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 FMG 18.0010X**

Page 1 of 4

Certificate history:
Issue 1 (2021-06-17)
Issue 0 (2018-04-24)

Status: **Current**

Issue No: 2

Date of Issue: 2023-03-30

Applicant: **Schienle Magnettechnik GmbH**
In Oberweisen 3
Salem-Neufrach 88682
Germany

Equipment: **EX23 Twin Solenoids**

Optional accessory:

Type of Protection: **Flameproof "db", Dust-Protected "tb"**

Marking: Ex db IIB T4 Gb

Ex tb IIIC T135°C Db

-40°C ≤ Tamb ≤ +70°C

Approved for issue on behalf of the IECEx Certification Body: **J. E. Marquedant**

Position: **VP, Manager - Electrical Systems**

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.
3. The Status and authenticity of this certificate may be verified by visiting www.iecex.com or use of this QR Code.

Certificate issued by:

FM Approvals LLC
1151 Boston-Providence Turnpike
Norwood, MA 02062
United States of America

FM Approvals
Member of the FM Global Group

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Certificate No.: **IECEx FMG 18.0010X**

Date of issue: 2023-03-30 Issue No: 2

Manufacturer: **Schienle Magnettechnik GmbH**
In Oberweisen 3
Salem-Neufrach 88682
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 Edition:7.0	Explosive atmospheres - Part 0: Equipment - General requirements
IEC 60079-1:2014-06 Edition:7.0	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
IEC 60079-31:2022-01 Edition:3.0	Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosure "t"

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:

US/FMG/ExTR18.0011/00 US/FMG/ExTR18.0011/01

Quality Assessment Report:

DE/EPS/QAR19.0010/05

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EQUIPMENT:
Equipment and systems covered by this Certificate are as follows:

General – The EX23 Series Twin Solenoids are electrical devices used for actuating hydraulic valves for use in explosive atmospheres. The equipment employs two independent conductive coils that each use electrical energy to hold a metallic shaft open or closed in order to control the movement of process fluids and gases. The solenoids are always fixed with means for fastening the solenoids to a valve body.

Construction – The EX23 Series Twin Solenoids consist of two machined steel blocks fastened together to form a flameproof and dust-protected enclosure. One steel block has a ½ NPT or M20x1.5 threaded wiring entry for conduit or other suitable connection, as well as a metric stopping plug that acts as a cover and allows the user to make field wiring terminal connections. The other block connects to the first block and houses the twin coils and forms cylindrical joints with the actuator shafts. The blocks are held together and form a flange joint that is secured by four M4 fasteners. The solenoid enclosures offer integral grounding provisions both internal and external to the enclosure.

Ratings – The ambient temperature range of the EX23 Series Twin Solenoids is -40°C to 70°C for process medium temperatures up to 70°C. The rated Maximum Working Pressure (MWP) is up to 50 bar (725 psi). The nominal input voltage is 12 or 24 VDC depending on the model code option chosen, with a maximum power output of 23 Watts.

The equipment provides Degree of Protection IP66/IP67 in accordance with IEC 60529.

The product model codes associated with this certificate are as follows:

EX23 049 B 23W a b DC 2 H c Twin Solenoid
a = Coil 1 Input Voltage: B (12Vdc) or C (24Vdc)
b = Coil 2 Input Voltage: B (12Vdc) or C (24Vdc)
c = Variant (Wiring Entry): 01 (1/2 NPT) or 02 (M20x1.5)

SPECIFIC CONDITIONS OF USE: YES as shown below:

1. *To keep the temperature class, the solenoid may only be operated in combination with a valve block with minimum volume according to the operating instructions. The maximum ambient as well as process medium temperatures of +70°C must not be exceeded.*
2. *Flame path repair is not possible. Contact manufacturer.*
3. *Contact manufacturer if enclosure fasteners are damaged.*
4. *Potential electrostatic charging hazard – clean only with damp cloth. Refer to manual for additional guidance.*

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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)
- Qualified additional option for M20x1.5 metric thread entry
- Minor editorial revisions to labels and instructions, mainly for UKCA
- Gap analysis IEC 60079-31 (Ed 2 to 3)