



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 99 ATEX 0006

(4) Equipment: **Angular position transmitter KINAX WT 710 type 710-2**

(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 0379918007.

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

EN 50 014: 1997

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 G EEx ia IIC T6

Zertifizierungsstelle **ZELM Ex**

Braunschweig, September 08, 1999


Dipl.-Ing. Harald Zelm



Sheet 1/2

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



Prüf- und Zertifizierungsstelle

ZELM Ex



SCHEDULE

(13)

(14) **EC-TYPE-EXAMINATION CERTIFICATE ZELM 99 ATEX 0006**

(15) Description of equipment

The angular position transmitter KINAX WT710 type 710-2 is a mechanical modification of the KINAX 3W2 with the certification number PTB 97 ATEX 2271. Scheme, layout, print and constructive design remain unchanged. Consequently the type of protection EEx ia IIC T6 and the electrical data correspond to the KINAX 3W2.

The ranges of the ambient temperature dependent on the temperature class are shown in the following table.

Lower ambient temperature limit	Upper ambient temperature limit	Temperature class
- 40 °C	+ 60 °C	T6
- 40 °C	+ 75 °C	T5

Data resp. measures for the explosion protection

Degree of protection in accordance with EN60529:1991: IP20

Output/Powering circuit..... type of protection Intrinsic Safety EEx ia IIC.
(terminals 1, 2, 3, 4) For connection to a certified intrinsically safe circuit only.

Maximum values: $U_i = 30 \text{ V}$
 $I_i = 160 \text{ mA}$
 $P_i = 1 \text{ W}$

Effective internal capacitance $C_i \leq 10 \text{ nF}$.
The effective internal inductance is negligibly small.

(16) Report No. ZELM Ex 0379918007


(17) Special conditions for safe use

not applicable

(18) Essential Health and Safety Requirements

met by standards

Zertifizierungsstelle ZELM Ex


Dipl.-Ing. Harald Zelm



Braunschweig, September 08, 1999

Sheet 2/2

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1. Supplement

(Supplement according to EC-Directive 94/9 Annex III letter 6)
to EC-type-examination Certificate

ZELM 99 ATEX 0006

Equipment: **Angular position transmitter KINAX 2W2 type 760-2...**
Manufacturer: **Camille Bauer AG**
Address: **Aargauerstrasse 7, CH-5610 Wohlen**

Description of supplement

The Angular position transmitter KINAX WT 710 type 710-2... will be extended by an alternative version.

The type designation of this new version is:

Angular position transmitter KINAX WT 711 type 711-2

The variations refers to the inner construction.

The maximum permissible ambient temperature of this alternative version conducts depending on the maximum load P_i of the intrinsically safe output circuit and the temperature class according to the following table:

Maximum load	Temperature class		
	T6	T5	T4
P_i			
1000 mW	40 °C	55 °C	75 °C
900 mW	44 °C	59 °C	75 °C
800 mW	49 °C	64 °C	75 °C
700 mW	54 °C	69 °C	75 °C
660 mW	56 °C	71 °C	75 °C

(Table 1)

The lowest permissible ambient temperature is -40 °C.

Electrical data

Output circuit

type of protection Intrinsic Safety EEx ia IIC
only for connection to a certified intrinsically safe circuit.

maximum values: $U_i = 30$ V
 $I_i = 160$ mA
 $P_i \leq 1$ W (siehe Tabelle 1)

maximum effective internal capacitance $C_i = 6,6$ nF
The maximum effective internal inductance is negligibly small.



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1. Supplement to EC-type-examination Certificate ZELM 99 ATEX 0006

References:

The configuration via the programming circuit is only permitted in non-hazardous locations by a short-time connection of a standard personal computer via the programming cable type PK 610 with the EC-type-examination Certificate ZELM 99 ATEX 0011 to suitable connections.

Report No.

ZELM Ex 1200315329

Special conditions for safe use

not applicable

Essential Health and Safety Requirements

The Essential Health and Safety Requirements are further met by adherence to the standards referred in the EC-type-examination certificate.

Zertifizierungsstelle ZELM Ex


Adolf Gruber



Braunschweig, Oktober 29, 2004

2. Supplement

(Supplement according to EC-Directive 94/9 Annex III letter 6)

ZELM ex

to EC-type-examination Certificate

ZELM 99 ATEX 0006

Equipment: **Angular position transmitter KINAX WT 710 type 710-2...
and KINAX WT 711 type 711-2...**

Manufacturer: **Camille Bauer AG**

Address: **Aargauerstrasse 7, CH-5610 Wohlen**

Description of supplement

The 2. Supplement concerns to the verification of the equipment regarding the appropriate requirements of the actual standards. Within the scope of this supplement all data of the both versions are listed again to assure the clarity also in the future. Therefore only the informations given in this 2. Supplement are further valid.

