



## (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 02 ATEX 2195**



(4) Equipment: Electrical switching amplifier, type EXL-IR

(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 report PTB Ex 03-22353.

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

**EN 50014:1997 + A1 + A2**

**EN 50020:1994**

(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 (1) GD [EEx ia] IIC**

Zertifizierungsstelle Explosionschutz

By order:

Dipl.-Ing. M. Krämer



Braunschweig, April 7, 2003

SCHEDULE

(13)

(14) EC-TYPE-EXAMINATION CERTIFICATE PTB 02 ATEX 2195

(15) Description of equipment

The electrical switching amplifier, type EXL-IR is used for the transmission of binary signals from the hazardous area into the non-hazardous area.

The switching amplifier will be installed outside the hazardous area.

The maximum permissible range of the ambient temperature is - 10 °C up to 50 °C .

Electrical data

Voltage supply .....U = 24 V AC/DC ±20 %, 50...60 Hz  
 (terminals 1, 2) P = 3 W  
 U<sub>m</sub> = 60 V

Relay circuit .....U = 230 V AC resp. 250 V DC  
 (terminals 4, 5, 6) I = 3 A  
 U<sub>m</sub> = 250 V

Output circuit Sens dyn.....type of protection Intrinsic Safety EEx ia IIC  
 (terminals 11+, 12-)

Maximum values:

U<sub>o</sub> = 13,5 V  
 I<sub>o</sub> = 23 mA  
 P<sub>o</sub> = 76 mW  
 trapezoidal characteristic  
 L<sub>i</sub> = 726 µH  
 C<sub>i</sub> negligibly low

Interconnection **without** the existence of lumped external capacitances and inductances:

	EEx ia		
	IIC	IIB	IIA
L <sub>o</sub>	70 mH	250 mH	250 mH
C <sub>o</sub>	0.85 µF	5.3 µF	5.3 µF

Interconnection **with** the existence of lumped external capacitances and inductances:

	EEx ia		
	IIC	IIB	IIA
L <sub>o</sub>	2 mH	10 mH	10 mH
C <sub>o</sub>	0.42 µF	1.7 µF	1.7 µF

Output circuit Sens stat.....type of protection Intrinsic Safety EEx ia IIC  
(terminals 13+, 12-)

Maximum values:

$U_o = 13,5 \text{ V}$   
 $I_o = 23 \text{ mA}$   
 $P_o = 76 \text{ mW}$   
trapezoidal characteristic  
 $L_i = 726 \text{ } \mu\text{H}$   
 $C_i$  negligibly low

Interconnection **without** the existence of lumped external capacitances and inductances:

	IIC	EEx ia	
		IIB	IIA
$L_o$	70 mH	250 mH	250 mH
$C_o$	0.85 $\mu\text{F}$	5.3 $\mu\text{F}$	5.3 $\mu\text{F}$

Interconnection **with** the existence of lumped external capacitances and inductances:

	IIC	EEx ia	
		IIB	IIA
$L_o$	2 mH	10 mH	10 mH
$C_o$	0.42 $\mu\text{F}$	1.7 $\mu\text{F}$	1.7 $\mu\text{F}$

(16) Test report PTB Ex 02-22353

(17) Special conditions for safe use

none

(18) Essential health and safety requirements

met by compliance with the standards mentioned above

Zertifizierungsstelle Explosionsschutz

By order:

Dipl.-Ing. M. Krämer



Braunschweig, April 7, 2003

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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.