



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

Ex COMPONENT CERTIFICATE

Certificate No.: **IECEx SIR 07.0111U**

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Certificate history:

Status: **Current**

Issue No: 7

[Issue 6 \(2021-03-31\)](#)

[Issue 5 \(2018-08-28\)](#)

[Issue 4 \(2018-03-06\)](#)

[Issue 3 \(2012-10-10\)](#)

[Issue 2 \(2009-09-28\)](#)

[Issue 1 \(2009-02-19\)](#)

[Issue 0 \(2008-04-17\)](#)

Date of Issue: 2022-10-14

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

Ex Component: 8080, 8075, 8066 & 7080 Series Junction Boxes

This component is NOT intended to be used alone and requires additional consideration when incorporated into other equipment or systems for use in explosive atmospheres (refer to IEC 60079-0).

Type of Protection: **Flameproof and Dust**

Marking: **Stainless Steel Only**

Ex db I Mb

Stainless Steel or Aluminium

Ex db IIC Gb

Ex tb III C Db IP68

Ta = -40°C to +85°C

Approved for issue on behalf of the IECEx
Certification Body:

Michelle Halliwell

Position:

Director Operations, UK & Industrial Europe

Signature:
(for printed version)

Date:
(for printed version)

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 www.iecex.com or use of this QR Code.



Certificate issued by:

CSA Group Testing UK Ltd
Unit 6, Hawarden Industrial Park
Hawarden, Deeside CH5 3US
United Kingdom





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Manufacturer: **International Metal Engineering Pte Limited**
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#06-05 Braddell Tech Park
Singapore 319261
Singapore

Manufacturing locations: **International Metal Engineering Pte Limited**
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#06-05 Braddell Tech Park
Singapore 319261
Singapore

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 component 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 60079-0:2017 Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

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 component listed has successfully met the examination and test requirements as recorded in:

Test Reports:

GB/SIR/ExTR08.0035/00
GB/SIR/ExTR12.0243/00
GB/SIR/ExTR21.0026/00

GB/SIR/ExTR08.0166/00
GB/SIR/ExTR18.0014/00
GB/SIR/ExTR22.0165/00

GB/SIR/ExTR09.0142/00
GB/SIR/ExTR18.0150/00

Quality Assessment Report:

GB/SIR/QAR07.0040/09



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Ex Component(s) covered by this certificate is described below:

The 8080, 8075, 8066 and 7080 Series Instrument Enclosures are cylindrical single compartment enclosures comprising a base and cover with a maximum internal volume of 280 cm³. The enclosures are manufactured from cast aluminium or stainless steel. Some cast aluminium versions are painted with epoxy paint. The cover may be blank or have a window fitted. Each enclosure may have a number of conduit openings and sizes. Refer to the Annexe for additional information and Condition of Manufacture.

SCHEDULE OF LIMITATIONS:

1. Refer to the manufacturer's instruction sheet for conduit/cable entry locations and sizes.
2. Oil-filled circuit breakers and contactors shall not be used in the enclosure.
3. The ambient range of the enclosure is -40°C to +85°C.
4. For Group I applications, the content of the Ex Component enclosure equipment may be placed in any arrangement, provided that an area of at least 20% of each cross-sectional area remains free to permit an unimpeded gas flow and therefore, unrestricted development of an explosion. Separate relief areas may be aggregated provided that each area has a minimum dimension in any direction of 12.5 mm.
5. For Group IIC applications, the content of the Ex Component enclosure equipment may be placed in any arrangement, provided that an area of at least 40% of each cross-sectional area remains free to permit an unimpeded gas flow and therefore, unrestricted development of an explosion. Separate relief areas may be aggregated provided that each area has a minimum dimension in any direction of 12.5 mm.
6. The enclosures of model numbers 7080WT, 7080WM, 7080AT, 7080AM, 8066PD, 8066PB, 8075WT, 8075WM, 8075AT, 8075AM, 8080WT, 8080WM, 8080AT and 8080AM may have a non-conducting coating and when used in Group IIIC applications may generate an ignition-capable level of electrostatic charge under certain extreme conditions. The user shall ensure that the enclosure is only used in fixed installations and is not installed in a location where it may be subjected to external conditions which might cause a build-up of electrostatic charges on non-conducting surfaces. Additionally, cleaning of the external enclosure should be done only with a damp cloth.



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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

This issue recognises the following changes; refer to the certificate annex to view a comprehensive history:

1. Amendment to the electrostatic assessment for the build-up of electrostatic charge for Group III enclosures with an external non-metallic coating. Resulting in a condition being added to the Schedule of Limitations and the addition of the electrostatic charge warning to model numbers 7080WT, 7080WM, 7080AT, 7080AM, 8066PD, 8066PB, 8075WT, 8075WM, 8075AT, 8075AM, 8080WT, 8080WM, 8080AT and 8080AM.
2. The recognition of minor drawing modifications. These amendments are administrative or involve changes to the design that do not affect the aspects of the product that are relevant to explosion safety.
3. Following appropriate assessment to demonstrate compliance with the latest standards, IEC 60079-0:2011 Ed 6, is replaced by IEC 60079-0:2017 Ed 7. Resulting in five conditions being added to the Schedule of Limitation.

