



Physical Technical Testing Institute, Ostrava-Radvanice

National testing authority No 210

Certification body No. 3051 accredited by ČIA Praha

Certificate No. FTZÚ 09 E 0027

about verification of workplace atmospheres – Electrical apparatus used for the direct detection and direct concentration measurement of toxic gases and vapours

This certificate is issued for: **ALTAIR 5iR Multigas Detector**

Manufacturer: **Mine Safety Appliances Co., Instrument Division**

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

Above mentioned product and any of its variant are specified in Annex of the certificate and in documentation, list of which is attached in Annex of this certificate.

The examination and test results are recorded in confidential Report No.

09E/0027 dated 31.08.2010


FTZÚ – National testing authority No. 210 confirms, that product comply with requirements following standards:

EN 45544-1:1999 EN 45544-2:1999 EN 45544-3:1999

Manufacturer (or applicant) listed in the certificate is responsible for product conformity assurance in accordance with its specification (documentation) listed in Annex of the certificate and for successful performance of all specified routine tests and verification.

This certificate is valid till: **31.08.2015**

Responsible person:


Dipl. Ing. Sindler Jaroslav
Head of certification body



Date of issue: **31.08.2010**

Number of pages: 2
Page: 1/2

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Physical Technical Testing Institute, Ostrava-Radvanice

National testing authority No 210

Certification body No. 3051 accredited by ČIA Praha

Schedule

Certificate No. FTZÚ 09 E 0027

Product description:

The ALTAIR 5iR Multigas Detector is a portable apparatus designed to monitor gases in ambient air and in the workplace. It is available with a maximum of five sensors which can display readings for six gases.

The ALTAIR 5iR Multigas Detector is supplied by an encapsulated battery which may be charged only in a safe area and from chargers made available by MSA for use with this instrument.

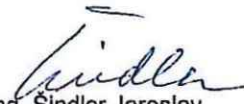
This certificate is concerned only the performance tests for toxic gases namely hydrogen sulfide H_2S in the range of 0 - 200 ppm, carbon monoxide CO in the range of 0 - 1000 ppm and carbon dioxide CO_2 in the range of 0 - 10 % v/v. The performance tests covers only the test conditions according to standards mentioned in this certificate.

List of documentation:

- [1] Operating Manual ALTAIR 5iR – Multigas Detector, No.:10094177, rev. 0 with manual addendum 10103427, rev.1
- [2] WUSB Operating Manual - Supplementary Information No.10102623, rev. 0

Date of verification of documentation by FTZÚ: 31.08.2010

Responsible person:


Dipl. Ing. Sindler Jaroslav
Head of certification body



Date of issue: 31.08.2010

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Physical Technical Testing Institute, Ostrava-Radvanice

National testing authority No 210

Certification body No. 3051 accredited by ČIA Praha

Supplement No.1 to Certificate No. FTZÚ 09 E 0027

about verification of workplace atmospheres – Electrical apparatus used for the direct detection and direct concentration measurement of toxic gases and vapours

This certificate is issued for: **ALTAIR 5iR Multigas Detector**

Manufacturer: **Mine Safety Appliances Co., Instrument Division**

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

This supplement of certificate is valid for: - documentation changes

Modification of certified apparatus and any of its approved variants are specified in documentation, list of which is mentioned in schedule of this supplement to the certificate.

The examination and test results are recorded in confidential Report No.

09E/0027/1 dated 11.04.2011


FTZÚ – National testing authority No. 210 confirms, that product comply with requirements following standards:

EN 45544-1:1999 EN 45544-2:1999 EN 45544-3:1999

Manufacturer (or applicant) listed in this supplement to the certificate is responsible for product conformity assurance in accordance with its specification (documentation) listed in schedule of this supplement to the certificate and for successful performance of all specified routine tests and verification.

