

X Purge System Certificates

ML499

PART B

Important Note

Refer to the system manual for applicable certificates.

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1 EU - Type Examination Certificate

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

Certificate Number: EXVeritas 19ATEX0542X Issue: 1

Equipment: MiniPurge Interface Units MIUe

Manufacturer: Expo Technologies Ltd

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:

II 2 G Ex eb IIC T5/4 * Gb T_{amb} -20 °C to +55/60 * °C
 II 2 D Ex tb IIIC T100 °C Db T_{amb} -20 °C to +55 °C



On behalf of ExVeritas



Peter Lauritzen
Managing Director

This certificate may only be reproduced in its entirety and without any change, schedule included.

The status of this certificate can be verified at www.exveritas.com

For help or assistance relating to this certificate, contact info@exveritas.com.

ExVeritas A/S, Severnsmindevej 6, 4420 Regstrup, Denmark.

ExVeritas® is a registered trademark, unauthorised use will lead to prosecution.



13 Description of Equipment or Protective System

The Minipurge Interface Units are part of a series of IP66 rated enclosures that are used as Junction Boxes. The construction of the boxes has been assessed under the component certificate EXV19ATEX0464U. 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/e1MO – 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/AV1 | 17 th Oct 2019 | 0 | Initial issue of the Prime Certificate |
| EXV3094A | 12 th 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
- Essential Health and Safety Requirements

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

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

Certificate: EXVeritas 19ATEX0542X


Issue 1

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For help or assistance relating to this certificate, contact info@exveritas.com.

ExVeritas A/S, Severnsmindevej 6, 4420 Regstrup, Denmark.

ExVeritas® is a registered trademark, unauthorised use will lead to prosecution.



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 Edition:7.0 | Explosive atmospheres - Part 0: Equipment - General requirements |
| IEC 60079-31:2013 Edition:2 | Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "r" |
| IEC 60079-7:2015 Edition:5.0 | Explosive atmospheres - Part 7: Equipment protection by increased safety "e" |

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

TEST & ASSESSMENT REPORTS:
 A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in:

Test Report:
 GB/EX/IECTR19.0059/00

Quality Assessment Report:
 GB/SIR/QAR07.0012/15



IECEX Certificate of Conformity

Certificate No.: **IECEX EXV 19.0057X** Page 1 of 3

Status: **Current** Issue No.: 0

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

Certificate history:

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 T1.00°C Db Ta = -20°C to +55°C

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

Position: **Certification Manager**

Signature: _____
 (for printed version)

Date: _____





1. This certificate and schedule may only be reproduced in full.
 2. This certificate is not transferable and remains the property of the issuing body.
 3. The Status and authenticity of this certificate may be verified by visiting www.ieceex.com or use of this QR Code.

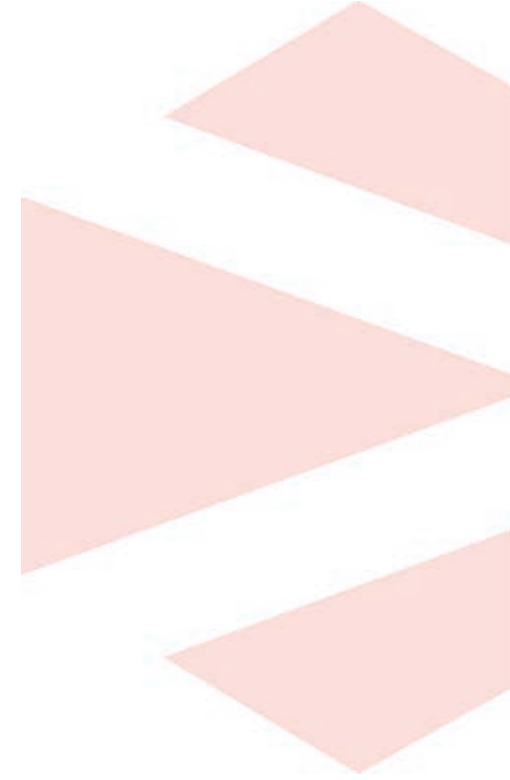
Certificate issued by:
ExVeritas Limited
 Units 16-18 Aberbury Way
 Wrexham Ind. Est.
 Wrexham LL 139JZ
 United Kingdom



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 |



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



TÜVRheinland
Precisely Right.

Certificado de Conformidade

Certificate of Compliance • Certificado de Conformidade

Revisão: 03
Review • Revisión:

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

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

Emitido em: 27/10/2021
Issued • Emitido:

Lista de Modelos

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

Especificações:

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

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

MIU/e1

MIU/e2

MIU/e1/JO

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/JO 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/JO é 6 A

Análise e ensaios realizados:

As análises e os ensaios realizados encontram-se no relatório de análise n.º CC_121463/03.

