2009, ANSI/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. Marquedant
Manager, Electrical Systems

23 November 2016
Date

To verify the availability of the Approved product, please refer to www.approvalguide.com

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

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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

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
    Ui = 11.1V
    Ii = 340 mA
    Pi = 2.613 W (non linear)

    Electronic Timer Module ETM-ISab-cde
    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
    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

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

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EU - Type Examination Certificate

(1)

(2) Equipment and protective systems intended for use in potentially explosive atmospheres – **Directive 2014/34/EU**

(3) EU - Type Examination Certificate Number

EPS 14 ATEX 1 766 X **Revision 1**

(4) Equipment: Limit switch type 07-25*1-****/**** and Position switch type 07-291*-****/****

(5) Manufacturer: BARTEC GmbH

(6) Address: Max-Eyth-Straße 16
97980 Bad Mergentheim
Germany

(7) This equipment and any acceptable variation thereto are specified in the annex to this certificate and the documentation therein referred to.

(8) 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.

(9) Compliance with the essential health and safety requirements has been assured by compliance with:

EN 60079-0:2012+A11:2013 **EN 60079-1:2014**

FprEN 60079-0:2017 (IEC 60079-0:2017) **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 annex to this certificate.

(11) 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.

(12) 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

Certification department of explosion protection

Nuremberg, 2018-06-22

H. Schaffer

BUREAU VERITAS
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Thurn-und-Taxis-Straße 18, 90411 Nürnberg, Germany
Phone: + 49 40 74041-0
cps-nuernberg@de.bureauveritas.com
www.bureauveritas.de/cps

Annex

(13)

(14) **EU - Type Examination Certificate EPS 14 ATEX 1 766 X** **Revision 1**

(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[1]	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 400 V
	AC 7 A	AC 250 V
	DC 0,5 A	DC 250 V
	DC 7 A	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[1]: 1 or 2

Cross section[1]: 0,5 mm² up to 1,5 mm²

Ambient temperature range[1]: Max. -60 °C ≤ T_a ≤ +75 °C (T6), Max. -60 °C ≤ T_a ≤ +90 °C (T5)

[1] = 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.

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www.bureauveritas.de/cps

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 ac-cording 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 Nuremberg, 2018-06-22

H. Schaffer

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IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification Scheme for Explosive Atmospheres

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

Certificate No.: IECEx EPS 14.0092X — Issue No: 1

Certificate history:
Issue No. 1 (2018-06-20)
Issue No. 0 (2014-12-03)

Status: **Current**

Page 1 of 4

Date of Issue: **2018-06-20**

Applicant: **BARTEC GmbH**
Max-Eyth-Straße 16
97980 Bad Mergentheim
Germany

Equipment: **Limit switch type 07-25*1-****/**** and Position switch type 07-291*-****/****

Optional accessory:

Type of Protection: **"db", "tb"**

Marking:

Ex db IIC T6,T5 Gb

Ex tb IIIC T80°C,T95°C Db

Approved for issue on behalf of the IECEx Certification Body: Holger Schaffer

Position: Certification manager

Signature:
(for printed version)

Date:

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the Official IECEx Website.

Certificate issued by:

Bureau Veritas Consumer Products Services Germany GmbH
Businesspark A96
86842 Türkheim
Germany

BUREAU VERITAS

IECEx Certificate of Conformity

Certificate No: IECEx EPS 14.0092X — Issue No: 1

Date of Issue: **2018-06-20**

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/EPS/ExTR14.0093/00 DE/EPS/ExTR14.0093/01

Quality Assessment Report:

DE/TUN/QAR06.0017/06

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IECEx Certificate of Conformity

Certificate No: IECEx EPS 14.0092X Issue No: 1

Date of Issue: **2018-06-20** Page 3 of 4

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.

IECEx Certificate of Conformity

Certificate No: IECEx EPS 14.0092X Issue No: 1

Date of Issue: **2018-06-20** Page 4 of 4

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

Update of standards

Annex:

IECExEPS14.0092X-Annex.pdf

中国国家强制性产品认证证书

Ex NEPSI SITIIAS Worldwide Access

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，特发此证。

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

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批准：

上海仪器仪表自控系统检验测试所有限公司

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CERTIFICATE FOR CHINA COMPULSORY PRODUCT CERTIFICATION

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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.

