Physical Technical Testing Institute
Ostrava – Radvanice

(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:

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

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

PHYSICAL-TECHNICAL TESTING INSTITUTE FTZÚ TECHNICKÝ ZKUŠEBNÍ ÚSTAV AO 210 NB 1026

Responsible person:

Dipl. Ing. Lukáš Martinák
Head of Certification Body

Date of issue: 13.03.2015

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(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 bar ≤ p ≤ 1,1 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

PHYSICAL-TECHNICAL TESTING INSTITUTE AO 210 NB 1026

Date of issue: 13.03.2015

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(13) **Schedule**

(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

PHYSICAL-TECHNICAL TESTING INSTITUTE FTZÚ Ex AO 210 NB 1026

Date of issue: 13.03.2015

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Physical Technical Testing Institute

Ostrava-Radvanice

(1) # 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 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

PHYSICAL-TECHNICAL TESTING INSTITUTE FTZÚ AO 210 NB 1026

Date of issue: 11 of January 2010

Number of pages: 3
Page: 1/3

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(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:
$U_i = 30$ V; $I_i = 132$ mA; $P_i = 0{,}99$ W; $C_i = 370$ nF; $L_i = 0{,}9$ 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: $-30°C \leq Ta \leq +70°C$

(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: $-20°C \leq T_a \leq +60°C$; $0{,}8$ bar $\leq p \leq 1{,}1$ 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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(13) **Schedule**

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

(19) **LIST OF DOCUMENTATION**

	Documentation:	*Date:*
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

PHYSICAL-TECHNICAL TESTING INSTITUTE FTZÚ AD 210 NB 1026

Date of issue: 11 of January 2010

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