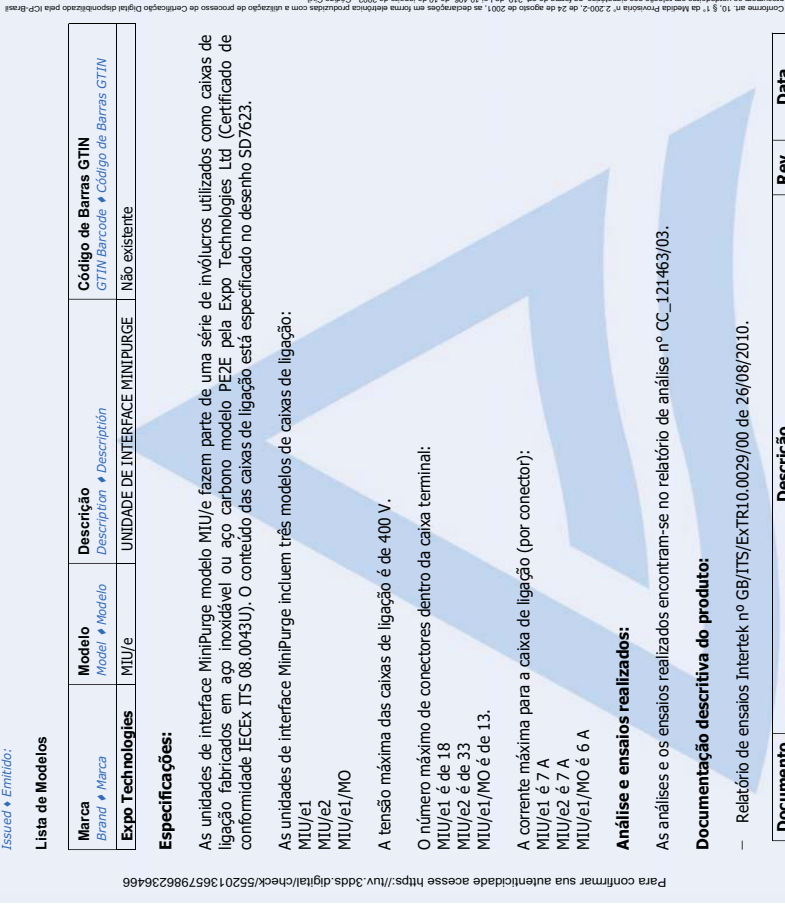

Documentação descritiva do produto:

– Relatório de ensaios Intertek n.º GB/ITS/EXTR10.0029/00 de 26/08/2010.

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

TUV 12.1463 - Rev.03 - 27/10/2021 - Página 2 de 4
Endereço: Escritório: Av. Quarenta Filtros, 767 - Vila Hamburgo - São Paulo - SP - CEP: 05319-000
CNPJ: 01.950.467/0001-65 - Tel.: 55 11 5113.145.700 - www.tuv.com.br - RS-003142@tuv.com.br

Para confirmar sua autenticidade acesse <https://tuv.cdds.digital/check/55201365798236466>

TÜVRheinland
Precisely Right.

Certificado de Conformidade

Certificate of Compliance • Certificado de Conformidade

Revisão: 03
Review • Revisión:

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

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

Emitido em: 27/10/2021
Issued • Emitido:

UNIDADE DE INTERFACE MINIPURGE
MIU/e

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

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

Não aplicável.

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 n.º 179 de 18/05/2010.

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

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

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

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

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

Igor Moreno
Local Field Manager

TUV 12.1463 - Rev.03 - 27/10/2021 - Página 1 de 4
Endereço: Escritório: Av. Quarenta Filtros, 767 - Vila Hamburgo - São Paulo - SP - CEP: 05319-000
CNPJ: 01.950.467/0001-65 - Tel.: 55 11 5113.145.700 - www.tuv.com.br - RS-003142@tuv.com.br

Para confirmar sua autenticidade acesse <https://tuv.cdds.digital/check/55201365798236466>



CERTIFICATE FOR CHINA COMPULSORY PRODUCT CERTIFICATION

No.: 2020312303000422

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

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

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

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

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

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

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

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

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

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

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

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



Director: 穆大玉



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

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

CN 0001571



CERTIFICATE FOR CHINA COMPULSORY PRODUCT CERTIFICATION
(Annex)

No.: 2020312303000422

Page 1 of 1

Product information:

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

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

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

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

Issued on: 2023-02-07



Director: 穆大玉



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

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



1 EU-TYPE EXAMINATION CERTIFICATE

- 2 **Equipment or Protective systems intended for use in Potentially Explosive Atmospheres - Directive 2014/34/EU**
- 3 **EU-Type Examination Certificate No:** FM10ATEX0003X
- 4 **Equipment or protective system:** Electronic Timer Module ETM-IS-***
(Type Reference and Name)
- 5 **Name of Applicant:** Expo Technologies Ltd
- 6 **Address of Applicant:** Unit 2, The Summit
Hanworth Road
Sunbury on Thames
TW16 5DB
United Kingdom
- 7 This equipment or protective system and any acceptable variation thereto is specified in the schedule to this certificate and documents therein referred to.

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

The examination and test results are recorded in confidential report number:
3036907EC dated 12th November 2010
EN60079-0:2012+A11:2013, and EN 60079-11:2012

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:

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

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

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

II 1 G Ex ia IIC T* Ga
II 1 D Ex ia IIC T* Da
* See Description

Digitally signed by Richard Zammit, DN: cn=Richard Zammit, o=FM Approvals Europe, email=richard.zammit@fmapprovals.com, c=IE

Richard Zammit
Certification Manager, FM Approvals Europe Ltd.
Issue Date: 13th March 2019

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

FM Approvals Europe Ltd, One Georges Quay Plaza, Dublin, Ireland, D02 E440
T: +353 (0) 1761 4200 E-mail: alex@fmapprovals.com www.fmapprovals.com
F ATEX 020 (Mar/2019)



Member of the FM Global Group

SCHEDULE

to EU-Type Examination Certificate No. FM10ATEX0003X

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

The Timer module and Solenoid Valve are designed to be installed within another enclosure.
Electronic Timer Module ETM-IS-sub-cde
a = sub module
1 = Timer Module powered by Expo Battery Pack
2 = Timer module powered by IS power supply
3 = Expo IS Battery Pack
4 = Expo IS remote Battery Pack
5 = Timer module powered by E.P.P.S.

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

The input parameters for the power supply option are:
Ui = 11.1V Ii = 340 mA Pi = 2.613 W (non linear) Ci = 363 nF Li = 0
The input parameters for the E.P.P.S. option are:
Ui = 10.8V Ii = 3.28 A Pi = 1.46 W Ci = 363 nF Li = 0

The temperature class is dependant on the ambient temperature:

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

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

15 **Essential Health and Safety Requirements:**
The relevant EHSRs that have not been addressed by the standards listed in this certificate have been identified and assessed in the confidential report identified in item 8.