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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 代表外壳类型，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℃/T95℃

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：

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ЕВРАЗИЙСКИЙ ЭКОНОМИЧЕСКИЙ СОЮЗ

ПРИЛОЖЕНИЕ

К СЕРТИФИКАТУ СООТВЕТСТВИЯ № ЕАЭС RU C-DE.АД07.В.04162/22

Серия RU № 0782239

ТР ТС 012/2011	Технический регламент Таможенного союза «О безопасности оборудования для работы во взрывоопасных средах».
ГОСТ 31610.0-2014 (IEC 60079-0:2011)	Взрывоопасные среды. Часть 0. Оборудование. Общие требования.
ГОСТ IEC 60079-1-2011	Взрывоопасные среды. Часть 1. Оборудование с видом взрывозащиты "взрывонепроницаемые оболочки "d".
ГОСТ Р МЭК 60079-18-2012	Взрывоопасные среды. Часть 18. Оборудование с видом взрывозащиты "герметизация компаундом "m".
ГОСТ IEC 60079-31-2013	Взрывоопасные среды. Часть 31. Оборудование с защитой от воспламенения пыли оболочками «t».

4. Маркировка

Маркировка, наносимая на электрооборудование, должна включать следующие данные:

4.1 Наименование предприятия-изготовителя или его зарегистрированный товарный знак;
4.2 Обозначение типа оборудования;
4.3 Порядковый номер оборудования по системе нумерации предприятия-изготовителя;
4.4 Ex-маркировку согласно таблице 2.1;
4.5 Номер сертификата соответствия;
4.6 Единый знак ЕАС обращения продукции на рынке государств - членов Таможенного союза;
4.7 Специальный знак взрывобезопасности Ex в соответствии с ТР ТС 012/2011;
4.8 Другие данные, которые должен отразить изготовитель, если это требуется технической документацией (диапазон температур окружающей среды, степень защиты оболочки и т.д.).

Согласно пункту 29.10 ГОСТ 31610.0-2014 на малогабаритном электрооборудовании и на Ex-компонентах с ограниченной поверхностью маркировка может быть сокращена.

5. Специальные условия применения и шкала ограничений

5.1 Специальные условия применения для переключателей герконовых типа 07-*211-**/****:**

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).

Переключатели должны быть установлены таким образом, чтобы они были защищены от УФ-света и ударов, а постоянно подключенные кабели имели соответствующие концевые заделки и были защищены от ударов.

Выключатели должны питаться от цепи, ограничивающей ток до 0,5 А максимум.

Выключатели должны питаться только от цепи, содержащей отключающее устройство настроенное на 1500 А..

5.2 Шкала ограничений для переключателей встраиваемых типа 07-15*1-**/****:**

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

Переключатель встраиваемый должен быть установлен в 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

Руководитель (уполномоченное лицо) органа по сертификации — (подпись) — Рогалькон Галина Александровна (Ф.И.О.)

М.П.

Эксперт (эксперт-аудитор) (эксперты (эксперты-аудиторы)) — (подпись) — Мартынюк Дмитрий Олегович (Ф.И.О.)

АО «Опцион», Москва, 2020 г., «Б», ТЗ № 334.

