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 04.0002X issue No.:1	Certificate history: Issue No. 1 (2012-3-19) Issue No. 0 (2004-5-25)
Status:	Current	
Date of Issue:	2012-03-19	Page 1 of 4

Applicant: **Nass Magnet GmbH**
Nass Magnet GmbH
Eckenerstraße 4-6
30179 Hannover
Germany

Electrical Apparatus: **Solenoid**
Optional accessory:

Type of Protection: **Encapsulation, protection by enclosure**

Marking: Ex mb IIC T6, T5, T4
Ex mb tb IIIC T80°C, T95°C, T130°C
IP65

Approved for issue on behalf of the IECEx Certification Body: Dr.-Ing. U. Johannsmeyer

Position: Head of Department "Intrinsic Safety and Safety of Systems"

Signature:
(for printed version)

Date: 2012-05-08

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

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Manufacturer:

Nass Magnet GmbH
Nass Magnet GmbH
Eckenerstraße 4-6
30179 Hannover
Germany

Manufacturing location(s):

Precison Controls Bt.
Henger utca 2
8200 Veszprem
Hungary

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 : 2007-10 Edition: 5	Explosive atmospheres - Part 0:Equipment - General requirements
IEC 60079-18 : 2009 Edition: 3	Explosive atmospheres Part 18: Equipment protection by encapsulation "m"
IEC 60079-31 : 2008 Edition: 1	Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosure 't'

*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/04-002
DE/PTB/ExTR12.0018/00

File Reference:
B032018X

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Schedule

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

The solenoid consists of a magnet coil, an armature system and a fixing nut. The armature guide forms the pressure-proof part of the magnet, the guide tube is tested at 1.5 times the nominal operating pressure. The guide tube is specified either for thread-mounting or flange-mounting. The winding consists of varnished copper wire of insulation class H. The coil is injection-moulded with pre-plastified granules. A circuit board with electronic components is soldered onto the terminal posts of the encapsulated part of the coil. The terminals are mounted into a housing made of glass-fibre-reinforced polyimide 6 and casted afterwards.

Electrical data

Type designation	0515..
Type of current	alternating current
Nominal voltage	12 V ... 240 V
Nominal current	0,158 A ... 0,010 A
Steady-state active power	2,3 W
Max. perm. ambient temperature	50 °C
Temperature class	T6
Frequency	50 Hz...60 Hz
Medium temperature	50 °C
Single mounting	yes

Type designation	0515..
Type of current	alternating current
Nominal voltage	12 V ... 240 V
Nominal current	0,158 A ... 0,010 A
Steady-state active power	2,3 W
Max. perm. ambient temperature	40 °C
Temperature class	T6
Frequency	50 Hz...60 Hz
Medium temperature	40 °C
Group mounting	yes, wall to wall

Type designation	1215..
Type of current	direct current
Nominal voltage	6 V ...220 V
Nominal current	0,435 A ... 0,012 A
Steady-state active power	2,5 W
Max. perm. ambient temperature	50 °C
Temperature class	T6
Medium temperature	50 °C
Single mounting	yes

Type designation	1215..
Type of current	direct current
Nominal voltage	6 V ...220 V
Nominal current	0,435 A ... 0,012 A
Steady-state active power	2,5 W
Max. perm. ambient temperature	40 °C
Temperature class	T6
Medium temperature	40 °C
Group mounting	yes, wall to wall

Type designation	0515..
Type of current	alternating current
Nominal voltage	12 V ... 240 V

Nominal current	0,212 A ... 0,015 A
Steady-state active power	3,4 W
Max. perm. ambient temperature	50 °C
Temperature class	T5
Frequency	50 Hz...60 Hz
Medium temperature	50 °C
Single mounting	yes

Type designation	0515
Type of current	alternating current
Nominal voltage	12 V ... 240 V
Nominal current	0,212 A ... 0,015 A
Steady-state active power	3,4 W
Max. perm. ambient temperature	40 °C
Temperature class	T5
Frequency	50 Hz...60 Hz
Medium temperature	40 °C
Group mounting	yes, wall to wall

Type designation	1215..
Type of current	direct current
Nominal voltage	6 V ...220 V
Nominal current	0,531 A ... 0,014 A
Steady-state active power	3,3 W
Max. perm. ambient temperature	50 °C
Temperature class	T5
Medium temperature	50 °C
Single mounting	yes

Type designation	1215..
Type of current	direct current
Nominal voltage	6 V ...220 V
Nominal current	0,531 A ... 0,014 A
Steady-state active power	3,3 W
Max. perm. ambient temperature	40 °C
Temperature class	T5
Medium temperature	40 °C
Group mounting	yes, wall to wall

Type designation	0515..
Type of current	alternating current
Nominal voltage	12 V ... 240 V
Nominal current	0,380 A ... 0,024 A
Steady-state active power	4,6 W
Max. perm. ambient temperature	60 °C
Temperature class	T4
Frequency	50 Hz...60 Hz
Medium temperature	80 °C
Single mounting	yes
Group mounting	yes, wall to wall

Type designation	1215..
Type of current	direct current
Nominal voltage	6 V ...220 V
Nominal current	0,815 A ... 0,027 A
Steady-state active power	5,0 W
Max. perm. ambient temperature	50 °C
Temperature class	T4
Medium temperature	80 °C
Single mounting	yes
Group mounting	yes, wall to wall

CONDITIONS OF CERTIFICATION: YES as shown below:

A fuse corresponding to the rated current (max. $3*I_{rat}$ according to IEC 60127-2-1) or a motor protecting switch with short-circuit and thermal instantaneous tripping (set to rated current) shall be connected in series to each solenoid as short circuit protection. For very low rated currents of the solenoid the fuse of lowest current value according to the indicated IEC standard will be sufficient. The fuse may be accommodated in the associated supply unit or shall be arranged separately. The rated voltage of the fuse shall be equal to or greater than the

stated rated voltage of the magnet coil. The breaking capacity of the fuse-link shall be as high as or higher than the maximum expected short circuit current at the location of the installation (usually 1500 A).
A maximum permissible ripple of 20 % is valid for all magnets of direct-current design.

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

protection by enclosure added