

CERTIFICATE OF CONFORMITY



1. **HAZARDOUS (CLASSIFIED) LOCATION ELECTRICAL EQUIPMENT PER US REQUIREMENTS**
2. **Certificate No:** FM17US0239X
3. **Equipment:** Model EN and EG Series Valve Position Montiors
(Type Reference and Name)
4. **Name of Listing Company:** StoneL
5. **Address of Listing Company:** 26271 US Hwy 59
Fergus Falls, MN 56537, USA
6. The examination and test results are recorded in confidential report number:
3002488 dated 18th February 1991
7. FM Approvals LLC, certifies that the equipment described has been found to comply with the following Approval standards and other documents:
FM Class 3600:2011, FM Class 3610:2010, FM Class 3611:2004,
FM Class 3810:2005, ANSI/NEMA 250:1991
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:**
Intrinsically Safe with Entity Parameters and FISCO Parameters for use in Class I, II, III, Division 1, Group A, B, C, D, E, F, and G T5 Ta = -40°C to 80°C, Nonincendive with nonincendive field wiring parameters for use in Class I, Division 2, Group A, B, C, D T5 Ta = -40°C to 80°C, Suitable for Class II, Division 2, Group F and G T5 Ta = -40°C to 80°C, NEMA Type 4, 4X and 6 Hazardous (Classified) Indoor and Outdoor Locations.

Certificate issued by:

J.E. Marquedant

J.E. Marquedant
VP, Manager, Electrical Systems

31 July 2017

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

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SCHEDULE

US Certificate Of Conformity No: FM17US0239X

11. The marking of the equipment shall include:

Class I Division 1, Groups A, B, C, D, E, F and G; T5 Ta = -40°C to 80°C;

Class I, Division 1, Groups A, B, C and D T5 Ta = -40°C to 80°C;

Class II, Division 2; Groups F and G T5 Ta = -40°C to 80°C,

NEMA Type 4, 4X and 6

12. **Description of Equipment:**

General - The EN and EG Series Valve Position Monitors consist of dual solid-state sensors to detect and transmit valve positions. They are available as non-incendive and intrinsically safe version (EN) for hazardous areas with a removable module and in a general purpose, completely sealed micro-connector version (EN).

Construction – All mechanical parts of the EN and EG Series Valve Position Monitors are made of Lexan or Stainless steel and are corrosion resistant. The valve position monitors are fully sealed, submersible and capable of withstanding high pressure washdown.

EGabcde-f. Valve Position Monitor.

IS* / I,II,III / 1 / ABCDEFG / T5 Ta = -40°C to 80°C – 105149; Entity**; FISCO***;

NI / I / 2 / ABCD / T5 Ta = -40°C to 80°C — 105149; NIFW****;

S / II / 2 / FG / T5 Ta = -40°C to 80°C; Type 4, 4X, 6

a = Function 33, 34, 44, 92, 93, 94, 95, 96 and 97.

b = Enclosure C and P.

c = Junction 23, 24, 25 and 26.

d = Visual Indication X, G, R, F, 1, 2, 0, N, D, L, S and T.

e = Branding A, M and N.

f = Options 1-5 alpha or numeric digits for special and marketing identification (not affecting safety)

*Intrinsically Safe only when a = 44 and 93.

**Entity Parameters when a = 44, Ui = 22 V dc, li = 120 mA, Ci = 98 nF, Li = 1.56 mH, Pi = 2.0 W

***FISCO Parameters only when a = 93, Ui = 30 V dc, li = 380 mA, Ci = 0.0, Li = 0.0 mH, Pi = 5.32 W

****NIFW Parameters only when a = 93, Ui = 30 V dc, li = 380 mA, Ci = 0.0, Li = 0.0 mH, Pi = 5.32 W

****NIFW Parameters only when a = 96, 97, Ui = 37 V dc, li = 150 mA, Ci = 0.0 mH, Li = 0.0, Pi = 3.0 W

Special Conditions of Use:

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

ENabcde-f. Valve Position Monitor.

IS* / I,II,III / 1 / ABCDEFG / T5 Ta = -40°C to 80°C - 105073; Entity**; FISCO***;

NI / I / 2 / ABCD / T5 Ta = -40°C to 80°C - 105073; NIFW****;

S / II / 2 / FG / T5 Ta = -40°C to 80°C; Type 4, 4X, 6

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SCHEDULE

US Certificate Of Conformity No: FM17US0239X

a = Function 33, 34, 44, 92, 93, 94, 95, 96 and 97.

b = Enclosure C and P.

c = Junction 02, 05, 11 and 12.

d = Visual Indication X, G, R, F, 1, 2, 0, N, D, L, S and T.

e = Branding A, M and N.

f = Options 1-5 alpha or numeric digits for special and marketing identification (not affecting safety).

*Intrinsically Safe only when a = 44 and 93.

**Entity Parameters when a = 44, $U_i = 22\text{ V dc}$, $I_i = 120\text{ mA}$, $C_i = 98\text{ nF}$, $L_i = 1.56\text{ mH}$, $P_i = 2.0\text{ W}$

***FISCO Parameters only when a = 93, $U_i = 30\text{ V dc}$, $I_i = 380\text{ mA}$, $C_i = 0.0\text{ nF}$, $L_i = 0.0\text{ mH}$, $P_i = 5.32\text{ W}$

****NIFW Parameters only when a = 93, $U_i = 30\text{ V dc}$, $I_i = 380\text{ mA}$, $C_i = 0.0\text{ nF}$, $L_i = 0.0\text{ mH}$, $P_i = 5.32\text{ W}$

****NIFW Parameters only when a = 96, 97, $U_i = 37\text{ V dc}$, $I_i = 150\text{ mA}$, $C_i = 0.0\text{ nF}$, $L_i = 0.0\text{ mH}$, $P_i = 3.0\text{ W}$

13. Specific Conditions of Use:

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

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.

16. Certificate History

Details of the supplements to this certificate are described below:

Date	Description
18 th February 1991	Original Issue.
31 st July 2017	<u>Supplement 7:</u> Report Reference: RR210256 dated 31 st July 2017 Description of the Change: Minor drawing updates and removal of "Branding: N".

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