

CERTIFICATE OF CONFORMITY



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

2. **Certificate No:** FM17US0304X

3. **Equipment:** LMS200 Magnetic Level Gauge Switch
(Type Reference and Name)

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

5. **Address of Listing Company:** 125 East County Line Rd
Warminster PA 18974
United States

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

3060068 dated 6th June 2018

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 3610:2018, FM Class 3611:2018, FM Class 3615:2018, FM Class 3616:2011, FM Class 3810:2018, ANSI / ISA 61010-1 (82.02.01): 2015, ANSI / UL 61010-1:2015, ANSI / ISA 60079-0:2013, ANSI / UL 60079-1:2015, ANSI / ISA 60079-11:2014, ANSI / ISA 60079-31:2015, ANSI / NEMA 250:2014, UL 50:2015, UL 50E:2015, 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.

Certificate issued by:

J.E. Marquedant
Vice President, Manager, Electrical Systems

6 June 2018

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

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 www.fmapprovals.com

SCHEDULE



US Certificate Of Conformity No: FM17US0304X

10. Equipment Ratings:

Explosionproof for Class I, Division 1, Groups A, B, C, and D; Dust-ignitionproof for Class II, III, Division 1, Groups E, F, and G; Flameproof for Class I, Zone 1, AEx db IIC T6...T1 Gb; and Protection by Enclosure for Zone 21, AEx tb IIIC T85°C...T450°C Db Hazardous (Classified) Locations, indoor/outdoor Type 4X, IP66/67.

Intrinsically safe for Class I, II and III, Division 1, Groups A, B, C, D, E, F, and G; Intrinsically safe for Class I, Zone 0, AEx ia IIC; Intrinsically safe for Zone 20, AEx ia IIIC T85°C to T450°C; Nonincendive for Class I, Division 2, Groups A, B, C and D when supplied with nonincendive field wiring parameters; Suitable for Class II, Division 2, Groups E, F and G; Suitable for Class III, Division 1 and 2 Hazardous Locations. Temperature classification T6...T5 for gases and vapors and T85°C to T450°C dusts and fibers with an ambient temperature range of -40°C to 70°C when installed per control drawing 3KXL130200G0122.

11. The marking of the equipment shall include:

For LMS200 XP version:

Class I Division 1, Groups A, B, C and D T6...T1 Ta = -40°C to +70°C; Type 4X, IP66/67
Class I, Zone 1, AEx db IIC T6...T1 Gb Ta = -40°C to +70°C; Type 4X, IP66/67
Class II, III, Division 1, Groups E, F and G T6...T3B Ta = -40°C to +70°C; Type 4X, IP66/67
Zone 21, AEx tb IIIC T85°C...T165°C Ta = -40°C to +70°C; Type 4X, IP66/67

For LMS200 IS version:

Class I,II,III, Division 1, Groups A, B, C, D, E, F and G; T6...T5 Ta = -40°C to +70°C; Type 4X
Class I, Zone 0, AEx ia IIC T6...T5 Ta = -40°C to +70°C; Type 4X
Zone 20, AEx ia IIIC T85°C...T450°C Ta = -40°C to +70°C; Type 4X
Class I, Division 2, Groups A, B, C and D; T6...T5 Ta = -40°C to +70°C; Type 4X
Class II, Division 2, Groups E, F and G; T6...T5 Ta = -40°C to +70°C; Type 4X
Class III, Division 1; T6...T5 Ta = -40°C to +70°C; Type 4X

12. Description of Equipment:

General - The LMS200 Magnetic Level Gauge Switch is used for measuring fluid level. The LMS200 has two magnetically actuated single pole double-throw switches. The LMS200 enclosure mounts to an external pipe that contains a magnetic float to sense a high or low level within a vessel.

Construction - The LMS200 consists of a single compartment electronics housing with thread-on cover. The enclosure has a single threaded conduit opening.

Ratings - The LMS200 operates at 250 V ac/dc 10 A. The Level Gauge Switch is rated for use in an ambient temperature range of -40°C to +70°C.

LMS200.a.b.c.d Magnetic Level Gauge Switch

a = Approval: N4, M1

b = Mounting: A1 or A2

c = Insulation: Y0 or P1

d = Electrical Connection Size: A1, A2, A3, C1, C2, C3, or C4

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@fmaprovals.com www.fmaprovals.com

SCHEDULE

US Certificate Of Conformity No: FM17US0304X

13. Specific Conditions of Use:

1. Consult the manufacturer if dimensional information on the flameproof joints is necessary.
2. The non-metallic label and painted enclosure may store an electrostatic charge and become a source of ignition in Group II and III environments. Care should be taken to prevent the buildup of electrostatic charge. Clean only with a damp cloth.
3. Housing and cover are made from aluminum. Assess material suitability for the target environment before deploying.
4. The relationship between the temperature class, the maximum surface temperature, the ambient temperature and the process temperature is as follows:

| For Gases and Vapours (for IS and non-incendive) | |
|---|-------------------|
| Maximum Process Temperature | Temperature Class |
| 75 °C | T6 |
| 90 °C | T5 |

| For Dusts and Fibres (for IS and non-incendive) | | |
|--|-------------------|-------------------|
| Maximum Process Temperature | Temperature Class | Temperature Class |
| 80 °C | T85 °C | T6 |
| 95 °C | T100 °C | T5 |

| For Gases and Vapours (for XP and AEx db) | |
|--|-------------------|
| Maximum Process Temperature | Temperature Class |
| 75 °C | T6 |
| 90 °C | T5 |
| 125 °C | T4 |
| 190 °C | T3 |
| 290 °C | T2 |
| 416 °C | T1 |

| For Dusts and Fibres (for DIP and AEx tb) | | |
|--|-------------------|-------------------|
| Maximum Process Temperature | Temperature Class | Temperature Class |
| 80 °C | T85 °C | T6 |
| 95 °C | T100 °C | T5 |
| 130 °C | T135 °C | T4 |
| 160 °C | T165 °C | T3B |

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@fmaprovals.com www.fmaprovals.com

SCHEDULE



US Certificate Of Conformity No: FM17US0304X

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 |
|---------------------------|-----------------|
| 6 th June 2018 | Original Issue. |

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@fmaprovals.com www.fmaprovals.com