



(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 2093

(4) Equipment: Valve control unit SINEAX SD810 type 810-1.. resp. Valve control unit SIRAX SD810 type 810-6...

(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 97-26354.

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

DIN EN 50 014:1994-03

DIN EN 50020:1996-04

DIN EN 50014/prA1:1996

(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.

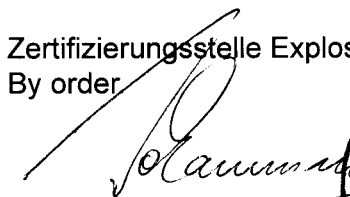
(11) This EC-type-examination Certificate relates only to the design and construction of the specified equipment in accordance with Directive 94/9/EC. Further requirements of this Directive apply to the manufacture and supply of this equipment.

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

 **II (2) G [EEx ib] IIC**

Zertifizierungsstelle Explosionsschutz

By order



Dr.-Ing. U. Johannsmeyer
Oberregierungsrat



Braunschweig, 04.09.1997

sheet 1/4

S c h e d u l e

(13)

(14) **EC-type-examination Certificate No. PTB 97 ATEX 2093**

(15) Description of equipment

The one-channel valve control unit SD810 is used to supply intrinsically safe solenoid valves as well as alarm - or illuminated indicators inside the explosion hazardous area. For conditioning the intrinsically safe output is designed in two variants with different U_o and I_o .

The valve control unit SIRAX SD810 of type 810-6... is only used to be plugged on the associated apparatus rack or on the apparatus rack SIRAX BP902 of type 902-2... with EC-type-examination certificate PTB 97 ATEX 2113, manufactured by Camile Bauer AG.

The auxiliary power is divided in ranges of 24 V ... 60 V and 85 V ... 230 V.

The active digital signals can be logically combined by the different input terminals and activate the output. The connection of passive switching contacts is possible as well.

The maximum permissible ambient temperature of the valve control unit SINEAX SD810 of type 810-1.. is 55 °C.

The maximum permissible ambient temperature of the valve control unit SIRAX SD810 of type 810-6... is 40 °C.

The valve control unit shall be installed outside the explosion hazardous area only.

Electrical data

The indicated terminal clamps refer to the design SINEAX SD810 of type 810-1..
The indicated connections refer to the design SIRAX SD810 of type 810-6...

Auxiliary power	type 810-11. resp. type 810-61.
(terminal clamps 10 and 5 resp. connections 14 and 20)	direct voltage 24 - 60 V -15% / +33%
	maximum voltage: $U_m = 125 \text{ V}$
	or
	alternating voltage 24 - 60 V \pm 15%
	maximum voltage: $U_m = 253 \text{ V}$
	resp.

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Schedule to EC-type-examination Certificate No. PTB 97 ATEX 2093

type 810-12. resp. type 810-62.

direct voltage 85 - 110 V -15% / +10%

maximum voltage: $U_m = 125 \text{ V}$

or

alternating voltage 85 - 230 V $\pm 10\%$

maximum voltage: $U_m = 253 \text{ V}$

output circuit
(terminal clamps 1 and
6 resp. connections 1
and 2)

type of protection Intrinsic Safety EEx ib IIC
resp. EEx ib IIB

Typ 810-1.1 resp. Typ 810-6.1

maximum values per circuit:

$$U_o = 15,75 \text{ V}$$

$$I_o = 65 \text{ mA}$$

$$P_o = 1024 \text{ mW}$$

rectangular output characteristic

EEx ib	IIC	IIB
max. permissible external inductance	1,33 mH	5 mH resp. 25 mH
max. permissible external capacitance	142 nF	489 nF resp. 306 nF

resp.

Typ 810-1.2 resp. Typ 810-6.2

maximum values per circuit:

$$U_o = 20 \text{ V}$$

$$I_o = 35 \text{ mA}$$

$$P_o = 700 \text{ mW}$$

rectangular output characteristic

EEx ib	IIC	IIB
max. permissible external inductance	2 mH resp. 3,47 mH	5 mH resp. 25 mH
max. permissible external capacitance	86 nF resp. 73 nF	377 nF resp. 284 nF

sheet 3/4

Physikalisch-Technische Bundesanstalt

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Schedule to EC-type-examination Certificate No. PTB 97 ATEX 2093

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

all types

$U_{\text{rat}} = 0 \dots 30 \text{ V}$
maximum voltage:
 $U_{\text{m}} = 253 \text{ V}_{\text{AC}}$ resp. $125 \text{ V}_{\text{DC}}$

The output circuit is safely electrically isolated from the input circuits and the auxiliary power up to a peak value of the nominal voltage of 375 V.

(16) Report PTB Ex 97-26354

(17) Special conditions for safe use

not applicable

(18) Essential Health and Safety Requirements

met by standards

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