



## 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 05 ATEX 0250**

- (4) Equipment or protective system: **Altair Portable Single Gas Detector**  
(5) Manufacturer: **Mine Safety Appliances Co. (Instrument Division)**  
(6) Address: **1000 Cranberry Township PA 16066-5207, U.S.A.**  
(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°

**05/0250 dated 21. 12. 2005**

(9) Compliance with Essential Health and safety requirements has been assured by compliance with:

**EN 50014:1997 + A1,+A2                      EN 50020:2002**

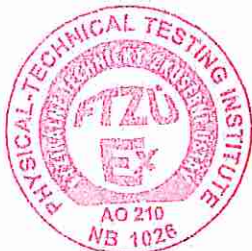
- (10) If the sign „X“ is placed after the certificate number, it indicates that the equipment or protective system is subject to special conditions for safe use specified in the schedule to this certificate.  
(11) This EC-TYPE EXAMINATION CERTIFICATE relates only to the design, examination and testing 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 2G EEx ia IIC T4**

This EC-Type Examination Certificate is valid till: **22. 12. 2010**

Responsible person:

Dipl. Ing. Šindler Jaroslav  
Head of certification body



Date of issue: 22.12.2005

Number of pages: 3

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Physical Technical Testing Institute  
Ostrava-Radvanice

(13)

**Schedule**

(14) **EC-Type Examination Certificate N° FTZÚ 05 ATEX 0250**

(15) Description of Equipment or Protective System:

The "Altair" portable single gas detector is initially available in three gas models e.g. O<sub>2</sub>, CO and H<sub>2</sub>S. The gas sensing cells are of the electro-chemical type. The instrument is powered by a non-replaceable lithium cell. The LCD display panel on the front displays the months of battery life remaining or the alarm range when in alarm mode. A push button allows users to select the information viewed on the LCD display. Audible and visual alarm indicators are located on the front of the apparatus, and an imbalanced motor produces an optional vibration alert when in alarm mode.

All electronic components are mounted on one printed circuit board and housed in an antistatic plastic enclosure.

*Ambient temperature:*  $T_a = -20^{\circ}\text{C}$  to  $+50^{\circ}\text{C}$

(16) Report No. : 05/0250


(17) Special conditions for safe use: none

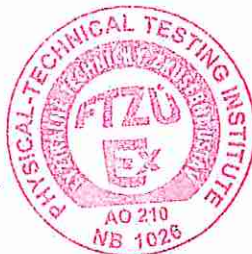
(18) Essential Health and Safety Requirements:

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

Responsible person:

Date of issue: 22.12.2005

  
Dipl. Ing. Sindler Jaroslav  
Head of certification body



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(13)

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(14) EC-Type Examination Certificate N° FTZÚ 05 ATEX 0250

(19)

LIST OF DOCUMENTATION

*Documentation:*

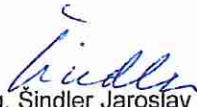
*Date of FTZÚ verification:*

Drawings No.:

SK3098-1011 Altair Approval Critical Items	22.12.2005
SK3098-1011 Altair Approval Critical Items, Labels (sheet 1 of 7)	22.12.2005
SK3098-1011 Altair Approval Critical Items, Assembly (sheet 2 of 7)	22.12.2005
SK3098-1011 Altair Approval Critical Items, Schematic (sheet 3 of 7)	22.12.2005
SK3098-1011 Altair Approval Critical Items, Parts List (sheet 4 of 7)	22.12.2005
SK3098-1011 Altair Approval Critical Items, PCB Layouts (sheet 5 of 7)	22.12.2005
SK3098-1011 Altair Approval Critical Items, Components (sheet 6 of 7)	22.12.2005
SK3098-1011 Altair Approval Critical Items, Manual (sheet 7 of 7)	22.12.2005
PCB Artwork Revision 3, for MSA10066407 (12 sheets)	22.12.2005
PCB Artwork Revision 3, for MSA10068318 (12 sheets)	22.12.2005

Responsible person:

Date of issue: 22.12.2005

  
Dipl. Ing. Sindler Jaroslav  
Head of certification body



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**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 05 ATEX 0250**

(4) Equipment or protective system: **Altair Portable Single Gas Detector**

(5) Manufacturer: **Mine Safety Appliances Co., Instrument Division**

(6) Address: **P.O.Box 427, Pittsburgh, PA 15230;  
1000 Cranberry Woods Drive, Cranberry Twp, PA 16066, U.S.A**

(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 50014:1997 + A1,+A2; EN 50020:2002**

(11) Marking of equipment shall contain symbols:

**Ex II 2G EEx ia IIC T4**

(12) This type examination certificate is valid till: **22. 12. 2010**

Responsible person:

Dipl. Ing. Šindler Jaroslav  
Head of certification body



Date of issue: 29.05.2008

Number of pages: 2  
Page: 1/2

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Supplement No. 1 to  
EC-Type Examination Certificate N° FTZÚ 05 ATEX 0250

(15) Description of Variation to the Equipment:

Variation one, to permit:

1. The use of an alternative case overmold material with the similar mechanical and electrostatic dissipative properties.
2. Minor drawing changes.

