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- [1] **EU-TYPE EXAMINATION CERTIFICATE**
- [2] Equipment and protective systems intended for use in potentially explosive atmospheres. Directive 2014/34/EU
- [3] EU – type examination certificate (module B):
KDB 12ATEX0077X **issue 1**
- [4] Equipment:
Smart pressure transmitters type APC-2000, APCE-2000, APC-2000G, APCE-2000G
Smart differential pressure transmitters type APR-2000, APRE-2000, APR-2000G, APRE-2000G, APR-2200, APRE-2200
Smart hydrostatic level probes type APR-2000Y, APRE-2000Y
- [5] Manufacturer:
APLISENS S.A.
- [6] Address:
ul. Morelowa 7, 03-192 Warszawa, POLAND
- [7] This product and any acceptable variation thereto is specified in the schedule to this certificate.
- [8] Główny Instytut Górnictwa, Notified Body number 1453 in accordance with Directive 2014/34/EU of 26 February 2014, certifies that this equipment or protective system has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres given in Annex II to the Directive 2014/34/EU. The examination and test results are recorded in confidential report **KDB Nr 12.099-1 [T-6901]**
- [9] Compliance with the Essential Health and Safety Requirements has been met by compliance with:
EN 60079-0:2012 + A11:2013; EN 60079-11:2012;
EN 50303:2000
- [10] In case if the sign „X“ is placed after the certificate number, it indicates special conditions for safe use, specified in the schedule to this certificate.
- [11] This EU-type examination certificate relates only to the construction, evaluation and tests of product accordance with Directive 2014/34/EU. The certificate does not include other requirements of the Directive relating to manufacturing process and putting into the market of the equipment or protective device.
- [12] Marking of the equipment shall include:



I M1 Ex ia I Ma
II 1/2G Ex ia IIC T4/T5/T6 Ga/Gb
II 1D Ex ia IIIC T110°C Da



KDBEX.eu

mgr inż. Piotr Madej
(signature)
ATEX Certification
Specialist



KIEROWNIK
Zespołu Certyfikacji Wyrobów
KD "BARBARA" Mikołów
(signature)
dr hab. inż. Krzysztof Cybulski, prof. GIG

Date of issue: **24.04.2017 r.**
Date of English version: **24.04.2017 r.**

Page 1 of 3

Główny Instytut Górnictwa, 40-166 Katowice, Plac Gwarków 1, POLAND, www.gig.eu
(Certification Body-Certification Team-Kopalnia Doświadczalna "Barbara" Mikołów)
Certification Body accredited by PCA, Nr AC038

This certificate may be reproduced only in its entirety with schedule. The next issue of the certificate replaces the earlier editions.
Issue 0 is the initial certification. The document without signatures and seals is invalid.

[13]
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SCHEDULE
EU-type Examination Certificate
KDB 12ATEX0077X issue 1



[15] Description:

The smart pressure transmitters APC-2000 and APCE-2000 are designed to measure gauge pressure, vacuum pressure and absolute pressure of gases, vapours and liquids. The smart pressure transmitters APC-2000G and APCE-2000G are designed to measure pressure non-reactive gases.

The smart differential pressure transmitters APR-2000, APR-2200, APRE-2000 and APRE-2200 are used to measure liquid levels in closed tanks, and to measure differential pressure at elements such as filters, orifices, etc.

The smart pressure transmitters APR-2000G, APRE-2000G are designed to measure gas differential pressure.

The smart hydrostatic level probes type APR-2000Y, APRE-2000Y are used to measure the level or density in closed 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 a 4-20mA output analog signal and produces a digital HART signal.

Transmitters are cased in an Ø51 pipe with a PD or PZ type connector. The PD type connector is located on the top of the casing. Transmitters with a PZ type connector have a terminal box connected permanently to the casing.

Technical parameters:

| | |
|---------------------|--|
| Supply voltage | 7,5V ÷ 30V DC (24VDC nominal voltage) |
| Measurement range | max. 100 MPa (for APC-2000, APCE-2000) max 7 MPa (for APR-2000, APRE-2000, APR-2200, APRE-2200) max 100 kPa (for APR-2000G, APRE-2000G, APC-2000G, APCE-2000G) max 10 mH ₂ O (for APR-2000Y, APRE-2000Y) |
| Output signal | 4 ÷ 20 mA + HART |
| Ingress protection | IP65 version with PD electrical connector IP66/IP67 version with PZ connector |
| Ambient temperature | -40°C÷+80°C (for APC...) -25°C÷+80°C (for APR...) -50°C÷+80°C (for special version) |



[13]

[14]

SCHEDULE
EU-type Examination Certificate
KDB 12ATEX0077X issue 1



Intrinsic safety parameters:

Supply from a power source with linear output characteristic:

$U_i = 30 \text{ V}; I_i = 0,1 \text{ A}$

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

$U_i = 24 \text{ V}; I_i = 0,1 \text{ A}$

$C_i = 11 \text{ nF}; L_i = 0,611 \text{ mH}$

| P_i [W] | T_a [°C] | Temperature classification |
|-----------|------------|----------------------------|
| 0.75 | 50 | T6 |
| | 70 | T5 |
| | 80 | T4, group I |
| 1.2 | 40 | T6 |
| | 60 | T5 |
| | 80 | T4, group I |

[16] Test report:

„Sprawozdanie z oceny ATEX“ KDB Nr 12.099-1

[17] Special conditions for safe use:

- Version of transmitter with surge arrester, marked on the plate "SA", does not meet the requirements of Section 10.3 of the EN 60079-11 (500 Vrms). The relevant information for the user is included in the manual;
- 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.

[18] Essential health and safety requirements:

Met by compliance with standards listed below:

EN 60079-0:2012 + A11:2013; EN 60079-11:2012; EN 50303:2000
(PN-EN 60079-0:2013-03 + A11:2014-03; PN-EN 60079-11:2012;
PN-EN 50303:2004)

Document's history:

- EC-Type Examination Certificate KDB 12ATEX0077X of 21.06.2012 r., initial certification (issue 0).
- EU-Type Examination Certificate KDB 12ATEX0077X issue 1, **this document**, some changes in measurement module has been introduced. The changes in GCR20 has been introduced. The MPC3-rev6.12_N plate assembly was replaced with the MPC3-rev7_N plate assembly. The new CR15 and CC50 head has been introduced. The pattern plate has been changed. The new alternative casting compound has been introduced

