GIG

PCA
POLSKIE CENTRUM AKREDYTACJI
CERTYFIKACJA WYROBÓW
AC 038

INTERNATIONAL ACCREDITATION FORUM IAF

KDB 10ATEX122X

# [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 10ATEX122X**

[4] Equipment or protective system:

**Temperature transmitter type APT 2000ALW**
**Exd version**

[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. 10.170 [T-6664]

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

EN 60079-0:2006; EN 60079-1:2007;
EN 60079-11:2007; EN 60079-26:2004
EN 61241:2006; EN 61241-1:2004;
EN 61241-11:2006

[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 d/ia IIC T***
**II 1/2D, Ex iaD 20/tD A21 T***
**-40°C≤Ta≤+45°C/+75°C**

SPECJALISTA ds. CERTYFIKACJI URZĄDZEŃ PRZECIWWYBUCHOWYCH
mgr inż. Wojciech Kwiatkowski

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

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

13 **SCHEDULE**

14 **EC-Type Examination Certificate KDB 10ATEX122X**

**[15] Description:**

Transmitters APT 2000ALW are designed to measure temperatures in industrial installations. Transmitter housing is a flameproof enclosure AL164 of Aplisens production equipped with flame-proof cable gland and blind plug specified in the agreed documentation. Inside the enclosure is mounted electronics with galvanically separated intrinsically safe sensor circuit of level of protection ia.

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**Technical parameters:**

| | |
|---|---|
| Power Supply | 13.5÷45V DC |
| Measuring range | -200°C÷+550°C for sensor Pt 100<br>-40°C÷+550°C for sensor Ni-Cr-Ni/K |
| Degree of protection of enclosure | IP67/66 |
| Output signal | 4÷20mA |

$U_m$ = 45V DC

**[16] Test report:**

Report no. KDB Nr 10.170

Report no. KDB Nr 08.170

The overpressure test in conformity with EN 60079-1:2004+AC:2006 made pressure 38 [bar] (4-times the reference pressure) - enclosure not subjected to overpressure test in routine test.

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

17.1 Temperature class transmitter (T * for gas) or the maximum surface temperature (T * for dust) depends mainly on the process temperature (temperature-controlled medium) and methods of installation on site. Accordingly, the temperature Tp the most hot place on the surface of the transducer housing (virtually cover the sensor) having contact with the explosive atmosphere in conditions of installation on site be determined and follow the instructions in DTR.APT.ALW.02.

17.2 Permitted gap of flameproof cylindrical joint marked in the documentation by L4 is less than specified in EN EN 60079-1:2007 and shall not exceed the values specified in the manufacturer's instructions.

# SCHEDULE

## EC-Type Examination Certificate KDB 10ATEX122X

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

Met by compliance with standards listed below:

| | |
|---|---|
| EN 60079-0:2006 | *(PN-EN 60079-0:2009);* |
| EN 60079-1:2007 | *(PN-EN 60079-1:2010);* |
| EN 60079-11:2007 | *(PN-EN 60079-11 :2010);* |
| EN 60079-26:2004 | *(PN-EN 60079-26 :2005);* |
| EN 61241:2006 | *(PN-EN 61241-0 :2007);* |
| EN 61241-1:2004 | *(PN-EN 61241-1 :2005);* |
| EN 61241-11:2006 | *(PN-EN 61241-11 :2007)* |

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

[1]

# SUPPLEMENT No 1
## to EC-TYPE EXAMINATION CERTIFICATE
## KDB 10ATEX122X

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

[3] Equipment and protective system:

**Temperature Transmitter type APT-2000ALW**
**Exd version**

[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. 10.170-1 [T-6664]

[7] Marking:

**II 1/2G, Ex d/ia IIC T***
**II 1/2D, Ex iaD 20/tD A21 T***

[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 60079-1:2007;*(PN-EN 60079-1:2010)*;
EN 60079-11:2012;*(PN-EN 60079-11:2012)*;
EN 60079-26:2007;*(PN-EN 60079-26:2007)*;
EN 60079-31:2009;*(PN-EN 60079-31:2011)*;

[9] The marking will change to:

**I M2 Ex d ia I Mb**
**II 1/2G Ex ia/d IIC T* Ga/Gb**
**II 1/2D Ex ia/t IIIC T* Da/Db**

Specjalista ds. Certyfikacji Urządzeń Przeciwwybuchowych
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Główny Instytut Górnictwa w Katowicach Jednostka Certyfikująca Zespół Certyfikacji Wyrobów KD "Barbara" Mikołów

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

[10] # SCHEDULE

[11] **Supplement no 1 to EC-Type Examination Certificate KDB 10ATEX122X**

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

The following amendments have been put to the transmitters mentioned above:

- the new performance of the transmitter with stainless steel 316 has been introduced,
- the marking of the transmitters with stainless steel 316 has been expanded on group I,
- the new performance of the transmitter to metrological application (MID version) has been introduced,
- the plate assembly MPT5-AD-rev3 has been introduced,
- the new LCD display has been introduced,
- the new performance of the shield assembly SW1T, SW2T;
- the compound used to encapsulate the transformer has been changed,
- the changes in the transmitter software have been introduced,
- the pattern plate has been changed.

