AC 038

KDB 08ATEX

[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 08ATEX004X

[4] Equipment or protective system:

Pressure transmitters type PC-29A/XX/YY, PC-29PA/XX/YY, PC-29B/XX/YY, PC-29PB/XX/YY and

Differential pressure transmitters type PR-29A/XX/YY,PR-29B/XX/YY

[5] Manufacturer:

APLISENS-Manufacture Of Pressure Transmitters and Control Instruments

[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. 08.006 [T-6126]

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

EN 60079-0:2004; EN 60079-0:2006; EN 50303:2000;

EN 60079-26:2004;EN 60079-11:2007

[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:

II 1/2G, Ex ia IIC T5 for PC-29B, PR-29B
II 1/2G, Ex ia IIB T5 for PC-29A, PR-29A
IM1, Ex ia I

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EKSPERT/SPECJALISTA ds. CERTYFIKACJI URZĄDZEŃ PRZECIWWYBUCHOWYCH

mgr inż. Wojciech Kwiatkowski

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[13] # SCHEDULE

[14] **EC-Type Examination Certificate KDB 08ATEX004X**

[15] **Description:**

Pressure transmitters PC-29A, PC-29B are designed to measure positive gauge pressure, vacuum pressure and absolute pressure of gases, vapors and liquids.
The transmitters PC-29PA, PC-29PB are designed to measure of level of liquid.
Differential pressure transmitters PR-29A, PR-29B are designed to measure liquid levels in closed tanks and to measure differential pressure across constrictions.
The electronic part is identical in all versions.
The active sensing element is a silicon diaphragm with in-diffused piezoresistors located in sensing module.
The electronic part amplifies and standardizes the output signal of measuring bridge.
The casing of the transmitters, made from stainless steel pipe, is stable mounted on the sensing module.
On the other side can be mounted the following electrical connections:
- PD(angular connector produced by Hirschmann)
- PZ(terminal box with packing gland PG-11)
- PK(cable connector - stable interval of cable.)

XX indicate type of process connector.
YY indicate the type of electric connector.

Technical parameters:

Measurement range	2.5kPa ÷ 100MPa(positive gauge pressure, vacuum pressure) and 40kPa÷8MPa(absolute pressure) for PC-29A, PC-29B 1kPa ÷ 2,5MPa for PR-29A, PR-29B
Output signal	2.5 ÷ 5.5V three-wire transmission
Accuracy	0,25% up to 0,4% (dependent on measurement range)
Ambient temperature limit	-40°C÷+80°C
Supply	Intrinsic safety power line: - 12V DC - PC-29A, PR-29A - 3.6V DC - PC-29B, PR-29B
Degree of protection	IP65 for PD and PZ connectors IP67 for PK

Permitted parameters:
Type PC-29A, PC-29PA, PR-29A
terminals 1-3(supply):
- Ui=14.1 DC

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[13] # SCHEDULE

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- I_i=0.2A
- L_i=0.61mH
- C_i=1.4µF

terminals 2-3:

- U_o/U_i=14.1/14.1V DC
- I_o/I_i=13.25/200mA
- L_i=0.974mH
- C_i=1.4µF

Type PC-29B, PC-29PB, PR-29B

terminals 1-3(supply):

- Ui=5.6 DC
- I_i=0.2A
- L_i=0.61mH
- C_i=8.5µF

terminals 2-3:

- U_o/U_i=±5.6/±5.6V DC
- I_o/I_i=11.5/100mA
- L_i=0.974mH
- C_i=0.25µF

Note. The pressure transmitter is an intrinsic safety apparatus with level of protection "ia", when supply circuit has level of protection "ia"

[16] **Test report:**

Report KDB No 08.006

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

- electrical installation of pressure transmitters shall comply with installation requirements of valid standard.

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

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

[19] **Descriptive documents:**

Technical description rev.1(2 sheets)	PC29-A000-01	08.2007
Rating plate rev.1(2 sheets)	PC29-C001-01	08.2007
Circuit diagram PC-29A(12V)	PC29-S001-00	08.2007

Główny Instytut Górnictwa Katowicach Jednostka Certyfikująca Zespół Certyfikacji Wyrobów KD "Barbara" Mikopow

[13] # SCHEDULE

[14] **EC-Type Examination Certificate KDB 08ATEX004X**

Circuit diagram PC-29B(3.6V)	PC29-S002-00	08.2007
Printed circuit board assembly PC-29A(2 sheets)	PC29-B001-00	08.2007
Printed circuit board assembly PC-29B(2 sheets)	PC29-B002-00	08.2007
Printed circuit board assembly of filter (2 sheets)	PC29-B003-TA	08.2007
Terminal board assembly(2 sheets)	ZA-054-TA	09.2007
Technological advice	PC29-A200-TA	08.2007
Low voltage pressure transmitter type PC-29A, PC-29B, PC-29PA, PC-29PB rev.1(4 sheets).	PC29-A001-TA	07.2007
Low voltage differential pressure transmitter type PR-29A, PR-29B rev.1(2 sheets)	PR29-A001-TA	08.2007
System compensation assembly for range 600kPa ABS	PC28-B010-TA	07.2007
Board of head PG-2	A-203-00	05.2004
Bushing Φ15	ZG-002-TA	06.2007
Transistor bushing assembly	ZG-006-TA	10.2004
Very low pressure sensor module(3 sheets) p<20kPa	GC1-007-TA	06.2007
Low, middle, absolute pressure sensor module(3 sheets)	GC3-001-TA	06.2007
Sensor module with frontal membrane(2 sheets)	GC3-003-TA	06.2007
Middle, high, absolute pressure sensor module(3 sheets)	GC4-001-TA	06.2007
High pressure sensor module(3 sheets)	GC4-005-TA	06.2007
Differential pressure sensor module(2 sheets)	GR50-001-TA	06.2007
Differential pressure sensor module(2 sheets)	GR40-001-TA	06.2007
USER´S MANUAL	DTR.PC.PR-29	11.2007
"Analysis of conformity with standard for pressure transmitters type PC-29A, PC-29PA, PC-29B, PC-29PB and differential pressure transmitters type PR-29A, PR-29B"	AN.PC-29.01	

Główny Instytut Górnictwa w Katowicach
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