

CERTIFICATE OF CONFORMITY



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

2. Certificate No: FM25US0065X
3. Equipment:
(Type Reference and Name) Stonel Eclipse EC Models 30S, 30W, 34S, 35S, 45S, 96S, 97S, 97W Valve Position Monitors
4. Name of Listing Company: Valmet Flow Control Inc. (MN)
5. Address of Listing Company: 26271 US Highway 59, Fergus Falls, Minnesota 56537, United States of America

6. The examination and test results are recorded in confidential report number:

PR470692 dated 7 July 2025

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

FM 3600:2022, FM 3610:2021, FM 3611:2021, FM 3810:2021, ANSI/UL 50E:2020 (R2024), ANSI/UL 60079-0:2020 (R2024), ANSI/IEC 60529:R2011, ANSI/UL 61010-1:2023, ANSI/UL 121201:2021

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:

SEE ANNEX

11. The marking of the equipment shall include:

SEE ANNEX

Certificate issued by:

J.E. Marquedant
VP, Manager - Electrical Systems

7 July 2025

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. One Technology Way, Norwood, MA 02062 USA

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12. Description of Equipment:

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

See ANNEX for electrical ratings of each model.

Environmental

The enclosures are rated for ingress protections Type 4; Type 4X; Type 6; IP66 and IP67.

The Stonel Eclipse EC Series Valve Position Monitors are rated for an ambient temperature range of -40°C to +80°C.

Model Code Structure:

ECabcdef. Stonel Eclipse EC Valve Position Monitors.

a = Function: 30S, 30W, 34S, 35S, 45S, 96S, 97S, or 97W.

b = Enclosure: C

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

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

e = Branding: A.

f* = 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.

13. Specific Conditions of Use:

SEE ANNEX

14. Test and Assessment Procedure and Conditions:

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

15. Schedule Drawings

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

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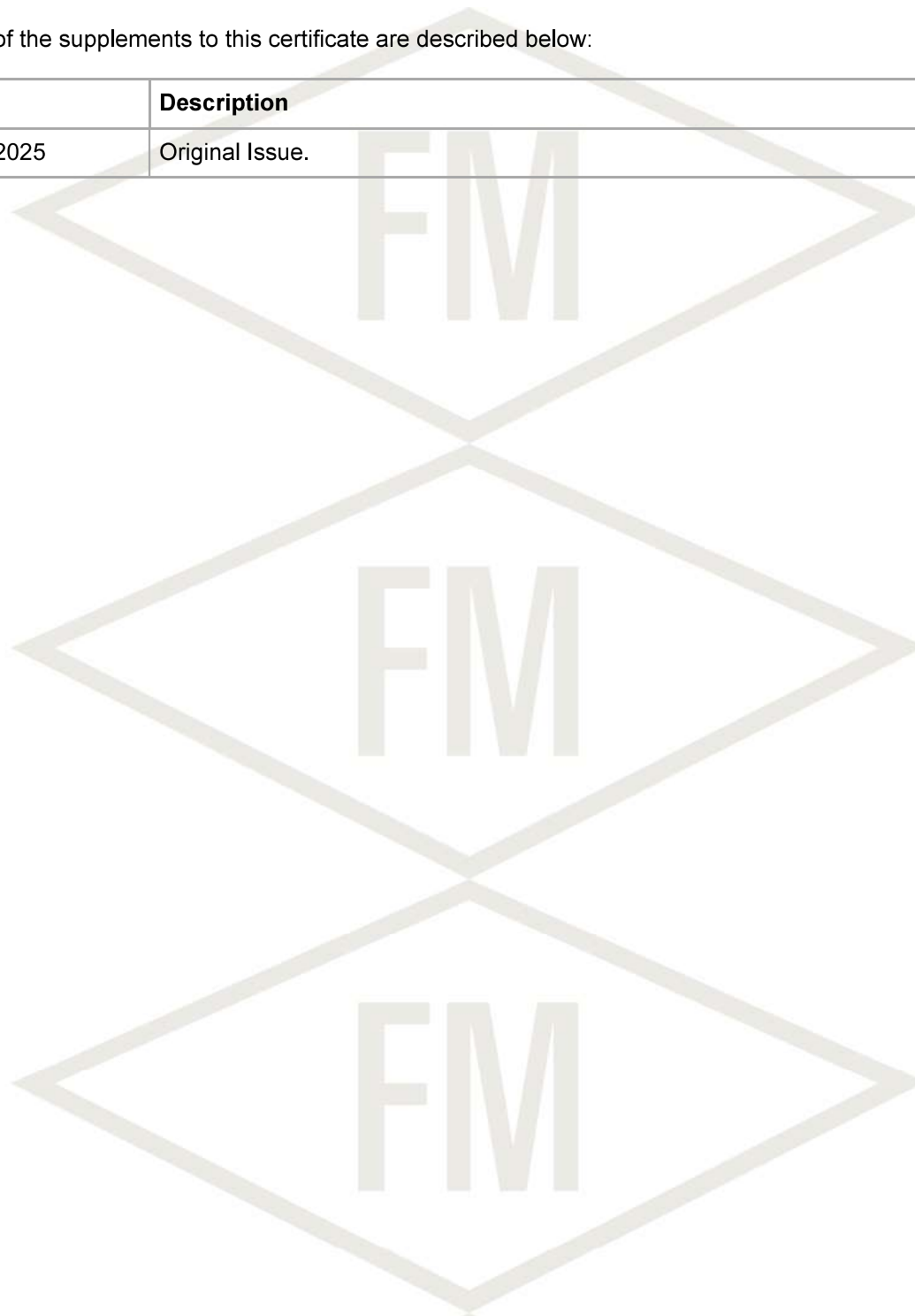
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16. Certificate History

