

CERTIFICATE OF CONFORMITY



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

2. **Certificate No:** FM17US0048X

3. **Component:**
(Type Reference and Name) Quartz QX and QC Series Valve Position Monitor

4. **Name of Listing Company:** Neles USA Inc. dba 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:

2R1A7.AE dated 3rd December 1990

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

FM Approvals Class 3600:2018, FM Approvals Class 3611:2004; FM Approvals Class 3615:2018, FM Approvals Class 3810:2005; ANSI/NEMA 250:2003; ANSI/IEC 60529:2004; ANSI/ISA 60079-0:2019; ANSI/ISA 60079-1:2015

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 component as examined, tested and Approved.

Certificate issued by:



J.E. Marquedant
VP, Manager - Electrical Systems

21 April 2020

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: FM17US0048X

10. Equipment Ratings:

Explosionproof for Class I, Division 1, Groups BCD, T5
 Dust-Ignitionproof for Class II / III, Division 1, Groups EFG, T5
 Nonincendive for Class I / II / III, Division 2, Groups ABCDEFG, T5
 Flameproof for Class I, Zone 1, AEx db IIC T5 Gb
 Nonincendive for Class I, Zone 2, Group IIC T5 Gc
 Type 4 / 4X / 6 / IP66 / IP67
 $-50^{\circ}\text{C} \leq \text{Ta} \leq +80^{\circ}\text{C}$

See equipment details for specific hazardous location ratings. Some models are not available with all ratings. Some models have a more limited ambient temperature range.

11. The marking of the equipment shall include:

Hazardous location ratings per Section 12
 Ambient temperature rating
 Manufacturer's name and address
 Model number
 Serial number
 Date Code
 Electrical ratings

12. **Description of Equipment:**

The Quartz QX and QC Series enclosure is a single flameproof compartment. The material of the base and all covers are fabricated from aluminum alloy or Stainless Steel. Each cover is prevented from opening by means of an M4 set-screw that locks the cover to the base. Up to three; ½ NPT, or ¾ NPT; threaded entries can be provided. The base-to-cover joint and the operating shaft are sealed with Buna-N o-rings. A series of different function modules may be mounted in the enclosure to provide different monitoring of a valve's position. An external visual indicator is also provided at the base of the enclosure.

The electrical ratings vary by function module, but are clearly specified on the product nameplate. The specific markings can be found on drawings 105025 and 105477.

The specific models described by this Certificate are as follows:

QXabcdefg. Valve Position Monitor.

XP / I / 1 / BCD / T5; Type 4 / 4X / 6 / IP66 / IP67; Ta = -40°C to +80°C
 DIP / II-III / 1 / EFG / T5; Type 4 / 4X / 6 / IP66 / IP67; Ta = -40°C to +80°C
 I / 1 / AEx db IIC T5 Gb; Type 4 / 4X / 6 / IP66 / IP67; Ta = -40°C to +80°C

a = Function 2V, 4V, 5V, 6V, 7V, 8V, BV, CV, TV, 2W, 4W, 5W, 6W, 7W, 8W, BW, CW, TW, or 14.
 b = Enclosure E, S, B, or J.
 c = Junction 02 or 03.
 d = Shaft output X, S, N, or H.

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SCHEDULE

US Certificate of Conformity No: FM17US0048X

e = Visual Indicator R, G, C, 1, 2, 3, 4, 5, X, N, D, A, S, T, U, V, W or O.

f = Branding A or M.

g = Options 'Special Unit Digits'.

Note: 'Special Unit Digits' are do not affect the integrity of the housing, the electrical safety, or the title plate.

