



1 **EC TYPE-EXAMINATION CERTIFICATE**

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

3 Certificate No.: **Sira 10ATEX1280X** Issue: **1**

4 Equipment: **95, 96, 98 and 99 Series Temperature Probe Assemblies & 1080 Device Series Assembly**

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

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

7 This equipment and any acceptable variation thereto is 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 equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment 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:

YTA Enclosure Series 95 Temperature Probe Assembly

EN 60079-0:2006 EN 60079-1:2007 EN 61241-0:2006 EN 61241-1:2004

96, 98 and 99 Series Temperature Probe Assemblies

EN 60079-0:2009 EN 60079-1:2007 EN 60079-31:2009

1080 Series Device Assembly

EN 60079-0:2012 EN 60079-1:2007 EN 60079-31:2009

The above list of documents may detail standards that do not appear on the UKAS Scope of Accreditation, but have been added through Sira's flexible scope of accreditation, which is available on request.

10 If the sign 'X' is placed after the certificate number, it indicates that the equipment 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 and construction of the specified equipment. If applicable, further requirements of this Directive apply to the manufacture and supply of this equipment.

12 The marking of the equipment shall include the following:



II 2GD

Ex d IIC T6 Gb

Ex tD A21 T85°C IP68*

(Ta = -40°C to +70°C)

(95 Series YTA enclosure only)



II 2GD

Ex d IIC T6 Gb

Ex tb IIIC T85°C Db IP68*

(Ta = -40°C to +70°C)

(96, 98 and 99 Series)



II 2GD

Ex d IIC T6 Gb IP66/68**

Ex tb IIIC T85°C Db

(Ta = -40°C to +70°C)

(1080 Series Device Assy.)

* Dust protection and IP68 only applicable when probe end meets the special condition of safe use.

** IP66/68 is only met when the associated equipment is similarly rated.

Project Number 28247

A C Smith
Certification Manager

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13 DESCRIPTION OF EQUIPMENT

95, 96, 98 and 99 Series Temperature Probe Assembly

The temperature probe assembly comprises a flameproof nipple union assembly fitted with a probe which houses the temperature sensor. This unit is fitted to an International Metal Engineering enclosure to complete the assembly. The probe is retained within the nipple by a spring. The nipple union, probe and spring are stainless steel grade 316. The probe end of the nipple union is threaded to accommodate an optional protection of the probe such as a thermowell.

The 1080 series enclosures may contain equipment limited to a maximum power dissipation of 3 W.

The union nipple assembly may be fitted to the following International Metal Engineering enclosures:

- 95 Series: Yokogawa YTA enclosures (Kema 07ATEX0130)
- 96 Series: 1080SM and 1080 WM enclosures (Sira 09ATEX1023U)
- 98 Series: 8080SM and 8080WM enclosures (Sira 08ATEX1227X)
- 99 Series: 1080SM and 1080 WM enclosures (Sira 09ATEX1023U)

The assemblies have the following part numbers:

95 Series

Part number	Sensor description	
95TJ	Type J thermocouple, class 1, DIN/IEC 584-2-1992	
95TK	Type K thermocouple, class 1, DIN/IEC 584-2-1992	
95TT	Type T thermocouple, class 1, DIN/IEC 584-2-1992	
95TE	Type E thermocouple, class 1, DIN/IEC 584-2-1992	
95TR	Type R thermocouple, class 1, DIN/IEC 584-2-1992	
95TS	Type S thermocouple, class 1, DIN/IEC 584-2-1992	
95PA	100 Ohm platinum resistance sensor, class A, DIN/IEC 751-1985	
95PB	100 Ohm platinum resistance sensor, class B, DIN/IEC 751-1985	
95PF	100 Ohm platinum resistance sensor, class A, DIN/IEC 751-1985, 4 wire	
95xx	Alternative temperature sensor	
	Code	Number of elements
	S	Single element
	D	Dual element
	Code	Nipple Union Assembly length ("N" Length)
	04	4 Inch
	05	5 Inch
	06	6 Inch
	07	7 Inch
	Code	Yokogawa enclosure
	YTA110-00	Temperature transmitter with aluminium enclosure
	YTA110-E1	Temperature transmitter with stainless steel enclosure
	YTA310-00	Temperature transmitter with aluminium enclosure
	YTA310-E1	Temperature transmitter with stainless steel enclosure
	YTA320-00	Temperature transmitter with aluminium enclosure
	YTA320-E1	Temperature transmitter with stainless steel enclosure