Details of the supplements to this certificate are described below:

Date	Description
7 July 2025	Original Issue.



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ANNEX

EC30Sbdef. Stonel Eclipse EC Valve Position Monitor.

Equipment Ratings:

Nonincendive for use in Class I, II and III, Division 2, Groups A, B, C, D, E, F and G; Temperature Class T5;
Temperature Ambient Range -40°C to +80°C; Hazardous (Classified) Locations.
Enclosure Ingress Protection Ratings: Type 4, Type 4X, Type 6, IP66, IP67

Markings:

NI CL I, II, III, DIV 2, GP ABCDEFG
Class I, Zone 2, Group IIC; T5
T5 Tamb = -40°C to +80°C
Type 4, Type 4X, Type 6, IP66, IP67

Description of Equipment:

Electrical Ratings:

The electronic connections have the following nominal values:

Power Terminals: 18Vdc to 30Vdc; 2mA to 100mA, 600mW to 6W
Output Terminals: 24Vdc, ≤85mA, 2W

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.
2. For Division 2 installation, the Turck minifast® and eurofast® receptacles shall be mated with Turck minifast and eurofast cordsets, and the use of tool secured Turck lokfast® guards is required.

EC30Wbdef. Stonel Eclipse EC Valve Position Monitor.

Equipment Ratings:

Nonincendive for use in Class I, II and III, Division 2, Groups A, B, C, D, E, F and G; Temperature Class T5;
Temperature Ambient Range -40°C to +80°C; Hazardous (Classified) Locations.

Enclosure Ingress Protection Ratings: Type 4, Type 4X, Type 6, IP66, IP67

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Markings:

NI CL I, II, III, DIV 2, GP ABCDEFG
Class I, Zone 2, Group IIC; T5
T5 Tamb = -40°C to +80°C
Type 4, Type 4X, Type 6, IP66, IP67

Description of Equipment:

Electrical Ratings:

The electronic connections have the following nominal values:

Power Terminals: 18Vdc to 30Vdc; 2mA to 100mA, 600mW to 6W
Output Terminals: 24Vdc, ≤85mA, 2W

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.
2. For Division 2 installation, the Turck minifast® and eurofast® receptacles shall be mated with Turck minifast and eurofast cordsets, and the use of tool secured Turck lokfast® guards is required.

EC34Sbdef. Stonel Eclipse EC Valve Position Monitor.

Equipment Ratings:

Nonincendive for use in Class I, II and III, Division 2, Groups A, B, C, D, E, F and G; Temperature Class T5;
Temperature Ambient Range -40°C to +80°C; Hazardous (Classified) Locations.