This certificate is valid till: **31.08.2015**

Responsible person:


Dipl. Ing. Šindler Jaroslav
Head of certification body



Date of issue: **11.04.2011**

Number of pages: 2
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Physical Technical Testing Institute, Ostrava-Radvanice

National testing authority No 210

Certification body No. 3051 accredited by ČIA Praha

Schedule

**Supplement No.1
to Certificate No. FTZÚ 09 E 0027**

Product description changes:

Variation one, to permit:

- a) Small changes of the documentation – WUSB Operation manual.

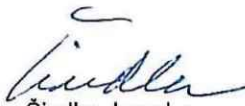
Technical description has not been changed. These changes don't have influence on the safety of the apparatus or the detection performance.

List of documentation:

- [1] WUSB Operating Manual - Supplementary Information No.10102623, rev. 1, Date: 10.03.2011
[2] Drawing SK3098-1125, rev.2, date: 10.03.2011

Date of verification of documentation by FTZÚ: 11.04.2011

Responsible person:


Dipl. Ing. Šindler Jaroslav
Head of certification body



Date of issue: 11.04.2011

Page: 2/2

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Physical Technical Testing Institute, Ostrava-Radvanice

National testing authority No 210

Certification body No. 3051 accredited by ČIA Praha

Supplement No.2 to Certificate No. FTZÚ 09 E 0027

about verification of workplace atmospheres – Electrical apparatus used for the direct detection and direct concentration measurement of toxic gases and vapours

This certificate is issued for: **ALTAIR 5iR Multigas Detector**

Manufacturer: **Mine Safety Appliances Company**

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

This supplement of certificate is valid for: - minor firmware changes of equipment
- modification of name and address of manufacturer

Modification of certified apparatus and any of its approved variants are specified in documentation, list of which is mentioned in schedule of this supplement to the certificate.

The examination and test results are recorded in confidential Report No.

09E/0027/2 dated 14.11.2011

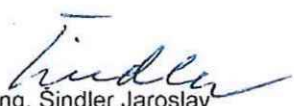
FTZÚ – National testing authority No. 210 confirms, that product comply with requirements following standards:

EN 45544-1:1999 EN 45544-2:1999 EN 45544-3:1999

Manufacturer (or applicant) listed in this supplement to the certificate is responsible for product conformity assurance in accordance with its specification (documentation) listed in schedule of this supplement to the certificate and for successful performance of all specified routine tests and verification.

This certificate is valid till: **31.08.2015**

Responsible person:


Dipl. Ing. Šindler Jaroslav
Head of certification body




Date of issue: 14.11.2011

Number of pages: 2
Page: 1/2

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Physical Technical Testing Institute, Ostrava-Radvanice

National testing authority No 210

Certification body No. 3051 accredited by ČIA Praha

Schedule

Supplement No.2 to Certificate No. FTZÚ 09 E 0027

Product description changes:

Variation two, to permit:

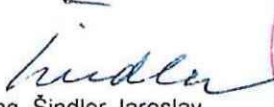
- a) Minor changes of the firmware prescribed in the mentioned documentation.
- b) Due to company restructuring, manufacturer will no longer be recognized at their manufacturing facility as the "Instrument Division" and can just be shown as Mine Safety Appliances Company. Also, the "P.O. Box 427, Pittsburgh, PA 15230" address will no longer be used.

List of documentation:

- [1] Drawings No.: SK3098-1125, rev. 4, (39 sheets), dated 19.10.2011
- [2] Software Change Report Altair 5, rev. 1.01.0004, (3 sheets), dated 14.09.2011
- [3] Source Code Change Report Altair 5, rev. 1.00.0052, (7 sheets), dated 19.10.2011

Date of verification of documentation by FTZÚ: 14.11.2011

Responsible person:


Dipl. Ing. Šindler Jaroslav
Head of certification body



Date of issue: 14.11.2011

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Physical Technical Testing Institute, Ostrava-Radvanice

National testing authority No 210

Certification body No. 3051 accredited by ČIA Praha

Supplement No. 3 to Certificate No. FTZÚ 09 E 0027

about verification of workplace atmospheres – Electrical apparatus used for the direct detection and direct concentration measurement of toxic gases and vapours

This certificate is issued for: **ALTAIR 5iR Multigas Detector**

Manufacturer: **Mine Safety Appliances Company**

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

This supplement of certificate is valid for: - minor firmware changes of equipment

Modification of certified apparatus and any of its approved variants are specified in documentation, list of which is mentioned in schedule of this supplement to the certificate.

