



# 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: FM25ATEX00013X

4. Equipment or protective system:  
(Type Reference and Name) Stonel Eclipse EC Model 45S Valve Position Monitor

5. Name of Applicant: Valmet Flow Control Inc. (MN)

6. Address of Applicant 26271 US Highway 59, Fergus Falls, Minnesota 56537, United States of America

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:

PR470692 dated ORIG\_APPROVAL\_DATE

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+A11:2024 , EN 60079-11:2012, 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 1 G Ex ia IIC T6...T5 Ga; T6 Tamb = -40°C to +65°C  
T5 Tamb = -40°C to +80°C

Certificate issued by:

FM Approvals

8 July 2025

Certification Manager, FM Approvals Europe Ltd.

Date

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

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## **SCHEDULE**

EU-Type Examination Certificate No. FM25ATEX00013X

**FM Approvals**

### **13. Description of Equipment or Protective System:**

#### **General**

The Stonel Eclipse Valve Position Monitor is designed to be attached to various valve/actuator assemblies to communicate and control its position.

#### **Mechanical**

The circuitry for the Stonel Eclipse EC Series Valve Position Monitors is located inside of a polymeric housing having a tool secured polymeric threaded cover on the top side. The field wiring terminals are located under the cover. The housing is approximately 6.2" (160mm) in length by 3.1" (80mm) wide by 2" (50mm) in height. The left and right side of the housing contains a threaded port for 1/2" NPT or M20 conduit entry.

#### **Electrical**

For type of protection intrinsic safety, connections can only be made by connecting certified associated Intrinsically Safe apparatus having energy limitation parameters. The output of the associated apparatus shall not exceed the Energy Limitation Parameters for the Model Eclipse EC 45S Valve Position Monitor as shown below.

#### **Open and Closed Sensor Indication Power terminals**

$U_i \leq 22\text{Vdc}$ ,  $I_i \leq 120\text{mA}$ ,  $P_i \leq 400\text{mW}$

#### **Solenoid Power Terminals**

$U_i \leq 28\text{Vdc}$ ,  $I_i \leq 120\text{mA}$

#### **Environmental**

The enclosures are rated for ingress protections IP66 and IP67.

The Stonel Eclipse EC Series Valve Position Monitors are rated for an ambient temperature range of  $-40^\circ\text{C}$  to  $+65^\circ\text{C}$  and  $+80^\circ\text{C}$ .

#### **Model Code Structure:**

##### **EC45Sabcde. Stonel Eclipse EC Valve Position Monitor.**

a = Enclosure: C

b = Conduit entries: 02, 05, 10, 11, 12, 13, 14, 15, 16, 30, 31, 32, 33, 34, 35, 36, or 38.

c = Visual Indication: X, G, R, 1 or 2

d = Branding: A.

e\* = Special Options: Blank or a dash symbol (-) followed with up to 5 alpha and/or numeric identification digits after model number for special and marketing purposes. Option digits are not normally applied.

\*Special Option digits are not verified by FM Approvals and are permitted when they do not affect the integrity of the housing, electrical, or marking of the product with respect to hazardous locations certification.

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## **SCHEDULE**

EU-Type Examination Certificate No. FM25ATEX00013X

### **Intrinsically Safe Energy Limitation Parameters:**

#### **Open Indication Sensor Terminals:**

$U_i (V_{max}) \leq 22V_{dc}$ ,  $I_i (I_{max}) \leq 120mA$ ,  $P_i \leq 400mW$ ,  $C_i = 3nF$ ,  $L_i = 0mH$ .

#### **Closed Indication Sensor Terminals:**

$U_i (V_{max}) \leq 22V_{dc}$ ,  $I_i (I_{max}) \leq 120mA$ ,  $P_i \leq 400mW$ ,  $C_i = 3nF$ ,  $L_i = 0mH$ .

