18 MAR 2014

Physical Technical Testing Institute
Ostrava – Radvanice

(1) # 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 13 ATEX 0210X

(4) Equipment or protective system: **Pressure Transmitter type DPC-2000ALW/XX, Differential Pressure Transmitters type DPR-2000ALW/XX, DPR-2200ALW/XX, DPR-2000GALW/XX and DPR-2000YALW/XX**

(5) Manufacturer: **Delta Controls Limited**

(6) Address: **Island Farm Avenue, West Molesey, Surrey, KT8 2UZ, United Kingdom**

(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°:

13/0210 dated 10.01.2014

(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 following:

II 1/2G Ex ia IIC T4/T5 Ga/Gb
II 1/2G Ex ia IIB T4/T5 Ga/Gb version with teflon-shielded cable
I M1 Ex ia I Ma version with enclosure ss316
II 1D Ex ia IIIC T105°C Da

This EC-Type Examination Certificate is valid till: **30.01.2017**

Responsible person:

Dipl. Ing. Lukáš Martinák
Head of Certification Body

PHYSICAL-TECHNICAL TESTING INSTITUTE
FYZIKÁLNĚ-TECHNICKÝ ZKUŠEBNÍ ÚSTAV
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AO 210
NB 1026

Date of issue: 31.01.2014

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tel +420 595 223 111, fax +420 596 232 672, ftzu@ftzu.cz, www.ftzu.cz

(13) **Schedule**

(14) EC-Type Examination Certificate N° FTZÚ 13 ATEX 0210X

(15) Description of Equipment or Protective System:

The Pressure Transmitter type DPC-2000ALW/XX, Differential Pressure Transmitters type DPR-2000ALW/XX, DPR-2200ALW/XX, DPR-2000GALW/XX and DPR-2000YALW/XX are designed to convert process pressure measurements into a 4 to 20 mA current signal. The apparatus comprises several printed circuit boards and an optional liquid crystal display all housed in a light alloy enclosure. When the optional display is included, the housing cover contains a glass window. External connections are made via an integral terminal block.

The transmitter with sensor on the cable is marked DPC-2000ALW/LXX.

The transmitters are allowed to be installed into the partition between the hazardous areas of Zone 0 and Zone 1, next into hazardous area Zone 20 and the apparatus with stainless steel enclosure is equipment category M1.

Input parameters:

Linear power supply output characteristic:
Ui = 28 V; Ii = 0,1 A; Pi = 0,7 W; Ci = 20 nF; Li = 1,1 mH, temperature class T5
Range of permissible ambient temperature: Ta = - 40°C to + 70°C

Trapezoidal power supply output characteristic:
Ui = 24 V; Ii = 50 mA; Pi = 0,7 W; Ci = 20 nF; Li = 1,1 mH, temperature class T5
Range of permissible ambient temperature: Ta = - 40°C to + 80°C

Rectangular power supply output characteristic:
Ui = 24 V; Ii =25mA, Pi = 0,6 W; Ci = 20 nF; Li = 1,1 mH, temperature class T5
Ui = 24 V; Ii =50mA, Pi = 1,2 W; Ci = 20 nF; Li = 1,1 mH, temperature class T4
Range of permissible ambient temperature: Ta = - 40°C to + 80°C

In transmitters marked on the label "Version SC" with revised filter are reduced values Ci=2,5nF, Li= 18μF.

(16) Report No.: 13/0210

(17) Special conditions for safe use:

17.1 Version of transmitter with surge arrester marked on plate "SC, SA" does not meet the requirements of Section 10,3 of the standard EN 60079-11:2012 (500Vrms). This must be taken into account wheninstalling the equipment.

