

**Australian/New Zealand
Certification Scheme for
EXPLOSION-PROTECTED ELECTRICAL EQUIPMENT**

ANZEx Scheme

Certificate of Conformity

Certificate No.: ANZEx 06.3014X	Issue No.: 5	Date of Issue: 08/08/2012
	Issue No.: 0	Date of Issue: 26/06/2006

Applicant: Mine Safety Appliances Co. (Instrument Division)
1000 Cranberry Woods Drive
Cranberry Township PA 16066 – 5207
United States of America

Electrical Apparatus: Altair Pro Portable Single Gas Detector

Type of Protection: Ex ia

Marking Code: Ex ia IIC T4 (Ta = 50 °C)

Manufacturer: Mine Safety Appliances Co. (Instrument Division)
1000 Cranberry Woods Drive
Cranberry Township PA 16066 – 5207
United States of America

Manufacturing Location(s): As above

The EPEE certification database located at <http://www.anzex.com.au> shows the validity of this Certificate.

 <p>Test Safe AUSTRALIA</p>	<p>Certificate issued by:</p> <p><i>TestSafe Australia</i> 919 Londonderry Road, Londonderry NSW 2753 Australia Phone: +61 2 4724 4900 Fax: +61 2 4724 4999 http://www.testsafe.com.au</p>	 <p>JAS-ANZ</p> <p>www.jas-anz.org/register</p>
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*This certificate is granted subject to the conditions as set out in Standards Australia/Standards New Zealand Miscellaneous Publication **MP87.1:2008**.*

STANDARDS:

The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

- IEC 60079-0:2004** Electrical equipment for explosive atmospheres – Part 0: General requirements
- IEC 60079-11:1999** Electrical apparatus for explosive gas atmospheres – Part 11: Intrinsic safety ‘i’

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standard(s) listed above.*

ASSESSMENT & TEST REPORTS:

The equipment listed has successfully met the assessment and test requirements as recorded in:

Test Report No. and Issuing Body:	33788, TestSafe Australia
Quality Assessment Report No. and Issuing Body:	FR/INE/QAR08.0011/03, Ineris
File Reference:	2012/012106



Ujen Singh

Signed for and on behalf of issuing body

Quality & Certification Manager

Position

08/08/2012

Date of Issue

This certificate is not transferable and remains the property of the issuing body and must be returned in the event of it being revoked or not renewed.

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Schedule

EQUIPMENT:

The “Altair Pro” portable single gas detector is initially available in three gas models e.g. O₂, CO and H₂S. The O₂ model is called “Altair Pro O₂”. The gas sensing cells are of the electro-chemical type. The instrument is powered by a replaceable CR2 lithium cell. The LCD display panel on the front displays an indication of the level of the detected gas. 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.

CONDITIONS OF CERTIFICATION:

It is a condition of safe use that the lithium batteries of Panasonic CR-2PA/1B, Energizer CR2 EL1CR2BP, Varta CR2 6206 and Varta (Power One) CR2 CR15H270, 6206 shall be used in the apparatus.

DOCUMENTS:

Document Number	Document Title	Revision	Date
SK3098-1014 sheet 1 of 7	<i>Altair Pro Marking Details</i>	00	2006/06/16
SK3098-1014 sheet 2 of 7	<i>Altair Pro Assembly Details</i>	00	2006/06/16
SK3098-1014 sheet 3 of 7	<i>Schematic, Single Gas, Altair Pro</i>	00	2006/06 /16
SK3098-1014 sheet 4 of 7	<i>Altair Pro Parts List</i>	00	2006/06/16
SK3098-1014 sheet 5 of 7 & attachment B, 10 sheets	PCB Artwork, (<i>Altair Pro PCB</i>) (ref. 10073836)	00	2006/06/16
SK3098-1014 sheet 5 of 7 & attachment C, 10 sheets	PCB Artwork, (<i>Altair Pro O2 PCB</i>) (ref. 10066405)	00	2006/06/16
SK3098-1014 sheet 6 of 7	Special Component Requirements	00	2006/06/16
SK3098-1014 sheet 7 of 7	Altair Pro Overview	00	2006/06/16

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Schedule of Variations

Variations Permitted by Issue 1:

- A new model “Altair Pro-R O2” Remote Oxygen Detector has been added. The “Altair Pro-R O2” remote oxygen detector is identical to the model “Altair Pro O₂”. The “Altair Pro-R O2” remote oxygen detector has a jack socket on the front panel where a remote oxygen detecting electrochemical cell is connected.

