



Physical Technical Testing Institute
Ostrava – Radvanice



EC-Type Examination Certificate

- (1)
- (2) **Equipment or Protective Systems Intended for Use
in Potentially Explosive Atmospheres
(Directive 94/9/EC)**
- (3) EC-Type Examination Certificate Number:
FTZÚ 12 ATEX 0193X
- (4) Equipment or protective system:
**Pressure transmitter PC-28, PCE-28, PC-28Ex Safety, PCE-28Ex Safety
Differential pressure transmitter PR-28, PRE-28, PR-28Ex Safety, PRE-28Ex Safety
Hydrostatic level probe PC-28P, PCE-28P**
- (5) Manufacturer: **APLISENS S.A.**
- (6) Address: **ul. Morelowa 7, 03-192 Warszawa, Poland**
- (7) This equipment or protective system and any of acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.
- (8) The Physical Technical Testing Institute, notified body number 1026 in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment or 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 N°:
12/0193 dated 04.04.2013
- (9) Compliance with Essential Health and Safety Requirements has been assured by compliance with:
EN 60079-0:2009, EN 60079-11:2012, EN 60079-26:2007, 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, examination and testing of the specified equipment or protective system in accordance to the Directive 94/9/EC. Further requirements of the Directive 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:

 **I M1 Ex ia I Ma
II 1/2G Ex ia IIC T4/T5/T6 Ga/Gb
II 1D Ex ia IIIC T110°C Da**

This EC-Type Examination Certificate is valid till: **04.04.2018**

Responsible person:


Dipl. Ing. Lukáš Martinák
Head of Certification Body



Date of issue: 04.04.2013

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FTZÚ, s.p., Pikartská 1337/7, 716 07 Ostrava-Radvanice, Czech Republic,
tel +420 595 223 111, fax +420 596 232 672, ftzu@ftzu.cz, www.ftzu.cz



**Physical Technical Testing Institute
Ostrava – Radvanice**

(13)

Schedule

(14) **EC-Type Examination Certificate N° FTZÚ 12 ATEX 0193X**

(15) Description of Equipment or Protective System:

The device is used as a pressure transmitter (PC*-28*), or differential pressure transmitter (PR*-28*), or hydrostatic level probe (PC*-28P). The device converts non electrical process variable, which is pressure, into electrical 4...20mA output signal.

- measurement head including pressure sensor (various types),
- fully encapsulated main PCB (additional small auxiliary PCBs might exists depending on version),
- steel cylindrical enclosure,
- cable connector (various types: with cable gland or fixed external cable).

Ambient temperature: -40°C... Tamb_{max}

Pi [W]	Tamb _{max} [°C]	Temperature class, Group
0,7	+45	T6
	+80	T5, T4, Gr. I, Gr.III-110°C
1,2	+75	T5
	+80	T4, Gr. I, Gr.III-110°C

Intrinsic safe parameters

In case of power supply with linear output characteristic:

Ui=28VDC, Ii=0,1A, Pi=0,7W, Ci=25nF+cable capacitance*, Li=0,4mH+cable inductivity*

In case of power supply with trapezoidal or rectangular output characteristic:

Ui=24VDC, Ii=0,1A, Pi=1,2W, Ci=25nF+cable capacitance*, Li=0,4mH+cable inductivity*

* - concerns versions with PK(M) and SG(M) connectors; cable parameters C=200pF/m, L=1μH/m

(16) Report No.: 12/0193

(17) Special conditions for safe use:

1. Ambient temperature range – see Instruction manual and marking label.
2. Process temperature (medium) at the diaphragm of the transmitter must be in range of ambient temperature.
3. In case of use the transmitter in dust atmosphere, supplying voltage could occur on transmitter enclosure. It should be taken into consideration during transmitter installation.
4. In case of use titan parts in diaphragm seal, during installation and operation of the device the diaphragm seal should be protected against mechanical impact.
5. Version of the transmitter with surge arrester, marked on the plate "Version SA", does not meet the requirements of Section 6.3.13 of EN 60079-11:2012 (test of isolation 500VAC). This must be taken into account during the installation of transmitters.

Responsible person:


Dipl. Ing. Lukáš Martinák
Head of Certification Body



Date of issue: 04.04.2013

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Physical Technical Testing Institute
Ostrava – Radvanice

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(14) **EC-Type Examination Certificate N° FTZÚ 12 ATEX 0193X**

(18) Essential Health and Safety Requirements:

Essential health and safety requirement of Directive 94/9/EC are covered by the standard mentioned in (9), according which the product was verified and in the manufacturer's instruction for use.

