



# IECEx Certificate of Conformity

## INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System for Explosive Atmospheres

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

Certificate No.: **IECEx SIR 12.0151X** Page 1 of 4 Certificate history:  
Status: **Current** Issue No: 2 [Issue 1 \(2018-03-06\)](#)  
[Issue 0 \(2013-03-13\)](#)  
Date of Issue: 2021-03-31  
Applicant: **IntInternational Metal Engineering Pte Ltd**  
Blk 13 Toa Payoh Lorong 8  
#06-05 Braddell Tech Park  
Singapore 319261  
**Singapore**  
Equipment: **9080 Dual Compartment Indicator/Transmitter Assembly**  
Optional accessory:  
Type of Protection: **Flameproof and Dust Protection by Enclosure**  
Marking: Ex db IIC T6 Gb  
Ex tb III C T85°C Db  
Ta = -40°C to +60°C

Approved for issue on behalf of the IECEx  
Certification Body:

**Neil Jones**

Position:

**Certification Manager**

Signature:  
(for printed version)

Date:

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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.
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Certificate issued by:

**SIRA Certification Service**  
**CSA Group**  
**Unit 6, Hawarden Industrial Park**  
**Hawarden, Deeside, CH5 3US**  
**United Kingdom**

**sira**  
CERTIFICATION





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Additional manufacturing locations:

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 equipment 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 60079-0:2011** Explosive atmospheres - Part 0: General requirements  
Edition:6.0

**IEC 60079-1:2014-06** Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"  
Edition:7.0

**IEC 60079-31:2013** Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"  
Edition:2

This Certificate **does not** indicate compliance with 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 Reports:

[GB/SIR/ExTR13.0024/00](#)

[GB/SIR/ExTR18.0013/00](#)

[GB/SIR/ExTR21.0026/00](#)

Quality Assessment Report:

[GB/SIR/QAR07.0040/08](#)



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## **EQUIPMENT:**

Equipment and systems covered by this Certificate are as follows:

The 9080 series dual compartment indicator/transmitter assemblies utilise the 9080 dual compartment housings, they are cylindrical, and comprising a base and two covers with an approximate internal volume of 450 cm<sup>3</sup>. The two compartments are separated by a central internal wall that may have one 8 mm thru hole for electronics. The electronics are secured with epoxy cement. The enclosures are manufactured from Copper-free Aluminium or Stainless Steel, the Copper-free Aluminium versions have an epoxy paint coating of maximum thickness 0.20 mm. The covers are either manufactured from Aluminium or Stainless Steel, and may be blind or comprise a tempered glass window. The housings can be populated with either a four post terminal block or a ten post semi-circle terminal block as specified in the manufacturer's documents.

The dual compartment indicator/transmitter assembly is populated with a loop powered indicator/transmitter as specified by the manufacturer.

The maximum diameter of which shall not exceed 68 mm and the maximum power dissipation within the enclosure shall not exceed 5.6 W.

The housings meet the requirements for degree of protection IP68.

Refer to the Annexe for additional information

## **SPECIFIC CONDITIONS OF USE: YES as shown below:**

1. Under rated conditions, the cable entries may exceed 74°C; this shall be considered when installing the 9080 dual compartment indicator/transmitter assembly. Only cables and cable glands that have temperature ratings suitable for the application shall be used.
2. The Copper-free Aluminium version has a non-conducting coating and may generate an ignition-capable level of electrostatic charge under certain extreme conditions. The user shall ensure that the equipment is not installed in a location where it may be subjected to external conditions (such as high-pressure steam) which might cause a build-up of electrostatic charges on non-conducting surfaces. Additionally, cleaning of the equipment should be done only with a damp cloth.



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

**This issue, Issue 2, recognises the following change; refer to the certificate annex to view a comprehensive history:**

1. Remove all references to BSP thread types in the certificate product description and drawings, in relation to cable entry options, resulting in the removal of a condition in the certificate.
2. Removal of a Condition of Manufacture regarding the Ex component labelling.

## **Annex:**

[IECEx SIR 12.0151X Issue 2 Annexe.pdf](#)

Annexe to: IECEx SIR 12.0151X Issue 2

Applicant: International Metal Engineering Pte Ltd



Apparatus: 9080 Dual Compartment Indicator/Transmitter Assembly

Each enclosure may have a number of conduit openings and sizes refer to Table 2.

