IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: **IECEx EPS 14.0023X**

Page 1 of 4

Certificate history:
Issue 2 (2017-01-16)
Issue 1 (2015-11-06)
Issue 0 (2014-09-16)

Status: **Current**

Issue No: 3

Date of Issue: 2023-09-20

Applicant: **Schischek GmbH**
Mühlsteig 45
90579 Langenzenn
Germany

Equipment: **Electrical sensor, type RedCos-..**

Optional accessory:

Type of Protection: **"ec", "mc", [ia], "tc"**

Marking: Ex ec mc [ia Ga] IIC T6...T4 Gc

Ex tc [ia Da] IIIC T80°C...T130°C Dc IP66

Approved for issue on behalf of the IECEx Certification Body: **Ulrich Feike**

Position: **Head of Certification**

Signature:
(for printed version)

Date:
(for printed version)

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting www.iecex.com or use of this QR Code.

Certificate issued by:

Bureau Veritas Consumer Products Services Germany GmbH
Businesspark A96
86842 Türkheim
Germany

IECEx Certificate of Conformity

Certificate No.: **IECEx EPS 14.0023X** Page 2 of 4

Date of issue: 2023-09-20 Issue No: 3

Manufacturer: **Schischek GmbH**
Mühlsteig 45, 90579 Langenzenn
Germany

Manufacturing locations: **Schischek GmbH**
Mühlsteig 45, 90579 Langenzenn
Germany

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements.This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended

STANDARDS :
The equipment and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards

IEC 60079-0:2017 Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

IEC 60079-11:2011 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:6.0

IEC 60079-18:2017 Explosive atmospheres - Part 18: Protection by encapsulation "m"
Edition:4.1

IEC 60079-31:2013 Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
Edition:2

IEC 60079-7:2017 Explosive atmospheres - Part 7: Equipment protection by increased safety "e"
Edition:5.1

This Certificate **does not** indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

TEST & ASSESSMENT REPORTS:
A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in:

Test Report:

DE/EPS/ExTR14.0074/03

Quality Assessment Report:

DE/BVS/QAR07.0009/16

IECEx Certificate of Conformity

EQUIPMENT:
Equipment and systems covered by this Certificate are as follows:

The explosion protected electrical sensor, type RedCos-.. 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.Two intrinsically safe sensor circuits which are available as an option may be installed into areas of categories 1 G 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 see attachment.

SPECIFIC CONDITIONS OF USE: YES as shown below:
Ambient temperature range: -20 °C < T < +50 °C.

The device may only be opened if there is no explosive atmosphere.

Do not open when energized.

IECEx Certificate of Conformity

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)
- minor technical modification
- standard update

Annex:

Schi_14TH0061_RedCos_IECEx EPS 14.0023X_003_Attachment_1.pdf

Annex to: IECEx EPS 14.0023X Issue No. 3

Applicant: Schischek GmbH

Apparatus: Sensor type RedCos

Description of equipment:

The explosion protected electrical sensor, type RedCos-… 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.

Two intrinsically safe sensor circuits which are available as an option may be installed into areas of categories 1 G 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.

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
(ExCos-D-.. / ExCos-P-..)

type of protection Intrinsic Safety Ex ia IIC
U_0 = 7.9 V
I_0 = 48 mA
P_0 = 95 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_o	2 mH	5 mH	10 mH
C_o	1.3 µF	5.8 µF	7.1 µF

Passive sensor circuits

(ExCos-A-..)

type of protection Intrinsic Safety Ex ia IIC
U_0 = 7.9 V
I_0 = 6.4 mA
P_0 = 12.7 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_o	2 mH	5 mH	10 mH
C_o	1.4 µF	6.3 µF	7.9 µF

Description of equipment: (continuation)

Analog outputs (optional)

type of protection Intrinsic Safety Ex ia IIC
U_0 = 15.8 V
I_0 = 85 mA
P_0 = 336 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_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
U_0 = 7.9 V
I_0 = 48 mA
P_0 = 95 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_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.

Special conditions for safe use:

Ambient temperature range: -20 °C ... +50 °C

Do not open when hazardous atmosphere is present.

Do not open when energized.

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
RedCos (aluminium)	T6 (T80°C)	T6 (T80°C)
RedCos (stainlesssteel)	T5 (T95°C)	T4 (T130°C)

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