

Translation

EU-Type Examination Certificate

Equipment intended for use in potentially explosive atmospheres
Directive 2014/34/EU

EU-Type Examination Certificate Number: **BVS 17 ATEX E 081 X**

Product: **Rotating-paddle bin level indicator type MBA8*0Z* and MBA888Z***

Manufacturer: **MBA Instruments GmbH**

Address: **Friedrich-List-Straße 5, 25451 Quickborn, Germany**

This product and any acceptable variations thereto are specified in the appendix to this certificate and the documents referred to therein.

DEKRA Testing and Certification GmbH, Notified Body number 0158, in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this 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 to the Directive.

The examination and test results are recorded in the confidential Report No. BVS PP 19.2018 EU.

The Essential Health and Safety Requirements are assured in consideration of:

EN IEC 60079-0:2018
EN 60079-31:2014

General requirements
Protection by Enclosure "t"

Except in respect of those requirements listed under item 18 of the appendix.

If the sign "X" is placed after the certificate number, it indicates that the product is subject to the Special Conditions for Use specified in the appendix to this certificate.

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.

The marking of the product shall include the following:

 **II 1/2D Ex ta/tb IIIC T100°C Da/Db**

DEKRA Testing and Certification GmbH
Bochum, 2019-02-19

Signed: Jörg-Timm Kilisch

Managing director

13 **Appendix**
 14 **EU-Type Examination Certificate**

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15 **Product description**

15.1 **Subject and type**

Rotating-paddle bin level indicators type

MBA810Z*... - enclosure type A; 115...230 V AC; drive and electronics type A

MBA820Z*... - enclosure type A; 12/24 V DC; drive and electronics type A

MBA888Z*K*... - enclosure type B; 12/24 V DC; drive and electronics type A

MBA888Z*L*... - enclosure type B; 115...230 V AC; drive and electronics type A

* more variants, without relevance for explosion protection

15.2 **Description**

The Rotating-paddle bin level indicators type MBA8*0Z* und MBA888Z* are used for the detection of the level in containers in which granular, powdery or sludge materials are stored. They consist of an electronics enclosure conforming to category 2D and an extension part conforming to category 1D. A synchronous geared motor drives a measuring paddle which is fixed to a shaft and which stops as soon as it is covered with the bulk material. The freely suspended motor then operates a micro switch which stops the motor and triggers a signal in an electrical circuit. If the bulk material level drops, the rotating paddle becomes free again, the motor will be drawn back by a tension spring to its initial position and will be switched on again. The mechanical version varies according to the spatial and thermal requirements.

The supply of type MBA8*0Z* is realized via a separately certified cable entry or via a plug and socket construction.

The supply of type MBA888Z* is realized with a fixed cable lead through a separately certified cable entry or via a plug and socket construction.

The plug part of the plug and socket construction is provided by the end user in the end use application.

15.3 **Parameters**

15.3.1 **Electrical data**

	MBA810Z	MBA820Z	MBA888Z*L	MBA888Z*K
voltage	115...230 V AC	12 V DC or 24 V DC	115..230 V AC	12 V or 24 V DC
max. power	6 VA	6 W	6 VA	6 W
max. signal-switch	relay: 230 V; 6 A AC	optocoupler: 30 V; 1.2 A DC	relay: 230 V; 6 A AC	optocoupler: 30 V; 1.2A DC

15.3.2 **Thermal data**

15.3.2.1 **permitted ambient temperature range**

type MBA8*0Z* -20 °C ... + 50 °C

type MBA888Z* -20 °C ... + 60 °C

15.3.2.2 **maximum permitted temperature at the process connection + 80 °C**

16 **Report Number**

BVS PP 19.2018 EU, as of 2019-02-19

17 **Special Conditions for Use**

17.1 The plug part of the connector provided by the end user in the end use application shall be in accordance with all applicable clauses of IEC 60079-0 and IEC 60079-31. A minimum degree of protection IP6X according to IEC 60529 shall be ensured.

17.2 The variant with fixed cable has to be installed in a way that it is protected against intensive charging processes.

18 **Essential Health and Safety Requirements**

The Essential Health and Safety Requirements are covered by the standards listed under item 9.

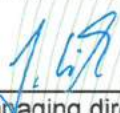
For this product the standard EN IEC 60079-0:2018 is equivalent to the harmonized standard EN 60079-0:2012 + A11:2013 in terms of safety.

19 **Drawings and Documents**

Drawings and documents are listed in the confidential report.

We confirm the correctness of the translation from the German original.
In the case of arbitration only the German wording shall be valid and binding.

DEKRA Testing and Certification GmbH
Bochum, dated 2019-02-19
BVS-HK/VKA A20170539



Managing director