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 12.0010X**	Page 1 of 4	Certificate history:
Status:	**Current**	Issue No: 2	Issue 1 (2017-06-29) Issue 0 (2012-06-19)
Date of Issue:	2018-08-31		
Applicant:	**APLISENS** ul. Morelowa 7, 03-192 Warszawa **Poland**		
Equipment:	**Smart pressure transmitters type PC-28.SMART, PCE-28.SMART. Smart differential pressure transmitters type PR-28.SMART, PRE-28.SMART. Smart hydrostatic level probes type PC-28P.SMART, PCE-28P.SMART.**		
Optional accessory:			
Type of Protection:	**Intrinsic safe "i"**		
Marking:	Ex ia IIC T4/T5/T6 Ga/Gb Ex ia IIIC T105ºC Da Ex ia I Ma or Ex ia IIC T4/T5/T6 Ga/Gb or Ex ia IIC T4 Ga/Gb or Ex ia IIC T4 Ga/Gb Ex ia IIIC T105ºC Da		

Approved for issue on behalf of the IECEx Certification Body: **mgr inż. Piotr Madej**

Position: **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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Manufacturer: **APLISENS**
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 60079-0:2011 Explosive atmospheres - Part 0: General requirements
Edition:6.0

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:

PL/KDB/ExTR12.0006/00 PL/KDB/ExTR12.0006/01 PL/KDB/ExTR12.0006/02

Quality Assessment Reports:

PL/KDB/QAR12.0001/00 PL/KDB/QAR12.0001/01 PL/KDB/QAR12.0001/02
PL/KDB/QAR12.0001/03

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

The PC-28.SMART, PCE-28.SMART smart pressure transmitters are designed to measure gauge pressure, vacuum pressure and absolute pressure of gases, vapours and liquids (including corrosive).

The PR–28.SMART, PRE–28.SMART differential pressure transmitters are used to measure liquid levels in closed tanks, static pressure up to 25 MPa or 32 MPa for special versions, and to measure differential pressure and flow measurement at filters, orifices and others. The transmitters with P-type connectors are designed to work with static pressure of up to 4MPa or 7MPa only.

The PCE-28P.SMART smart hydrostatic level probes are used to measure liquid levels in open tanks.

The active sensing element is a enclosed silicon diaphragm with piezoresistors, separated from the medium by a sealing diaphragm and manometric fluid. The electronic system digitally processes the measurement signal and generates output signals an analogue 4÷20 mA signal, and a digital Hart communication signal. The main electronic assembly is identical for all versions.

The main components of the smart pressure transmitter are the sensing module, in which the pressure signal is converted into an electrical signal, and the electronic system, which converts the signal from the sensing module into an unified output signal.

The casing of the transmitter made from ø27 or ø25 pipe (for SG or SGM cable connector) is permanently mounted on the sensing module. On the other side is an electrical connector. The ALW and ALM type electrical connectors are made of an aluminum alloy housing with an electronic display inside.

SPECIFIC CONDITIONS OF USE: YES as shown below:
- Version of transmitter with surge arrester, marked on the plate "Version SA", does not meet the requirements of Section 10.3 of the IEC 60079-11 (500 Vrms). The relevant information for the user is included in the manual.

- Transmitters with display, (with electrical connection ALW or ALM) and transmitters with a plastic rating plate and transmitters with teflon coated diaphragm seals for Group III, should be installed in a place and in a way that prevents electrostatic charging – see user's manual.

- If the elements made of titanium are used in the construction of the device, during installation and operation of the transmitter these elements should be protected against direct access.

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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)
The new design has been introduced with an adapter with a flange for flow measurement, a new type of process connection and a new type of electrical connection. An additional sealing method has been introduced in the SG cable connection. A transducer equipped with a separator made of titanium parts has been added. Special conditions of use have changed.

Annex:

CoC_KDB_12_0010X_02_Attachment.pdf

Data Sheet

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

Equipment:

Smart pressure transmitters type PC-28.SMART, PCE-28.SMART
Smart differential pressure transmitters type PR-28.SMART, PRE-28.SMART
Smart hydrostatic level probes type PC-28P.SMART, PCE-28P.SMART

Marking:

- transmitters with PD, PZ, PK, PKM, SG, SGM electric connector:

Ex ia I Ma
Ex ia IIC T4/T5/T6 Ga/Gb
Ex ia IIIC T105°C Da

- transmitters with PM12 or PKD connector:

Ex ia IIC T4/T5/T6 Ga/Gb

- transmitters with ALW or ALM and PM12 connector:

Ex ia IIC T4 Ga/Gb

- transmitters with ALW or ALM and PD connector:

Ex ia IIC T4 Ga/Gb
Ex ia IIIC T105°C Da

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Technical safe parameters:

Supply voltage	7,5 V ÷ 30 V DC 10,5 V ÷ 30 V DC (with ALW and ALM connector)		
Measurement range	max. 100 MPa for PC-28.SMART, PCE-28.SMART max 7 MPa for PR-28.SMART, PRE-28.SMART max 3000 mmH_2O for PC-28P.SMART, PCE-28P.SMART,		
Output signal	4 ÷ 20 mA + HART		
Ingress protection	IP65 transmitters with PD electrical connector, and transmitters with ALW or ALM connector with electrical output PD IP66 transmitters with PZ connector IP67 transmitters with PK, PKM, PKD, PM12 and transmitters with ALW or ALM connector and PM12 electrical output IP68 transmitters with SG, SGM cable connector		
Ambient temperature – maximum:			
Pi	Ta		Temperature class
0,75W	+50°C		T6
	+70°C		T5
	+75°C*	+80°C	T4, Group I
1,2W	+40°C		T6
	+65°C		T5
	+75°C*	+80°C	T4, Group I
Ambient temperature – minimum:			
	Ta		
	-40°C		
	-50°C (special version)		

* Ambient temperature of transmitters with ALW or ALM connector

Intrinsic safety parameters:

Supply from a power source with linear output characteristic:

Ui=30V Ii=0,1A Pi=0,75W or Pi=1,2W

Supply from a power source with rectangular or trapezoidal output characteristic:

Ui=24V Ii=0,1A Pi=0,75W or Pi=1,2W

Ci=11nF Li = 0,61 mH
Ci=25nF Li = 0,61 mH (transmitter with ALW or ALM connector)

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