#### **Solenoid Junction Terminals:**

$U_i (V_{max}) \leq 28V_{dc}$ ,  $I_i (I_{max}) \leq 120mA$ ,  $C_i = 0$ ,  $L_i = 0$ .

\*Solenoid installation shall meet:

$C_o (C_a) \text{ (Associated Apparatus)} \geq C_i \text{ of the Solenoid} + C_i \text{ of the Junction} + C_{cable}$

$L_o (L_a) \text{ (Associated Apparatus)} \geq L_i \text{ of the Solenoid} + L_i \text{ of the Junction} + L_{cable}$

### **14. Specific Conditions of Use:**

1. The enclosure is constructed from plastic. To prevent the risk of electrostatic sparking the plastic surface should only be cleaned with a damp cloth.

### **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. The documents are maintained under file number PR470692.

### **18. Certificate History**

Details of the supplements to this certificate are described below:

Date	Description
8 July 2025	Original Issue.

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# Blueprint Report

**Valmet Flow Control Inc. (MN) (1000001486)**

**Class No 3610**

**Original Project I.D. 470692**

**Certificate I.D. FM25ATEX00013X**

<u>Drawing No.</u>	<u>Revision Level</u>	<u>Drawing Title</u>	<u>Last Report</u>
000247	A	Model Description, Stonel Eclipse EC Series, IECEx ATEX Ex ia	PR470692
105483	A	ENCLOSURE ECLIPSE EC SERIES	PR470692
105509	C	Stonel Eclipse Valve Monitor EC Series Installation, maintenance and operating instructions	PR470692
105518	A	ELECTRICAL INFO, ECLIPSE EC SERIES	PR470692
105520	A	PROD MARK, ECLIPSE EC SERIES, IECEx Ex ia	PR470692
200309	B	SCH - ECLIPSE 45 NAMUR	PR470692
407194	A	O-RING, 67.5MM ID X 2.5MM CS EX	PR470692
407208	A	O-RING, 0.739 ID X 0.070 CS EX	PR470692
409105	C	PLUG, SS, M20	PR470692
418531	B	PRINTED CIRCUIT BOARD, ECLIPSE 45	PR470692
418532	B	BOARD ASSEMBLY, ECLIPSE 45	PR470692
420495	A	LEXAN 500 RESIN 10% GLASS FILLED	PR470692
420496	A	LEXAN 143R NATURAL	PR470692
420504	A	LEONA 90G50 POLAMIDE 66	PR470692
420505	A	LEXAN 503R POLYCARBONATE 10% GLASS	PR470692
420514	A	USP UNISOFT AD-50A-NT-1-40F	PR470692
432033	B	MOMENTIVE RTV5243 ALKOXY SILICONE BLACK	PR470692
432038	B	URETHANE POTTING, CLEAR, MIXED	PR470692
432041	A	URETHANE POTTING, CLEAR, MIXED	PR470692
434387	B	TERMINAL BLOCK, 2 PT SAURO VERT EX EC	PR470692
434388	B	TERMINAL BLOCK, 8 PT SAURO VERT EX EC	PR470692
434415	A	CONNECTOR, MINI MALE 4P M20 SS CFMUS	PR470692
434416	A	CONNECTOR, MINI MALE 5P M20 SS CFMUS	PR470692
434417	A	CONNECTOR, MINI MALE 6P M20 SS CFMUS	PR470692
434418	A	CONNECTOR, MINI MALE 7P M20 SS CFMUS	PR470692
434420	A	CONNECTOR, MICRO MALE 5P M20 SS CFMUS	PR470692
434437	A	CONNECTOR, MICRO 4P MALE M20 SS CFMUS	PR470692
434440	A	CONNECTOR, MINI FEMALE 3P M20 SS CFMUS	PR470692
434449	A	CONNECTOR, MICRO FEMALE 5P M20 SS CFMUS	PR470692
434450	A	CONNECTOR, MICRO MALE 8P M20 SS	PR470692