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Sira Certification Service

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96 Series

Part number	Sensor description
96TJ	Type J thermocouple, class 1, DIN/IEC 584-2-1992
96TK	Type K thermocouple, class 1, DIN/IEC 584-2-1992
96TT	Type T thermocouple, class 1, DIN/IEC 584-2-1992
96TE	Type E thermocouple, class 1, DIN/IEC 584-2-1992
96TR	Type R thermocouple, class 1, DIN/IEC 584-2-1992
96TS	Type S thermocouple, class 1, DIN/IEC 584-2-1992
96PA	100 Ohm platinum resistance sensor, class A, DIN/IEC 751-1985
96PB	100 Ohm platinum resistance sensor, class B, DIN/IEC 751-1985
96PF	100 Ohm platinum resistance sensor, class A, DIN/IEC 751-1985, 4 wire
96xx	Alternative temperature sensor
Code	Number of elements
S	Single element
D	Dual element
Code	Nipple Union Assembly length ("N" Length)
04	4 Inch
05	5 Inch
06	6 Inch
07	7 Inch
Code	Temperature Transmitter Enclosure
YTA 50	Temperature Transmitter
YTA 70	Temperature Transmitter with Hart
YTA 80	Temperature Transmitter With Fieldbus
8070	Terminal block
Code	Enclosure material
A	Aluminium
T	Stainless steel
Code	Conduit entry
01	3/4" NPT
02	1/2" NPT
08	M20 x 1.5
37	1/2" BSP
38	3/4" BSP

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98 Series

Part number	Sensor description	
98TJ	Type J thermocouple, class 1, DIN/IEC 584-2-1992	
98TK	Type K thermocouple, class 1, DIN/IEC 584-2-1992	
98TT	Type T thermocouple, class 1, DIN/IEC 584-2-1992	
98TE	Type E thermocouple, class 1, DIN/IEC 584-2-1992	
98TR	Type R thermocouple, class 1, DIN/IEC 584-2-1992	
98TS	Type S thermocouple, class 1, DIN/IEC 584-2-1992	
98PA	100 Ohm platinum resistance sensor, class A, DIN/IEC 751-1985	
98PB	100 Ohm platinum resistance sensor, class B, DIN/IEC 751-1985	
98PF	100 Ohm platinum resistance sensor, class A, DIN/IEC 751-1985, 4 wire	
98xx	Alternative temperature sensor	
	Code	Number of elements
	S	Single element
	D	Dual element
	Code	Nipple Union Assembly length ("N" Length)
	04	4 Inch
	05	5 Inch
	06	6 Inch
	07	7 Inch
	Code	8080 Series indicator/ transmitter
	xxxxxx	As per Sira 08ATEX1227X
	Code	Enclosure material
	A	Aluminium
	T	Stainless steel
	Code	Conduit entry
	04	¾" NPT
	05	½" NPT
	06	M20 x 1.5
	07	None

