



## EC-Type Examination Certificate

- (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 08 ATEX 0160X**
- (4) Equipment or protective system: **Temperature Transmitter type LI-24**
- (5) Manufacturer: **APLISENS S.A.**
- (6) Address: **ul. Morelowa 7, 03-192 Warszawa, Poland**
- (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°  
**08/0160 dated 02.09.2008**
- (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 : 2004; EN 50303 : 2000**
- (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 1G Ex ia IIC T4/T5**

 **I M1 Ex ia I**

This EC-Type Examination Certificate is valid till: **10. 09. 2013**

Responsible person:

  
Dipl. Ing. Šindler Jaroslav  
Head of certification body



Date of issue: 10.09.2008

Number of pages: 3

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Physical Technical Testing Institute  
Ostrava-Radvanice

(13)

Schedule

(14) **EC-Type Examination Certificate N° FTZÚ 08 ATEX 0160X**

(15) Description of Equipment or Protective System:

An LI-24 Temperature Transmitter is designed to process the signal from resistive or thermoelectric temperature sensors and to convert it into an electric signal 4 to 20 mA.

The apparatus comprises a printed circuit board (PCB) on which all of the electronic components are mounted. The PCB is housed inside a moulded plastic box suitable for installation on a DIN rail. The unit must be protected with another enclosure, when installed in hazardous area – see (17).

Input/output parameters:

Supply/signal circuits, terminals DC-DC:

Linear power supply output characteristic:

$U_i = 30 \text{ V}$ ;  $I_i = 0,1 \text{ A}$ ;  $P_i = 0,75 \text{ W}$ ;  $C_i = 5 \text{ nF}$ ;  $L_i = 1,1 \text{ mH}$ , temperature class T5

Range of permissible ambient temperature:  $T_a = -40^\circ\text{C}$  to  $+70^\circ\text{C}$

Trapezoidal power supply output characteristic:

$U_i = 24 \text{ V}$ ;  $I_i = 50 \text{ mA}$ ;  $P_i = 0,7 \text{ W}$ ;  $C_i = 5 \text{ nF}$ ;  $L_i = 1,1 \text{ mH}$ , temperature class T5

Range of permissible ambient temperature:  $T_a = -40^\circ\text{C}$  to  $+75^\circ\text{C}$

Rectangular power supply output characteristic:

$U_i = 24 \text{ V}$ ;  $I_i = 25 \text{ mA}$ ;  $P_i = 0,6 \text{ W}$ ;  $C_i = 5 \text{ nF}$ ;  $L_i = 1,1 \text{ mH}$ , temperature class T5

$U_i = 24 \text{ V}$ ;  $I_i = 50 \text{ mA}$ ;  $P_i = 1,2 \text{ W}$ ;  $C_i = 5 \text{ nF}$ ;  $L_i = 1,1 \text{ mH}$ , temperature class T4

Range of permissible ambient temperature:  $T_a = -40^\circ\text{C}$  to  $+75^\circ\text{C}$

Temperature sensor circuits, terminals 1, 2, 3, 4, 5:

$U_o = 6 \text{ V}$ ;  $I_o = 0,1 \text{ A}$ ;  $P_o = 0,5 \text{ W}$ ;  $C_o = 10 \text{ }\mu\text{F}$ ;  $L_o = 1,5 \text{ mH}$

(16) Report No. : 08/0160

(17) Special conditions for safe use:


17.1 When installed as category G equipment, the unit must be mounted inside of enclosure or under the cover complying with requirements of EN 60079-0 : 2006, clause 7.3.2 or 8.1.2 when these are made of plastic and light alloy respectively.

17.2 When installed as category M1 or M2 equipment the unit must be mounted inside of enclosure which affords it a degree of protection of at least IP 54. Non-metallic enclosures must comply with requirements of EN 60079-0 : 2006, clause 7.3.2. Light alloy enclosures are not allowed.

