

EU-TYPE EXAMINATION

CERTIFICATE

Equipment or Protective System Intended for use in Potentially Explosive Atmospheres Directive
2014/34/EU

1. **EU-Type Examination Certificate Number:** ITS14ATEX27940X **Issue 02**
2. **Product:** MS50 Buoyancy Level Switch
3. **Manufacturer:** ABB Inc.
4. **Address:** 125 East Country Line Road; Warminster, PA 18974; USA
5. This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.
6. Intertek Testing and Certification Limited, Notified Body number 0359 in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council dated 26 February 2014, certifies that the product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II of the Directive.
7. Compliance with the Essential Health and Safety Requirements has been assured by compliance with EN 60079-0:2012+A11:2013 and EN 60079-11:2012 except in respect of those requirements referred to within item 14 of the Schedule.
8. If the sign "X" is placed after the certificate number, it indicates that the product is subject to the special conditions of use specified in the Schedule to this certificate.
9. This EU-Type Examination Certificate relates only to the design and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.
10. The marking of the product shall include the following:



II 1 G Ex ia IIC T* Ga

II 1 D Ex ia IIIC T* Da IP66

-40°C ≤ Tamb ≤ 66°C

Certification Officer:



Kevin J. Wolf

Date:

29 June 2020

SCHEDULE:

EU-Type Examination Certificate Number:

ITS14ATEX27940X Issue 02

11. Description of Equipment or Protective System

The product is a series of Magnetically Actuated Electric Switch Assemblies using Intrinsic Safety, “Ex ia”, protection (Diode Safety Barrier Supply). The product incorporates up to six (6) Magnetic Reed Switches in series based on tank depth. The switches are actuated by a magnetic float. The same product/construction also has certification as Ex db IIC and Ex tb IIC. Application for Zone 0 and/or Zone 20 when supplied by Diode Safety Barriers.

Temperature Classification:

T*: Ex ‘ia’ - Gasses/Vapors		T*: Ex ‘ia’ – Dust	
T Class	Max Process	T Class	Max Process
T6	66.3°C	T85°C	66.3°C
T5	81.3°C	T100°C	81.3°C
T4	116.3°C	T135°C	116.3°C
T3	181.3 °C	T200°C	181.3°C
T2	276.3°C	T305°C	276.3°C
T1	426.3°C	T450°C	426.3°C

Entity Parameters:

Ui (V)	Ii (mA)	Pi (mW)	Li	Ci
7.2	1000	1000	3uH	2.7pF
15.75	723	1000		
20	267	1000		
25.4	136	863		
28	120	840		
45	27	303		

12. Report Number

Intertek Report: 103106616CRT-200 Dated: 29 June 2020.

SCHEDULE:

EU-Type Examination Certificate Number:

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13. Special Conditions of Certification

(a). Special Conditions of Use

Installation Requirements (EPL Ga):

- When non-metallic probe materials are used (PVC, CPVC, and PVD), there is a risk of ignition from electrostatic discharge due to the flow of non-conductive media (for example in stirring vessels or pipes). The user must decide on the suitability of the equipment for the particular application.
- Metallic materials exceed the material limits imposed on type Ga equipment suitable information to be provided to ensure safe installation.

(b). Conditions of Manufacture - Routine Tests

- Dielectric Strength Test - Equipment contains separate IS circuits; therefore routine dielectric strength testing of 500VAC shall be performed between IS circuits in the equipment.

14. Essential Health and Safety Requirements (EHSRs)

The relevant Essential Health and Safety Requirements (EHSRs) have been identified and assessed in Intertek Report: 103106616CRT-200 Dated: 29 June 2020.

15. Drawings and Documents

Title:	Drawing No.:	Rev. Level:	Date:
Single Compartment Housing Explosion Proof & Flameproof Certification	HSG2020	D	10/16/13
MS50 Buoyancy Level Switch General Assembly and options	MS50-0000-1	A	01/30/14
MS50 Buoyancy Level Switch ATEX & IEX Nametag Intrinsic Safety Option	TAG0254	A	04/22/16
MS50 ATEX & IECEx Electrical Interconnect Diagram	ELE0038	NC	04/01/14
MS50 Buoyancy Level Switch Nameplate Marking Procedure	TAG0070	B	04/09/14
MS50 Buoyancy Level Switch Printed Circuit Board Terminal Assembly	MS50-2010-1	C	04/30/13
Operating Instructions Manual for MS50 buoyancy Level Switch	OI_MS50-EN	N/A	N/A

SCHEDULE:

EU-Type Examination Certificate Number:

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16. Details of Certificate changes Issue 1

Performed under Intertek Report No. Intertek Reports 100756809CRT-008 dated May 2014 (UK G101234296), 102612865CRT-006a and 102612865CRT-006b dated 2017-05-10.

This variation comprises the following changes to the equipment:

- Update manufacture and applicant address and associated drawing changes
- Update to directive 2014/34/EU

The following drawings have changed as part of this variation:

Title:	Drawing No.:	Rev. Level:	Date:
Single Compartment Housing Explosion Proof & Flameproof Certification	HSG2020	D	10/16/13
MS50 Buoyancy Level Switch General Assembly and options	MS50-0000-1	A	01/30/14
MS50 Buoyancy Level Switch ATEX & IEX Nametag Intrinsic Safety Option	TAG0254	A	04/22/16
MS50 ATEX & IECEx Electrical Interconnect Diagram	ELE0038	NC	04/01/14
MS50 Buoyancy Level Switch Nameplate Marking Procedure	TAG0070	C	01/10/17
MS50 Buoyancy Level Switch Printed Circuit Board Terminal Assembly	MS50-2010-1	C	04/30/13
Operating Instructions Manual for MS50 buoyancy Level Switch	OI_MS50-EN	N/A	N/A

SCHEDULE:

EU-Type Examination Certificate Number:

ITS14ATEX27940X Issue 02

Details of Certificate changes Issue 2

Performed under Intertek Report No. Intertek Report 103106616CRT-200 dated 2020-06-30 (This Report).

This variation comprises the following changes to the equipment:

- Updated standards:
 - A. From: EN 60079-0:2006 To: EN 60079-0:2012+A11:2013,
 - B. From: EN 60079-11:2007 To: EN 60079-11:2012
 - C. Remove: EN 60079-26:2007+COR:2011(Not Applicable to Ex ia)
 - D. Remove: EN 61241-11:2005 (Replaced By EN 60079-0 and EN 60079-11)
- Change Address: 125 East Country Line Road; Warminster, PA 18974; USA
- Correct Entity Parameters:

The following drawings have changed as part of this variation:

Title:	Drawing No.:	Rev. Level:	Date:
MS50 BUOYANCY LEVEL SWITCH GENERAL ASSEMBLY AND OPTIONS	MS50-0000-1	B	06/01/20
MS50 BUOYANCY LEVEL SWITCH NAMEPLATE MARKING PROCEDURE	TAG0070	D	06/02/20
MS50 ATEX/IECEx INTRINSIC SAFETY NAMEPLATE	TAG0254	C	06/26/20
MS50 ATEX & IECEx INTRINSICALLY SAFE INSTALLATION DRAWING	ELE0038	A	06/01/20
MS50 ATEX/IECEx I.S. BARE PCB	MS50-2010-2	NC	01/27/20
WIRE 26AWG PTFE UL1199 3COND RED/WHI/BLK	3KXL000787U0102	NC	12/27/19
ABB MEASUREMENT & ANALYTICS OPERATING INSTRUCTION MANUAL	OI_MS50-EN	-	2020