



(1) **Supplementary EU - Type Examination Certificate No.2**

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

(3) EU - Type Examination Certificate number:

**FTZÚ 09 ATEX 0277X**

(4) Product: **Ultrasonic level meter type ULM-70Xi - \_ - I**

(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 09 ATEX 0277X 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:

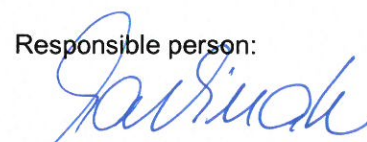
**EN IEC 60079-0:2018, EN 60079-11:2012**

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

 **II 1/2G Ex ia IIB T5 Ga/Gb - ULM-70Xi-02(06) - - I - - -**  
 **II 1/2G Ex ia IIA T5 Ga/Gb - ULM-70Xi-10 - - I - - -**  
 **II 2G Ex ia IIA T5 Gb - ULM-70Xi-20 - - I - - -**

(12) This certificate is valid till: **30.06.2025**

Responsible person:

  
Dipl. Ing. Lukáš Martinák  
Head of Certification Body



Date of issue: 19.06.2020

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**Physical-Technical Testing Institute  
Ostrava - Radvanice**

(13) **Schedule**

(14) **Supplementary EU - Type Examination Certificate No. 2  
to FTZÚ 09 ATEX 0277X**

(15) Description of the variation to the Product:

The subject of this supplementary certificate is:

- Modification of product;
- Evaluation according to the newest standards;
- Prolongation of certificate validity.

On equipment "Ultrasonic level meter type ULM-70Xi - \_\_ - I" were made changes. There were made constructional changes of enclosure and modifications of internal electronic circuits. Equipment is in accordance with standards mentioned in clause (10). The validity of certificate is prolonged for next five years. Updated documentation is listed in clause (19) in this supplement.

Technical parameters: remain unchanged.

(16) Report Number.: 09/0277/2

(17) Specific Conditions of Use:

1. The device is designed for connection to the supply unit type IRU-420.
2. When the other approved supply unit is used, whose output parameters satisfy above mentioned output parameters, it is necessary to have a galvanic separation or, if supply unit without galvanic separation is used (Zener barriers), it is necessary provide potential equalization between sensor and point of barrier earthing.
3. For application in zone 0 the present explosive atmospheres – mixture of air with flammable gases, vapour or mists must comply:  $0,8 \text{ bar} \leq p \leq 1,1 \text{ bar}$ .
4. The device must be installed in such a way, to prevent mechanical damage of sensor face.
5. It is necessary carried out earthing by screw which is placed on head of level meter.

(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: 19.06.2020

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(13)

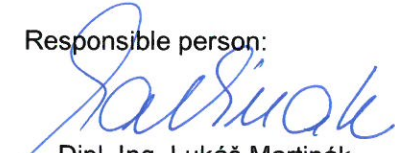
**Schedule**

(14) **Supplementary EU - Type Examination Certificate No. 2  
to FTZÚ 09 ATEX 0277X**

(19) Drawings and Documents:

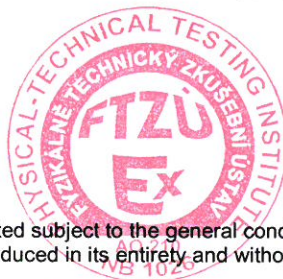
Number	Sheet	Date	Description
ULM-70	36	01.2020	User's manual
ULM-70	12	12.2014	Technical conditions
ULM-70Xi	4	01.2020	Production documentation
ULM-70-OD-02	1	14.01.2020	Label
ULM-70-100	1	10.01.2020	Assembly of product
ULM-70-200	1	10.01.2020	Assembly of product
ULM-70-500	1	10.01.2020	Assembly of product
ULM-70-600	1	10.01.2020	Assembly of product
ULM-70-SZ-04	1	20.02.2017	PCB ULM-70-M Schematic diagram
ULM-70-OS-05	1	20.02.2017	PCB ULM-70-M TOP
ULM-70-OS-06	1	20.02.2017	PCB ULM-70-M BOTTOM
ULM-70-MO-05	1	20.02.2017	PCB ULM-70-M TOP Layout
ULM-70-MO-06	1	20.02.2017	PCB ULM-70-M BOTTOM Layout
ULM-70-SS-03	1	20.02.2017	BOM ULM-70-M
ULM-70-SZ-04	1	14.01.2020	PCB ULM-70-M_vx Schematic diagram
ULM-70-OS-05	1	14.01.2020	PCB ULM-70-M_vx TOP
ULM-70-OS-06	1	14.01.2020	PCB ULM-70-M_vx BOTTOM
ULM-70-MO-05	1	14.01.2020	PCB ULM-70-M_vx TOP Layout
ULM-70-MO-06	1	14.01.2020	PCB ULM-70-M_vx BOTOM Layout
ULM-70-SS-03	1	14.01.2020	BOM ULM-70-M_vx
ULM-70-SZ-03	1	20.02.2017	PCB ULM-70-P Schematic diagram
ULM-70-OS-03	1	20.02.2017	PCB ULM-70-P TOP
ULM-70-OS-04	1	20.02.2017	PCB ULM-70-P BOTTOM
ULM-70-MO-03	1	20.02.2017	PCB ULM-70-P TOP Layout