(19) List of Documentation:

Number:	Date:	Title:	Pages:
1 PC28-A150-01	09.2012	Technical description + drawings	5
2 AN.PC-28.03	-	Intrinsic safety discussion + annexes	12
3 DTR.PC.PR-28.02	09.2012	User manual for PC-28, PR-28, PC-28P	29
4 DTR.PC.PR-28 Safety	09.2012	User manual for PC-28 Safety, PC-28Ex Safety, PR-28 Safety, PR-28Ex Safety	29
5 DTR.PCE.PRE-28.02	09.2012	User manual for PCE-28, PRE-28, PCE-28P	29
6 DTR.PCE.PRE-28 Safety	09.2012	User manual for PCE-28 Safety, PCE-28Ex Safety, PRE-28 Safety, PRE-28Ex Safety	29

Drawing list:

Number:	Date:	Pages:			
			PC29-B014-01	10.2009	1
PC28-C151-TA	08.2012	3	PC28-B017-01	08.2012	1
PC28-C152-TA	08.2012	3	PC28-B018-01	08.2012	1
PC28-C153-TA	08.2012	3	PC28-B019-01	08.2012	1
PC28-C154-TA	08.2012	3	ZG-002-TA	06.2007	1
PC28-S151-TA	08.2012	1	ZG-006-TA	10.2004	1
PC28-S152-TA	08.2012	1	EP-232-01	02.2011	1
PC28-S153-TA	08.2012	1	GC1-007-TA	01.2010	3
PC28-B151-TA	08.2012	5	GC3-001-TA	03.2011	3
PC28-B152-TA	08.2012	6	GC3-003-TA	01.2010	2
ACP2000-B122-01	01.2012	2	GC4-001-TA	05.2012	3
PC28-A151-TA	08.2012	7	GC4-005-TA	03.2011	3
PR28-A152-TA	08.2012	5	GC4-019-TA	02.2012	3
PC28P-A153-TA	08.2012	8	GR40-001-TA	09.2010	2
PC28-A154-TA	07.2012	2	GR40-003-TA	09.2009	1
PR28-A155-TA	07.2012	2	GR50-001-TA	07.2010	2
PC29-B012-02	12.2010	1	GSP-002-TA	10.2008	2
PC29-B013-01	10.2009	1			

Responsible person:


Dipl. Ing. Lukáš Martinák
Head of Certification Body



Date of issue: 04.04.2013

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(1) **Supplement No. 1 to
EC-Type Examination Certificate**

(2) **Equipment or Protective Systems Intended for Use
in Potentially Explosive Atmospheres
(Directive 94/9/EC)**

(3) EC-Type Examination Certificate Number:

FTZÚ 12 ATEX 0193X

(4) Equipment or protective system:

**Pressure transmitter PC-28, PCE-28, PC-28Ex Safety, PCE-28Ex Safety,
Differential pressure transmitter PR-28, PRE-28, PR-28Ex Safety, PRE-28Ex Safety,
Hydrostatic level probe PC-28P, PCE-28P**

(5) Manufacturer: **APLISENS S.A.**

(6) Address: **ul. Morelowa 7, 03-192 Warszawa, Poland**

(7) This supplement of certificate is valid for: - application of new standards
- modification of certified apparatus

(8) Modification of certified apparatus (protective system) and any of its approved variants are specified in documentation, list of which is mentioned in schedule of this certificate.

(9) This supplement to type examination certificate is valid only for type examination of design and construction of product sample in accordance with Annex 3 Paragraph 6) of Directive No. 94/9/EC. The Directive contains another requirements, which manufacturer shall fulfill before products are place on market or introduce in service.

(10) Safety requirements of modified parts were fulfilled by satisfying the following standards:

EN 60079-0:2012/A11:2013, EN 60079-11:2012, EN 50303:2000

(11) Marking of equipment shall contain symbols:

 **I M1 Ex ia I Ma**
 **II 1/2G Ex ia IIC T4/T5/T6 Ga/Gb**
 **II 1D Ex ia IIC T110°C Da**
 **II 1/2G Ex ia IIC T4 Ga/Gb** – (for transmitters with connection ALW)

(12) This type examination certificate is valid till **04.04.2018**

Responsible person:


Dipl. Ing. Lukáš Martinák
Head of Certification Body



Date of issue: 15.02.2016

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Physical Technical Testing Institute
Ostrava – Radvanice

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Schedule

(14)

Supplement No. 1 to
EC-Type Examination Certificate N° FTZÚ 12 ATEX 0193X

(15) Description of Equipment or Protective System:

Added versions of pressure transmitters and differential pressure transmitters with electrical connections type: PKD, PM12, ALW. Transmitters with electrical connection ALW are equipped with LCD display mounted on the plate AM1-rev2 enclosed in light alloy housing with PM12 or PD connector. Transmitters with electrical connection PKD, PM12 and ALW equipped with PM12 connector are allowed only to hazardous gas explosive atmospheres (Group II). Transmitters with ALW connection with connector PD are allowed for gas and dust hazardous explosive atmospheres (Group II and Group III).

