



# 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.:	<b>IECEx EXV 20.0050X</b>	Page 1 of 4	<u>Certificate history:</u> Issue 0 (2021-01-18)
Status:	<b>Current</b>	Issue No: 1	
Date of Issue:	2021-11-25		
Applicant:	<b>EXPO Technologies Limited</b> Unit 2, The Summit Hanworth Road Sunbury on Thames Surrey TW16 5DB United Kingdom		
Equipment:	<b>Pre-Start Ventilation System</b>		
Optional accessory:			
Type of Protection:	<b>Ex 'e'</b>		
Marking:	Standard version Ex eb IIC T5 Gb Ta = -20°C to +60°C  Standard /ET version Ex eb ia IIC T5 Gb Ta = -20°C to +59°C...or...II 2G Ex eb ia IIC T4 Gb Ta = -20°C to +60°C  Low temperature version Ex db eb IIC T3 or T4* Gb Ta = Ta -60°C to +60°C ... * Dependent upon heater  Low temperature/ET version Ex db eb ia IIC T3 or T4* Gb Ta -60°C to +60°C ... * Dependent upon heater		

Approved for issue on behalf of the IECEx  
Certification Body:

**Sean Clarke CEng MSc FIET**

Position:

**Certification Manager**

Signature:  
(for printed version)

Date:

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



Certificate issued by:

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





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

Additional  
manufacturing  
locations:

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

## STANDARDS :

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

[IEC 60079-0:2017](#) Explosive atmospheres - Part 0: Equipment - General requirements  
Edition:7.0

[IEC 60079-7:2017](#) 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 Reports:

[GB/EXV/ExTR20.0079/00](#)

[GB/EXV/ExTR21.0100/00](#)

Quality Assessment Report:

[GB/SIR/QAR07.0012/17](#)



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## **EQUIPMENT:**

Equipment and systems covered by this Certificate are as follows:

The Expo Technologies Pre-Start Ventilation System is intended to provide pre-start ventilation for motors in a hazardous area. The equipment consists of a control unit and a relief valve, which contains various electrical, mechanical, and pneumatic components for the control of ventilation gas to an associated motor (not included in this certificate), at a set flow rate and for a predetermined time. Alternative arrangements include the provision of an electronic timer, a solenoid valve, and the option for extended or continuous ventilation. A low temperature version is available which includes a certified heater and thermostat

Please see Annex for part number disambiguation.

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

1. The intended use of this equipment is as a pre-start ventilation system. It is the user's responsibility to ensure the correct functionality of the equipment when in use.
2. The equipment enclosure may contain RTDs or simple resistive switches. It is the user's responsibility to ensure that these are connected into suitably certified intrinsically safe circuits.
3. The Pre-Start Ventilation System, low temperature version, shall be protected by a safety related system that ensures that it cannot be energised if the temperature of the air inlet or controller unit falls below -20°C. This system shall utilise the RTDs that are fitted to the control unit to provide the appropriate level of safety integrity, i.e. a level of operational safety of Cat 3 according to EN 954-1 for ATEX Category 2 (Zone 1) applications; note that these RTDs have not been assessed as a safety related device in accordance with EHSR 1.5 of Directive 94/9/EC.
4. When the equipment is provided with an intrinsically safe solenoid valve, the user must ensure that any associated line inductance is within the parameters of the solenoid valve certificate.



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

- Update to assessment standards to IEC 60079-0 Ed. 7.0 and IEC 60079-7 Ed. 5.1

## Annex:

[IECEx Certificate Annex\\_Issue 1.pdf](#)

**Description Continued:**

The Expo Technologies Pre-Start Ventilation System is intended to provide pre-start ventilation for motors in a hazardous area. The equipment consists of a control unit and a relief valve, which contains various electrical, mechanical, and pneumatic components for the control of ventilation gas to an associated motor (not included in this certificate), at a set flow rate and for a predetermined time. Alternative arrangements include the provision of an electronic timer, a solenoid valve, and the option for extended or continuous ventilation. A low temperature version is available which includes a certified heater and thermostat.

The following representative placeholder indicates the order of the model number. This disambiguation comprehensively defines the part numbers using the characteristic letters which are defined in the table overleaf.

*Part Number: a b c d e*

Characteristic letter	Definition
a - Size or Capacity	1 = Flow rate up to 225 l/min 2 = Flow rate up to 450 l/min 3 = Flow rate up to 1500 l/min 4 = Flow rate up to 3000 l/min 5 = Flow rate up to 6000 l/min 6 = Flow rate up to 9000 l/min 7 = Flow rate up to 14000 l/min
b - Pre-start Ventilation Type	PV = Pre-start Ventilation PP = Pre-start Ventilation (alternative)
c - Control Unit Enclosure Material/Mounting Configuration	al = Aluminium alloy cs = Mild steel, painted ss = Stainless steel bp = Back Plate only co = Chassis only pm = Panel mounting nm = Non-Metallic
d - Start Option	LS = Local start using start switch on PV/PP system RS## = Remote start using Ex rated solenoid kit
e - Fitting Option	A = ANSI flange connection fittings used D = DIN flange connection fittings used B = BSP Pipe connection fittings used N = NPT Pipe connection fittings used # = letter showing non-certified pipe fitting

Option codes (Added only if used)

FM	Flow Meter(s) fitted on enclosure to indicate ventilation flow
IS	Internal Switches suitable for Ex i circuits.
MR	Mechanically Resets ventilation reset signal.
ER	Electronically Resets ventilation reset signal.
PR	Pneumatically Resets ventilation reset signal.
MT	Mechanical Timing used to time pre-start ventilation cycle
PT	Pneumatic Timing used to time pre-start ventilation cycle
ET	Electronic Timing used to time pre-start ventilation cycle
HP	High Pressure sensor fitted to prevent over pressure.
OV	Outlet valve, pneumatically operated.
PA	"Ex" switch(es) built-in, with/without "Ex" junction box.
SP	Secondary Pre-Ventilation supply options.
SS	Separate Supply for Protective gas and Logic air.
TW	Twin (or more) outputs for two or more separate ventilated enclosures ventilated in parallel.
HS	High Supply Pressure up to 16 Bar.
CV	Ventilation sustained indefinitely after completion of ventilation cycle
EV	Ventilation extended for predefined period of time after completion of ventilation cycle
DXXX	Special design, no certification related options
LT	Low Temperature option
/ES	Electronic timer with EPPS
/ET	Electronic timer with the battery

**Routine Tests:**

None.

**Issue 1**

Title	Drawing No.	Rev. Level	Rev. Date
Ventilation Complete Reset Options for PV system.	SD8036	03	11/11/2020
Pre-start Ventilation Housing.	SD8038	06	11/11/2020
Pre-start Ventilation Model Numbers.	SD8043	04	25/11/2020
Circuit Diagram for PV/PP System.	SD8044	06	11/11/2020
High Pressure Option 'HP'.	SD8049	03	11/11/2020
Timing Options for PV System.	SD8066	06	11/11/2020
*Pre-Start Ventilation System Certification Label (ATEX).	SD8076	04	13/09/2021
PV & PP System Low Temp. Wiring (Typical).	SD8312	02	11/11/2020
PV & PP Low Temperature Housing.	SD8313	02	11/11/2020

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