The changes do neither affect the intrinsic safety nor the ingress protection of apparatus.

(16) Report No. : 05/0250

(17) Special conditions for safe use: none

(18) Essential Health and Safety Requirements: remain unchanged

(19) List of documentation:

Drawings No.: SK3098-1011, Revision 1 (8 sheets)

29 May 2008

Responsible person:

Dipl. Ing. Šindler Jaroslav  
Head of certification body



Date of issue: 29.05.2008

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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 05 ATEX 0250**

(4) Equipment or protective system: **Altair Portable Single Gas Detector**

(5) Manufacturer: **Mine Safety Appliances Co., Instrument Division**

(6) Address: **P.O.Box 427, Pittsburgh, PA 15230;  
1000 Cranberry Woods Drive, Cranberry Twp, PA 16066, U.S.A**

(7) This supplement of certificate is valid for: - modification of certified apparatus  
- verification according to new standards

(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**

(11) Marking of equipment shall contain symbols:

**Ex II 2G Ex ia IIC T4**

(12) This type examination certificate is valid till: **22.12.2010**

Responsible person:

Dipl. Ing. Šindler Jaroslav  
Head of certification body



Date of issue: 01.12.2008

Number of pages: 2  
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**Schedule**

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**Supplement No. 2 to  
EC-Type Examination Certificate N° FTZÚ 05 ATEX 0250**

(15) Description of Variation to the Equipment:

Variation two, to permit:

- a) Verification according to the new standards mentioned in the point (10) of this supplement.
- b) The use of an alternative any color case overmold material with the similar mechanical and electrostatic dissipative properties.

The changes do neither affect the intrinsic safety nor the ingress protection of apparatus.

(16) Report No. : 05/0250/2, dated 28.11.2008 - 2 pages

(17) Special conditions for safe use: see the basic certificate

(18) Essential Health and Safety Requirements: see the basic certificate

(19) List of documentation:

[1] Drawings No.: SK3098-1011, Revision 2, date: 26.11.2008 - 8 pages

Date of verification of documentation by FTZÚ: 28.11.2008

Responsible person:

Dipl. Ing. Šindler Jaroslav  
Head of certification body



Date of issue: 01.12.2008

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## Supplement No. 3 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 05 ATEX 0250**

(4) Equipment or protective system: **Altair Portable Single Gas Detector**

(5) Manufacturer: **Mine Safety Appliances Co., Instrument Division**

(6) Address: **P.O.Box 427, Pittsburgh, PA 15230;  
1000 Cranberry Woods Drive, Cranberry Twp, PA 16066, U.S.A**

(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**

(11) Marking of equipment shall contain symbols:

**Ex II 2G Ex ia IIC T4**

(12) This type examination certificate is valid till: **22.12.2010**

Responsible person:

Dipl. Ing. Šindler Jaroslav  
Head of certification body



Date of issue: 11.01.2010

Number of pages: 2  
Page: 1/2

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Supplement No. 3 to  
EC-Type Examination Certificate N° FTZÚ 05 ATEX 0250

(15) Description of Variation to the Equipment:

Variation three, to permit:

a) Added -40°C as alternate minimum ambient temperature.

The change does neither affect the intrinsic safety nor the ingress protection of apparatus.

(16) Report No. : 05/0250/3, dated 11.01.2010 - 2 pages

(17) Special conditions for safe use: see the basic certificate

(18) Essential Health and Safety Requirements: see the basic certificate

(19) List of documentation:

[1] Drawings No.: SK3098-1011, Revision 3, Date: 05.12.2008 - 8 pages

Date of verification of documentation by FTZÚ: 11.01.2010

Responsible person:

Dipl. Ing. Šindler Jaroslav  
Head of certification body



Date of issue: 11.01.2010

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(1) **Supplement No. 4 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 05 ATEX 0250**

(4) Equipment or protective system: **Altair Portable Single Gas Detector**

(5) Manufacturer: **Mine Safety Appliances Co., Instrument Division**

(6) Address: **P.O.Box 427, Pittsburgh, PA 15230;  
1000 Cranberry Woods Drive, Cranberry Twp, PA 16066, U.S.A**

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


(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:

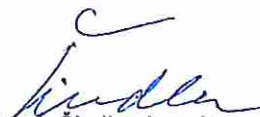
**EN 60079-0:2006 EN 60079-11:2007**

(11) Marking of equipment shall contain symbols:

 **II 2G Ex ia IIC T4**

(12) This type examination certificate is valid till: **01.12.2015**

Responsible person:

  
Dipl. Ing. Sindler Jaroslav  
Head of certification body



Date of issue: 01.12.2010

Number of pages: 2  
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**Schedule**

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**Supplement No. 4 to  
EC-Type Examination Certificate N° FTZÚ 05 ATEX 0250**

(15) Description of Variation to the Equipment:

Variation four, to permit:

The validity of the certificate is prolonged till 01.12.2015.

