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 13.0004X**

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Certificate history:
Issue 2 (2018-04-04)
Issue 1 (2016-03-09)
Issue 0 (2013-06-12)

Status: **Current**

Issue No: 3

Date of Issue: 2023-04-04

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

Equipment: **Pressure transmitter, Differential pressure transmitter, Hydrostatic level probe / PC-28, PCE-28, PC-28Ex Safety, PCE-28Ex Safety, PR-28, PRE-28, PR-28Ex Safety, PRE-28Ex Safety, PC-28P, PCE-28P, SG(E)-25, SG(E)-25S, SG(E)-25C**

Optional accessory:

Type of Protection: **Intrinsic safety**

Marking:

Transmitters Px-28...

Ex ia I Ma	products with connection PD, PK, PKM, PZ, SG, SGM
Ex ia IIC T6/T5/T4 Ga/Gb	products with connection PD, PK, PKM, PZ, SG, SGM, PM12, PKD
Ex ia IIC T4 Ga/Gb	products with ALW, ALM with connection PD or PM12
Ex ia IIIC T135°C Da	products with connection PD, PK, PKM, PZ, SG, SGM and ALW, ALM with connection PD

Probes SG(E)-25x

Ex ia I Ma	all SG... types
Ex ia IIC T6/T5/T4 Ga	products without plastic tip and plastic cover
Ex ia IIB T6/T5/T4 Ga	products with cable with protection ETFE or with additional protection by PTFE with metal wire
Ex ia IIC T6/T5/T4 Gb	products with cable with additional protection by PTFE without metal wire

Approved for issue on behalf of the IECEx Certification Body: **Dipl. Ing. Lukáš Martinák**

Position: **Head of 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:

Fyzikalne technicky zkusebni ustav
(Physical -Technical Testing Institute)
Pikartska 7, 71607 Ostrava - Radvanice
Czech Republic

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Certificate No.: **IECEx FTZU 13.0004X** Page 2 of 4

Date of issue: 2023-04-04 Issue No: 3

Manufacturer: **APLISENS S.A.**
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/ExTR13.0005/00 CZ/FTZU/ExTR13.0005/01 CZ/FTZU/ExTR13.0005/02
CZ/FTZU/ExTR13.0005/03

Quality Assessment Report:

PL/KDB/QAR12.0001/05

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

The device is used as a pressure transmitter (PC*-28*), or differential pressure transmitter (PR*-28*), or hydrostatic level probe (PC*-28P, SG(E)-25*). The device converts non electrical process variable, which is pressure, into electrical 4…20 mA output signal. It consists of measurement head including pressure sensor (various types), fully encapsulated main PCB (additional small auxiliary PCBs might exists depending on version), steel cylindrical enclosure, cable connector (various types: with cable gland or fixed external cable.

Intrinsiaclly safe parameters are mentioned in Annex A to certificate No. IECEx FTZU 13.0004X Issue No. 3.

SPECIFIC CONDITIONS OF USE: YES as shown below:
1. Ambient temperature range – see Instruction manual and marking label.

2. Process temperature (medium) at the diaphragm of the transmitter or probe must be in range of ambient temperature.

3. In case of use the transmitter in dust atmosphere, supplying voltage could occur on transmitter enclosure. It should be taken into consideration during transmitter installation.

4. In case of use titan parts in diaphragm seal, during installation and operation of the device the diaphragm seal should be protected against mechanical impact.

5. Version of the transmitter or probe with surge arrester, marked on the plate “Version SA”, does not meet the requirements of Section 6.3.13 of IEC 60079-11:2011 (test of isolation 500 VAC). This must be taken into account during the installation of transmitters.

6. Transmitters with display (with electrical connections ALW, ALM) and with diaphragm seals covered by PTFE, for Group III, should be installed in a place and in a way that prevents electrostatic charging.

7. In hazardous areas, transmitters with diaphragm seals covered with a PTFE layer should be installed in places and in a manner preventing electrostatic charging.

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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)
Issue 3:

Downsize of internal PCB PC30Ex-rev2.
Modification of marking.
Added the new documentation to the new PCB PC-30-rev7 with changed the parameters Li and Ci, Ci = 2,5nF + capacity of cable, Li = 0 mH + inductivity of cable.
Added the ability to use layer of PTFE thickness max. 0,35mm covering the surfaces of diaphragm seals. Added warning table.
Reduction the number of versions of the PC-28 transmitters with PM12, PKD, ALW, ALM connections.
Changed seals in the cable connection SG.
Updated drawings of transmitters, changed and added marking tables.
Added new probes Hydrostatic level probe SG(E)-25, SG(E)-25S, SG(E)-25C with documentation.
Updated implementation of pressure heads and differential pressure heads.
Added new pressure heads and differential pressure heads.
Updated and added new technical description.
Updated list of documentation.
Modification of instrinsically safe parameters, see Annex A to certificate No. IECEx FTZU 13.0004X Issue No. 3.

Added new product: Hydrostatic level probe SG(E)-25, SG(E)-25S, SG(E)-25C

The hydrostatic level probes are installed in places where the liquid level is measured in wells, tanks, boreholes, etc. The probe is immersed in the measured medium. The mechanical construction is simplified version of transmitter PC-28.. equipped only with cable connection. Electrical scheme is identical. Adjustment potentiometers are not used in hydrostatic level probes SG(E)-25, SG(E)-25S, SG(E)-25C.

Intrinsically safe parameters: see Annex A to certificate No. IECEx FTZU 13.0004X Issue No. 3.

Annex:

Annex A to certificate No. IECEX FTZU 13.0004X Issue No. 3_1.pdf

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

Pressure transmitter PC-28, PCE-28, PC-28Ex Safety, PCE-28Ex Safety,
Differential pressure transmitter PR-28, PRE-28,PR-28Ex Safety, PRE-28Ex Safety,
Hydrostatic level probe PC-28P, PCE-28P, SG(E)-25, SG(E)-25S, SG(E)-25C

Intrinsically safe parameters

Transmitters Px-28

Ambient temperature: -40°C < Ta < T_{amax} (special version for Group II only Tamin = -50 °C)

Power supply	Pi [W]	T_{amax} [°C]	Temperature class, Group	Surface temperature
Linear output characteristic: Ui=28VDC, Ii=0,1A	0,7	+45 °C	T6	85 °C
		+70 °C	T5	110 °C
		+80 °C	T4, Group. I, Group.III	120 °C
Rectangular or Trapezoidal output characteristic: Ui=24VDC, Ii=0,1A	1,2	+55	T5	110 °C
		+80	T4, Group. I, Group.III	135 °C

Input parameters:
Ver A: Ci=25 nF + cable capacitance*, Li=0,4 mH + cable inductivity*
Ver B: Ci=2.5 nF + cable capacitance*, Li=0 mH + cable inductivity*
* - concerns versions with PK(M), PKD and SG(M) connectors; cable parameters C=200pF/m, L=1μH/m

Probes SG(E)-25x

Ambient temperature: -25°C < Ta <T_{amax}

Power supply	Pi [W]	T_{amax} [°C]	Temperature class, Group
Linear output characteristic: Ui=28VDC, Ii=0,1A	0,7	+45 °C	T6
		+70 °C	T5
		+80 °C	T4, Group. I
Rectangular or Trapezoidal output characteristic: Ui=24VDC, Ii=0,1A	1,2	+55	T5
		+80	T4, Group. I

Input parameters:
Ci=2.5 nF + cable capacitance*, Li=0 mH + cable inductivity*
* - cable parameters C=200pF/m, L=1μH/m