



1 **EC TYPE-EXAMINATION CERTIFICATE**

2 Component intended for use in Potentially Explosive Atmospheres Directive 94/9/EC

3 Certificate Number: **Sira 08ATEX1325U** Issue: **1**

4 Component: **7100, 8100, 8100Vx and 8100Px Series of Instrument Enclosures and Junction Boxes**

5 Applicant: **International Metal Engineering Pte Ltd**

6 Address: Blk 13
Toa Payoh Lorong 8
06-05 Braddell Tech Park
Singapore
319261

7 This component and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.

8 Sira Certification Service, notified body number 0518 in accordance with Article 9 of Directive 94/9/EC of 23 March 1994, certifies that this component has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of a component intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential reports listed in Section 14.2.

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the schedule to this certificate, has been assured by compliance with the following documents:

EN 60079-0:2006 EN 60079-1:2007 EN 61241-0:2006 EN 61241-1:2004
IEC 60079-0:2007 (used for guidance in respect of marking)

10 The sign 'U' is placed after the certificate number to indicate that the product assessed is a component and may be subject to further assessment when incorporated into equipment. Any special conditions for safe use are listed in the schedule to this certificate.

11 This EC type-examination certificate relates only to the design and construction of the specified component. If applicable, further requirements of this Directive apply to the manufacture and supply of this component.

12 The marking of the component shall include the following:



II 2GD
Ex d IIC Gb
Ex tb Db IIIC IP68
Ta = -40°C to +85°C

Project Number 51A19908
C. Index 04

C Ellaby
Certification Officer

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SCHEDULE

EC TYPE-EXAMINATION CERTIFICATE

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Issue 1

13 DESCRIPTION OF COMPONENT

8100Px: The 8100Px instrument enclosures and junction boxes are cylindrical, single compartment enclosures comprising a base and cover with a maximum internal volume of 700 cm³. The enclosures are manufactured from cast aluminium with an epoxy paint finish. The enclosures cover may be solid aluminium or contain a circular tempered glass window. Each enclosure may have up to three conduit openings with entry sizes selected from ½" NPT, ¾" NPT, ½" BSP or M20x1.5.

8100Px Series	8100PD	Aluminium, epoxy coated	Window cover
Design options	8100PB	Aluminium, epoxy coated	Blind cover

7100 and 8100 Series: The 8100 and 7100 series instrument enclosures and junction boxes are cylindrical single compartment enclosures comprising a base and cover with a maximum internal volume of 950 cm³. The enclosures are manufactured from cast aluminium, with an epoxy paint finish, or stainless steel, the 7100 series are also available in cast aluminium. The enclosure covers may be solid aluminium/ stainless steel or contain a circular tempered glass window. A further option of a high cover with a window is available in stainless steel only. Each 7100 enclosure may have up to four conduit openings and each 8100 enclosure may have up to three conduit openings, with entry sizes selected from ½" NPT, ¾" NPT, 1" NPT, ½" BSP, M20 x 1.5 or M25 x 1.5.

7100 Series Design options	7100 ST	Stainless steel	Window cover
	7100 SM	Stainless steel	Window cover
	7100 TT	Stainless steel	Blind cover
	7100 TM	Stainless steel	Blind cover
	7100 WT	Aluminium, epoxy coated	Window cover
	7100 WM	Aluminium, epoxy coated	Window cover
	7100 AT	Aluminium, epoxy coated	Blind cover
	7100 AM	Aluminium, epoxy coated	Blind cover
	7100 CT	Aluminium, cast finished	Window cover
	7100 CM	Aluminium, cast finished	Window cover
	7100 NT	Aluminium, cast finished	Blind cover
8100 Series Design options	7100 NM	Aluminium, cast finished	Blind cover
	8100 ST	Stainless steel	Window cover
	8100 SH	Stainless steel	High window cover
	8100 SM	Stainless steel	Window cover
	8100 TT	Stainless steel	Blind cover
	8100 TM	Stainless steel	Blind cover
	8100 WT	Aluminium, epoxy coated	Window cover
	8100 WM	Aluminium, epoxy coated	Window cover
8100 AT	Aluminium, epoxy coated	Blind cover	
8100 AM	Aluminium, epoxy coated	Blind cover	

8100Vx: The 8100Vx instrument enclosure has a cylindrical single compartment comprising a base and cover with a maximum internal volume of 950 cm³. The base and cover are manufactured from stainless steel, the cover may be solid or may contain a circular tempered glass window. Each enclosure may have up to six conduit openings, with entry sizes selected from ½" NPT or M20 x 1.5.