The examination and test results are recorded in confidential Report No.

09E0027/3 dated 12.03.2012


FTZÚ – National testing authority No. 210 confirms, that product comply with requirements following standards:

EN 45544-1:1999 EN 45544-2:1999 EN 45544-3:1999

Manufacturer (or applicant) listed in this supplement to the certificate is responsible for product conformity assurance in accordance with its specification (documentation) listed in schedule of this supplement to the certificate and for successful performance of all specified routine tests and verification.

This certificate is valid till: **31.08.2015**

Responsible person:


Dipl. Ing. Lukáš Martinák
Head of certification body



Date of issue: 12.03.2012

Number of pages: 2
Page: 1/2

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Physical Technical Testing Institute, Ostrava-Radvanice

National testing authority No 210

Certification body No. 3051 accredited by ČIA Praha

Schedule

Supplement No. 3 to Certificate No. FTZÚ 09 E 0027

Product description changes:

Variation three, to permit:

- a) Minor changes of the firmware prescribed in the mentioned documentation.

Technical description has not been changed. These changes do not have influence on the safety of the apparatus or the detection performance.

List of documentation:

- [1] Drawings No.: SK3098-1125, rev. 5, (39 sheets), dated 01.02.2012

Responsible person:

Dipl. Ing. Lukáš Martinák
Head of certification body



Date of issue: 12.03.2012

Page: 2/2

This certificate is valid only for products described in this certificate and doesn't replace any other documents.

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Physical Technical Testing Institute, Ostrava-Radvanice

National testing authority No 210

Certification body No. 3051 accredited by CAI Praha

Supplement No. 4 to Certificate No. FTZÚ 09 E 0027

about verification of workplace atmospheres – Electrical apparatus used for the direct detection and direct concentration measurement of toxic gases and vapours

This certificate is issued for: **ALTAIR 5iR Multigas Detector**

Manufacturer: **Mine Safety Appliances Company**

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

This supplement of certificate is valid for: - performance tests for model **ALTAIR5XiR**

Modification of certified apparatus and any of its approved variants are specified in documentation, list of which is mentioned in schedule of this supplement to the certificate.

The examination and test results are recorded in confidential Report No.

09E0027/4 dated 19.12.2012

FTZÚ – National testing authority No. 210 confirms, that product comply with requirements following standards:

EN 45544-1:1999, EN 45544-2:1999, EN 45544-3:1999

Manufacturer (or applicant) listed in this supplement to the certificate is responsible for product conformity assurance in accordance with its specification (documentation) listed in schedule of this supplement to the certificate and for successful performance of all specified routine tests and verification.

This certificate is valid till: **31.08.2015**

Responsible person:

Dipl. Ing. Lukáš Martinák
Head of certification body



Date of issue: 19.12.2012

Number of pages: 2
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Physical Technical Testing Institute, Ostrava-Radvanice

National testing authority No 210

Certification body No. 3051 accredited by CAI Praha

Schedule

Supplement No. 4 to Certificate No. FTZÚ 09 E 0027

Product description changes:

Variation four, to permit:

a) The equipment model ALTAIR 5XiR has been subjected to the performance tests prescribed in the standards listed in clause (10) for toxic gases CO in range 0-2000ppm, H₂S in range 0-200ppm with electrochemical sensor and for CO₂ in range 0-10% v/v with IR sensor and complies with their requirements. The pressure range 90kPa to 110kPa for gas CO₂ in range 0-100% v/v for IR sensor.

