



1 **EC TYPE-EXAMINATION CERTIFICATE**

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

3 Certificate Number: **Sira 08ATEX1082U** Issue: **1**

4 Component: **V2081, 7092 & 8092 Series Instrument Enclosures & Junction Boxes**

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

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

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 2 G D
Ex d IIC
Ex tD A21 IP66
Ta -40°C to +85°C

Project Number 23337
C. Index 04

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C Ellaby
Certification Officer

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SCHEDULE

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13 DESCRIPTION OF COMPONENT

The V2081, 7092 & 8092 Series Instrument Enclosures & Junction Boxes, examples of which are detailed in Figures 1 to 3, are cylindrical single compartment enclosures comprising a base and threaded cover with a maximum internal volume of 610 cm³. The enclosures are manufactured from stainless steel or cast aluminium that may have an epoxy paint coating. The cover may be blind or contain a circular tempered glass window. Each enclosure may have a number of conduit openings and sizes as detailed in the Table 1.

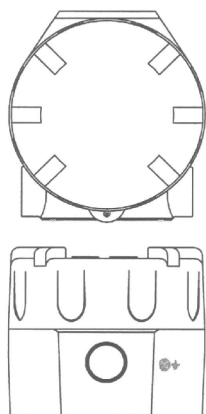


Figure 1 – Model V2081

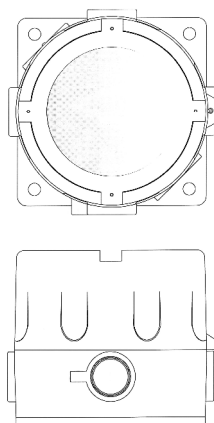


Figure 2 – Model 7092

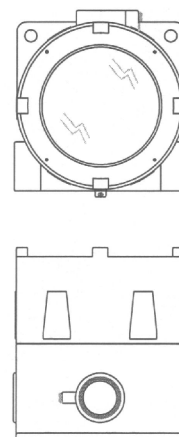


Figure 3 – Model 8092

Table 1. Design Options

Model	No. of entries	½" NPT	¾" NPT	1" NPT	½" BSP	M20 x 1.5	M25 x 1.5	M27 x 1.5	None
V2081	3	ü	ü	X	X	X	X	X	ü
7092	1	ü	ü	X	ü	ü	X	X	ü
7092	2 @ 90°	ü	ü	X	ü	ü	X	X	ü
7092	2 @ 180°	ü	ü	X	ü	ü	X	X	ü
7092	3	ü	ü	X	ü	ü	X	X	ü
7092	4	ü	ü	X	ü	ü	X	X	ü
8092	3	ü	ü	ü	ü	ü	ü	ü	ü

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- V2081 Series: Model V20815E6 - cast aluminium with blind cover *
- Model V20816E6 - cast aluminium with window cover *
- 7092 Series: Model 7092WM - cast aluminium with window cover *
- Model 7092WT - cast aluminium with window cover *
- Model 7092CM - cast aluminium with window cover *
- Model 7092CT - cast aluminium with window cover *
- Model 7092AM - cast aluminium with blind cover *
- Model 7092AT - cast aluminium with blind cover *
- Model 7092NM - cast aluminium with blind cover *
- Model 7092NT - cast aluminium with blind cover *
- Model 7092TM - stainless steel with blind cover *
- Model 7092TT - stainless steel with blind cover *
- Model 7092SM - stainless steel with window cover *
- Model 7092 ST - stainless steel with window cover *
- 8092 Series: Model 8092AT - cast aluminium with blind cover *
- Model 8092AM - cast aluminium with blind cover *
- Model 8092WT - cast aluminium with window cover *
- Model 8092WM - cast aluminium with window cover *
- Model 8092TT - stainless steel with blind cover *
- Model 8092TM - stainless steel with blind cover *
- Model 8092ST - stainless steel with window cover *
- Model 8092SM - stainless steel with window cover *

* Denotes that an adhesive label is fitted detailing the threadform when a metric threadform is selected.

