IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: IECEx PTB 04.0017X issue No.:1

Certificate history: Issue No. 1 (2008-5-21) Issue No. 0 (2004-11-17)

Status: **Current**

Date of Issue: **2008-05-21** Page 1 of 5

Applicant: **UNI-Geraete E. Mangelmann Elektrotechnische Fabrik GmbH**
Holtumsweg 13
47652 Weeze
Germany

Electrical Apparatus: **Solenoid actuator type MG 0..-..**
Optional accessory:

Type of Protection: **Flameproof Enclosure "d", Protection by Enclosures "tD"**

Marking: **Ex de IIC T5**
Ex tD A21 IP65 T 95 °C
Tamb - 20 °C to + 60 °C

Approved for issue on behalf of the IECEx Certification Body: Dr.-Ing Uwe Klausmeyer

Position: Head of Section "Flameproof Enclosure"

Signature:
(for printed version)

Date:

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 the Official IECEx Website.

Certificate issued by:

Physikalisch-Technische Bundesanstalt (PTB)
Bundesallee 100
38116 Braunschweig
Germany

IECEx Certificate of Conformity

Certificate No.: IECEx PTB 04.0017X

Date of Issue: **2008-05-21** Issue No.: **1**

Page 2 of 5

Manufacturer: **UNI-Geraete E. Mangelmann Elektrotechnische Fabrik GmbH**
Holtumsweg 13
47652 Weeze
Germany

Manufacturing location(s):

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 electrical apparatus 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 : 2004 Edition: 4.0	Electrical apparatus for explosive gas atmospheres - Part 0: General requirements
IEC 60079-1 : 2003 Edition: 5	Electrical apparatus for explosive gas atmospheres - Part 1: Flameproof enclosure 'd'
IEC 60079-7 : 2006-07 Edition: 4	Explosive atmospheres - Part 7: Equipment protection by increased safety "e"
IEC 61241-0 : 2004 Edition: 1	Electrical apparatus for use in the presence of combustible dust - Part 0: General requirements
IEC 61241-1 : 2004 Edition: 1	Electrical apparatus for use in the presence of combustible dust - Part 1: Protection by enclosures "tD"

*This Certificate **does not** indicate compliance with electrical 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

IECEx ATR: **DE/PTB/ExTR08.0021/00** File Reference:

'QAR: DE/PTB/QAR07.0006/01

IECEx Certificate of Conformity

Certificate No.: IECEx PTB 04.0017X

Date of Issue: **2008-05-21** Issue No.: **1**

Page 3 of 5

Schedule

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

Description of equipment
Solenoid actuator type MG 0..-.. of different rating classes for the control of valves, alternatively with pickup- and holding winding.

Technical data

Rated voltage	max. 420 V
Ambient temperature	-20 °C up to +60 °C
Protection against contact, foreign bodies and water	IP65 according to EN 60529

CONDITIONS OF CERTIFICATION: YES as shown below:

1. The connecting line has to be chosen according to the maximum temperature for nominal operation (including max. permissible ambient temperature, max. current load and possibly heat conduction).
2. The formation of explosive atmosphere shall be avoided in the area of the magnet core and the guide conduit.
3. The maximum constructional gaps (i_c) are less than the maximum allowed gap as specified in Table 2 of IEC 60079-1 standard. Repair and overhaul of the flameproof gaps are only allowed according constructive information given from the original manufacturer. A repair according the values given in Table 2 of IEC 60079-1 is not permitted.

These notes shall be added to each apparatus in suitable form.

IECEx Certificate of Conformity

Certificate No.: IECEx PTB 04.0017X

Date of Issue: **2008-05-21** Issue No.: **1**

Page 4 of 5

EQUIPMENT(continued):

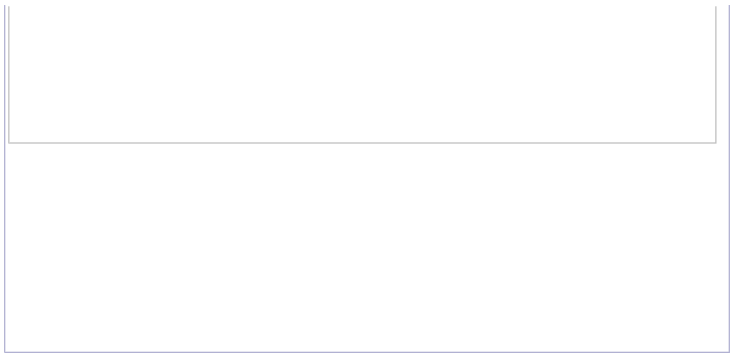
Key of type designation

MG	0..	x	-...
1	2	3	4

1: Abbreviation: Magnetgehäuse (Enclosure of the magnet)
2: Dimension of the magnet or the solenoid
3: Explosionprotected type
4: Solenoid with pickup- and holding winding

Possible types

MG 008x				
MG 010x				
MG 012x	MG 012x-A5			
MG 014x	MG 014x-A5			
MG 016x	MG 016x-A	MG 016x-A5		
MG 018x	MG 018x-A1	MG 018x-A2	MG 018x-A5	
MG 019x	MG 019x-A1	MG 019x-A2	MG 019x-A3	MG 019x-A5



IECEx Certificate of Conformity

Certificate No.: IECEx PTB 04.0017X

Date of Issue: **2008-05-21** Issue No.: **1**

Page 5 of 5

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

New test according to the new revision of IEC 60079-0 (Ed. 4.0), IEC 60079-1(Ed. 5), IEC 60079-7(Ed.4), IEC 61241-0 (Ed.1) and IEC 61241-1(Ed.1).
Addition of an X to the certificate number, because the gaps are less than the maximum allowed gap as specified in Table 2 of IEC 60079-1.