



AC 038



KDB 09ATEX



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 09ATEX007

[4] Equipment or protective system:

**Hydrostatic level probes type SG-25, SG-25S,
SG-25C, SGE-25, SGE-25S, SGE-25C**

[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. 09.008 [T-6408]

[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:

**II 1G
Ex Ga Ex ia IIC T4/T5/T6
I M1, Ex ia I**

SPECJALISTA ds. CERTYFIKACJI
URZĄDZEN PRZECIWWYBUCHOWYCH

mgr inż. Wojciech Kwiatkowski



KIEROWNIK
Zespołu Certyfikacji Wyrobów
KD „BARBARA” Mikołów
doc. dr hab. inż. Krzysztof Cybulski

Date of issue: 20.01.2009
Date of English version: 20.01.2009

13

SCHEDULE

14

EC-Type Examination Certificate KDB 09ATEX007

[15] Description:

Hydrostatic level probes SG-25, SG-25S, SG-25C, SGE-25, SGE-25S, SGE-25C 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 all 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 parameters:

Output signal	4 ÷ 20mA two-wire transmission
Ambient temperature limit	-25°C ÷ +75°C
Supply	Intrinsic safety power line with power supply max 28V
Degree of Protection	IP68

Permitted input parameters

- for power supply with a linear characteristic

- $U_i=28V$ DC

- $I_i=0.1A$

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

- $U_i = 28V$ DC

- $I_i = 0,08A$

Input inductance and capacity:

$L_i = 750\mu H$

$C_i = 30nF$

P_i for all type of power supply - see Table 1



SCHEDULE

EC-Type Examination Certificate KDB 09ATEX007

Table 1

P_i [W]	T_p [°C]	Temperature class
1.8	53	T6
	68	T5
	75	T4 and Group I
1.6	56	T6
	71	T5
	75	T4 and Group I
1.3	60	T6
	75	T5, T4 and Group I
1.0	65	T6
	75	T5, T4 and Group I
0.7	69	T6
	75	T5, T4 and Group I

$T_p = T_m$ - for $T_m > T_a$
 $T_p = T_a$ - for $T_m < T_a$

T_m - temperature of measuring medium
 T_a - ambient temperature

[16] Test report:

Report KDB No 09.008

[17] Special conditions for safe use:

- None

[18] Essential health and safety requirements:

Met by compliance with standards:

EN 60079-0:2004 (PN-EN 60079-0:2006);
EN 60079-11:2007 (PN-EN 60079-11:2007);
EN 60079-26:2007 (PN-EN 60079-26:2007);
EN 50303:2000 (PN-EN 50303:2004);





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Product certification program
no: PCW-ISO/IEC-1b
CODE ICS 13.230



[1] **SUPPLEMENT No 1**
to EC-TYPE EXAMINATION CERTIFICATE
KDB 09ATEX007

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

[3] Equipment:
Hydrostatic level probes type SG-25,
SG-25S, SG-25C, SGE-25,
SGE-25S, SGE-25C


[4] Manufacturer:
APLISENS S.A.

[5] Address:
ul. Morelowa 7, 03-192 Warszawa, POLAND

[6] Changes were introduced to design or construction of component in accordance with the specification set out in the Schedule attached to this certificate and the documents therein referred to.

This document shall be held with the original Certificate.


The examination and test results are recorded in confidential report
KDB No. 09.008-1 [T-6408]

[7] Marking:
II 1G
 **Ga Ex ia IIC T4/T5/T6**
I M1, Ex ia I

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

- EN 60079-0:2009; (PN-EN 60079-0:2009);
- EN 60079-11:2012; (PN-EN 60079-11:2012);
- EN 60079-26:2007; (PN-EN 60079-26:2007);
- EN 50303:2000; (PN-EN 50303:2004);

[9] The marking will change to:

 **I M1 Ex ia I Ma**
II 1G Ex ia IIC T4/T5/T6 Ga

Specjalista ds. Certyfikacji
Urządzeń Przeciwybuchowych

dr inż. Michał Górny



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

Date of issue: 23.07.2012
Date of English version: 27.08.2012

[10]

SCHEDULE

[11]

Supplement no 1 to EC-Type Examination Certificate KDB 09ATEX007

[12] **Description of the variation to the equipment or protective system:**

The printed circuit PG-2 with the contact strips have been replaced by the printed circuit PG2_rev1 and PG2_rev3. The Printed circuit PG2_rev1 is mounted to sensor GC4-....., while the printed circuit PG2_rev3 is mounted to sensor GC3-..... . The printed circuits PG2_rev1 and PG2_rev3 are oval shaped.

