Physikalisch-Technische Bundesanstalt
Braunschweig und Berlin

T R A N S L A T I O N

(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 06 ATEX 2027

(4) Equipment: Model 3967-1 Solenoid Valve

(5) Manufacturer: SAMSON AG, Mess- und Regeltechnik

(6) Address: Weismüllerstrasse 3, 60314 Frankfurt am Main, Germany

(7) The design of this equipment and the various approved versions there of are specified in the schedule to this type examination certificate and the documents referred to therein

(8) The Physikalisch-Technische Bundesanstalt, notified body number 0102 according to 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 as specified in Annex II to the Directive.

The examination and test results are recorded in the confidential report **PTB Ex 06-26108.**

(9) The essential health and safety requirements are satisfied by compliance with

EN 50014:1997 + A1+A2 **EN 50020:2002** **EN 50281-1-1:1998**

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

The results laid down in this test report refer exclusively to the test object and the technical documentation submitted. Test reports without signature and seal are invalid. This test report may be reproduced unaltered only. Extracts or amendments shall require the prior approval of the Physikalisch-Technische Bundesanstalt.

(11) This EC Type Examination Certificate relates only to the design and examination of the specified equipment in compliance with Directive 94/9/EC. Further requirements of this Directive apply to the manufacture and supply of this equipment. These requirements are not covered by this Certificate.

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

 **II 2 G EEx ia II T 6 and II 2 D IP 65 T 80 °C**

Zertifizierungsstelle Explosionsschutz
Braunschweig, 23 October 2006

By order
(Signature)
(Seal)

Dr. Ing. U. Gerlach
Oberregierungsrat

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(13) # Schedule

(14) **EC Type Examination Certificate Number PTB 06 ATEX 2027**

(15) **Description of Equipment**

The Model 3967-1.. Solenoid Valve converts electrical binary signals into pneumatic output signals and serves for controlling pneumatic actuators.

The solenoid valve is actuated electrically by the Model 1079-40 .. e/p Binary Converter Coil, a modified version of the Model 1079-27 .. e/p Binary Converter Coil certified under PTB 00 ATEX 2157 U. This is a passive two-pole network that is permitted to be connected to certified intrinsically safe circuits unless the admissible maximum values of U_i, I_i and P_i are exceeded.

The equipment is intended for use in hazardous areas.

The Model 3967-1 … also complies with the requirements of electrical equipment protected by the enclosure according to EN 50281-1-1:1998.

Electrical data:

By connection of a suitable series resistor the Model 1079-40 .. e/p Binary Converter Coil can be connected to nominal voltages of 6 V, 12 V and 24 V.

The correlation between version, temperature classification, permissible ambient temperature ranges and maximum power dissipation is shown in the table below.

Version	**U_N**	**6 V DC**	**12 V DC**	**24 V DC**
Temperature class	T6	- 45 °C	….	60 °C
	T5			70 °C
	T4			80 °C
Characteristic rectangular	P_i	250 mW	(#)	
Characteristic linear	P_i	(#)	(#)	

(#) No limitations

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Schedule to the EC Type Examination Certificate PTB 06 ATEX 2027

The maximum values for connection to a certified intrinsically safe circuit are shown in the table below:

U_i	25V	27 V	28 V	30 V	32 V
I_i	150mA	125 mA	115 mA	100 mA	85 mA
P_i		No limitation			

C_i negligible
L_i negligible

(16) Test report **PTB Ex 06-26108**

(17) Special conditions for safe use

None

(18) Essential safety and health requirements

Satisfied by compliance with the standards specified above.

Zertifizierungsstelle Explosionsschutz Braunschweig, 23 October 2006

By order
(Signature)

(Seal)

Dr. Ing. U. Gerlach
Oberregierungsrat

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Physikalisch-Technische Bundesanstalt
Braunschweig und Berlin

T R A N S L A T I O N

A D D E N D U M No. 1

in compliance with Directive 94/9/EC Annex III Clause 6
to the EC Type Examination Certificate PTB 06 ATEX 2027

Equipment: Model 3967-1 … Solenoid Valve

Marking: **II 2 G EEx ia IIC T 6 and II 2 D IP 65 T 80 °C**

Manufacturer: SAMSON AG Mess- und Regeltechnik

Address: Weismüllerstrasse 3
60314 Frankfurt am Main, Germany

Description of the additions and modifications

The Model 3967-1.. Solenoid Valve converts electrical binary signals into pneumatic output signals and serves for closed-loop and open-loop control of pneumatic actuators.

The modifications relate, amongst others, to modifications of the printed circuit board and of the marking.

In future the will be:

II 2 G Ex ia IIC T 6
II 2 D Ex tD A21 IP 65 T 80 °C

The electrical data and all other specifications apply also to this Addendum No. 1.

Standards applied

EN 60079-0:2006 **EN 60079-11:2007** **EN 61241-0:2006** **EN 61241-1:2004**

Test report: **PTB Ex 07-27332**

Zertifizierungsstelle Explosionsschutz

By order (Seal) Braunschweig, 16 November 2007

(Signature)
Dr.-Ing. U. Johannsmeyer
Director and Professor

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