

## English Translation

### (1) **EC-Type-Examination Certificate**

(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 2125 X**

(4) Equipment: Solenoids, type 11A52, 11C52, 11E52 and 11F52

(5) Manufacturer: Eugen Seitz AG

(6) Address: Spitalstrasse 204; CH-8623 Wetzikon 3; Switzerland

(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 02-22231.

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

**EN 50014:1997 + A1 + A2**

**EN 50019:2000**

**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 em II T5 or EEx em II T6**

Zertifizierungsstelle Explosionschutz  
By order:

Braunschweig, 22 August 2002

Dr.-Ing. U. Johannsmeyer  
Regierungsdirektor

(13)

## SCHEDULE

(14) **EC-Type –Examination Certificate PTB 02 ATEX 2125 X**

(15) Description of equipment

The solenoids are used for valve actuation; the limitation of the breaking surge voltage is guaranteed by suitable measures.

### Electrical data

Type	11A52
Type of current	direct current
Rated voltage	6 V ... 400V
Rated current	0.43 A ... 0.006 A
Limit rating	2.5 W
Max. perm. ambient temperature	60 °C
Temperature class	T5
Medium temperature	60 °C
Single mounting	yes
Group mounting	yes

Type	11A52
Type of current	direct current
Rated voltage	6 V ... 400V
Rated current	0.43 A ... 0.006 A
Limit rating	2.5 W
Max. perm. ambient temperature	50 °C
Temperature class	T6
Medium temperature	50 °C
Single mounting	yes
Group mounting	yes

Type	11A52
Type of current	direct current
Rated voltage	6 V ... 400V
Rated current	0.9 A ... 0.012 A
Limit rating	5.2 W
Max. perm. ambient temperature	40 °C
Temperature class	T5
Medium temperature	40 °C
Single mounting	yes
Group mounting	yes

## Schedule to EC-Type-Examination Certificate PTB 02 ATEX 2125 X

Type	11C52
Type of current	alternating current
Rated voltage	6 V ... 400V
Rated current	0.7 A ... 0.01 A
Limit rating	2.5 W
Max. perm. ambient temperature	60 °C
Temperature class	T5
Frequency	48 Hz ... 62 Hz
Medium temperature	60 °C
Single mounting	yes
Group mounting	yes

Type	11C52
Type of current	alternating current
Rated voltage	6 V ... 400V
Rated current	0.7 A ... 0.01 A
Limit rating	2.5 W
Max. perm. ambient temperature	50 °C
Temperature class	T6
Frequency	48 Hz ... 62 Hz
Medium temperature	50 °C
Single mounting	yes
Group mounting	yes

Type	11E52
Type of current	direct current
Rated voltage	6 V ... 400V
Rated current	0.43 A ... 0.006 A
Limit rating	2.5 W
Max. perm. ambient temperature	60 °C
Temperature class	T5
Medium temperature	60 °C
Single mounting	yes
Group mounting	yes

Type	11E52
Type of current	direct current
Rated voltage	6 V ... 400V
Rated current	0.43 A ... 0.006 A
Limit rating	2.5 W
Max. perm. ambient temperature	50 °C
Temperature class	T6
Medium temperature	50 °C
Single mounting	yes
Group mounting	yes

## Schedule to EC-Type-Examination Certificate PTB 02 ATEX 2125 X

Type	11F52
Type of current	universal current
Rated voltage	6 V ... 400V
Rated current	0.43 A ... 0.006 A
Limit rating	2.5 W
Max. perm. ambient temperature	60 °C
Temperature class	T5
Frequency	0 Hz and 10 Hz ... 10000Hz
Medium temperature	60 °C
Single mounting	yes
Group mounting	yes

Type	11F52
Type of current	universal current
Rated voltage	6 V ... 400V
Rated current	0.43 A ... 0.006 A
Limit rating	2.5 W
Max. perm. ambient temperature	50 °C
Temperature class	T6
Frequency	0 Hz and 10 Hz ... 10000Hz
Medium temperature	50 °C
Single mounting	yes
Group mounting	yes

Type	11F52
Type of current	universal current
Rated voltage	6 V ... 400V
Rated current	0.9 A ... 0.012 A
Limit rating	5.2 W
Max. perm. ambient temperature	40 °C
Temperature class	T5
Frequency	0 Hz and 10 Hz ... 10000Hz
Medium temperature	40 °C
Single mounting	yes
Group mounting	yes

(16) Test report PTB Ex 02-22231

(17) Special conditions

1. Each solenoid has to be provided on its line side with a circuit breaker as a short-circuit protection that meets the magnet current rating (max.  $3 \times I_B$  in accordance with DIN 41571 or IEC 60127), or a motor protecting switch with short-circuit and thermal instantaneous tripping function (adjusted to rated current). For very low 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 it has otherwise to be separately installed on the line side. The rated voltage of the fuse has to be identical with or greater than the stated rated voltage of the solenoid. The breaking capacity of the fuse link has to be identical with or greater than the maximum short-circuit current expected for the respective location (normally 1500 A).
2. For all magnets of the d.c. type, the max. permissible ripple content is 20 %.
3. The solenoid may be mounted in optional position. The installation instructions according to drawing no. 123 458 01 must be mentioned.
4. The solenoids may be operated in single and group mounting with a valve body made of stainless steel and the minimum dimensions 22 mm x 25 mm x 32 mm. A bigger valve body with better thermal conductivity may be used always.
5. Inserted guide tubes must be tested with 1.5-times the rated pressure.
6. For the application of the solenoids in group IIC the danger of electrostatic charge is to be taken in consideration according to EN 50014 section 7.3.2b (danger sign).