Annex:

[IECEx SIR 07.0111U Issue 7 Annexe.pdf](#)

Annexe to: IECEx SIR 07.0111U Issue 7

Applicant: International Metal Engineering Pte Limited



Apparatus: 8080, 8075, 8066 and 7080 Series Instrument Enclosures and Junction Boxes

Model range	No. of entries					
		1/2" NPT	3/4" NPT	M16 x 2 (not a thru hole)	M20 x 1.5	None
8080	3	X	X	X	X	X
8075	3	X	X	X	X	X
8066	3	X	X		X	X
7080	1	X	X		X	X
7080	2 @ 90°	X	X		X	X
7080	2 @ 180°	X	X		X	X
7080	3	X	X		X	X
7080	4	X	X		X	X
8066	3	X	X		X	X

Design Options

Description	Model nos.
Made of cast aluminium with blind cover	8080AT, 8075AT, 7080AT, 7080NT
Made of cast aluminium with blind cover	8080AM*, 8075AM*, 7080AM*, 7080NM*
Made of cast aluminium with glass window cover	8080WT, 8075WT, 8066PD*, 7080WT, 7080CT
Made of cast aluminium with glass window cover	8080WM*, 8075WM*, 7080WM*, 7080CM*
Made of stainless steel with blind cover	8080TT, 8075TT, 7080TT
Made of stainless steel with blind cover	8080TM*, 8075TM*, 7080TM*
Made of stainless steel with glass window cover	8080ST, 8075 ST, 7080ST
Made of stainless steel with glass window cover	8080SM*, 8075SM*, 7080SM*
Made of 2.6" Aluminium that has a blind cover	8066PB*
Models with an asterisk (*) denote that an adhesive metric label is required when a metric thread is selected. The 7080WT, 7080WM, 7080AT and 7080AM are painted with an epoxy paint where the 7080CT, 7080CM, 7080NM and 7080NT are not painted.	

Conditions of Manufacture

- i. The 8080, 8075, 8066 and 7080 Series Instrument Enclosures and Junction Boxes, which are made from cast aluminium and fitted with a window assembly, shall be subjected to a routine overpressure test of 17.2 bar for at least 10 s as required by clause 16 of IEC 60079-1. There shall be no leakage, permanent deformation or damage.

Full certificate change history

Issue 1 – this Issue introduced the following changes:

1. The addition of a new enclosure size to range, 8066PD, the description being modified accordingly.
2. The extension of ambient temperature range from $-40^{\circ}\text{C} \leq T_a \leq +60^{\circ}\text{C}$ to $-40^{\circ}\text{C} \leq T_a \leq +85^{\circ}\text{C}$.
3. The marking of the products was corrected by the removal of T6, (85°C) and T85°C from the certificate and affected labels.
4. Minor modification to two drawings of the 8080-enclosure base.

Issue 2 – this Issue introduced the following change:

1. The existing range was extended to include the IME Model 8066PB - 2.6" Aluminium Unit that has a blind cover.

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Annexe to: IECEx SIR 07.0111U Issue 7

Applicant: International Metal Engineering Pte Limited

Apparatus: 8080, 8075, 8066 and 7080 Series Instrument Enclosures and Junction Boxes



Issue 3 – this Issue introduced the following change:

1. Following appropriate re-assessment to demonstrate compliance with the requirements of the latest EN 60079 series of standards, the documents previously listed in section 9, IEC 60079-0:2004 Ed 4 IEC 61241-0:2004 Ed 1 and IEC 61241-1:2004 Ed 1, were replaced by those currently listed, the markings were updated accordingly

Issue 4 – 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 were updated accordingly to recognise the new standards, and a Schedule of Limitations was added.
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 5 – this Issue introduced the following changes:

1. The existing range was extended to include IME Model 7080TF* Junction Box, made of stainless steel with blind cover. Marked suitable for concept of protections Ex db I Mb, or Ex db IIC Gb and Ex tb IIIC Db. The design is based upon model 7080TT* (stainless steel model with blind cover) with the following design differences only:
 - a) Absence of the four external blind holes and their associated internal lugs on the interior of the cover they are machined into. Used to locate hammer driven rivets to mount certification labels.
 - b) A reduction in height of the four, internal mounting lugs within the enclosure main body for internal circuitry.(* denotes that an adhesive metric label is required when a metric thread is selected)

Issue 6 – 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 two schedule of limitations in the certificate.
2. Replace current external label with an internal label.

Issue 7 – this Issue introduced the following changes:

1. Amendment to the electrostatic assessment for the build-up of electrostatic charge for Group III enclosures with an external non-metallic coating. Resulting in a condition being added to the Schedule of Limitations and the addition of the electrostatic charge warning to model numbers 7080WT, 7080WM, 7080AT, 7080AM, 8066PD, 8066PB, 8075WT, 8075WM, 8075AT, 8075AM, 8080WT, 8080WM, 8080AT and 8080AM.
2. The recognition of minor drawing modifications. These amendments are administrative or involve changes to the design that do not affect the aspects of the product that are relevant to explosion safety.
3. Following appropriate assessment to demonstrate compliance with the latest standards, IEC 60079-0:2011 Ed 6, is replaced by IEC 60079-0:2017 Ed 7. Resulting in five conditions being added to the Schedule of Limitation.

Annexe to: IECEx SIR 07.0111U Issue 7

Applicant: International Metal Engineering Pte Limited

Apparatus: 8080, 8075, 8066 and 7080 Series Instrument
Enclosures and Junction Boxes



Date: 14 October 2022

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CSA Group Testing UK Ltd.
Unit 6 Hawarden Industrial Park,
Hawarden Deeside CH5 3US, UK.