



(1) **EU - Type Examination Certificate**

(2) Equipment and protective systems intended for use in potentially explosive atmospheres – **Directive 2014/34/EU**

(3) EU - Type Examination Certificate Number

EPS 14 ATEX 1 655 X

Revision 3

(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 annex to this certificate and the documentation therein referred to.

(8) Bureau Veritas Consumer Products Services Germany GmbH, notified body No. 2004 in accordance with Article 21 given in the Directive 2014/34/EU of the European Parliament and of the Council of 26 February 2014, 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 documentation under the reference number 14TH0060.

(9) Compliance with the essential health and safety requirements has been assured by compliance with:

EN IEC 60079-0:2018

**EN 60079-7:2015,
EN IEC 60079-7:2015/A1:2018**

EN 60079-11:2012

**EN 60079-18:2015,
EN 60079-18:2015/A1:2017**

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 annex to this certificate.

(11) This EU - Type Examination Certificate relates only to the design and construction of the specified equipment in accordance with Directive 2014/34/EU. Further requirements of this Directive apply to the manufacture of this equipment and its placing on the market. Those requirements are not covered by this certificate.

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

 II 2(1)G Ex eb ma [ia Ga] IIC T6...T4 Gb
II 2(1)D Ex tb [ia Da] IIIC T80°C...T130°C Db IP66

Certification department of explosion protection

Tuerkheim, 2023-09-20



Ulrich Feike

Certificates without signature and seal are void. This certificate is allowed to be distributed only if not modified. Extracts or modifications must be authorized by Bureau Veritas Consumer Products Services Germany GmbH.

(13)

Annex

(14) **EU - Type Examination Certificate EPS 14 ATEX 1 655 X**

Revision 3

(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.

Electrical data:

Supply (terminals 1, 2)

U = 24 V AC/DC $\pm$ 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 (ExCos-D-... / ExCos-P-...)

type of protection Intrinsic Safety Ex ia IIC
U₀ = 7.9 V
I₀ = 48 mA
P₀ = 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 ₀	2 mH	5 mH	10 mH
C ₀	1.3 μ F	5.8 μ F	7.1 μ F

Passive sensor circuits (ExCos-A-...)

type of protection Intrinsic Safety Ex ia IIC
U₀ = 7.9 V
I₀ = 6.4 mA
P₀ = 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 ₀	2 mH	5 mH	10 mH
C ₀	1.4 μ F	6.3 μ F	7.9 μ F

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(15) Description of equipment: (continuation)

Analog outputs (optional)

type of protection Intrinsic Safety Ex ia IIC

$U_0 = 15.8 \text{ V}$

$I_0 = 85 \text{ mA}$

$P_0 = 336 \text{ mW}$

Ci negligibly low

Li 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_0	2 mH	5 mH	10 mH
C_0	0.33 μF	1.6 μF	1.8 μF

IRDA interface (optional)

type of protection Intrinsic Safety Ex ia IIC

$U_0 = 7.9 \text{ V}$

$I_0 = 48 \text{ mA}$

$P_0 = 95 \text{ mW}$

Ci negligibly low

Li 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_0	2 mH	5 mH	10 mH
C_0	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) Reference number: 14TH0060

(17) Special conditions for safe use:

Ambient temperature range: $-20^\circ\text{C} \dots +50^\circ\text{C}$

Do not open when hazardous atmosphere is present.

Do not open when energized.

The ExPro-C is only allowed to be used with the ExCos-D.

Temperature class (group II) and max. surface temperature (group III) depending on used enclosure type (material):

Modell	Max. ambient temperature: $+40^\circ\text{C}$	Max. ambient temperature: $+50^\circ\text{C}$
ExCos (aluminium)	T6 (T80 $^\circ\text{C}$)	T6 (T80 $^\circ\text{C}$)
ExCos (stainlesssteel)	T5 (T95 $^\circ\text{C}$)	T4 (T130 $^\circ\text{C}$)



(18) Essential health and safety requirements:

Met by compliance with standards.



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