Model Nos. 7092WT, 7092WM, 7092AT & 7092AM are coated with epoxy paint.
Model Nos. 7092CT, 7092CM, 7092NM & 7092NT are uncoated.

Variation 1 - This variation introduced the following change:

- i. The recognition of the introduction of 1" NPT, M25 and M27 cable entries in the 8092 range of enclosures, Table 1 was amended to reflect this.

14 DESCRIPTIVE DOCUMENTS

14.1 Drawings

Refer to Certificate Annexe.

14.2 Associated Sira Reports and Certificate History

Issue	Date	Report no.	Comment
0	25 April 2008	R51A16939A	The release of the prime certificate
1	12 November 2010	R23337A/00	The introduction of Variation 1.

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15 SPECIAL CONDITIONS FOR SAFE USE

- 15.1 The window cement has an upper service temperature limit of +95°C.
- 15.2 The window has an upper service temperature limit of +85°C.
- 15.3 The contents of the V2081, 7092 & 8092 Series Instrument Enclosures & Junction Boxes 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 an explosion. Separate relief areas may be aggregated provided that at each area has a minimum dimension in any direction of 12.5 mm.

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 08ATEX1082U

Component: V2081, 7092 & 8092 Series
Instrument Enclosures & Junction Boxes

Applicant: International Metal Engineering Pte Limited

Issue 0

Number	Sheet	Rev.	Date (Sira Stamp)	Description
1080-023	1 of 1	1	28 Mar 08	M4 x 6 SS Earth Green Screw
V2081-001	1 of 1	-	28 Mar 08	V2081 Tempered Glass
V2081-002	1 of 1	-	28 Mar 08	V2081 Back Up Ring
V2081-003	1 of 1	-	28 Mar 08	8-32 SS Set Screw
V2081-004	1 of 1	-	28 Mar 08	O-Ring for Cover
V2081-006	1 of 1	-	28 Mar 08	10-32 SS Earth Green Screw
V2081-600-XX	1 of 1	5	28 Mar 08	Rectangular Tag for V20815E6
V2081-601-XX	1 of 1	5	28 Mar 08	Rectangular Tag for V20816E6
V20815E6-XX	1 of 1	1	28 Mar 08	Clark Reliance Blind Assembly
V20815E6-001-XX	1 of 1	2	28 Mar 08	Clark Reliance Alu Hsg
V20815E6-002	1 of 1	-	28 Mar 08	Clark Reliance Alu Blind Cover
V20816E6-XX	1 of 1	1	28 Mar 08	Clark Reliance Window Assembly
V20816E6-001	1 of 1	-	28 Mar 08	Clark Reliance Alu Window Cover
V20816E6-002	1 of 1	1	28 Mar 08	Clark Reliance Alu Window Cover Assembly
2380-004	1 of 1	1	28 Mar 08	O-Ring For Housing
7092-00-SS-XX	1 of 1	2	28 Mar 08	7092 Stainless Steel Junction Box with 1 Entry