ЕВРАЗИЙСКИЙ ЭКОНОМИЧЕСКИЙ СОЮЗ

ПРИЛОЖЕНИЕ

К СЕРТИФИКАТУ СООТВЕТСТВИЯ № ЕАЭС RU C-DE.АД07.В.04162/22

Серия RU № 0782238

Переключатели встраиваемые типа 07-15*1-****/****	Ex d I Mb U Ex d IIC Gb U	Диапазон эксплуатационной температуры: от - 20 °С до + 100 °С от - 55 °С до + 100 °С от - 60 °С до + 100 °С в зависимости от исполнения	-	400 В переменного тока, 2,0 А; 250 В переменного тока, 7,0 А; 250 постоянного тока, 0,5 А; 30 В постоянного тока 7,0 А или 0,4 А (согласно эксплуатационной документации изготовителя и заводской табличке с маркировкой)
Переключатели миниатюрные встраиваемые типа 07-1501-****/****	Ex d I Mb U Ex d IIC Gb U	Диапазон эксплуатационной температуры: от - 60 °С до + 100 °С (в зависимости от используемых проводов и исполнения переключателя)	-	250 В переменного тока, 5,0 А или 1,0 А; 30 В постоянного тока, 3,0 А или 0,4 А; 15 В постоянного тока, 5,0 А
Переключатели миниатюрные встраиваемые типа 07-2501-****/****	1Ex d IIC T5 Gb X 1Ex d IIC T6 Gb X	-60 °С ≤ Ta ≤ + 90 °С для T5 -60 °С ≤ Ta ≤ + 75 °С для T6	-	250 В переменного тока, 5,0 А или 1,0 А; 30 В постоянного тока, 3,0 А или 0,4 А; 15 В постоянного тока, 5,0 А
Переключатели концевые типов 07-25*1-****/**** и переключатели позиционные типа 07-291*-****/****	1Ex d IIC T5 Gb X Ex tb IIIC T95°C Db X 1Ex d IIC T6 Gb X Ex tb IIIC T80°C Db X	-60 °С ≤ Ta ≤ + 90 °С для T5 -60 °С ≤ Ta ≤ + 75 °С для T6	IP66	400 В переменного тока, 2,0 А; 250 В переменного тока, 7,0 А; 250 В постоянного тока, 0,5 А; 30 В постоянного тока, 7,0 А; 30 В постоянного тока, 0,4 А
Переключатели прецизионные концевые типа 07-295*-**30/****	1Ex d IIC T6 Gb X Ex tb IIIC T80°C Db X	-20 °С ≤ Ta ≤ + 60 °С Максимальная эксплуатационная температура до 90°С	IP65	250 В переменного тока, 5,0 А; 230 В постоянного тока, 0,16 А
Переключатели прецизионные концевые типа 07-296*-**62/****	1Ex d IIC T5 Gb X Ex tb IIIC T95°C Db X 1Ex d IIC T6 Gb X Ex tb IIIC T80°C Db X	-20 °С ≤ Ta ≤ + 65 °С для T5/ T95°C -20 °С ≤ Ta ≤ + 75 °С для T6/T80°C Диапазон эксплуатационной температуры: от -20 °С до 90°С	IP63	230 В переменного тока, 6,0 А; 250 В постоянного тока, 0,25 А
Остальные технические и электрические характеристики согласно руководству по эксплуатации на конкретный тип переключателей, которое направляется изготовителем				

Взрывозащищенность переключателей герконовых типа 07-*211-****/**** обеспечивается выполнением требований ТР ТС 012/2011, ГОСТ 31610.0-2014 (IEC 60079-0:2011) и видом взрывозащиты "герметизация компаундом "mb" по ГОСТ Р МЭК 60079-18-2012.

Взрывозащищенность переключателей встраиваемых типа 07-15*1-****/****, переключателей миниатюрных встраиваемых типа 07-1501-****/**** и типа 07-2501-****/**** обеспечивается выполнением требований ТР ТС 012/2011, ГОСТ 31610.0-2014 (IEC 60079-0:2011) и видом взрывозащиты взрывонепроницаемая оболочка "d" по ГОСТ IEC 60079-1-2011.

Взрывозащищенность переключателей концевых типа 07-25*1-****/****, переключателей позиционных типа 07-291*-****/****, переключателей прецизионных концевых типа 07-295*-**30/**** и типа 07-296*-**62/**** обеспечивается выполнением требований ТР ТС 012/2011, ГОСТ 31610.0-2014 (IEC 60079-0:2011) и видами взрывозащиты: взрывонепроницаемая оболочка "d" по ГОСТ IEC 60079-1-2011, с защитой от воспламенения пыли оболочками «tb» по ГОСТ IEC 60079-31-2013.

Внесение изготовителем в конструкцию и техническую документацию изменений, влияющих на взрывозащищенность и соответствие переключателей требованиям ТР ТС 012/2011, возможно только по согласованию с органом по сертификации ООО «Центр Сертификации «ВЕЛЕС».

Данный сертификат соответствия подтверждает соответствие требованиям взрывобезопасности ТР ТС 012/2011 и не рассматривает любые другие виды безопасности при эксплуатации переключателей.

3. Оборудование соответствует требованиям:

Руководитель (уполномоченное лицо) органа по сертификации — (подпись) — Рогалькон Галина Александровна (Ф.И.О.)

М.П.

Эксперт (эксперт-аудитор) (эксперты (эксперты-аудиторы)) — (подпись) — Мартынюк Дмитрий Олегович (Ф.И.О.)