Altair Pro-R O2 Remote Oxygen Detector has been assessed in Test Report 28538.

Condition of Certification Relating to Issue 1:

1. It is a condition of safe use that the maximum length of the remote sensor connecting cable in the “Altair Pro-R O2” does not exceed 3.3 metres (10 feet).
2. All previous conditions are still applicable.

Drawings Relating to Issue 1:

Document Number	Document Title	Revision	Date
SK3098-1014 sheet 1 of 9	Altair Pro <i>Marking Details</i>	01	2006/12/14
SK3098-1014 sheet 2 of 9	Altair Pro <i>Assembly Details</i>	01	2006/12/14
SK3098-1014 sheet 3 of 9	Schematic, <i>Single Gas, Altair Pro</i>	01	2006/12/14
SK3098-1014 sheet 4 of 9	Altair Pro <i>Parts List</i>	01	2006/12/14
SK3098-1014 sheet 5 of 9 & attachment 7 sheets	PCB Artwork, (<i>Altair Pro PCB</i>) (ref. 10075555)	01	2006/12/14
SK3098-1014 sheet 6, 7 of 9	Special Component Requirements	01	2006/12/14
SK3098-1014 sheet 8 of 9	Altair Pro Overview	01	2006/12/14
SK3098-1014 sheet 9 of 9	Revision History	01	2006/12/14

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Variations Permitted by Issue 2:

- Adding an alternate case overmould material RTP 2099E X 118617 B (Black) to the apparatus.

This change has been assessed in Test Report 30309.

Condition of Certification Relating to Issue 2:

1. The previous conditions are still applicable.

Drawings Relating to Issue 2:

Document Number	Document Title	Revision	Date
SK3098-1014 sheet 6 of 9	Special Component Requirements	2	2008/05/06

Variations Permitted by Issue 3:

- Capacitors C13, C14, C22 (0.1 μ F 10% each) were added to the Altair Pro microcontroller reset circuit.
- Capacitors C18, C19, C20 (0.1 μ F 10% each) were added to the Altair Pro O2 microcontroller reset circuit.
- An additional Transient Voltage Suppressor was added to the Altair Pro-R O2 version.
- Added alternate static dissipative overmould material RTP2099 EX 118617 B (various colour) to the apparatus.

This change has been assessed in Test Report 30856.

Condition of Certification Relating to Issue 3:

The previous conditions are still applicable.

Drawings Relating to Issue 3:

Document Number	Document Title	Revision	Date
SK3098-1014 9 sheets	Altair Pro_TestSafe	3	2008/11/06

Variations Permitted by Issue 4:

- The QAR Issuer was changed from CSA to Ineris.

Condition of Certification Relating to Issue 4:

The previous conditions are still applicable.

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Variations Permitted by Issue 5:

1. The IR Transceiver (component designator U2) Sharp GP2W0110YP0F is being replaced by a similar device Vishay TFBS4650.
2. Associated capacitor C8 decreased in nominal capacitance from 1.0 μ F to 0.1 μ F.
3. Protective resistor R3 previously 39.2 Ω , \pm 1% tolerance, 0.5 W rating, has changed to 100 Ω , \pm 1% tolerance, 0.5 W rating.

This change has been assessed in Test Report 33788.

Condition of Certification Relating to Issue 5:

The previous conditions are still applicable.

Drawings Relating to Issue 5:

Document No.	Sheets	Document Title	Issue	Date (yyyy-mm-dd)
SK3098-1014	28	Altair Pro TestSafe	4	2012-05-18

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