(18) Essential Health and Safety Requirements:

Essential health and safety requirements of Directive 94/9/EC are covered by standards mentioned in (9), according to 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: 10.09.2008

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Physical Technical Testing Institute  
Ostrava-Radvanice

(13)

Schedule

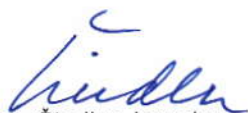
(14) EC-Type Examination Certificate N° FTZÚ 08 ATEX 0160X

(19)

LIST OF DOCUMENTATION

<i>Documentation:</i>	<i>Date:</i>
1. Technical documentation DT.LI-24Ex	05/2008
2. Drawings No.:	
LI24-A000-00	05/2008
LI24-A000-01 (2 sheets)	05/2008
LI24-A001-01 (2 sheets)	05/2008
LI24-C001-01	05/2008
LI24-C002-01	05/2008
LI24-C003-01	05/2008
LI24-C004-TA	05/2008
LI24-S001-01 (2 sheets)	05/2008
LI24-B001-01 (7 sheets)	05/2008
A-251-00	12/2007
APC2000-B622-00	12/2007
APC2000-612-00	12/2007
3. Analysis of Ex requirements No. AN.LI-24.Ex.01 (13 pages)	
4. Instruction manual No. DTR.LI-24	06/2008

Responsible person:

  
Dipl. Ing. Šindler Jaroslav  
Head of certification body



Date of issue: 10.09.2008

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(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 08 ATEX 0160X**

(4) Equipment or protective system: **Temperature Transmitter type LI-24**

(5) Manufacturer: **APLISENS S. A.**

(6) Address: **ul. Morełowa 7, 03-192 Warszawa, Poland**

(7) This supplement of certificate is valid for: - 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 : 2006; EN 60079-11 : 2007; EN 60079-26 : 2004; EN 50303 : 2000**


(11) Marking of equipment shall contain symbols:

 **II 1G Ex ia IIC T4/T5**

 **I M1 Ex ia I**

(12) This type examination certificate is valid till: **10. 09. 2013**

Responsible person:

  
Dipl. Ing. Sındler Jaroslav  
Head of certification body



Date of issue: 15.02.2010

Number of pages: 3

Page: 1/3

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**Physical Technical Testing Institute  
Ostrava-Radvanice**

(13) **Schedule**

(14) **Supplement No. 1 to  
EC-Type Examination Certificate N° FTZÚ 08 ATEX 0160X**

(15) Description of Equipment or Protective System:

Variation one:

1. To improve screening of electronics, a screening plate added to the lower part of enclosure.
2. The printed circuit board MPT 2 changed from rev. 2 to rev. 2.1 and the contact springs added to enable contact of the PCB with the screening plate.
3. Omitting of some elements, changes of value of some elements, some other elements added.
4. Update of some drawings.

The described changes do not affect intrinsic safety.

Input/output parameters listed in the basic certificate remain unchanged.

(16) Report No.: 08/0160/1

(17) Special conditions for safe use: remain unchanged

(18) Essential Health and Safety Requirements:

Covered by standards mentioned in (10).

Responsible person:

  
Dipl. Ing. Sindler Jaroslav  
Head of certification body



Date of issue: 15.02.2010

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(13)

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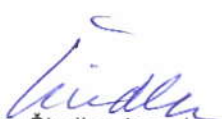
Supplement No. 1 to  
EC-Type Examination Certificate N° FTZÚ 08 ATEX 0160X

(19)

LIST OF DOCUMENTATION

<i>Documentation:</i>	<i>Date:</i>
1. Instruction manual, edition B	10/2009
2. Drawings No.:	
LI24-A000-05	10/2009
LI24-A000-00	10/2009
LI24-A001-01 (sheet 1A)	05/2008
LI24-A001-01 (sheet 2A)	06/2008
LI24-C002-01	10/2009
LI24-C004-TA	10/2009
LI24-S001-01 (sheet 1A)	10/2009
LI24-S001-01 (sheet 2A)	10/2009
LI24-B001-01 (sheet 1A)	10/2009
LI24-B001-01 (sheet 2A)	10/2009
LI24-B001-01 (sheet 3A)	10/2009
LI24-B001-01 (sheet 4A)	10/2009
LI24-B001-01 (sheet 5A)	10/2009
LI24-B001-01 (sheet 6A)	10/2009
LI24-B001-01 (sheet 7A)	10/2009
LI24-B001-01 (sheet 8A)	10/2009
LI24-B001-01 (sheet 9A)	10/2009
LI24-B002-01	08/2009
LI24-B003-01	08/2009

Responsible person:

  
Dipl. Ing. Šindler Jaroslav  
Head of certification body



Date of issue: 15.02.2010

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(1) **Supplement No. 2 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 08 ATEX 0160X**