АО «Опцион», Москва, 2020 г., «Б», ТЗ № 334.

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ЕВРАЗИЙСКИЙ ЭКОНОМИЧЕСКИЙ СОЮЗ

ПРИЛОЖЕНИЕ

К СЕРТИФИКАТУ СООТВЕТСТВИЯ № ЕАЭС RU C-DE.АД07.В.04162/22

Серия RU № 0782237

1. Назначение и область применения

Сертификат соответствия распространяется переключатели герконовые типа 07-*211-****/****, переключатели встраиваемые типа 07-15*1-****/****, переключатели миниатюрные встраиваемые типа 07-1501-****/**** и типа 07-2501-****/****, переключатели концевые типа 07-25*1-****/****, переключатели позиционные типа 07-291*-****/****, переключатели прецизионные концевые типа 07-295*-**30/**** и типа 07-296*-**62/****, предназначенные для коммутации электрических цепей.

Область применения переключателей герконовых типа 07-*211-****/****, переключателей концевых типа 07-25*1-****/****, переключателей позиционных типа 07-291*-****/****, переключателей прецизионных концевых типа 07-295*-**30/**** и типа 07-296*-**62/**** - взрывоопасные зоны классов 1 и 2 по ГОСТ IEC 60079-10-1-2011 и взрывоопасные зоны классов 21 и 22 по ГОСТ IEC 60079-10-2-2011 согласно маркировке взрывозащиты электрооборудования, ГОСТ IEC 60079-14-2011 и другим нормативным документам, регламентирующим применение оборудования в потенциально взрывоопасных средах.

Область применения переключателей миниатюрных встраиваемых типа 07 2501 ****/**** взрывоопасные зоны классов 1 и 2 по ГОСТ IEC 60079-10-1-2011 согласно маркировке взрывозащиты электрооборудования, ГОСТ IEC 60079-14-2011 и другим нормативным документам, регламентирующим применение оборудования в потенциально взрывоопасных средах.

Область применения переключателей встраиваемых типов 07-15*1-****/****, переключатели миниатюрные встраиваемые типа 07-1501-****/**** - переключатели являются Ex-компонентами и предназначены для установки в электрооборудовании, которое предназначено для установки во взрывоопасных зонах классов 1 и 2 по ГОСТ IEC 60079-10-1-2011, а также в подземных выработках угольных шахт и рудников, опасных по газу (метану) и угольной пыли.

2. Описание оборудования и средств обеспечения взрывозащиты

Переключатели герконовые типа 07-*211-****/**** имеют неразборную конструкцию и состоят из армированного стекловолокном пластмассового корпуса, внутри которого размещены один или два герконовых переключателя или герконовый переключатель и плавкий предохранитель, залитый компаундом вместе с постоянно присоединенным кабелем.

Переключатели миниатюрные встраиваемые типа 07-2501-****/****, переключатели концевые типа 07-25*1-****/****, переключатели позиционные типа 07-291*-****/****, переключатели прецизионные концевые типа 07-295*-**30/**** и типа 07-296*-**62/****, переключатели встраиваемые типа 07-15*1-****/****, переключатели миниатюрные встраиваемые типа 07-1501-****/**** состоят из подвижных контактов, размещенных в корпусе, кабельного ввода, залитого компаундом и постоянно присоединенных проводников.

Структура условного обозначения переключателей приведена в руководствах по эксплуатации на переключатели.

Ex-маркировка и основные технические характеристики переключателей представлены в таблице 2.1.

Таблица 2.1

Наименование переключателей	Ex-маркировка по ГОСТ 31610.0-2014	Диапазон температур окружающей среды, эксплуатационной/рабочей температуры	Степень защиты от внешних воздействий по ГОСТ 14254-2015	Максимальные электрические параметры коммутируемой цепи
Переключатели герконовые типа 07-*211-****/****	1Ex mb IIC T6 Gb X Ex mb IIIC T80°C Db X	- 40 °C ≤ Ta ≤ + 70 °C	IP68	200 В переменного/постоянного тока, 0,5 А, 10 Вт (10 В·А) в зависимости от установленного геркона

«Центр Сертификации «ВЕЛЕС»

Руководитель (уполномоченное лицо) органа по сертификации (подпись) Рудзевон Галина Александровна (Ф.И.О.)

М.П.

