

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