(4) Equipment or protective system: **Temperature Transmitter type LI-24**

(5) Manufacturer: **APLISENS S. A.**

(6) Address: **ul. Morelowa 7, 03-192 Warszawa, Poland**

(7) This supplement of certificate is valid for: - application of new standards  
- prolongation of certificate validity  
- modification of apparatus marking


(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 60079-0:2009, EN 60079-11:2012, EN 60079-26:2007, EN 50303:2000**

(11) Marking of equipment shall contain symbols:

 **II 1G Ex ia IIC T4/T5 Ga  
I M1 Ex ia I Ma**

(12) This type examination certificate is valid till: **16.07.2017**

Responsible person:

  
Dipl. Ing. Lukáš Martinák  
Head of Certification Body



Date of issue: 16.07.2012

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Physical Technical Testing Institute  
Ostrava – Radvanice

(13) **Schedule**  
(14) **Supplement No. 2 to**  
**EC-Type Examination Certificate N° FTZÚ 08 ATEX 0160X**

(15) Description of Equipment or Protective System:

Technical parameters and construction of apparatus remain unchanged.

(16) Report No.: 08/0160/2

(17) Special conditions for safe use: are modified according valid standards

17.1 When installed as category G equipment, the unit must be mounted inside of enclosure or under the cover complying with requirements of EN 60079-0 : 2009, clause 7.4.2 or 8.1.2 when these are made of plastic and light alloy respectively.

17.2 When installed as category M1 or M2 equipment the unit must be mounted inside of enclosure which affords it a degree of protection of at least IP 54. Non-metallic enclosures must comply with requirements of EN 60079-0 : 2009, clause 7.4.2. Light alloy enclosures are not allowed.

(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 new model was verified and in the manufacturer's Instruction for Using.

(19) List of Documentation: for new model

*Document name / Drawing:*  
LI24-C001-01

*Date:*  
05.2012

*Nr. of Pages:*  
1

Responsible person:

  
Dipl. Ing. Lukáš Martinák  
Head of Certification Body



Date of issue: 16.07.2012

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(1) **Supplementary EU - Type Examination Certificate No.3**

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

(3) EU - Type Examination Certificate number:

**FTZÚ 08 ATEX 0160X**

(4) Product: **Temperature Transmitter type LI-24**

(5) Manufacturer: **APLISENS S.A.**

(6) Address: **ul. Morelowa 7, 03-192 Warszawa, Poland**

(7) This supplementary certificate extends EC - Type Examination Certificate No. FTZÚ 08 ATEX 0160X 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 60079-11:2012, EN 50303:2000**

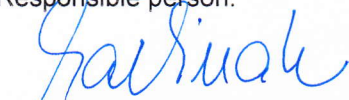
(11) The marking of the product shall include the following:



**II 1G Ex ia IIC T4/T5 Ga  
I M1 Ex ia I Ma**

(12) This certificate is valid till: **17.07.2022**

Responsible person:

  
Dipl. Ing. Lukáš Martinák  
Head of Certification Body



Date of issue: 17.07.2017

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Physical-Technical Testing Institute  
Ostrava - Radvanice

(13)

Schedule

(14) **Supplementary EU - Type Examination Certificate No. 3  
to FTZÚ 08 ATEX 0160X**

(15) Description of the variation to the Product:

The subject of this supplementary certificate is:

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

Technical parameters and construction of the product Temperature Transmitter type LI-24 remain unchanged.

(16) Report Number.: 08/0160/3

(17) Specific Conditions of Use:

Modified to those listed previously according to actual standards:

1. The operating instructions must be taken into account during installation. When installed as category G equipment, the unit must be mounted inside of enclosure or under the cover complying with requirements of EN 60079-0:2012, clause 7.4.2 or 8.3, when these are made of plastic and light alloy respectively.
2. When installed as category M1 or M2 equipment the unit must be mounted inside of enclosure which affords it a degree of protection of at least IP 54. Non-metallic enclosures must comply with requirements of EN 60079-0:2012, clause 7.4.2. Light alloy enclosures are not allowed.

(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:

Title / Drawing No.:	Version:	Date:	Nr. of Pages:
DTR.LI-24	G	05.2017	12

Responsible person:

  
Dipl. Ing. Lukáš Martinák  
Head of Certification Body



Date of issue: 17.07.2017

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