List of documentation:

[1] Operating manual, No.10116951, Rev.2, EN version, Date: 12.2012

[2] Drawings No. SK3098-1184, Rev.4, Date: 07.12.2012

Responsible person:

Dipl. Ing. Lukáš Martinák
Head of certification body



Date of issue: 19.12.2012

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Physical Technical Testing Institute, Ostrava-Radvanice

National testing authority No 210

Certification body No. 3051 accredited by CAI Praha

Supplement No. 5 to Certificate No. FTZÚ 09 E 0027

about verification of workplace atmospheres – Electrical apparatus used for the direct detection and direct concentration measurement of toxic gases and vapours

This certificate is issued for: **ALTAIR 5iR Multigas Detector**

Manufacturer: **Mine Safety Appliances Company**

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

This supplement of certificate is valid for: - modification of model **ALTAIR 5XIR**

Modification of certified apparatus and any of its approved variants are specified in documentation, list of which is mentioned in schedule of this supplement to the certificate.

The examination and test results are recorded in confidential Report No.

09E0027/5 dated 30.05.2013

FTZÚ – National testing authority No. 210 confirms, that product comply with requirements following standards:

EN 45544-1:1999, EN 45544-2:1999, EN 45544-3:1999

Manufacturer (or applicant) listed in this supplement to the certificate is responsible for product conformity assurance in accordance with its specification (documentation) listed in schedule of this supplement to the certificate and for successful performance of all specified routine tests and verification.

This certificate is valid till: **31.08.2015**

Responsible person:

Dipl. Ing. Lukáš Martinák
Head of certification body



Date of issue: 30.05.2013

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Physical Technical Testing Institute, Ostrava-Radvanice

National testing authority No 210

Certification body No. 3051 accredited by CAI Praha

Schedule

Supplement No. 5 to Certificate No. FTZÚ 09 E 0027

Product description changes:

Variation five, to permit:

- a) The model ALTAIR 5XiR can be alternatively supplied by one (1) encapsulated rechargeable 3.6V lithium-ion battery type Panasonic/Sanyo UR18650A which may be charged from chargers made available by MSA for use with this instrument.

Technical description has not been changed. This change doesn't have influence on the safety and the detection performance of the apparatus.

List of documentation:

Document No.:	Revision:	Date:	Pages:	Title:
10116951	2	12.2012	95	Operating Manual
SK3098-1184	5	19.04.2013	75	FTZU approvals, ALTAIR5X / ALTAIR5XIR

Responsible person:

Dipl. Ing. Lukáš Martinák
Head of certification body



Date of issue: 30.05.2013

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Physical Technical Testing Institute, Ostrava-Radvanice

National testing authority No 210

Certification body No. 3051 accredited by CAI Praha

Supplement No. 6 to Certificate No. FTZÚ 09 E 0027

about verification of workplace atmospheres – Electrical apparatus used for the direct detection and direct concentration measurement of toxic gases and vapours

This certificate is issued for: **ALTAIR 5iR Multigas Detector**

Manufacturer: **Mine Safety Appliances Company**

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

This supplement of certificate is valid for: - modification of model **ALTAIR 5XiR**

Modification of certified apparatus and any of its approved variants are specified in documentation, list of which is mentioned in schedule of this supplement to the certificate.

The examination and test results are recorded in confidential Report No.

09E0027/6 dated 04.04.2014

FTZÚ – National testing authority No. 210 confirms, that product comply with requirements following standards:

EN 45544-1:1999, EN 45544-2:1999, EN 45544-3:1999, EN 50104:2010, EN 50271:2010

Manufacturer (or applicant) listed in this supplement to the certificate is responsible for product conformity assurance in accordance with its specification (documentation) listed in schedule of this supplement to the certificate and for successful performance of all specified routine tests and verification.

