



## 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

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Annex: 1 (1 pages)

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tel +420 595 223 111, fax +420 596 232 672, ftzu@ftzu.cz, www.ftzu.cz



**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.

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Head of Certification Body



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Schedule

(13)

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(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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## 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)

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