Responsible person:

  
Dipl. Ing. Lukáš Martinák  
Head of Certification Body

Date of issue: 19.06.2020

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(14) **Supplementary EU - Type Examination Certificate No. 2  
to FTZÚ 09 ATEX 0277X**

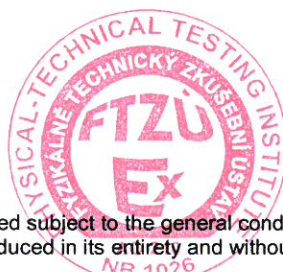
Number	Sheet	Date	Description
ULM-70-MO-04	1	20.02.2017	PCB ULM-70-P BOTOM Layout
ULM-70-SS-02	1	20.02.2017	BOM ULM-70-P
ULM-70-SZ-03	1	14.01.2020	PCB ULM-70-P-HART_vx Schematic diagram
ULM-70-OS-03	1	14.01.2020	PCB ULM-70-P-HART_vx TOP
ULM-70-OS-04	1	14.01.2020	PCB ULM-70-P-HART_vx BOTTOM
ULM-70-MO-03	1	14.01.2020	PCB ULM-70-P-HART_vx TOP Layout
ULM-70-MO-04	1	14.01.2020	PCB ULM-70-P-HART_vx BOTOM Layout
ULM-70-SS-02	1	14.01.2020	BOM ULM-70-P-HART_vx
ULM-70-SZ-02	1	05.05.2017	PCB ULM-70-Z Schematic diagram
ULM-70-OS-01	1	20.02.2017	PCB ULM-70-Z TOP
ULM-70-OS-02	1	20.02.2017	PCB ULM-70-Z BOTTOM
ULM-70-MO-01	1	20.02.2017	PCB ULM-70-Z TOP Layout
ULM-70-MO-02	1	20.02.2017	PCB ULM-70-Z BOTOM Layout
ULM-70-SS-01	1	05.05.2017	BOM ULM-70-Z
ULM-70-SZ-02	1	14.01.2020	PCB ULM-70-Z-HART_vx Schematic diagram
ULM-70-OS-01	1	14.01.2020	PCB ULM-70-Z-HART_vx TOP
ULM-70-OS-02	1	14.01.2020	PCB ULM-70-Z-HART_vx BOTTOM
ULM-70-MO-01	1	14.01.2020	PCB ULM-70-Z-HART_vx TOP Layout
ULM-70-MO-02	1	14.01.2020	PCB ULM-70-Z-HART_vx BOTOM Layout
ULM-70-SS-01	1	14.01.2020	BOM ULM-70-Z-HART_vx
DM-70-SZ-01	1	23.07.2019	PCB DM-70-D Schematic diagram
DM-70-SZ-02	1	23.07.2019	PCB DM-70-C Schematic diagram
DM-70-OS-01	1	23.07.2019	PCB DM-70-D TOP
DM-70-OS-02	1	23.07.2019	PCB DM-70-D BOTTOM
DM-70-MO-01	1	23.07.2019	PCB DM-70-D TOP Layout
DM-70-MO-02	1	23.07.2019	PCB DM-70-D BOTOM Layout

