



## (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 1016 X**

(4) Equipment: Electric explosion-proof valve actuator ExRun -..... - .. - ..

(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 09-19037.

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

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

**II 2 (1) G Ex de [ia] IIC T6, T5 and T4**

**II 2 (1) D Ex tD [iaD] A21 IP66 T80, T95 and T130 °C**

Zertifizierungssektor Explosionsschutz

Braunschweig, April 21, 2009

By order:

Dr.-Ing. M. Thedens  
Oberregierungsrat



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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.

(13)

## SCHEDULE

(14)

### EC-TYPE-EXAMINATION CERTIFICATE PTB 09 ATEX 1016 X

(15) Description of equipment

The electric, explosion-proof ExRun -..... - .. - .. valve actuator comprises of a flameproof enclosure with actuator shafts that accommodate electromechanical components. The internal elements are temperature controlled. The flameproof enclosure is mounted in a protective housing with additional mechanical components. The gears and mechanical actuators mounted in the protective housing do not form part of this certificate.

A terminal box of Increased Safety, which is integrated in the outer housing, provides for connection.

#### Electrical data

Nominal voltage $U_0/U$ ..... up to	300/500 V
Rated voltage ..... max.	250 V
Conductor size ..... max.	2.5 mm <sup>2</sup>

Rated values are maximum values, the actual electrical values are determined by mounted electrical apparatus. Within these limiting values complying with the appropriate standards the manufacturer specifies the final limiting values dependent on power supply specifications, operating mode, utilisation category, etc. Any additional technical features are specified in the test documents and the operating manual.

Ambient temperature	T6	-40 °C to 40 °C
	T5	-40 °C to 50 °C
	T4	-40 °C to 60 °C
Voltage supply .....	U =	24 ... 230 V AC/DC, 50...60 Hz
	U <sub>m</sub> =	253 V

#### Intrinsically safe circuits

Sensor circuit.....type of protection: Intrinsic Safety Ex ia IIC

Maximum values:

U<sub>0</sub> = 10.6 V  
I<sub>0</sub> = 11 mA  
P<sub>0</sub> = 30 mW  
Linear characteristic

L<sub>i</sub> negligibly low

C<sub>i</sub> negligibly low

The outer reactance accepted as a maximum is shown in the table below:

	IIC	EEx ia	
		IIB	IIA
$L_o$	2 mH	5 mH	10 mH
$C_o$	830 nF	3.6 $\mu$ F	4.5 $\mu$ F

(16) Test Report PTB Ex 09-19037

(17) Special conditions for safe use

Repair of the flameproof joints must be made in compliance with the structural specifications provided by the manufacturer. Repair in compliance with the values in tables 1 and 2 of EN 60079-1 is not accepted.

Additional notes for safe operation:

Any components attached or installed (e.g. terminal compartments, bushings, 'Ex' cable glands, connectors) must be of a technical standard that complies with the specifications on the cover sheet. They must be suited for the operating conditions, and be covered by a separate examination certificate, and a separate examination certificate must have been issued for them. The operating conditions set forth in the relevant component certificates must by all means be complied with.

When the equipment is classified under temperature class T4 or T130 °C, adequate measures must be taken that ensure that temperatures at places where the sealing material is installed will not exceed 100 °C.

The connecting cable must be of a quality that meets the thermal and mechanical requirements under field service conditions.

For in zone 20 or 21 applications, sensors connected to the intrinsically safe sensor circuit must meet the requirements of categories D 1 and D 2, respectively.

(18) Essential health and safety requirements

Met by compliance with the afore-mentioned Standards.

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