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

Certificate No.: **IECEx CSA 25.0009X**

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Certificate history:
Issue 0 (2025-07-17)

Status: **Current**

Issue No: 1

Date of Issue: 2025-09-18

Applicant: **Flow Management Devices, LLC**
5225 South 37th Street
Suite 4
Phoenix, AZ 85040
United States of America

Equipment: **Unidirectional Captive Displacement Prover-Series Models: FMD-XXX, where XXX can be 001, 003, 007, 015, 025, C25, 035, A35, 045, 060, 090, 130, 200, 245, 060EV, 090EV, 200EV**

Optional accessory:

Type of Protection: **Flameproof 'd', Encapsulation 'm'**

Marking: Ex db mb [ia Ga] IIB T3 Gb
-20 °C to +54 °C
-20 °C to +40 °C for special motors

Approved for issue on behalf of the IECEx Certification Body: **Dave Magee**

Position: **Senior Director of Operations**

Signature:
(for printed version)

Date:
(for printed version)

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 or use of this QR Code.

Certificate issued by:

CSA Group
178 Rexdale Boulevard
Toronto, Ontario M9W IR3
Canada

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Certificate No.: **IECEx CSA 25.0009X**

Date of issue: 2025-09-18 Issue No: 1

Manufacturer: **Flow Management Devices, LLC**
5225 South 37th Street
Suite 4
Phoenix, AZ 85040
United States of America

Manufacturing locations: **Flow Management Devices, LLC**
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Suite 4
Phoenix, AZ 85040
United States of America

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 60079-1:2014 Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
Edition:7.0

IEC 60079-11:2011 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:6.0

IEC 60079-18:2017 Explosive atmospheres - Part 18: Protection by encapsulation "m"
Edition:4.1

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:

CA/CSA/ExTR25.0034/00 CA/CSA/ExTR25.0034/01

Quality Assessment Report:

US/ETL/QAR15.0014/09

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EQUIPMENT:
Equipment and systems covered by this Certificate are as follows:

The series of FMD-XXX are Unidirectional Captive Displacement Provers or Small Volume Provers are a control system consisting of a PIM (Prover interface Module) and software.

The system consists of an electrical panel housed in a flameproof enclosure and contains up to two I.S. barriers and power supply that powers an optional barrier. The other barrier (PIM) is powered externally (Nominal 24 Vdc control, Um = 30Vdc). Barriers power the switches and encoder. System also consists of a clutch and motor.

There are multiple models covered under this report - FMD-XXX, where XXX can be 001, 003, 007, 015, 025, C25, 035, A35, 045, 060, 090, 130, 200, 245; models 060EV, 090EV, 200EV are longer mechanical options of the models 060, 090 and 200 respectively.

Model numbers depict the flow rate of the system. For example FMD-001 has a flow rate of 100 gallons/min and FMD-200 has a flow rate of 20,000 gallons/min. The differences in the flow rate does not affect safety of the product.

SPECIFIC CONDITIONS OF USE: YES as shown below:

1. Flameproof joints are not intended to be repaired.
2. Encoders shall be replaced once they have exceeded their bearing life (1.5 X 109 for Model H20). For bearing life of all other models please refer to conditions of certification on certificate IECEx UL 12.0035X.
3. For Rosemount Temperature Transmitter, the LCD cover must be guarded against impact energies of greater than 4 joules.
4. To replace the fasteners in SCANCON Encoders, use only fasteners with property class of A*-70 with a yield stress ≥ 450MPa.
5. For control voltage supplies to intrinsically safe associated apparatus, where Um is less than 250V, the source to provide Um = 30V must be from an SELV approved source.
6. The PIM Gen 4 shall be installed within a flame-proof enclosure with rating of IP66 with flame-proof cable glands and/or conduit sealing fittings with appropriate IP rating.
7. The wiring connections to the PIM must be derived and be powered from 60950-1 or 61010-1 Certified power supply(s) having maximum 24Vdc output.
8. Entity parameters
   For PIM I/O board Gen 3.6: Um = 30 Vdc; Uo = 7.14V; Io = 501.1mA; Po = 894.4mW; Co = 240µF; Lo = 566.4µH
9. At least one terminal or connection shall be provided for connecting the I/O board Zener diode anodes to ground. The grounding terminal or connection shall be sized to accommodate a 4 mm^2 (No. 12 AWG) minimum for aluminum grounding conductors or a 2.5 mm^2 (No. 14 AWG) minimum for copper grounding conductors. The grounding conductor shall be connected to a suitable ground in accordance with the local electrical installation code.
10. Unused entries of the flame proof enclosures shall be closed with properly rated plugs maintaining ingress protection indicated.

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Equipment (continued):

Conditions of Manufacture

1. AD-U Adaptors and RD-U Reducers shall not be installed using 40% Glas Filled Nylon O-ring.
2. Maximum working ambient temperature range shall be reduced to +40 °C when following components installed: ABB Motors models M3KP 80, M3JP 80, M3JP 90, M3KP 90, M3JP 100, M3KP 100, M3JP 112, M3KP 112, M3JP 132, M3KP 132, M3JP 160, M3KP 160, M3JC 160, M3KC 160, M3JP 180 or M3KP
3. Maximum working ambient temperature range shall be reduced to +50 °C when following components installed: ABB Circuit Breaker models SU203M-K20 or SU203M-K15

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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)
Issue 1 – this Issue introduced the following changes:

1. Addition of 690 VAC motor version and related components