

EU-TYPE EXAMINATION CERTIFICATE



Equipment or Protective systems intended for use in Potentially
Explosive Atmospheres - Directive 2014/34/EU

EU-Type Examination Certificate No: FM17ATEX0089X

Equipment or protective system:
(Type Reference and Name) LMS200 Magnetic Level Gauge Switch

Name of Applicant: ABB Inc - BU Measurement Products

Address of Applicant: 125 East County Line Rd
Warminster PA 18974
United States

This equipment or protective system and any acceptable variation thereto is specified in the schedule to this certificate and documents therein referred to.

FM Approvals Ltd, notified body number 1725 in accordance with Article 17 of Directive 2014/34/EU of 26 February 2014, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.

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

3060068 dated 6th June 2018

Compliance with the Essential Health and Safety Requirements, with the exception of those identified in item 15 of the schedule to this certificate, has been assessed by compliance with the following documents:

EN 60079-0:2012 + A11:2013, EN 60079-11:2012, EN 60529:1991 A1:2000 + A2:2013

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.

This EU-Type Examination certificate relates only to the design, examination and tests of the specified equipment or protective system in accordance to the directive 2014/34/EU. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by this certificate.

The marking of the equipment or protective system shall include:



II 1 G Ex ia IIC T6...T5 Ga -40 °C ≤ Ta ≤ 70 °C; IP66 / 67
II 1 D Ex ia IIIC T85 °C...T450 °C Da -40 °C ≤ Ta ≤ 70 °C; IP66 / 67

Andrew Was
Deputy Certification Manager, FM Approvals Ltd.

Issue date: 27th June 2018

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

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SCHEDULE



Member of the FM Global Group

to EU-Type Examination Certificate No. FM17ATEX0089X

13 Description of Equipment or Protective System:

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

Electrical Ratings

Ui = 14 V, li = 1200 mA, Pi = 4.20 W; Ci = 0; Li = 0

Ui = 18 V, li = 440 mA, Pi = 1.98 W; Ci = 0; Li = 0

Ui = 24 V, li = 174 mA, Pi = 1.04 W; Ci = 0; Li = 0

Ui = 30 V, li = 101 mA, Pi = 757 mW; Ci = 0; Li = 0

Ui = 60 V, li = 29 mA, Pi = 435 mW; Ci = 0; Li = 0

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

a = Approval: E5, M1.

b = Mounting: A1 or A2.

c = Insulation: Y0 or P1.

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

14 Specific Conditions of Use:

1. When the manufacturer of the equipment has not identified the type of protection on the label, the user shall, on installation, permanently mark the label with the type of protection used.
2. The non-metallic label and painted enclosure may store an electrostatic charge and become a source of ignition in Group II and Group III environments. Care should be taken to prevent the buildup of electrostatic charge. Only clean with a damp cloth.
3. Install in accordance with ABB drawing number 3KXL130200G0122.
4. Housing and cover are made from aluminium. Assess material suitability for the target environment before deploying to avoid an ignition hazard due to impact or friction.
5. The relationship between the temperature class, the maximum surface temperature, the ambient temperature and the process temperature is as follows:

For Gases and Vapours	
Maximum Process Temperature	Temperature Class
75 °C	T6
90 °C	T5

For Dusts and Fibres	
Maximum Process Temperature	Temperature Class
80 °C	T85 °C
95 °C	T100 °C
130 °C	T135 °C
195 °C	T200 °C
295 °C	T305 °C
416 °C	T450 °C

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15 Essential Health and Safety Requirements:

The relevant EHSRs that have not been addressed by the standards listed in this certificate have been identified and assessed in the confidential report identified in item 8.

16 Test and Assessment Procedure and Conditions:

This EU-Type Examination Certificate is the result of testing of a sample of the product submitted, in accordance with the provisions of the relevant specific standard(s), and assessment of supporting documentation. It does not imply an assessment of the whole production.

Whilst this certificate may be used in support of a manufacturer's claim for CE Marking, FM Approvals Ltd accepts no responsibility for the compliance of the equipment against all applicable Directives in all applications.

This Certificate has been issued in accordance with FM Approvals Ltd's ATEX Certification Scheme.

17 Schedule Drawings

A list of the significant parts of the technical documentation is annexed to this certificate and a copy has been kept by the Notified Body.

18 Certificate History

Details of the supplements to this certificate are described below:

Date	Description
27 th June 2018	Original Issue.

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Blueprint Report

ABB Inc - BU Measurement Products (1000000328)

Class No 3610

Original Project I.D. 3060068

Certificate I.D. FM17ATEX0089X

<u>Drawing No.</u>	<u>Revision Level</u>	<u>Drawing Title</u>	<u>Last Report</u>
3KXL000671U0102	A	MICROSWITCH 250V/12A 0.5N ROLLER LEVER	3060068
3KXL000672U0101	B	LMS200 BARE PCB	3060068
3KXL000674U0101	B	LMS200 PCB ASSEMBLY	3060068
3KXL000678U0101	A	LMS200 CHASSIS ASSEMBLY	3060068
3KXL000687U0101	A	LMS200 TERMINAL COVER	3060068
3KXL000690U1102	A	SCREW M4X0.7 14MM 316SS SOC HEAD SEALING	3060068
3KXL000691U0101	A	LMS200 HOUSING ASSEMBLY	3060068
3KXL000692U0101	A	LMS200 MAGNETIC LEVEL GAUGE SWITCH	3060068
3KXL000699U0109	NC	LMS200 NAMEPLATE	3060068
3KXL000715U0101	B	LMS200 CORE ASSEMBLY	3060068
3KXL130200G0001	NC	LMS200 GENERAL ASSEMBLY DRAWING	3060068
3KXL130200G0009	NC	LMS200 FLAMEPATH DRAWING	3060068
3KXL130200G0122	NC	LMS200 IS/NI CONTROL DRAWING	3060068
OI/LMS200-EN	A	OPERATING INSTRUCTION MANUAL	3060068