Physikalisch-Technische Bundesanstalt

Braunschweig und Berlin

(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 01 ATEX 2129 X

(4) Equipment: Solenoids type 2A52W and type 2C52W

(5) Manufacturer: Eugen Seitz AG

(6) Address: Spitalstrasse 204; 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 01-21273.

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

EN 50014: 1997 + A1 + A2 **EN 50019:1994** **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:

Ex II 2 G EEx em II T4 resp. T6

Zertifizierungsstelle Explosionsschutz
By order:

Dr.-Ing. U. Johannsmeyer
Regierungsdirektor

Braunschweig, September 26, 2001

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.

Physikalisch-Technische Bundesanstalt • Bundesallee 100 • D-38116 Braunschweig

(13) # S C H E D U L E

(14) ## EC-TYPE-EXAMINATION CERTIFICATE PTB 01 ATEX 2129 X

(15) Description of equipment

The solenoid function is to operate valves, the breaking surge voltage is limited by means of a varistor or a diode, which is subject to the type of voltage used.

Elektrische Daten

Type designation	2A52W
Type of current	direct current
Nominal voltage	6 V ... 250 V
Nominal current	0,072 A ... 3,0 A
Steady-state active power	17 W
Max. perm. Ambient temperature	40 °C
Temperature class	T4
Dimensions of the valve block	54 mm x 38 mm x 38 mm
Material of the valve block	St
Medium temperature	max. 40 °C
Single mounting	yes
Group mounting	no

Type designation	2A52W
Type of current	direct current
Nominal voltage	6 V ... 250 V
Nominal current	0,03 A ... 1,25 A
Steady-state active power	7,5 W
Max. perm. Ambient temperature	40 °C
Temperature class	T6
Dimensions of the valve block	54 mm x 38 mm x 38 mm
Material of the valve block	St
Medium temperature	max. 40 °C
Single mounting	yes
Group mounting	no

Type designation	2C52W
Type of current	alternating current
Nominal voltage	12 V ... 250 V
Nominal current	0,108 A ... 2,250 A
Steady-state active power	16 W
Max. perm. Ambient temperature	40 °C
Temperature class	T4
Frequency	48 Hz...62 Hz
Dimensions of the valve block	54 mm x 38 mm x 38 mm
Material of the valve block	St
Medium temperature	max. 40 °C
Single mounting	yes
Group mounting	no

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SCHEDULE TO EC-TYPE-EXAMINATION CERTIFICATE PTB 01 ATEX 2129 X

Type designation	2C52W
Type of current	alternating current
Nominal voltage	12 V ... 250 V
Nominal current	0,04 A ... 0,833 A
Steady-state active power	7 W
Max. perm. Ambient temperature	40 °C
Temperature class	T6
Frequency	48 Hz...62 Hz
Dimensions of the valve block	54 mm x 38 mm x 38 mm
Material of the valve block	St
Medium temperature	max. 40 °C
Single mounting	yes
Group mounting	no

(16) Test report PTB Ex 01-21273

(17) Special conditions for safe use

1. A fuse corresponding to its rated current (max. $3*I_{rat}$ according 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 currents or 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 separately arranged. The rated voltage to 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).
2. A maximum perissible ripple of 20 % is valid for all magnets of direct-current desin.
3. The solenoids of type 2A52W and type 2C52W may only be operated with the associated valve. A bigger valve block with improved thermal conductivity may be assembled at any time.
4. The solenoids were only qualified for single mounting, group mounting respectively batterie mounting is not allowed.
5. For the application of the solenoids in the induvidual groups the danger of electrostatic charge is to he taken into consideration. For group IIC the additional plate is absolutely necessary.

(18) Essential health and safety requirements

met by standards mentioned above

Zertifizierungsstelle Explosionsschutz
By order:

Dr.-Ing. U. Johannsmeyer
Regierungsdirektor

Braunschweig, September 26, 2001

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Physikalisch-Technische Bundesanstalt PTB

Braunschweig und Berlin

English Translation

1st S U P P L E M E N T

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

to EC-Type Examination Certificate PTB 01 ATEX 2129 X

Equipment: Solenoids type 2A52W and type 2C52W

Marking: **II 2 G EEx em II T4 or T6**

Manufacturer: Eugen Seitz AG

Address: Spitalstrasse 204, 8623 Wetzikon, Switzerland

Description of the supplements and modifications

Solenoids type 2A52W and type 2C52W (PTB 01 ATEX 2129 X) may be used in such areas where it is expected that a potentionally explosive atmosphere of dust/air-mixtures occasionally occurs.

Marking for dust area:

II 2 D IP 65 T 80 °C or T 130 °C

Test Report: PTB Ex 03-23458ST

Test laboratory explosion protection
By order:

Braunschweig, 31. Oktober 2003

Dr.-Ing. U. Johannsmeyer
Regierungsdirektor

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Physikalisch-Technische Bundesanstalt

Braunschweig und Berlin

English Translation

2nd SUPPLEMENT

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

to EC-Type Examination Certificate PTB 01 ATEX 2129 X

Equipment:	Solenoids type 2A52W and type 2C52W
Marking:	**II 2 G EEx em T4 or T6 and II 2D IP 65 T130 °C or T80 °C**
Manufacturer:	Eugen Seitz AG
Address:	Spitalstrasse 204, 8623 Wetzikon 3, Switzerland

Description of the supplements and changes

The Solenoids type 2A52W and type 2C52W (PTB 01 ATEX 2129 X) may be produced and operated also according to the test documentation listed in the test report.
The change concerns the connection. Instead of terminal strip a printed circuit board may be alternativelly used.

Test Report: PTB Ex 04-24126

Test laboratory explosion protection
By order:

Braunschweig, 19. Mai 2004

Dr.-Ing. U. Johannsmeyer
Regierungsdirektor

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Physikalisch-Technische Bundesanstalt PTB

Braunschweig und Berlin

English Translation

3rd S U P P L E M E N T

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

to EC-Type Examination Certificate PTB 01 ATEX 2129 X

Equipment: Solenoids type 2A52W and type 2C52W

Marking: **II 2 G EEx em T4 or T6 and**
II 2 D IP 65 T110 °C or T80 °C

Manufacturer: Eugen Seitz AG

Address: Spitalstrasse 204
8623 Wetzikon, Switzerland

Description of the supplements and changes

The Solenoids type 2A52W and type 2C52W (7,5 W and 7 W models) may also be manufactured and operated according to the attached documents. The modification concerns the ambient temperature. These both models may be used for ambient temperatures up to 70 °C in temperature class T4. For application at an ambient temperature above 55 °C cables and cable entries with increased thermo stability shall be used.
An additional label refers to this.

Applied Standards

EN 50014:1997 + A1 + A2 **EN 50019 :1994** **EN 50028 :1987**

Test Report: PTB Ex 05-25054

Test laboratory explosion protection
By order:

Braunschweig, 15. April 2005

Dr.-Ing. U. Johannsmeyer
Regierungsdirektor

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