(18) Essential health and safety requirements

met by standards mentioned above

Zertifizierungsstelle Explosionsschutz  
By order

Braunschweig, 22. August 2002

Dr.-Ing. U. Johannsmeyer  
Regierungsdirektor

**Physikalisch-Technische Bundesanstalt**  
Braunschweig und Berlin

**1<sup>st</sup> SUPPLEMENT**

**according to Directive 94/9/EG Annex III Point 6**

**to EC-Type-Examination Certificate PTB 02 ATEX 2125 X**

Equipment: Solenoid type 11A52, 11C52, 11E52 and 11F52

Marking:  II 2 G EEx em II T6  
 II 2 D IP65 T80 °C or  
 II 2 G EEx em II T5  
 II 2 D IP65 T95 °C

Manufacturer: Eugen Seitz AG

Address: Spitalstrasse 204, 8623 Wetzikon 3, Switzerland

Description of the supplements and changes

The application area of the solenoid is extended as electrical equipment to use in areas with combustible dust. The marking of the maximum surface temperature depends of the operational conditions of the solenoid.

Used standards

**EN 50014:1997 + A1 + A2**  
**EN 50281-1-1:1998**

**EN 50019:2000**

**EN 50028:1987**

Test Report PTB Ex 06-26270

Zertifizierungsstelle Explosionsschutz  
By order:

Braunschweig, 27. October 2006

Dr.-Ing. U. Johannsmeyer  
Direktor und Professor

# Physikalisch-Technische Bundesanstalt



Braunschweig und Berlin

## 2<sup>nd</sup> SUPPLEMENT

according to Directive 94/9/EG Annex III Point 6

### to EC-Type-Examination Certificate PTB 02 ATEX 2125 X

Equipment: Solenoid type 11A52, 11C52, 11E52 and 11F52



Marking:  II 2 G EEx em II T6 and II 2 D IP65 T80 °C  
 II 2 G EEx em II T5 and II 2 D IP65 T95 °C

Manufacturer: Eugen Seitz AG



Address: Spitalstrasse 204, 8623 Wetzikon 3, Switzerland

#### Description of the supplements and changes

The solenoids type 11A52, 11C52, 11E52 and 11F52 fulfil the requirements of the below-mentioned standards.

In the future the equipment: must be marked as follows:  II 2 G Ex emb II T6  
 II 2 D Ex tD A21 IP 65 T80 °C

or

 II 2 G EEx em II T5  
 II 2 D Ex tD A21 IP 65 T95 °C

The “special condition” No. 6 changed like follows:

6. For the application of the solenoids in group IIC the danger of electrostatic charge is to be taken into consideration according to EN 60079-0:2006, section 7.3.2.e (danger sign).

All other statements in the EC-Type-Examination Certificate are valid unchanged.

#### Used standards

EN 60079-0:2006  
EN 61241-0:2006

EN 60079-7:2007  
EN 61241-1:2004

EN 60079-18:2004

English translation made by Eugen Seitz AG

# Physikalisch-Technische Bundesanstalt

Braunschweig und Berlin

2<sup>nd</sup> Supplement to EC-Type-Examination Certificate PTB 02 ATEX 2125 X

Test Report

PTB Ex 08-28312

Zertifizierungsstelle Explosionsschutz  
By order:

Braunschweig, 16. December 2008

Dr.-Ing. U. Johannsmeyer  
Direktor und Professor



# Physikalisch-Technische Bundesanstalt


Braunschweig und Berlin

## 3. SUPPLEMENT

according to Directive 94/9/EG Annex III Point 6

### to EC-Type-Examination Certificate PTB 02 ATEX 2125 X

Equipment: Solenoid type 11A52, 11C52, 11E52 and 11F52

Marking:  II 2 G Ex emb II T6 II 2 D Ex tD A21 IP65 T80 °C or II 2 G Ex emb II T5 II 2 D Ex tD A21 IP65 T95 °C

Manufacturer: Eugen Seitz AG

Address: Spitalstrasse 204, 8623 Wetzikon 3, Switzerland

#### Description of supplements and modifications

In the future the name plates and the warning markings will be based on the requirements of the actual standards. The marking changed as follows:

 II 2 G Ex eb mb IIC T6, T5

 II 2 D Ex tb IIIC T80 °C, T95 °C  
IP 65

All other statements in the EC-Type-Examination Certificate and its supplements as well as the “special conditions” apply without changes.

#### Applied standards

**EN 60079-0:2009, EN 60079-7:2007, EN 60079-18:2009, EN 60079-31:2009**

Test Report PTB Ex 12-22172

Zertifizierungssektor Explosionsschutz  
By order:

Braunschweig, 31. July 2012

Dr.-Ing. U. Johannsmeyer  
Direktor und Professor