



# IECEX Certificate of Conformity

## INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit [www.iecex.com](http://www.iecex.com)

Certificate No.: **IECEX SIR 10.0132X** issue No.:1

Certificate history:  
Issue No. 1 (2013-4-30)  
Issue No. 0 (2011-1-14)

Status: **Current**

Date of Issue: **2013-04-30** Page 1 of 4

Applicant: **International Metal Engineering Pte Ltd**  
Blk 13, Toa Payoh Lorong 8  
#06-05 Braddell Tech Park  
319261  
Singapore

Electrical Apparatus: **95,96,98 and 99 Series temperature probe assemblies**  
Optional accessory:

Type of Protection: **Flameproof and Dust**

Marking: Ex d IIC T6 Gb Ex d IIC T6 Gb Ex d IIC T6 Gb  
Ex tD A21 T85°C IP68\* Ex tb IIIC T85°C Db IP68\* Ex tb IIIC T85°C Db IP66/68\*\*  
(Ta = -40°C to +70°C) (Ta = -40°C to +70°C) (Ta = -40°C to +70°C)  
(95 Series YTA enclosure only) (96, 98 and 99 Series) 1080 Series Device Assembly.  
\* Dust protection and IP68 only applicable when probe end meets the Condition of Certification  
\*\* IP66/68 is only met when the associated equipment is similarly rated.


Approved for issue on behalf of the IECEx  
Certification Body:

A C Smith

Position:

Certification Manager

Signature:  
(for printed version)

  
2013-04-30

Date:

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the [Official IECEx Website](http://www.iecex.com).

Certificate issued by:

**SIRA Certification Service**  
Rake Lane  
Eccleston  
Chester  
CH4 9JN  
United Kingdom

**sira**  
CERTIFICATION



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Manufacturer: **International Metal Engineering Pte Ltd**  
Blk 13, Toa Payoh Lorong 8  
#06-05 Braddell Tech Park  
319261  
**Singapore**

Additional Manufacturing location  
(s):

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

#### 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:

<b>IEC 60079-0 : 2004</b> Edition: 4.0	Electrical apparatus for explosive gas atmospheres - Part 0: General requirements
<b>IEC 60079-0 : 2007-10</b> Edition: 5	Explosive atmospheres - Part 0: Equipment - General requirements
<b>IEC 60079-0 : 2011</b> Edition: 6.0	Explosive atmospheres - Part 0: General requirements
<b>IEC 60079-1 : 2007-04</b> Edition: 6	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
<b>IEC 60079-31 : 2008</b> Edition: 1	Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure 't'
<b>IEC 61241-0 : 2004</b> Edition: 1	Electrical apparatus for use in the presence of combustible dust - Part 0: General requirements
<b>IEC 61241-1 : 2004</b> Edition: 1	Electrical apparatus for use in the presence of combustible dust - Part 1: Protection by enclosures "tD"

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

#### TEST & ASSESSMENT REPORTS:

*A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in*

#### Test Report:

[GB/SIR/ExTR11.0001/00](#)

[GB/SIR/ExTR13.0071/00](#)

#### Quality Assessment Report:

[GB/SIR/QAR07.0040/01](#)

[GB/SIR/QAR07.0040/02](#)

[GB/SIR/QAR07.0040/03](#)



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## Schedule

### EQUIPMENT:

*Equipment and systems covered by this certificate are as follows:*

#### 95, 96, 98 and 99 series temperature probe assembly

The temperature probe assembly comprises a flameproof nipple union 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 (IECEX KEM 07.0044)
- 96 Series: 1080SM and 1080 WM enclosures (IECEX SIR 09.0006U)
- 98 Series: 8080SM and 8080WM enclosures (IECEX SIR 08.0091X)
- 99 Series: 1080SM and 1080 WM enclosures (IECEX SIR 09.0006U)

For tables detailing part numbers see annexe

### CONDITIONS OF CERTIFICATION: YES as shown below:

- 1 96, 98 and 99 Series only: 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 union nipple shall be threaded into a protection tube such as a thermowell to maintain the degree of protection IP68.



