



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

- (2) **Component Intended for use on/in an Equipment or Protective System
Intended for use in Potentially Explosive Atmospheres
(Directive 2014/34/EU)**

- (3) EU - Type Examination Certificate number:

FTZÚ 12 ATEX 0139U

- (4) Product: **The induction sensor type IS X.1XXEx**
- (5) Manufacturer: **ELIS PLZEŇ a. s.**
- (6) Address: **Luční 425/15, P.O.BOX 126, 304 26 Plzeň, Czech Republic**
- (7) This supplementary certificate extends EC - Type Examination Certificate No. FTZÚ 12 ATEX 0139U 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 60079-0:2012+A11:2013, EN 60079-7:2015, EN 60079-11:2012
EN 60079-31:2014**

The marking of the product shall include the following:

 **II 2G Ex eb ia IIC Gb**

 **II 2D Ex tb IIIC Db**

- (11) This certificate is valid till: **31.10.2024**

Responsible person:


Dipl. Ing. Lukáš Martinák
Head of Certification Body



Date of issue: 29.10.2019

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Annex No. 1 (1 sheet)



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

Schedule

(13)

(14) **Supplementary EU - Type Examination Certificate No. 1
to FTZÚ 12 ATEX 0139U**

(15) Description of the variation to the Product:

The subject of this supplementary certificate is:

- Evaluation according to the newest standards: EN 60079-7:2015 and EN 60079-31:2014;
- Prolongation of certificate validity.

Technical parameters and construction remain unchanged.

(16) Report Number.: 12/0139/1

(17) Schedule of Limitations:

1. The intrinsic safety circuits sensing electrode circuit shall be connected to other intrinsic safety systems whose output parameters shall be within the sensor input parameters (green and white conductors); $U_i \leq 30 \text{ V}$, $I_i \leq 100 \text{ mA}$, C_i and L_i negligible.
2. The maximum permitted fluid temperature depends on the pipe lining material; the temperature class and the maximum permitted surface temperature (see Annex No. 1).
3. The induction sensor shall be fully flooded at all times.
4. Excitation of coils max. 200 mA.
5. Range of temperature: $-35^\circ\text{C} \leq T_{\text{amb}} \leq +60^\circ\text{C}$.

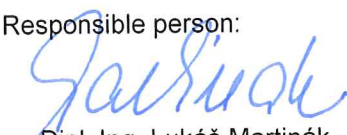
(18) Essential Health and Safety Requirements:

Compliance with the Essential Health and Safety Requirements is covered by standards mentioned in clause (10) of this supplementary certificate.

(19) Drawings and Documents:

Number	Sheets	Issue	Date	Description
Es 402080/a	1	a	18.01.2018	Label induction sensor
Es 90 556 K	17	a	--	Technical description

Responsible person:


Dipl. Ing. Lukáš Martinák
Head of Certification Body



Date of issue: 29.10.2019

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Physical-Technical Testing Institute
Ostrava - Radvanice

Annex No. 1

**to Supplementary EU - Type Examination Certificate No. 1
to FTZÚ 12 ATEX 0139U**

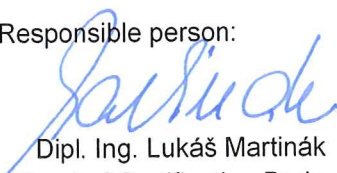
For DN 15 and DN 25

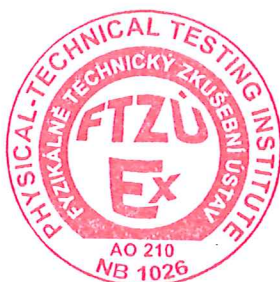
<i>Type of lining</i>	<i>Maximum temperature of measured medium</i>	<i>Temperature class for 2G</i>	<i>Surface temperature for 2D</i>
MG	-35°C ÷ +48°C	T6	80°C
NG	+5°C ÷ +48°C	T6	80°C
PTFE	-35°C ÷ +48°C	T6	80°C
PTFE	-35°C ÷ +63°C	T5	95°C
PTFE	-35°C ÷ +98°C	T4	130°C
PTFE	-35°C ÷ +123°C	T3	155°C

For DN 32-300

<i>Type of lining</i>	<i>Maximum temperature of measured medium</i>	<i>Temperature class for 2G</i>	<i>Surface temperature for 2D</i>
MG	-35°C ÷ +64°C	T6	80°C
NG	+5°C ÷ +64°C	T6	80°C
E-CTFE a PTFE	-35°C ÷ +64°C	T6	80°C
E-CTFE a PTFE	-35°C ÷ +79°C	T5	95°C
E-CTFE a PTFE	-35°C ÷ +114°C	T4	130°C
E-CTFE a PTFE	-35°C ÷ +139°C	T3	155°C

Responsible person:


Dipl. Ing. Lukáš Martinák
Head of Certification Body



Date of issue: 29.10.2019

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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 12 ATEX 0139U

(4) Component: **The induction sensor type IS X.1XXEx**

(5) Manufacturer: **ELIS PLZEŇ a. s.**

(6) Address: **Luční 425/15, P.O.BOX 126, 304 26 Plzeň, Czech Republic**

(7) This Component 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°

12/0139 dated 31 July 2014

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

**EN 60079-0:2012; EN 60079-7:2007; EN 60079-11:2012
EN 60079-31:2009**

(10) The sign „U“ placed after the certificate number indicates that this certificate must not be mistaken for a certificate intended for an equipment or protective system. This partial certification may be used as a basis for certification of an equipment or protective system.

