

CERTIFICATE OF CONFORMITY



Member of the FM Global Group

1. HAZARDOUS (CLASSIFIED) LOCATION ELECTRICAL EQUIPMENT PER US REQUIREMENTS

2. **Certificate No:** FM23US0009X
3. **Equipment:** EX18 Series Solenoids
(Type Reference and Name)
4. **Name of Listing Company:** Schienle Magnettechnik + Elektronik GmbH
5. **Address of Listing Company:** In Oberwiesen 3, D-88682 Salem - Neufrach, Germany

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

PR463636 dated 12 June 2023

7. FM Approvals LLC, certifies that the equipment described has been found to comply with the following Approval standards and other documents:

FM 3600:2022, FM 3615:2022, FM 3616:2022, FM 3810:2021, ANSI/UL 60079-0:2020, ANSI/UL 60079-1:2015, ANSI/UL 60079-31:2015, ANSI/IEC 60529:2020, ANSI/UL 61010-1:2012

8. 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.

9. This certificate relates to the design, examination and testing of the products specified herein. The FM Approvals surveillance audit program has further determined that the manufacturing processes and quality control procedures in place are satisfactory to manufacture the product as examined, tested and Approved.

10. Equipment Ratings:

Explosionproof for Class I, Division 1, Groups B, C and D; Dust-Ignitionproof for Class II, Division 1, Groups E, F and G, Class III; Flameproof for Zone 1, AEx db IIB+H2 T6...T4 Gb; and Dust-Protected by Enclosure for Zone 21, AEx tb IIIC T85°C...T135°C Db hazardous (classified) locations, with Degree of Protection IP66/IP68 (IPX8: 1m, 24hr).

Certificate issued by:

J.E. Marquedant
VP, Manager - Electrical Systems

12 June 2023

Date

To verify the availability of the Approved product, please refer to www.approvalguide.com

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

FM Approvals LLC, 1151 Boston-Providence Turnpike, Norwood, MA 02062 USA

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SCHEDULE

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11. The marking of the equipment shall include:

10W models:	18W models:
CI.I Div.1 Gp B,C,D T6...T4 CI II/III Div 1 Gp E,F,G T6...T4 CL I Zone 1, AEx db IIB+H2 T6...T4 Gb Zone 21, AEx 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 IP66/IP68	CI.I Div.1 Gp B,C,D T4 CI II/III Div 1 Gp E,F,G T4 CL I Zone 1, AEx db IIB+H2 T4 Gb Zone 21, AEx tb IIIC T135°C Db -40°C≤Tamb≤+60°C IP66/IP68

12. Description of Equipment:

General – The EX18 Series Solenoids are electrical devices used for actuating hydraulic valves for use in hazardous locations and 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 explosionproof/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 ANSI/IEC 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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13. 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.

14. Test and Assessment Procedure and Conditions:

This Certificate has been issued in accordance with FM Approvals US Certification Requirements.

15. Schedule Drawings

A copy of the technical documentation has been kept by FM Approvals.

16. Certificate History

Details of the supplements to this certificate are described below:

Date	Description
12 June 2023	Original Issue.

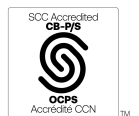
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