Table 2: 9080 Dual Compartment Indicator/Transmitter Assembly Design Options

Typical product reference - 9080MK-A-04		
Code	Electronics Type	
MK	LED Loop Powered Indicator, Input 4-20 mA , Output: None	
PP	LCD Loop Powered Indicator, Input 4-20 mA, Output: None	
MN	LED Process Indicator, Power Supply 18 to 28 VDC, Input 4-20 mA, Output: None	
RR	LED Process Indicator with Dual alarms, Power Supply 18 to 28 VDC, 4-20 mA Input, 2 Relay Outputs, 4-20mA Retransmission Output	
PR	LED Temperature Indicator with Dual alarms, Power Supply 18 to 28 VDC, RTD, Thermocouple J,K Sensors Input, 2 Relay Outputs	
PR1	LED Temperature Indicator with Dual Alarms, Power Supply 12 to 28 VDC, RTD, Thermocouple J,K Sensors Input, 2 Relay Outputs, 4-20mA Retransmission Output	
PR2	LED Temperature Indicator with Dual Alarms, Power Supply 12 to 28 VDC, RTD, Thermocouple J,K Sensors Input, 2 Relay Outputs, PID Controlled Output	
PR3	Dual Channel, LED Temperature Indicator with Dual Alarms, Power Supply 12 to 28 VDC, RTD, Thermocouple J,K Sensors Input, 2 Relay Outputs	
EL	LCD Loop Powered Indicator with Engineering Units Display, Input 4-20 mA, Output: None	
HT	LCD, 2 Wire, Indicating Temperature Transmitter + Hart, Power Supply 10.5 to 45 VDC, 4-20mA Output (loop) + Hart Communication Protocol	
PA	LCD, 2 Wire, Indicating Pressure Transmitter + Hart, Power Supply 10.5 to 45 VDC, 4-20mA Output (loop) + Hart Communication Protocol	
PT	LED Pressure Indicator with Dual alarms, Power Supply 18 to 28 VDC, 2 Relay Outputs	
FR	LED Flow Indicator and Totalizer with Dual alarms, Power Supply 18 to 28 VDC, 4-20 mA/Pulse Input, 2 Relay Outputs, 4-20mA Retransmission Output	
HM	Combination of LED Loop Powered Indicator + Head Mounted Transmitter.	
XX	Any specified Indicator/Transmitter with power dissipation less than 5.6W, Outer diameter less than 65mm and total height less than 60mm	
Code	Enclosure Type	
A	Aluminum Enclosure	
T	Stainless Steel Enclosure	
Code	T1	T2
04	½"NPT	¾"NPT
05	½"NPT	½"NPT
06	½"NPT	M20 x 1.5P
07	¾"NPT	¾"NPT
08	¾"NPT	½"NPT
09	¾"NPT	M20 x 1.5P
13	¾"NPT	None
14	M20 x 1.5P	None
17	½"NPT	None
18	None	None
19	None	¾"NPT
20	None	½"NPT
21	None	M20 x 1.5P
22	M20 x 1.5P	M20 x 1.5P
25	M25 x 1.5P	½" NPT
26	M25 x 1.5P	¾" NPT
27	M25 x 1.5P	M20 x 1.5P

Annexe to: IECEx SIR 12.0151X Issue 2  
Applicant: International Metal Engineering Pte Ltd  
Apparatus: 9080 Dual Compartment  
Indicator/Transmitter Assembly



Code	T1	T2
28	M25 x 1.5P	M25 x 1.5P
30	M25 x 1.5P	None
31	½"NPT	M25 x 1.5P
32	¾"NPT	M25 x 1.5P
34	M20 x 1.5P	M25 x 1.5P
35	1" NPT	M25 x 1.5P
36	NONE	M25 x 1.5P
37	1" NPT	½" NPT
38	1" NPT	¾" NPT
39	1" NPT	M20 x 1.5P
40	1" NPT	M25 x 1.5P
42	1" NPT	None

A typical product reference would be 9080MK-A-04.

## Conditions Of Manufacture

- i. The equipment covered by this certificate incorporates previously certified devices; it is therefore the responsibility of the manufacturer to continually monitor the status of the certification associated with these devices, and the manufacturer shall inform CSA Sira of any modifications of the devices that may impinge upon the explosion safety design of the equipment.

## Full Certificate Change History

Issue 1 – this Issue introduced the following changes:

1. Following appropriate assessment to demonstrate compliance with the latest technical knowledge, IEC 60079-1:2007 Ed.6 and IEC 60079-31:2008 Ed.1 were replaced by IEC 60079-1:2014 Ed.7 and IEC 60079-31:2013 Ed.2, the markings and conditions were updated accordingly to recognise the new standards.
2. Other external thread types (other than metric or NPT) are not permitted as an option for cable glands in field wiring installations in IEC 60079-1:2014 Annex C.2.2, therefore a specific condition of use is added to this certificate.

Issue 2 – this Issue introduced the following changes:

1. Remove all references to BSP thread types in the certificate product description and drawings, in relation to cable entry options, resulting in the removal of a condition in the certificate.
2. Removal of a Condition of Manufacture regarding the Ex component labelling.