ExVeritas®

1 **EU - Type Examination Certificate**

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

3 Certificate Number: ExVeritas 19ATEX0454U Issue: 0

4 Equipment: PEx and PExE Range of Enclosures (Component)

5 Manufacturer: Expo Technologies Ltd

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

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

8 ExVeritas, Notified Body number 2585 in accordance with Article 17 of the Council Directive 2014/34/EU of 26 February 2014, certifies that this component 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 report:

EN 60079-0: 2018 EN 60079-2: 2014 EN 60079-7:2015+A1:2018
EN 60079-31: 2014

10 If the sign "U" placed after the certificate number indicates that this certificate must not be mistaken for a certificate intended for an equipment or protective system. This partial certification may be used as the basis for certification of an equipment or protective system.

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

12 The marking of the equipment shall include the following:

Ex II 2 GD	Ex p*b IIC Gb	Ex tb IIIC Db
II 2 G / II 2 D	Ex eb IIC Gb	Ex p*b IIIC Db see description for Tamb & *

On behalf of ExVeritas

S Clarke
Certification Manager

UKAS PRODUCT CERTIFICATION
No. 8613

Schedule

13 Description of Equipment or Protective System

The Expo Technologies Ltd. PEx and PExE range of enclosures are stainless steel or painted mild steel electrical enclosures designed for use with purge and pressurization or increased safety protection concepts when used in explosive gas atmospheres. When used in explosive dust atmospheres purge and pressurization or protection by enclosure protection concepts are employed.

Enclosures are designed as permanently installed on a fixed structure or may be fitted with wheels and used as transportable.

Enclosure types PEx are suitable for purge and pressurization (gas & dust) only, and PExE types for purge and pressurization (gas & dust) and increased safety (gas) and protection by enclosure (dust).

An enclosure may be suitable for more than one protection concept, in which case the marking for each protection concept shall be marked separately.

The final equipment certification will assign the applicable x/y/z coding, denoted by *

Ambient Range:
-20°C ≤ Ta ≤ +40°C

For extended upper ambient versions:
-20°C ≤ Ta ≤ +55°C

For reduced lower ambient versions (pressurization versions only):
-50°C ≤ Ta ≤ +55°C

14 Descriptive Documents

14.1 Associated Report and Certificate History:

Report Number	Cert Issue Date	Issue	Comment
R1993/A/1	9 May 2019	0	Initial issue of the Prime Certificate

14.2 Compliance Drawings:

Title:	Drawing No.:	Rev	Sheets	Date:
PEx / PExE ATEX / IECEx Certification Label	SD8375	2	2 of 2	04/04/2019
PEx and PExE Enclosure GA	SD8376	2	2 of 2	11/04/2019
Alternative PExE Boxes	SD8377	1	1 of 1	08/02/2019
PEx Seals and Door Fasteners	SD8378	1	1 of 1	08/02/2019
PExE Seals and Door Fasteners	SD8379	2	1 of 1	11/04/2019
PEx Typical Hinges	SD8380	1	1 of 1	08/02/2019
PExE Typical Hinges	SD8381	1	1 of 1	08/02/2019
Mounting Details	SD8382	1	1 of 1	08/02/2019
Accessory/Gland Plates Details	SD8383	2	1 of 1	11/04/2019
"Sloping" Accessory/Gland Plate	SD8384	2	1 of 1	11/04/2019
Windows and Seals	SD8385	2	2 of 2	11/04/2019
Typical Control and Indication Device	SD8386	1	1 of 1	08/02/2019
Close Coupled Keyboards	SD8387	1	1 of 1	08/02/2019
Expo Moving Key Membrane	SD8388	1	1 of 1	08/02/2019