This certificate is valid till: **04.04.2019**

Responsible person:

Dipl. Ing. Lukáš Martinák
Head of certification body



Date of issue: 04.04.2014



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Physical Technical Testing Institute, Ostrava-Radvanice

National testing authority No 210

Certification body No. 3051 accredited by CAI Praha

Schedule

Supplement No. 6 to Certificate No. FTZÚ 09 E 0027

Product description changes:

Variation six, to permit:

- The model ALTAIR 5XiR has been tested for oxygen deficiency and enrichment according to the standard EN 50104:2010 and software evaluation was done according to the standard EN 50271:2010.
- Prolongation of validity of the certificate for next five years.
- Minor constructional changes of the color display module, PCB and schematic.

These changes do not have influence on the safety and the detection performance of the apparatus.

Parameters recapitulation:

Performance tests have been carried out for:

- Gas CO in range 0-2000 ppm by electrochemical sensor.
- Gas H₂S in range 0-200 ppm by electrochemical sensor.
- Gas CO₂ in range 0-10 % (v/v) by IR sensor. The pressure range is limited from 90 kPa to 110 kPa.
- Gas O₂ in range 0-25 % (v/v) by electrochemical sensor. The warm-up time is up to 180 sec.

Firmware version: v1.27.06

List of documentation:

Document No.:	Revision:	Date:	Pages:	Title:
10116951	3	03.2014	96	Operating Manual
SK3098-1184	6	21.10.2013	86	FTZÚ approvals, ALTAIR5X / ALTAIR5XIR
SK3098-1307	01	27.03.2014	22	Safety Discussion

Responsible person:

Date of issue: 04.04.2014

Dipl. Ing. Lukáš Martinák
Head of certification body



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Physical Technical Testing Institute, Ostrava-Radvanice

National testing authority No 210

Certification body No. 3051 accredited by CAI Praha

Supplement No. 7 to Certificate No. FTZÚ 09 E 0027

about verification of workplace atmospheres – Electrical apparatus used for the direct detection and direct concentration measurement of toxic gases and vapours

This certificate is issued for: **ALTAIR 5iR Multigas Detector**

Manufacturer: **Mine Safety Appliances Company**

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

This supplement of certificate is valid for: - modification of model **ALTAIR 5XiR**

Modification of certified apparatus and any of its approved variants are specified in documentation, list of which is mentioned in schedule of this supplement to the certificate.

The examination and test results are recorded in confidential Report No.

09E0027/7 dated 23.01.2015

FTZÚ – National testing authority No. 210 confirms, that product comply with requirements following standards:

EN 45544-1:1999, EN 45544-2:1999, EN 45544-3:1999, EN 50104:2010, EN 50271:2010

Manufacturer (or applicant) listed in this supplement to the certificate is responsible for product conformity assurance in accordance with its specification (documentation) listed in schedule of this supplement to the certificate and for successful performance of all specified routine tests and verification.

This certificate is valid till: **04.04.2019**

Responsible person:

Dipl. Ing. Lukáš Martinák
Head of certification body



Date of issue: 23.01.2015

Page: 1/2

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Physical Technical Testing Institute, Ostrava-Radvanice

National testing authority No 210

Certification body No. 3051 accredited by CAI Praha

Schedule

Supplement No. 7 to Certificate No. FTZÚ 09 E 0027

Product description changes:

Variation seven, to permit:

- a) The firmware has been updated to version v1.30.12.

This change does not have influence on the safety and the detection performance of the apparatus.

Parameters recapitulation:

Performance tests have been carried out for:

- Gas CO in range 0-2000 ppm by electrochemical sensor.
- Gas H₂S in range 0-200 ppm by electrochemical sensor.
- Gas CO₂ in range 0-10 % (v/v) by IR sensor. The pressure range is limited from 90 kPa to 110 kPa.
- Gas O₂ in range 0-25 % (v/v) by electrochemical sensor. The warm-up time is up to 180 sec.

