



AC 038



KDB ATEX



Główny Instytut Górnictwa
Jednostka Certyfikująca
Zespół Certyfikacji WYROBÓW
KD „Barbara”
ul. Podleska 72
43-190 Mikołów,
tel. (+48) 32 3246550
fax. (+48) 32 3224931
www.gig.katowice.pl

This certificate and its
schedules may only be
reproduced in its entirety and
without change

[1] EC-TYPE EXAMINATION CERTIFICATE



[2] Equipment, protective systems and components intended for use in
potentially explosive atmospheres - Directive 94/9/EC

[3] EC – type examination certificate:

KDB 08ATEX282

[4] Equipment or protective system:

**Smart pressure transmitters type APCE-2000,
APC-2000; smart differential pressure
transmitters type APRE-2000, APR-2000 and
APRE-2200, APR-2200; smart differential pressure
transmitters for gases type APRE-2000G,
APR-2000G; smart level probes type
APRE-2000Y, APR-2000Y**

[5] Manufacturer:

APLISENS S.A.

[6] Address:

ul. Morelowa 7 , 03-192 Warszawa

[7] This equipment and any acceptable variation thereto is specified in the schedule to this
certificate and the documents therein referred to.

[8] Główny Instytut Górnictwa, Notified Body number 1453 in accordance with Article 9 of
Directive 94/9/EC of 23 March 1994, certifies that this equipment and 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.

The examination and test results are recorded in confidential report
KDB No. 08.243 [T-6388]


[9] Compliance with the Essential Health and Safety Requirements has been assured by
compliance with:

EN 60079-0:2004, EN 60079-26:2006;
EN 60079-11:2007; EN 50303:2000

[10] If the sign „X” is placed after the certificate number, it indicates that the equipment or
protective system is subject to special conditions for safe use specified in the schedule to this
certificate.

[11] This EC-type examination certificate relates only to the design and construction of the
specified equipment and protective system in accordance with Directive 94/9/EC.
Further requirements of the Directive may apply to the manufacturing process and supply of
this equipment or protective system. These are not covered by this certificate.

[12] The marking of the equipment or protective system shall include the following:


 **Ga/Gb, Ex ia IIC T4/T5/T6
I Ml Ex ia I**

Date of issue: 12.12.2008

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SPECJALISTA ds. CERTYFIKACJI
URZĄDZEŃ PRZECIWWYBUCHOWYCH


mgr inż. Wojciech Kwiatkowski



KIEROWNIK
Zespołu Certyfikacji WYROBÓW
KD „BARBARA” Mikołów


doc. dr hab. inż. Krzysztof Cybulski



[13]

SCHEDULE

[14]

EC-Type Examination Certificate KDB 08ATEX282

[15] **Description:**

Smart pressure transmitters APC-2000 and APCE-2000 are designed to measure positive gauge pressure, negative pressure and absolute pressure of gases, vapors and liquids.

Smart differential pressure transmitters APR-2000, APR-2200 and APRE-2000, APRE-2200 are designed to measure liquid levels in closed tanks and to measure differential pressure across constrictions.

Smart differential pressure transmitters type APR-2000G, APRE-2000G are designed to measure of gases.

Smart level probes type APR-2000Y, APRE-2000Y are designed to measure liquid levels or liquid density.

The electronic assembly is identical for all versions.

The active sensing element is a silicon diaphragm with in-diffused piezoresistors located in sensing module.

The electronic assembly amplifies and standardizes the output signal of measuring bridge.

The casing of the transmitters, made from stainless steel pipe is mounted on the sensing module.

On the other side of casing is mounted electrical connector of type:

PD (angular connector produced by Hirschmann) or

PZ (terminal box with cable gland M20x1,5)

Technical parameters:

Measurement range	up to 100MPa for APC-2000, APCE-2000 up to 2.5MPa for APR-2000, APR-2200, APRE-2000, APRE-2200 up to 100kPa for APR-2000G, APRE-2000G up to 10mH ₂ O for APR-2000Y, APRE-2000Y
Output signal	4 ÷ 20mA + HART, two-wire transmission
Accuracy	0,075% up to 0,5% (dependent on measurement range)
Ambient temperature limit	-40°C ÷ +80°C
Supply	30V DC - for power supply with a linear characteristic 24V DC - for power supply with a rectangular and trapezoidal characteristic
Degree of protection	IP65 for PD and PZ connectors





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Permitted input parameters

- for power supply with a linear characteristic

- $U_i=30V$ DC

- $I_i=0.1A$

- for power supply with a "rectangular" characteristic and a "trapezoidal" characteristic

- $U_i = 24V$ DC

- $I_i = 0,1A$

Input inductance and capacity:

$L_i = 1.3mH$

$C_i = 20nF$

P_i for all type of power supply - see Table 1

Table 1

P_i [W]	T_p [°C]	Temperature class
1.2	51	T6
	66	T5
	101	T4
	121	Group I
1.0	56	T6
	71	T5
	106	T4
	126	Group I
0.9	58	T6
	73	T5
	108	T4
	128	Group I
0.8	61	T6
	76	T5
	111	T4
	131	Group I
0.7	63	T6
	78	T5
	113	T4
	133	Group I
0.6	65	T6
	80	T5
	115	T4
	135	Group I
0.4	70	T6
	85	T5
	120	T4
	140	Group I

T_p - temperature of enclosure of mounted transmitter (for example at tank) without power supply, to determinate for maximum ambient temperature.





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The level of protection:

- the transmitter is an intrinsic safety device with protection level "ia", when supply circuit have level of protection "ia".
- the transmitter is an intrinsic safety device with protection level "ib", when supply circuit have level of protection "ib".

[16] **Test report:**

Report KDB No 08.243

[17] **Special conditions for safe use:**

None

[18] **Essential health and safety requirements:**

Met by compliance with standards listed in section 9. of this Certificate.