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## DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

**Issue 1** – this Issue introduced the following change:

1.	The introduction of the 1080 Series Device Assembly, the details of which can be found in the Annexe
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Annexe to: **IECEX SIR 10.0132X**      **Issue 1**  
 Applicant: **International Metal Engineering Pte Ltd**  
 Apparatus: **95, 96, 98 99 and 1080 series temperature assembly**



**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	
	<b>Code</b>	<b>Number of elements</b>
	S	Single element
	D	Dual element
	<b>Code</b>	<b>Nipple Union Assembly length ("N" Length)</b>
	04	4 Inch
	05	5 Inch
	06	6 Inch
	07	7 Inch
	<b>Code</b>	<b>Yokogawa enclosure</b>
	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

Annexe to: **IECEX SIR 10.0132X**      **Issue 1**  
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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	
	<b>Code</b>	<b>Number of elements</b>
	S	Single element
	D	Dual element
	<b>Code</b>	<b>Nipple Union Assembly length ("N" Length)</b>
	04	4 Inch
	05	5 Inch
	06	6 Inch
	07	7 Inch
	<b>Code</b>	<b>Temperature Transmitter Enclosure</b>
	YTA 50	Temperature Transmitter
	YTA 70	Temperature Transmitter with Hart
	YTA 80	Temperature Transmitter With Fieldbus
	8070	Terminal block
	<b>Code</b>	<b>Enclosure material</b>
	A	Aluminium
	T	Stainless steel
	<b>Code</b>	<b>Conduit entry</b>
	01	3/4" NPT
	02	1/2" NPT
	08	M20 x 1.5
	37	1/2" BSP
	38	3/4" BSP

Annexe to: **IECEX SIR 10.0132X**      **Issue 1**  
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 Apparatus: **95, 96, 98 99 and 1080 series temperature assembly**



**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	
	<b>Code</b>	<b>Number of elements</b>
	S	Single element
	D	Dual element
	<b>Code</b>	<b>Nipple Union Assembly length ("N" Length)</b>
	04	4 Inch
	05	5 Inch
	06	6 Inch
	07	7 Inch
	<b>Code</b>	<b>8080 Series indicator/ transmitter</b>
	xxxxx	As per Sira IECEx SIR 08.0091X
	x	
	<b>Code</b>	<b>Enclosure material</b>
	A	Aluminium
	T	Stainless steel
	<b>Code</b>	<b>Conduit entry</b>
	04	¾" NPT
	05	½" NPT
	06	M20 x 1.5
	07	None

Annexe to: **IECEX SIR 10.0132X**      **Issue 1**

Applicant: **International Metal Engineering Pte Ltd**

Apparatus: **95, 96, 98 99 and 1080 series temperature assembly**



**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	
<b>Code</b>	<b>Number of elements</b>	
S	Single element	
D	Dual element	
<b>Code</b>	<b>Nipple Union Assembly length ("N" Length)</b>	
04	4 Inch	
05	5 Inch	
06	6 Inch	
07	7 Inch	
<b>Code</b>	<b>Temperature Transmitter Enclosure</b>	
xxxxx x	Terminal block / Temperature Transmitter	
<b>Code</b>	<b>Enclosure material</b>	
A	Aluminium	
T	Stainless steel	
<b>Code</b>	<b>Conduit entry</b>	
01	¾" NPT	
02	½" NPT	
08	M20 x 1.5	
37	½" BSP	
38	¾" BSP	



Annexe to: **IECEX SIR 10.0132X**      **Issue 1**  
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 Apparatus: **95, 96, 98 99 and 1080 series temperature assembly**



**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 and IECEX SIR 09.0006U. 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		
	<b>Code</b>	<b>Device specification</b>	
	-xx	Any specified terminal block/electronics device with power dissipation $\leq 3.0$ W, outer diameter of $\leq 50.0$ mm & height of $\leq 30.0$ mm	
		<b>'T1' Thread Size</b>	<b>'T2' Thread Size</b>
	-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