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

FM Approvals Europe Ltd, One Georges Quay Plaza, Dublin, Ireland, D02 E440
T: +353 (0) 1761 4200 E-mail: alex@fmapprovals.com www.fmapprovals.com
F ATEX 020 (Mar/2019)

Blueprint Report
Expo Technologies Ltd (1000002806)

Class No - 3610

Expo Technologies Ltd (1000002806)

Class No 3610

Original Project I.D. 3036907

Certificate I.D. FM10ATEX0003X

| Drawings No. | Revision Level | Drawings Title | Last Report | Electronic Drawings |
|--------------|----------------|---|-------------|---------------------|
| EPC-B000-114 | 1 | Electronic Timer Timer Main PCB Layout | 3049400 | Yes (msw6) |
| EPC-B000-115 | 1 | Electronic Timer Battery Main PCB Layout | 3036907 | Yes (pdf) |
| EPC-B000-116 | 1 | Electronic Timer Battery Connector PCB Layout | 3036907 | Yes (pdf) |
| EPC-B000-117 | 1 | Electronic Timer BCD PCB Layout | 3049400 | Yes (msw6) |
| EPC-B000-147 | 1 | Electronic Timer Battery Pack PCB | 3049400 | Yes (zfp_hhm) |
| EPC-BM00-010 | 3 | Timer Module Parts List | 16-Oct-14 | Yes (pdf) |
| EPC-BM00-011 | 1 | Battery pack Parts List | 3049400 | Yes (msw6) |
| EPC-BM00-015 | 1 | ETM-IS31-001 Battery Pack Parts List.doc | 3049400 | Yes (msw6) |
| SD7607 | 3 | Electronic Timer Schematic | RR209962 | Yes (pdf) |
| SD7608 | 3 | Electronic Timer Module - Design Document.doc | 3055146 | Yes (msw6) |
| SD7610 | 1 | Timer Module Schematic | 3049400 | Yes (pdf) |
| SD7611 | 5 | Electronic Timer ELECTRONIC TIMER - BLOCK DIAGRAM | RR209962 | Yes (pdf) |
| SD7616 | 5 | Electronic Timer ATEX / ICEX CERTIFICATION LABEL | RR209962 | Yes (pdf) |
| SD7620 | 4 | Electronic Timer - FN (USA, Canada) Label | RR209962 | Yes (msw6) |
| SD7621 | 5 | Electronic Timer - Manual Extracts | 3055146 | Yes (pdf) |
| SD7622 | 2 | Electronic Timer - Model Number designation | RR209962 | Yes (pdf) |
| SD7642 | 5 | Electronic Timer - Model Number designation | RR209962 | Yes (pdf) |
| SD7835 | 1 | Electronic Timer Assembly | 3036907 | Yes (pdf) |
| SD7841 | 4 | Electronic Timer Interconnection | RR209962 | Yes (pdf) |
| SD7842 | 3 | Electronic Timer - Encapsulation | 3055146 | Yes (msw6) |
| SD7848 | 3 | Electronic Timer | 3049400 | Yes (pdf) |
| SD7898 | 1 | Electronic Timer System Certification Label.doc | 3049400 | Yes (msw6) |
| SD8095 | 1 | Electronic Timer Assembly.pdf | 3049400 | Yes (pdf) |
| SD8222 | 2 | Description of proposal changes for E-timer | RR209962 | Yes (pdf) |
| SD8255 | 1 | EPPS - Timer with EPPS Assembly | RR209962 | Yes (pdf) |
| SD8266 | 1 | EPPS - IS Barrier Schematic | RR209962 | Yes (pdf) |
| Timer Module | 1 | General files of Timer PWM | 3036907 | Yes (zfp_hhm) |

SCHEDULE

to EU-Type Examination Certificate No. FM10ATEX0003X

16 Test and Assessment Procedure and Conditions:

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

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

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

17 Schedule Drawings

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

18 Certificate History

Details of the supplements to this certificate are described below:

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

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

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

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

Equipment: **Electronic Timer Module ETM-1S**

Optional accessory:

Type of Protection: **Intrinsic Safety**

Marking:

- Ex ia IIC T4 Ga Ta = -20°C to +60°C
- Ex ia III C T101°C Da Ta = -20°C to +60°C
- Ex ia IIC T5 Ga Ta = -20°C to +59°C
- Ex ia III C T100°C Da Ta = -20°C to +59°C
- Ex ia IIC T6 Ga Ta = -20°C to +44°C
- Ex ia III C T85°C Da Ta = -20°C to +44°C

Approved for issue on behalf of the IECEX

Mick Gower

Certification Body:

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

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



IECEX Certificate of Conformity

Certificate No.: IECEX FME 10.0001X Issue No.: 6
 Date of Issue: **2017-07-24** Page 2 of 5

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

Additional Manufacturing location(s)

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the EC Standard listed below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEX Quality system requirements. This certificate is granted subject to the conditions as set out in IECEX Scheme Rules, IECEX:02 and Operational Documents as amended.

STANDARDS:

The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

- IEC 60079-0: 2011** Explosive atmospheres - Part 0: General requirements
Edition:6.0
- IEC 60079-11: 2011** Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:6.0

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

TEST & ASSESSMENT REPORTS:

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

Test Report:
 GB/FME/EXTR10.0006/00 3B/FME/EXTR10.0006/00
 GB/FME/EXTR10.0006/03 3B/FME/EXTR10.0006/04
 GB/FME/EXTR10.0006/06 3B/FME/EXTR10.0006/05

Quality Assessment Report

GB/SIR/QAR07.0012/10




**IECEX Certificate
of Conformity**

Issue No: 6
Page 4 of 5

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

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



**IECEX Certificate
of Conformity**

Issue No: 6
Page 3 of 5

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

Schedule

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

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

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

SPECIFIC CONDITIONS OF USE: YES as shown below:

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

IECEX Certificate of Conformity



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

Additional information:

| |
|---|
| Electronic Timer Module ETM-Sub-c/c/e |
| 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 |
| d = Maximum Time |
| d = Reference Value 1 to 9 |
| e = Multiplying digit 1, 2, 3 or 4 |

SCHEDULE

Canadian Certificate Of Conformity No: FM16CA0176X

FM Approvals
Member of the FM Global Group

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

12. **Description of Equipment:**
General - The Timer module is designed to be supplied from either from a self contained battery pack or from an intrinsically safe power supply. The battery pack contains a non-rechargeable battery together with current limiting resistors.
Construction - The Timer module and Solenoid Valve are designed to be installed within another enclosure.
Ratings - Input Parameters for when a = 2
 U_i = 11.1 V
 I_i = 340 mA
 P_i = 2.613 W (non linear)
Electronic Timer Module ETM/Sab-ede
 IS / I, II, III / ABCDEFG / T Ta = -20°C to *

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

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

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

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

13. **Specific Conditions of Use:**
 1. The Electronic Timer shall not be used where UV light or radiation may impinge the Electronic Timer System.

