



Supplement No. 1 to 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 0119X

(4) Equipment or protective system: **Ultrasonic level meter type ULM-53Xi-__-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
- introduction of new model ULS-53 Xi-__-S-__

(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:

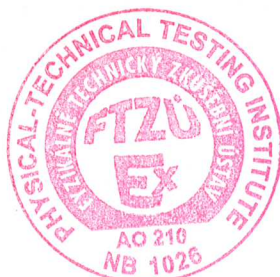
 **II 1/2G Ex ia IIB/IIA T5 Ga/Gb**

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

(12) This type examination certificate is valid till: **25.05.2020**

Responsible person:


Dipl. Ing. Lukáš Martinák
Head of Certification Body



Date of issue: 25.05.2015

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Physical Technical Testing Institute
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(15) Description of Equipment or Protective System:

On equipment "Ultrasonic level meter type ULM-53Xi-__-__-I-__" were carried out changes. Is introduced new model ULS-53 Xi-__-__-S-__ which is based on model ULM-53Xi-__-I. Marking of equipment was actualized. Special condition 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:

Devices types ULM-53Xi-01-__-I-__ and ULS-53Xi-01-__-S-__ are equipments subgroup IIB.

Devices types ULM-53Xi-02-__-I-__ and ULS-53Xi-02-__-S-__ are equipments subgroup IIB.

Devices types ULM-53Xi-06-__-I-__ and ULS-53Xi-06-__-S-__ are equipments subgroup IIB.

Devices types ULM-53Xi-10-__-I-__ and ULS-53Xi-10-__-S-__ are equipments subgroup IIA.

Devices types ULM-53Xi-20-__-I-__ and ULS-53Xi-20-__-S-__ are equipments subgroup IIA.

Devices types ULM-53Xi-20-__-I-__ and ULS-53Xi-20-__-S-__ are designed only for zone 1.

(16) Report No.: 09/0119-1

(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 For models ULM-53Xi-20-F-I-__ a ULS-53Xi-20-F-S-__ is necessary carried out earthing of flange by screw which is placed on flange.

(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.

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Head of Certification Body



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(19) List of Documentation:

Name:	Drawing No.:	Date:	Pages:
Technical conditions ULM-53 and ULS-53	-	02.2015	21
User's manual	-	03.2015	32
Production documentation ULM-53Xi and ULS-53Xi	-	02.2015	4
Schematic diagrams:			
ULx-53 _ _ _ _ _	ULx-53-SZ-01	15.01.2015	1
ULx-53 _ _ _ -I- _ _	ULx-53-SZ-02	15.01.2015	1
ULS-53 _ _ _ -S- _ _	ULx-53-SZ-03	15.01.2015	1
ULx-53 _ _ _ _ _ -T	ULx-53-SZ-04	15.01.2015	1
ULx-53 _ _ _ _ _ -M(L)	ULx-53-SZ-05	15.01.2015	1
ULx-53 _ _ _ _ _ -G- _	ULx-53-SZ-06	15.01.2015	1
ULx-53 _ _ _ _ _ -C- _	ULx-53-SZ-07	15.01.2015	1
PCB's:			
ULx-53 _ _ _ _ _	ULx-53-MO-01	15.01.2015	1
ULx-53 _ _ _ _ _	ULx-53-MO-02	15.01.2015	1
ULx-53 _ _ _ -I- _ _	ULx-53-MO-03	15.01.2015	1
ULx-53 _ _ _ -I- _ _	ULx-53-MO-04	15.01.2015	1
ULS-53 _ _ _ -S- _ _	ULx-53-MO-05	15.01.2015	1
ULS-53 _ _ _ -S- _ _	ULx-53-MO-06	15.01.2015	1
ULx-53 _ _ _ _ _ -T	ULx-53-MO-07	15.01.2015	1
ULx-53 _ _ _ _ _ -T	ULx-53-MO-08	15.01.2015	1
ULx-53 _ _ _ _ _ -M	ULx-53-MO-09	15.01.2015	1
ULx-53 _ _ _ _ _ -M	ULx-53-MO-10	15.01.2015	1
ULx-53 _ _ _ _ _ -G- _	ULx-53-MO-11	15.01.2015	1
ULx-53 _ _ _ _ _ -G- _	ULx-53-MO-12	15.01.2015	1
ULx-53 _ _ _ _ _ -C- _	ULx-53-MO-13	15.01.2015	1
ULx-53 _ _ _ _ _ -C- _	ULx-53-MO-14	15.01.2015	1
Mounting schemes:			
ULx-53 _ _ _ _ _	ULx-53-OS-01	15.01.2015	1
ULx-53 _ _ _ _ _	ULx-53-OS-02	15.01.2015	1
ULx-53 _ _ _ -I- _ _	ULx-53-OS-03	15.01.2015	1
ULx-53 _ _ _ -I- _ _	ULx-53-OS-04	15.01.2015	1
ULS-53 _ _ _ -S- _ _	ULx-53-OS-05	15.01.2015	1
ULS-53 _ _ _ -S- _ _	ULx-53-OS-06	15.01.2015	1
ULx-53 _ _ _ _ _ -T	ULx-53-OS-07	15.01.2015	1
ULx-53 _ _ _ _ _ -M(L)	ULx-53-OS-08	15.01.2015	1
ULx-53 _ _ _ _ _ -G- _	ULx-53-OS-09	15.01.2015	1