8100Vx Series	8100VW	Stainless steel	Window cover
Design options	8100VB	Stainless steel	Blind cover

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Sira Certification Service

Rake Lane, Eccleston, Chester, CH4 9JN, England

Tel: +44 (0) 1244 670900
Fax: +44 (0) 1244 681330
Email: info@siracertification.com
Web: www.siracertification.com



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Variation 1 - This variation introduced the following changes:

- i. The following devices were introduced, the Description of Component being amended accordingly:
 - The 8100PB epoxy coated aluminium instrument enclosure with a blind cover.
 - The 8100Vx stainless steel instrument enclosures with a blind or window cover

14 DESCRIPTIVE DOCUMENTS

14.1 Drawings

Refer to Certificate Annexe.

14.2 Associated Sira Reports and Certificate History

Issue	Date	Report number	Comment
0	16 July 2009	R51L18316A	The release of the prime certificate.
1	2 September 2009	R51A19908A	The introduction of Variation 1.

15 SPECIAL CONDITIONS FOR SAFE USE

- 15.1 The contents of the 7100 and 8100 Series enclosures may be placed in any arrangement provided that an area of at least 40% of each cross-sectional area remains free to permit unimpeded gas flow and, therefore, unrestricted development of any explosion.

16 ESSENTIAL HEALTH AND SAFETY REQUIREMENTS OF ANNEX II (EHSRs)

The relevant EHSRs that are not addressed by the standards listed in this certificate have been identified and individually assessed in the reports listed in Section 14.2.

17 CONDITIONS OF CERTIFICATION

- 17.1 The use of this certificate is subject to the Regulations Applicable to Holders of Sira Certificates.
- 17.2 Holders of EC type-examination certificates are required to comply with the production control requirements defined in Article 8 of directive 94/9/EC.

Certificate Annexe

Certificate Number: Sira 08ATEX1325U

Component: 7100, 8100, 8100Vx and 8100Px Series of Instrument Enclosures and Junction Boxes