Added the ability to use layer of PTFE thickness max. 0.15mm covering the wetted surfaces of pressure separators.

Added replacements of previously used: silicone sealant, power cable and electrical connector PD.

Introduced version of transmitter is allowed for hazardous explosive gas atmospheres with minimum ambient temperature $T_a \geq -50^\circ\text{C}$.

Introduced minor other changes do not affect the intrinsic safety.

Ambient temperature:

$T_a = -40^\circ\text{C}$ to $+80^\circ\text{C}$

$T_a = -50^\circ\text{C}$ to $+80^\circ\text{C}$ - version only for explosive gas atmospheres (Group II)

Other technical parameters, intrinsically safe parameters and construction of apparatus remain unchanged.

(16) Report No.: 12/0193/1

(17) Special conditions for safe use: added new condition

17.1 Ambient temperature range – see Instruction manual and marking label.

17.2 Process temperature (medium) at the diaphragm of the transmitter must be in range of ambient temperature.

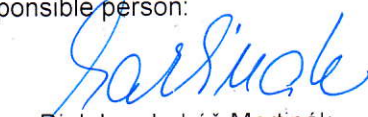
17.3 In case of use the transmitter in dust atmosphere, supplying voltage could occur on transmitter enclosure. It should be taken into consideration during transmitter installation.

17.4 In case of use titan parts in diaphragm seal, during installation and operation of the device the diaphragm seal should be protected against mechanical impact.

17.5 Version of the transmitter with surge arrester, marked on the plate "Version SA", does not meet the requirements of Section 6.3.13 of EN 60079-11:2012 (test of isolation 500VAC). This must be taken into account during the installation of transmitters.

17.6 Transmitters with display, (with electrical connection ALW) for Group III, should be installed in a place and in a way that prevents electrostatic charging.

Responsible person:


Dipl. Ing. Lukáš Martinák
Head of Certification Body



Date of issue: 15.02.2016

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Physical Technical Testing Institute
Ostrava – Radvanice

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Supplement No. 1 to
EC-Type Examination Certificate N° FTZÚ 12 ATEX 0193X

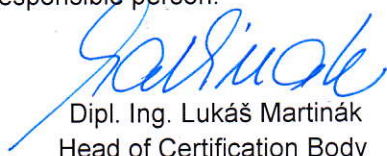
(18) Essential Health and Safety Requirements:

Essential health and safety requirements of Directive 94/9/EC are covered by the standards mentioned in clause (10) of this supplement according which the new model was verified and in the manufacturer's Instruction for Using.

(19) List of Documentation:

<i>Document/Drawings:</i>	<i>Type of sheet:</i>	<i>Date:</i>	<i>Nr. of pages:</i>
PC28-A150-00	1A, 2	04.2015	2
PC28-A150-01	1A+5A	04.2015	5
PC28-C151-TA	1A+3A	04.2015	3
PC28-C152-TA	1A+3A	04.2015	3
PC28-S152-TA	1A	04.2015	1
(CER.Ex)PC28-S154-02	1,2,3,4	12.2015	4
PC28-B152-TA	1A, 5A, 6A	04.2015	3
(CER.Ex)PC28-B154-02	1+7	12.2015	7
PC28-A151-TA	2A, 5A, 6A	04.2015	3
PR28-A152-TA	2A, 4A, 5A	04.2015	3
PC28P-A153-TA	2A, 5A, 7A, 8A	04.2015	4
(CER.Exi)PC28-A156-TA	1,2,3	04.2015	3
PC28-A154-TA	1A	04.2015	1
PR28-A155-TA	1	04.2015	1
(CER.Exi)PC28-B155-02	1A	11.2015	1
U1-AN.PC-28.03_ATEX_IECEX	1	04.2015	9
DTR.PC.PR-28.02		06.2015	36

Responsible person:


Dipl. Ing. Lukáš Martinák
Head of Certification Body



Date of issue: 15.02.2016

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(1) **Supplementary EU - Type Examination Certificate No. 2**

(2) **Equipment or Protective Systems Intended for Use
in Potentially Explosive Atmospheres
(Directive 2014/34/EU)**

(3) EU - Type Examination Certificate number:

FTZÚ 12 ATEX 0193X

(4) Product: **Pressure transmitter PC-28, PCE-28, PC-28Ex Safety, PCE-28Ex Safety,
Differential pressure transmitter PR-28, PRE-28, PR-28Ex Safety, PRE-28Ex Safety,
Hydrostatic level probe PC-28P, PCE-28P**

(5) Manufacturer: **APLISENS S.A.**

(6) Address: **ul. Morelowa 7, 03-192 Warszawa, Poland**

(7) This supplementary certificate extends EC - Type Examination Certificate No. FTZÚ 12 ATEX 0193X to apply to products designed and constructed in accordance with the specification set out in the Schedule of the said certificate but having any variations specified in the Schedule attached to this certificate and the documents therein referred to.