Enclosure Ingress Protection Ratings: Type 4, Type 4X, Type 6, IP66, IP67

Markings:

NI CL I, II, III, DIV 2, GP ABCDEFG
Class I, Zone 2, Group IIC; T5
T5 Tamb = -40°C to +80°C
Type 4, Type 4X, Type 6, IP66, IP67

Description of Equipment:

Electrical Ratings:

The electronic connections have the following nominal values:

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When option c = 38:

Power Terminals: 20Vac to 60Vac, 50/60Hz; 2mA-100mA or 8Vdc to 75Vdc; 2mA-100mA

Solenoid Pass-Thru 20Vac to 60Vac, 50Hz/60Hz, ≤750mA or 20Vdc to 75Vdc, ≤750mA

When option c = 02, 05, 10, 11, 12, 13, 14, 15, 16, 30, 31, 32, 33, 34, 35, or 36:

Power Terminals: 20Vac to 250Vac, 50/60Hz; 2mA-100mA or 8Vdc to 250Vdc; 2mA-100mA

Solenoid Pass-Thru 20Vac to 250Vac, 50Hz/60Hz, ≤750mA or 20Vdc to 250Vdc, ≤750mA

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.
2. For Division 2 installation, the Turck minifast® and eurofast® receptacles shall be mated with Turck minifast and eurofast cordsets, and the use of tool secured Turck lokfast® guards is required.

EC35Sbcdef. Stonel Eclipse EC Valve Position Monitor.

Equipment Ratings:

Nonincendive for use in Class I, II and III, Division 2, Groups A, B, C, D, E, F and G; Temperature Class T5;
Temperature Ambient Range -40°C to +80°C; Hazardous (Classified) Locations.

Enclosure Ingress Protection Ratings: Type 4, Type 4X, Type 6, IP66, IP67

Markings:

NI CL I, II, III, DIV 2, GP ABCDEFG

Class I, Zone 2, Group IIC; T5

T5 Tamb = -40°C to +80°C

Type 4, Type 4X, Type 6, IP66, IP67

Description of Equipment:

Electrical Ratings:

The electronic connections have the following nominal values:

When option c = 38:

Power Terminals: 20Vac to 60Vac, 50/60Hz; 2mA-100mA or 8Vdc to 75Vdc; 2mA-100mA

Solenoid Pass-Thru 20Vac to 60Vac, 50Hz/60Hz, ≤750mA or 20Vdc to 75Vdc, ≤750mA

When option c = 02, 05, 10, 11, 12, 13, 14, 15, 16, 30, 31, 32, 33, 34, 35, or 36:

Power Terminals: 20Vac to 250Vac, 50/60Hz; 2mA-100mA or 8Vdc to 250Vdc; 2mA-100mA

Solenoid Pass-Thru 20Vac to 250Vac, 50Hz/60Hz, ≤750mA or 20Vdc to 250Vdc, ≤750mA

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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.
2. For Division 2 installation, the Turck minifast® and eurofast® receptacles shall be mated with Turck minifast and eurofast cordsets, and the use of tool secured Turck lokfast® guards is required.

EC45Sbdef. Stonel Eclipse EC Valve Position Monitor.

Equipment Ratings:

Intrinsically Safe (Entity) for use in Class I, II and III, Division 1, Groups A, B, C, D, E, F and G; Temperature Class T5; Temperature Ambient Range -40°C to +80°C; when installed per control drawing 105521; Hazardous (Classified) Locations.

Nonincendive for use in Class I, II and III, Division 2, Groups A, B, C, D, E, F and G; Temperature Class T5; Temperature Ambient Range -40°C to +80°C; Hazardous (Classified) Locations.

Intrinsically Safe (Entity) for use in Class I, Zone 0, Gas Group IIC, Temperature Class T5; Temperature Ambient Range -40°C to +80°C; when installed per control drawing 105521; Explosive Atmospheres.