Responsible person:

Date of issue: 19.06.2020

  
Dipl. Ing. Lukáš Martinák  
Head of Certification Body

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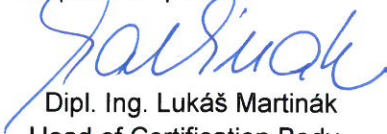
(13)

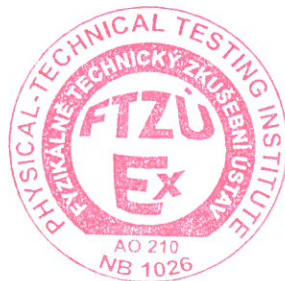
Schedule

(14) **Supplementary EU - Type Examination Certificate No. 2  
to FTZÚ 09 ATEX 0277X**

Number	Sheet	Date	Description
DM-70-SS-01	1	23.07.2019	PCB DM-70-D BOM
DM-70-OS-03	1	23.07.2019	PCB DM-70-C TOP
DM-70-OS-04	1	23.07.2019	PCB DM-70-C BOTTOM
DM-70-MO-03	1	23.07.2019	PCB DM-70-C TOP Layout
DM-70-MO-04	1	23.07.2019	PCB DM-70-C BOTTOM Layout
DM-70-SS-02	1	23.07.2019	PCB DM-70-C BOM
-	6	01.2020	Product documentation Display module

Responsible person:

  
Dipl. Ing. Lukáš Martinák  
Head of Certification Body



Date of issue: 19.06.2020

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tel.: +420 595 223 111, +420 604 203 525, e-mail: ftzu@ftzu.cz, www.ftzu.cz



(1) **Supplement No. 1 to  
EC-Type Examination Certificate**

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

(3) EC-Type Examination Certificate Number:

**FTZÚ 09 ATEX 0277X**

(4) Equipment or protective system: **Ultrasonic level meter type ULM-70Xi-\_\_-I**

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

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

(7) This supplement of certificate is valid for: - prolongation of certificate validity  
- modification of certified apparatus

(8) Modification of certified apparatus (protective system) and any of its approved variants are specified in documentation, list of which is mentioned in schedule of this certificate.

(9) This supplement to type examination certificate is valid only for type examination of design and construction of product sample in accordance with Annex 3 (Paragraph 6) of Directive No. 94/9/EC. The Directive contains another requirements, which manufacturer shall fulfil before products are place on market or introduce in service.

(10) Safety requirements of modified parts were fulfilled by satisfying the following standards:

**EN 60079-0:2012, EN 60079-11:2012, EN 60079-26:2007**

(11) Marking of equipment shall contain symbols:

 **II 1/2G Ex ia IIB/IIA T5 Ga/Gb**

 **II 2G Ex ia IIA T5 Gb**

(12) This type examination certificate is valid till: **13.03.2020**

Responsible person:

Dipl. Ing. Lukáš Martinák  
Head of Certification Body



Date of issue: 13.03.2015

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Physical Technical Testing Institute  
Ostrava – Radvanice

(13)

Schedule

(14)

Supplement No. 1 to  
EC-Type Examination Certificate N° FTZÚ 09 ATEX 0277X

(15) Description of Equipment or Protective System:

On equipment "Ultrasonic level meter type ULM-70Xi-\_- I" were carried out changes. Marking of equipment was actualized. Special conditions for safety use were changed. Equipment is in accordance with standards mentioned in clause (10). The validity of certificate is prolonged for next five years. Updated documentation is listed in clause (19) in this supplement.

Technical parameters without changes.

(16) Report No.: 09/0277-1

(17) Special conditions for safe use:

17.1 The device is designed for connection to the supply unit type IRU-420.

17.2 When the other approved supply unit is used, whose output parameters satisfy above mentioned output parameters, it is necessary to have a galvanic separation or, if supply unit without galvanic separation is used (Zener barriers), it is necessary provide potential equalization between sensor and point of barrier earthing.

