



(1) **Supplementary EU - Type Examination Certificate No.1**

(2) **Equipment or Protective Systems Intended for Use  
in Potentially Explosive Atmospheres  
(Directive 2014/34/EU)**

(3) EU - Type Examination Certificate number:

**FTZÚ 15 ATEX 0207X**

(4) Product: **Radar level meter type GRLM-70Xt (XtT)**

(5) Manufacturer: **Dinel s.r.o.**

(6) Address: **U Tescomy 249, 760 01 Zlín, Czech Republic**

(7) This supplementary certificate extends EC - Type Examination Certificate No. FTZÚ 15 ATEX 0207X 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 IEC 60079-0:2018, EN 60079-31:2014**

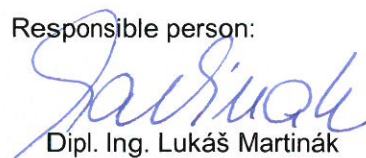
If the sign "X" is placed after the certificate number, it indicates that the product is subject to Specific Conditions of Use specified in the schedule to this certificate.

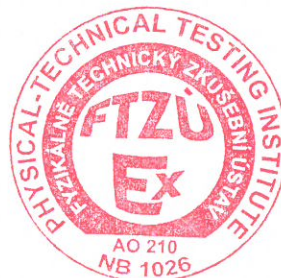
(11) The marking of the product shall include the following:

**Ex II 1/2D Ex ta/tb IIIC T75°C...T300°C Da/Db**

(12) This certificate is valid till: **31.03.2026**

Responsible person:

  
Dipl. Ing. Lukáš Martinák  
Head of Certification Body



Date of issue: 19.03.2021

Page: 1/3  
Annex: 1 (1 sheet)



Physical-Technical Testing Institute  
Ostrava - Radvanice

(13) **Schedule**

(14) **Supplementary EU - Type Examination Certificate No. 1  
to FTZÚ 15 ATEX 0207X**

(15) Description of the variation to the Product:

The subject of this supplementary certificate is:

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

New modifications of certified apparatus:

- 1) The type marking was changed to **GRLM-70Xt (XtT)**.
- 2) The material of the case Xt and high temperature housing XtT was changed. The process connection shall be equipped by 1" NPT external thread for specific electrode type ( It is impossible for type 11, 12, 13, 20, 32, and type XtT).
- 3) The housing without display is equipped by cover without window.
- 4) Extension with new types of electrodes 36 and 37 and Ex- cable glands type **Progress MS Multi EX M20x1,5..**

Electrical parameters were unchanged.

The certified apparatus is verified according to the new standard EN IEC 60079-0:2018.

(16) Report Number: 15/0207/1

(17) Specific Conditions of Use:

1. Ambient temperature of housing Tamb: -30°C to +70°C.
2. Maximum surface temperature – see annex No. 1.
3. When is used variant with sight glass cover, the housing shall be protected against direct sunlight.
4. The housing must be installed to avoid a risk from propagating brush discharges for application in explosive dust atmosphere.

(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.

Responsible person:

Dipl. Ing. Lukáš Martinák  
Head of Certification Body



Date of issue: 19.03.2021

Page: 2/3

Annex: 1 (1 sheet)

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(13)

Schedule

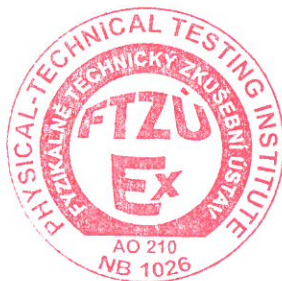
(14) **Supplementary EU - Type Examination Certificate No. 1  
to FTZÚ 15 ATEX 0207X**

(19) Drawings and Documents:

Number	Sheets	Date	Description
GRLM-70	17	12/2020	Technical conditions
GRLM-70	60	02/2021	User manual
GRLM-70Xt(XtT)	4	12/2020	Product documentation - the process of production of a mechanical part
GRLM-70-100-Xt	1	03.12.2020	Assembly drawing
GRLM-70-500-Xt	1	03.12.2020	Assembly drawing
GRLM-70-700-Xt	1	03.12.2020	Assembly drawing
GRLM-70-800-Xt	1	03.12.2020	Assembly drawing
GRLM-70-100-Xd	1	08.09.2020	Assembly drawing
GRLM-70-104a	1	08.09.2020	Drawing
GRLM-70-104b	1	08.09.2020	Drawing
GRLM-70-134a	1	08.09.2020	Drawing
GRLM-70-134b	1	08.09.2020	Drawing
GRLM-70-154	1	08.09.2020	Drawing
ULM-70-001bX-Xd	1	9.7.2015	Drawing
GRLM-70-OD-03	1	24.02.2021	Label Drawing

