



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 FTZU 13.0028X	Page 1 of 4	<u>Certificate history:</u>
Status:	Current	Issue No: 2	Issue 1 (2017-07-13) Issue 0 (2014-06-24)
Date of Issue:	2022-07-13		
Applicant:	APLISENS S.A. ul. Morelowa 7, 03-192 Warszawa Poland		
Equipment:	Smart Temperature Transmitter type LI-24ALW		
Optional accessory:			
Type of Protection:	Intrinsic safety		
Marking:	Ex ia I Ma Ex ia IIC T6/T5/T4 Ga/Gb Ex ia [ia Ga] IIC T6/T5/T4 Gb Ex ia IIC T115°C Da	only version with enclosure ss316L only version with producer sensor only version with user sensor	

Approved for issue on behalf of the IECEx
Certification Body:

Dipl. Ing. Lukáš Martinák

Position:

Head of the Certification Body

Signature:
(for printed version)

Date:
(for printed version)

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:

**Fyzikálne technický zkusební ústav
(Physical -Technical Testing Institute)
Pikartská 7, 71607 Ostrava - Radvanice
Czech Republic**





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

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 Reports:

[CZ/FTZU/ExTR13.0028/00](#)

[CZ/FTZU/ExTR13.0028/01](#)

[CZ/FTZU/ExTR13.0028/02](#)

Quality Assessment Report:

[PL/KDB/QAR12.0001/05](#)



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

The Temperature Transmitter type LI-24ALW is designed to convert temperature signal into an electrical signal. The apparatus comprises several printed circuit boards and LCD, all housed in a metal enclosure which can be made of light alloy for group II and III applications but only of stainless steel for mine (group I) application. One of the housing cover contains a window.

External connections are made via integral terminals and cable glands which must be of certified type if they are mounted on the version for combustible dust hazard application.

The transmitters intended as EPL Ga/Gb equipment shall be installed into the partition between the hazardous areas of EPL Ga and Gb.

Temperature classes T4, T5 or T6 depend on the input power and maximum ambient temperature – see below.

Input parameters:

a) supply from a power source with linear output characteristic:

$U_i = 30\text{ V}$; $I_i = 0.1\text{ A}$; $C_i = 2.5\text{ nF}$; $L_i = 18\text{ }\mu\text{H}$; $P_i = 0.75\text{ W}$; $T_a \leq 80^\circ\text{C}$ & T4; $T_a \leq 70^\circ\text{C}$ & T5;

$P_i = 0.5\text{ W}$; $T_a \leq 40^\circ\text{C}$ & T6;

$T_m > T_a$ & T^* , T^{**} according to instructions PL.IX.LI.24.ALW

b) supply from a power source with trapezoidal output characteristic:

$U_i = 24\text{ V}$; $U_Q = 48\text{ V}$; $I_i = 50\text{ mA}$; $C_i = 2.5\text{ nF}$; $L_i = 18\text{ }\mu\text{H}$; $P_i = 0.6\text{ W}$; $T_a \leq 80^\circ\text{C}$ & T5;

$P_i = 0.5\text{ W}$; $T_a \leq 40^\circ\text{C}$ & T6;

$T_m > T_a$ & T^* , T^{**} according to instructions PL.IX.LI.24.ALW

c) supply from a power source with rectangular output characteristic:

$U_i = 24\text{ V}$; $I_i = 25\text{ mA}$; $P_i = 0.6\text{ W}$; $C_i = 2.5\text{ nF}$; $L_i = 18\text{ }\mu\text{H}$; $T_a \leq 80^\circ\text{C}$ & T5,

$T_m > T_a$ & T^* , T^{**} according to instructions PL.IX.LI.24.ALW

T_m - medium temperature

T^* - maximum surface temperature

T^{**} - temperature class

Output parameters:

$U_o = 6.6\text{ V}$; $I_o = 9.8\text{ mA}$; $P_o = 16.2\text{ mW}$; $L_o = 400\text{ mH}$

$C_o = 1000\text{ }\mu\text{F}$ for Groups IIA+I; $C_o = 480\text{ }\mu\text{F}$ for Group IIB; $C_o = 3.5\text{ }\mu\text{F}$ for Group IIC

Degree of protection: IP 65, IP 66/67

Ambient temperature:

$T_a = -40^\circ\text{C}$ to $+80^\circ\text{C}$

$T_a = -50^\circ\text{C}$ to $+80^\circ\text{C}$ version only for explosive gas atmospheres (Group II)

SPECIFIC CONDITIONS OF USE: YES as shown below:

1. The operating instructions must be taken into account during installation.
2. Versions of transmitter with surge arrester marked on plate "SA", do not meet the requirements of Section 10.3 of the standard IEC 60079-11:2011 (500Vrms). This must be taken into account when installing the equipment.
3. Under certain extreme circumstances in dust explosive atmospheres, the device with painting of aluminum enclosure and with plastic plate may store an ignition-capable level of electrostatic charge. The device shall not be installed in a location where the external conditions are conducive to the build-up of electrostatic charge.
4. For the medium temperature $T_m > T_a$ temperature class T^{**} and the maximum surface temperature T^* should be set according to the current manual.



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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

Issue 2:

1. Removing current type name LI-24ALW/C.
2. Mechanical modification of metal enclosure, added the third thread hole, identical with current thread holes.
3. Updating of documentation.
4. The surface temperature for dust atmosphere is changed to T115°C.
5. Formerly marking Ex ia IIIC T105°C Da is changed to Ex ia IIIC T115°C Da.
6. There are minor changes in used mechanical parts.