



1 **EU-TYPE EXAMINATION CERTIFICATE**

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

3 Certificate Number: **Sira 13ATEX1083X** Issue: **2**

4 Equipment: **Pre-Start Ventilation System**

5 Applicant: **Expo Technologies**

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

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

8 CSA Group Netherlands B.V., notified body number 2813 in accordance with Articles 17 and 21 of Directive 2014/34/EU of the European Parliament and of the Council, dated 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 the confidential reports listed in Section 14.2.

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the schedule to this certificate, has been assured by compliance with the following documents:

EN 60079-0:2012

EN 60079-7:2007

10 If the sign 'X' is placed after the certificate number, it indicates that the equipment is subject to Specific Conditions of Use identified in the schedule to this certificate.

11 This EU-Type Examination Certificate relates only to the design and construction of the specified equipment. If applicable, further requirements of this Directive apply to the manufacture and supply of this equipment.

12 The marking of the equipment shall include the following:

Standard versions



II 2 G
Ex e IIC T5 Gb
(Ta -20°C to +60°C)

Low temperature versions



II 2 G
Ex db e IIC T3 or T4* Gb
(Ta -60°C to +60°C)

Standard /ET versions



II 2 G
Ex e ia IIC T5 Gb
(Ta -20°C to +59°)
or
Ex e ia IIC T4 Gb

Low temperature /ET versions



II 2 G
Ex db e ia IIC T3 or T4* Gb
(Ta -60°C to +60°C)
* Depending on heater

Project Number 0801

Signed: 

Title: Director of Operations

This certificate and its schedules may only be reproduced in its entirety and without change

CSA Group Netherlands B.V.
Utrechtseweg 310,
6812 AR, Arnhem,
Netherlands



SCHEDULE

EU-TYPE EXAMINATION CERTIFICATE

Sira 13ATEX1083X
Issue 2

(Ta -20°C to +60°)

13 DESCRIPTION OF EQUIPMENT

The Expo Technologies Pre-Start Ventilation System is intended to provide pre-start ventilation for Ex e motors. The equipment consists of a control unit and a relief valve, which comprise various electrical, mechanical and pneumatic components for the control of ventilation gas to an associated motor (not included in this certification), 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.

Model designation is of the form:

a b c d e

where, a = Size or Capacity

- i.e.
- 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

- i.e.
- PV = Pre-start Ventilation
 - PP = Pre-start Ventilation (alternative)

c = Control Unit Enclosure Material/Mounting Configuration

- i.e.
- 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

- i.e.
- LS = Local start using start switch on PV/PP system
 - RS## = Remote start using Ex rated solenoid kit

e = Fitting Option

- i.e.
- 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)

This certificate and its schedules may only be reproduced in its entirety and without change

CSA Group Netherlands B.V.
Utrechtseweg 310,
6812 AR, Arnhem Netherlands



SCHEDULE

EU-TYPE EXAMINATION CERTIFICATE

Sira 13ATEX1083X
Issue 2

- i.e. 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, not certification related options
LT = Low Temperature option

Variation 1 - This variation introduced the following changes:

- i. A solenoid in the Expo Technologies Electronic Timer (ET) Module ETM-IS**-*** covered by certificate FM10ATEX0003X was replaced due to obsolescence resulting in a change of the temperature classification. The ET Module ETM-IS**-*** is incorporated in 'ET versions' of the Pre-Start Ventilation System covered by certificate Sira 13ATEX1083X, as a result of this update, only the temperature class and ambient temperature marking of the 'Standard/ET versions' were affected and were therefore amended as follows, T5 retained with the maximum ambient temperature limit lowered from +60°C to +59°C. T5 raised to T4 with the maximum ambient temperature limit retained at +60°C.
- ii. A Low Temperature (LT) option was introduced, the description was changed to recognise this option.
- iii. The certification coding for the equipment certified heater, incorporated in the low temperature versions of Pre-Start Ventilation System, was amended from Ex d mb IIC T3...T4 (Ta -50°C to +60°C) to Ex db IIC T3...T4 (Ta -60°C to +60°C). As a result of this modification the main certification coding for the low temperature versions of Pre-Start Ventilation System were amended with 'd' being replaced with 'db' and 'mb' being removed.
- iv. The minimum ambient temperature limit for the Low Temperature and Low Temperature/ET versions was lowered from -50°C to -60°C.
- v. The introduction of an alternative adhesive label was approved.
- vi. The introduction of drawing SD8312 revision 1, which replaces drawing SD7449 revision 7.
- vii. The introduction of drawing SD8313 revision 1, which replaces drawing SD7448 revision 9.
- viii. To assess and document minor modifications to the drawings in the certification package for this equipment. Resulting in a Condition of Manufacture being added to the certificate.