Responsible person:

Dipl. Ing. Lukáš Martinák  
Head of Certification Body



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Page: 3/3

Annex: 1 (1 sheet)

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Annex No. 1

to Supplementary EU - Type Examination Certificate No. 1  
to FTZÚ 15 ATEX 0207X

Table No.1: Maximum service temperature - variant Xt

variants / performance	temperature tp	temperature tm	temperature ta
GRLM-70Xt-00 (10)	-40°C...+85°C	-40°C...+300°C	-30°C...+70°C
GRLM-70Xt-30 (33, 36)	-40°C...+85°C	-40°C...+200°C	-30°C...+70°C
GRLM-70Xt-34 (35, 37)	-40°C...+85°C	-40°C...+95°C	-30°C...+70°C

Table No. 2: Maximum service temperature - high-temperature variant XtT

variants / performance	temperature tp	temperature tm	temperature ta
GRLM-70XtT-00 (10)	-40°C...+200°C	-40°C...+300°C	-30°C...+70°C
GRLM-70XtT-30 (33, 36))	-40°C...+130°C	-40°C...+200°C	-30°C...+70°C
GRLM-70XtT-34 (35, 37))	-40°C...+130°C	-40°C...+95°C	-30°C...+70°C

Table No. 3: Maximum surface temperature - variants Xt and XtT

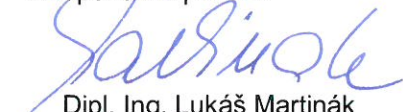
variants / performance	surface temperature
All variants	on housing with electronic: ambient temperature ta + 5 °C on process connection: equal to process connection temperature tp on electrode: equal to medium operating temperature tm

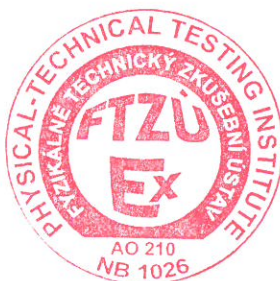
tp – Temperature in process connection place

tm – Medium operating temperature

ta – Ambient temperature range ( on the surface of housing )

Responsible person:

  
Dipl. Ing. Lukáš Martinák  
Head of Certification Body



Date of issue: 19.03.2021

Page: 1/1

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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



## EC-Type Examination Certificate

- (1)  
(2) **Equipment or Protective Systems Intended for Use  
in Potentially Explosive Atmospheres  
(Directive 94/9/EC)**

(3) EC-Type Examination Certificate Number:

**FTZÚ 15 ATEX 0207X**

(4) Equipment or protective system: **Radar level meter GRLM-70Xd (XdT)**

(5) Manufacturer: **Dinel s.r.o.**

(6) Address: **U Tescomy 249, 760 01 Zlín, Czech Republic**

(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°:

**15/0207 dated 10.11.2015**

(9) Compliance with Essential Health and Safety Requirements has been assured by compliance with:

**EN 60079-0:2012; EN 60079-31:2014**

(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 1/2D Ex ta/tb IIIC T75°C...T300°C Da/Db** – see Annex No. 1

This EC-Type Examination Certificate is valid till: **30.11.2020**

Responsible person:

  
Dipl. Ing. Lukáš Martinák  
Head of Certification Body



Date of issue: 25.11.2015

Page: 1/3

Annex: 1 (1 pages)

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Physical Technical Testing Institute  
Ostrava – Radvanice

(13)

Schedule

(14) **EC-Type Examination Certificate N° FTZÚ 15 ATEX 0207X**

(15) Description of Equipment or Protective System:

The radar level meter type GRLM-70Xd (XdT) consists of two main parts – level meter (body) and display module. It works on principle of electromagnetic wave transmission towards the liquid level where the wave is partially reflected back. The electromagnetic wave is guided by level meter electrode that could be made by rod or rope. The actual distance to the liquid level is indicated with display.

