

# CERTIFICATE OF CONFORMITY



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

2. **Certificate No:** FM17US0224

3. **Equipment:** MS10 Level Switch  
(Type Reference and Name)

4. **Name of Listing Company:** ABB, Inc. – BU Measurement Products

5. **Address of Listing Company:** 125 East County Line Road  
Warminster, PA 18974  
USA

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

3012744 dated 22<sup>nd</sup> December 2014

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 3615:2006, FM Class 3810:2005,  
ANSI/ISA S12.0.01:1998, ANSI/ISA S12.22.01:1998, 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:

Explosionproof for Class I, Division 1, Groups A, B, C and D; flameproof for Class I, Zone 1 AEx d IIC; intrinsically safe for Class I, Division 1 and 2, Groups A, B, C, D, E, F and G; intrinsically safe for Class I, Zone 0 AEx ia IIC; dust-ignitionproof for Class II/III, Division 1, Groups E, F and G hazardous (classified) locations, indoor/outdoor (NEMA Type 4X).

**Certificate issued by:**

J. E. Marquedant  
VP, Manager, Electrical Systems

8 August 2017

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**

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# SCHEDULE

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11. The marking of the equipment shall include:

Class I Division 1, Groups A, B, C and D; T6 Ta = -40°C to +80°C, T3 Ta = -40°C to +150°C;  
Class I, Zone 1, AEx d, IIC; T6 Ta = -40°C to +80°C, T3 Ta = -40°C to +150°C;  
Class II, III, Division 1, Groups E, F and G; T6 Ta = -40°C to +80°C, T3 Ta = -40°C to +150°C;  
Class I, Division 1, Groups A, B, C and D; T6 Ta = -40°C to +80°C  
Class I, Zone 0, AEx ia, IIC; T6 Ta = -40°C to +80°C; Type 4X

12. **Description of Equipment:**

The MS10 Level Switch measures the level of a liquid using a pivoting stainless steel float with an integral magnet to activate a reed switch. The body of the apparatus is in the form of a threaded connector, to facilitate fitting into pipework or tank walls. The reed switch is considered to be simple apparatus. The MS10 Level Switch may optionally be fitted with a variety of extended supports for the float and the reed switch. The reed switch is fitted with unterminated leads for user connection.

The MS10 Level Switch is made of a solid stainless steel housing which is available in a selection of process connection threads of various flange sizes and one ½-NPT conduit entry.

**MS10.a.b.c.d.e.f.g. Level Switch.**

XP/I /1/ABCD/T6 Ta= -40°C to 80°C; T3 Ta= -40°C to 150°C;  
I/1/AEx d IIC/T6 Ta= -40°C to 80°C; T3 Ta= -40°C to 150°C;  
DIP/II,III/1/EFG/T6 Ta= -40°C to 80°C; T3 Ta= -40°C to 150°C;  
IS/I /1/ABCD /T6 Ta= -40°C to 80°C; - MS10-0923-1;  
I/O/AEx ia IIC/T6 Ta= -40°C to 80°C; - MS10-0923-1; Entity; Type 4X.

**Entity Parameters**

Vmax = 100 V, Imax = 750 mA, Ci = 0.0 F, Li = 0.0 H

a = Process Connection 15, 20, WP, FL, T2 or S2.

b = Flange Process Connection Material: X, 316 or CST

c = Process Connection Size/Rating/Type: xxx (representing specific type, material & rating from SLG-0001-1 Flange Designation Chart).

d = Tag with Customer Specified Information: X or NT.

e = Insertion Length EXT1, EXT2, EXT3, EXT4 or EXTN (custom insertion length N = 6½ to 14 in / 168 to 356 mm).

f = High Pressure Option: X, HP, 1, 2, 3, 4 or 5.

g = Approvals: N3

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**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
22 <sup>nd</sup> December 2014	Original Issue.
8 <sup>th</sup> August 2017	<u>Supplement 4:</u> Report Reference: – RR209734 dated 8 <sup>th</sup> August 2017 Description of the Change: Update to new certificate format and change design and production address. Certificate transferred from ABB Inc. Baton Rouge, LA. Correct ambient temperature range to add low ambient.

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