(1) EC-TYPE-EXAMINATION CERTIFICATE ZELM C

- (2) Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres - **Directive 94/9/EC**
- (3) EC-TYPE-EXAMINATION CERTIFICATE Number:

ZELM 11 ATEX 0452 X

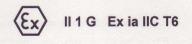
- (4) Equipment: Head transmitter type ATX-2 and type GIX-22-2
- (5) Manufacturer: Aplisens S.A.
- (6) Address: ul. Morelowa 7, PL-03-192 Warszawa
- (7) This equipment and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.
- (8) The 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 1691013824.

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

EN 60079-0:2009 EN 60079-11:2007 EN 60079-26:2007 EN 1127-1:2007

- (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 or protective system in accordance to the Directive 94/9/EC. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by this Certificate.
- (12) The marking of the equipment shall include the following:



	Braunschweig, 2011-02-14		
ZELMEX		ZELM	
Zertifizierungs- stelle	Zertifizierungsstelle ZELM ex DiplIng. Harald Zelm		Sheet 1 of
<pre> <</pre>	X ZELM CX ZEL rithout signature and stamp are not valid. The certifica		elm OX Zelm CX zi

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(14) EC-TYPE-EXAMINATION CERTIFICATE ZELM 11 ATEX 0452 X

(15) Description of equipment

The head transmitter type ATX-2 and type GIX-22-2 is used for the signal conversion of resistance thermometers, thermocouples, resistance-type sensors and voltage sensors in a 4...20 mA current loop. The current input loop and signal output are freely scalable via an interface. The measured value registration is realized by A/D conversion. The registered data are evaluated via a D/A converter as a measurement signal in the 4...20 mA current loop. The available galvanical isolation is a function isolation between sensor circuit and supply circuit.

To the head transmitter type ATX-2 resistance thermometers can be connected. To the head transmitter type GIX-22-2 resistance thermometers and thermocouples can be connected.

The head transmitter can be used in the hazardous location. The head transmitter is to be installed in a way which guarantees protection IP20 according to EN 60529 at least for all connectors as well.

The ambient temperature ranges depending on the temperature class are to be taken from the following table:

Lower ambient temperature limit	Upper ambient temperature limit	Temperature class
-40°C	+55°C	T6
-40°C	+70°C	T5
-40°C	+85°C	T4

maximum values:

Electrical Data

Supply circuit in type of protection Intrinsic Safety Ex ia IIC [terminals 1(+) and 2(-)] for connection to a certified intrinsically safe circuit with the following maximum values:

 $\begin{array}{rrrr} U_i &=& 30 & V \\ I_i &=& 100 & mA \\ P_i &=& 750 & mW \end{array}$

Effective internal capacitance and effective internal inductance are negligibly small.

Setup circuit

only for a short-time connection of a standard personal computer to suitable connection. Maximum r.m.s a.c or d.c voltage $U_m = 30$ V.

in type of protection Intrinsic Safety Ex ia IIC resp. Ex ia IIB

Sensor circuit (terminals 3, 4, 5 and 6)

 $U_{o} = 9,6 V$ $I_{o} = 4,5 mA$ $P_{o} = 11 mW$

(linear output characteristic)

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IIC resp. IIB

Max. permissible external inductance 4,5 mH 8,5 mH Max. permissible external capacitance 709 nF 1300 nF

The supply circuit and the sensor circuit are to be considered in a combined manner to be galvanic with each other. The technical function of isolation remains.

(16) Report No.

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(17) Special conditions for safe use

The configuration via the setup circuit is only permitted in non-hazardous locations. In this case, none of the connections may be laid into the hazardous location.

The head transmitter is to be installed in a way which guarantees protection IP20 according to EN 60529 at least for all connectors as well.

The head transmitter is to be installed in such a way, that no electrostatic charge is possible.

The instruction manual has to be observed, in particular with regard to the consideration of lesser ambient temperatures during the application in accordance with category 1.

(18) Essential Health and Safety Requirements

met by standards



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