



EU TYPE EXAMINATION CERTIFICATE

- [1] 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)
- [2] EU type examination certificate (module B):
KDB 18ATEX0055X **1st edition**
- [3] Equipment:
Pressure transmitters type:
PC-28, PC-28.Smart, PC-29A, PC-29B, PC-28.Modbus,
PC-28 Ex Safety, PCE-28, PCE-28.Smart, PCE-28.Modbus,
PCE-28 Ex Safety
Differential pressure transmitters type:
PR-28, PR-28.Smart, PR-29A, PR-29B, PR-28.Modbus,
PR-28 Ex Safety, PRE-28, PRE-28.Smart, PRE-28.Modbus,
PRE-28 Ex Safety
- [4] Manufacturer:
APLISENS S.A.
- [5] Address:
ul. Morelowa 7, 03-192 Warszawa, Poland
- [6] The protective equipment or system and any acceptable variations thereto are specified in the schedule to this certificate.
- [7] Główny Instytut Górnictwa, 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 18.065-1 [T-7511]**
- [8] The essential health and safety requirements have been met by compliance with the requirements of the following standards:
EN IEC 60079-0:2018; EN 60079-1:2014; EN 60079-31:2014
- [9] If sign "X" is placed after the certificate number, this means the specific conditions of use set out in the schedule to this certificate.
- [10] 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.
- [11] The marking of the equipment is shown in point [15].

mgr inż. Piotr Madej

ATEX Certification
Expert



Główny Instytut Górnictwa
KIEROWNIK
Jednostki Oceny Zgodności

dr inż. Dariusz Stefaniak

Date of issue: 29 October 2021

Page 1 of 6

[13]
[14]

SCHEDULE
EU type examination certificate
KDB 18ATEX0055X 1st edition



[15] Description:

The pressure transmitters type PC-28, PC-28.Smart, PC-29A, PC-29B, PC-28.Modbus, PC-28 Ex Safety, PCE-28, PCE-28.Smart, PCE-28.Modbus, PCE-28 Ex Safety are designed to measure gauge pressure, vacuum pressure and absolute pressure of gases, vapours and liquids (including corrosive).

The differential pressure transmitters type PR-28, PR-28.Smart, PR-29A, PR-29B, PR-28.Modbus, PR-28 Ex Safety, PRE-28, PRE-28.Smart, PRE-28.Modbus, PRE-28 Ex Safety are used to measure liquid levels in closed tanks and to measure differential pressure at filters, orifices and others. The differential pressure transmitters with P-type connectors are designed to work with static pressure of up to 4MPa only.

The pressure transmitters and differential pressure transmitters can be fitted with a range of additional process connectors, enabling them to be used in a conditions variety, such as dense media, reactive media, high and low temperature.

The basic elements of the transmitters construction are:

- measuring head in which a pressure signal is converted into an electric signal;
- electronic unit that converts the measuring head signal into a unified transmission signal;
- housing;
- SGM, FL or PZ2 type electrical connection, where:
 - SGM - the electrical connection of the transmitter with a hermetically sealed power cord in a polyurethane sheath, with external metric thread M20x1,5 or tapered thread 1/2 "NPT,
 - FL - the electrical connection of the transmitter with hermetically sealed power wires with PVC insulation, with external metric thread M20x1,5 or tapered thread 1/2 "NPT,
 - PZ2 - electrical connection of the transmitter with the terminal box closed with a threaded cover, welded to the upper part of the housing.

The transducer housing is made of $\varnothing 27$ mm pipe. The external thread in the SGM and FL electrical connection enables it to be screwed into the socket:

a) Ex d flameproof enclosure, for the execution of:



II 2G Ex db IIC T6/T5/T4 Gb;

b) Ex d flameproof enclosure, Ex e increased safety, or Ex t protection by enclosure, for the execution of:




II 2D Ex tb IIIC T85°C/T100°C/T120°C Db while maintaining the required degree of protection IP66.






