	<b>International Center for Quality Certification - ICQC Ltd.</b> <b>63-19, Skolas street, Jurmala, LV-2016, Latvia</b> <b>Phone: +371 27168371 E-mail: office@icqc.lv Web: www.icqc.lv</b> SIA „International Center for Quality Certification - ICQC” Reģ. Nr.LV40103539825 Skolas iela 63-19, Jūrmala, LV-2016, Latvija
EU Notified Body No. 2549	



EN ISO/IEC 17065  
S1-499

(1) **EU-TYPE EXAMINATION CERTIFICATE**

(2) **Equipment and protective systems intended for use in potentially explosive atmospheres - Directive 2014/34/EU**

(3) EU-Type Examination Certificate Number: **ICQC 21 ATEX 0464 X** **Issue: 0**

(4) Equipment: **Pressure transmitter EMIS-BAR**

(5) Manufacturer: **EMIS CJSC**

(6) Address: **Lenina Avenue 3, office 308, Chelyabinsk, 454091, Russia**

(7) This equipment and any acceptable variation, also documents which are specified in the schedule to this certificate.

(8) The certification body ICQC, Notified body No. 2549 in accordance with Article 17 of the Directive 2014/34/EU of the European Parliament and the Council of 26 February 2014, certifies that this equipment 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 No. **464/2021/10/ATEX**

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:  
**EN IEC 60079-0:2018, EN 60079-11:2012**

(10) If the sign "X" is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule to this certificate.

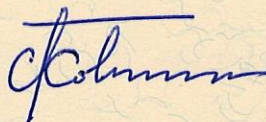
(11) This EU-Type Examination Certificate relates only to the design and the construction of the specified equipment in accordance with Directive 2014/34/EU. Further requirements of this Directive apply to the manufacture and supply of this equipment. These are not covered by the certificate

(12) The marking of the equipment or protective system shall include the following:

 See Schedule to certificate

Head of Certification Body:



 Sergey Kovalev

Date of issue: 25 October, 2021  
Jurmala, Latvia

(13) **SCHEDULE**

(14) **to EU-TYPE EXAMINATION CERTIFICATE: ICQC 21 ATEX 0464 X**

**Issue: 0**

(15) **Description of Equipment:**

The pressure transmitters EMIS-BAR are designed for continuous measurement and converting gauge, absolute, vacuum, hydrostatic and differential pressure into a 4 – 20 mA analogue output signal with a HART Communication protocol as well as displaying the measured value on its own display (optional).

Table 1 – EMIS-BAR pressure transmitters type designation

EMIS-BAR	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	Model (type of the measured pressure and flange in-line adapter version – see Operation manual for more details) 103, 105, 113, 123, 133, 143, 153, 163, 164, 173, 174, 175, 176, 183, 184, 185, 186, 187, 188, 193														
2	H – 4 – 20 mA HART														
3	Explosion protection: ExiaB – II 1G Ex ia IIB T6...T3, T1 Ga ExiaC – II 1G Ex ia IIC T6...T3, T1 Ga RO – I M1 Ex ia I Ma ExiaBD – II 1D Ex ia IIIB 85/100/135/200/400°C Da ExiaCD – II 1D Ex ia IIIC 85/100/135/200/400°C Da														
4	Measuring range *														
5	Accuracy *														
6	Materials (Diaphragm material, filling fluid, degree of cleanliness of measuring part, wetted parts material etc) *														
7	Process connection* (see NOTE 1 and NOTE 2)														
8	Electronic housing material Al – aluminium S – stainless steel X – aluminium (special coating)														
9	LCD display *														
10	Types of the cable glands *														
11	Additional protection*														
12	Transmitter lightning protection *														
13	High-temperature version * (see NOTE 1)														
14	Special version *														
15	Calibration *														
16	Valve block *														
17	Medium separator *														
18	Additional certificates (not related to explosion safety)*														

\* see Operation manual for more details.

Note 1: A radiator (code 13 in the order sheet) or a capillary tube at least 1 m long and appropriate filling liquid (code 7 in the order sheet) must be used if the temperature range of the measured medium is from 135 to 200 °C.

Note 2: A capillary tube at least 1 m long and appropriate filling liquid (code 7 in the order sheet) must be used if the temperature range of the measured medium is from 200 to 400 °C

The pressure transmitter EMIS-BAR consists of a pressure transducer and an electronic unit. The electronic unit is a cylindrical metal housing, closed on both sides by screw covers. The pressure transducer is screwed in the threaded hole in a lower part of the electronic housing. There are two

threaded holes for cable glands on the sides of the housing. The noise filter board, main board, sensor board, LCD module and the sensor settings buttons are installed in the electronic unit.

Depending on the design, the pressure transducers of the pressure transmitter EMIS-BAR have two versions – with flange or with in-line adapter. The in-line version consists of a housing and a connection sleeve with a sensor with a measuring diaphragm. The flanged version of the pressure transducer consists of a sensor with measuring diaphragms, flanges and fasteners. The sensors are optionally supplied with medium separators and capillary lines.

Depending on the temperature of the measured medium, ambient temperature range and configuration, the pressure transmitters EMIS-BAR have explosion protection marking listed in the Table2.