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

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

CERTIFICATE OF CONFORMITY

FM Approvals
Member of the FM Global Group

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-USA C22.2 No. 157:1992 (R2012), CAN-USA 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. Marquardt*
 J.E. Marquardt
 Manager, Electrical Systems

23 November 2016
 Date

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

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

FM Approvals LLC, 1151 Boston-Providence Turnpike, Norwood, MA 02062 USA
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 F 348 (Mar 16) Page 1 of 3



SCHEDULE

Canadian Certificate Of Conformity No: FM16CA0176X

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

14. Test and Assessment Procedure and Conditions:

This Certificate has been issued in accordance with FM Approvals Canadian Certification Scheme.

15. Schedule Drawings

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

16. Certificate History

Details of the supplements to this certificate are described below:

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

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

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



CERTIFICATE OF CONFORMITY

- HAZARDOUS (CLASSIFIED) LOCATION ELECTRICAL EQUIPMENT PER US REQUIREMENTS
- Certificate No: FM16US0373X
- Equipment: (Type Reference and Name) Electronic Timer Module ETM-IS*-***
- Name of Listing Company: Expo Technologies Ltd
- Address of Listing Company: Unit 2, The Summit Hanworth Road Sunbury on Thames TW16 5DB United Kingdom
- The examination and test results are recorded in confidential report number: 3036907 dated 21st October 2010
- 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
- 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.
- 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.
- Equipment Ratings:
Intrinsically safe for Class I, II and III, Division 1, Groups A, B, C, D, E, F, and G indoor hazardous (Classified) locations. Temperature Class T6 at Ta = +44 °C, T5 at Ta = +59 °C and T4 at Ta = 60 °C.

Certificate issued by:

J.E. Marquardt
J.E. Marquardt
Manager, Electrical Systems

23 November 2016
Date

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

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

FM Approvals LLC, 1151 Boston-Providence Turnpike, Norwood, MA 02062 USA
T: +1 (1) 781 762 4300 F: +1 (1) 781 762 9375 E-mail: info@fmapprovals.com www.fmapprovals.com
F 347 (Mar 16)



SCHEDULE

US Certificate Of Conformity No: FM16US0373X

- The marking of the equipment shall include:
Class I Division 1, Groups A, B, C, D;
Class II, Division 1, Groups E, F, G,
Class III, Division 1;
T4 Ta = -20°C to +60 °C; T5 Ta = -20°C to +59 °C T6 Ta = -20°C to +44 °C
- Description of Equipment:**
General - The Timer module is designed to be supplied from either from a self contained battery pack or from an intrinsically safe power supply. The battery pack contains a non-rechargeable battery together with current limiting resistors.
Construction - The Timer module and Solenoid Valve are designed to be installed within another enclosure.
Ratings - Input Parameters for when a = 2
U_i = 11.1V
I_i = 340 mA
P_i = 2.613 W (non linear)
Electronic Timer Module ETM-IS*-***
IS / I, II, III / I, ABCDEFG, T* Ta = -20°C to *

13. Specific Conditions of Use:

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

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

FM Approvals LLC, 1151 Boston-Providence Turnpike, Norwood, MA 02062 USA
T: +1 (1) 781 762 4300 F: +1 (1) 781 762 9375 E-mail: info@fmapprovals.com www.fmapprovals.com
F 347 (Mar 16)



SCHEDULE

US Certificate of Conformity No: FM16US0373X

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

14. Test and Assessment Procedure and Conditions:

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

15. Schedule Drawings

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

16. Certificate History

Details of the supplements to this certificate are described below:

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

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

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 T: +1 (1) 781 762 4300 F: +1 (1) 781 762 8375 E-mail: info@mail.com www.fmapprovals.com

F 347 (Mar 16)

Page 3 of 3



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

(4) Equipment: Limit switch type 07-2511-****/**** and Position switch type 07-2911-****/****
(5) Manufacturer: BARTEC GmbH
(6) Address: Max-Eyth-SträÙe 16
97980 Bad Meigenheim
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 1417H0090.

(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 Ib IIC T80°C, T95°C Db



Nuremberg, 2018-06-22

Page 1 of 3
Certificates without signature and seal are void. This certificate is allowed to be distributed only if not modified. Extracts or modifications must be authorized by Bureau Veritas Consumer Products Services Germany GmbH, EPS 17 ATEX 1 766 X, Revision 1.



Annex

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

(14) Description of equipment:

The limit switch type 07-2511-****/**** and 07-2581-****/**** as well as the position switch type 07-2911-****/**** 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-****/****, 07-2581-****/**** | AC 2 A | AC 400 V |
| 07-2311-5****/****, 07-2381-5****/**** | AC 7 A | AC 250 V |
| 07-2511-7****/****, 07-2581-7****/**** | DC 0.5 A | DC 250 V |
| 07-2911-****/****, 07-2915-****/****, 07-2917-****/**** | 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.

Page 2 of 3
Certificates without signature and seal are void. This certificate is allowed to be distributed only if not modified. Extracts or modifications must be authorized by Bureau Veritas Consumer Products Services Germany GmbH, EPS 17 ATEX 1 766 X, Revision 1.



EU-Type Examination Certificate EPS 14 ATEX 1 766 X

Rev. 0

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

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

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

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


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



Nuremberg, 2018-06-22

Page 3 of 3
Certificates without signature and seal are void. This certificate is allowed to be distributed only if not modified. Extracts or modifications must be authorized by Bureau Veritas Consumer Products Services Germany GmbH EPS 17 ATEX 1766 X, Revision 1.