7092-00-XX-XX	1 of 1	2	28 Mar 08	7092 Aluminium Junction Box Housing with 1 Entry
7092-01-SS-XX	1 of 1	2	28 Mar 08	7092 Stainless Steel Junction Box with 2 Entries at 180°
7092-01-XX-XX	1 of 1	2	28 Mar 08	7092 Aluminium Junction Box Housing with 2 Entries at 180°
7092-02-SS-XX	1 of 1	2	28 Mar 08	7092 Stainless Steel Junction Box Housing with 2 Entries at 90°
7092-02-XX-XX	1 of 1	2	28 Mar 08	7092 Aluminium Junction Box Housing with 2 Entries at 90°
7092-03-SS-XX	1 of 1	2	28 Mar 08	7092 Stainless Steel Junction Box Housing with 3 Entries
7092-03-XX-XX	1 of 1	2	28 Mar 08	7092 Aluminium Junction Box Housing with 3 Entries
7092-04-SS-XX	1 of 1	2	28 Mar 08	7092 Stainless Steel Junction Box Housing with 4 Entries
7092-04-XX-XX	1 of 1	2	28 Mar 08	7092 Aluminium Junction Box Housing with 4 Entries
7092-602-YY-XX	1 of 1	3	28 Mar 08	Rectangular Tag for 7092WT Assembly
7092-603-YY-XX	1 of 1	3	28 Mar 08	Rectangular Tag for 7092WM Assembly
7092-605-YY-XX	1 of 1	3	28 Mar 08	Rectangular Tag for 7092ST Assembly
7092-606-YY-XX	1 of 1	3	28 Mar 08	Rectangular Tag for 7092SM Assembly
7092-622-YY-XX	1 of 1	3	28 Mar 08	Rectangular Tag for 7092AT Assembly
7092-623-YY-XX	1 of 1	3	28 Mar 08	Rectangular Tag for 7092AM Assembly
7092-625-YY-XX	1 of 1	3	28 Mar 08	Rectangular Tag for 7092TT Assembly
7092-626-YY-XX	1 of 1	3	28 Mar 08	Rectangular Tag for 7092TM Assembly
7092-652-YY-XX	1 of 1	3	28 Mar 08	Rectangular Tag for 7092CT Assembly
7092-653-YY-XX	1 of 1	3	28 Mar 08	Rectangular Tag for 7092CM Assembly
7092-655-YY-XX	1 of 1	3	28 Mar 08	Rectangular Tag for 7092NT Assembly
7092-656-YY-XX	1 of 1	3	28 Mar 08	Rectangular Tag for 7092NM Assembly
7092AM-YY-XX	1 of 1	2	28 Mar 08	7092AM Aluminium Junction Box Blind Assembly
7092AT-YY-XX	1 of 1	2	28 Mar 08	7092AT Aluminium Junction Box Blind Assembly
7092CM-YY-XX	1 of 1	2	28 Mar 08	7092CM Aluminium Junction Box Window Assembly
7092CT-YY-XX	1 of 1	2	28 Mar 08	7092CT Aluminium Junction Box Window Assembly
7092NM-YY-XX	1 of 1	2	28 Mar 08	7092NM Aluminium Junction Box Blind Assembly
7092NT-YY-XX	1 of 1	2	28 Mar 08	7092NT Aluminium Junction Box Blind Assembly
7092SM-YY-XX	1 of 1	2	28 Mar 08	7092SM Stainless Steel Junction Box Window Assembly
7092ST-YY-XX	1 of 1	2	28 Mar 08	7092ST Stainless Steel Junction Box Window Assembly