Applicant: International Metal Engineering Pte Ltd



Issue 0

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
7100xx-xx-xx	1 of 1	1	26 Jun 09	7100 Aluminium junction box assembly
7100-xx-xx-xx	1 of 1	1	26 Jun 09	7100 Aluminium junction box
7100-100-xx-xx-xx	1 of 1	0	26 Jun 09	7100 Aluminium junction box
7100xx-xx-xx	1 of 1	0	26 Jun 09	7100 Stainless steel junction box assembly
7100-xx-SS-xx	1 of 1	0	26 Jun 09	7100 Stainless steel junction box
7100-100-xx-SS-xx	1 of 1	0	26 Jun 09	7100 Stainless steel junction box
8100xx-xx	1 of 1	1	26 Jun 09	8100 Aluminium instrument enclosure
8100W-xx	1 of 1	1	26 Jun 09	8100 Aluminium housing
8100W-100-xx	1 of 1	0	26 Jun 09	8100 Aluminium housing
8100-102-xx	1 of 1	1	26 Jun 09	8100 Aluminium blind cover (8100A)
8100-103-xx	1 of 1	1	26 Jun 09	8100 Aluminium window cover (8100W)
8100-204-xx	1 of 1	1	26 Jun 09	8100 Aluminium window cover assembly (8100W)
8100xx-xx	1 of 1	0	26 Jun 09	8100 Stainless steel instrument enclosure
8100-100-XX	1 of 1	0	26 Jun 09	8100 Stainless steel housing
8100S-XX	1 of 1	0	26 Jun 09	8100 Stainless steel housing
8100-002	1 of 1	0	26 Jun 09	8100 Stainless steel window cover (8100S)
8100-003	1 of 1	0	26 Jun 09	8100 Stainless steel blind cover (8100T)
8100-202	1 of 1	0	26 Jun 09	8100 Stainless steel window cover assembly (8100S)
8100SH-xx	1 of 1	0	26 Jun 09	8100 High stainless steel instrument enclosure (8100SH)
2380-002	1 of 1	1	26 Jun 09	2380 Stainless steel cover (8100SH)
2380-007	1 of 1	1	26 Jun 09	2380SE Cover assembly (8100SH)
8100PD-XX	1 of 1	1	26 Jun 09	8100PD Aluminium housing window assembly
8100-300-XX	1 of 1	9	26 Jun 09	8100PD Aluminium housing
8100-301	1 of 1	5	26 Jun 09	8100PD Aluminium window cover
8100-302	1 of 1	1	26 Jun 09	8100PD Aluminium window cover assembly
7100-601-xx-xx-xx	1 of 1	0	22 Jul 09	Rec tag for 7100 T series (for Aluminium type)
7100-602-xx-xx-xx	1 of 1	1	22 Jul 09	Rec tag for 7100 M series (for Aluminium type)
7100-604-xx-xx-xx	1 of 1	0	22 Jul 09	Rec tag for 7100 T series (for Stainless steel type)
7100-605-xx-xx-xx	1 of 1	0	22 Jul 09	Rec tag for 7100 M series (for Stainless steel type)
8100-600-xx	1	2	22 Jul 09	Adhesive rec tag for 8100PD (for 8100PD)
8100-601-xx-xx	1	0	22 Jul 09	Rec tag for 8100 T series (for Aluminium type)
8100-602-xx-xx	1	1	22 Jul 09	Rec tag for 8100 M series (for Aluminium steel type)
8100-604-xx-xx	1	0	22 Jul 09	Rec tag for 8100 T series (for Stainless steel type)
8100-605-xx-xx	1	0	22 Jul 09	Rec tag for 8100 M series (for Stainless steel type)
1080-023	1	1	26 Jun 09	M4 x 6 SS earth green screen
2380-003	1	1	26 Jun 09	Stainless steel ring
2380-004	1	1	26 Jun 09	'O' ring for housing
2380-005	1	1	26 Jun 09	'O' ring for cover
2380-006	1	2	26 Jun 09	Tempered glass
8080-006	1	1	26 Jun 09	M4 x 10 SS set screw
8080-007	1	1	26 Jun 09	Stainless steel rivets
8080-012	1	1	26 Jun 09	Stycast
8080-080	1	1	26 Jun 09	Stycast procedure
8100-004	1	0	26 Jun 09	'O' ring for 4" alu housing
8100-005	1	0	26 Jun 09	8100 SS Back up ring

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Certificate Annexe

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Component: 7100, 8100, 8100Vx and 8100Px Series of Instrument Enclosures and Junction Boxes
Applicant: International Metal Engineering Pte Ltd



Drawing	Sheets	Rev.	Date (Sira stamp)	Title
V2081-001	1	0	26 Jun 09	V2081 Tempered glass
V2081-002	1	0	26 Jun 09	V2081 Back up ring
V2081-004	1	0	26 Jun 09	'O' ring for cover

Issue 1

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
8100PB-XX	1 of 1	0	13 Aug 09	8100PB Aluminium blind assembly
8100-303	1 of 1	2	13 Aug 09	8100PB Aluminium blind cover
8100-601-xx	1 of 1	0	13 Aug 09	Adhesive rec tag for 8100PB
8100VB-xx-xx	1 of 1	1	18 Aug 09	8100VB assembly with blind cover
8100VW-xx-xx	1 of 1	1	18 Aug 09	8100VW assembly with window
8100-101-xx-xx	1 of 1	4	18 Aug 09	8100 V stainless steel housing
8100-600-xx-xx-xx	1 of 1	0	12 Aug 09	Rec Tag for 8100 V Series

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