



1 EU-TYPE EXAMINATION CERTIFICATE

2 **Equipment or Protective systems intended for use in Potentially
Explosive Atmospheres - Directive 2014/34/EU**

3 **EU-Type Examination Certificate No: FM19ATEX0172X**

4 **Equipment or protective system: EXS-1 and EXS-2 Sidestream Intelligent Controller
(Type Reference and Name) EXP-1 and EXP-2 Probe Intelligent Controller**

5 **Name of Applicant: INOV8 Systems Ltd**

6 **Address of Applicant: Unit 6 Edgewater Road Office Park
Belfast, BT3 9JQ
United Kingdom**

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

8 FM Approvals Europe Ltd, notified body number 2809 in accordance with Article 17 of Directive 2014/34/EU of 26th 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 confidential report number:

PR452545 dated 02nd July 2019

9 Compliance with the Essential Health and Safety Requirements, with the exception of those identified in item 15 of the schedule to this certificate, has been assessed by compliance with the following documents:

EN IEC 60079-0:2018, EN 60079-1:2014, EN 60079-28:2015 and EN 60529:1991+A1:2000+A2:2013

10 If the sign 'X' is placed after the certificate number, it indicates that the equipment is subject to specific conditions of use specified in the schedule to this certificate.

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

12 The marking of the equipment or protective system shall include:



II 2 G Ex db [op is T6 Gb] IIB T4...T3 Gb Ta= -20°C to +60°C



**Richard Zammitt
Certification Manager, FM Approvals Europe Ltd.**

Issue date: 20th April 2021

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FM Approvals Europe Ltd. One Georges Quay Plaza, Dublin. Ireland. D02 E440
T: +353 (0) 1761 4200 E-mail: atex@fmaprovals.com www.fmaprovals.com

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13 Description of Equipment or Protective System:

The EXS Sidestream model is made from stainless steel, comprising of the following major components; main enclosure and sample measuring section.

Main Enclosure - The main enclosure is a stainless steel enclosure incorporating a cemented viewing window. This enclosure contains the control circuits' assembly for this model and there is also a channel through the rear flanged cover that connects to the sample measurement section. The viewing window is cemented on the rear end cap using the DOW CORNING 736 Oil Resistant Sealant.

The rear flange cover has two cable entry ports which can be manufactured as M20 x 1.5mm or ¾ inch NPT. There are 18 M8 screws that is used to secure the flanged cover to the enclosure.

Sample Measuring Section - The sample monitoring section contains the transducer assembly that includes a pair of solid optical fibre wire and a viewing window where the sample monitoring takes place. The window in this sample measuring section is cemented unto the housing and the voids inside this probe is completely filled with the DOW CORNING 736 Oil Resistant Sealant.

The EXP Probe model comprises of the following major components; Main Housing and the Measurement Housing.

Main Housing - The main housing enclosure is a cylindrical stainless steel enclosure having two end caps. This enclosure contains the control circuits' assembly for this model and the connection to the transducer assembly in the front measurement housing. The viewing window is cemented on the rear end cap using the DOW CORNING 736 Oil Resistant Sealant. There are 8 M8 screws at each end used to secure the end caps to the housing. The rear end cap has up to three cable entry ports in the enclosure which can be configured as M20 X 1.5mm or ¾ inch NPT.

Measurement Housing - The measurement housing contains the transducer assembly that includes a pair of solid optical fibre wire and a viewing window where the sample monitoring takes place. This window is cemented unto the housing and the voids inside this probe is completely filled with the DOW CORNING 736 Oil Resistant Sealant. This measurement housing is welded to both the mounting flange and the rear housing enclosure assembly.

The EXS Series and EXP Series Controller incorporate a laser diode with a maximum power output rating of 10mW.

Operation Temperature Ranges and Working Pressure:

The ambient temperature range of the EXP Probe and EXS Sidestream models is -20°C to 60°C. The process temperature range is -20°C to 200°C for T3 ratings and -20°C to 135°C for T4 ratings. The maximum working pressure is 35 bar (3500kPa/507 psi).

Electrical data:

The EXP Probe and EXS Sidestream models are rated as 24Vdc, 6 Amps; 20W nominal, 140W peak.

The equipment has been assessed to provide Degree of Protection IP66 in accordance with EN 60529.

14 Specific Conditions of Use:

1. The equipment includes flamepath joints. Should any repair of the flame paths be required, consultation with Inov8 is necessary.
2. The process temperature shall not exceed 200°C for T3 ratings and shall not exceed 135°C for T4 ratings.

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15 Essential Health and Safety Requirements:

The relevant EHSRs that have not been addressed by the standards listed in this certificate have been identified and assessed in the confidential report identified in item 8.

16 Test and Assessment Procedure and Conditions:

This EU-Type Examination Certificate is the result of testing of a sample of the product submitted, in accordance with the provisions of the relevant specific standard(s), and assessment of supporting documentation. It does not imply an assessment of the whole production.

Whilst this certificate may be used in support of a manufacturer's claim for CE Marking, FM Approvals Europe Ltd accepts no responsibility for the compliance of the equipment against all applicable Directives in all applications.

This Certificate has been issued in accordance with FM Approvals Europe Ltd's ATEX Certification Scheme.

17 Schedule Drawings

A list of the significant parts of the technical documentation is annexed to this certificate and a copy has been kept by the Notified Body.

18 Certificate History

Details of the supplements to this certificate are described below:

| Date | Description |
|-----------------------------|--|
| 05 th July 2019 | Original Issue. |
| 21 st May 2020 | <u>Supplement 1:</u> Report Reference: RR223202 dated 19 th May 2020. Description of the Change: Update to the label drawings & the installation manuals due to change to the manufacturing address and other documentation documentation update that do not affect the safety of the product. |
| 20 th April 2021 | <u>Supplement 2:</u> Report Reference: RR227268 dated 16 th April 2021. Description of the Change: Update to the label drawings and instructions due to additional temperature ratings found to be acceptable based on past evaluation. Additional light sources incorporated, minor corrections to electrical ratings. Sections 12-14 of this certificate updated accordingly. Specific Condiiton of Use #3 removed as this is an installation issue per code. |

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