

1 United Kingdom 'Ex' Conformity Assessment

**2 Product Intended for use in Potentially Explosive Atmospheres
UKSI 2016:1107 (as amended by UKSI 2019:696)**

3 Certificate Number: **ExVeritas 24UKEX1789X** Issue: **1**

4 Product: SmartPurge Z

5 Manufacturer: Expo Technologies Ltd.

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

7 This product and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to. The assessments are recorded in ExVeritas project file number EXV004830A.

8 The product has been assessed against the following Standards and found to comply:

EN IEC 60079-0:2018	EN 60079-2:2014	EN IEC 60079-7:2015+A1:2018
IEC 60079-11:2023	EN IEC 60079-15:2019	IEC 60079-31:2022

9 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.

10 ExVeritas takes no responsibility for the validity of any information or data supplied by the manufacturer on which parts of the assessment may be based upon.

11 The marking of the equipment shall include the following:

 II 3 (3) G Ex ec ic nC [pzc Gc] IIC T6...T5 Gc $T_{amb} = -20^{\circ}\text{C}$ to $+40^{\circ}\text{C}$ for T6

$T_{amb} = -20^{\circ}\text{C}$ to $+58^{\circ}\text{C}$ for T5

 II 3 (3) D Ex tc [pzc Dc] IIC T85°C Dc

$T_{amb} = -20^{\circ}\text{C}$ to $+58^{\circ}\text{C}$



No. 8613

On behalf of ExVeritas



S Clarke CEng MSc FIET
Managing Director

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Schedule

12 Description of Product

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.

The SmartPurge Z utilises the following Ex Component part:

Part	Manufacturer	Model / Part No.	Certificate	Marking
Breather	CMP	781EM2	CML 21UKEX1241U	II 2G Ex eb IIC Gb II 1D Ex ta IIIC Da
Terminals	Phoenix Contact	SPT 2.5/2-V5,0-EX SPT 2.5/3-V5,0-EX	KEMA 07ATEX0193 U	II 2 GD Ex eb IIC Gb

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

Variation 1:

This variation introduces the following changes:

- Change to the Main PCB layout
- Introduction of an alternative PCB (Issue C)
- Change to output safety resistors
- Drawing corrections.
- Introduction of non-safety related marking to label.

13 Descriptive Documents

13.1 Associated Report and Certificate History:

Report Number	Cert Issue Date	Issue	Comment
4830/A/1	14.08.2024	0	Initial issue of the Prime Certificate
R5475/A/1	19.11.2024	1	Introduction of variation 1

Certificate: **ExVeritas 24UKEX1789X**

Issue 1

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13.2 Compliance Drawings:

Title:	Drawing No.:	Rev. Level:	Date:
*SmartPurge Z main PCB Layout	SD8668	1	17/09/24
*SmartPurge Z LED PCB Layout	SD8669	1	17/09/24
*SmartPurge Z Main Control Board	EPC-BCT0-023	3	05/11/24
SmartPurge Z LED Board Schematic	EPB-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	03	05-Nov-24
*SmartPurge Z Main PCB DC Version Part List	SD8610	03	05-Nov-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	03	24/10/2024
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 (SPZ) Manual Extracts	SD8629	02	31-Jul-24
*Modification for Smartpurge Z AC & PCB EPC-B000-170 Issue 1	SD8655	1	02-Aug-24
*SmartPurge Z Main PCB Issue C Layout	SD8670	1	26/09/24

*Note: An * is included before the title of documents that are new or revised.*

14 Specific Conditions of Use

14.1 Special Conditions for Safe Use

- 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 EN 60079-0, EN 60079-2, EN 60079-31, as applicable.

14.2 Routine tests

- The SmartPurge Z shall be subject to a routine dielectric strength test in accordance with clause 6.1 of EN IEC 60079-7:2015+A1:2018.
- The SmartPurge Z shall be subject to a routine inspection of the conformal coating to determine that no damage is evident, in accordance with clause 10.4 of IEC 60079-11:2023 Ed 7.

15 Essential Health and Safety Requirements

Essential Health and Safety Requirements are addressed by the standards listed in section 8 and where required the report listed in section 13.1

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

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Issue 1

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