

CERTIFICATE OF CONFORMITY



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

2. **Certificate No:** FM21US0040
3. **Equipment:** 372X and 382X Series
(Type Reference and Name) Solenoids

4. **Name of Listing Company:** Norgren LLC dba Herion

5. **Address of Listing Company:** 5400 South Delaware Street
Littleton, CO 80120
United States

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

2Z2A6.AE dated 11th April 1997

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

FM Class 3600:2018, FM Class 3615:2018, FM Class 3810:1989,
ANSI/UL 746C:1995, 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.

Certificate issued by:



J.E. Marquedant

VP, Manager - Electrical Systems

13 October 2021

Date

To verify the availability of the Approved product, please refer to www.approvalguide.com

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SCHEDULE



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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:**

Versions 3726 and 3826 Solenoid Markings

Explosionproof for Class I, Division 1, Groups A, B, C and D; Dust-ignitionproof for Class II, Division 1, Groups E, F and G; T3A hazardous (classified) locations, indoors and outdoors (Type 4X) with an ambient operating temperature range of Ta= -20°C to +60°C.

Class III, Division 1 hazardous (classified) locations, indoors and outdoors (Type 4X) with an ambient operating temperature range of Ta= -20°C to +45°C.

Remaining versions of 372X and 382X Solenoid Markings

Explosionproof for Class I, Division 1, Groups A, B, C and D; Dust-ignitionproof for Class II, Division 1, Groups E, F and G; T3C; and Class III, Division 1 hazardous (classified) locations, indoors and outdoors (Type 4X) with an ambient operating temperature rating of Ta= -20°C to +60°C.

11. **The marking of the equipment shall include:**

Versions 3726 and 3826 Solenoid Markings

Class I Division 1, Groups A, B, C, D; T3A Ta = -20°C to +60°C; Type 4X

Class II, Division 1, Groups E, F, G, T3A Ta = -20°C to +60°C; Type 4X

Class III, Division 1; Ta = -20°C to +45°C; Type 4X

Remaining versions of 372X and 382X Solenoid Markings

Class I Division 1, Groups A, B, C, D; T3C Ta = -20°C to +60°C; Type 4X

Class II, Division 1, Groups E, F, G, T3C Ta = -20°C to +60°C; Type 4X

Class III, Division 1; Ta = -20°C to +60°C; Type 4X

12. **Description of Equipment:**

General - The 372X and 382X Series Solenoids are used to control valves for general purpose process applications. The control valves were not included in the scope of this program, as requested by the manufacturer. Supply voltage to the 372X and 382X Series Solenoids is 12/24Vdc, 110-120V, 40-60Hz, or 220-240V, 40-60Hz, with a corresponding wattage rating of 1.4 to 13 watts for the DC powered solenoids and 6 to 15 VA for the AC powered solenoids. The AC powered solenoids include a rectifier that converts the AC voltage to a DC voltage.

Construction - The 372X and 382X Series Solenoids body includes a coil and welded steel frame that is totally encapsulated using Cyglas 50IE polyester molding compound. The encapsulated welded steel frame includes a welded steel or stainless-steel conduit hub, 14 - 14 NPT, that is factory sealed as a result of the encapsulation. The steel frame and steel conduit hub are zinc plated to provide corrosion protection. The conduit hub has three flying lead conductors, two coil leads and one protective ground lead, that are used for field wiring connections. The internal coil winding, rectifier and lead connections are totally encapsulated. The coil windings

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are turned on a spool made of PPS-Ryton 4. All solenoid bodies are manufactured with a 16mm center core opening that is used for connection of a valve. The difference between the 372X and 382X Series Solenoids is that the 372X Series Solenoids include a reducing ring that slides into the center core opening of the solenoid body to reduce the center core opening from 16mm to 13mm.

Ratings – All Versions 3726 and 3826 Series Solenoids have an indoor / outdoor environmental rating of Type 4X; and the Ambient Operating Temperature range for Class I and Class II is Ta= -20°C to +60°C. The Class III ambient operating temperature range is Ta= -20°C to +45°C.

All Versions 372X and 382X Series Solenoids have an indoor / outdoor environmental rating of Type 4X; and have an Ambient Operating Temperature range of Ta= -20°C to +60°C.

372X and 382X Solenoids.

X = Nominal watt or volt/amp rating 0, 2, 3, 4, 5 or 7.

13. Specific Conditions of Use:

NONE

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
11 th April 1997	Original Issue.
25 th May 2021	<u>Supplement 2:</u> Report Reference: – RR227247 Dated 25 th May 2021. Description of the Change: Revised the Certificate of Conformity to the latest format. Nameplate drawing updated with Norgren reference. No other safety changes.
13 th October 2021	<u>Supplement 3:</u> Report Reference: – RR228884 Dated 13 th October 2021. Description of the Change: Revised ambient operation temperature range. Update made to company name Norgren LLC dba Herion. Update made to versions 3726 and 3826 Series Solenoid Class III ambient operating temperature range markings.

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