The angular position transmitter KINAX WT 710 type 710-2...and KINAX WT 711 type 711-2... are allowed to be manufactured in the future also in accordance with this second supplement and to be marked as shown.



II 2G Ex ia IIC T6

Depending on the version the equipment is available with a manometer- or magnetic coupling set or with an additional gear. The version with an additional gear is only intended for acquisition of the angular position of the shaft. The usage as a rotational speed sensor is not permitted.

The both versions are different regarding the integrated transmitter. The following informations are listed separately for the particular version:

1. Angular position transmitter KINAX WT 710 type 710-2...

The angular position transmitter KINAX WT710 type 710-2... is a mechanical modification of the KINAX 3W2 Type 708-2... with the EC-type-examination certificate ZELM 10 ATEX 0427 X. Consequently the type of protection Ex ia IIC T6 and the electrically data correspond to this equipment.

The ranges of the ambient temperature dependent on the temperature class are shown in the following table.

Minimum ambient temperature	maximum ambient temperature	temperature class
-40 °C	60 °C	T6
-40 °C	75 °C	T5

**2. Supplement
to EC-TYPE-EXAMINATION CERTIFICATE ZELM 99 ATEX 0006**

Electrical data

Measuring output
(terminals 1,2,3,4)

type of protection Intrinsic Safety Ex ia IIC
only for connection to certified intrinsically safe circuit

maximum values: $U_i = 30 \text{ V}$
 $I_i = 160 \text{ mA}$
 $P_i = 1 \text{ W}$

The effective internal capacitance is: $C_i \leq 10 \text{ nF}$
The effective internal inductance is negligibly small.

2. Angular position transmitter KINAX WT 711 type 711-2...

The angular position transmitter KINAX WT711 type 711-2... is a mechanical modification of the KINAX 2W2 Type 760-2... with the EC-type-examination certificate ZELM 03 ATEX 0123. Consequently the type of protection Ex ia IIC T6 and the electrically data correspond to this equipment.

The maximum permissible ambient temperature conducts depending on the maximum load P_i of the intrinsically safe output circuit and the temperature class according to the following table:

Maximum load	Temperature class		
	T6	T5	T4
P_i			
1000 mW	40 °C	55 °C	75 °C
900 mW	44 °C	59 °C	75 °C
800 mW	49 °C	64 °C	75 °C
700 mW	54 °C	69 °C	75 °C
660 mW	56 °C	71 °C	75 °C

The lowest permissible ambient temperature is -40 °C.

Electrical data

Measuring output
(terminals 1,2,3,4)

type of protection Intrinsic Safety Ex ia IIC
only for connection to certified intrinsically safe circuit

maximum values: $U_i = 30 \text{ V}$
 $I_i = 160 \text{ mA}$
 $P_i = 1 \text{ W}$

The effective internal capacitance is: $C_i \leq 6,6 \text{ nF}$
The effective internal inductance is negligibly small.

**2. Supplement
to EC-TYPE-EXAMINATION CERTIFICATE ZELM 99 ATEX 0006**

ZELM ex

Programming circuit only for configuration in non-hazardous locations by a short-time connection of a standard personal computer via the programming cable type PK 610 with the EC-type-examination Certificate ZELM 99 ATEX 0011 to the intended programming connector.

For the angular position transmitter KINAX WT 710 type 710-2... and KINAX WT 711 type 711-2... the following references are to be observed:

References:

The instruction manual has to be considered, in particular regarding the permissible ambient temperature range and the corresponding temperature class.

Depending on the version the equipment is available with a manometer- or magnetic coupling set or with an additional gear. The version with an additional gear is only intended for acquisition of the angular position of the shaft. The usage as a rotational speed sensor is not permitted.

Report No.

ZELM Ex 1490915765

Essential Health and Safety Requirements

Within the scope of this 2. Supplement the agreement with the current standards has been checked.

The essential health and safety requirements are still fulfilled by compliance with the following Standards:

EN 60079-0:2006

EN 60079-11:2007

Braunschweig, May 25, 2010

ZELM ex

**Zertifizierungs-
stelle**



Zertifizierungsstelle ZELM ex
Dipl.-Ing. Harald Zelm

**ZELM
ex**

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