Эксперт (эксперт-аудитор) (эксперты (эксперты-аудиторы)) (подпись) Мартынюк Дмитрий Олегович (Ф.И.О.)

АО «Опцион», Москва, 2020 г., «Б», ТЗ № 334.

ЕВРАЗИЙСКИЙ ЭКОНОМИЧЕСКИЙ СОЮЗ

СЕРТИФИКАТ СООТВЕТСТВИЯ

EAC

№ ЕАЭС RU C-DE.АД07.В.04162/22

Серия RU № 0272869

ОРГАН ПО СЕРТИФИКАЦИИ Орган по сертификации Общество с ограниченной ответственностью «Центр Сертификации «ВЕЛЕС». Место нахождения (адрес юридического лица): 195009, РОССИЯ, город Санкт-Петербург, улица Академика Лебедева, дом 12, корпус 2, литера А, этаж 2, комната 26. Адрес места осуществления деятельности: 195009, РОССИЯ, город Санкт-Петербург, улица Академика Лебедева, дом 12 корпус 2 литер А, помещения № 6-9. Уникальный номер записи об аккредитации в реестре аккредитованных лиц № RA.RU.10АД07. Дата решения об аккредитации: 24.03.2016. Телефон: +74952211810. Адрес электронной почты: info@velesert.ru

ЗАЯВИТЕЛЬ ОБЩЕСТВО С ОГРАНИЧЕННОЙ ОТВЕТСТВЕННОСТЬЮ "БАРТЕК РУС"
Место нахождения (адрес юридического лица): 111141, Россия, город Москва, проезд 3-й Перова Поля, дом 8, строение 1, помещение 253
Адрес места осуществления деятельности: 141006, Россия, Московская область, город Мытищи, шоссе Волковское, владение 5А строение 1, бизнес-центр «Волковский», офис 401
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Телефон: 74932490542 Адрес электронной почты: mail@bartec-russia.ru

ИЗГОТОВИТЕЛЬ BARTEC GmbH
Место нахождения (адрес юридического лица): Германия, Max-Eyth-Strasse 16, 97980 Bad Mergentheim
Адреса мест осуществления деятельности по изготовлению продукции: Соединенное Королевство, Unit 12, Basepoint Business Centre, Rivermead Dr, Westlea, Swindon SN5 7EX
Германия, Max-Eyth-Strasse 16, 97980 Bad Mergentheim
Мексика, Calle poniente 4 S/N, esq. Norte 7 Ciudad industrial 87499, H. Matamoros, Tamaulipas
Китай, Nanfang Industrial Park, Dangfang Road, Beiche, Humen Town, Dongguan City, Guangdong 523925

ПРОДУКЦИЯ Переключатели герконовые типа 07 *211 ****/****, переключатели встраиваемые типа 07-15*1-****/****, переключатели миниатюрные встраиваемые типа 07-1501-****/**** и типа 07-2501-****/****, переключатели концевые типа 07-25*1-****/****, переключатели позиционные типа 07-291*-****/****, переключатели прецизионные концевые типа 07-295*-**30/**** и типа 07-296*-**62/****.
Маркировка взрывозащиты согласно приложению (бланки №№ 0782237 - 0782241). Продукция изготовлена в соответствии с технической документацией изготовителя для работы во взрывоопасных средах в соответствии с требованиями Технического регламента ТР ТС 012/2011.
Серийный выпуск

КОД ТН ВЭД ЕАЭС 8536500700

СООТВЕТСТВУЕТ ТРЕБОВАНИЯМ
Технического регламента Таможенного союза "О безопасности оборудования для работы во взрывоопасных средах" (ТР ТС 012/2011)

СЕРТИФИКАТ СООТВЕТСТВИЯ ВЫДАН НА ОСНОВАНИИ Протоколов испытаний №№ 4181ИЛПМВ, 4182ИЛПМВ, 4183ИЛПМВ от 26.01.2022 года, выданных Испытательным центром Общества с ограниченной ответственностью «ПРОММАШ ТЕСТ» (уникальный номер записи об аккредитации в реестре аккредитованных лиц RA.RU.21BC05)
акта анализа состояния производства от 24.08.2021 года, выданного Органом по сертификации Общество с ограниченной ответственностью «Центр Сертификации «ВЕЛЕС»
руководств по эксплуатации: 01-1211-6D0004, 01-1541-6D0006, 01-1541-6D0007, 01-1511-6D0006, 01-2910-6D0004, 01-2511-6D0005, 01-2950-6D0004, 01-2960-6B0001, 01-1501-6D0005, 01-2501-6D0003; описания: 01-1211-6B0002, 01-1511-6B0004, 01-2511-6B0004, 01-2950-6B0001, 01-2960-6B0001, 01-1501-6B0003, 01-2501-6B0003; чертежей
Схема сертификации: 1с

