GiG Research Institute

EU TYPE EXAMINATION CERTIFICATE

[1]

[2] Protective equipment and systems intended for use in potentially explosive atmospheres. Directive 2014/34/EU (Rozporządzenie Ministra Rozwoju z dnia 06.06.2016r. Dz.U. z dnia 09.06.2016r. Poz. 817)

[3] EU type examination certificate (module B):

KDB 14ATEX0121X 1st edition

[4] Equipment:

Smart pressure transmitters type D23
Smart differential pressure transmitters type D33
Smart level probes type D42

[5] Manufacturer:

DELTA MOBREY LTD

[6] Address:

Riverside Business Park, Dogflud Way, Farnham, Surrey, GU9 7SS, United Kingdom

[7] The protective equipment or system and any acceptable variations thereto are specified in the schedule to this certificate.

[8] Central Mining Institute, Notified Body no 1453 according to Directive 2014/34/EU of February 26, 2014, approves that the protective equipment or system specified in this certificate has been found to comply with the essential health and safety requirements for the design and construction of protective equipment and systems intended for use in potentially explosive atmosphere given in Annex II to Directive 2014/34 /EU (Załącznik nr 2 Rozporządzenia Ministra Rozwoju z dnia 06.06.2016r. Dz.U. z dnia 09.06.2016r. Poz. 817). The results of the assessment and examinations as well as the list of agreed documentation are recorded in the confidential Report **KDB No 14.137-1 [T-7209]**

[9] The essential health and safety requirements have been met by compliance with the requirements of the following standards:

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

[10] If sign "X" is placed after the certificate number, this means the specific conditions of use set out in the schedule to this certificate.

[11] This EU type examination certificate relates only to the construction, assessment and testing of the specified product in accordance with Directive 2014/34 /EU (Rozporządzenie Ministra Rozwoju z dnia 06.06.2016r. Dz.U. z dnia 09.06.2016r. Poz. 817). The certificate shall not cover the remaining requirements of the Directive regarding the manufacturing process and placing the protective equipment or system on the market.

[12] The marking of the equipment 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 T105°C Da
or
II 1/2G Ex ia IIC T4/T5/T6 Ga/Gb
or
II 1/2G Ex ia IIC T4 Ga/Gb
or
II 1/2G Ex ia IIC T4 Ga/Gb
II 1D Ex ia IIIC T105°C Da

mgr inż. Piotr Madej
ATEX Certification Expert

Główny Instytut Górnictwa Jednostka Oceny Zgodności

Główny Instytut Górnictwa
Jednostka Oceny Zgodności
p.o. KIEROWNIKA
dr inż. Dariusz Stefaniak

Date of issue: **15.09.2020**

Central Mining Institute, 40-166 Katowice, Plac Gwarków 1, Poland, www.gig.eu
Conformity Assessment Body, 43-190 Mikołów, ul. Podleska 72, www.gigcert.com
Certification Body accredited by PCA *[Polish Centre for Accreditation]*, **No AC038.**

[15] Description:

The smart pressure transmitters type D23 are designed to measure gauge pressure, vacuum pressure and absolute pressure of gases, vapours and liquids (including corrosive).

The smart differential pressure transmitters type D33 are used to measure liquid levels in closed tanks, static pressure up to 25 MPa or 32 MPa for special versions, and to measure differential pressure and flow measurement at filters, orifices and others. The transmitters with P-type connectors are designed to work with static pressure of up to 4MPa or 7MPa only.

The smart hydrostatic level probes type D42 are used to measure liquid levels in open tanks.

The active sensing element is a enclosed silicon diaphragm with piezoresistors, separated from the medium by a sealing diaphragm and manometric fluid. The electronic system digitally processes the measurement signal and generates output signals an analogue 4÷20 mA signal, and a digital Hart communication signal. The main electronic assembly is identical for all versions.

The main components of the smart pressure transmitter are the sensing module, in which the pressure signal is converted into an electrical signal, and the electronic system, which converts the signal from the sensing module into an unified output signal.

The casing of the transmitter made from ø27 or ø25 pipe (for SG or SGM cable connector) is permanently mounted on the sensing module. On the other side is an electrical connector. The transmitter is also available with an additional aluminum alloy housing with an electronic display inside.

Marking:

- transmitters with PD, PZ, PK, PKM, SG, SGM electric connector:

  I M1 Ex ia I Ma
  II 1/2G Ex ia IIC T4/T5/T6 Ga/Gb
  II 1D Ex ia IIIC T105°C Da

- transmitters with PM12 or PKD connector:

  II 1/2G Ex ia IIC T4/T5/T6 Ga/Gb

- transmitters with an aluminum housing and PM12 connector:

  II 1/2G Ex ia IIC T4 Ga/Gb

- transmitters with an aluminum housing and PD connector:

  II 1/2G Ex ia IIC T4 Ga/Gb
  II 1D Ex ia IIIC T105°C Da

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Technical parameters:

Supply voltage	7,5 V ÷ 30 V DC 10,5 V ÷ 30 V DC (with an aluminum housing)
Measurement range	max. 100 MPa for D23 max 7 MPa for D33 max 3000 mmH_2O for D42
Output signal	4 ÷ 20 mA + HART
Ingress protection	IP65 transmitters with PD electrical connector, and transmitters with an aluminum housing with electrical output PD IP66 transmitters with PZ connector IP67 transmitters with PK, PKM, PKD, PM12 and transmitters with an aluminum housing and PM12 electrical output IP68 transmitters with SG, SGM cable connector

Ambient temperature - maximum:

Pi	Ta		Temperature class
0,75W	+50°C		T6
	+70°C		T5
	+75°C*	+80°C	T4, Group I
1,2W	+40°C		T6
	+65°C		T5
	+75°C*	+80°C	T4, Group I

Ambient temperature - minimum:

Ta
-40°C

* Ambient temperature of transmitters with an aluminum housing

Intrinsic safety parameters:

Supply from a power source with linear output characteristic:
Ui=30V Ii=0,1A Pi=0,75W or Pi=1,2W

Supply from a power source with rectangular or trapezoidal output characteristic:
Ui=24V Ii=0,1A Pi=0,75W or Pi=1,2W

Ci=11nF Li = 0,61 mH
Ci=25nF Li = 0,61 mH (transmitter with an aluminum housing)

[16] Test Report:

"ATEX assessment report" KDB No 14.137-1

[17] Special conditions of use:

- Version of transmitter with surge arrester, marked on the plate "Version SA", does not meet the requirements of Section 10.3 of the EN 60079-11 (500 Vrms). The relevant information for the user is included in the manual.
- Transmitters with display, (with an aluminum housing) and transmitters with a plastic rating plate and transmitters with teflon coated diaphragm seals for Group III, should be installed in a place and in a way that prevents electrostatic charging - see user's manual.
- If the elements made of titanium are used in the construction of the device, during installation and operation of the transmitter these elements should be protected against direct access.

[18] Essential health and safety requirements:

Met by fulfilling the requirements of the following standards:

EN IEC 60079-0:2018	*(PN-EN IEC 60079-0:2018-09)*
EN 60079-11:2012	*(PN-EN 60079-11:2012)*
EN 50303:2000	*(PN-EN 50303:2004)*

Document history:

- EU type examination certificate KDB 14ATEX0121X, 0 edition of 17.10.2014, initial certification.
- EU type examination certificate KDB 14ATEX0121X, 1st edition of 15.09.2020, supersedes the certificate KDB 14ATEX0121X, 0 edition of 17.10.2014.

  Construction of the device has been changed.

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