Physical-Technical Testing Institute
Ostrava - Radvanice

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 24 ATEX 0062X

(4) Product: **Density Meter series DIMF*T****

(5) Manufacturer: **Bopp & Reuther Messtechnik GmbH**

(6) Address: **Am Neuen Rheinhafen 4, 67346 Speyer, Germany**

(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:

24/0062 dated 31.10.2024

(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 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:

Ex II 1/2G Ex ia IIC T4...T2 Ga/Gb

This certificate is valid till: **31.10.2029**

Responsible person:

Dipl. Ing. Lukáš Martinák
Head of Certification Body

PHYSICAL-TECHNICAL TESTING INSTITUTE FYZIKÁLNĚ TECHNICKÝ ZKUŠEBNÍ ÚSTAV FTZÚ Ex NB 1026

Date of issue: 31.10.2024

Physical-Technical Testing Institute, s.p., Pikartská 1337/7, 716 07 Ostrava - Radvanice, Czech Republic
tel.: +420 595 223 111, +420 604 203 525, e-mail: ftzu@ftzu.cz, www.ftzu.cz

(13) **Schedule**

(14) EU - Type Examination Certificate No. FTZÚ 24 ATEX 0062X

(15) Description of Product:

The product Density meter DIMF*T** series is designed for continuous measurement of the density of liquids. It is composed of two parts, the first is head with electronics with all PCBs, and the head has EPL Gb because is made of aluminium alloy. The second is measuring part inside stainless steel housing and has EPL Ga. Inside the electronics head there are five PCBs, one of PCBs is with terminals for input IS circuits, one of PCBs is equipped with display and four buttons. There are three variants of measuring part. There are two variants determining connection between head with electronics and measuring part, variant DIMF*TV* has measuring part and electronics head integrated into one unit forming one enclosure. For variant DIMF*TW* the measuring part is equipped with terminal box and is connected to head with electronics only via wiring, see below for coding of variants of DIMF*T**.

Coding of variants of DIMF*T**:

First *	Measuring part		2nd *	Electronics head		3rd *	Media temperature
1.3	Fork		V	Integrated		S	Standard
2.0	Pipe small		W	Wall mounted		H	High
2.1	Pipe Large						

Technical parameters:
Process media temperature: $-20\ °C \le T_{media} \le +210\ °C$
Ambient temperature for:
Head with electronics (all variants): $-20\ °C \le T_{a\_head} \le +64\ °C$
Terminal box on separate measuring part (only variant DIMF*TW*): $-20\ °C \le T_{a\_box} \le +80\ °C$.

Note: *See Specific Conditions of Use no. 1 for details regarding temperatures.*

Intrinsically safe parameters:
Supply circuit 4…20 mA: $U_i = 30$ V; $I_i = 101$ mA; $P_i = 800$ mW; $L_i = 0.6$ mH; $C_i = 20$ nF, or
$U_i = 29$ V; $I_i = 110$ mA; $P_i = 800$ mW; $L_i = 0.6$ mH; $C_i = 20$ nF
NAMUR: $U_i = 18$ V; $I_i = 22$ mA; $P_i = 100$ mW; $L_i = 20$ µH; $C_i = 17$ nF

(16) Report Number: 24/0062

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

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(13) **Schedule**

(14) EU - Type Examination Certificate No. FTZÚ 24 ATEX 0062X

(17) Specific Conditions of Use:

1. Temperature class depends on the variant, ambient temperature T_{a_head} of head with electronics, ambient temperature T_{a_box} of terminal box of separate measuring part and process media temperature T_{media}:

DIMF*TV*			
Temp. Class	T_{a_head} (°C)	T_{media} (°C)	Type
T2	52	210	**H** High temperature
T3	54	195	
T3	56	170	
T3	57	150	**S** Standard temperature and **H** High temperature
T4	59	130	
T4	60	110	
T4	64	64	

DIMF*TW*				
Temp. Class	T_{a_head} (°C)	T_{a_box} (°C)	T_{media} (°C)	Type
T2	64	67	210	**H** High temperature
T3		68	195	
T3		71	170	
T3	64	73	150	**S** Standard temperature and **H** High temperature
T4		75	130	
T4		77	110	
T4		80	80	

(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

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(13) **Schedule**

(14) **EU - Type Examination Certificate No. FTZÚ 24 ATEX 0062X**

(19) Drawings and Documents:

Number:	Issue:	Sheets:	Date:	Description:
Ex-description_DIMF_T	2024-10-23	16	23.10.2024	Description EN
2-82-26001.4	1.1	1	08.05.2024	Circuit diagram Ex-Platine_1.1
2-82-26002.4	1.1	1	08.05.2024	Circuit diagram Kom-Platine_1.1
2-82-26003.4	1.1	2	08.05.2024	Circuit diagram Controllerplatine_1.1
2-82-26004.4	1.1	1	08.05.2024	Circuit diagram Displayplatine_1.1
0-60-93514-4-Zul	0	1	16.04.2024	Wiring diagram
3-60-83919-1-Zul	0	1	16.04.2024	DIMF1.3 assembly
3-60-83914-1-Zul	0	1	16.04.2024	DIMF2.0 assembly
0-60-00206-4-Zul	a	1	02.10.2024	DIMF2.1 assembly
3-60-83247-1-Zul	a	1	16.04.2024	DIMF* Wall construction
1-60-83928-4	--	1	10.10.2024	Label – transmitter
1-60-83929-4	--	1	10.10.2024	Label – sensor part
Ex-manual_extract	--	3	23.10.2024	Operating instructions
PartList	08	--	08.05.2024	Part list (Excel file)
--	1.1	--	23.10.2024	PCB (Gerber files)

Responsible person:

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