



AC 038



KDB ATEX



Główny Instytut Górnictwa
Jednostka Certyfikująca
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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 06ATEX260

[4] **Equipment or protective system:**

Temperature sensors of type CT..., CT XX..., AP CT ...

[5] **Manufacturer:**

Aplisens – Produkcja

**Przetworników Ciśnienia i Aparatury Pomiarowej
Sp. z o.o.**

[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. 06.217 [T-5869]**

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

**EN 50014:1997/A2:1999, EN 50020:2002
EN 50281-1-1:1998/A1:2002, EN 50284:1999**

[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:**

Ex II 1/2G D EEx ia IIC T6* T75°C*

*** temperature class of a sensor dependent on the temperature of a measured medium**

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**SPECJALISTA ds. CERTYFIKACJI
URZĄDZEŃ PRZECIWWYBUCHOWYCH**

mgr inż. Wojciech Kwiatkowski



K E R O W N I K
Zespołu Certyfikacji Wytrobów
KD "BARBARA" Mikołów
doc. dr hab. inż. Krzysztof Cybulski

[13]

SCHEDULE

[14]

EC-Type Examination Certificate KDB 06ATEX260

[15] **Description:**

Industrial temperature sensors with replaceable measuring elements in connection with control instruments enable remote measuring, recording, and controlling liquids, vapors and gases temperature in range from -200°C to 900°C. The measuring units of sensors are thermometer resistors or thermocouples.

An industrial temperature sensor type CT consists of a dust- and splash-proof head made of light alloy, an outer steel cover and a replaceable measuring element is placed inside the outer cover.

Measuring elements may be single or double; depending on manufacturing, a thermoelectric element may have a measuring junction isolated from a cover of insert or connected with it.

The manufacturer plans to produce the following types of sensors:

CT1 - 2 3 - 4 5 6 7 - 8/EExia

1. Cover type according to the catalogue: I4 - I6 - I8; GB1; GB2, GE1, GN1, GN2, G1, T1, SW1, SW2; P1; X

2. Length of the cover – according to the order [mm]

3. Screw of connector - according to the catalogue

4. Type and multiplicity of transformation element

- Platinum thermometer resistor : PT, 2xPT
- Fe –Constantan thermocouple: J, 2xJ
- NiCr-NiAl thermocouple: K, 2xK

5. Class of the measuring element

- for Pt 100: A; B; 1/3DIN B
- for Thermocouple: 1 or 2

6. Connection with the measuring element 2-, 3-or 4-wire

7. Type of a measuring junction

- isolated from a cover: O;
- isolated from a cover but shorted each other – 2 measuring circuits: P (double connections with a measuring junction);
- grounded : Z;

8. Additional information

/EExia intrinsically safe type

Produced type of sensor: AP-CT ...– it means that instead of a cube clamp, a 4-20 mA intrinsically safe measuring temperature transmitter, which has the manufacturer's declaration of conformity with the Directive 94/9/WE (94/9/CE), was applied in the cover.



[13]

SCHEDULE

[14]

EC-Type Examination Certificate KDB 06ATEX260

[15] **Description : continued**

Technical data:

Thermometric characteristics of the thermoelectric sensor	according to the PN-EN 60584:1997
Thermometric characteristics of the resistance sensor	according to the PN-EN 60751:1997
Quantity of measuring elements	1 or 2
Cover material	15 HM, 1H18N9T, H25N20S2, 316, 10H2M
Length to dip	80-3 000 mm
4 – 20mA temperature transmitter	Optional, only with-head version, applicable in the explosive conditions, – Directive 94/9/WE (94/9/CE); corresponding in size with a cube clamp jointly with head.
Ambient temperature	-20 + 60°C
Ingress protection of a head	IP65 according to the PN-EN 60529:2003 except for a version without head
Level protection of a electrical device according to the PN-EN 50020:2005	ia
Gas group according to the PN-EN 50020:2005	IIC
Temperature class according to the PN-EN 50020:2005	T6*
* sensor's temperature class dependent on the medium temperature being measured	
Parameters of the intrinsically safe:	
Single thermocouple: Clamp: 1-2 Double thermocouple Clamp: 1-2, 3-4	U ₀ =10V, I ₀ =10mA, P ₀ =100mW, C ₀ =3μF (sensor with the single thermocouple) L ₀ = 0,9 μF (sensor with the double thermocouple) L ₀ =100mH
2-wire single thermometer resistor Clamp 1-2 2-wire double thermometer resistor Clamp: 1-2 i 3-4 3-wire single thermometer resistor Clamp: 1-2-3 3-wire double thermometer resistor Clamp: 1-2-3 i 4-5-6 4-wire single thermometer resistor Clamp: 1-2-3-4	U _i =10V, I _i =10mA, P _i =100mW, C _i =1000pF L _i =0, in case of sensors equipped in 2 measuring elements, it is to assume their galvanic connection (coupling)





[13]

SCHEDULE

[14]

EC-Type Examination Certificate KDB 06ATEX260

[16] **Test report:**

Report KDB No 06.217

[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.

[19] **Descriptive documents:**

Przemysłowe czujniki temperatury w wykonaniu iskrobezpiecznym / Exia
Instrukcja Użytkowania.

Czujniki temperatury – rezystancyjne i termoelektryczne - wykonanie

CT-A001-TA-ATEX

