



(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**

EPS 14 ATEX 1 655 X

Revision: 1

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

(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) Bureau Veritas Consumer Products Services Germany GmbH, Notified Body No. 2004 in accordance with Article 9 of the Council Directive 94/9/EC of March 23rd 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 of the Directive. The examination and test results are recorded in the confidential report 14TH0060.

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

EN 60079-0:2012/A11:2013

EN 60079-7:2007

EN 60079-11:2012

EN 60079-18:2009

EN 60079-31:2014

(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 the 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 (1) G Ex e ma [ja Ga] IIC T6...T4 Gb

II 2 (1) D Ex tb [ja Da] IIIC T80°C...T130°C Db IP66

Certification department of explosion protection

Nuremberg, July 24, 2015



D. Zitzmann



(13)

Annexe

(14) **EC-Type Examination Certificate EPS 14 ATEX 1 655 X Rev.: 1**

(15) Description of equipment:

The explosion protected electrical sensor, type ExCos-... 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 category 2G or 2D. Different sensor variants are available corresponding to the usage site.

The maximum permissible ambient temperature is +50 °C.

Electrical data:

Supply	U = 24 V AC/DC ±20%, 50...60 Hz
(terminals 1, 2)	U _m = 30 V
Analog outputs	I = 0(4)...20 mA
(terminals 3, 4, 5)	U = 0(2)...10 V
	U _m = 30 V
Digital sensor circuits	type of protection Intrinsic Safety Ex ia IIC
(ExCos-D-.. / ExCos-P-..)	
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

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

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 μ F	6.3 μ F	7.9 μ F

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 μ F	1.6 μ F	1.8 μ F

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

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 μ F	5.8 μ F	7.1 μ F

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

(16) Test report: 14TH0060

(17) Special conditions for safe use:

- Ambient temperature range: $-20^{\circ}\text{C} < T < +50^{\circ}\text{C}$
- Do not open when hazardous atmosphere is present.
- Do not open when energized.
- The ExPro-C is only allowed to be used with the Ex-Cos-D.
- Temperature class (group II) and max. surface temperature (group III) depending on used enclosure type (material):

Modell	Max. ambient temperature: +40°C	Max. ambient temperature : +50°C
ExCos (aluminium enclosure)	T6 (T80°C)	T6 (T80°C)
ExCos (stainless steel enclosure)	T5 (T95°C)	T4 (T130°C)

(18) Essential health and safety requirements:

Met by standards.

Certification department of explosion protection

Nuremberg, July 24, 2015



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Certificates without signature are void. This certificate is allowed to be distributed only if not modified.
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