



EU - Type Examination Certificate

(1)

(2)

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

(3) EU - Type Examination Certificate number:

FTZÚ 18 ATEX 0077X

(4) Product:

**Pressure Transmitter PC-28.Modbus, PCE-28.Modbus
Differential Pressure Transmitter PR-28.Modbus, PRE-28.Modbus
Smart Level Probe SG-25*.Modbus, SG-25*.Smart/Modbus**

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

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

(7) This product and any 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 Articles 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26.02.2014, certifies that this product 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.

The examination and test results are recorded in confidential Report number:

18/0077 dated 26.07.2018

(9) 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

(10) If the sign "X" is placed after the certificate number, it indicates that the product is subject to Specific Conditions of Use specified in the schedule to this certificate.

(11) This certificate relates only to the design and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.

(12) 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 1G Ex ia IIB T4/T5/T6 Ga

for smart level probes

This certificate is valid till: **31.07.2023**

Responsible person:

Dipl. Ing. Lukáš Martinák
Head of Certification Body



Date of issue: 27.07.2018

Page: 1/4

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

(13)

Schedule

(14) **EU - Type Examination Certificate No. FTZÚ 18 ATEX 0077X**

(15) Description of Product:

The device is used as a pressure transmitter (PC*-28.Modbus), or differential pressure transmitter (PR*-28.Modbus), or hydrostatic level probe (SGE-25*.Smart/Modbus and SG-25*.Modbus). The device converts non electrical process variable, which is pressure, into electrical RS485 output signal.

The product is comprised of these parts:

- 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).

Transmitters with electrical connection PKD, PM12 are allowed only to hazardous gas explosive atmospheres (Group II).

Ambient temperature: -40°C to Tamax

-50°C to Tamax special version only for explosive gas atmospheres (Group II)

ΣP_i (power supply and RS485) [W]	Tamax [°C]	Temperature Class
0,25	65	T6
	80	T5
0,5	60	T6
	80	T5
0,75	55	T6
	80	T5
1,2	70	T5
	80	T4
1,5	65	T5
	80	T4
1,75	60	T5
	80	T4

Intrinsically safe parameters:

Power supply with linear output characteristic:

$U_i = 10$ VDC, $I_i = 0,4$ A, $P_i =$ according to table above

Power supply with trapezoidal or rectangular output characteristic:

$U_i = 5$ VDC, $I_i = 0,4$ A, $P_i =$ according to table above

$C_i = 2.5$ μ F, $L_i = 0$ mH

Responsible person:


Dipl. Ing. Lukáš Martinák
Head of Certification Body



Date of issue: 27.07.2018

Page: 2/4

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Physical-Technical Testing Institute
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(13)

Schedule

(14) **EU - Type Examination Certificate No. FTZÚ 18 ATEX 0077X**

RS485 interface:

$U_i = 10 \text{ V}$, $I_i = 0.2 \text{ A}$ $C_i = 2.5 \mu\text{F}$, $L_i = 0 \text{ mH}$

$U_o = 10 \text{ V}$, $I_o = 0.4 \text{ A}$ (output parameters meet the output parameters of power supply)

Group	Co [μF]	Lo [mH]
I + IIA	80	1.7
IIB + III	15	0.7
IIC	0.5	0.2

(16) Report Number.: 18/0077

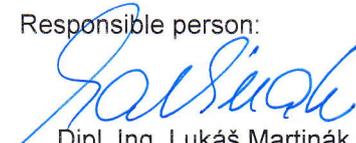
(17) Specific Conditions of Use:

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 titan parts in diaphragm seal, during installation and operation of the device the diaphragm seal should be protected against mechanical impact.
4. The Device does not meet the requirements of Section 6.3.13 of EN 60079-11:2012 (test of isolation 500 VAC). This must be taken into account during the installation of transmitters.
5. Transmitters 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 (9) of this certificate.