17.3 For application in zone 0 the present explosive atmospheres – mixture of air with flammable gases, vapour or mists must comply:  $0,8 \text{ bar} \leq p \leq 1,1 \text{ bar}$

17.4 The device must be installed in such a way, to prevent mechanical damage of sensor face.

17.5 It is necessary carried out earthing by screw which is placed on head of level meter.

(18) Essential Health and Safety Requirements:

Essential health and safety requirement of Directive 94/9/EC are covered by the standards mentioned in clause (10) of this supplement according which the equipment was verified.

Responsible person:

  
Dipl. Ing. Lukáš Martinák  
Head of Certification Body



Date of issue: 13.03.2015

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(13)

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(14)

Supplement No. 1 to  
EC-Type Examination Certificate N° FTZÚ 09 ATEX 0277X

(19) List of Documentation:

Name:	Drawing No.:	Date:	Pages:
Technical conditions ULM-70	ULM-70	12.2014	12
User's manual	-	12.2014	32
Schematic diagram	ULM-70-SZ-04	16.12.2014	1
Mounting scheme	ULM-70-OS-05	16.12.2014	1
Mounting scheme	ULM-70-OS-06	16.12.2014	1
PCB mask	ULM-70-MO-05	16.12.2014	1
PCB mask	ULM-70-MO-06	16.12.2014	1
BOM	ULM-70-SS-03	16.12.2014	1
Label ULM-70Xi	ULM-70-OD-02	16.12.2014	1
Impulse transformer type ULM 01	211.001	15.12.2014	2
Impulse transformer type ULM 02	211.002	25.11.2014	2
Impulse transformer type ULM 03	211.003	25.11.2014	2
Impulse transformer type ULM 04	211.004	25.11.2014	2
Impulse transformer type ULM 05	211.005	25.11.2014	2
Assembly ULM-70_-02	ULM-70-100	15.12.2014	1
Assembly ULM-70_-02	ULM-70-200	15.12.2014	1
Assembly ULM-70_-02	ULM-70-600	15.12.2014	1
Assembly ULM-70_-02	ULM-70-500	15.12.2014	1

Responsible person:

  
Dipl. Ing. Lukáš Martinák  
Head of Certification Body



Date of issue: 13.03.2015

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## 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 09 ATEX 0277X**

- (4) Equipment or protective system: **Ultrasonic level meter type ULM-70Xi - \_\_ -I**
- (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°

**09/0277 dated 11 January 2010**

- (9) Compliance with Essential Health and safety requirements has been assured by compliance with:  
**EN 60079-0:2006; EN 60079-11:2007; EN 60079-26:2007**
- (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:

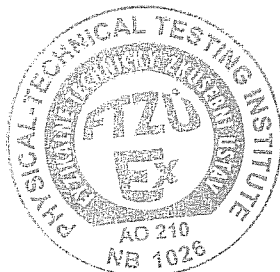


**II 1/2G Ex ia IIB/IIA T5  
II 2G Ex ia IIA T5**

This EC-Type Examination Certificate is valid till: **11. 01. 2015**

Responsible person:

Dipl. Ing. Šindler Jaroslav  
Head of certification body



Date of issue: 11 of January 2010

Number of pages: 3  
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Ostrava-Radvanice

(13)

Schedule

(14) **EC-Type Examination Certificate N° FTZÚ 09 ATEX 0277X**

(15) Description of Equipment or Protective System:

The ultrasonic level meter type ULM-70Xi - \_ \_ -I consists of electro-acoustic converter, measuring module, display and adjusting modules. It is designed for screwing into vessel cover, so only electro-acoustic converter is installed in zone 0. Upper part (installed in zone 1) contains encapsulated measuring electronics and display and adjusting module. Output signal is current 4 – 20 mA with HART communication.

Maximum input parameters:

$U_i = 30 \text{ V}$ ;  $I_i = 132 \text{ mA}$ ;  $P_i = 0,99 \text{ W}$ ;  $C_i = 370 \text{ nF}$ ;  $L_i = 0,9 \text{ mH}$

Device types ULM-70Xi-02-I and ULM-70Xi-06-I are apparatus subgroup IIB.

Device types ULM-70Xi-10-I and ULM-70Xi-20-I are apparatus subgroup IIA.

Device ULM-70Xi-20-I is designed only for zone 1.