BUREAU VERITAS
Consumer Products Services Germany GmbH
Thurn-und-Taxis-Strasse 18, 90411 Nuremberg, Germany
Phone: +49 40 7404 1-0
cps-nuernberg@de.bureauveritas.com
www.bureauveritas.de/cps



**IECEX Certificate
of Conformity**

Certificate No: IECEX EPS 14.0092X Issue No: 1
 Date of Issue: 2016-06-20 Page 2 of 4
 Manufacturer: **BARTEC GmbH**
 Max-Eyth-Strabe 16
 97980 Bad Mergentheim
 Germany

Additional Manufacturing location(s):

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEX Quality system requirements. This certificate is granted subject to the conditions as set out in IECEX Scheme Rules, IECEX 02 and Operational Documents as amended.


STANDARDS:
 The apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0 : 2017 Explosive atmospheres -Part 0: Equipment - General requirements
 Edition:7,0
IEC 60079-1 : 2014-06 Explosive atmospheres -Part 1: Equipment protection by flameproof enclosures "d"
 Edition:7,0
IEC 60079-31 : 2013 Explosive atmospheres -Part 31: Equipment dust ignition protection by enclosure "t"
 Edition:2

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

TEST & ASSESSMENT REPORTS:
 A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in

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



**IECEX Certificate
of Conformity**

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

Certificate No.: IECEX EPS 14.0092X Issue No: 1
 Status: **Current** Issue No. 1 (2015-06-20)
 Date of Issue: 2016-06-20 Issue No. 0 (2014-12-03)
 Page 1 of 4
 Applicant: **BARTEC GmbH**
 Max-Eyth-Strabe 16
 97980 Bad Mergentheim
 Germany

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

Optional accessory:


Type of Protection: **"db", "tb"**
 Marking: Ex db IIC T6, T5 Gb
 Ex tb IIC T8* C, T95* C Db

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

Signature: _____
 (or printed version)
 Date: _____

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

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





中国国家强制性产品认证证书



证书编号: 2020322304000843

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

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

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

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

证书有效期内本证书的有效性依据发证机构的定期监督获得保持。

本证书的相关信息可通过国家认监委网站 www.cnca.gov.cn 查询



批准:

Xu JianPing



上海仪器仪表自控系统检验测试所有限公司

http://www.sitiis.com.cn

中国·上海·漕宝路103号200233

电话: +86 21 64510844

S 0000882



CERTIFICATE FOR CHINA COMPULSORY PRODUCT CERTIFICATION



CERTIFICATE NO: 2020322304000843

APPLICANT: BARTEC Explosion Proof Appliances (Shanghai) Co. Ltd
ADDRESS: New Building 7,101、401 No.188, Xinjun Ring Rd.,Shanghai
Pujiang Hi-Tech Park(Pu Dong Area), Minhang
District,Shanghai China

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

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

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

Valid from:August 28, 2020 Valid until: August 27, 2025

Date of original certification:August 28, 2020

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

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



APPROVAL:

Xu JianPing



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

http://www.sitiis.com.cn

Building 9, 103 Cao Bao Road, Shanghai 200233, China

Tel: +86 21 64510844

S 0000517



中国国家强制性产品认证证书



证书编号: 2020322304000843

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 为与防锁无关代码

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 为与防锁无关代码

防锁标志:

Ex d IIC T6/T5 Gb, Ex tD A21 T80C/T95C

电气参数:

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

批准:



上海仪器仪表自控系统检验测试所有限公司

http://www.sitiilas.com.cn

中国·上海·漕宝路103号200233

电话: +86 21 64510844

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ЕВРАЗИЙСКИЙ ЭКОНОМИЧЕСКИЙ СОЮЗ

СЕРТИФИКАТ СООТВЕТСТВИЯ

№ ЕАЭС RU C-DE.AH07.B.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, литер А, этаж 2, комната 26. Адрес места осуществления деятельности: 195009, РОССИЯ, город Санкт-Петербург, улица Академика Лебедева, дом 12, корпус 2, литер А, помещение № 6-9. Уникальный номер записи об аккредитации в реестре аккредитованных лиц № RA.RU.10.AH07. Дата решения об аккредитации: 21.03.2016 г. Телефон: +74952211810. Адрес электронной почты: info@velesnet.ru

ЗАЯВИТЕЛЬ общество с ограниченной ответственностью «БАРТЕК РУС» Место нахождения (адрес юридического лица): 11141, Россия, город Москва, проезд 3-й Паров Пала, дом 8, строение 1, помещение 253. Адрес места осуществления деятельности: 41006, Россия, Московская область, город Мытищи, шоссе Волжское, владение 5А, строение 1, бизнес-центр «Волжские», офис 411. Общественный государственный регистрационный номер: 107746415307. Телефон: +7495-965694. Адрес электронной почты: info@barterc.ru

