

# 1. UNITED KINGDOM CONFORMITY ASSESSMENT UK-TYPE EXAMINATION CERTIFICATE



2. Equipment or Protective systems intended for use in Potentially Explosive Atmospheres  
UKSI 2016:1107 (as amended) – Schedule 3A, Part 1

3. UK-Type Examination Certificate No: FM23UKEX0010X

4. Equipment or protective system:  
(Type Reference and Name) EX18 Series Solenoids

5. Name of Applicant: Schienle Magnettechnik + Elektronik GmbH

6. Address of Applicant In Oberwiesen 3, D-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 Ltd, Approved Body number 1725, in accordance with Regulation 42 of the Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2016, UKSI 2016:1107 (as amended), 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 Schedule 1 of the Regulations.

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

PR463636 dated 12 June 2023

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, 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 UK-Type Examination certificate relates only to the design, examination and tests of the specified equipment or protective system in accordance with the Regulations. Further requirements of the Regulations apply to the manufacturing process and supply of this product. These are not covered by this certificate.

Certificate issued by:

Victor Aluko-Oginni  
Certification Manager, FM Approvals Ltd.

Date: 16 June 2023

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

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F UKEX 020 (Jan/21)



Page 1 of 3

## SCHEDULE

to UK-Type Examination Certificate No. FM23UKEX0010X



Member of the FM Global Group

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



### 10W models:

I M2 Ex db I Mb  
II 2 G Ex db IIB+H2 T6...T4 Gb  
II 2 D Ex tb IIIC T85°C...T135°C Db  
-40°C ≤ Tamb ≤ +70°C for T4/T135°C  
-40°C ≤ Tamb ≤ +55°C for T5/T100°C  
-40°C ≤ Tamb ≤ +40°C for T6/T85°C

### 18W models:

I M2 Ex db I Mb  
II 2 G Ex db IIB+H2 T4 Gb  
II 2 D Ex tb IIIC T135°C Db  
-40°C ≤ Tamb ≤ +60°C

13. Description of Equipment or Protective System:

**General** – The EX18 Series Solenoids are electrical devices used for actuating hydraulic valves for use in explosive atmospheres. The equipment employs a conductive coil that uses electrical energy to hold a metallic shaft open or closed in order to control hydraulic oil and similar fluids. The solenoids are always fixed with means for fastening the solenoids to a valve body.

**Construction** – The EX18 Series Solenoids consist of machined steel parts threaded and press-fit together in order to form a rectangular flameproof and dust-protected electrical enclosure. The bottom of the enclosure has a cylindrical throughfare for connection to a valve assembly. The solenoid enclosures offer protective bonding provisions both internal and external.

The enclosure includes two metric threaded openings, with one on top and one on the side of the electronics housing. One is to be used as the enclosure cover; the other to be closed using the adapter provided in order to make electrical connections using a M20x1.5 or 1/2 NPT threaded wiring entry.

**Ratings** – The temperature and electrical ratings of the EX18 Solenoids are given as follows, for a maximum process medium temperature up to +70°C.

The equipment provides Degree of Protection IP66/IP68 (IPX8: 1m, 24hr) in accordance with EN 60529.

Inputs: (12, 24, 48, 110)VDC or (110, 230)VAC & 50/60 Hz; 10W or 18W

### EX18-uuu-w-1-A-zzz-0. Series Solenoids

uuu = Constructive design: 001 (10W) or 002 (18W).  
w = Kind of current: A (AC) or D (DC).  
zzz = Input voltage (Volts): 012, 024, 048, 110 or 230.

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**SCHEDULE**  
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**14. Specific Conditions of Use:**

1. The equipment is provided with two metric M36 threaded openings. One opening shall be employed as a cover using the solid blanking plug provided, and the other opening shall be used for electrical connections via the 1/2 NPT or M20 adapter provided.
2. To keep the temperature class, the solenoid may only be operated in combination with a valve block with minimum volume and maximum process medium temperature according to the operating instructions.
3. Flame path repair is not possible. Contact manufacturer.
4. Potential electrostatic charging hazard – clean only with damp cloth. Refer to instructions 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 UK-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 UKCA Marking, FM Approvals Ltd accepts no responsibility for the compliance of the equipment against all applicable Regulations in all applications.

This Certificate has been issued in accordance with FM Approvals Ltd's UKCA 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 Approved Body.

**18. Certificate History**

Details of the supplements to this certificate are described below:

Date	Description
16 June 2023	Original Issue.

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# Blueprint Report

**Schienle Magnettechnik + Elektronik GmbH (136167)**

**Class No 3615**

**Original Project I.D. 463636**

**Certificate I.D. FM23UKEX0010X**

<u>Drawing No.</u>	<u>Revision Level</u>	<u>Drawing Title</u>	<u>Last Report</u>	<u>Electronic Drawing</u>
B18	01	Safety instructions EX18	PR463636	Yes (pdf)
EX18-uuu-w-x-y-zzz-www	00	excitation system EX18	PR463636	Yes (pdf)
T42	01	Technical description EX18	PR463636	Yes (pdf)