



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

Certificate No.: **IECEX EXV 24.0015X** Page 1 of 5 [Certificate history:](#)  
Status: **Current** Issue No: 0  
Date of Issue: 2024-08-15  
Applicant: **Expo Technologies Limited**  
Unit 2 The Summit  
Hanworth Road  
Sunbury on Thames  
Surrey  
TW16 5DB  
**United Kingdom**  
Equipment: **SmartPurge Z ALCV or SmartPurge Z CF**  
Optional accessory:  
Type of Protection: **Ex p, Ex e, Ex i, Ex n, Ex t**  
Marking: Ex ec ic nC [pzc Gc] IIC T6...T5 Gc  
Tamb -20°C to +40°C for T6  
Tamb -20°C to +58°C for T5  
Ex tc [pzc Dc] IIC T85 °C Dc  
Tamb -20°C to +58°C

Approved for issue on behalf of the IECEx  
Certification Body:

**Sean Clarke CEng MSc FIET**

Position:

**Certification Manager**

Signature:  
(for printed version)

Date:  
(for printed version)

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.
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Certificate issued by:

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





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

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

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

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 60079-11:2023](#) Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"  
Edition:7.0

[IEC 60079-15:2017](#) Explosive atmospheres - Part 15: Equipment protection by type of protection "n"  
Edition:5.0

[IEC 60079-2:2014](#) Explosive atmospheres - Part 2: Equipment protection by pressurized enclosure "p"  
Edition:6

[IEC 60079-31:2022](#) Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosure "t"  
Edition:3.0

[IEC 60079-7:2017](#) Explosive atmospheres - Part 7: Equipment protection by increased safety "e"  
Edition:5.1

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/ExTR24.0024/00](#)

Quality Assessment Report:

[GB/EXV/QAR24.0002/00](#)



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## **EQUIPMENT:**

Equipment and systems covered by this Certificate are as follows:

The SmartPurge Z purge and pressurization system is an electrically operated device, designed to offer type of protection pressurized enclosure to unspecified electrical equipment or enclosures.

The SmartPurge Z controls the flow of purge media through the protected equipment. During purging, the system provides a predetermined flow rate of protective media for a pre-set period. After purging, the SmartPurge Z maintains the protected equipment pressurized.

The SmartPurge Z system provides one of the following methods of purge and/or pressurization operation:

- AL – Automatic Leakage Compensation
- CF – Continuous Flow
- DP – Dust Pressurization
- LC – Leakage Compensation

The SmartPurge Z includes a Relief Valve to allow the exit of the purging media and to protect the pressurized equipment from overpressure.

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

- Potential electrostatic hazard, see instructions.
- When polymeric cable gland is used on the side/external entry, the installation shall guarantee that the cable gland will be only exposed to a low risk of mechanical danger (< 4J impact).
- When the SmartPurge Z is used with a pressurized enclosure, the assembly shall be evaluated according to the requirements of IEC 60079-0, IEC 60079-2 and IEC 60079-31, as applicable.



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**Equipment (continued):**

The SmartPurge Z utilises the following Ex Component parts:

Part	Manufacturer	Model / Part no.	Certificate	Marking
Breather	CMP	781EM2	IECEX CML 18.0187U	Ex eb IIC Gb Ex ta IIIC Da
Terminals	Phoenix Contact	SPT 2.5/2-V5,0-EX SPT 2.5/3-V5,0-EX	IECEX KEM 07.0057U	Ex eb IIC Gb



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**Additional information:**

Technical documents:

Title:	Drawing No.:	Rev. Level:	Date:
SmartPurge Z Main PCB Layout	EPC-B000-170	1	21/05/24
SmartPurge Z LED PCB Layout	EPC-B000-171	1	23/11/23
SmartPurge Z Main Control Board Schematic	EPC-BCT0-023	2	21/05/24
SPZ LED Board Schematic	EPC-BCT0-024	2	24/07/2024
SmartPurge Z System Block Diagram	SD8587	01	23/07/2024
SmartPurge Z LC Flow Chart	SD8605	01	10/07/2024
SmartPurge Z CF Flow Chart	SD8606	01	10/07/2024
SmartPurge Z General Assembly (ALCV Option)	SD8607	01	11/07/2024
SmartPurge Z Main PCB AC Version Part List	SD8609	02	07-Aug-24
SmartPurge Z Main PCB DC Version Part List	SD8610	02	07-Aug-24
SmartPurge Z LED PCB Parts List	SD8611	01	11-Jul-24
SmartPurge Z - Earthing Detail	SD8613	01	11/07/2024
SmartPurge Z Housing Construction Detail	SD8614	01	23/07/2024
SmartPurge Z Relief Valve (RLV) Construction Detail	SD8615	01	11/07/2024
SmartPurge Z Housing Construction Materials	SD8619	01	11-Jul-24
SmartPurge Z General Assembly (CF Option)	SD8622	01	11/07/2024
SmartPurge Z PCBA Wiring Layout	SD8623	01	01/08/2024
SmartPurge # ATEX / IECEX / UKEX Label	SD8625	01	11-Jul-24
SmartPurge # Model Number Structure	SD8626	01	11-Jul-24
SmartPurge Z Purge System Design Document	SD8627	01	11-Jul-24
SmartPurge Z Components	SD8628	01	11-Jul-24
SmartPurge Z Manual Extracts	SD8629	02	31-Jul-24
Modification for SmartPurge Z AC & PCB EPC-B000-170	SD8655	1	02-Aug-24