Responsible person:

Date of issue: 25.05.2015


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Name:	Drawing No.:	Date:	Pages:
ULx-53_-- --C_	ULx-53-OS-10	15.01.2015	1
Bills of material:			
ULx-53_01- -- --	ULx-53-SS-01	15.01.2015	1
ULx-53_02- -- --	ULx-53-SS-02	15.01.2015	1
ULx-53_06- -- --	ULx-53-SS-03	15.01.2015	1
ULx-53_10- -- --	ULx-53-SS-04	15.01.2015	1
ULx-53_20- -- --	ULx-53-SS-05	15.01.2015	1
ULx-53_-- -I- --	ULx-53-SS-06	15.01.2015	1
ULS-53_-- -S- --	ULx-53-SS-07	15.01.2015	1
ULx-53_-- -- -T	ULx-53-SS-08	15.01.2015	1
ULx-53_-- -- -M(L)	ULx-53-SS-09	15.01.2015	1
ULx-53_-- -- -G-	ULx-53-SS-10	15.01.2015	1
ULx-53_-- -- -C-	ULx-53-SS-11	15.01.2015	1
Labels:			
ULx-53_-- -I- --	ULx-53-OD-01	15.01.2015	1
ULM-53_-- -U(M)- --	ULx-53-OD-02	15.01.2015	1
ULS-53_-- -S- --	ULx-53-OD-03	15.01.2015	1
ULS-53_-- -P- --	ULx-53-OD-04	15.01.2015	1
Transformers:			
ULM 01	211.001	15.12.2014	2
ULM 02	211.002	25.11.2014	2
ULM 03	211.003	25.11.2014	2
ULM 04	211.004	25.11.2014	2
ULM 05	211.005	15.12.2014	2
Assembly ULM-53_02	ULM-53-100	18.12.2014	1
Assembly ULM-53_06	ULM-53-200	18.12.2014	1
Assembly ULM-53_20	ULM-53-500	18.12.2014	1
Assembly ULM-53_10	ULM-53-600	18.12.2014	1
Assembly ULM-53_01	ULM-53-700	18.12.2014	1

Responsible person:



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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 0119X

(4) Equipment or protective system: **Ultrasonic level meter type ULM-53Xi - __-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°

09/0119 dated 26.02.2010

(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.