Ambient temperature:  $-30^\circ\text{C} \leq T_a \leq +70^\circ\text{C}$

(16) Report No.: 09/0277 (36 pages)

(17) Special conditions for safe use: none

17.1 The device is designed for connection to the supply unit type IRU-420.

17.2 When the other approved supply unit is used, whose output parameters satisfy above mentioned output parameters, it is necessary to have a galvanic separation or, if supply unit without galvanic separation is used (Zener barriers), it is necessary provide potential equalization between sensor and point of barrier earthing.

17.3 For application in zone 0 the present explosive atmospheres – mixture of air with flammable gases, vapour or mists must comply:  $-20^\circ\text{C} \leq T_a \leq +60^\circ\text{C}$ ;  $0,8 \text{ bar} \leq p \leq 1,1 \text{ bar}$

17.4 The device must be installed in such a way, to prevent mechanical damage of sensor face.

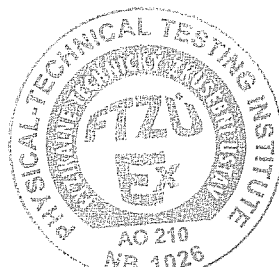
(18) Essential Health and Safety Requirements:

Essential health and safety requirement of Directive 94/9/EC are covered by standards mentioned in (9), according which the product was verified and in manufacturer's instruction for use.

Responsible person:

Dipl. Ing. Šindler Jaroslav  
Head of certification body

Date of issue: 11 of January 2010



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Physical Technical Testing Institute  
Ostrava-Radvanice

(13)

Schedule

(14) **EC-Type Examination Certificate N° FTZÚ 09 ATEX 0277X**

(19)

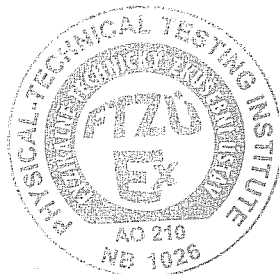
**LIST OF DOCUMENTATION**

<i>Documentation:</i>	<i>Date:</i>
1. Technical conditions ULM-70 (12 pages)	09/2009
2. Production documentation ULM-70Xi (6 pages)	09/2009
3. Drawings:	
• Annex 1: Circuitry ULM-70Xi - ___ -I board ULM-70-Z	
• Annex 2: Circuitry ULM-70Xi - ___ -I board ULM-70-P	
• Annex 3: Circuitry ULM-70Xi - ___ -I board ULM-70-M	
• Annex 4: Circuitry ULM-70Xi - ___ -I board ULM-70-D a ULM-70-K	
• Annex 5: PCB component layout ULM-70Xi - ___ -I board ULM-70-Z (side Top)	
• Annex 6: PCB component layout ULM-70Xi - ___ -I board ULM-70-Z (side Bottom)	
• Annex 7: PCB component layout ULM-70Xi - ___ -I board ULM-70-P (side Top)	
• Annex 8: PCB component layout ULM-70Xi - ___ -I board ULM-70-P (side Bottom)	
• Annex 9: PCB component layout ULM-70Xi - ___ -I board ULM-70-M (side Top)	
• Annex 10: PCB component layout ULM-70Xi - ___ -I board ULM-70-M (side Bottom)	
• Annex 11: PCB component layout ULM-70Xi - ___ -I board ULM-70-D (side Top)	
• Annex 12: PCB component layout ULM-70Xi - ___ -I board ULM-70-D (side Bottom)	
• Annex 27: Printed circuit board image ULM-70Xi - ___ -I board ULM-70-Z	
• Annex 28: Printed circuit board image ULM-70Xi - ___ -I board ULM-70-P	
• Annex 29: Printed circuit board image ULM-70Xi - ___ -I board ULM-70-M	
• Annex 30: Printed circuit board image ULM-70Xi - ___ -I board ULM-70-D a ULM-70-K	
• Annex 31: List of component ULM-70Xi - ___ -I (4 pages)	
• Annex 32: Content of sticker plate ULM-70Xi - ___ -I	
ULM – 70 – 100	09.09.2009
ULM – 70 – 200	12.5. 2009
ULM – 70 – 400	14.5. 2009
ULM – 70 – 500	15.5. 2009

All annexes were verified on 11.01. 2010

Responsible person:

Dipl. Ing. Šindler Jaroslav  
Head of certification body



Date of issue: 11 of January 2010

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