



## (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 97 ATEX 2272**



(4) Equipment: Isolating Switching Amplifier SINEAX SV 824 type 824-1...  
Isolating Switching Amplifier SIRAX SV 824 type 824-6...

(5) Manufacturer: Camille Bauer AG

(6) Address: Aargauerstrasse 7, CH-5610 Wohlen

(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 97-27380.

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

**EN 50014:1997**

**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 and construction of the specified equipment in accordance with Directive 94/9/EC. Further requirements of this Directive apply to the manufacture and supply of this equipment.

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

II (1) G [EEx ia] IIC

Zertifizierungsstelle Explosionsschutz  
By order

Braunschweig, 21.01.1998

Dr.-Ing. U. Johannsmeyer  
Regierungsdirektor



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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.

## SCHEDULE

(13)

(14) **EC-TYPE-EXAMINATION CERTIFICATE No. PTB 97 ATEX 2272**

(15) Description of equipment

The 2-channel switching amplifier SV 824 transmits logic, digital information from the explosion hazardous area. The both intrinsically safe circuits are used for the connection of e.g. switches or NAMUR-initiators, which signal is routed electrically isolated to the output stage. Relay auxiliary power is split up into the range of 24 V up to 60 V and of 85 V up to 230 V.

The switching amplifier SIRAX SV824 of type 824-6 is only used to be plugged on the associated apparatus rack or on the apparatus rack SIRAX BP902 of type 902-2 with the EC-type examination certificate PTB 97 ATEX 2113, manufactured by Camille Bauer AG.

The switching amplifier shall be installed outside the explosion hazardous area only. The ambient temperature for the switching amplifier SINEAX SV 824 type 824-1... is -20 °C up to 55 °C. The ambient temperature for the switching amplifier SIRAX SV 824 type 824-6... is -20 °C up to +40 °C.

The indicated terminal clamps refer to the design SINEAX SV824 type 824-1... .  
The indicated connections refer to the design SIRAX SV824 type 824-6... .

### Electrical data

Auxiliary power .....	<b>type 824-1.3 resp. 824-6.3</b>	
(terminal clamps 10 and 5 resp. connections 14 and 20)	direct voltage	24 - 60 V -15%/+33% (U <sub>m</sub> = 125V)
	or	
	alternating voltage	24 - 60 V ± 15% (U <sub>m</sub> = 253V)
resp.	<b>type 824-1.4 resp. 824-6.4</b>	
	direct voltage	85 - 110 V -15%/+10% (U <sub>m</sub> = 125V)
	or	
	alternating voltage	85 - 230V ± 10% (U <sub>m</sub> = 253V)

Input circuits .....	type of protection	Intrinsic Safety	EEx ia IIC/IIB
(terminal clamps 1, 6 resp. 2, 7 resp. connections 1, 2 resp. 3, 4)	resp.		EEx ib IIC/IIB
	maximum values of each circuit:		U <sub>o</sub> = 12 V
			I <sub>o</sub> = 13 mA
			P <sub>o</sub> = 39 mW

linear output characteristic

	IIC	IIB
max. permissible external inductance	200 mH	730 mH
max. permissible external capacitance	1410 nF	9 µF

Contact circuits  
(terminal clamps 4,9,14  
resp.3,8,13  
resp. connections 27,29,  
31 resp. 26,28,30)

alternating voltage:  
direct voltage:

$U_{\max} = 253 \text{ V}$ ,  $I_{\max} = 3 \text{ A}$  ( $U_m = 253 \text{ V}$ )  
 $U_{\max} = 40 \text{ V}$ ,  $I_{\max} = 2 \text{ A}$  ( $U_m = 125 \text{ V}$ )  
 $S_{\max} = 100 \text{ VA}$

The intrinsically safe circuits are safely electrically isolated from the contact circuits and from the auxiliary power up to a peak value of the nominal voltage of 375 V.

(16) Report PTB Ex 97-27380

(17) Special conditions for safe use

not applicable

(18) Essential health and safety requirements

met by standards

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