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Expo Extended Pushrod Keyboard	SD8389	1	1 of 1	08/02/2019
Indicator Window	SD8390	1	1 of 1	08/02/2019
50mm Stainless Steel Trackball	SD8391	1	1 of 1	08/02/2019
Feedthrough Devices	SD8392	1	1 of 1	08/02/2019
Feedthrough Devices Switch/Shafts	SD8393	1	1 of 1	08/02/2019
PEx Multi-Section Enclosures	SD8394	1	2 of 2	08/02/2019
IP66 Indicator Cover	SD8395	1	1 of 1	08/02/2019
MiniPurge Accessory – SAU	SD8396	1	1 of 1	08/02/2019
MiniPurge Accessory - RLV	SD8397	1	1 of 1	08/02/2019
Low Temperature Enclosure	SD8398	1	1 of 1	08/02/2019
PExE Multi-Section Enclosures	SD8399	1	1 of 1	08/02/2019
PEx / PExE Approved Wall Mounted Devices	SD8404	1	5 of 5	07/02/2019
PEx / PExE APPROVED SEAL AND GASKET MATERIALS	SD8405	2	3 of 3	04/04/2019
PEx / PExE APPROVED O-RING MATERIALS	SD8406	2	2 of 2	04/04/2019
Guide to PEx and PExE Enclosure Manual (Component)	SD8407	2	6 of 6	04/04/2019

15 Conditions of Certification

15.1 Schedule of Limitations

The enclosures are available in a range of standard sizes and each type is denoted by the type number PEx or PExE where the "x" is replaced by a type number then followed by a unique design specific number.

PExE Enclosures are also available in a number of small "Terminal Box" sizes, detailed on drawing SD8377.

Maximum Enclosure Dimensions:
PEx & PExE Types: 2100h x 1800w x 1000d

For PEx types only, up to 3 enclosures sections may be connected side by side to give a multisection enclosure, as detailed in drawing SD8394. Each section is limited to the construction features (including individual door width) of the stand-alone PEx enclosure.

For PExE types, two enclosure sections, each 1600mm wide, each with up to 1200mm wide doors may be joined together by a joint facilitated by a continuous weld, as detailed in drawing SD8399.

Enclosures may be fitted with doors with tool operated latches with maximum door size 1200 x 2100mm.

Windows may be fitted to the enclosure walls and doors, either Glass or Lexan MRE5 Polycarbonate. Window construction varies depending on protection concept and ambient temperature range.

Ambient temperature range is the standard range -20°C to +40°C or extended to +55°C upper limit, depending on the features incorporated.

Schedule

A number of accessories may be fitted to the enclosure, such as gland plates, windows, pushbutton and rotary operators, keyboards, trackballs, switches and lamps. The type of enclosure, protection concept and ambient temperature range to which any specific accessory may be fitted is defined on drawing SD8404.

For this component certification, only the enclosure strength with respect to impact, material suitability, non-metallic components, enclosure strength under maximum overpressure and ingress protection are considered.

PEx Enclosures provide ingress protection IP 40 as a minimum, PExE types provide IP 66. The PEx and PExE enclosures may be operated at an ambient temperature of -50°C and may incorporate a MiniPurge purge controller certified for a minimum -20°C ambient, when the low temperature design features are incorporated, as detailed on drawing SD8398.

The low temperature enclosure can be fitted with a double-glazed window made from Lexan material. The enclosure walls are internally insulated to assist with keeping the internal temperatures within acceptable limits, typically -20°C to 55°C.

The purge air inlet which could source protective gas at temperatures down to and including -50°C makes several passes through convoluted pipework in an internal enclosure which is heated by an appropriately certified electrical heater. A thermal isolation valve opens when the purge medium temperature is greater than 4°C and closes when it falls to -1°C.

The enclosure, including door and rotary lock only, have been assessed as providing adequate ingress protection at temperatures down to and including -50°C. All other operators have only been assessed at a minimum of -20°C, and therefore excluded from the low temperature design.

Ambient temperature range for low temperature versions -50°C to +40°C or extended to +55°C.

All other aspects are to be considered under the final apparatus certification.

An enclosure may be suitable for more than one protection concept, in which case the marking for each protection concept shall be marked separately.

15.2 Conditions for Use

None

16 Essential Health and Safety Requirements

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

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