



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:
(Type Reference and Name) EXS-1 and EXS-2 Sidestream Intelligent Controller
EXP-1 and EXP-2 Probe Intelligent Controller EXS-D Display

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 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 confidential report number:

PR452545 dated 2nd 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, 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.

Certificate issued by:

FM Approvals

13 December 2024

Certification Manager, FM Approvals Europe Ltd.

Date

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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 (for the Controllers)
Ex db IIB T4...T3 Gb Ta= -20°C to +60°C (for the Display)

13. Description of Equipment or Protective System:

EXS-1 and EXS-2

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. Models with the M20 entry are also optionally available with a separately certified Y adapter in order to split one of the wiring entries into two M20 entries. 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 wires 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.

EXP-1 and EXP-2

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 wires 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 incorporate a laser diode model with a maximum power output rating of 10mW.

EXS-D

The EXS-D Display model is made from stainless steel, comprising of the main enclosure only. There are no lasers nor optical equipment within the EXS-D Display enclosure. The enclosure is identical to the Sidestream model other than it functions as a display only. It has solid construction instead of the threaded connection to the 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 no channel through the rear flanged cover. The viewing window is cemented on the rear end cap using the DOW CORNING 736 Oil Resistant Sealant.

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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 are used to secure the flanged cover to the enclosure. Optionally the equipment with M20 threaded wiring entries may be provided with a separately certified adapter, Type 20 783 Y, in order to provide an additional M20 entry. It is not permitted to use this adaptor in series with additional adapters.

Operation Temperature Ranges and Working Pressure:

The equipment is rated for an ambient temperature range of -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 equipment is rated as 24Vdc, 6 Amps, 20W nominal, 140W peak; or 110-230Vac, 50/60Hz, 15W nominal, 84W peak.

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

14. Specific Conditions of Use:

Refer to the annex.

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
5 July 2019	Original Issue.

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Date	Description
21 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 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 Condition of Use #3 removed as this is an installation issue per code.
25 August 2021	<u>Supplement 3:</u> Report Reference: RR229193 dated 23 rd August 2021. Description of the Change: Addition of EXS-D Display model, relevant technical documents revised accordingly. Certificate updated and listing added.
30 September 2022	<u>Supplement 4:</u> Report Reference: PR462688 dated 27 th September 2022. Description of the Change: Testing and evaluation satisfactorily conducted in order to qualify additional 110-230Vac electrical input ratings. Minor electrical changes and drawing revisions not affecting safety.
21 February 2023	<u>Supplement 5:</u> Report Reference: RR235680 dated 9 th February 2023. Description of the Change: Minor drawing and product revisions for addition of optional Y adapter for M20 wiring entry on equipment enclosures.
20 June 2024	<u>Supplement 6:</u> Report Reference: PR464168 dated 19 June 2024. Description of the Change(s): Revisions to Technical Documents due to the alignment of part numbers with drawing numbers and addition of new drawings due to the alternative complete machined EXS enclosure without welded sections.
13 December 2024	<u>Supplement 7:</u> Report Reference: PR466643 dated 11 December 2024. Description of the Change(s): Revisions to Technical Documents due to the alignment of part numbers with drawing numbers and addition of new drawings to accommodate a round display and inclusion of the high pressure probe nose on the EXP models.

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ANNEX

EXP

Description of Equipment:

EXP-a Controller, Intelligent Control – Oil in Water Probe
a = Sensitivity Level (1 = Low; 2 = High)

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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EXS

Description of Equipment:

EXS-a Controller, Intelligent Control – Oil in Water Sidestream
a = Sensitivity Level (1 = Low; 2 = High)

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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EXS-D

Description of Equipment:

EXS-D Display

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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