ДОПОЛНИТЕЛЬНАЯ ИНФОРМАЦИЯ Анализ состояния производства проведен посредством дистанционной оценки. Срок службы – не менее 20 лет, срок хранения – 2 года, условия хранения – хранить переключатели в оригинальной упаковке при температуре от -40 °С до +80 °С, окружающая среда должна быть сухой, без пыли и вибрации. Стандарты, обеспечивающие соблюдение требований Технического регламента Таможенного союза ТР ТС 012/2011 "О безопасности оборудования для работы во взрывоопасных средах": согласно приложению (бланки №№ 0782237 - 0782241.

СРОК ДЕЙСТВИЯ С 28.01.2022 **ПО** 27.01.2027 **ВКЛЮЧИТЕЛЬНО**

«Центр Сертификации «ВЕЛЕС»

Руководитель (уполномоченное лицо) органа по сертификации (подпись) Рудзевон Галина Александровна (Ф.И.О.)

М.П.

Эксперт (эксперт-аудитор) (эксперты (эксперты-аудиторы)) (подпись) Мартынюк Дмитрий Олегович (Ф.И.О.)

АО «Опцион», Москва, 2019 г., «Б». Лицензия № 05-05-09/003 ФНС РО. ТЗ № 938. Тел.: (495) 726-47-42, www.opcion.ru

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ЕВРАЗИЙСКИЙ ЭКОНОМИЧЕСКИЙ СОЮЗ

ПРИЛОЖЕНИЕ

К СЕРТИФИКАТУ СООТВЕТСТВИЯ № ЕАЭС RU C-DE.АД07.В.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 переключатели прецизионные концевые типа 07-296*-62/****:**

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 ± 0,5 пФ.

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 — (подпись) — Родионова Галина Александровна (Ф.И.О.)

М.П.

Эксперт (эксперт-аудитор) (эксперты (эксперты-аудиторы)) — (подпись) — Артынюк Дмитрий Олегович (Ф.И.О.)

АО «Опцион», Москва, 2020 г., «Б», ТЗ № 334

ЕВРАЗИЙСКИЙ ЭКОНОМИЧЕСКИЙ СОЮЗ

ПРИЛОЖЕНИЕ

К СЕРТИФИКАТУ СООТВЕТСТВИЯ № ЕАЭС RU C-DE.АД07.В.04162/22

Серия RU № 0782240

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

Необходимо соблюдать стандарты установки и инструкции изготовителя.

Присоединительные проводники переключателя встраиваемого должны быть защищены от растягивающих 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 взрывозащищённого оборудования, в котором устанавливается переключатель встраиваемый.

Необходимо соблюдать стандарты установки и инструкции изготовителя.

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

5.4 Специальные условия применения для переключателей миниатюрных встраиваемых типа 07-2501-**/****:**

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 взрывозащищённого оборудования, в котором устанавливается переключатель встраиваемый. Необходимо соблюдать стандарты установки и инструкции изготовителя.

Присоединительные проводники переключателя миниатюрного встраиваемого должны быть защищены от растягивающих 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 типов 07-25*1-**/**** и переключателей позиционных типа 07-291*-****/****:**

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

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

Необходимо соблюдать стандарты установки 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 концевые типа 07 295*-30/****:**

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 — (подпись) — Родионова Галина Александровна (Ф.И.О.)

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АО «Опцион», Москва, 2020 г., «Б», ТЗ № 334

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[1]

EU-TYPE EXAMINATION CERTIFICATE

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

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

[4] Product: **Electro Pneumatic Power Supplies (EPPS)**

[5] Manufacturer: **Expo Technologies Limited**

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

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

[8] UL International Demko 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 II to the Directive.

The examination and test results are recorded in confidential report no. **US/UL/ExTR17.0016/03**.

[9] 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)**

[10] 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.

[11] This EU-Type Examination Certificate relates only to the design and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by the certificate.