Responsible person:

Dipl. Ing. Lukáš Martinák
Head of Certification Body

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(13) **Schedule**

(14) **EC-Type Examination Certificate N° FTZÚ 13 ATEX 0210X**

(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:

Document/Drawings:	*Date:*	*Nr. of Pages:*
DPC2000-C611-TA	10.2013	3
DTR.DPC.DPR.ALW.03	07.2013	51

Responsible person:

Dipl. Ing. Lukáš Martinák
Head of Certification Body

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Physical Technical Testing Institute
Ostrava – Radvanice

(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 13 ATEX 0210X

(4) Equipment or protective system:
Pressure Transmitter type DPC-2000ALW/XX, Differential Pressure Transmitters type DPR-2000ALW/XX, DPR-2200ALW/XX, DPR-2000GALW/XX and DPR-2000YALW/XX

(5) Manufacturer: **DELTA CONTROLS LTD.**

(6) Address: **Riverside Business Park, Dogflud Way, Farnham, GU9 7SS, United Kingdom**

(7) This supplement of certificate is valid for:
- application of new standards
- modification of apparatus marking
- modification of certified apparatus
- change of manufacturer address
- new model (variant)–extension of series **DPR-2000ALW/LXX, DPR-2200ALW/LXX**.

(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 fulfil 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, EN 60079-11:2012, EN 60079-26:2007, EN 50303:2000

(11) Marking of equipment shall contain symbols:

II 1/2G Ex ia IIC T5/T6 Ga/Gb

II 1/2G Ex ia IIB T5/T6 Ga/Gb version with teflon-shilelded cable

I M1 Ex ia I Ma version with enclosure ss316

II 1D Ex ia IIIC T105°C Da

(12) This type examination certificate is valid till: **30.01.2017**

Responsible person:

Dipl. Ing. Lukáš Martinák
Head of Certification Body

Date of issue: 27.04.2015

Page: 1/3

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(13) **Schedule**

(14) **Supplement No. 1 to**
EC-Type Examination Certificate N° FTZÚ 13 ATEX 0210X

(15) Description of Equipment or Protective System:

Added versions of transmitter with the revised PCBs, with the amended marking and input parameters.
Added a new type of rotary cover of main PCB.
Introduced the housing side cover with the glued glass panel.
Added new types of pressure and differential pressure sensors.
Introduced minor other changes do not affect the intrinsic safety.
Other technical parameters and construction of apparatus remain unchanged.

Intrinsically safe input power supply parameters:
Linear power supply output characteristic:
Ui = 30 V; Ii = 0,1 A; Pi = 0,75 W; Ta≤40°C - temperature class T6, Ta≤80°C - temperature class T5
Range of permissible ambient temperature: Ta = - 40°C to + 40/80°C

Trapezoidal power supply output characteristic:
Ui = 24 V; Ii = 50 mA; Pi = 0,7 W; temperature class T5
Range of permissible ambient temperature: Ta = - 40°C to + 80°C

Rectangular power supply output characteristic:
Ui = 24 V; Ii =25mA, Pi = 0,6 W; Ta≤40°C - temperature class T6, Ta≤80°C - temperature class T5
Range of permissible ambient temperature: Ta = - 40°C to + 40/80°C
Ui = 24 V; Ii =50mA, Pi = 1,2 W; temperature class T5
Range of permissible ambient temperature : Ta = - 40°C to +70°C

Intrinsically safe parameters
Ci = 2,5 nF; Li = 18 μH,

(16) Report No.: 13/0210/1

Responsible person:
Dipl. Ing. Lukáš Martinák
Head of Certification Body

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(13) **Schedule**

(14) **Supplement No. 1 to**
EC-Type Examination Certificate N° FTZÚ 13 ATEX 0210X

(17) Special conditions for safe use:

17.1 Versions of transmitter with surge arrester marked on plate "SA" do not meet the requirements of Section 10.3 of the standard EN 60079-11:2012 (500Vrms). This must be taken into account when installing the equipment.

(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:

Document/Drawings:	*Type of sheet:*	*Date:*	*Nr. of pages:*
DPC2000-C611-TA	1A, 2A	10.2014	2
IOM-DPCDPR-B:MAR 2015		03.2015	53

Responsible person:

Dipl. Ing. Lukáš Martinák
Head of Certification Body

PHYSICAL-TECHNICAL TESTING INSTITUTE
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Date of issue: 27.04.2015

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Physical-Technical Testing Institute

Ostrava - Radvanice

(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 13 ATEX 0210X

(4) Product: **Pressure Transmitter type DPC-2000ALW/XX, Differential Pressure Transmitters type DPR-2000ALW/XX, DPR-2200ALW/XX, DPR-2000GALW/XX, DPR-2000ALW/LXX, DPR-2200ALW/LXX, Level Probe type DPR-2000YALW, Level Transmitter type DPC-2000ALW/LXX**