ИЗГОТОВИТЕЛЬ «ВАРТЕС СпбФ» Место нахождения (адрес юридического лица): Германия, Макс-Бухе-Кампус 16, улица Райн-Мендельштрасе SN 7 EX. Адрес мест осуществления деятельности по изготовлению продукции: Соединенные Королевства, Unit 12, Bascroft Business Centre, Ruxwolden Dr., Westley, Swindon. Германия, Макс-Бухе-Кампус 16, 97880 Бай-Мюльхайм. Германия, Callier-Strasse 4 SN, 4th, 2nd, 3rd, 4th, 5th, 6th, 7th, 8th, 9th, 10th, 11th, 12th, 13th, 14th, 15th, 16th, 17th, 18th, 19th, 20th, 21st, 22nd, 23rd, 24th, 25th, 26th, 27th, 28th, 29th, 30th, 31st, 32nd, 33rd, 34th, 35th, 36th, 37th, 38th, 39th, 40th, 41st, 42nd, 43rd, 44th, 45th, 46th, 47th, 48th, 49th, 50th, 51st, 52nd, 53rd, 54th, 55th, 56th, 57th, 58th, 59th, 60th, 61st, 62nd, 63rd, 64th, 65th, 66th, 67th, 68th, 69th, 70th, 71st, 72nd, 73rd, 74th, 75th, 76th, 77th, 78th, 79th, 80th, 81st, 82nd, 83rd, 84th, 85th, 86th, 87th, 88th, 89th, 90th, 91st, 92nd, 93rd, 94th, 95th, 96th, 97th, 98th, 99th, 100th, 101st, 102nd, 103rd, 104th, 105th, 106th, 107th, 108th, 109th, 110th, 111st, 112nd, 113th, 114th, 115th, 116th, 117th, 118th, 119th, 120th, 121st, 122nd, 123rd, 124th, 125th, 126th, 127th, 128th, 129th, 130th, 131st, 132nd, 133rd, 134th, 135th, 136th, 137th, 138th, 139th, 140th, 141st, 142nd, 143rd, 144th, 145th, 146th, 147th, 148th, 149th, 150th, 151st, 152nd, 153rd, 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1260th, 1261st, 1262nd, 1263rd, 1264th, 1265th, 1266th, 1267th, 1268th, 1269th, 1270th, 1271st, 1272nd, 1273rd, 1274th, 1275th, 1276th, 1277th, 1278th, 1279th, 1280th, 1281st, 1282nd, 1283rd, 1284th, 1285th, 1286th, 1287th, 1288th, 1289th, 1290th, 1291st, 1292nd, 1293rd, 1294th, 1295th, 1296th, 1297th, 1298th, 1299th, 1300th, 1301st, 1302nd, 1303rd, 1304th, 1305th, 1306th, 1307th, 1308th, 1309th, 1310th, 1311st, 1312nd, 1313th, 1314th, 1315th, 1316th, 1317th, 1318th, 1319th, 1320th, 1321st, 1322nd, 1323rd, 1324th, 1325th, 1326th, 1327th, 1328th, 1329th, 1330th, 1331st, 1332nd, 1333rd, 1334th, 1335th, 1336th, 1337th, 1338th, 1339th, 1340th, 1341st, 1342nd, 1343rd, 1344th, 1345th, 1346th, 1347th, 1348th, 1349th, 1350th, 1351st, 1352nd, 1353rd, 1354th, 1355th, 1356th, 1357th, 1358th, 1359th, 1360th, 1361st, 1362nd, 1363rd, 1364th, 1365th, 1366th, 1367th, 1368th, 1369th, 1370th, 1371st, 1372nd, 1373rd, 1374th, 1375th, 1376th, 1377th, 1378th, 1379th, 1380th, 1381st, 1382nd, 1383rd, 1384th, 1385th, 1386th, 1387th, 1388th, 1389th, 1390th, 1391st, 1392nd, 1393rd, 1394th, 1395th, 1396th, 1397th, 1398th, 1399th, 1400th, 1401st, 1402nd, 1403rd, 1404th, 1405th, 1406th, 1407th, 1408th, 1409th, 1410th, 1411st, 1412nd, 1413th, 1414th, 1415th, 1416th, 1417th, 1418th, 1419th, 1420th, 1421st, 1422nd, 1423rd, 1424th, 1425th, 1426th, 1427th, 1428th, 1429th, 1430th, 1431st, 1432nd, 1433rd, 1434th, 1435th, 1436th, 1437th, 1438th, 1439th, 1440th, 1441st, 1442nd, 1443rd, 1444th, 1445th, 1446th, 1447th, 1448th, 1449th, 1450th, 1451st, 1452nd, 1453rd, 1454th, 1455th, 1456th, 1457th, 1458th, 1459th, 1460th, 1461st, 1462nd, 1463rd, 1464th, 1465th, 1466th, 1467th, 1468th, 1469th, 1470th, 1471st, 1472nd, 1473rd, 1474th, 1475th, 1476th, 1477th, 1478th, 1479th, 1480th, 1481st, 1482nd, 1483rd, 1484th, 1485th, 1486th, 1487th, 1488th, 1489th, 1490th, 1491st, 1492nd, 1493rd, 1494th, 1495th, 1496th, 1497th, 1498th, 1499th, 1500th, 1501st, 1502nd, 1503rd, 1504th, 1505th, 1506th, 1507th, 1508th, 1509th, 1510th, 1511st, 1512nd, 1513th, 1514th, 1515th, 1516th, 1517th, 1518th, 1519th, 1520th, 1521st, 1522nd, 1523rd, 1524th, 1525th, 1526th, 1527th, 1528th, 1529th, 1530th, 1531st, 1532nd, 1533rd, 1534th, 1535th, 1536th, 1537th, 1538th, 1539th, 1540th, 1541st, 1542nd, 1543rd, 1544th, 1545th, 1546th, 1547th, 1548th, 1549th, 1550th, 1551st, 1552nd, 1553rd, 1554th, 1555th, 1556th, 1557th, 1558th, 1559th, 1560th, 1561st, 1562nd, 1563rd, 1564th, 1565th, 1566th, 1567th, 1568th, 1569th, 1570th, 1571st, 1572nd, 1573rd, 1574th, 1575th, 1576th, 1577th, 1578th, 1579th, 1580th, 1581st, 1582nd, 1583rd, 1584th, 1585th, 1586th, 1587th, 1588th, 1589th, 1590th, 1591st, 1592nd, 1593rd, 1594th, 1595th, 1596th, 1597th, 1598th, 1599th, 1600th, 1601st, 1602nd, 1603rd, 1604th, 1605th, 1606th, 1607th, 1608th, 1609th, 1610th, 1611st, 1612nd, 1613th, 1614th, 1615th, 1616th, 1617th, 1618th, 1619th, 1620th, 1621st, 1622nd, 1623rd, 1624th, 1625th, 1626th, 1627th, 1628th, 1629th, 1630th, 1631st, 1632nd, 1633rd, 1634th, 1635th, 1636th, 1637th, 1638th, 1639th, 1640th, 1641st, 1642nd, 1643rd, 1644th, 1645th, 1646th, 1647th, 1648th, 1649th, 1650th, 1651st, 1652nd, 1653rd, 1654th, 1655th, 1656th, 1657th, 1658th, 1659th, 1660th, 1661st, 1662nd, 1663rd, 1664th, 1665th, 1666th, 1667th, 1668th, 1669th, 1670th, 1671st, 1672nd, 1673rd, 1674th, 1675th, 1676th, 1677th, 1678th, 1679th, 1680th, 1681st, 1682nd, 1683rd, 1684th, 1685th, 1686th, 1687th, 1688th, 1689th, 1690th, 1691st, 1692nd, 1693rd, 1694th, 1695th, 1696th, 1697th, 1698th, 1699th, 1700th, 1701st, 1702nd, 1703rd, 1704th, 1705th, 1706th, 1707th, 1708th, 1709th, 1710th, 1711st, 1712nd, 1713th, 1714th, 1715th, 1716th, 1717th, 1718th, 1719th, 1720th, 1721st, 1722nd, 1723rd, 1724th, 1725th, 1726th, 1727th, 1728th, 1729th, 1730th, 1731st, 1732nd, 1733rd, 1734th, 1735th, 1736th, 1737th, 1738th, 1739th, 1740th, 1741st, 1742nd, 1743rd, 1744th, 1745th, 1746th, 1747th, 1748th, 1749th, 1750th, 1751st, 1752nd, 1753rd, 1754th, 1755th, 1756th, 1757th, 1758th, 1759th, 1760th, 1761st, 1762nd, 1763rd, 1764th, 1765th, 1766th, 1767th, 1768th, 1769th, 1770th, 1771st, 1772nd, 1773rd, 1774th, 1775th, 1776th, 1777th, 1778th, 1779th, 1780th, 1781st, 1782nd, 1783rd, 1784th, 1785th, 1786th,

