



CERTIFICATE



[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 04ATEX088

[4] Equipment or protective system:

Hydrostatic level probes type SG-25, SG-25S

[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] Central Mining Institute, 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 number KDB No. 04.205 [T-5094]

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

EN 50303:2000; EN 50284: 1999; EN 50014:1997 +
A1:1999 + A2:1999; EN 50020:2002

[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 1G EEx ia IIC T4/T5/T6
I M1 EEx ia I**

Date of issuance: 28.06.2004

Date of issuance English version: 02.11.2005

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Central Mining Institute
Certification Body
Product Certification Team
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This certificate and its
schedules may only be
reproduced in its entirety and
without change

KIEROWNIK
ZESPOŁU CERTYFIKACJI WYROBÓW
KD „BARBARA” MIKOŁÓW
dr inż. Krzysztof Cybulski



GŁÓWNY INSTYTUT GÓRNICZWA
KIEROWNIK
Jednostka Certyfikująca
dr inż. Dariusz Stefaniak

KDB ATEX



[13]

SCHEDULE

[14]

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[15] **Description:**

Hydrostatic level probes SG-25, SG-25S are designed to measure the level of liquid in wells, swimming pools, watercourses, boreholes etc. The standard signal 4 - 20mA is the output signal of probes using two-wire transmission.

The cable is stable mounted on the probe.

The cables of special version probes can be covered an additional teflon shield.

The electronic part is identical for both versions and is hermetically flooded harden able silicone encapsulated in the steel casing.

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

The output signal of measuring bridge enter into a electronic part which amplifies and standardizes the output signal.

Technical data

Nominal data

Measurement range	0 + 100 m for SG-25, 0 + 20 m for SG-25S
Output signal	4 ÷ 20mA two-wire transmission
Accuracy	max 0,6% for SG-25 (dependent on measurement range) max 1,5% for SG-25S (dependent on measurement range)
Ambient temperature limit	-25°C + +60°C
Supply	Intrinsic safety power line with power supply max 28V
Ingress Protection Rating of Case	IP68

Permitted input parameters

- for power supply with a linear characteristic

-U_i = 28V for T_a ≤ 70°C and T₆ and T_a ≤ 80°C
and T₅

-I_i = 0,1A

-U_i = 28V

-I_i = 0,1A for T_a = 80°C and T₆

-P_i = 0,33W



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- for power supply with a "trapezoidal" characteristic
- $U_i = 28V$
- $I_i = 0,1A$
- $P_i = 1,125W$ for $T_a \leq 60^\circ C$ and T6 and $T_a \leq 80^\circ C$ and T5
- $P_i = 0,99W$ for $T_a = 70^\circ C$ and T6
- $P_i = 0,33W$ for $T_a = 80^\circ C$ and T6
- for power supply with "rectangular" characteristic
 - $U_i = 28V$
 - $I_i = 0,082A$
 - $P_i = 1,66W$ for $T_a = 60^\circ C$ and T6
 - $P_i = 0,99W$ for $T_a = 70^\circ C$ and T5
 - $P_i = 0,33W$ for $T_a = 80^\circ C$ and T6
 - $P_i = 2,10W$ for $T_a = 60^\circ C$ and T5
 - $P_i = 1,95W$ for $T_a = 70^\circ C$ and T5
 - $P_i = 1,32W$ for $T_a = 80^\circ C$ and T5

Input inductance and capacity:

$$L_i = 0,94mH$$

$$C_i \leq 30nF$$

The level of protection:

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





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[16] **Test report:**

Report no. KDB Nr 04.205

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

- None

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

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

[19] **Descriptive documents:**

Figure SG25-A000-01	Technical characteristics (2 sheets)	05.2004
Figure SG25-C001-TA	Rating plate (2 sheets)	05.2004
Figure SG25-S001-00	Circuit diagram of SG-25, SG-25S Hydrostatic level probes	05.2004
Figure SG25-S002-00	Circuit diagram of SG-25, SG-25S Hydrostatic level probes	05.2004
Figure SG25-B001-00	Electronics board (2 sheets).	05.2004
Figure SG25-B002-00	Electronics board (3 sheets).	05.2004
Figure ZA-031-00	Electronics board of filter (2 sheets)	05.2004
Figure SG25-A200-TA	Technological advices	05.2004
Figure SG25-A102-TA	SG-25 and SG-25S Level probe (2 sheets)	05.2004
Figure GC3-006-TA	Sensor module of probe SG-25, SG-25S SG-25.SMART, SG-25S.SMART (2 sheets)	05.2004
Figure GC4-006-TA	Sensor module of probe SG-25, SG-25S SG-25.SMART, SG-25S.SMART (2 sheets)	05.2004
Figure ZA-002-TA	Cable assembly	11.2003
Figure ZG-002-TA	Header Ø15	04.2004
Figure ZG-006-TA	Transistorized header. Assembly	04.2004