Marking:

- transmitters with PZ2 electrical connection:

 I M2 Ex db I Mb
II 2G Ex db IIC T6/T5/T4 Gb
II 2D Ex tb IIIC T85°C/T100°C/T120°C Db

- transmitters with SGM or FL electrical connection:

 II 2G Ex db IIC T6/T5/T4 Gb
II 2D Ex tb IIIC T85°C/T100°C/T120°C Db

Technical parameters:

For transmitters with FL connection (with wires LgYc type with PVC insulation) or with PZ2 connection :

Variant I:

Maximum ambient temperature: $T_a \leq +70^\circ\text{C}$
Maximum process temperature: 70°C

Marking:

Temperature class: **T6**
Maximum surface temperature: **T85°C**

Variant II:

Maximum ambient temperature: $T_a \leq +80^\circ\text{C}$
Maximum process temperature: 85°C

Marking:

Temperature class: **T5**
Maximum surface temperature: **T100°C**

Variant III:

Maximum ambient temperature: $T_a \leq +80^\circ\text{C}$
Maximum process temperature: 115°C

Marking:

Temperature class: **T4**
Maximum surface temperature: **T120°C**



SCHEDULE
 EU type examination certificate
KDB 18ATEX0055X 1st edition



For transmitters with SGM connection (with cable LiYwC11Y (1) 4x0,35c type in a polyurethane sheath):

Variant I:

Maximum ambient temperature: $T_a \leq +65^\circ\text{C}$
 Maximum process temperature: 75°C

Marking:

Temperature class: **T6**
 Maximum surface temperature: **T85°C**

Variant II:

Maximum ambient temperature: $T_a \leq +65^\circ\text{C}$
 Maximum process temperature: 105°C

Marking:

Temperature class: **T5**
 Maximum surface temperature: **T100°C**

Note! See specific conditions of use.

For all variants of implementation:

- Minimum ambient temperature:
- For differential pressure transmitters: $-25^\circ\text{C} \leq T_a$
 - For pressure transmitters: $-40^\circ\text{C} \leq T_a$
 - For special version transmitters: $-50^\circ\text{C} \leq T_a$

Transmitter type	Maximum power supply voltage	Output signal
PC-28 PCE-28 PR-28 PRE-28	30V DC	4÷20mA
PC-28 Ex Safety PCE-28 Ex Safety PR-28 Ex Safety PRE-28 Ex Safety	30V DC	4÷20mA
PC-28.Smart PCE-28.Smart PR-28.Smart PRE-28.Smart	30V DC	4÷20mA + Hart
PC-28.Modbus PCE-28.Modbus PR-28.Modbus PRE-28.Modbus	28V DC	MODBUS RTU
PC-29A PR-29A	16V DC	0,5÷4,5V
	16V DC	1÷5V
	16V DC	1÷10V



SCHEDULE
EU type examination certificate
KDB 18ATEX0055X 1st edition



PC-29B PR-29B	5,6V DC	0÷2V
	5,6V DC	0÷2,5V
	5,6V DC	0÷3V
	5,6V DC	0÷3,3V
	5,6V DC	0,4÷2V
	5,6V DC	1÷2,5V

Maximum power supply of the transmitter: 1W
Ingress protection: ≥ IP 66

[16] Test Report:

"ATEX assessment report" KDB No 18.065-1

[17] Special conditions of use:

- Transmitters with LiYwC11Y (1) 4x0,35c type cable, (SGM electrical connection), used at an ambient temperature of $T_a = 65^{\circ}\text{C}$ and process temperature 105°C , must be installed in a horizontal position in such a way that the temperature above the process connection does not exceed 100°C .
- If transmitters for Group III contain:
 - a) the nameplate made of plastic,
 - b) diaphragm seals covered by PTFE, they should be installed in a way that prevents electrostatic charging, according to the instruction 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.
- External parts made of plastic should be cleaned with a damp cloth, with the addition of antistatic fluids.
- The diaphragm should not be subject on damage during installation and exploitation of the transmitter. The transmitter diaphragm is made of stainless steel or Hastelloy alloy and must not be exposed to medium that could cause its damage.
- Flameproof joints are not intended to be repaired.
- The cable glands inlets used must meet the explosion-proof requirements and have the Ex marking, in accordance with the Ex marking of the device.

[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 60079-1:2014 (PN-EN 60079-1:2014-12);
EN 60079-31:2014 (PN-EN 60079-31:2014-10)



SCHEDULE
EU type examination certificate
KDB 18ATEX0055X 1st edition



Document history:

- EU type examination certificate KDB 18ATEX0055X, 0 edition of 30.07.2018, initial certification.
 - EU type examination certificate KDB 18ATEX0055X, 1 edition of 29.10.2021, replaces EU type examination certificate KDB 18ATEX0055X 0 edition of 30.07.2018
- New versions have been introduced with connection PZ2.

