



(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 02 ATEX 2154



(4) Equipment: Valve solenoid, type 1259..

(5) Manufacturer: Nass Magnet GmbH

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

(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 03-22254.

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

EN 50014:1997 + A1 + A2

EN 50020:1994

(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, examination and tests of the specified equipment in accordance to the Directive 94/9/EC. Further requirements of the Directive apply to the manufacturing process and supply of this equipment. These are not covered by this certificate.

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



II 2 G EEx ia IIC T6 oder T4

Zertifizierungsstelle Explosionsschutz

Braunschweig, April 01, 2003

By order:

Dr.-Ing. U. Gerlach



SCHEDULE

(13)

(14) **EC-TYPE-EXAMINATION CERTIFICATE PTB 02 ATEX 2154**

(15) Description of equipment

The valve solenoids are intended for installation and operation in hazardous areas. The coil is encapsulated in epoxy resin moulding compound. Diodes connected in parallel to the winding limit the breaking overvoltage. With use of a plug connector in accordance with DIN the degree of protection IP 65 will be met.

Electrical data

Supply

for connection to intrinsically safe circuits of category ia

Maximum values:

$$U_i \leq 28 \text{ V}$$

$$I_i \leq 115 \text{ mA}$$

$$P_i \leq 1,6 \text{ W}$$

The effective inductance and capacitance of the solenoid are negligibly low

$$L_i \approx 0$$

$$C_i \approx 0$$

With type 1259..., for temperature class T6, the ambient temperature shall not exceed the range from -40 °C up to + 50 °C. The maximum permissible medium temperature is 70 °C.

With type 1259..., for temperature class T4, the ambient temperature shall not exceed the range from -40 °C up to + 85 °C. The maximum permissible medium temperature is 80 °C.

(16) Test report PTB Ex 02-22254

(17) Special conditions for safe use

not applicable

(18) Essential health and safety requirements

met by compliance with the standards mentioned above

Zertifizierungsstelle Explosionsschutz

By order:

Braunschweig, April 01, 2003

Dr.-Ing. U. Gerlach



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1. SUPPLEMENT

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

to EC-TYPE-EXAMINATION CERTIFICATE PTB 02 ATEX 2154

(Translation)

Equipment: Solenoids, types 1259..

Marking:  II 2 G Ex ia IIC/IIB T6/T4

Manufacturer: Nass Magnet GmbH

Address: Eckenerstraße 4-6, 30179 Hannover, Germany

Description of supplements and modifications

In the future the solenoid of type 1259.. may also be manufactured according to the test documents listed in the test report.

The modifications concern the internal and external construction. The electrical data are supplemented.

The relationship to the standards EN 60079-0 and EN 60079-11 is established.

All other specifications as well as the notes for manufacture and operation given in the EC-type examination certificate apply also to this 1st supplement without changes.

Electrical data

Supply only for connection to a certified intrinsically safe circuit of type of protection Ex ia IIC

Maximum values:

$$U_i = 28 \text{ V}$$

$$I_i = 115 \text{ mA}$$

or

only for connection to a certified intrinsically safe circuit of type of protection Ex ia IIB

$$U_i = 32 \text{ V}$$

$$I_i = 195 \text{ mA}$$

L_i negligibly low

C_i negligibly low

1. SUPPLEMENT TO EC-TYPE-EXAMINATION CERTIFICATE PTB 02 ATEX 2154

For relationship between type and marking as well as the permissible electrical and thermal maximum values, reference is made to the following tables:

type 1259 00.1-.. through type 1259 49.1-..	temperature class	U_i / I_i	permissible range of the ambient temperature
II 2 G Ex ia IIC	T6	28 V / 115 mA	- 40 ... 50 °C
II 2 G Ex ia IIB	T6	32 V / 195 mA	- 40 ... 50 °C

type 1259 50.1-.. through type 1259 99.1-..	temperature class	U_i / I_i	permissible range of the ambient temperature
II 2 G Ex ia IIC	T4	28 V / 115 mA	- 40 ... 85 °C
II 2 G Ex ia IIB	T4	32 V / 195 mA	- 40 ... 85 °C

Test report: PTB Ex 08-27052

Zertifizierungsstelle Explosionsschutz
By order:

Dr.-Ing. U. Johannsmeyer
Direktor und Professor



Braunschweig, June 3, 2008

2. SUPPLEMENT

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

to EC-TYPE-EXAMINATION CERTIFICATE PTB 02 ATEX 2154

(Translation)

Equipment: Solenoids, types 1259..

Marking:  II 2 G Ex ia IIC/IIB T6/T4

Manufacturer: nass magnet GmbH

Address: Eckenerstraße 4-6
30179 Hannover, Germany

Description of supplements and modifications

In the future the solenoids of types 1259.. may also be manufactured according to the test documents listed in the test report.

The state of the standards has been updated.

The marking of the models has been modified.

Further modifications have not been made.

All further specifications of the EC-type examination certificate including its supplement apply without changes.

