



Prüf- und Zertifizierungsstelle

ZELM Ex



(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:

ZELM 01 ATEX 0070

(4) Equipment: **Head-mounted transmitter SINEAX VK 636 type 636-7D...**

(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 Prüf- und Zertifizierungsstelle ZELM Ex, notified body No. 0820 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 ZELM Ex 0340019101.

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

EN 50 014: 1997+A1+A2

EN 50 020: 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 2 (1) G EEx ia IIC T6

Zertifizierungsstelle ZELM Ex

Braunschweig, December 17, 2001


Dipl.-Ing. Harald Zelm



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EC-type-examination Certificates without signature and stamp are not valid. The certificates may only be circulated without alteration. Extracts or alterations are subject to approval by the Prüf- und Zertifizierungsstelle ZELM Ex. In the case of dispute, the German text shall prevail.



SCHEDULE

(13)

(14) **EC-TYPE-EXAMINATION CERTIFICATE ZELM 01 ATEX 0070**

(15) Description of equipment

The head-mounted transmitter SINEAX VK 636 type 636-7D... is a two-wire transmitter for the temperature measurement. The input signal of a temperature sensor, as PT100 or thermocouple, is converted into a Profibus signal at the exit. Input and Output are safely electrically isolated from each other.

The head-mounted transmitter is determined to be mounted in a metallic case or a plastic case with a surface resistance $< 10^9 \Omega$ which at least achieves the degree of protection IP20 in accordance with EN 60529:1991.

The minimum permissible ambient temperature is $-40 \text{ }^\circ\text{C}$.
The maximum permissible ambient temperature is:

Temperature class		
T6	T5	T4
45 °C	60 °C	80 °C

(Table 1)

Electrical data

Output circuit
(terminals + and -)

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

for connection to FISCO supply units

maximum values:

EEx ia or ib	IIB	IIC
U_i	17,5 V	17,5 V
I_i	unlimited	unlimited
P_i	unlimited	unlimited

resp. for connection to supply unit or barrier with linear characteristics

maximum values:

EEx ia or ib IIC	$U_i =$	24	V
	$I_i =$	250	mA
	$P_i =$	1,2	W

effective internal inductance	$L_i \leq$	3	μH
effective internal capacitance	$C_i \leq$	1,15	nF

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Schedule to EC-TYPE-EXAMINATION CERTIFICATE ZELM 01 ATEX 0070

Input circuit
(terminals 1, 2, 3, 4)

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

maximum values:

$$\begin{aligned}U_o &= 6,5 \text{ V} \\I_o &= 3 \text{ mA} \\P_o &= 4,8\text{mW}\end{aligned}$$

(linear output characteristic)

IIC bzw. IIB

effective external inductance	1 H	1 H
effective external capacitance	24 μ F	569 μ F

The following peak values are also valid while simultaneous occurrence from inductance and capacitance.

IIC bzw. IIB

effective external inductance	5 mH	5 mH
effective external capacitance	1800 nF	8900 nF

References:

The input circuit is safely electrically isolated from the output circuit up a peak value of the nominal voltage of 60 volts.

The instruction manual has to be observed.

(16) Report No.

ZELM Ex 0340019101

(17) Special conditions for safe use

not applicable

(18) Essential Health and Safety Requirements

met by standards

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