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Серия RU № 0782238

| | | | |
|---|--|--|--|
| Переклюатели встраиваемые типа 07-15*1-***/* | Ex d I Mb U Ex d ICS Sb 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 В 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) |
| Переклюатели миниатюрные встраиваемые типа 07- 150-***/* | Ex d I Mb U Ex d ICS Sb U | Диапазон эксплуатационной температуры: от -60 °С до +100 °С (в зависимости от исполнения проводов и исполнения переклюателей) | 1,0 А; 30 В переменного тока, 5,0 А или 10 А; 15 В постоянного тока, 5,0 А или 0,4 А; 15 В постоянного тока, 5,0 А или 1,0 А; 30 В переменного тока, 3,0 А или 0,4 А; |
| Переклюатели миниатюрные встраиваемые типа 07- 250-***/* | Ex d ICS Tb Sb X Ex d ICS T6 Sb X | -60 °С ≤ T _a ≤ +90 °С для T5 -60 °С ≤ T _a ≤ +75 °С для T6 | 1,0 А; 30 В переменного тока, 3,0 А или 0,4 А; 15 В постоянного тока, 5,0 А или 1,0 А; 30 В переменного тока, 3,0 А или 0,4 А; |
| Переклюатели концевых типа 07- 25*1-***/* | Ex d ICS T5 Sb X Ex d ICS T6 Sb X Ex d ICS T9bC Db X Ex d ICS T9bC Db X | -60 °С ≤ T _a ≤ +90 °С для T5 -60 °С ≤ T _a ≤ +75 °С для T6 -60 °С ≤ T _a ≤ +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; |
| Переклюатели прецизионные концевые типа 07-295*-**30*** | Ex d ICS T6 Sb X Ex d ICS T9bC Db X | -20 °С ≤ T _a ≤ +60 °С Минимальная эксплуатационная температура до 90°С | IPK5 250 В переменного тока, 5,0 А; 230 В постоянного тока, 0,16 А |
| Переклюатели прецизионные концевые типа 07-296*-**62*** | Ex d ICS T5 Sb X Ex d ICS T9bC Db X Ex d ICS T6 Sb X Ex d ICS T9bC Db X | -20 °С ≤ T _a ≤ +63 °С для T5 T9bC -20 °С ≤ T _a ≤ +75 °С для T6 T9bC Диапазон эксплуатационной температуры: от -20 °С до 90°С | IPK3 230 В переменного тока, 0,25 А 250 В постоянного тока, 0,25 А |

Остальные технические и электрические характеристики согласно руководству по эксплуатации на конкретный тип переклюателей, которые выносятся в заводские паспорта.

Вывозашищенность переклюателей герметиков типа 07-21-***/* обеспечивается выполнением требований ТР ТС 012/2011, ГОСТ 31610.0-2014 (IEC 60079-0-2011) и видом взрывозащиты "герметизация компаундом "nb" по ГОСТ Р МЭК 60079-18-2012.

Вывозашищенность переклюателей герметиков типа 07-15*1-***/*, переклюателей миниатюрных встраиваемых типа 07-150-***/* и типа 07-250-***/* 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.

Вывозашищенность переклюателей концевых типа 07-25*1-***/*, переклюателей позиционных типа 07-291*-***/*, переклюателей 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 видом взрывозащиты взрывонепроницаемая оболочка "d" по ГОСТ IEC 60079-1-2011, с защитой от воспламенения пыли оболочками «fb» по ГОСТ IEC 60079-31-2013.

Высшие изготовители в соответствии с технической документацией изготовленной, прилагаемой на взрывозащищенное оборудование и соответствие переклюателей требованиям ТР ТС 012/2011, возможно только по согласованию с органом по сертификации ООО «Центр Сертификации «ВЕЛЕС».

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

3. Оборудование соответствует требованиям:

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



Генеральный директор
Галина Александровна
М.П. (подпись)
М.П. (подпись)
Генеральный директор
Дмитрий Олегович
М.П. (подпись)

05.01.2018, 09:00:00, 0001-05-1103-03

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- 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 "взрывонепроницаемая оболочка "d"".
- ГОСТ Р МЭК 60079-18-2012 Взрывоопасные среды. Часть 18. Оборудование с видом взрывозащиты "герметизация компаундом "nb"".
- ГОСТ IEC 60079-31-2013 Взрывоопасные среды. Часть 31. Оборудование с зашитой от воспламенения пылей оболочками «fb».

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. Эк-маркировку согласно таблице 2.1;
 - 4.5. Номер сертификата соответствия;
 - 4.6. Единый знак ЕАС обращения продукции на рынке государства - члена 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 предусмотрено технической документацией (диапазон температур окружающей среды, степень защиты оболочки и т.д.).
- Согласно пункту 29.10 ГОСТ 31610.0-2014 на малозаметном электрооборудовании и на Эк-монтажных с его дельнейшей поверхностью маркировка может быть сокращена.