Responsible person:


Dipl. Ing. Lukáš Martinák
Head of Certification Body



Date of issue: 27.07.2018

Page: 3/4



Physical-Technical Testing Institute
Ostrava - Radvanice

(13)

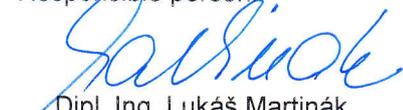
Schedule

(14) **EU - Type Examination Certificate No. FTZÚ 18 ATEX 0077X**

(19) Drawings and Documents:

Number:	Sheet:	Date:
AN-PC28.Modbus	1-9 + 4 Annexes	12.2017
DTR.PC.PR.SG.MODBUS ver. D	1-40	12.2017
(CER.Exi)PC28M-A010-00	1	12.2017
(CER.Exi)PC28M-A010-01	1-4	12.2017
(CER.Exi)PC28M-C011-TA	1-3	12.2017
(CER.Exi)SG25M-C011-TA	1-2	12.2017
PC28M-S011-01	1	12.2017
(CER.Exi)PC28M-B011-TA	1-3	12.2017
(CER.Exi)PC28M-A011-TA	1-2	12.2017
(CER.Exi)SG25M-A011-TA	1-2	12.2017
(CER.Exi)PC28M-A012-TA	1-2	12.2017
(CER.Exi)PR28M-A012-TA	1-2	12.2017
PC29-B012-02	1	12.2010
PC29-B013-01	1	10.2009
PC29-B014-01	1	10.2009
(CER.Ex)SG25-A061-TA	1A	07.2017
ZA-002-TA	1C	05.2011
ZA-002-TA	2	12.2015
ZG-002-TA	1A	06.2007
ZG-006-TA	1A	10.2004
A-013-03	1	05.2011

Responsible person:


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Date of issue: 27.07.2018

Page: 4/4

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

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

(3) EU - Type Examination Certificate number:

FTZÚ 18 ATEX 0077X

(4) Product: **Pressure Transmitter PC-28.ModbusXX, PCE-28.ModbusXX
Differential Pressure Transmitter PR-28.ModbusXX, PRE-28.ModbusXX,
Smart Level Probe SG-25*.Modbus, SGE-25*.Modbus**

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

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

(7) This supplementary certificate extends EU - Type Examination Certificate No. FTZÚ 18 ATEX 0077X 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) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN IEC 60079-0:2018, EN 60079-11:2012, EN 50303:2000

(10) If the sign "X" is placed after the certificate number, it indicates that the product is subject to Specific Conditions of Use specified in the schedule to this certificate.

(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 2D	Ex ia IIIC T110°C Db	
	II 1G	Ex ia IIB T4/T5/T6 Ga	for smart level probes
	II 1/2G	Ex ia IIB T4 Ga/Gb	for P*28.Modbus16

(12) This certificate is valid till: **31.12.2026**

Responsible person:

Dipl. Ing. Lukáš Martinák
Head of Certification Body



Date of issue: 01.12.2021

Page: 1/4

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

(13)

Schedule

(14) **Supplementary EU - Type Examination Certificate No. 1
to FTZÚ 18 ATEX 0077X**

(15) Description of the variation to the Product:

The subject of this supplementary certificate is:

- Modification of certified apparatus;
- Extension of product line by P*28.Modbus16
- Evaluation according to the newest standards;
- Extension of certificate validity.

The device is used as a pressure transmitter (PC*-28.ModbusXX), or differential pressure transmitter (PR*-28.ModbusXX), or hydrostatic level probe (SGE-25*.Modbus and SG-25*.Modbus). The device converts non electrical process variable, which is pressure, into electrical RS485 output signal.

The product is comprised of these parts:

- 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).

Transmitters with electrical connection PKD, PM12 are allowed only to hazardous gas explosive atmospheres (Group II).

Ambient temperature: -40°C to Tamax
-50°C to Tamax special version only for explosive gas atmospheres (Group II)

Intrinsically safe parameters (PC-28.Modbus, PCE-28.Modbus, PR-28.Modbus, PRE-28.Modbus, SG-25*.Modbus, SGE-25*.Modbus)

ΣP_i (power supply and RS485) [W]	Tamax [°C]	Temperature Class
0,25	65	T6
	80	T5
0,5	60	T6
	80	T5
0,75	55	T6
	80	T5
1,2	70	T5
	80	T4
1,5	65	T5
	80	T4
1,75	60	T5
	80	T4

Responsible person:

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Page: 2/4

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Physical-Technical Testing Institute
Ostrava - Radvanice

(13)