Electrical data

Supply only for connection to a certified intrinsically safe circuit of type of protection Ex ia IIC

Maximum values:

$$U_i = 28 \text{ V}$$

$$I_i = 115 \text{ mA}$$

or

only for connection to a certified intrinsically safe circuit of type of protection Ex ia IIB

$$U_i = 32 \text{ V}$$

$$I_i = 195 \text{ mA}$$

L_i negligibly low

C_i negligibly low

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2. SUPPLEMENT TO EC-TYPE-EXAMINATION CERTIFICATE PTB 02 ATEX 2154

For relationship between type of equipment, temperature class as well as the electrical and thermal maximum values, reference is made to the following table:

type 1259 00 / .. through type 1259 49 / ..	temperature class	U_i / I_i	permissible range of the ambient temperature
II 2 G Ex ia IIC	T6	28 V / 115 mA	- 40 ... 50 °C
II 2 G Ex ia IIB	T6	32 V / 195 mA	- 40 ... 50 °C

type 1259 50 / .. through type 1259 99 / ..	temperature class	U_i / I_i	permissible range of the ambient temperature
II 2 G Ex ia IIC	T4	28 V / 115 mA	- 40 ... 85 °C
II 2 G Ex ia IIB	T4	32 V / 195 mA	- 40 ... 85 °C

In the future the marking will read:

 II 2 G Ex ia IIC/IIB T6/T4 Ga **alternatively**  II 2 G Ex ia IIC/IIB T6/T4

Applied standards

EN 60079-0:2009

EN 60079-11:2012

Test report: PTB Ex 12-22208

Zertifizierungssektor Explosionsschutz
On behalf of PTB:

Braunschweig, September 6, 2012



Dr.-Ing. T. Horn




3. SUPPLEMENT

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

to EC-TYPE-EXAMINATION CERTIFICATE PTB 02 ATEX 2154

(Translation)

Equipment: Valve solenoid, type 1259..

Marking:  II 2 G Ex ia IIC/IIB T6/T4 Ga alternatively
II 2 G Ex ia IIC/IIB T6/T4

Manufacturer: nass magnet GmbH

Address: Eckenerstraße 4-6, 30179 Hannover, Germany

Description of supplements and modifications

The valve solenoids are intended for installation and operation in hazardous areas. The coil is encapsulated in epoxy resin moulding compound. Diodes connected in parallel to the winding limit the breaking overvoltage. With use of a plug connector in accordance with DIN the degree of protection IP 65 will be met.

Electrical data

Supply Only for connection to certified intrinsically safety circuits, category ia IIC with the following maximum values:

$$\begin{aligned}U_i &= 28 \text{ V} \\I_i &= 115 \text{ mA} \\P_i &= 1,6 \text{ W} \\L_i &\approx 0 \\C_i &\approx 0\end{aligned}$$

Only for connection to certified intrinsically safety circuits, category ia IIB with the following maximum values:

$$\begin{aligned}U_i &= 32 \text{ V} \\I_i &= 195 \text{ mA} \\P_i &= 1,6 \text{ W} \\L_i &\approx 0 \\C_i &\approx 0\end{aligned}$$

3. SUPPLEMENT TO EC-TYPE-EXAMINATION CERTIFICATE PTB 02 ATEX 2154

For relationship between type and marking as well as the permissible electrical and thermal maximum values, reference is made to the following tables:

type 1259 00.1-.. through type 1259 49.1-..	temperature class	$U_i / I_i / P_i$	permissible range of the ambient temperature
II 2 G Ex ia IIC	T6	28 V / 115 mA / 1,6 W	- 40 ... 50 °C
II 2 G Ex ia IIB	T6	32 V / 195 mA / 1,6 W	- 40 ... 50 °C

type 1259 50.1-.. through type 1259 99.1-..	temperature class	$U_i / I_i / P_i$	permissible range of the ambient temperature
II 2 G Ex ia IIC	T4	28 V / 115 mA / 1,6 W	- 40 ... 85 °C
II 2 G Ex ia IIB	T4	32 V / 195 mA / 1,6 W	- 40 ... 85 °C

With type 1259.., for temperature class T6, the ambient temperature shall not exceed the range from -40 °C up to +50 °C. The maximum permissible medium temperature is 70 °C.

With type 1259.., for temperature class T4, the ambient temperature shall not exceed the range from -40 °C up to +85 °C. The maximum permissible medium temperature is 80 °C.

In the future the marking will read:

 II 2 G Ex ia IIC T6 / T4 Gb
 II 2 G Ex ia IIB T6 / T4 Gb

Applied standards


EN 60079-0:2012+A11:2013, EN 60079-11:2012

Test report: PTB Ex 16-24201

Konformitätsbewertungsstelle, Sektor Explosionsschutz

Braunschweig, April 18, 2016

On behalf of PTB


Dr.-Ing. T. Horn
Regierungsrat



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EC-type-examination Certificates without signature and official stamp shall not be valid. The certificates may be circulated only without alteration. Extracts or alterations are subject to approval by the Physikalisch-Technische Bundesanstalt. In case of dispute, the German text shall prevail.