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Certificate

(1) EU - TYPE EXAMINATION CERTIFICATE

in accordance with Directive 2014/34 / EU, Annex III, point 6

(2) Equipment or Protective System Intended for use in Potentially Explosive Atmospheres - Directive 2014/34/EU

(3)	EU - Type Examination Certificate Number:	**TÜV-A25ATEX0101 X**
(4)	Product:	**Solenoid drive** **Typ: MG004m, MG008m, MG005A7m, MG008A8m**
(5)	Manufacturer:	**UNI-Geräte E. Mangelmann Elektrotechnische Fabrik GmbH**
(6)	Address:	**Holtumsweg 13** **GERMANY-47652 Weeze**

(7) This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

(8) TÜV AUSTRIA GMBH, Notified Body number 0408 in accordance with Article 17 and Article 21 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that the 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 Annex II to the Directive.

The examination and test results are recorded in confidential Report No. TUV-A 2024-TAD-0136

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN IEC 60079-0:2018 **EN IEC 60079-7/A1:2015** **EN 60079-18: 2015**

except in respect of those requirements listed at item 18 of the Schedule.

(10) If the sign "X" is placed after the certificate number, it indicates that the product is subject to the Specific Conditions of Use specified in the schedule to this certificate.

(11) This EU - Type Examination Certificate relates only to the technical design of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.

(12) The marking of the product shall include the following:

II 2 G **Ex eb mb IIC T4/T5 Gb**

II 2 G **Ex eb mb IIB T4/T5 Gb**

Filderstadt
Place

29th April, 2025
Date

Sebastian Willer
Notified Body 0408
TÜV AUSTRIA GMBH

TÜV AUSTRIA GMBH
„The duplication of this document in parts is subject to the approval by TÜV AUSTRIA GMBH"

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TÜV AUSTRIA

(13) # Schedule

(14) ## Certificate Number TÜV-A 25ATEX0101 X

(15) **Description of Product**

The solenoid actuator (pot magnet) is used as a drive unit for valves. The actuator consists of a magnetic housing (pipe, base, magnetic plate and cover), a coil and electronics if necessary. Depending on the version, the solenoid actuator can be operated with direct or alternating voltage. A rectifier is built into the AC voltage version. The different types of coil therefore always have direct current flowing through them when they are live. The MG004m and MG008m solenoid actuators have a conventional coil with one winding and resulting average sustained pickup forces with average current consumption during continuous operation. The MG005A7m and MG008A8m solenoid actuators, on the other hand, have two windings on their coil body, a pull-in winding and a hold-in winding. The installed TS200 valve controller switches from the pull-in winding to the hold-in winding or from higher to lower power after a defined time. In this way, very high pull-in forces can be achieved for short periods with low power consumption in continuous (hold-in) operation at the same time

Type designation:

Solenoid drives:	MG004m MG008m MG005A7m MG008A8m

Type key:

Solenoid drive:	MG
Drive size:	004, 005 or 008
With pick-up winding and holding winding:	A7 or A8
Ignition protection type 'm' and 'e':	m

Technical data:

General technical data		
Rated voltage:	24 to 230 V DC (+10 % -15 %) 24 to 230 V AC (+10 % -15 %)	
Current type:	Direct current / alternating current 40 to 60 Hz	
Ingress protection:	IP65	
Switching frequency:	MG004m, MG008m MG005A7m, MG008A8m	1000 c/h 600 c/h
Duty cycle	100%	
Ambient temperature:	-20°C ≤ T_a ≤ + 60°C	
Fluid temperature:	-20°C ≤ T_a ≤ + 60°C	

Typ designation data		
Type designation:	MG004m	
Current type:	Direct current / alternating current	
Rated current/rated voltage:	0,58 A / 24 V 0,25 A / 60 V	0,22 A / 110 V 0,11 A / 230 V

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Rated output:	10 W	10 W
Steady-state active power:	12 W	18 W
Temperature class:	T4	
Type designation:	MG008m	
Current type:	Direct current / alternating current	
Rated current/rated voltage:	2,00 A / 24 V 0,45 A / 110 V 0,22 A / 230 V	
Rated output:	30 W	
Steady-state active power:	38 W	
Temperature class	T4	
Type designation:	MG005A7m	
Current type:	Direct current / alternating current	
Rated current/rated voltage:	1,65 A / 24 V 0,40 A / 110 V 0,20 A / 230 V	
Rated output:	30W / 3 W	
Steady-state active power:	36 W / 3 W	
Temperature class	T5	
Type designation:	MG008A8m	
Current type:	Direct current / alternating current	
Rated current/rated voltage:	2,80 A / 24 V 0,70 A / 110 V 0,35 A / 230 V	
Steady-state active power:	50 W / 5 W	
Rated output:	62 W / 5 W	
Temperature class:	T5	

(16) Report Number

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(17) Specific Conditions of Use

- Since temperatures higher than 70 °C occur at the cable entry and higher than 80 °C at the branching point only a heat-resistant connecting cable with an upper operating temperature of at least 100 °C may be used to connect the solenoid actuator.

- The solenoid actuators must be protected against the dangerous effects of short circuits, earth faults and overloading. A line-side fuse that is appropriate for the rated current (max. 3xIB acc. to IEC 60127-1) must be selected. A line-side motor circuit breaker - with overload and short-circuit tripping - must be adjusted for the rated current. If the magnet has very low rated currents, fusing with the lowest current value in keeping with the stated IEC standard is sufficient. Protective devices must be of the kind that prevent automatic reactivation under fault conditions. The rated voltage of the fuse must be equal to or greater than the specified nominal voltage of the solenoid actuator. The breaking capacity of the fuse

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link must match or exceed the maximum short-circuit current that is expected at the installation location (usually 1500 A).

- When a silicon (or silicon containing) connecting lead is used or if the connecting lead is not scratch proof respectively, this must be protected from mechanical damage (e.g. interrupted tube system with edge protection).
- A maximum permissible ripple of 20 % is valid for all magnets of d.c.-design.
- A deviating ambient temperature of -20°C ≤ Ta ≤ + 60°C applies

(18) Essential Health and Safety Requirements

Met by the standards mentioned above.

(19) Drawings and Documents

Title	Rev	Drawing No.	Date
TÜV-A 25ATEX0101 X	--		2025-04-29
TUV-A 2024-TAD-0136	--	/	2025-04-29
HR-FIDI-ExTR24.0004-00 Solenoid Unigerate final		/	2025-03-28
Description of solenoid actuators MG004m, MG008m, MG005A7m and MG008A8m	05	225.100.427	2025-02-13
Assembly drawing	09	115.000.026	2025-03-13
Circuit diagram Rectifier GL 08 Xm 0-230 VAC	02	225.100.432	2025-02-27
Circuit diagram TS 200 Xm 230 VDC/AC	00	225.100.433	2024-06-25
Circuit diagram TS 200 Xm 110 VDC/AC	00	225.100.434	2024-06-25
Circuit diagram TS 200 Xm 24 VDC	00	225.100.435	2024-06-25
Schematic diagram DC	00	105.000.197	2025-02-13
Enclosure cover	02	110.000.391	2012-06-22
Marking plate	14	105.000.048	2025-03-12
Instruction	13	220.100.039	2025-03

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