Enclosure Ingress Protection Ratings: Type 4, Type 4X, Type 6, IP66, IP67

Markings:

IS CL I, II, III, DIV 1 and 2, GP ABCDEFG
NI CL I, II, III, DIV 2, GP ABCDEFG
CL I, ZN 0, AEx ia IIC T5 Ga
Class I, Zone 2, Group IIC; T5
T5 Tamb = -40°C to +80°C
When Installed per Control Drawing 105521;
Type 4, Type 4X, Type 6, IP66, IP67

Description of Equipment:

Electrical Ratings:

For type of protection intrinsic safety, connections can only be made by connecting certified associated Intrinsically Safe apparatus having entity parameters.

For all other protection techniques, the electronic connections have the following nominal values:

Power Terminals: 5Vdc to 25Vdc; 0.4mA to 5mA
Solenoid 30Vdc, ≤750mA

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Intrinsically Safe Entity 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:

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

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

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.
2. For Division 2 installation, the Turck minifast® and eurofast® receptacles shall be mated with Turck minifast and eurofast cordsets, and the use of tool secured Turck lokfast® guards is required.

EC96Sbcdef. Stonel Eclipse EC Valve Position Monitor.

Equipment Ratings:

Nonincendive for use in Class I, II and III, Division 2, Groups A, B, C, D, E, F and G; Temperature Class T5; Temperature Ambient Range -40°C to +80°C; Hazardous (Classified) Locations.

Enclosure Ingress Protection Ratings: Type 4, Type 4X, Type 6, IP66, IP67

Markings:

NI CL I, II, III, DIV 2, GP ABCDEFG

Class I, Zone 2, Group IIC; T5

T5 Tamb = -40°C to +80°C

Type 4, Type 4X, Type 6, IP66, IP67

Description of Equipment:

Electrical Ratings:

The electronic connections have the following nominal values:

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AS-I Power Terminals: 26.5Vdc to 31.6Vdc

Output Terminals: 24Vdc, ≤85mA, 2W

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.
2. For Division 2 installation, the Turck minifast® and eurofast® receptacles shall be mated with Turck minifast and eurofast cordsets, and the use of tool secured Turck lokfast® guards is required.

EC97Sbdef. Stonel Eclipse EC Valve Position Monitor.

Equipment Ratings:

Nonincendive for use in Class I, II and III, Division 2, Groups A, B, C, D, E, F and G; Temperature Class T5; Temperature Ambient Range -40°C to +80°C; Hazardous (Classified) Locations.

Enclosure Ingress Protection Ratings: Type 4, Type 4X, Type 6, IP66, IP67

Markings:

NI CL I, II, III, DIV 2, GP ABCDEFG

Class I, Zone 2, Group IIC; T5

T5 Tamb = -40°C to +80°C

Type 4, Type 4X, Type 6, IP66, IP67

Description of Equipment:

Electrical Ratings:

The electronic connections have the following nominal values:

AS-I+/- Power Terminals: 26.5Vdc to 31.6Vdc

Output Terminals: 24Vdc, ≤85mA, 2W

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.
2. For Division 2 installation, the Turck minifast® and eurofast® receptacles shall be mated with Turck minifast and eurofast cordsets, and the use of tool secured Turck lokfast® guards is required.

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EC97Wbcdef. Stonel Eclipse EC Valve Position Monitor.

Equipment Ratings:

Nonincendive for use in Class I, II and III, Division 2, Groups A, B, C, D, E, F and G; Temperature Class T5; Temperature Ambient Range -40°C to +80°C; Hazardous (Classified) Locations.

Enclosure Ingress Protection Ratings: Type 4, Type 4X, Type 6, IP66, IP67

Markings:

NI CL I, II, III, DIV 2, GP ABCDEFG
Class I, Zone 2, Group IIC; T5
T5 Tamb = -40°C to +80°C
Type 4, Type 4X, Type 6, IP66, IP67

Description of Equipment:

Electrical Ratings:

The electronic connections have the following nominal values:

AS-I+/- Power Terminals: 26.5Vdc to 31.6Vdc
Output Terminals: 24Vdc, ≤85mA, 2W

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.
2. For Division 2 installation, the Turck minifast® and eurofast® receptacles shall be mated with Turck minifast and eurofast cordsets, and the use of tool secured Turck lokfast® guards is required.

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