1 # EU-TYPE EXAMINATION CERTIFICATE

2 **Equipment or Protective systems intended for use in Potentially Explosive Atmospheres - Directive 2014/34/EU**

3 **EU-Type Examination Certificate No:** **FM18ATEX0032X**

4 **Equipment or protective system: (Type Reference and Name)** **EX23 Series Twin Solenoid Electric Solenoid Valve Actuator**

5 **Name of Applicant:** **Schienle Magnettechnik + Elektronik GmbH**

6 **Address of Applicant:** **In Oberwiesen 3**
88682 Salem-Neufrach
Germany

7 This equipment or protective system and any acceptable variation thereto is specified in the schedule to this certificate and documents therein referred to.

8 FM Approvals Europe Ltd, notified body number 2809 in accordance with Article 17 of Directive 2014/34/EU of 26 February 2014, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in confidential report number:

3063965 dated 24th April 2018

9 Compliance with the Essential Health and Safety Requirements, with the exception of those identified in item 15 of the schedule to this certificate, has been assessed by compliance with the following documents:

EN IEC 60079-0:2018, EN 60079-1:2014, EN 60079-31:2014 and
EN 60529:1991 + A1:2000 + A2:2013

10 If the sign 'X' is placed after the certificate number, it indicates that the equipment is subject to specific conditions of use specified in the schedule to this certificate.

11 This EU-Type Examination certificate relates only to the design, examination and tests of the specified equipment or protective system in accordance to the directive 2014/34/EU. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by this certificate.

12 The marking of the equipment or protective system shall include:

II 2 G Ex db IIB T4 Gb
II 2 D Ex tb IIIC T135°C Db
$-40°C \leq T_{amb} \leq +70°C$

Martin Crowe
Certification Manager, FM Approvals Europe Ltd.

Issue date: 03rd April 2023

THIS CERTIFICATE MAY ONLY BE REPRODUCED IN ITS ENTIRETY AND WITHOUT CHANGE

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SCHEDULE

to EU-Type Examination Certificate No. FM18ATEX0032X

13 **Description of Equipment or Protective System:**

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 EN 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)

14 **Specific Conditions of Use:**

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.

15 **Essential Health and Safety Requirements:**

The relevant EHSRs that have not been addressed by the standards listed in this certificate have been identified and assessed in the confidential report identified in item 8.

16 **Test and Assessment Procedure and Conditions:**

This EU-Type Examination Certificate is the result of testing of a sample of the product submitted, in accordance with the provisions of the relevant specific standard(s), and assessment of supporting documentation. It does not imply an assessment of the whole production.

Whilst this certificate may be used in support of a manufacturer's claim for CE Marking, FM Approvals Europe Ltd accepts no responsibility for the compliance of the equipment against all applicable Directives in all applications.

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SCHEDULE

to EU-Type Examination Certificate No. FM18ATEX0032X

This Certificate has been issued in accordance with FM Approvals Europe Ltd's ATEX Certification Scheme.

17 **Schedule Drawings**

A list of the significant parts of the technical documentation is annexed to this certificate and a copy has been kept by the Notified Body.

18 **Certificate History**

Details of the supplements to this certificate are described below:

Date	Description
28 April 2018	Original Issue.
20th March 2019	Supplement 1: Description of the Change: Certificate transferred from FM Approvals Ltd., notified body no. 1725, to FM Approvals Europe Ltd., notified body no. 2809.
03rd April 2023	Supplement 2: Report Reference: – RR236192 dated 30th March 2023. Description of the Change: Qualified additional option with M20x1.5 metric entry; minor editorial updates to labels and instructions, mainly for UKCA; continued compliance with EN IEC 60079-0:2018.

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Blueprint Report

Schienle Magnettechnik + Elektronik GmbH (136167)

Class No 3615

Original Project I.D. 3063965

Certificate I.D. FM18ATEX0032X

Drawing No.	Revision Level	Drawing Title	Last Report
B23	08	Explosion-proof twin solenoid - EX23	RR236192
EX23	04	twin solenoid	RR236192
T41 / 2017	04	Technical Description Model EX23	RR236192