***QX*abcdefg. Valve Position Monitor.**

XP / I / 1 / BCD / T5; Type 4 / 4X / 6 / IP66 / IP67; Ta = -40°C to +80°C

DIP / II-III / 1 / EFG / T5; Type 4 / 4X / 6 / IP66 / IP67; Ta = -40°C to +80°C

NI / I-II-III / 2 / ABCDEFG / T5; Type 4 / 4X / 6 / IP66 / IP67; Ta = -40°C to +80°C

I / 1 / AEx db IIC T5 Gb; Type 4 / 4X / 6 / IP66 / IP67; Ta = -40°C to +80°C

I / 2 / IIC / T5 Gc; Type 4 / 4X / 6 / IP66 / IP67; Ta = -40°C to +80°C

*When a = 2E, 4E, 5E, 7E, BE, CE, 2F, 4F, 5F, 7F, BF, CF, or TF, Ta = -25°C to +70°C

When a = 2N, 4N, 5N, 6N, 7N, BN, CN, or, TN, Ta = -25°C to +68°C

When a = 2A, 4A, 5A, 7A, BA, CA, or TA, Ta = -40°C to +69°C

When a = 2B, Ta = -25°C to +69°C

a = Function 2A, 4A, 5A, 7A, BA, CA, TA, 2B, 2J, 4J, 5J, 7J, BJ, CJ, 2M, 4M, 5M, 7M, BM, CM, 2N, 4N, 5N, 6N, 7N, BN, CN, TN, 2P, 4P, 5P, 7P, BP, CP, 2L, 4L, 5L, 7L, BL, CL, 2H, 4H, 5H, 7H, 8H, BH, CH, 2S, 4S, 5S, 7S, BS, CS, 8Y, 2G, 4G, 5G, 7G, BG, CG, 2E, 4E, 5E, 7E, BE, CE, TE, 2F, 4F, 5F, 7F, BF, CF, TF, 33, 53, 73, B3, C3, 35, 5T, 7T, BT, CT, TT, 44, 54, 74, B4, C4, 45, 5R, 7R, BR, CR, TR, 82, 83, 86, 87, 92, 93, 96, 97, 5O, 7O, TO, BO, CO, 4X, or 6X.

b = Enclosure E, S, B or J.

c = Junction 02 or 03.

d = Shaft output X, S, N, or H.

e = Visual Indicator R, G, C, 1, 2, 3, 4, 5, X, N, D, A, S, T, U, V, W or O.

f = Branding A or M.

g = Options 'Special Unit Digits'.

Note: 'Special Unit Digits' do not affect the integrity of the housing, the electrical safety, or the title plate.

***QC*abcdefg. Valve Position Monitor.**

XP / I / 1 / BCD / T5; IP66; Ta = -50°C to +80°C

DIP / II-III / 1 / EFG / T5; IP66 Ta = -50°C to +80°C

I / 1 / AEx db IIC T5 Gb; IP66; Ta = -50°C to +80°C

a = Function 35, 45, 2V, 4V, 2W, or 4W

b = Enclosure E, S, B, or J.

c = Junction 03.

d = Shaft output X, S, N, or H.

e = Visual Indicator R, G, C, 1, 2, 3, 4, 5, X, N, D, A, S, T, U, V, W or O.

f = Branding A or M.

g = Options 'Special Unit Digits'.

Note 2: 'Special Unit Digits' are do not affect the integrity of the housing, the electrical safety, or the title plate.

See also FM17US0129X for series QC with type of protection "i".

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13. Specific Conditions of Use:

1. Consult the manufacturer if dimensional information on the flameproof joints is necessary.
2. To minimize the risk of electrostatic sparking, the equipment shall be cleaned 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
3 rd December 1990	Original Issue.
26 th February 2017	<u>Supplement 19</u> Report Reference: 2R1A7AE - RR208397 dated 26 th February 2017. Description of the Change: Introduction of alternate construction die-cast aluminum base, introduction of alternate construction die-cast aluminum short cover, consolidation of instruction sheets into a single manual, revisions to function assemblies not affecting explosionproof or dust-ignitionproof protection.
29 th November 2017	<u>Supplement 20</u> Report Reference: 2R1A7AE - RR212001 dated 29 th November 2017. Description of the Change: Addition of Transmitter "T__" options. Revision to "35" function assembly.
9 th October 2019	<u>Supplement 21</u> Report Reference: 2R1A7AE - PR452032 dated 9 th October 2019. Description of the Change: Addition of "2B" function option. Revision to "96", "97", "86", and "87" function options. Added "QC" section. Addition of IP66, IP67. Standards updates, Added X condition. Removed "2X", "5X", "7X", "BX" and "CX" function options.
21 st April 2020	<u>Supplement 22</u> Report Reference: RR222856 dated 21 st April 2020. Description of the Change: Company name change.

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