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 FIDI 25.0005X**	Page 1 of 3	Certificate history:
Status:	**Current**	Issue No: 0	
Date of Issue:	2025-03-27		
Applicant:	**UNI-Geräte E. Mangelmann Elektrotechnische Fabrik GmbH** Holtumsweg 13, D-47652 Weeze **Germany**		
Equipment:	**Solenoid actuator types: MG004m, MG008m, MG005A7m, MG008A8m**		
Optional accessory:			
Type of Protection:	**Increased safety 'eb'; Encapsulation 'mb'**		
Marking:	**Ex eb mb IIC T4/T5 Gb** or **Ex eb mb IIB T4/T5 Gb**		

Approved for issue on behalf of the IECEx Certification Body: **Marino Kelava**

Position: **Certification Signatory**

Signature: (for printed version)

Date: (for printed version) 2025-03-27

Fiditas d.o.o. ZAGREB

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.

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Croatia

Fiditas explosion safety solutions

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Certificate No.: **IECEx FIDI 25.0005X**

Date of issue: 2025-03-27

Issue No: 0

Manufacturer: **UNI-Geräte E. Mangelmann Elektrotechnische Fabrik GmbH**
Holtumsweg 13, D-47652 Weeze
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 Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

IEC 60079-18:2017 Explosive atmospheres - Part 18: Protection by encapsulation "m"
Edition:4.1

IEC 60079-7:2017 Explosive atmospheres - Part 7: Equipment protection by increased safety "e"
Edition:5.1

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 Report:

HR/FIDI/ExTR25.0004/00

Quality Assessment Report:

DE/PTB/QAR07.0006/08

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

The solenoid actuator is used as an actuator for valves. It can be operated with DC current or AC voltage. If the latter is used, the coil current is rectified by an upstream rectifier. When the actuator is switched on the coil generates a magnetic field. A moving magnetic core made from ferrite steel inside the coil is attracted by the magnetic field and opens or closes the valve.

The MG005A7m and MG008A8m solenoid actuators consist of a pick-up winding and a holding winding protected by encapsulation 'mb'. When the actuator is switched on, the pick-up power is present for 0.9 to 1.8 sec for opening the valve. The TS200Xm solenoid valve controller switches to the lower holding power after the attraction time has elapsed.

External connections are wired in a connecting compartment with increased safety 'eb'. The external supply line is led into here through a IECEx certified cable gland (at least Ex eb IIC Gb, IP65) and directly connected to a device terminal. This terminal is certified as an Ex component (PHOENIX CONTACT, type: G 5/2-EX; IECEx PTB 06.0043U; Ex eb IIC Gb).

The solenoid actuator satisfies requirements for Group IIC or for Group IIB (option when painting of thickness is > 0.2 mm, but < 2 mm).

For other description see Annex.

SPECIFIC CONDITIONS OF USE: YES as shown below:

1. 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.
2. 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 link must match or exceed the maximum short-circuit current that is expected at the installation location (usually 1500 A).
3. When a silicon (or silicon containing) connecting lead is used or if the connecting lead is not scratch proof respectively, this has to be protected from mechanical damage (e.g. interrupted tube system with edge protection).
4. A maximum permissible ripple of 20 % is valid for all magnets of d.c. design.

Annex:

IECExFIDI25.0005_00 Annex1-.pdf

Continued from original certificate

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

Electrical data

Rated voltage	24 to 230 VDC
	24 to 230 V AC
Current type:	DC current / AC current 40 to 60 Hz
Ingress protection:	IP 65
Switching frequency:	1000 c/h MG004m, MG008m
	600 c/h MG005A7m, MG008A8m
Duty cycle	100 %
Ambient temperature:	-20 °C to +60 °C
Fluid temperature:	-20 °C to +60 °C

Type designation:	**MG004m**	
Current type:	Direct current / alternating current	
Rated current/rated voltage:	0.58 A / 24 V	0.22 A / 110 V
	0.25 A / 60 V	0.11 A / 230 V
Steady-state active power:	12 W	18 W
Rated output:	10 W	10 W
Temperature class	T4	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
Steady-state active power:	36 W / 3 W
Rated output:	30 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:	62 W / 5 W
Rated output:	50 W/ 5 W
Temperature class	T5