5. Специальные условия применения и шеста ограничений

- 5.1 Специальные условия применения для переклюателей герметиков типа 07-21-***/*
- Переклюатели выполнены с постоянно присоединенными проводниками. Присоединение свободных концов проводников переклюателей 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).
- Переклюатели 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.

- 5.2 Шкала ограничения для переклюателей встраиваемых типа 07-15*1-***/*
- Переклюатели встраиваемый должны применяться в пределах своего рабочего диапазона температур и номинальных значений, указанных в эксплуатационной документации изготовителя и на заводской табличке с маркировкой.

- 5.3 Шкала ограничения для переклюателей встраиваемых типа 07-150-***/*
- Переклюатели встраиваемый должны быть установлены в соответствии с требованиями стандарта на виды взрывозащищенного оборудования, который соответствует требованиям стандарта к воздействию УФ-света взрывозащиты, перечисленных в ГОСТ 31610.0-2014 (IEC 60079-0-2011).

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



Генеральный директор
Галина Александровна
М.П. (подпись)
М.П. (подпись)
Генеральный директор
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обеспечивается материалом корпуса сертифицированного взрывозащищенного 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 миниаторных встраиваемых типа 07-1501-***/**** Переключатель миниаторный встраиваемый должен применяться в пределах своего рабочего диапазона температур и номинальных значений, указанных в эксплуатационной документации изготовителя и на заводской табличке с маркировкой.

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

5.4 Специальные условия применения для переключателей миниаторных встраиваемых типа 07-25*1-***/**** и ***/*****. Необходимо соблюдать стандарты установки и инструкции изготовителя.

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

5.5 Специальные условия применения для переключателей концевых типов 07-25*1-***/**** и **/*****. Переключатель позиционный типа 07-291-***/***** и переключатель позиционный типа 07-291-***/***** и переключатель концевой типа 07-25*1-***/***** и переключатель концевой типа 07-25*1-***/***** 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 установлены в корпусе сертифицированного взрывозащищенного оборудования с высокой степенью оплотнения от механических повреждений согласно ГОСТ 31610.0-2014 (IEC 60079-0:2011) в соответствии с требованиями УФ-света обеспечивается материалом корпуса сертифицированного взрывозащищенного оборудования, в котором устанавливается переключатель.

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* **/*****.

Переключатели выполнены с постоянно присоединенными проводниками, присоединение свободных концов проводников переключателей должно осуществляться либо за счет заводской заводской зоны, либо с помощью

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

5.7 Специальные условия применения для переключателей прецизионных концевые типа 07-296* **/*****.

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

Емкость направляющей розетки и привода составляет 4,5 ± 0,3 пФ. При использовании в лавовой группе ПС должно быть гарантировано расстояние не менее 4 мм между направляющей муфтой и окружающими металлическими поверхностями.

Руководитель (уполномоченное лицо) органа по сертификации
Эксперт (эксперт-аудитор) (эксперт (эксперт-аудитор))
Галина Александровна (И.И.О.)
М.П.И.
Центр Сертификации ЕАЭС
Федеральное государственное учреждение «Центр сертификации ЕАЭС»
Иркутская область, Иркутск, ул. Мухоморова, 10



EU-TYPE EXAMINATION CERTIFICATE



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

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

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

Manufacturer: **Expo Technologies Limited**

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

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

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

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

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

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

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

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

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

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

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

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



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

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

Nomenclature:

E P W - E P S - 0 0 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 – S – Supply

VII – 0 – Numerical Value Given as 0

VIII – 0 – Numerical Value Given as 0

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

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

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

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.

Specific conditions of use:

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

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

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



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

[13]
[14]


Additional Information



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

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





IECEX Certificate of Conformity

Page 2 of 4
Issue No: 3

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

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

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

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

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEX Quality system requirements. This certificate is granted subject to the conditions as set out in IECEX Scheme Rules, IECEX 02 and Operational Documents as amended

STANDARDS:
The equipment and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards


IEC 60079-0:2017 Explosive atmospheres - Part 0: Equipment - General requirements Edition:7.0
IEC 60079-1:2014-06 Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d" Edition:7.0
IEC 60079-11:2011 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i" Edition:6.0
IEC 60079-31:2022-01 Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t" Edition:3.0

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

TEST & ASSESSMENT REPORTS:
A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in:

Test Reports:
US/UL/EXTR17.0016/00 US/UL/EXTR17.0016/01
US/UL/EXTR17.0016/00 US/UL/EXTR17.0016/03

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



IECEX Certificate of Conformity

Page 1 of 4
Issue No: 3

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

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

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

Optional accessory:
Flameproof "db", Intrinsic safety "ia", Dust Ignition Protection by Enclosure "tb"

Type of Protection:
Ex db [ia Ga] IIC T6 Gb
Ex tb [ia Da] IIIC T65°C Db
-50°C to +65°C



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

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

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

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

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

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




IECEx Certificate of Conformity

Page 4 of 4
Issue No: 3

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

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

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



IECEx Certificate of Conformity

Page 3 of 4
Issue No: 3

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

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

Please see Annex for additional information.

SPECIFIC CONDITIONS OF USE: YES as shown below:

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



IECEX Certificate of Conformity

Annex to Certificate No.: IECEX UL 17.0016X

Issue No.: 3

Page 1 of 2

TYPE DESIGNATION

Nomenclature:

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

I - E - Model Designation Given as E

II - P - Model Designation Given as P

III - W - Model Designation Given as W

IV - E - Electro

V - P - Pneumatic

VI - P - Power

VII - S - Supply

VIII - 0 - Numerical Value Given as 0

IX - 0 - Numerical Value Given as 0

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

PARAMETERS RELATING TO THE SAFETY

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



IECEX Certificate of Conformity

Annex to Certificate No.: IECEX UL 17.0016X

Issue No.: 3

Page 2 of 2

MARKING

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

EPPS

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

IECEX UL 17.0016X
 Ex db Ia Gb IIC T6 Gb
 Ex db Ia Db IIC T65°C Db
 T amb -50°C to +65°C

DENKO 17ATEX1795X
 CE 2813 II 2(I) GD

UKA UUL 21LUKEX242X 0518 II 2(I) GD

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

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