



## (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 09 ATEX 2018**



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

(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 assessment and test report PTB Ex 09-29111.

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

**EN 60079-0:2006**

**EN 60079-11:2007**

**EN 60079-15:2005**

**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.

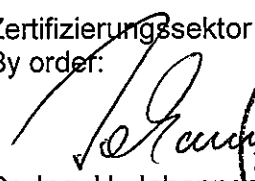
(12) The marking of the equipment shall include the following:

**Ex II 3 (1) G Ex nC [ia] IIC T6 or II 3 (1) D Ex tD A22 [iaD] IP66 T 80 °C**

Zertifizierungssektor Explosionsschutz

Braunschweig, August 6, 2009

By order:

  
Dr.-Ing. U. Johannsmeier  
Direktor und Professor



## SCHEDULE

(13)

(14) **EC-TYPE-EXAMINATION CERTIFICATE PTB 09 ATEX 2018**

(15) Description of equipment

The explosion protected electrical sensor, type RedBin-.. is used for the measurement of pressures, humidity and/or temperatures and for the conversion of the measurand into a switch signal.

It is intended for stationary application in the hazardous area.

The sensor circuits of the RedBin-.. may be led into hazardous areas requiring category 1G- or 1D-equipment, provided that the associated sensors comply with the requirements of these categories.

The sensors of types ExPro-B.. may be installed in hazardous areas requiring category 2G- or 2D-equipment. They are available in various designs corresponding to the respective place of installation.

The permissible range of the ambient temperature is -20 °C ... 50 °C.

For relationship between explosion group and permissible external reactances, reference is made to the respective table.

### Electrical data

Supply ..... U = 24 V AC/DC  $\pm$  20 %, 50 ... 60 Hz  
(terminals 1, 2) U<sub>m</sub> = 30 V

Auxiliary contacts..... U = 24 V AC/DC  $\pm$  20 %, 50 ... 60 Hz  
(terminals 3, 4) U<sub>m</sub> = 30 V

Relay-outputs ..... V AC = 250 V / 0.1 A  
(terminals 5...10) 125 VA / 0.2 A  
30 V / 0.5 A

or

V DC = 220 V / 0.1 A  
110 V / 0.2 A  
30 V / 0.5 A

The relay outputs are safely electrically isolated from all other circuits up to a maximum value of the rated voltage of 375 V.

Sensor circuits .....type of protection Intrinsic Safety Ex ia IIC  
(RedBin-A., RedBin-FR)

Maximum values:

$$U_o = 7.14 \text{ V}$$

$$I_o = 8 \text{ mA}$$

$$P_o = 15 \text{ mW}$$

	IIC	IIB	IIA
$L_o$	5 mH	10 mH	20 mH
$C_o$	1.5 $\mu$ F	6.7 $\mu$ F	8.6 $\mu$ F

$C_i$  negligibly low  
 $L_i$  negligibly low

Sensor circuit .....type of protection Intrinsic Safety Ex ia IIC  
(RedBin-D..)

Maximum values:

$$U_o = 7.9 \text{ V}$$

$$I_o = 6.4 \text{ mA}$$

$$P_o = 12.7 \text{ mW}$$

	IIC	IIB	IIA
$L_o$	5 mH	10 mH	20 mH
$C_o$	1.5 $\mu$ F	6.7 $\mu$ F	8.6 $\mu$ F

$C_i$  negligibly low  
 $L_i$  negligibly low

Sensor circuit NAMUR .....type of protection Intrinsic Safety Ex ia IIC  
(RedBin-N..)

Maximum values:

$$U_o = 9.6 \text{ V}$$

$$I_o = 9.7 \text{ mA}$$

$$P_o = 24 \text{ mW}$$

	IIC	IIB	IIA
$L_o$	5 mH	10 mH	20 mH
$C_o$	0.84 $\mu$ F	3.8 $\mu$ F	4.9 $\mu$ F

$C_i$  negligibly low  
 $L_i$  negligibly low

Sensor circuit.....type of protection Intrinsic Safety Ex ia IIC  
(ExPro-B..)

Maximum values:

$U_i = 9.6 \text{ V}$

$I_i = 9.7 \text{ mA}$

$C_i = 120 \text{ nF}$

$L_i$  negligibly low

The intrinsically safe circuits are safely electrically isolated from each other and from the non-intrinsically safe circuits up to a maximum value of the rated voltage of 30 V.

(16) Assessment and test report PTB Ex 09-29111

(17) Special conditions for safe use

none

(18) Essential health and safety requirements

met by compliance with the standards mentioned above

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