Firmware version: v1.30.12

List of documentation:

Document No.:	Revision:	Date:	Pages:	Title:
10116951	3	03.2014	98	Operating Manual
SK3098-1184	7	18.11.2014	86	FTZÚ approvals, ALTAIR5X / ALTAIR5XIR
SK3098-1307	02	10.10.2014	22	Safety Discussion

Responsible person:

Dipl. Ing. Lukáš Martinák
Head of certification body



Date of issue: 23.01.2015

Page: 2/2

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Physical Technical Testing Institute, Ostrava-Radvanice

National testing authority No 210

Certification body No. 3051 accredited by CAI Praha

Supplement No. 8 to Certificate No. FTZÚ 09 E 0027

about verification of workplace atmospheres – Electrical apparatus used for the direct detection and direct concentration measurement of toxic gases and vapours

This certificate is issued for: **ALTAIR 5iR Multigas Detector**

Manufacturer: **MSA – The Safety Company**

Address: **1000 Cranberry Woods Drive, Cranberry Twp, PA 16066, USA**

This supplement of certificate is valid for: - new performance tests for model ALTAIR 5XiR
- change of manufacturer's name

Modification of certified apparatus and any of its approved variants are specified in documentation, list of which is mentioned in schedule of this supplement to the certificate.

The examination and test results are recorded in confidential Report No.

09E0027/8 dated 21.04.2017

FTZÚ – National testing authority No. 210 confirms, that product comply with requirements following standards:

EN 45544-1:2015, EN 45544-3:2015, EN 50104:2010, EN 50271:2010

Manufacturer (or applicant) listed in this supplement to the certificate is responsible for product conformity assurance in accordance with its specification (documentation) listed in schedule of this supplement to the certificate and for successful performance of all specified routine tests and verification.

This certificate is valid till: **04.04.2019**


Responsible person:



Date of issue: **21.04.2017**

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Dipl. Ing. Lukáš Martinák
Head of Certification Body

This supplement to certificate is granted subject to the general conditions of the FTZÚ, s.p.
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tel +420 595 223 111, fax +420 596 232 672, ftzu@ftzu.cz, www.ftzu.cz



Physical Technical Testing Institute, Ostrava-Radvanice

National testing authority No 210

Certification body No. 3051 accredited by CAI Praha

Schedule

Supplement No. 8 to Certificate No. FTZÚ 09 E 0027

Product description changes:

Variation eight, to permit:

- The performance tests have been carried out according to new standards EN 45544-1:2015 and EN 45544-3:2015.;
- The name of the manufacturer has been changed. The previous name Mine Safety Appliances Company has been superseded by MSA-The Safety Company.
- The firmware has been updated to version v2.17.1.

Parameters recapitulation:

Performance tests have been carried out for:

- Gas H₂S in range 0-200 ppm by electrochemical sensor. The TWA function is not supported.
- Gas O₂ in range 0-25 % (v/v) by electrochemical sensor. The warm-up time is up to 180 sec.

List of documentation:

Document No.:	Revision:	Date:	Pages:	Title:
10116951	-	2017	57 to 62	Operating Manual – chapter 6
SK3098-1184	8	16.03.2015	97	FTZÚ approvals, ALTAIR5X / ALTAIR5XIR
SK3098-1307	03	10.07.2015	17	Safety Discussion

Responsible person:

Dipl. Ing. Lukáš Martinák
Head of Certification Body



Date of issue: 21.04.2017

Page: 2/2

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Physical-Technical Testing Institute
Ostrava – Radvanice

Supplementary Type Examination Certificate No.9

about verification of workplace atmospheres – Electrical apparatus used for the direct detection and direct concentration measurement of toxic gases and vapours

Type Examination Certificate number:

FTZÚ 09 E 0027

Product: **ALTAIR 5iR Multigas Detector**

Manufacturer: **MSA - The Safety Company**

Address: **1000 Cranberry Woods Drive, Cranberry Twp, PA 16066, USA**

This supplementary certificate extends Certificate No. FTZÚ 09 E 0027 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.

The Physical-Technical Testing Institute, Certification Body No.3051, accredited by ČIA o.p.s, Prague according to EN ISO/IEC 17065:2012, certifies that this product has been found to comply with requirements of the following standard:

EN 45544-1:2015, EN 45544-3:2015, EN 50104:2010, EN 50271:2010

Manufacturer listed in the certificate is responsible for the product conformity assurance in accordance with its specification (documentation) listed in this certificate and for successful performance of all specified routine tests and verification.

