



- [1] **EU TYPE EXAMINATION CERTIFICATE**
- [2] Protective equipment and systems intended for use in potentially explosive atmospheres. Directive 2014/34/EU (Rozporządzenie Ministra Rozwoju z dnia 06.06.2016r. Dz.U. z dnia 09.06.2016r. Poz. 817)
- [3] EU type examination certificate (module B):
KDB 20ATEX0005X **0 edition**
- [4] Equipment:
Smart rail mount temperature transmitters type LI-24L, LI-24L Safety;
Smart head mount temperature transmitters type LI-24G, LI-24G Safety;
- [5] Manufacturer:
APLISENS S.A.
- [6] Address:
ul. Morelowa 7, 03-192 Warszaw, POLAND
- [7] The protective equipment or system and any acceptable variations thereto are specified in the schedule to this certificate.
- [8] Central Mining Institute, Notified Body no 1453 according to Directive 2014/34/EU of February 26, 2014, approves that the protective equipment or system specified in this certificate has been found to comply with the essential health and safety requirements for the design and construction of protective equipment and systems intended for use in potentially explosive atmosphere given in Annex II to Directive 2014/34 /EU (Załącznik nr 2 Rozporządzenia Ministra Rozwoju z dnia 06.06.2016r. Dz.U. z dnia 09.06.2016r. Poz. 817). The results of the assessment and examinations as well as the list of agreed documentation are recorded in the confidential Report **KDB No 20.006 [T-7607]**
- [9] The essential health and safety requirements have been met by compliance with the requirements of the following standards:
**EN IEC 60079-0:2018; EN 60079-11:2012;
EN 50303:2000**
- [10] If sign "X" is placed after the certificate number, this means the specific conditions of use set out in the schedule to this certificate.
- [11] This EU type examination certificate relates only to the construction, assessment and testing of the specified product in accordance with Directive 2014/34 /EU (Rozporządzenie Ministra Rozwoju z dnia 06.06.2016r. Dz.U. z dnia 09.06.2016r. Poz. 817). The certificate shall not cover the remaining requirements of the Directive regarding the manufacturing process and placing the protective equipment or system on the market.
- [12] The marking of the equipment is included in the descriptive part of the certificate.



KDBEX

inż. Andrzej Trębaczewski

ATEX Certification
Expert



Główny Instytut Górnictwa
Jednostka Oceny Zgodności
p.o. KIEROWNIKA

Dr inż. Dariusz Stefaniak

Date of issue : **31.01.2020**

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Central Mining Institute, 40-166 Katowice, Plac Gwarków 1, Poland, www.gig.eu
Conformity Assessment Body, 43-190 Mikołów, ul. Podleska 72, www.gigcert.com
Certification Body accredited by PCA [Polish Centre for Accreditation], No AC038.

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PC-ATEX-01/ExXen ed.1, 03.2019




[15] Description:

Smart temperature transmitters type LI-24L, LI-24L Safety, LI-24G, LI-24G Safety are designed to convert the signal from the sensor to a current signal 4...20mA, with Hart communication signal. Depending on the configuration, the transmitter is equipped with one or two measuring channels, enabling the measurement of difference, average, average with redundancy, minimum or maximum temperature. The transmitters enclosures are made of plastic.

Smart rail mount temperature transmitters type LI-24L, LI-24L Safety

Marking:

 I Ml Ex ia I Ma
II 1G Ex ia IIC T4/T5 Ga

Technical parameters:

Group I

Ambient temperature: $-40^{\circ}\text{C} \div 85^{\circ}\text{C}$ (special version: -50°C)

Group II

Ambient temperature: $-40^{\circ}\text{C} \div 55^{\circ}\text{C}$ (special version: -50°C)
Temperature class: T5

Ambient temperature: $-40^{\circ}\text{C} \div 85^{\circ}\text{C}$ (special version: -50°C)
Temperature class: T4

Ingres protection of enclosure: IP20

Intrinsically safe parameters:

