

Translation

EU-Type Examination Certificate

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

EU-Type Examination Certificate Number: **BVS 19 ATEX E 013 X**

Product: **Valve solenoid type *****.890*.*** ****

Manufacturer: **Buschjost GmbH**

Address: **Detmolder Str. 256, 32545 Bad Oeynhausen, Germany**

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

DEKRA EXAM 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 19.2024 EU.

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

EN 60079-0:2012 + A11:2013	General requirements
EN 60079-1:2014	Flameproof enclosure "d"
EN 60079-7:2015	Increased Safety "e"
EN 60079-31:2014	Protection by Enclosure "t"

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 2G Ex db eb IIC T4 / T5^{*)} Gb**
II 2D Ex tb IIIC T130°C / T95°C^{*)} Db
^{*)} See clause 15.3 for details

DEKRA Testing and Certification GmbH
Bochum, 2019-03-08

Signed: Jörg-Timm Kilisch

Managing Director

13 Appendix

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15 Product description

15.1 Subject and type

Valve solenoid type *****1) 89²⁾***3) ****4) **5)

*****1) - Valve number (Not part of this type examination)

89²⁾ - Solenoid group 89

***3) - Rotor no. for design of magnet, magnet sleeve, cable, temperature class, etc.
00 ... 09

****4) - Rated voltage, 024 for 24 V, 110 for 110 V, 230 for 230 V

**5) - Power type:
00 Direct current
49 Alternating current

15.2 Description

The actuating solenoids of solenoid group 89 (types 8900 ... 8909) serve as electric drives for process valves. A distinction is made between the two basic valve types NC (normally closed) and NO (normally open). The process valves are not part of this approval. The coil space of the solenoids is designed in flameproof enclosure "db", while the connection space is designed according to the rules of increased safety "eb". The entire device fulfils the requirements of the type of protection "Protection by enclosure "tb". The solenoids can be used in Zones 1 and 2 as well as 21 and 22. The housing complies with protection class IP65.

Listing of all components used referring to older standards

Subject and type	Certificate	Standards
Reduction / Adapter	PTB 02 ATEX 1067 U	EN 60079-0:2012 + A11:2013 EN 60079-1:2007 EN 60079-7:2007

15.3 Parameters

15.3.1 Electrical Parameters

Nominal voltage

Direct current	12	V	up to	400	V DC
Alternating current	24	V	up to	400	V AC
	40	Hz	up to	60	Hz
Nominal current	0.073	A	up to	2.42	A
Nominal power	29	W			

15.3.2 Thermal Parameters

Ambient temperature by temperature class and surface temperature

T5 / T95 °C: $-40\text{ °C} \leq T_{\text{amb}} \leq +40\text{ °C}$

T4 / T130 °C: $-40\text{ °C} \leq T_{\text{amb}} \leq +60\text{ °C}$

Medium temperature by temperature class and surface temperature

T5 / T95 °C: max. +90 °C

T4 / T130 °C: max. +110 °C

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17 Special Conditions for Use

- A fuse corresponding to the rated current (max. $3 \times I_E$) must be connected in series with each electromagnet.
- Repair of the gap-forming parts is not permitted.
- The gap length of the flameproof joint of this apparatus are in parts longer and the gap width are in parts smaller than required by Table 3 of EN 60079-1:2014.
- The continuous temperature resistance of the connecting cables must be at least 90 °C.

18 Essential Health and Safety Requirements

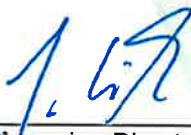
The Essential Health and Safety Requirements are covered by the standards listed under item 9.

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, 2019-03-08
BVS-Ret/Mu A 20170818


Managing Director