



## (1) EC-TYPE-EXAMINATION CERTIFICATE (Translation)

(2) Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres - **Directive 94/9/EC**



(3) EC-type-examination Certificate Number:

**PTB 00 ATEX 2001 X**

(4) Equipment: Valve magnet 0513 and 1213; valve magnet 0514 and 1214

(5) Manufacturer: nass magnet GmbH

(6) Address: Eckenerstraße 4-6, D-30179 Hannover

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

(8) The Physikalisch-Technische Bundesanstalt, notified body No. 0102 in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres, given in Annex II to the Directive.

The examination and test results are recorded in the confidential report PTB Ex 00-29248.

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

**EN 50014:1997**

**EN 50028:1987**

(10) If the sign "X" is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule to this certificate.

(11) This EC-type-examination Certificate relates only to the design and construction of the specified equipment in accordance with Directive 94/9/EC. Further requirements of this Directive apply to the manufacture and supply of this equipment.

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



**II 2 G EEx m II T4 und T5**

Zertifizierungsstelle Explosionsschutz

Braunschweig, March 06, 2000

By order:

  
Dr.-Ing. U. Johannsmeyer  
Regierungsdirektor



(13)

## SCHEDULE

(14)

### EC-TYPE-EXAMINATION CERTIFICATE PTB 00 ATEX 2001 X

(15) Description of equipment

The valve magnets are intended for installation and operation in explosion hazardous areas. The coil assembly is plastic-sheathed, the terminal housing consists of glass-fibre-reinforced polyimide and is filled with casting compound. The breaking overvoltage is limited by a diode resp. a varistor connected in parallel to the coil. To protect the diodes against voltage peaks from the mains a varistor is connected in parallel to the supply terminal. The strain relief of the connecting cable is carried out by a cable tie which is completely potted.

#### Electrical data

type designation	0513 00.1-00/.... to 0513 49.1-00/....
type of current	single coil
rated voltage	alternating current
rated current	12 V...240 V tolerance $\pm 10\%$
maximum power	0.392 A...0.023 A
max. permissible ambient temperature	4.8 W
temperature class	40 °C resp. 50 °C
frequency	T4
single mounting	40 Hz...60 Hz
butt mounting	yes, ambient temperature max. 50 °C
	yes, ambient temperature max. 40 °C
type designation	0514 00.1-00/.... to 0514 49.1-00/....
type of current	double coil
rated voltage	alternating current
rated current	12...240 V tolerance $\pm 10\%$
maximum power	0.392 A...0.023 A
max. permissible ambient temperature	4.8 W
temperature class	60 °C
frequency	T4
single mounting	40 Hz...60 Hz
dimensions of the valve body	yes
material of the valve body	47 x 22 x 20 mm
medium temperature	cast alloy with Mg content below 6 %
operating time	max. 60 °C
	100 %, both magnet heads simultaneous

## SCHEDULE TO EC-TYPE-EXAMINATION CERTIFICATE PTB 00 ATEX 2001 X

type designation	1213 00.1-00/.... to 1213 49.1-00/....
type of current	single coil
rated voltage	direct current
rated current	6... 125 V tolerance $\pm 10$ %
maximum power	0.83...0.04 A
max. permissible ambient temperature	5 W
temperature class	40 °C resp. 50 °C
single mounting	T4
butt mounting	yes, ambient temperature max. 50 °C
	yes, ambient temperature max. 40 °C
type designation	1214 00.1-00/.... to 1214 49.1-00/....
type of current	double coil
rated voltage	direct current
rated current	6...125 V tolerance $\pm 10$ %
maximum power	0.83...0.04 A
max. permissible ambient temperature	5 W
temperature class	60 °C
single mounting	T4
dimensions of the valve body	yes
material of the valve body	47 x 22 x 20 mm
medium temperature	cast alloy with Mg content below 6 %
operating time	max. 60 °C
	100 %, both magnet heads simultaneous
type designation	0513 50.1-00/.... to 0513 99.1-00/....
type of current	single coil
rated voltage	alternating current
rated current	12...240 V tolerance $\pm 10$ %
maximum power	0.19...0.01 A
max. permissible ambient temperature	2.5 W
temperature class	40 °C resp. 50 °C
frequency	T5
single mounting	40...60 Hz
butt mounting	yes, ambient temperature max. 50 °C
	yes, ambient temperature max. 40 °C
type designation	0514 50.1-00/.... to 0514 99.1-00/....
type of current	double coil
rated voltage	alternating current
rated current	12...240 V tolerance $\pm 10$ %
maximum power	0.19...0.01 A
max. permissible ambient temperature	2.5 W
temperature class	60 °C
frequency	T5
single mounting	40... 60 Hz
dimensions of the valve body	yes
material of the valve body	47 x 22 x 20 mm
	cast alloy with Mg content below 6 %

