



IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: **IECEx IBE 19.0008X**

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[Certificate history](#):

Status: **Current**

Issue No: 1

[Issue 0 \(2019-04-15\)](#)

Date of Issue: 2024-05-06

Applicant: **Magnet-Schultz GmbH & Co. KG**
Allgäuer Straße 30
87700 Memmingen
Germany

Equipment: **Valve solenoid type GBKE 010 S01...**

Optional accessory:

Type of Protection: **Intrinsic safety "i"**

Marking: Ex ib IIC T4 Gb

Ex ib IIIC T130 °C Db

-5 °C ≤ T_a ≤ +55 °C

Approved for issue on behalf of the IECEx
Certification Body:

Kai Willamowski

Position:

Head of department Certification Body

Signature:
(for printed version)

Date:
(for printed version)

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
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Certificate issued by:

IBExU Institut für Sicherheitstechnik GmbH
Fuchsmühlenweg 7
09599 Freiberg
Germany

IBExU



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Manufacturer: **Magnet-Schultz GmbH & Co. KG**
Allgäuer Straße 30
87700 Memmingen
Germany

Manufacturing
locations:

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended

STANDARDS :

The equipment and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards

IEC 60079-0:2017 Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

IEC 60079-11:2023 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:7.0

This Certificate **does not** indicate compliance with safety and performance requirements
other than those expressly included in the Standards listed above.

TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in:

Test Reports:

[DE/IBE/ExTR18.0045/00](#) [DE/IBE/ExTR18.0045/01](#)

Quality Assessment Report:

[DE/IBE/QAR11.0002/07](#)



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

The valve solenoid type GBKE 010 S01... is applied as actuator for pneumatic applications in potentially explosive gas and dust atmospheres that require category 2 G or 2 D devices. The solenoid consists of a magnetic body that is intended for mounting on different valve parts. The magnetic body is implemented in type of protection "i" (intrinsic safety). It contains a winding and two freewheeling diodes connected in parallel for limitation of interrupting transient overvoltage. Winding and diodes are completely over-molded by PPS for exclusion of explosive atmosphere. Electrical connection of the magnetic body is realized via an external plug and socket connector according to EN 61076-2-101 (model E). A suitable connection cable with mating connector must be chosen by user or provided by the manufacturer.

Technical data

Nominal input voltage	U_N	12 V DC or 24 V DC (depends on type)
Maximum input voltage	U_i	30 V DC
Maximum input current	I_i	200 mA
Maximum input power	P_i	0.68 W
Maximum internal inductance	L_i	negligible
Maximum internal capacitance	C_i	negligible
Duty cycle	ED	S1 (100 %)
Ambient temperature	T_a	-5 °C...+55 °C

Multiple valve solenoids can be assembled on one valve manifold (see manufacturer's instructions for details).

SPECIFIC CONDITIONS OF USE: YES as shown below:

If multiple intrinsically safe circuits are used, e.g. at an assembly of multiple solenoids at a valve manifold, the following specific conditions of use must be observed:

1. The solenoids must only be used in circuits of overvoltage category I or II in accordance with IEC 60664-1.
2. All intrinsically safe circuits must be referenced to a common ground.
3. Only the associated heat-resistant connection cables with PTFE jacket or equivalent connection cables as specified in the manufacturer's instructions must be used.
4. The plug and socket connectors of the cables do not comply with the resistance to impact requirements of IEC 60079-0, clause 26.4.2. The connectors must therefore be installed with suitable protection from mechanical danger.
5. The connection cables of the solenoids must be routed as fixed installation. Additional clamping of the cables must be provided to ensure that pulling is not transmitted to the terminations.
6. The solenoids must be installed protected from UV light.
7. Where dust is excluded and the solenoids are restricted to installation and use in environments providing pollution degree 2 or 1 according to IEC 60664-1, the conditions 3) to 6) do not have to be applied.



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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

The valve solenoid is also suitable for explosive dust atmospheres.

The valve solenoid meets the requirements of IEC 60079-11:2023 (ed. 7).