

# CERTIFICATE OF CONFORMITY



1. **HAZARDOUS (CLASSIFIED) LOCATION ELECTRICAL EQUIPMENT PER US REQUIREMENTS**
2. **Certificate No:** FM17US0074X
3. **Equipment:** QC41, QC42, QC43 FieldQ and Bettis Q- Series Actuator  
**(Type Reference and Name)** Control Modules
4. **Name of Listing Company:** Emerson Process Management Valve Automation inc.
5. **Address of Listing Company:** 19200 Northwest Freeway  
Houston, Texas  
USA
6. The examination and test results are recorded in confidential report number:  
  
3045972 dated 31<sup>st</sup> August 2012
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 3616:2011, FM Class 3810:2005,  
ANSI/NEMA 250:2003, ANSI/IEC 60529:2004
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:**  
  
Explosionproof for use in Class I, Division 1, Groups B, C and D; and Class I, Zone 1, Group IIB+H<sub>2</sub>;  
Dust-ignitionproof for use in Class II,III, Division 1, Groups E, F and G hazardous (classified) locations,  
indoors and outdoors, Type 4X/IP66.

## Certificate issued by:



J.E. Marquedant  
VP, Manager, Electrical Systems

26 November 2018

Date

To verify the availability of the Approved product, please refer to [www.approvalguide.com](http://www.approvalguide.com)

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

FM Approvals LLC, 1151 Boston-Providence Turnpike, Norwood, MA 02062 USA  
T: +1 (1) 781 762 4300 F: +1 (1) 781 762 9375 E-mail: [information@fmapprovals.com](mailto:information@fmapprovals.com) [www.fmapprovals.com](http://www.fmapprovals.com)

# SCHEDULE



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11. The marking of the equipment shall include:

Model QC4 FieldQ and Bettis Q

Class I Division 1, Groups B, C, D; T4 Ta = -25°C to +60°C; T6 Ta = -25°C to +60°C Type 4X, IP66

Class II, Division 1, Groups E, F, G; Class III, Division 1; T4 Ta = -25°C to +60°C; T6 Ta = -25°C to +60°C; Type 4X, IP66

Class I, Zone 1, IIB+H2 T4 Ta = -25°C to +60°C; T6 Ta = -25°C to +60°C; Type 4X, IP66

12. **Description of Equipment:**

The QC41, QC42 and QC43 FieldQ and Bettis Q-Series Actuator Control Modules are a family of actuators and actuator control modules integrated together for use in hazardous (classified) locations. The QC41, QC42 and QC43 FieldQ and Bettis Q-Series Actuator Control Modules have ½ inch or ¾ inch female NPT opening are provided for field wiring (Conduit Seal Required at the Enclosure). The QC41, QC42 and QC43 FieldQ and Bettis Q Series Actuator Control Modules enclosure are Type 4X and IP66 rated for use indoors and outdoors. The maximum working pressure ratings (MWPR) of the QC41, QC42 and QC43 FieldQ and Bettis Q-Series Actuator Control Modules, is 10 bar.

#### Operation Temperature Ranges

The QC41, QC42 and QC43 FieldQ and Bettis Q-Series Actuator Control Modules have an ambient temperature range of Tambient from -25°C to +60°C.

#### Electrical Data

The electrical ratings are 24Vdc, 1.8 Watts or 3.6 Watts, 115 Vac, 3.6 Watts or 7.2 Watts, or 230Vac, 3.6 Watts or 7.2 Watts. For signal output the following configurations of switches can be used.

Potential free contact switches: 125Vac/1A, 30VDC/0.1A

2 Wire proximity switches: 20-250Vac/100mA, 10-300VDC/100mA

2 Wire NAMUR proximity switches: 8VDC/3mA

3 Wire proximity switches NPN or PNP: 10-30VDC/100mA

#### ***QC4abcdefg. FieldQ Actuator Control Modules.***

a = Control Module Type: 1, 2, 3

b = Conduit Connection: U

c = Protection Method: F5

d = Control Module Options: M, G, O, C, N, H

e = Action: S, D, F

f = Future Expansion Code: A

g = Language Code: 1

#### ***QC4abcdefg. Bettis Q-Series Actuator Control Modules.***

a = Control Module Type: 1, 2, 3

b = Conduit Connection: U

c = Protection Method: F5

d = Control Module Options: M, G, O, C, N, H

e = Action: S, D, F

f = Future Expansion Code: K

g = Language Code: 1

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# **SCHEDULE**



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**13. Specific Conditions of Use:**

1. *Temperature Codes* for the ratings of Class I, Division 1, Groups BCD; Class I, Zone 1, IIB+H<sub>2</sub> and Class II, III, Division 1, Groups EFG hazardous (classified) locations shall be T4 or T6 for the ambient temperature range of  $-25^{\circ}\text{C} \leq T_a \leq 60^{\circ}\text{C}$ .

**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
31 <sup>st</sup> August 2012	Original Issue.
2 <sup>nd</sup> March 2017	<u>Supplement 2:</u> Report Reference: – RR208441 dated 2 <sup>nd</sup> March 2017. Description of the Change: Change of Ambient temperature range, addition of Temperature code Specific Condition of Use and convert to new certificate format.
26 <sup>th</sup> November 2018	<u>Supplement 3:</u> Report Reference: - RR215311 Dated of 26 <sup>th</sup> November 2018 Description of the Change: updated label to reflect new design control location. Updated product model code. Transfer of Company from Emerson Process Management, Valve Automation, EL-O-Matic BV to Emerson Process Management Valve Automation Inc.

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