IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: **IECEx KDB 20.0001X**

Certificate history:

Status: **Current**

Issue No: 0

Date of Issue: 2020-01-31

Applicant: **APLISENS S. A.**
ul. Morelowa 7
03-192 Warszawa
Poland

Equipment: **Smart rail mount temperature transmitters type LI-24L, LI-24L Safety; Smart head mount temperature transmitters type LI-24G, LI-24G Safety;**

Optional accessory:

Type of Protection: **Intrisic safety "ia".**

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

Ex ia I Ma

Ex ia IIC T4/T5 Ga

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

Ex ia I Ma

Ex ia IIC T5/T6 Ga

Ex ia IIIC T105°C Da

Approved for issue on behalf of the IECEx Certification Body: **Andrzej Trębaczewski**

Position: **Deputy Head of ExCB**

Signature:
(for printed version)

Date:

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting www.iecex.com or use of this QR Code.

Certificate issued by:

Główny Instytut Górnictwa, Kopalnia Doświadczalna "BARBARA"
(Central Mining Institute Experimental Mine "Barbara")
ul. Podleska 72
43-190 Mikołów
Poland

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Certificate No.: **IECEx KDB 20.0001X**

Date of issue: 2020-01-31

Issue No: 0

Manufacturer: **APLISENS S. A.**
ul. Morelowa 7
03-192 Warszawa
Poland

Additional manufacturing locations:

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements.This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended

STANDARDS :
The equipment and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards

IEC 60079-0:2017 Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

IEC 60079-11:2011 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:6.0

This Certificate **does not** indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

TEST & ASSESSMENT REPORTS:
A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in:

Test Report:

PL/KDB/ExTR20.0001/00

Quality Assessment Report:

PL/KDB/QAR12.0001/04

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EQUIPMENT:
Equipment and systems covered by this Certificate are as follows:

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.

SPECIFIC CONDITIONS OF USE: YES as shown below:

- 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.

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

Technical parameters:

Group I

Ambient temperature: -40°C÷85°C (special version: -50°C)

Group II

Ambient temperature: -40°C÷55°C (special version: -50°C)
Temperature class: T5

Ambient temperature: -40°C÷85°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 +/-):

Ui = 30V Li ~ 0
Ii = 100mA Ci = 2.5nF
Pi = 0.75W

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

I:

Ui = 24V Li ~ 0
Ii = 25mA Ci = 2.5nF
Pi = 0.6W

II - only for Ta = -40°C÷85°C (T4):

Ui = 24V Li ~ 0
Ii = 50mA Ci = 2.5nF
Pi = 1.2W

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

Ui = 24V Li ~ 0
Ii = 50mA Ci = 2.5nF
Pi = 0.6W

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

Uo = 6V Lo = 2mH
Io = 3.3mA Co = 2.5µF
Po = 19.8mW

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

Technical parameters:

Group I

Ambient temperature: -40°C÷70°C (special version: -50°C)

Group II

Ambient temperature: -40°C÷50°C (special version: -50°C)
Temperature class: T6

Ambient temperature: -40°C÷70°C (special version: -50°C)
Temperature class: T5

Group III

Maximum surface temperature for dust atmospheres: 105°C

Ingres protection of enclosure: IP55
Ingres protection of terminals: IP10

Intrinsically safe parameters:

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

Ui = 30V Li = 910µH
Ii = 100mA Ci = 2.5nF
Pi = 0.75W

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

Ui = 24V Li = 910µH
Ii = 25mA Ci = 2,5nF
Pi = 0.6W

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

Ui = 24V Li = 910µH
Ii = 50mA Ci = 2.5nF
Pi = 0.6W

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

Uo = 6V Lo = 2mH
Io = 3.3mA Co = 2.5µF
Po = 19.8mW