GIG Research Institute

[1] # EU TYPE EXAMINATION CERTIFICATE

[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 22ATEX0021X **0 edition**

[4] Equipment:

Smart temperature transmitters
Type D72, D72 Safety

[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] Główny Instytut Górnictwa, 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 22.030 [T-7722]**

[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 60079-1:2014;

EN 60079-11:2012; EN 60079-31:2014; 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 is included in point 15

mgr inż. Piotr Madej
ATEX Certification Expert

Główny Instytut Górnictwa Jednostka Oceny Zgodności

Główny Instytut Górnictwa
KIEROWNIK
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Certification Body accredited by PCA *[Polish Centre for Accreditation]*, **No AC038.**

[15] Description:

Smart temperature transmitters type D72, D72 Safety are designed for temperature measurement in various industrial applications related to measuring, control and regulation. The transmitter basic components are enclosure and logic unit converting signal from the measuring sensor to output signal. The transmitters can be provided with temperature sensors installed directly to the transmitter enclosure or temperature sensors installed with the connection cable. Enclosure of the transmitter is made of high pressure die-cast aluminium alloy or stainless steel. The housing consists of a main enclosure and two screwed access covers (for the display and electrical connection terminal). Cover for the display has a window. The enclosure is provided with openings with thread M20x1,5 or ½" NPT.

Marking:

Smart temperature transmitter type D72, version Ex „d" designed to work with an independent distance sensor:

- version with aluminium alloy enclosure:

  II 2(1)G Ex db [ia Ga] IIC T5/T6 Gb
  II 2(1)D Ex tb [ia Da] IIIC T100°C/T85°C Db

- version with steel (316) enclosure:

  II 2(1)G Ex db [ia Ga] IIC T5/T6 Gb
  II 2(1)D Ex tb [ia Da] IIIC T100°C/T85°C Db
  I M2 Ex db [ia Ma] I Mb

Smart temperature transmitter version Ex „d":

- type D72, designed to work with a direct sensor;
- type D72, with an installed direct sensor;
- type D72 Safety, designed to work with an independent distance sensor or direct sensor;

- version with aluminium alloy enclosure:

  II 2G Ex db IIC T**/T5/T6 Gb
  II 2D Ex tb IIIC T*/T100°C/T85°C Db

- version with steel (316) enclosure:

  II 2G Ex db IIC T**/T5/T6 Gb
  II 2D Ex tb IIIC T*/T100°C/T85°C Db
  I M2 Ex db I Mb

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Smart temperature transmitter type D72 Safety, version Ex „i" designed to work with an independent distance sensor or direct sensor:

- version with aluminium alloy enclosure:

  II 2(1)G Ex ia [ia Ga] IIC T4 Gb
  II 1D Ex ia IIIC T105°C Da

- version with steel (316) enclosure:

  II 2(1)G Ex ia [ia Ga] IIC T4 Gb
  II 1D Ex ia IIIC T105°C Da
  I M1 Ex ia I Ma

Technical parameters:

Smart temperature transmitters type D72, D72 Safety version Ex „d"

Power supply:	13,5 ÷ 45V DC	for type D72
	12,5 ÷ 36V DC	for type D72 Safety
Output Signal:	4 ÷ 20mA	
Ambient temperature:	-40°C < Ta < +40°C	Temperature class T6 Maximum surface temperature 85°C
	-40°C < Ta < +75°C	Temperature class T5 Maximum surface temperature 100°C
	(special version: from -50°C)	
Degree of protection:	IP66/IP67	

Intrinsic safety parameters for temperature transmitter type D72:

Transmitters designed to work with an independent distance sensor

Uo = 6,6V	Lo = 400mH
Io = 9,8mA	Co = 480µF (for IIB)
Po = 14,5mW;	Co = 3,5µF (for IIC)
	Co = 1000µF (for IIA and I)

Smart temperature transmitter type D72 Safety version Ex „i"

Ambient temperature:	-40°C < Ta < +75°C	Temperature class T4 Maximum surface temperature 105°C
	(special version: from -50°C)	
Degree of protection:	IP66/IP67	

Intrinsic safety parameters:

Transmitters designed to work with an independent distance sensor or direct sensor

Supply from a power source with linear output characteristic (terminals +/-):

Ui = 30V	Li = 910µH
Ii = 100mA	Ci = 25nF
Pi = 0,75W	

Supply from a power source with rectangular output characteristic (terminals +/-):

Ui = 24V	Li = 910µH
Ii = 25mA	Ci = 25nF
Pi = 0,6W	

Supply from a power source with trapezoidal output characteristic (terminals +/-):

Ui = 24V	Li = 910µH
Ii = 50mA	Ci = 25nF
Pi = 0,6W	

Output parameters (between any combination of terminals: 1…5):

Uo = 6V	Lo = 2mH
Io = 3,3mA	Co = 2,5µF (for IIC)
Po = 19,8mW	Co = 480µF (for IIB)
	Co = 1000µF (for IIA and I)

[16] Test Report:

"ATEX assessment report" KDB No 22.030

[17] Special conditions of use:

- Temperature class of transmitter with temperature sensor installed directly (T** for gas) or the maximum surface temperature (T* for dust) depends on the process temperature (temperature of controlled medium) and methods of installation on site. For the temperature of the medium higher than declared maximum ambient temperature the temperature class T** and the maximum surface temperature T* should be determined in accordance with the manufacturer's manual.
- Some of the permitted gaps in flameproof joints are smaller and width of the flameproof joints are greater than the one specified in Table 3 EN 60079-1. The relevant information for the user are included in the manual.
- In hazardous zones of dust explosion, transmitters with painted aluminum enclosures, as well as transmitters equipped with plastic marking plates should be installed in a way that prevents electrostatic charging, in accordance with the instructions.

[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 60079-1:2014	(PN-EN 60079-1:2014-12);
EN 60079-11:2012	(PN-EN 60079-11:2012);
EN 60079-31:2014	(PN-EN 60079-31:2014-10);
EN 50303:2000	(PN-EN 50303:2004)

Document history:

- EU type examination certificate KDB 22ATEX0021X, 0 edition of 31.08.2022, initial certification

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