



AC 038



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This certificate and its  
schedules may only be  
reproduced in its entirety and  
without change

PC/CM-ATEX-01/ExXen  
Edition 01/2015

[1] **EC-TYPE EXAMINATION CERTIFICATE**



[2] Equipment, protective systems and components intended for use in  
potentially explosive atmospheres - Directive 94/9/EC

[3] EC – type examination certificate:

**KDB 15ATEX0080X**

[4] Equipment system:

**Smart temperature transmitter type LI-24G**

[5] Manufacturer:

**APLISENS S.A.**

[6] Address:

**ul. Morelowa 7, 03-192 Warszawa, POLAND**

[7] This equipment and any acceptable variation thereto is specified in the schedule to this  
certificate and the documents therein referred to.

[8] Główny Instytut Górnictwa, Notified Body number 1453 in accordance with Article 9 of  
Directive 94/9/EC of 23 March 1994, certifies that this equipment and protective system 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 confidential report  
KDB No. 15.109 [T-7317]

[9] Compliance with the Essential Health and Safety Requirements has been assured by  
compliance with:

EN 60079-0:2012 + A11:2013; EN 60079-11:2012;  
EN 50303:2000; EN 60079-26:2007)

[10] If the sign „X“ is placed after the certificate number, it indicates that the equipment or  
protective system 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 and protective system in accordance with Directive 94/9/EC.  
Further requirements of the Directive may 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:



**I M1 Ex ia I Ma  
II 1G Ex ia IIC T5/T6 Ga  
II 1D Ex ia IIIC T105°C Da**

Specjalista ds. Certyfikacji  
Urządzeń Przeciwybuchowych

dr inż. Michał Górny



KIEROWNIK  
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## SCHEDULE

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### EC-Type Examination Certificate KDB 15ATEX0080X

**[15] Description:**

Smart temperature transmitter type LI-24G is designed for temperature measuring in various industrial applications related to measurements, control and regulation. Smart temperature transmitter type LI-24G consist of a sealed housing of plastic material and the electronic unit placed inside that converts signal from the sensor to a unified output signal  $4\div 20\text{mA} + \text{HART}$ . Smart temperature transmitter type LI-24G has 5 terminals for measuring input and 2 terminals for power supply and signal output. Measuring inputs allow for single- or dual-channel measurement of difference, average, average with redundancy, minimum and maximum temperatures.

**Technical parameters:**

Input signal	Thermocouple, resistance sensor, resistance or voltage
Output signal	$4\div 20 \text{ mA} + \text{HART}$
Power supply Voltage	$8,5 \div 30\text{V DC}$
Terminals ingress protection	IP10
Ambient temperature for $P_i \leq 0,75\text{W}$ :	$-50 \div +70^\circ\text{C}$ for group II, T5 and T105°C
	$-50 \div +50^\circ\text{C}$ for group II, T6
	$-20 \div +60^\circ\text{C}$ for group I
Ambient temperature for $P_i \leq 1,2\text{W}$ :	$-50 \div +60^\circ\text{C}$ for group II, T5 and T105°C
	$-50 \div +40^\circ\text{C}$ for group II, T6

Intrinsic safety parameters:

The permissible parameters of the sensor supply circuits:

$U_o = 6\text{V}$ ;  $I_o = 10\text{mA}$ ;  $P_o = 15\text{mW}$ ;

$L_o$ [mH]	100	50	20	10	5	2	1	0,5	0,2	0,1	0,05
$C_o$ [ $\mu\text{F}$ ]	1,3	1,4	1,6	1,8	2	2,4	2,7	3,2	4	4,8	6

The permissible parameters of the transmitter power supply circuits:

- Supply from a power source with linear output characteristic:  
 $U_i = 30\text{V}$ ;  $I_i = 0,1\text{A}$ ;  $P_i = 0,75\text{W}$ ;  $L_i = 0$ ,  $C_i = 5\text{nF}$
- Supply from a power source with trapezoidal output characteristic:  
 $U_i = 24\text{V}$ ;  $I_i = 50\text{mA}$ ;  $P_i = 0,6\text{W}$ ;  $L_i = 0$ ,  $C_i = 5\text{nF}$
- Supply from a power source with rectangular output characteristic:  
 $U_i = 24\text{V}$ ;  $I_i = 25\text{mA}$ ;  $P_i = 0,6\text{W}$ ;  $L_i = 0$ ,  $C_i = 5\text{nF}$   
 $U_i = 24\text{V}$ ;  $I_i = 50\text{mA}$ ;  $P_i = 1,2\text{W}$ ;  $L_i = 0$ ,  $C_i = 5\text{nF}$



## SCHEDULE

### EC-Type Examination Certificate KDB 15ATEX0080X

**[16] Test report:**

Sprawozdanie KDB Nr 15.109

**[17] Special conditions for safe use:**

Smart temperature transmitter type LI-24G is designed for installation:

- group I: in a metal housing with a minimum degree of protection IP54
- group II: in a metal housing with a minimum degree of protection IP20.
- group III: in a metal housing with a minimum degree of protection IP5X.

**[18] Essential health and safety requirements:**

Met by compliance with standards listed below:

EN 60079-0:2012 + A11:2013 (PN-EN 60079-0:2013-03 + A11:2014-03);

EN 60079-11:2012 (PN-EN 60079-11:2012);

EN 50303:2000 (PN-EN 50303:2004);

EN 60079-26:2007 (PN-EN 60079-26:2007);