(8) The Physical-Technical Testing Institute, Notified Body number 1026, in accordance with Articles 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26.02.2014, certifies that this product, as modified by this supplementary certificate, has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II to the Directive.

(9) In accordance with Article 41 of Directive 2014/34/EU, EC-Type Examination Certificates referring to 94/9/EC that were in existence prior to the date of application of 2014/34/EU (20.04.2016) may be referenced as if they were issued in accordance with Directive 2014/34/EU. Supplementary Certificates to such EC-Type Examination Certificates, and new issues of such certificates, may continue to bear the original certificate number issued prior to 20.04.2016.

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

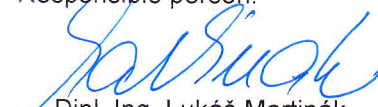
EN 60079-0:2012+A11:2013, EN 60079-11:2012, EN 50303:2000

(11) The marking of the product shall include the following:

 **I M1 Ex ia I Ma**
 **II 1/2G Ex ia IIC T4/T5/T6 Ga/Gb**
 **II 1D Ex ia IIIC T110°C Da**
 **II 1/2G Ex ia IIC T4 Ga/Gb** – (for transmitters with connection ALW, ALM)

(12) This certificate is valid till: **04.04.2023**

Responsible person:


Dipl. Ing. Lukáš Martinák
Head of Certification Body



Date of issue: 04.04.2018

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**Physical-Technical Testing Institute
Ostrava - Radvanice**

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Schedule

(14) **Supplementary EU - Type Examination Certificate No. 2
to FTZÚ 12 ATEX 0193X**

(15) Description of the variation to the Product:

The subject of this supplementary certificate is:

- Modification of certified apparatus;
- Prolongation of certificate validity.

Added versions of pressure transmitters and differential pressure transmitters with electrical connections type ALM. Transmitters with electrical connection ALM are equipped with LCD display mounted on the plate AM1-rev2 enclosed in light alloy housing with PM12 or PD connector. Transmitters with electrical connection ALM equipped with PM12 connector are allowed only to hazardous gas explosive atmospheres (Group II). Transmitters with ALM connection with connector PD are allowed for gas and dust hazardous explosive atmospheres (Group II and Group III).

Products PC-28 or PCE-28 with diaphragm seals can be equipped with heat shrinkable sleeve.

Added the ability to use layer of PTFE thickness max. 0,15mm covering the surfaces of pressure separators.

Introduced other minor changes do not affect the intrinsic safety.

Other technical parameters, intrinsically safe parameters and construction of apparatus remain unchanged.

(16) Report Number.: 12/0193/2

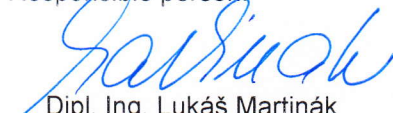
(17) Specific Conditions of Use: Edited to those listed previously

17.6 Transmitters with display (with electrical connections ALW, ALM) and with diaphragm seals covered by PTFE, for Group III, should be installed in a place and in a way that prevents electrostatic charging.

(18) Essential Health and Safety Requirements:

Compliance with the Essential Health and Safety Requirements is covered by standards mentioned in clause (10) of this supplementary certificate

Responsible person:


Dipl. Ing. Lukáš Martinák
Head of Certification Body



Date of issue: 04.04.2018

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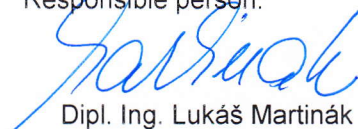
Schedule

(14) **Supplementary EU - Type Examination Certificate No. 2
to FTZÚ 12 ATEX 0193X**

(19) Drawings and Documents:

<i>Document/Drawings:</i>	<i>Type of sheet:</i>	<i>Date:</i>	<i>Nr. of pages:</i>
PC28-A150-00	1B, 2A	02.2018	2
PC28-A150-02	1	02.2018	1
PC28-A151-TA	3A, 4A, 5B, 6B	02.2018	4
(CER.Exi)PC28-A156-TA	1A, 2A, 3A, 4	02.2018	4
PC28-A154-TA	1B	02.2018	1
PR28-A155-TA	1B	02.2018	1
(CER.Exi)SG25-A061-TA	1A	02.2018	1
U2-AN.PC-28.03_ATEX	1, 2	02.2018	2
DTR.PC.PR-28.02	F	02.2018	37

Responsible person:



Dipl. Ing. Lukáš Martinák
Head of Certification Body



Date of issue: 04.04.2018

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