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 07 ATEX 2061

(4) Equipment: Explosion protected electrical sensor, type ExCon-..

(5) Manufacturer: Schischek GmbH

(6) Address: Mühlsteig 45, 90579 Langenzenn, 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 07-26362.

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

EN 60079-0:2006	**EN 60079-7:2007**	**EN 60079-11:2007**
EN 60079-18:2004		
EN 61241-0:2006	**EN 61241-1:2004**	**EN 61241-11:2006**

(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:

Ⓔx II 2 (1) G Ex e ma [ia] IIC T6 or
II 2 (1) D Ex tD A21 [iaD] IP66 T 80 °C

Zertifizierungsstelle Explosionsschutz
By order.

Dr.-Ing. U. Johannsmeyer
Direktor und Professor

Braunschweig, January 11, 2008

PHYSIKALISCH-TECHNISCHE BUNDESANSTALT 56

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.

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(13) # SCHEDULE

(14) ## EC-TYPE-EXAMINATION CERTIFICATE PTB 07 ATEX 2061

(15) Description of equipment

The explosion protected electrical sensor, type ExCon-.. is used for the measurement of pressures, humidity and/or temperatures and for the conversion of measurands into standard signals.

The associated sensors of type ExPro may be applied in hazardous areas of categories 2G or 2D. Different sensor variants are available corresponding to the usage site.

Two intrinsically safe sensor circuits which are available as an option may be installed into areas of categories 1G or 1D. The sensors to be used shall comply with the requirements for these categories.

The equipment is intended for the application inside the hazardous area.

The maximum permissible ambient temperature is 50 °C.

Electrical data

Supply (terminals 1, 2): U = 24 V AC/DC ± 20 %, 50 ... 60 Hz; U_m = 30 V

Analog outputs (terminals 3, 4, 5): I = 0(4)...20 mA; U = 0(2)...10 V; U_m = 30 V

Digital sensor circuits (ExCon-D-.. / ExCon-P-..): type of protection Intrinsic Safety Ex ia IIC

Maximum values:

U_o = 7.9 V
I_o = 48 mA
P_o = 95 mW

C_i negligibly low
L_i negligibly low

For relationship between the explosion group and the permissible external inductances and capacitances, reference is made to the following table:

	IIC	IIB	IIA
L_o	2 mH	5 mH	10 mH
C_o	1.3 µF	5.8 µF	7.1 µF

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Passive sensor circuits (ExCon-A-..) ..... type of protection Intrinsic Safety Ex ia IIC

Maximum values:

U_o = 7.9 V
I_o = 6.4 mA
P_o = 12.7 mW

C_i negligibly low
L_i negligibly low

For relationship between the explosion group and the permissible external inductances and capacitances, reference is made to the following table:

	IIC	IIB	IIA
L_o	2 mH	5 mH	10 mH
C_o	1.4 µF	6.3 µF	7.9 µF

Analog outputs (optional) ..... type of protection Intrinsic Safety Ex ia IIC

Maximum values:

U_o = 15.8 V
I_o = 85 mA
P_o = 336 mW

C_i negligibly low
L_i negligibly low

For relationship between the explosion group and the permissible external inductances and capacitances, reference is made to the following table:

	IIC	IIB	IIA
L_o	2 mH	5 mH	10 mH
C_o	0.33 µF	1.6 µF	1.8 µF

IRDA interface (optional) ..... type of protection Intrinsic Safety Ex ia IIC

Maximum values:

U_o = 7.9 V
I_o = 48 mA
P_o = 95 mW

C_i negligibly low
L_i negligibly low

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For relationship between the explosion group and the permissible external inductances and capacitances, reference is made to the following table:

	IIC	IIB	IIA
L_o	2 mH	5 mH	10 mH
C_o	1.3 µF	5.8 µF	7.1 µF

All circuits are safely electrically isolated from each other up to a peak value of the rated voltage of 30 V.

(16) Test report PTB Ex 07-26362

(17) Special conditions for safe use

none

(18) Essential health and safety requirements

met by compliance with the standards mentioned above

Zertifizierungsstelle Explosionsschutz
By order:

Dr.-Ing. U. Johannsmeyer
Direktor und Professor

Braunschweig, January 11, 2008

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Physikalisch-Technische Bundesanstalt

Braunschweig und Berlin

1. SUPPLEMENT

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

to EC-TYPE-EXAMINATION CERTIFICATE PTB 07 ATEX 2061

(Translation)

Equipment: Explosion protected electrical sensor, type ExCos-..

Marking: Ⓔx **II 2 (1) G Ex e ma [ia] IIC T6 or**
II 2 (1) D Ex tD A21 [iaD] IP66 T 80 °C

Manufacturer: Schischek GmbH

Address: Mühlsteig 45, 90579 Langenzenn, Germany

Description of supplements and modifications

Subject-matter of this supplement is the revision of the test documents for organizational reasons.

The product name has changed. Further modifications were not made.

All specifications of the EC-type examination certificate apply without changes.

Test report: PTB Ex 08-28298

Zertifizierungssektor Explosionsschutz
By order:

Braunschweig, November 19, 2008

Dr.-Ing. U. Johannsmeyer
Direktor und Professor

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