(16) Report No. : 05/0250/4, dated 01.12.2010 - 2 pages

(17) Special conditions for safe use: none

(18) Essential Health and Safety Requirements: see the basic certificate

(19) List of documentation: none

Responsible person:

A handwritten signature in black ink, appearing to read 'Šindler'.

Dipl. Ing. Šindler Jaroslav

Head of certification body



Date of issue: 01.12.2010

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(1) **Supplement No. 5 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 05 ATEX 0250**

(4) Equipment or protective system: **Altair Portable Single Gas Detector**

(5) Manufacturer: **Mine Safety Appliances Company**

(6) Address: **1000 Cranberry Woods Drive, Cranberry Twp, PA 16066, U.S.A.**

(7) This supplement of certificate is valid for:

- evaluation according to new standard
- modification of apparatus marking
- modification of certified apparatus
- modification of name and address of manufacturer


(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 60079-11:2007**

(11) Marking of equipment shall contain symbols:

 **II 2G Ex ia IIC T4 Gb**

(12) This type examination certificate is valid till: **01.12.2015**

Responsible person:

  
Dipl. Ing. Sindler Jaroslav  
Head of certification body



Date of issue: **20.05.2011**

Number of pages: 2  
Page: 1/2

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**Schedule**

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**Supplement No. 5 to  
EC-Type Examination Certificate N° FTZÚ 05 ATEX 0250**

(15) Description of Variation to the Equipment:

Variation five, to permit:

- a) Evaluation according to new standard EN 60079-0:2009.
- b) Marking of the equipment was updated according to new standard.
- c) Minor changes on the PCB.
- d) Due to company restructuring, manufacturer will no longer be recognized at their manufacturing facility as the "Instrument Division" and can just be shown as Mine Safety Appliances Company. Also, the "P.O. Box 427, Pittsburgh, PA 15230" address will no longer be used.

The changes are listed in verified manufacturer's document mentioned in clause (19) of this supplement. The changes do not affect the intrinsic safety.

(16) Report No. : 05/0250/5, dated 20.05.2011

(17) Special conditions for safe use: none


(18) Essential Health and Safety Requirements: see the basic certificate

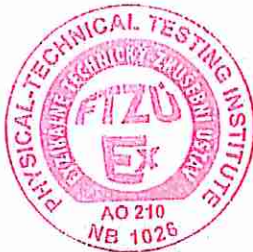
(19) List of documentation:

[1] Drawings No. SK 3098-1011, Rev. 4, Date: 09.03.2011 – 8 sheets

Date of verification of documentation by FTZÚ: 20.05.2011

Responsible person:

  
Dipl. Ing. Šindler Jaroslav  
Head of certification body



Date of issue: 20.05.2011

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(1) **Supplement No. 6 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 05 ATEX 0250**

(4) Equipment or protective system: **Altair Portable Single Gas Detector**

(5) Manufacturer: **Mine Safety Appliances Company**

(6) Address: **1000 Cranberry Woods Drive, Cranberry Twp, PA 16066, U.S.A.**

(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 60079-0:2009, EN 60079-11:2007**

(11) Marking of equipment shall contain symbols:

**Ex II 2G Ex ia IIC T4 Gb**

(12) This type examination certificate is valid till: **01.12.2015**

Responsible person:

Dipl. Ing. Lukáš Martinák  
Head of Certification Body



Date of issue: 26.07.2012

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Physical Technical Testing Institute  
Ostrava – Radvanice

(13)

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Supplement No. 6 to  
EC-Type Examination Certificate N° FTZÚ 05 ATEX 0250

(15) Description of Equipment or Protective System:

Variation six, to permit:

a) Revised Altair PCB with changes of the elements C8, R3 and U2.

The changes are listed in verified manufacturer's document mentioned in clause (19) of this supplement. The changes do not affect the intrinsic safety.

(16) Report No.: 05/0250/6, dated 26.07.2012

(17) Special conditions for safe use: none

(18) Essential Health and Safety Requirements:

Covered by standards mentioned in (10) of this supplement.

(19) List of Documentation:

[1] Drawings No. SK 3098-1011, Rev. 5, Date: 18.05.2012 – 26 sheets

Responsible person:

Dipl. Ing. Lukáš Martinák  
Head of Certification Body



Date of issue: 26.07.2012

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