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99 Series

Part number	Sensor description	
99TJ	Type J thermocouple, class 1, DIN/IEC 584-2-1992	
99TK	Type K thermocouple, class 1, DIN/IEC 584-2-1992	
99TT	Type T thermocouple, class 1, DIN/IEC 584-2-1992	
99TE	Type E thermocouple, class 1, DIN/IEC 584-2-1992	
99TR	Type R thermocouple, class 1, DIN/IEC 584-2-1992	
99TS	Type S thermocouple, class 1, DIN/IEC 584-2-1992	
99PA	100 Ohm platinum resistance sensor, class A, DIN/IEC 751-1985	
99PB	100 Ohm platinum resistance sensor, class B, DIN/IEC 751-1985	
99PF	100 Ohm platinum resistance sensor, class A, DIN/IEC 751-1985, 4 wire	
99xx	Alternative temperature sensor	
	Code	Number of elements
	S	Single element
	D	Dual element
	Code	Nipple Union Assembly length ("N" Length)
	04	4 Inch
	05	5 Inch
	06	6 Inch
	07	7 Inch
	Code	Temperature Transmitter Enclosure
	xxxxxx	Terminal block / Temperature Transmitter
	Code	Enclosure material
	A	Aluminium
	T	Stainless steel
	Code	Conduit entry
	01	¾" NPT
	02	½" NPT
	08	M20 x 1.5
	37	½" BSP
	38	¾" BSP

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1080 Series

The 1080 Series Device Assembly utilises the 1080 series instrument housing which is certified as an Ex Component under certificate numbers Sira 09ATEX1023U. The Instrument Assembly may be populated with either a ceramic terminal block or an encapsulated transmitter circuit. The maximum power dissipation of the terminal block and transmitter is less than 3 W. It is installed by International Metal Engineering and supplied as a complete assembly. The assemblies have the following part numbers:

IME Part Number	Description	
1080WL	1080 Aluminium Device Assembly	
1080SL	1080 Stainless Steel Device Assembly	
Code	Device specification	
-xx	Any specified terminal block/electronics device with power dissipation ≤ 3.0 W, outer diameter of ≤ 50.0 mm & height of ≤ 30.0 mm	
-xx	'T1' Thread Size	'T2' Thread Size
-01	3/4" NPT	1/2" NPT
-02	1/2" NPT	1/2" NPT
-04	3/4" BSP	1/2" BSP
-05	M20x1.5P	1/2" BSP
-08	M20x1.5P	1/2" NPT
-09	1/2" NPT	3/4" NPT
-10	3/4" NPT	M20x1.5P
-11	1/2" NPT	M20x1.5P
-12	M20x1.5P	M20x1.5P
-18	1/2" BSP	1/2" BSP
-33	3/4" NPT	3/4" NPT
-36	M20x1.5P	3/4" NPT
-37	1/2" BSP	1/2" NPT
-38	3/4" BSP	1/2" NPT
-39	1/2" BSP	3/4" NPT
-40	3/4" BSP	3/4" NPT
-41	1/2" BSP	M20x1.5P
-42	3/4" BSP	M20x1.5P
-43	1/2" NPT	1/2" BSP
-44	3/4" NPT	1/2" BSP
-45	1/2" NPT	3/4" BSP
-46	3/4" NPT	3/4" BSP
-47	M20x1.5P	3/4" BSP
-48	1/2" BSP	3/4" BSP
-49	3/4" BSP	3/4" BSP

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Variation 1 - This variation introduced the following changes:

- i. The introduction of the 1080 Series Device Assembly, the details of which are shown above.

14 DESCRIPTIVE DOCUMENTS

14.1 Drawings

Refer to Certificate Annexe.

14.2 Associated Sira Reports and Certificate History

Issue	Date	Report number	Comment
0	14 January 2011	R20362A/00	The release of prime certificate.
1	19 March 2013	R28247A/00	The introduction of Variation 1

15 SPECIAL CONDITIONS FOR SAFE USE (denoted by X after the certificate number)

- 15.1 **96, 98 and 99 Series temperature probe assemblies:** To meet the requirements of IEC 60079-31 and IEC 60529 for degree of protection IP68, the user shall ensure the probe end of the nipple union shall be threaded into a protection tube such as a thermowell to maintain the degree of protection IP68.

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.