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Certificate Annexe

Certificate Number: Sira 08ATEX1082U
 Component: V2081, 7092 & 8092 Series
 Instrument Enclosures & Junction Boxes
 Applicant: International Metal Engineering Pte Limited



Number	Sheet	Rev.	Date (Sira Stamp)	Description
7092TM-YY-XX	1 of 1	2	28 Mar 08	7092TM Stainless Steel Junction Box Blind Assembly
7092TT-YY-XX	1 of 1	2	28 Mar 08	7092TT Stainless Steel Junction Box Blind Assembly
7092WM-YY-XX	1 of 1	2	28 Mar 08	7092WM Aluminium Junction Box Window Assembly
7092WT-YY-XX	1 of 1	2	28 Mar 08	7092WT Aluminium Junction Box Window Assembly
8080-006	1 of 1	1	28 Mar 08	M4 x 10 SS Set Screw
8080-007	1 of 1	1	28 Mar 08	Stainless Steel Rivets
8080-012	1 of 1	1	28 Mar 08	Stycast
8092-002	1 of 1	-	28 Mar 08	8092 Stainless Steel Window Cover
8092-003	1 of 1	-	28 Mar 08	8092 Stainless Steel Blind cover
8092-004	1 of 1	-	28 Mar 08	8092SE Back Up Ring
8092-005	1 of 1	-	28 Mar 08	8092SE Tempered Glass
8092-007	1 of 1	-	28 Mar 08	O-Ring For Cover
8092-008	1 of 1	-	28 Mar 08	O-Ring For Housing
8092-102-XX	1 of 1	-	28 Mar 08	8092 Aluminium Blind Cover
8092-103-XX	1 of 1	-	28 Mar 08	8092 Aluminium Window Cover
8092-202	1 of 1	1	28 Mar 08	8092 Stainless Steel Window Cover Assembly
8092-204-XX	1 of 1	1	28 Mar 08	8092 Aluminium Window Cover Assembly
8092-601-XX	1 of 1	4	28 Mar 08	Rectangular Tag for 8092SM Assembly
8092-603-XX	1 of 1	4	28 Mar 08	Rectangular Tag for 8092TM Assembly
8092-605-XX	1 of 1	4	28 Mar 08	Rectangular Tag for 8092WM Assembly
8092-607-XX	1 of 1	4	28 Mar 08	Rectangular Tag for 8092AM Assembly
8092-608-XX	1 of 1	2	28 Mar 08	Rectangular Tag for 8092ST Assembly
8092-609-XX	1 of 1	2	28 Mar 08	Rectangular Tag for 8092TT Assembly
8092-610-XX	1 of 1	2	28 Mar 08	Rectangular Tag for 8092WT Assembly
8092-611-XX	1 of 1	2	28 Mar 08	Rectangular Tag for 8092AT Assembly
8092AM-XX	1 of 1	1	28 Mar 08	8092AM Aluminium Blind Assembly
8092AT-XX	1 of 1	1	28 Mar 08	8092AT Aluminium Blind Assembly
8092S-XX	1 of 1	2	28 Mar 08	8092 Stainless Steel Housing
8092SM-XX	1 of 1	1	28 Mar 08	8092SM Stainless Steel Window Assembly
8092ST-XX	1 of 1	1	28 Mar 08	8092ST Stainless Steel Window Assembly
8092TM-XX	1 of 1	1	28 Mar 08	8092TM Stainless Steel Blind Assembly
8092TT-XX	1 of 1	1	28 Mar 08	8092TT Stainless Steel Blind Assembly
8092W-XX	1 of 1	2	28 Mar 08	8092 Aluminium Housing
8092WM-XX	1 of 1	1	28 Mar 08	8092WM Aluminium Window Assembly
8092WT-XX	1 of 1	1	28 Mar 08	8092WT Aluminium Window Assembly

Issue 1

Drawing	Sheets	Rev.	Date (Sira stamp)	Description
8092S-xx	1 of 1	3	19 Oct 10	8092 Stainless Steel Housing
8092S-100-xx	1 of 1	-	19 Oct 10	8092 Stainless Steel Housing
8092Sx-xx	1 of 1	2	19 Oct 10	8092Sx Stainless Steel Window Assembly
8092Tx-xx	1 of 1	2	19 Oct 10	8092Tx Stainless Steel Blind Assembly
8092W-xx	1 of 1	3	19 Oct 10	8092 Aluminum Housing
8092Wx-xx	1 of 1	2	19 Oct 10	8092Wx Aluminum Window Assembly
8092Ax-xx	1 of 1	2	19 Oct 10	8092Ax Aluminum Blind Assembly
8092-608-xx	1 of 1	3	19 Oct 10	Rectangular Tag For 8092ST Assembly

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Certificate Annexe

Certificate Number: Sira 08ATEX1082U
Component: V2081, 7092 & 8092 Series
Instrument Enclosures & Junction Boxes
Applicant: International Metal Engineering Pte Limited



Drawing	Sheets	Rev.	Date (Sira stamp)	Description
8092-601-xx	1 of 1	5	19 Oct 10	Rectangular Tag For 8092SM Assembly
8092-609-xx	1 of 1	3	19 Oct 10	Rectangular Tag For 8092TT Assembly
8092-603-xx	1 of 1	5	19 Oct 10	Rectangular Tag For 8092TM Assembly
8092-610-xx	1 of 1	3	19 Oct 10	Rectangular Tag For 8092WT Assembly
8092-605-xx	1 of 1	5	19 Oct 10	Rectangular Tag For 8092WM Assembly
8092-611-xx	1 of 1	3	19 Oct 10	Rectangular Tag For 8092AT Assembly
8092-607-xx	1 of 1	5	19 Oct 10	Rectangular Tag For 8092AM Assembly

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