SCHEDULE

EU-TYPE EXAMINATION CERTIFICATE

Sira 13ATEX1083X
Issue 2

14 DESCRIPTIVE DOCUMENTS

14.1 Drawings

Refer to Certificate Annexe.

14.2 Associated Sira Reports and Certificate History

Issue	Date	Report number	Comment
0	11 October 2013	R29083A/00	The release of the prime certificate.
1	29 August 2017	R70087523A	This Issue covers the following changes: <ul style="list-style-type: none">• EC Type-Examination Certificate in accordance with 94/9/EC updated to EU Type-Examination Certificate in accordance with Directive 2014/34/EU. <i>(In accordance with Article 41 of Directive 2014/34/EU, EC Type-Examination Certificates referring to 94/9/EC that were in existence prior to the date of application of 2014/34/EU (20 April 2016) may be referenced as if they were issued in accordance with Directive 2014/34/EU. Variations to such EC Type-Examination Certificates may continue to bear the original certificate number issued prior to 20 April 2016.)</i>• The introduction of Variation 1.
2	15th October 2019	0801	<ul style="list-style-type: none">• Transfer of certificate Sira 13ATEX1083X from Sira Certification Service to CSA Group Netherlands B.V..

15 SPECIFIC CONDITIONS OF USE (denoted by X after the certificate number)

15.1 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.

15.2 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.

15.3 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.

15.4 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.

16 ESSENTIAL HEALTH AND SAFETY REQUIREMENTS OF ANNEX II (EHSRs)

The relevant EHSRs that are not addressed by the standards listed in this certificate have been identified and individually assessed in the reports listed in Section 14.2.

Certificate Annexe



Certificate Number: Sira 13ATEX1083X
Equipment: Pre-Start Ventilation System
Applicant: Expo Technologies

Issue 0

Drawing	Sheets	Rev.	Date (Sira Stamp)	Title
SD7448	1 to 3	9	18 Sep 13	Low Temperature Housing
SD7449	1 of 1	7	18 Sep 13	System Low Temp. Wiring (Typical)
SD7535	1 of 1	1	18 Sep 13	Spark Arrestor
SD7536	1 of 1	1	18 Sep 13	Differential Flow Monitor
SD7555	1 to 5	3	18 Sep 13	RLV Configurations
SD8036	1 to 3	1	18 Sep 13	Ventilation Complete Reset Options 'MR' 'ER' & 'PR' for PV System
SD8037	1 to 2	1	18 Sep 13	Sequence Diagram for PV/PP System
SD8038	1 of 1	4	18 Sep 13	Pre-Start Ventilation Housing
SD8040	1 of 1	1	18 Sep 13	Option 'IS' Internal Switches for PV/PP System
SD8042	1 of 1	1	18 Sep 13	Secondary Pre-Ventilation 'SP' & Twin Output 'TW' for PV System
SD8043	1 to 2	3	18 Sep 13	Pre-Start Ventilation Model Numbers
SD8044	1 to 5	2	18 Sep 13	Circuit Diagram for PV/PP System
SD8045	1 of 1	1	18 Sep 13	Separate Supply 'SS' Option for PV System
SD8049	1 of 1	1	18 Sep 13	High Pressure Option 'HP'
SD8065	1 of 1	1	18 Sep 13	OV Option for PV System
SD8066	1 of 1	3	18 Sep 13	Timing Options for PV System 'ET' 'MT' 'PT'
SD8076	1 to 2	1	18 Sep 13	Certification Label

Issue 1

Drawing	Sheets	Rev.	Date(Sira stamp)	Title
SD8036	1 to 3	2	01 Aug 17	Ventilation Complete Reset Options 'MR' 'ER' & 'PR' for PV System
SD8038	1 of 1	5	01 Aug 17	Pre-Start Ventilation Housing
SD8043	1 to 2	4	01 Aug 17	Pre-Start Ventilation Model Numbers
SD8044	1 to 5	5	01 Aug 17	Circuit Diagram for PV/PP System
SD8049	1 of 1	2	01 Aug 17	High Pressure Option 'HP'
SD8066	1 of 1	5	03 Aug 17	Timing Options for PV Systems 'ET' 'MT' 'PT'
SD8076	1 to 2	3	03 Aug 17	Certification Label
SD8312	1 of 1	1	01 Aug 17	PV & PP System Low Temp. Wiring (Typical)
SD8313	1 to 3	1	01 Aug 17	PV & PP Low Temperature Housing

This certificate and its schedules may only be reproduced in its entirety and without change

CSA Group Netherlands B.V.
 Utrechtseweg 310,
 6812 AR, Arnhem,
 Netherlands