**Technical data has been changed:**

| | |
|---|---|
| Power Supply: | 13,5 ÷ 45V DC |
| | 13,5 ÷ 28V DC (MID version) |
| Output signal: | 4 ÷ 20mA |
| Measuring range: | -200°C ÷ +550°C for sensor Pt100 |
| | -40°C ÷ +550°C for sensor Ni-Cr-Ni/K |
| Ambient temperature: | -40°C < Ta < +45°C/+75°C |
| | -25°C < Ta < +55°C (MID version) |
| Degree of protection: | IP67/66 |

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

No changes

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

[1]

# SUPPLEMENT No 2
## to EC-TYPE EXAMINATION CERTIFICATE
## KDB 10ATEX122X

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

[3] Equipment and protective system:

**Temperature Transmitter type APT-2000ALW**
**Exd version**

[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. 10.170-2 [T-6664]

[7] Marking:

**I M2 Ex d ia I Mb**
**II 1/2G Ex ia/d IIC T* Ga/Gb**
**II 1/2D Ex ia/t IIIC T* Da/Db**

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

EN 60079-0:2012;*(PN-EN 60079-0:2013)*;
EN 60079-1:2007;*(PN-EN 60079-1:2010)*;
EN 60079-11:2012;*(PN-EN 60079-11:2012)*;
EN 60079-26:2007;*(PN-EN 60079-26:2007)*;
EN 60079-31:2009;*(PN-EN 60079-31:2011)*;

[9] The marking will change.

**I M2 Ex d ia I Mb**
**II 1/2G Ex ia/d IIC T* Ga/Gb**
**II 1/2D Ex ia/t IIIC T* Da/Db**

or

**II 1/2G Ex ia/d IIC T* Ga/Gb**
**II 1/2D Ex ia/t IIIC T* Da/Db**

Specjalista ds. Certyfikacji Urządzeń Przeciwwybuchowych
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Product certification progam no: PCW-ISO/IEC-1b
CODE ICS 13.230

AC 038

[10] # SCHEDULE

[11] **Supplement no 2 to EC-Type Examination Certificate KDB 10ATEX122X**

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

The following amendments have been put to the transmitters mentioned above:

- The performance of the transmitter has been introduced in the case made of aluminium alloy with altered composition.

- There is a modification in the construction of the heads which does not affect the properties of the flameproof transmitter.

- Bonding technology of the seal cemented between cover assembly and glass has been changed.

- The connecting plate MPC5FO-rev1 has been introduced.

- The pattern plate has been changed.

Marking:

version with steel enclosure:

I M2 Ex d ia I Mb
II 1/2G Ex ia/d IIC T* Ga/Gb
II 1/2D Ex ia/t IIIC T* Da/Db

version with aluminium alloy enclosure:

II 1/2G Ex ia/d IIC T* Ga/Gb
II 1/2D Ex ia/t IIIC T* Da/Db

**Technical data has been changed:**

No changes

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

- Temperature class transmitter (T* for gas) or the maximum surface temperature (T* for dust) depends mainly on the process temperature (temperature-controlled medium) and methods of installation on site. Accordingly, the temperature Tp of the hottest place on the transmitter housing surface (which is actually the cover of the sensor), which has the contact with the explosive atmosphere in conditions of installation on site, has to be determined and one should follow the current instruction.
- The permitted gap of flameproof cylindrical joint, marked in the documentation as L4, is smaller than the one specified in EN 60079-1:2007 and shall not exceed the values specified in the manufacturer's instructions.

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

[1]

# SUPPLEMENT No 3
## to EC-TYPE EXAMINATION CERTIFICATE
## KDB 10ATEX122X

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

[3] Equipment:

**Temperature Transmitter type APT-2000ALW**
**Exd version**

[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. 10.170-3 [T-6664]

[7] Marking:

**I M2 Ex d ia I Mb**
**II 1/2G Ex ia/d IIC T* Ga/Gb**
**II 1/2D Ex ia/t IIIC T* Da/Db**

or

**II 1/2G Ex ia/d IIC T* Ga/Gb**
**II 1/2D Ex ia/t IIIC T* Da/Db**

[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 60079-1:2007 *(PN-EN 60079-1:2010);*
EN 60079-11:2012 *(PN-EN 60079-11:2012);*
EN 60079-26:2007 *(PN-EN 60079-26:2007);*
EN 60079-31:2009 *(PN-EN 60079-31:2011);*

[9] The marking will not change.

Specjalista ds. Certyfikacji
Urządzeń Przeciwwybuchowych
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Product certification progam no: PCW-ISO/IEC-1b
CODE ICS 13.230

[10] # SCHEDULE

[11] **Supplement no 3 to EC-Type Examination Certificate KDB 10ATEX122X**

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

The following amendments have been put to the transmitters mentioned above:

- dimensions of flameproof joints L4 have been changed in the housing body;
- there is a modification in the construction of the sensors which does not affect the properties of the flameproof transmitter;
- the new performance of the temperature sensors type G1, GB1, GN1, T1 have been introduced;
- the pattern plate has been changed;

Marking:

version with steel enclosure:

I M2 Ex d ia I Mb
II 1/2G Ex ia/d IIC T* Ga/Gb
II 1/2D Ex ia/t IIIC T* Da/Db

version with aluminium alloy enclosure:

II 1/2G Ex ia/d IIC T* Ga/Gb
II 1/2D Ex ia/t IIIC T* Da/Db

**Technical data:**

No changes

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

No changes