Supply from a power source with linear output characteristic (terminals +/-):

$U_i = 30\text{V}$ $L_i \sim 0$
 $I_i = 100\text{mA}$ $C_i = 2,5\text{nF}$
 $P_i = 0,75\text{W}$

Supply from a power source with rectangular output characteristic (terminals +/-):

I:
 $U_i = 24\text{V}$ $L_i \sim 0$
 $I_i = 25\text{mA}$ $C_i = 2,5\text{nF}$
 $P_i = 0,6\text{W}$

II - only for $T_a = -40^{\circ}\text{C} \div 85^{\circ}\text{C}$ (T4):

$U_i = 24\text{V}$ $L_i \sim 0$
 $I_i = 50\text{mA}$ $C_i = 2,5\text{nF}$
 $P_i = 1,2\text{W}$



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SCHEDULE
EU type examination certificate
KDB 20ATEX0005X 0 edition



Supply from a power source with trapezoidal output characteristic (terminals +/-):


$U_i = 24V$ $L_i \sim 0$
 $I_i = 50mA$ $C_i = 2,5nF$
 $P_i = 0,6W$

Output parameters (between any combination of terminals: 1...5):

$U_o = 6V$ $L_o = 2mH$
 $I_o = 3,3mA$ $C_o = 2,5\mu F$
 $P_o = 19,8mW$

Smart head mount temperature transmitters type LI-24G, LI-24G Safety

Marking:

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

Technical parameters:

Group I

Ambient temperature: $-40^{\circ}C \div 70^{\circ}C$ (special version: $-50^{\circ}C$)

Group II

Ambient temperature: $-40^{\circ}C \div 50^{\circ}C$ (special version: $-50^{\circ}C$)
Temperature class: T6

Ambient temperature: $-40^{\circ}C \div 70^{\circ}C$ (special version: $-50^{\circ}C$)
Temperature class: T5

Group III

Maximum surface
temperature for dust atmospheres: $105^{\circ}C$

Ingres protection of enclosure: IP55

Ingres protection of terminals: IP10

Intrinsically safe parameters:

Supply from a power source with linear output characteristic (terminals +/-):

$U_i = 30V$ $L_i = 910\mu H$
 $I_i = 100mA$ $C_i = 2,5nF$
 $P_i = 0,75W$

Supply from a power source with rectangular output characteristic (terminals +/-):

$U_i = 24V$ $L_i = 910\mu H$
 $I_i = 25mA$ $C_i = 2,5nF$
 $P_i = 0,6W$



[13]
[14]

SCHEDULE
EU type examination certificate
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Supply from a power source with trapezoidal output characteristic (terminals +/-):

$U_i = 24V$ $L_i = 910\mu H$
 $I_i = 50mA$ $C_i = 2,5nF$
 $P_i = 0,6W$

Output parameters (between any combination of terminals: 1..5):

$U_o = 6V$ $L_o = 2mH$
 $I_o = 3,3mA$ $C_o = 2,5\mu F$
 $P_o = 19,8mW$

[16] Test Report:

"ATEX assessment report" KDB No 20.006

[17] Special conditions of use:

- The maximum temperature of the external heating source cannot heat the transmitter above the maximum ambient temperature declared by manufacturer.
- Temperature transmitters in potentially explosive areas should be installed in enclosures designed for operation in these areas and provide a minimum degree of protection: IP54 for Group I devices, IP20 for Group II devices and IP5X for Group III devices.
- In hazardous zones the transmitters should be installed in a way that prevents electrostatic charging, in accordance with the instructions.

[18] Essential health and safety requirements:

Met by fulfilling the requirements of the following standards:

EN IEC 60079-0:2018 (PN-EN IEC 60079-0:2018-09)
EN 60079-11:2012 (PN-EN 60079-11:2012)
EN 50303:2000 (PN-EN 50303:2004)

Document history:

- EU type examination certificate KDB 20ATEX0005X, 0 edition of 31.01.2020, initial certification