## SCHEDULE TO EC-TYPE-EXAMINATION CERTIFICATE PTB 00 ATEX 2001 X

medium temperature	max. 60 °C
operating time	100 %, both magnet heads simultaneous
type designation	1213 50.1-00/.... to 1213 99.1-00/....
type of current	single coil
rated voltage	direct current
rated current	6...125 V tolerance $\pm 10$ %
maximum power	0.45...0.02 A
max. permissible ambient temperature	2.8 W
temperature class	40 °C resp. 50 °C
single mounting	T5
butt mounting	yes, ambient temperature max. 50 °C
	yes, ambient temperature max. 40 °C
type designation	1214 50.1-00/.... to 1214 99.1-00/....
type of current	double coil
rated voltage	direct current
rated current	6...125 V tolerance $\pm 10$ %
maximum power	0.45...0.02 A
max. permissible ambient temperature	2.8 W
temperature class	60 °C
single mounting	T5
dimensions of the valve body	yes
material of the valve body	47 x 22 x 20 mm
medium temperature	cast alloy with Mg content below 6 %
operating time	max. 60 °C
	100 %, both magnet heads simultaneous

(16) Test report PTB Ex 00-29248

(17) Special conditions for safe use

1. A fuse corresponding to the rated current (max.  $3 \times I_{\text{rat}}$  according to DIN 41571 or IEC 127) resp. a motor protecting switch with short circuit- and thermal instantaneous tripping (adjusted to rated current) must be connected in series to each magnet as short circuit protection. This fuse may be located inside the associated supply unit or must be connected in series separately. The rated voltage of the fuse shall be higher than or equal to the indicated rated voltage of the magnet. The breaking capacity of the fuse link shall be equal to or higher than the prospective maximum short-circuit current (usually 1500 A).
2. The maximum permissible ripple for all magnets of DC-design is 20 %.
3. The magnets of double coil design may only be operated with the associated valve. A larger valve body with improved thermal conductivity may be mounted any time.

# Physikalisch-Technische Bundesanstalt

Braunschweig und Berlin

SCHEDULE TO EC-TYPE-EXAMINATION CERTIFICATE PTB 00 ATEX 2001 X

(18) Essential health and safety requirements

met by standards mentioned above

Zertifizierungsstelle Explosionsschutz

By order:



Dr.-Ing. U. Johannsmeyer  
Regierungsdirektor



Braunschweig, March 06, 2000

## 4. SUPPLEMENT

according to Directive 94/9/EC Annex III.6

to EC-TYPE-EXAMINATION CERTIFICATE PTB 00 ATEX 2001 X

(Translation)

Equipment: Valve magnet, types 0513 and 1213

Marking:  I 2 G/D Ex m II T4, T5 .....IP 65 T95 °C, T130 °C



Manufacturer: nass magnet GmbH

Address: Eckenerstraße 4-6, 30179 Hannover, Germany

### Description of supplements and modifications

The rectifier diodes and the interference suppression elements may be comprised of alternative types. Furthermore, an alternative agent may be used as impregnant for the coil.

In the future the equipment will be marked as follows:

 II 2 G Ex mb II T4 and T5  
and  II 2 D Ex tD A21 IP 65 T95 °C and T130 °C

All further specifications of the examination certificate and its supplements as well as the "Special Conditions" apply without changes.

### Applied standards

EN 60079-0:2006, EN 60079-18:2004, EN 61241-0:2006, EN 61241-1:2004

Assessment and test report: PTB Ex 10-29408

Zertifizierungssektor Explosionsschutz

Braunschweig, May 3, 2010

By order:

  
Dr.-Ing. U. Johannsmeyer  
Direktor und Professor



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## 5. SUPPLEMENT

according to Directive 94/9/EC Annex III.6

to EC-TYPE-EXAMINATION CERTIFICATE PTB 00 ATEX 2001 X

(Translation)

Equipment: Valve magnet, types 0513, 1213, 0514 and 1214

Marking:  II 2 G Ex mb II T4, T5 and II 2 D Ex tD A21 IP65 T95 °C, T130 °C

Manufacturer: nass magnet GmbH



Address: Eckenerstraße 4-6, 30179 Hannover, Germany

### Description of supplements and modifications

The equipment will be marked as follows

 II 2 G Ex mb IIC T5, T4  
 II 2 D Ex mb tb IIIC T95 °C, T130 °C  
IP 65

or

 II 2 G Ex mb IIC T5, T4 Gb  
 II 2 D Ex mb tb IIIC T95 °C, T130 °C Db  
IP 65

All further specifications given in the examination certificate and its supplements as well as the „Special Conditions“ apply without changes.

Applied standards

EN 60079-0:2009, EN 60079-18:2009, EN 60079-31:2009

Test report: PTB Ex 12-22128

Zertifizierungssektor Explosionschutz  
On behalf of PTB:

Braunschweig, July 18, 2012

  
Dr.-Ing. U. Johannsmeyer  
Direktor und Professor

