



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

Certificate No.: **IECEx SIR 08.0091X**

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Certificate history:

Status: **Current**

Issue No: 5

Issue 4 (2023-01-27)

Issue 3 (2021-03-31)

Issue 2 (2018-03-06)

Issue 1 (2012-02-08)

Issue 0 (2009-02-19)

Date of Issue: 2024-02-28

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

Equipment: **8080 Range of Indicators and Transmitters**

Optional accessory:

Type of Protection: **Flameproof "db" and Dust "tb"**

Marking: Ex db I Mb or Ex db IIC T6 Gb
And
Ex tb IIIC T85°C Db IP68
Ta = -40°C to +60°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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Date of issue: 2024-02-28

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

Manufacturing locations: **International Metal Engineering PTE Ltd**
Blk 13 Toa Payoh Lorong 8
#06-05, Braddell Tech Park
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 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 60079-0:2017](#) Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

[IEC 60079-1:2014](#) 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/ExTR09.0001/00](#)
[GB/SIR/ExTR21.0026/00](#)

[GB/SIR/ExTR12.0026/00](#)
[GB/SIR/ExTR23.0015/00](#)

[GB/SIR/ExTR18.0013/00](#)
[GB/SIR/ExTR24.0029/00](#)

Quality Assessment Report:

[GB/SIR/QAR07.0040/10](#)



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

The 8080 Range are cylindrical single compartment enclosures comprising a base and cover with a maximum internal volume of 280 cm cubed. 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 up to 3 conduit openings, these conduit openings may be a combination of ½" NPT, ¾" NPT, M16 x 2, M20 x 1.5. The enclosures may contain equipment limited to a maximum power dissipation of 2.2W.

The stainless steel version of the 8080 range may also be used in Mining applications.

Refer to the Annexe for Additional Information.

SPECIFIC CONDITIONS OF USE: YES as shown below:

1. Only the stainless steel version of the 8080 enclosures can be used as Mining equipment.
2. The enclosure 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, the external enclosure should be cleaned only with a damp cloth.



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Date of issue: 2024-02-28

Issue No: 5

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

This issue, Issue 5, recognises the following changes; refer to the certificate annex to view a comprehensive history:

1. To allow introduction of new model 8080EL.
2. To allow introduction of new model 8080HT.
3. To allow introduction of new model 8080YK.
4. To allow introduction of new model 8080SS.
5. To capture administrative changes to the electrical ratings of existing models.

Annex:

[IECEx SIR 08.0091X Issue 5 Annexe.pdf](#)

Annexe to: IECEx SIR 08.0091X Issue 5

Applicant: International Metal Engineering Pte Limited

Apparatus: 8080 Range Of Indicators and Transmitters



EQUIPMENT (continued)

Electrical Rating

Model No.	Rating
8080PP	VOLTAGE DROP 5.54V, 20 mA, 4 – 20 mA DC, POWER SUPPLY : NIL
8080MK	VOLTAGE DROP 5V, 20 mA, 4 – 20 mA DC, POWER SUPPLY : NIL
8080EL	VOLTAGE DROP 3.5V, 20 mA, DC POWER SUPPLY: NIL
8080PR	RTD PT-100, THERMOCOUPLE J/K INPUT, 78 mA DC POWER SUPPLY: 24 VDC, OUTPUT: TWO RELAY C/O CONTACTS
8080PR1	RTD PT-100, THERMOCOUPLE J/K INPUT, 78 mA DC POWER SUPPLY: 24 VDC, OUTPUT: TWO RELAY C/O CONTACTS, 4 – 20 mA DC
8080PR2	RTD PT-100, THERMOCOUPLE J/K INPUT, 78 mA DC POWER SUPPLY: 24 VDC, OUTPUT: TWO RELAY C/O CONTACTS, 4 – 20 mA DC
8080PR3	RTD PT-100, THERMOCOUPLE J/K INPUT, 78 mA DC POWER SUPPLY: 24 VDC, OUTPUT: TWO RELAY C/O CONTACTS
8080MN	4-20 mA INPUT, 52 mA DC, POWER SUPPLY: 24 VDC
8080RR	4-20 mA INPUT, 90 mA DC, POWER SUPPLY: 24 VDC OUTPUT: TWO RELAY C/O CONTACTS
8080PN	RTD PT-100, THERMOCOUPLE J/K INPUT, mA DC POWER SUPPLY: 24 VDC, OUTPUT: 4 – 20 mA DC
8080FR	4-20 mA INPUT 72 mA DC, POWER SUPPLY: 24 VDC, OUTPUT: TWO RELAY C/O CONTACTS
8080HT	RTD/THERMOCOUPLE INPUT, 20mA DC, POWER SUPPLY: 24VDC, OUTPUT: 4-20 mA DC, HART
8080YK	WIRE TO BOARD PCB, 32V DC, 22mA DC MAX
8080SS	MINI SWITCH MONITOR, 24V DC, 10mA DC, OUTPUT: TWO RELAY C/O CONTACTS

The equipment enclosure has been tested separately as per IEC 60529 and meets the requirements of an IP68 rating.

Conditions of Manufacture

The Manufacturer shall comply with the following:

1. 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 of any modifications of the devices that may impinge upon the explosion safety design of the equipment.
2. Examine the 8080 enclosures that are made from cast aluminium and fitted with a window assembly, are subjected to a routine overpressure test of 17.2 bar for at least 10 seconds as required by clause 16 of IEC 60079-1. There shall be no leakage, permanent deformation or damage.
3. These enclosures shall not be fitted with batteries or any means for the user to install such devices.

Date: Inserted on Issue

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Full certificate change history

Issue 1 – this Issue introduced the following changes:

1. The addition of information to label drawings that shows specific model numbers, corresponding electrical ratings and marking relevant to other approvals.
2. The arrangement of the internal parts was clarified.
3. The addition of a Condition of Manufacture that excludes the use of batteries.
4. It was recognised that the equipment complies with IEC 60079-31:2008 Ed 1.

Issue 2 – this Issue introduced the following changes:

1. Following appropriate assessment to demonstrate compliance with the latest technical knowledge, IEC 60079-0:2007 Ed.5, IEC 60079-1:2007 Ed.6 and IEC 60079-31:2008 Ed.1 were replaced by IEC 60079-0:2011 Ed.6, 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 3 – 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.

Issue 4 – this Issue introduced the following changes:

1. Following appropriate assessment to demonstrate compliance with the latest technical knowledge, IEC 60079-0:2011 Ed.6.0 and IEC 60079-1:2014-06 Ed.7.0 were replaced by IEC 60079-0:2017+COR1:2020 Ed.7.0 and IEC 60079-1:2014+COR1:2018 Ed.7.0 respectively, and the documents were updated accordingly to recognize the new standards.
2. The marking section was amended to correct a typographical error.

Issue 5 – this Issue introduced the following changes:

1. To allow introduction of new model 8080EL.
2. To allow introduction of new model 8080HT.
3. To allow introduction of new model 8080YK.
4. To allow introduction of new model 8080SS.
5. To capture administrative changes to the electrical ratings of existing models.