1 # EU-TYPE EXAMINATION CERTIFICATE

2 Directive 2014/34/EU of the European Parliament and of the Council of 26 February 2014

3 EU-Type Examination Certificate Number: **CSANe 25ATEX1007X** Issue: **1**

4 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

5 Manufacturer: **Flow Management Devices, LLC**

6 Address: 5225 South 37th Street
Suite 4 Phoenix
AZ 85040, USA

7 This product 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 No. 2813 in accordance with Article 17 of the Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products 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 item 16.2.

9 Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN IEC 60079-0:2018 EN 60079-1: 2014 EN 60079-11:2012 EN 60079-18:2015+A1:2017

Where additional criteria beyond those given here have been used, they are listed in item 18 in the Schedule.

10 If the sign "X" is placed after the certificate number, it indicates that the product is subject to the "Specific Conditions of Use" listed in item 17 of this certificate.

11 This EU-Type Examination Certificate relates only to the technical design of the specified product in accordance with the Directive 2014/34/EU. Further requirements of the Directive apply to the manufacturing process and supply of this product, these are not covered by this certificate.

12 The marking of the product shall include the following (additional marking is provided in the Schedule as a part of item 15, if applicable):

II 2(1)G
Ex db mb [ia Ga] IIB T3 Gb
Ta = -20 °C to +54 °C
Ta = -20 °C to +40 °C for special motors

Signed:

M Halliwell

Title: Senior Director of Operations
Date 18 September 2025

13 # SCHEDULE

14 **EU-Type Examination Certificate Number:** **CSANe 25ATEX1007X** Issue: **1**

15 **Description:**

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.

Variation 1 - This variation introduced the following changes:

i. Addition of 690 V motor version and related components.

16 **Drawings and documents:**

16.1 **Technical documents:**

Refer to Certificate Annex.

16.2 **Associated reports and certificate history:**

Issue	Date	Report number	Comment
0	17 July 2025	R80235846A	The release of the prime certificate.
1	18 September 2025	R80264134A	The introduction of Variation 1.

17 **Specific conditions of use** (denoted by "X" after the certificate number):

17.1 Flameproof joints are not intended to be repaired.

17.2 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.

17.3 For Rosemount Temperature Transmitter, the LCD cover must be guarded against impact energies of greater than 4 joules.

17.4 To replace the fasteners in SCANCON Encoders, use only fasteners with property class of A*-70 with a yield stress ≥ 450MPa.

17.5 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.

17.6 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.

17.7 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.

17.8 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.

17.9 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.

17.10 Unused entries of the flame proof enclosures shall be closed with properly rated plugs maintaining ingress protection indicated.

18 **Essential health and safety requirements of Annex II** (EHSRs):

The relevant EHSRs that are not addressed by the standards listed in item 9 of this certificate have been identified and conformity of the product demonstrated in the reports listed in item 16.2.

19 **Remarks and additional information:**

The use of this certificate is subject to the regulations applicable to holders of CSA Group Netherlands B.V. certificates.

Compliance of the product with the applicable safety requirements of the relevant industrial standards has not been verified and is not covered by this certificate.

19.1 **Conditions of manufacture:**

19.1.1 AD-U Adaptors and RD-U Reducers shall not be installed using 40% Glas Filled Nylon O-ring.

19.1.2 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.

19.1.3 Maximum working ambient temperature range shall be reduced to +50 °C when following components installed: ABB Circuit Breaker models SU203M-K20 or SU203M-K15.

Certificate Annexe

Document History

Issue – 0

Documents Introduced or Revised

Drawing	Sheets	Rev.	Date (Stamp)	Title
000-112680-DOC	1 to 36	E	23 Jun 25	COMPACT PROVER 4TH GEN, Operating and Maintenance Manual
000-116972-SCH	1 of 1	B	23 Jun 25	PIM I/O Board Schematic V3.6
000-116956-ELE	1 of 1	B	23 Jun 25	PCB I/O PIM Bare Board
B01-004707-000	1 to 2	B	23 Jun 25	PCB I/O V3.6 - BOM
000-116790-DOC	1 to 4	F	23 Jun 25	System Wiring Main G4 W/G3PIM
000-111414-DOC	1 of 1	I	23 Jun 25	SYSTEM WIRING – DC POWER
000-111415-DOC	1 of 1	D	23 Jun 25	SYSTEM WIRING – POWER – 1 PH – 120VAC G4
000-111416-DOC	1 of 1	D	23 Jun 25	SYSTEM WIRING – POWER – 1 PH 230VAC G4
000-111417-DOC	1 of 1	I	23 Jun 25	SYSTEM WIRING – POWER – 3 PH 208-460VAC G4
000-111418-DOC	1 of 1	D	23 Jun 25	SYSTEM WIRING – SENSORS – STD
000-111419-DOC	1 to 2	B	23 Jun 25	SYSTEM WIRING – ENCODER
000-111432-DOC	1 of 1	C	23 Jun 25	SYSTEM WIRING – DC – HYDRAULIC G4
000-117186-DOC	1 to 5	C	23 Jun 25	SYSTEM WIRING DIAGRAM PROVER W/PURGE G4 W/G3 PIM
000-117410-DOC	1 to 4	C	23 Jun 25	SYSTEM WIRING DIAGRAM G4 W/G3 PIM CUSTOMER SUPPLIED 24VDC
000-100912-ELE	1 of 1	B	23 Jun 25	Cable 8 Cond Shld. 18AWG
000-103922-ELE	1 of 1	B	23 Jun 25	Cable Power BS5467 EX
000-107768-DOC	1 to 4	I	23 Jun 25	DOC ENG REF System Wiring Diagram
000-108233-DOC	1 to 3	D	23 Jun 25	IECEx Approval Master Assy Doc
000-108260-COM	1 of 1	F	23 Jun 25	Name Plate Prover IECEx / ATEX
000-108455-DOC	1 to 7	E	23 Jun 25	IECEx Electrical Protection Scheme
B01-000482-000	1 of 1	C	23 Jun 25	Cable Encoder

Issue – 1

Documents Introduced or Revised

Drawing	Sheets	Rev.	Date (Stamp)	Title
000-117582-DOC	1 of 1	A	25 Aug 25	SYSTEM WIRING POWER 3 PH 690VAC G4
000-117410-DOC	1 to 5	D	25 Aug 25	SYSTEM WIRING DIAGRAM G4 W/G3 PIM CUSTOMER SUPPLIED 24VDC
000-116790-DOC	1 to 4	G	25 Aug 25	System Wiring Main G4 W/G3PIM
000-117186-DOC	1 to 5	D	25 Aug 25	SYSTEM WIRING DIAGRAM PROVER W/PURGE G4 W/G3 PIM
000-118150-COM	1 of 1	A	25 Aug 25	NAME PLATE PROWER EX CUST PWR