This supplementary certificate relates only to the verification of workplace atmospheres – Electrical apparatus used for the direct detection and direct concentration measurement of toxic gases and vapours. Further requirements can be applied to the manufacturing process and supply of this product. These are not covered by this certificate.

This certificate is valid till: **04.04.2024**

Responsible person:

L. Martinák

Dipl. Ing. Lukáš Martinák
Head of certification body



Date of issue: 04.04.2019

Page: 1/2

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tel +420 595 223 111, fax +420 596 232 672, ftzu@ftzu.cz, www.ftzu.cz



Physical-Technical Testing Institute
Ostrava – Radvanice

Schedule

Supplementary Type Examination Certificate No. 9
to FTZÚ 09 E 0027

Description of product changes:

Prolongation of certificate validity for next five years.

There were no changes on the product.

Recapitulation of parameters:

Performance tests have been carried out for:

- Gas H₂S in range 0-200 ppm by electrochemical sensor. The TWA function is not supported.
- Gas O₂ in range 0-25 % (v/v) by electrochemical sensor. The warm-up time is up to 180 sec.

Test report No.: 09E/0027/9

List of documentation: remain unchanged

Responsible person:

L. Martinák

Dipl. Ing. Lukáš Martinák
Head of certification body



Date of issue: 04.04.2019

Page: 2/2

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Physical-Technical Testing Institute
Ostrava – Radvanice

Supplementary Type Examination Certificate No.10

about verification of workplace atmospheres – Electrical apparatus used for the direct detection and direct concentration measurement of toxic gases and vapours

Type Examination Certificate number:

FTZÚ 09 E 0027

Product: **ALTAIR 5XiR Multigas Detector**

Manufacturer: **MSA - The Safety Company**

Address: **1000 Cranberry Woods Drive, Cranberry Twp, PA 16066, USA**

This supplementary certificate extends Certificate No. FTZÚ 09 E 0027 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.

The Physical-Technical Testing Institute, Certification Body No.3051, accredited by ČIA o.p.s, Prague according to EN ISO/IEC 17065:2012, certifies that this product has been found to comply with requirements of the following standard:

EN 45544-1:2015, EN 45544-3:2015, EN 50104:2010, EN 50271:2010

Manufacturer listed in the certificate is responsible for the product conformity assurance in accordance with its specification (documentation) listed in this certificate and for successful performance of all specified routine tests and verification.

This supplementary certificate relates only to the verification of workplace atmospheres – Electrical apparatus used for the direct detection and direct concentration measurement of toxic gases and vapours. Further requirements can be applied to the manufacturing process and supply of this product. These are not covered by this certificate.

This certificate is valid till: **04.04.2024**

Responsible person:

Dipl. Ing. Lukáš Martinák
Head of certification body



Date of issue: 29.05.2019

Page: 1/2

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Physical-Technical Testing Institute
Ostrava – Radvanice

Schedule

Supplementary Type Examination Certificate No. 10
to FTZÚ 09 E 0027

Description of product changes:

The firmware has been updated to version v2.19.1. The assessment in scope of the standard EN 50271:2010 has been done.

The assessment according to other standards EN 45544-1:2015, EN 45544-3:2015 and EN 50104:2010 has not been affected.

Recapitulation of parameters:

Performance tests have been carried out for:

- Gas H₂S in range 0-200 ppm by electrochemical sensor. The TWA function is not supported.
- Gas O₂ in range 0-25 % (v/v) by electrochemical sensor. The warm-up time is up to 180 sec.

Test report No.: 09E/0027/10

List of documentation:

Number:	Rev.	Title:
SK 3098-1184	9	FTZÚ approvals, ALTAIR5X / ALTAIR5XIR

Responsible person:

Dipl. Ing. Lukáš Martinák
Head of certification body



Date of issue: 29.05.2019

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