

CERTIFICATE OF CONFORMITY



1. **HAZARDOUS (CLASSIFIED) LOCATION ELECTRICAL EQUIPMENT PER US REQUIREMENTS**

2. **Certificate No:** FM19US0011X
3. **Equipment:** EXP-1 and EXP-2 Probe Intelligent Controller
(Type Reference and Name)

4. **Name of Listing Company:** INOV8 Systems Ltd

5. **Address of Listing Company:** Unit 6 Edgewater Road Office Park
Belfast, BT3 9JQ United Kingdom

6. The examination and test results are recorded in confidential report number:
PR446508 dated 22nd March 2019

7. FM Approvals LLC, certifies that the equipment described has been found to comply with the following Approval standards and other documents:

FM Class 3600:2018, FM Class 3615:2018, FM Class 3810:2018, ANSI/ISA 61010-1:2012,
ANSI/NEMA 250:2008, ANSI/IEC 60529:2004

8. 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.

9. This certificate relates to the design, examination and testing of the products specified herein. The FM Approvals surveillance audit program has further determined that the manufacturing processes and quality control procedures in place are satisfactory to manufacture the product as examined, tested and Approved.

10. **Equipment Ratings:**

Explosionproof for Class I, Division 1, Groups C and D hazardous locations. The ambient temperature rating is -20°C to +60°C, Temperature Class T4...T3, with indoors and outdoors ratings Type 4 and IP66.

Certificate issued by:

J.E. Marquedant
VP, Manager - Electrical Systems

16 April 2021
Date

To verify the availability of the Approved product, please refer to www.approvalguide.com

THIS CERTIFICATE MAY ONLY BE REPRODUCED IN ITS ENTIRETY AND WITHOUT CHANGE

FM Approvals LLC. 1151 Boston-Providence Turnpike, Norwood, MA 02062 USA
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11. The marking of the equipment shall include:

Class I Division 1, Groups C, D; T4...T3 Ta = -20°C to +60°C; Type 4, IP66

12. **Description of Equipment:**

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 735 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 two 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 735 Oil Resistant Sealant. This measurement housing is welded to both the mounting flange and the rear housing enclosure assembly.

Operation Temperature Ranges and Working Pressure: The ambient temperature range of the EXP Series Probe 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 Series Probe models are rated as 24Vdc, 6 Amps; 20W nominal, 140W peak.

The model structure of the EXP Series Probe models is shown below.

EXP-a Controller, Intelligent Control – Oil in Water Probe

a = Sensitivity Level (1 = Low; 2 = High)

13. **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.

14. **Test and Assessment Procedure and Conditions:**

This Certificate has been issued in accordance with FM Approvals US Certification Requirements.

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15. Schedule Drawings

A copy of the technical documentation has been kept by FM Approvals.

16. Certificate History

Details of the supplements to this certificate are described below:

Date	Description
22 nd March 2019	Original Issue.
19 th 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.
16 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 11-13 of this certificate updated accordingly and deleted Specific Condition of Use #3 as this is an installation criteria per code.

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