(5) Manufacturer: **DELTA CONTROLS LTD.**

(6) Address: **Riverside Business Park, Dogflud Way, Farnham, GU9 7SS, United Kingdom**

(7) This supplementary certificate extends EC - Type Examination Certificate No. FTZÚ 13 ATEX 0210X 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:

II 1/2G	**Ex ia IIC T4/T5 Ga/Gb**	
II 1/2G	**Ex ia IIB T4/T5 Ga/Gb**	version with PTFE-shielded cable
I M1	**Ex ia I Ma**	version with enclosure ss316
II 1D	**Ex ia IIIC T105°C Da**	

(12) This certificate is valid till: **31.01.2022**

Date of issue: 30.01.2017

Responsible person:

Dipl. Ing. Lukáš Martinák
Head of Certification Body

PHYSICAL-TECHNICAL TESTING INSTITUTE FYZIKÁLNĚ TECHNICKÝ ZKUŠEBNÍ ÚSTAV FTZÚ Ex AO 210

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(13) **Schedule**

(14) **Supplementary EU - Type Examination Certificate No. 2 to FTZÚ 13 ATEX 0210X**

(15) Description of the variation to the Product:

The subject of this supplementary certificate is:

- Modification of certified apparatus;
- Modification of apparatus marking;
- Evaluation according to the newest standards;
- Prolongation of certificate validity.

This supplementary certificate accepts these changes of the Product:

- Added new version of main PCB, AD PCB and connection PCB.
- Measuring heads are compounded by casting compound.
- Added the ability to use sprayed layer of PTFE.
- Added the ability to use layer of PTFE thickness max. 0.15mm covering the wetted surfaces of diaphragm seals.
- New version of marking label.
- There are minor change in used electrical components and mechanical parts.
- Galvanically separated part of apparatus placed into measuring head is electrically connected with mass of enclosure.
- Temperature class is changed to T4/T5.

Intrinsically safe input power supply parameters:
Linear power supply output characteristic:
Ui = 30 V; Ii = 0,1 A; Pi = 0,75 W; temperature class T5

Trapezoidal power supply output characteristic:
Ui = 24 V; Ii = 50 mA; Pi = 0,7 W; temperature class T5

Rectangular power supply output characteristic:
Ui = 24 V; Ii =25mA, Pi = 0,6 W; temperature class T5
Ui = 24 V; Ii =50mA, Pi = 1,2 W; temperature class T4

x; *Intrinsically safe parameters*
Ci = 2,5 nF; Li = 18 µH,

Range of permissible ambient temperature : Ta = - 40°C to +80°C

Responsible person:
Dipl. Ing. Lukáš Martinák
Head of Certification Body

PHYSICAL-TECHNICAL TESTING INSTITUTE
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(13) **Schedule**

(14) **Supplementary EU - Type Examination Certificate No. 2 to FTZÚ 13 ATEX 0210X**

(16) Report Number.: 13/0210/2

(17) Specific Conditions of Use:

Additional to those listed previously.

1. Versions of transmitter with surge arrester marked on plate "SA" do not meet the requirements of Section 10.3 of the standard EN 60079-11:2012 (500Vrms). This must be taken into account when installing the equipment.
2. Under certain extreme circumstances in dust explosive atmospheres, the device with painting of aluminum enclosure and with plastic tables and with elements of diaphragm seals covered by PTFE may store an ignition-capable level of electrostatic charge. The device shall not be installed in a location where the external conditions are conducive to the build-up of electrostatic charge.
3. If the diaphragm seal contains titan parts, it must be protected against mechanical drops.
4. Galvanically separated part of apparatus placed into measuring head is electrically connected with mass of enclosure. It should be taken into account when installing the apparatus with remote measuring head on cable.

(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.

(19) Drawings and Documents:

Title / Drawing No.	Sheet:	Date:	Nr. of Pages:
DPC2000-C611-TA	1B	12.2016	1
IOM-DPCDPR-D	D	12.2016	60

Responsible person:

Dipl. Ing. Lukáš Martinák
Head of Certification Body

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