In the result of assessment it was found that the equipment fulfils requirement of standards listed in point 8 of this certificate and stays in accordance with Essential Health and Safety Requirements of 94/9/WE directive.

Technical data:

No changes

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

No changes





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Product certification program
no: PCW-ISO/IEC-1b
CODE ICS 13.230



[1]

**SUPPLEMENT No 2
to EC-TYPE EXAMINATION CERTIFICATE
KDB 09ATEX007X**

[2]

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

[3]

Equipment:

**Hydrostatic level probes type:
SG-25, SG-25S, SG-25C, SGE-25, SGE-25S, SGE-25C**

[4]

Manufacturer:

APLISENS S.A.

[5]

Address:

ul. Morelowa 7, 03-192 Warszawa, POLAND

[6]

Changes were introduced to design or construction of component in accordance with the specification set out in the Schedule attached to this certificate and the documents therein referred to.

This document shall be held with the original Certificate.

The examination and test results are recorded in confidential report
KDB No. 09.008-2 [T-6408]

[7]

Marking:



**I M1 Ex ia I Ma
II 1G Ex ia IIC T4/T5/T6 Ga**

[8]

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

EN 60079-0:2012+A11:2013 (PN-EN 60079-0:2013-03+A11:2014-03);

EN 60079-11:2012 (PN-EN 60079-11:2012);

EN 60079-26:2007 (PN-EN 60079-26:2007);

EN 50303:2000 (PN-EN 50303:2004);

[9]

The marking will change to:



**I M1 Ex ia I Ma
II 1G Ex ia IIC T4/T5/T6 Ga**



**I M1 Ex ia I Ma
II 1G Ex ia IIB T4/T5/T6 Ga**

Specjalista ds. Certyfikacji
Urządzeń Przeciwwybuchowych

dr inż. Michał Górny



KIEROWNIK
Zespołu Certyfikacji Wytrobów
KD „BARBARA” Mikołów

dr hab. inż. Krzysztof Cybulski prof. GIG

Date of issue: 06.02.2015

Date of English version: 06.02.2015

Page 1 of 3

[10]

SCHEDULE

[11]

Supplement no 2 to EC-Type Examination Certificate KDB 09ATEX007X

[12] **Description of the variation to the equipment:**

The following amendments have been put to the hydrostatic level probes mentioned above:

- the new alternative probes different from previous versions in main PCB assembly and in two kinds of PG PCB have been introduced;
- the new electrical connector type SGM with thread 1/2 "NPT has been introduced;
- the metal sleeve ensuring tightness of fastening the cable gland has been introduced to probes with a measuring range exceeding 100 m H₂O and probes designed to operate at temperatures above 40°C;
- the probe tip made of polypropylene has been introduced;
- ambient temperature has been increased to the value $T_a = 80^\circ\text{C}$ (only the new version);
- the new pattern plate has been introduced;
- performance of the probe with cable sheath of Teflon have been marked:



I M1 Ex ia I Ma
II 1G Ex ia IIB T4/T5/T6 Ga

The assessment of safety of the Hydrostatic level probes was carried out in compliance with the requirements of standards: EN 60079-0:2013-03+A11:2014-03; EN 60079-11:2012; EN 60079-26:2007; EN 50303:2004.

In the result of assessment it was found that the equipment fulfils requirement of standards listed in point 8 of this certificate and stays in accordance with Essential Health and Safety Requirements of 94/9/WE directive.

Technical data:

The following parameters are supplemented by (applies only to the new performance probes):

- Ambient temperature range: $-25^\circ\text{C} \div 80^\circ\text{C}$
- The temperature class dependence of ambient temperature (including temperature measured in the medium):

SCHEDULE

Supplement no 2 to EC-Type Examination Certificate KDB 09ATEX007X

Pi [W]	Ta [°C]	Temperature class
0,7	50	T6
	80	T5, T4, group I
1,2	40	T6
	75	T5
	80	T4, group I

Intrinsically safe parameters:

The following parameters have been changed:

Li= 0,4mH, Ci= 25nF

[13] Special conditions for safe use:

The probe marked "SA" is equipped with surge arrester. Details of installation are shown in the user's manual.