Schedule

(14) **Supplementary EU - Type Examination Certificate No. 1
to FTZÚ 18 ATEX 0077X**

(15) Description of the variation to the Product (continuing):

Power supply with linear output characteristic:

$U_i = 10$ VDC, $I_i = 0.4$ A, $P_i =$ according to table above

Power supply with trapezoidal or rectangular output characteristic:

$U_i = 5$ VDC, $I_i = 0.4$ A, $P_i =$ according to table above

$C_i = 2.5$ μ F, $L_i = 0$ mH

RS485 interface:

$U_i = 10$ V, $I_i = 0.2$ A $C_i = 2.5$ μ F, $L_i = 0$ mH

$U_o = 10$ V, $I_o = 0.4$ A (output parameters meet the output parameters of power supply)

Group	C_o [μ F]	L_o [mH]
I + IIA	80	1.7
IIB + III	15	0.7
IIC	0.5	0.2

Intrinsically safe parameters (PC-28.Modbus16, PCE-28.Modbus16, PR-28.Modbus16,
PRE-28.Modbus16)

Power supply for subgroups IIB and IIIC:

$U_i = 15.8$ VDC, $I_i = 1.5$ A

$C_i = 0$ μ F, $L_i = 0$ mH

Power supply for group I:

$U_i = 15.8$ VDC, $I_i = 2$ A

$C_i = 0$ μ F, $L_i = 0$ mH

RS485 interface:

$U_i = 10$ V, $I_i = 0.5$ A, $P_i = 1.6$ W, $C_i = 2.5$ μ F, $L_i = 0$ mH

$U_o = 5.88$ V, $I_o = 0.039$ A, $P_o = 0.143$ W

Group	C_o [μ F]	L_o [mH]
I + IIA	80	3
IIB + III	40	3

(16) Report Number: 18/0077/1

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Date of issue: 01.12.2021

Page: 3/4



Physical-Technical Testing Institute
Ostrava - Radvanice

(13)

Schedule

(14) **Supplementary EU - Type Examination Certificate No. 1
to FTZÚ 18 ATEX 0077X**

(17) Specific Conditions of 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 titan parts in diaphragm seal, during installation and operation of the device the diaphragm seal should be protected against mechanical impact.
4. The Device does not meet the requirements of Section 6.3.13 of EN 60079-11:2012 (test of isolation 500 VAC). This must be taken into account during the installation of transmitters.
5. Transmitters with diaphragm seals covered by PTFE, for Group III, should be installed in a place and in a way that prevents electrostatic charging.

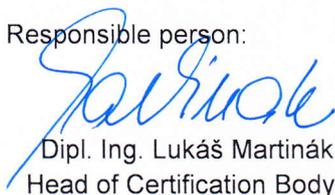
(18) Essential Health and Safety Requirements:

Compliance with the Essential Health and Safety Requirements is covered by standards mentioned in clause (9) of this supplementary certificate.

(19) Drawings and Documents:

Number:	Sheet:	Date:
PL.IX.PC.PR.28.MODBUS	1-5	09.2021
PL.IX.SG.25.MODBUS	1-3	09.2021
(CER.Exi)PC28M-A010-02	1	06.2021
(CER.Exi)PC28M-A010-00	1A	06.2021
(CER.Exi)PC28M-A010-01	1A-5A	06.2021
(CER.Exi)PC28M-A010-02	1	06.2021
(CER.Exi)PC28M-C011-TA	1A-3A	06.2021
(CER.Exi)PC28M-C012-TA	1-3	06.2021
(CER.Exi)SG25M-C011-TA	1A-2A	06.2021
(CER.Exi)PC28M-S012-TA	1	06.2021
(CER.Exi)PC28M-B011-TA	1A	06.2021
(CER.Exi)PC28M-B012-TA	1	06.2021
(CER.Exi)PC28M-A011-TA	1A-3A	06.2021
(CER.Exi)SG25M-A011-TA	1A-2A	06.2021
(CER.Exi)PC28M-A012-TA	1A-2A	06.2021
(CER.Exi)PR28M-A012-TA	1A-2A	06.2021
(CER.Exi)PC28M-A013-TA	1-3	06.2021
U1.AN.PC-28.Modbus.01	1-7	06.2021

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Page: 4/4

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