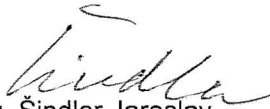
(12) The marking of the equipment or protective system shall include following:

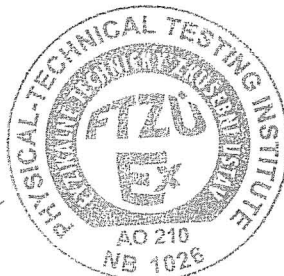


**II 1/2G Ex ia IIB/IIA T5
II 2G Ex ia IIA T5**

This EC-Type Examination Certificate is valid till: **26. 02. 2015**

Responsible person:


Dipl. Ing. Šindler Jaroslav
Head of certification body



Date of issue: 26.02.2010

Number of pages: 3
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(14) **EC-Type Examination Certificate N° FTZÚ 09 ATEX 0119X**

(15) Description of Equipment or Protective System:

The ultrasonic level meter type ULM-53Xi - _ _ -I consists of electro-acoustic converter and processing electronics. It is designed for screwing into vessel cover, so only electro-acoustic converter is installed in zone 0. The upper part (installed in zone 1) contains encapsulated processing electronics. Output signal is current 4 – 20 mA.

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-53Xi-02-I and ULM-53Xi-06-I are apparatus subgroup IIB.

Device types ULM-53Xi-10-I and ULM-53Xi-20-I are apparatus subgroup IIA.

Device ULM-53Xi-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.: 09/0119 (34 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: $- 20^\circ\text{C} \leq T_a \leq + 60^\circ\text{C}$; $0,8 \text{ bar} \leq p \leq 1,1 \text{ bar}$

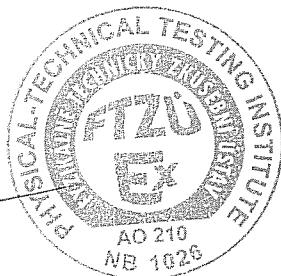
17.4 The device must be installed in such a way, to prevent mechanical damage of sensor face.

(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.

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(14) **EC-Type Examination Certificate N° FTZÚ 09 ATEX 0119X**

(19)

LIST OF DOCUMENTATION

Documentation:

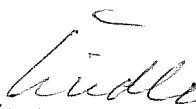
Date:

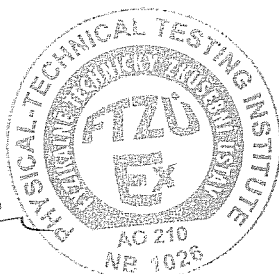
- | | |
|---|------------|
| 1. Technical conditions ULM-53 (14 pages) | 01/2010 |
| 2. Production documentation ULM-53Xi (4 pages) | 01/2010 |
| 3. Drawings: | |
| • Annex 1: Circuitry ULM-53Xi -_-I board ULM53-Z and ULM53-F | |
| • Annex 2: Circuitry ULM-53Xi -_-I board ULM53-M | |
| • Annex 3: PCB component layout ULM-53Xi -_-I board ULM53-Z | |
| • Annex 4: PCB component layout ULM-53Xi -_-I board ULM53-M | |
| • Annex 5: PCB component layout ULM-53Xi -_-I board ULM53-F | |
| • Annex 17: Printed circuit board image ULM-53Xi -_-I board ULM53-Z | |
| • Annex 18: Printed circuit board image ULM-53Xi -_-I board ULM53-M | |
| • Annex 19: Printed circuit board image ULM-53Xi -_-I board ULM53-F | |
| • Annex 20: List of component ULM-53Xi -_-I | |
| • Annex 22: Content of sticker plate ULM-53Xi -_-I | |
| • Annex 24: Transformers (3 sheets) | |
| ULM – 53 – 100 | 21.01.2009 |
| ULM – 53 – 200 | 21.01.2009 |
| ULM – 53 – 400 | 09.09.2009 |
| ULM – 53 – 500 | 30.01.2009 |

All annexes were verified on 26.02. 2010

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