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

Ex II 2 (1) G Ex db [ia Ga] IIC T6 Gb

Ex II 2 (1) D Ex tb [ia Da] IIIC T65°C Db

Certification Manager
Thomas Wilson

This is to certify that the sample(s) of the Product described herein ("Certified Product") has been investigated and found in compliance with the Standard(s) indicated on this Certificate, in accordance with the ATEX Product Certification Program Requirements. This certificate and test results obtained apply only to the product sample(s) submitted by the Manufacturer. UL did not select the sample(s) or determine whether the sample(s) provided were representative of other manufactured product. UL has not established Follow-Up Service or other surveillance of the product. The Manufacturer is solely and fully responsible for conformity of all product to all applicable Standards, specifications, requirements or Directives. The test results may not be used, in whole or in part, in any other document without UL's prior written approval.

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

Notified Body UL International Demko A/S, Borupvang 5A, 2750 Ballerup, Denmark
Tel. +45 44 85 65 65, info.dk@ul.com, www.ul.com

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

[13] [14]

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

[15] Description of Product
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.

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

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-EPPS-000	EPW-EPPS-001	EPW-EPPS-002
U_o : 10.8 V	U_o : 14.3 V	U_o : 7.0 V
I_o : 3.28 A	I_o : 1.085 A	I_o : 3.316 A
P_o : 1.46 W	P_o : 1.942 W	P_o : 1.885 W
L_o : 3.10 uH	L_o : 30.00 uH	L_o : 3.03 uH
C_o : 2.14 uF	C_o : 0.68 uF	C_o : 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 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.

[18] Essential Health and Safety Requirements
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] Additional information

The trademark expo Technologies may be used as the company identifier on the marking label.

[14] 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.

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IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification System for Explosive Atmospheres
for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.:	**IECEx UL 17.0016X**	Page 1 of 4	Certificate history:
Status:	**Current**	Issue No: 3	Issue 2 (2021-09-22) Issue 1 (2018-05-11) Issue 0 (2017-05-19)
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 (EPPS), Models EPW-EPPS-000, EPW-EPPS-001, EPW-EPPS-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] IIIC T65ºC Db

-50ºC to +65ºC

Approved for issue on behalf of the IECEx Certification Body: **Katy A. Holdredge**

Position: **Senior Staff Engineer**

Signature: (for printed version)

Date: (for printed version) 2023-06-15

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.iecex.com or use of this QR Code.

Certificate issued by:

UL LLC
333 Pfingsten Road
Northbrook IL 60062-2096
United States of America

UL Solutions

IECEx Certificate of Conformity

Certificate No.:	**IECEx UL 17.0016X**	Page 2 of 4
Date of issue:	2023-06-15	Issue No: 3

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 Edition:7.0	Explosive atmospheres - Part 0: Equipment - General requirements
IEC 60079-1:2014-06 Edition:7.0	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
IEC 60079-11:2011 Edition:6.0	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
IEC 60079-31:2022-01 Edition:3.0	Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosure "t"

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/ExTR17.0016/02
US/UL/ExTR17.0016/03

Quality Assessment Report:

GB/SIR/QAR07.0012/20

IECEx Certificate of Conformity

Certificate No.: **IECEx UL 17.0016X** Page 3 of 4

Date of issue: 2023-06-15 Issue No: 3

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

Certificate No.: **IECEx UL 17.0016X** Page 4 of 4

Date of issue: 2023-06-15 Issue No: 3

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

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IECEx Certificate of Conformity

Annex to Certificate No.: IECEx UL 17.0016X Issue No.: 3

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

MARKING

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

EPPS

Model: EPW-EPPS-000 Serial No. YYYY/NNNNN
Uo=10.8V Io=3.28A Po=1.46W Co=2.14µF Lo=3.10µH
INSTALL TO EXPO DRAWING SD8131

IECEx UL 17.0016X
Ex db [ia Ga] IIC T6 Gb
Ex tb [ia Da] IIIC T65°C Db
T_{amb} -50°C to +65°C

DEMKO 17ATEX1795X
CE 2813 Ex II 2(1) G D

UL 21UKEX2242X
UK CA 0518 Ex II 2(1) G D

Ex db [ia Ga] IIC T6 Gb
Ex tb [ia Da] IIIC T65°C Db
T_{amb} -50°C to +65°C

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