The design of Radar level meter GRLM-70Xd (XdT) is for type of Ex-protection „Ex t“.

The encapsulated electronic unit, display module with control buttons and terminal block for connection of cable to associated (evaluation) device are situated inside of the housing. The stainless steel rod with electrode is fixed to lower part of housing by inner screw joint.

Variants of electrodes - 00, 10, 30, 33, 34, 35. The Radar level meter is mounted into the upper lid of the tank or reservoir by using a welding flange or fastening nut.

The housing with electronic is placed in zone 21, the electrode part is placed inside of the tank or reservoir where is zone 20.

**Electrical parameters of radar level meter type GRLM-70Xd a GRLM-70XdT:**

Power supply: 18V DC - 33V DC

The variants of the level meter output:

GRLM-70Xd(XdT)-xx-G-I-B-x current loop 4-20mA with HART communication

GRLM-70Xd(XdT)-xx-G-M-B-x data communication RS-485 (Modbus RTU)

Degree of protection: IP 67

(16) Report No.: 15/0207

dated 10.11.2015

(17) Special conditions for safe use:

17.1 Ambient temperature of housing Tamb: -30°C to +70°C.

17.2 Maximum surface temperature – see annex No. 1.

17.3 When is used variant with sight glass cover, the housing shall be protected against direct sunlight.

Responsible person:

  
Dipl. Ing. Lukáš Martinák  
Head of Certification Body



Date of issue: 25.11.2015

Page: 2/3

Annex: 1 (1 pages)

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Physical Technical Testing Institute  
Ostrava – Radvanice

(13)

Schedule

(14) **EC-Type Examination Certificate N° FTZÚ 15 ATEX 0207X**

(18) Essential Health and Safety Requirements:

They are included in standards, which are mentioned in clause (9) of this certificate.

(19) List of Documentation:

<i>Title</i>	<i>Drawing No.:</i>	<i>Date:</i>
Technical conditions	GRLM-70	10/2015
Instruction manual	GRLM-70	10/2015
Drawings No.:	GRLM-70-100-Xd	20.10.2015
	GRLM-70-700-Xd	20.10.2015
	GRLM-70-500-Xd	20.10.2015
	ULM-70-003-Xd	16.10.2015
	ULM-70-002-Xd	24.06.2015
	ULM-70-001b-Xd	09.07.2015
	GRLM-70-104a	30.01.2013
	GRLM-70-104b	30.01.2013
	GRLM-70-108	16.04.2014
	GRLM-70-109	14.04.2014
	GRLM-70-154	12.08.2013
	GRLM-70-159	15.07.2014
	GRLM-70-163	27.05.2013
	GRLM-70-165	16.07.2014
	GRLM-70-168	22.08.2013

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Page: 3/3

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## ANNEX No. 1

### to EC-Type Examination Certificate N° FTZÚ 15 ATEX 0207X

Table No.1: Maximum service temperature - variant Xd

variants / performance	temperature tp	temperature tm	temperature ta
GRLM-70Xd-00 (10)	-40°C...+85°C	-40°C...+300°C	-30°C...+70°C
GRLM-70Xd-30 (33)	-40°C...+85°C	-40°C...+200°C	-30°C...+70°C
GRLM-70Xd-34 (35)	-40°C...+85°C	-40°C...+95°C	-30°C...+70°C

Table No. 2: Maximum service temperature - high-temperature variant XdT

variants / performance	temperature tp	temperature tm	temperature ta
GRLM-70XdT-00 (10)	-40°C...+200°C	-40°C...+300°C	-30°C...+70°C
GRLM-70XdT-30 (33)	-40°C...+130°C	-40°C...+200°C	-30°C...+70°C
GRLM-70XdT-34 (35)	-40°C...+130°C	-40°C...+95°C	-30°C...+70°C

Table No. 3: Maximum surface temperature - variants Xd and XdT

variants / performance	surface temperature
All variants	on housing with electronic: ambient temperature ta +5 °C on process connection: equal to process connection temperature tp on electrode: equal to medium operating temperature tm

tp – Temperature in process connection place  
tm – Medium operating temperature  
ta – Ambient temperature range (on the housing)

Responsible person:

  
Dipl. Ing. Lukáš Martinák  
Head of Certification Body



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Page: 1/1

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