Table 2 – Explosion protection marking of EMIS-BAR

Configuration	Maximum temperature of the measured medium, °C	Ambient temperature range, °C	Explosion protection marking
"ExiaB"	+85	$-60 \leq T_a \leq +70$	II 1G Ex ia IIB T6 Ga
	+100	$-60 \leq T_a \leq +85$	II 1G Ex ia IIB T5 Ga
	+135	$-60 \leq T_a \leq +85$	II 1G Ex ia IIB T4 Ga
	+200 <sup>1)</sup>	$-60 \leq T_a \leq +85$	II 1G Ex ia IIB T3 Ga
	+400 <sup>2)</sup>	$-60 \leq T_a \leq +85$	II 1G Ex ia IIB T1 Ga
"ExiaC"	+85	$-60 \leq T_a \leq +70$	II 1G Ex ia IIC T6 Ga
	+100	$-60 \leq T_a \leq +85$	II 1G Ex ia IIC T5 Ga
	+135	$-60 \leq T_a \leq +85$	II 1G Ex ia IIC T4 Ga
	+200 <sup>1)</sup>	$-60 \leq T_a \leq +85$	II 1G Ex ia IIC T3 Ga
	+400 <sup>2)</sup>	$-60 \leq T_a \leq +85$	II 1G Ex ia IIC T1 Ga
"RO"	+135	$-60 \leq T_a \leq +70$	I M1 Ex ia I Ma
	+200 <sup>1)3)</sup>	$-60 \leq T_a \leq +70$	
	+400 <sup>2)3)</sup>	$-60 \leq T_a \leq +70$	
"ExiaBD"	+85	$-60 \leq T_a \leq +70$	II 1D Ex ia IIIB 85 °C Da
	+100	$-60 \leq T_a \leq +85$	II 1D Ex ia IIIB 100 °C Da
	+135	$-60 \leq T_a \leq +85$	II 1D Ex ia IIIB 135 °C Da
	+200 <sup>1)</sup>	$-60 \leq T_a \leq +85$	II 1D Ex ia IIIB 200 °C Da
	+400 <sup>2)</sup>	$-60 \leq T_a \leq +85$	II 1D Ex ia IIIB 400 °C Da
"ExiaCD"	+85	$-60 \leq T_a \leq +70$	II 1D Ex ia IIIC 85 °C Da
	+100	$-60 \leq T_a \leq +85$	II 1D Ex ia IIIC 100 °C Da
	+135	$-60 \leq T_a \leq +85$	II 1D Ex ia IIIC 135 °C Da
	+200 <sup>1)</sup>	$-60 \leq T_a \leq +85$	II 1D Ex ia IIIC 200 °C Da
	+400 <sup>2)</sup>	$-60 \leq T_a \leq +85$	II 1D Ex ia IIIC 400 °C Da

Note 1: For models with radiator or with capillary length 1 m or more, see Operation manual.

Note 2: For models with capillary length 1 m or more, see Operation manual.

Note 3: Where coal dust is not likely to form a layer.

Note 4: The LCD display operates at a temperature not lower than -42 °C.

Note 5. The housing of the EMIS-BAR pressure transmitters with explosion protection marking I M1 Ex ia I Ma are made only from stainless steel.

The pressure transmitters EMIS-BAR should only be connected to equipment with the type of protection "intrinsically safe electrical circuit" with an explosion protection level (EPL) not lower than the EPL of the transmitters, and their intrinsically safe parameters, including the electrical parameters of the communication cable, should not affect the intrinsic safety.

**Technical characteristics:**

Parameter	Value
Ingress Protection code (IP)	At least IP65
Output signal	4 - 20 mA HART
Rated supply voltage	DC 10,5 ... 30 V

<b>Maximum input parameters of intrinsically safe electrical circuits:</b>	
<b>1. Configuration "ExiaB", "ExiaC", "ExiaBD", "ExiaCD"</b>	
- input voltage $U_i$	30 V
- input current $I_i$	120 mA
- input power $P_i$	0,8 W
- internal capacitance $C_i$	$\approx 0$
- internal inductance $L_i$	0,7 mH
<b>2. Configuration "RO"</b>	
- input voltage $U_i$	30 V
- input current $I_i$	480 mA
- input power $P_i$ (linear characteristic)	2,6 W
- internal capacitance $C_i$	$\approx 0$
- internal inductance $L_i$	0,7 mH

**Warning markings:**

WARNING - POTENTIAL ELECTROSTATIC CHARGING HAZARD - SEE INSTRUCTIONS.

**Routine tests:**

None.

**(16) Descriptive Documents:**

Operation & Instruction Manual

EB 100.000.00 OM

The drawings are listed in Evaluation report No:

464/2021/10/ATEX

**Certificate History:**

Issue/Date	Evaluation report	Comment
Issue 0 from 25.10.2021	464/2021/10/ATEX	The release of the prime certificate.

**(17) Specific conditions of use:**

17.1. The temperature of the measured medium shall not exceed the permissible value for the temperature class of transmitters specified in the explosion protection marking.

17.2. Painted housing can be the source of electrostatic discharge. Care should be taken during installation and cleaning to avoid risk of ignition due to electro-static discharge. Cleaning of painted surface must be done with a damp or antistatic cloth.

17.3 When the electronic housing made of aluminium is mounted in the Zone 0, it must be installed in such a way that even in the event of rare incidents, ignition sources due to impact or friction sparks are excluded.

17.4. The possibility of a dust layer deposition on the surface of transmitters EMIS-BAR model "RO" with explosion protection marking I M1 Ex ia I Ma for medium temperature above 150 °C must be excluded.

**(18) Essential Health and Safety Requirements:**

Met by compliance with the standards mentioned in clause (9).