(11) This EC-TYPE EXAMINATION CERTIFICATE relates only to design, examination and testing of the specified component in accordance to the directive 94/9/EC. If applicable, further requirements of the Directive apply to the manufacture and supply of this component.

(12) The marking of the component shall include following:

 **II 2G Ex e ia IIC Gb**

 **II 2D Ex tb IIIC Db**

This EC-Type Examination Certificate is valid till: **31.08.2019**

Responsible person:


Dipl. Ing. Lukáš Martinák
Head of certification body



Date of issue: 08.08.2014

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**Physical Technical Testing Institute
Ostrava-Radvanice**

(13)

Schedule

(14) **EC-Type Examination Certificate N° FTZÚ 12 ATEX 0139U**

(19)

LIST OF DOCUMENTATION

- Manual for designing, application and service No. Es 90 556 K/a (17 pages)
- Drawings No.:

Es 301449	date of issued 13.03.2014
Es 301453	date of issued 29.04.2014
Es 301454	date of issued 19.07.2014
Es 402077	date of issued 16.07.2014
Es 402079	date of issued 18.07.2014
Es 402080	date of issued 18.07.2014
Es 402082	date of issued 08.08.2014

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**Physical Technical Testing Institute
Ostrava-Radvanice**

(13)

Schedule

(14) **EC-Type Examination Certificate N° FTZÚ 12 ATEX 0139U**

(15) Description of Component:

Induction sensor of the type designation IS X.1XXEx consists of a measurement pipe section of nominal inner diameter DN 15 ... DN 300, measuring electrodes, electromagnetic excitation coils and the so-called "chimney" - a steel pipe with a stainless-steel flange used to provide mechanical connection to the electronic unit of the induction flow meter or a terminal box.

The internal surface of the measurement pipe section is lined with materials of different thermal conductivity - see Annex No. 2. The measuring electrodes (white and green conductors) shall be connected to intrinsic safety circuits "ia". The electromagnetic coils (brown and blue conductors) are attached onto the pipe section and protected with a cover; the coil design meets the safety standards referred to as "e".

(16) Report No. : 12/0139

dated 31 July 2014

(17) Schedule of Limitations:

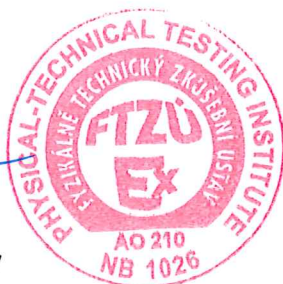
- 17.1 The intrinsic safety circuits sensing electrode circuit shall be connected to other intrinsic safety systems whose output parameters shall be within the sensor input parameters (green and white conductors); $U_i \leq 30 \text{ V}$, $I_i \leq 100 \text{ mA}$, C_i and L_i negligible.
- 17.2 The maximum permitted fluid temperature depends on the pipe lining material; the temperature class and the maximum permitted surface temperature (see Annex No. 1).
- 17.3 The induction sensor shall be fully flooded at all times.
- 17.4 Excitation of coils max. 200 mA.
- 17.5 $-35^\circ\text{C} \leq T_{\text{amb}} \leq +60^\circ\text{C}$

(18) The basic requirements regarding health protection and labour safety:

- 18.1 Covered by standards mentioned in (9) of this document.
- 18.2 At installation and operation of induction sensor observe requirements of manual.

Responsible person:


Dipl. Ing. Lukáš Martinák
Head of certification body



Date of issue: 08.08.2014

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Physical Technical Testing Institute
Ostrava-Radvanice

ANNEXES
to EC-Type Examination Certificate N° FTZÚ 12 ATEX 0139U

Annex No. 1

For DN 15 and DN 25

Type of lining	Maximum temperature of measured medium	Temperature class for 2G	Surface temperature 2D
MG	-35°C ÷ +48°C	T6	80°C
NG	+5°C ÷ +48°C	T6	80°C
E-CTFE a PTFE	-35°C ÷ +48°C	T6	80°C
E-CTFE a PTFE	-35°C ÷ +63°C	T5	95°C
E-CTFE a PTFE	-35°C ÷ +98°C	T4	130°C
E-CTFE a PTFE	-35°C ÷ +123°C	T3	155°C

For DN 32-300

Type of lining	Maximum temperature of measured medium	Temperature class for 2G	Surface temperature 2D
MG	-35°C ÷ +64°C	T6	80°C
NG	+5°C ÷ +64°C	T6	80°C
E-CTFE a PTFE	-35°C ÷ +64°C	T6	80°C
E-CTFE a PTFE	-35°C ÷ +79°C	T5	95°C
E-CTFE a PTFE	-35°C ÷ +114°C	T4	130°C
E-CTFE a PTFE	-35°C ÷ +139°C	T3	155°C

Annex No. 2

The temperature of measured medium according to lining of sensor:

Type of lining:	Operating temperature of measured medium:
Soft rubber (MG)	-35°C ÷ +80°C
Hard rubber for drinking water (NG)	+5°C ÷ +80°C
E-CTFE	-35°C ÷ +130°C
PTFE (Teflon)	-35°C ÷ +230°C

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