



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 07.0045U**

Page 1 of 4

Certificate history:

Status: **Current**

Issue No: 8

Issue 7 (2020-04-01)

Issue 6 (2018-11-27)

Issue 5 (2016-06-28)

Issue 4 (2015-05-29)

Issue 3 (2012-10-17)

Issue 2 (2011-04-19)

Issue 1 (2011-03-14)

Issue 0 (2008-01-18)

Date of Issue: 2022-03-09

Applicant: **Hazardous Locations Solutions LLC**
22755-E Savi Ranch Parkway
Yorba Linda
CA 92887
United States of America

Ex Component: Breather Drain Plugs Type 'Bd' & Type 'Be'

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 db, Increased Safety eb and Dust tb**

Marking: Be Series:
Ex eb IIC Gb
Ex tb IIIC Db

Bd Series:
Ex db IIC Gb
Ex tb IIIC Db

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





IECEX Certificate of Conformity

Certificate No.: **IECEX SIR 07.0045U**

Page 2 of 4

Date of issue: 2022-03-09

Issue No: 8

Manufacturer: **Hazardous Locations Solutions LLC**
22755-E Savi Ranch Parkway
Yorba Linda
CA 92887
United States of America

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 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

[IEC 60079-7:2017](#) Explosive atmospheres - Part 7: Equipment protection by increased safety "e"
Edition:5.1

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/CSAE/ExTR22.0058/00](#)
[GB/SIR/ExTR11.0081/00](#)
[GB/SIR/ExTR16.0164/00](#)

[GB/SIR/ExTR07.0143/00](#)
[GB/SIR/ExTR12.0254/00](#)
[GB/SIR/ExTR18.0216/00](#)

[GB/SIR/ExTR11.0051/00](#)
[GB/SIR/ExTR15.0142/00](#)
[GB/SIR/ExTR20.0071/00](#)

Quality Assessment Report:

[GB/SIR/QAR07.0036/12](#)



IECEX Certificate of Conformity

Certificate No.: **IECEX SIR 07.0045U**

Page 3 of 4

Date of issue: 2022-03-09

Issue No: 8

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

The Breather Drain Plugs have a metallic, hexagonal body, partly threaded at one end with a male thread, the threaded end is partially recessed which connects to two small co-axial vents, opposed 180° within the remaining hexagonal portion of the body. Internally, the Breather Drain Plugs house a non-metallic porous disc that allows the passage of air/moisture through the device. The Type 'Bd' Breather Drains have an internal threaded plug providing a flameproof joint and retaining the non-metallic porous disc, they are used in conjunction with threaded entries. The Type 'Be' Breather Drains retain the porous disc by means of a circlip and have opposing holes within the male thread which, along with a castellated nut, provide for drainage when the breather drain is installed within clearance holes. Taper threaded Type 'Be' Breather Drains are not machined with holes within the male thread and are used in conjunction with threaded entries and not supplied with a castellated nut. The ranges of Breather Drain Plugs are intended to mount into bottom cable entry point(s) in associated enclosures thereby allowing the passage of the external atmosphere into the enclosure enabling it to breathe, while also permitting any moisture within the enclosure to drain. Type 'Bd' Breather Drains may be fitted with an optional O-ring seal, Type 'Be' Breather Drains are fitted with an O-ring seal.

Threadform Size Range

Type Bd
M20 x 1.5
M25 x 1.5

Type Be
M20 x 1.5
M25 x 1.5

SCHEDULE OF LIMITATIONS:

1. Type 'Be' breather/drains are only suitable for bottom entry into increased safety enclosures that have a minimum wall thickness within the range of 1 mm to 3 mm.
2. Type 'Bd' breather/drains are only suitable for bottom entry.
3. The threads of the internal plug of the Type 'Bd' Breather Drains must be fully tightened within the main body and not protrude above the body surface.
4. The threaded spigots of Type 'Bd' Breather Drains & taper threaded Type 'Be' Breather Drains are not permitted to protrude into the associated enclosure to maintain their ingress protection ratings.
5. The interfaces between the male thread of the products and an associated enclosure and female thread of the products and the cable entry device cannot be defined. Therefore it is the user's responsibility to ensure that the appropriate ingress protection level is maintained at these interfaces.
6. The products are approved for a temperature ranges at their point of mounting based upon the minimum upper and lower temperatures of their constituent parts of construction:

Type 'Bd' & Type 'Be' breather drain porous disc	-50°C to 80°C
Products fitted with nitrile O-rings	-30°C to 90°C
Products fitted with silicone O-rings	-50°C to 230°C
Products manufactured from brass	-100°C to 150°C
Products manufactured from stainless steel	-100°C to 450°C
Products manufactured from steel	-20°C to 230°C



IECEX Certificate of Conformity

Certificate No.: **IECEX SIR 07.0045U**

Page 4 of 4

Date of issue: 2022-03-09

Issue No: 8

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

This issue, Issue 8, recognises the following changes; refer to the certificate annex to view a comprehensive history:

1. Following appropriate assessment to demonstrate compliance with the requirements of the latest standards, IEC 60079-7:2015 Ed.5 is replaced with IEC 60079-7:2017 Ed.5.1.
2. Removal of IP6X rating from the dust marking string. As a result, the Marking was amended.

Annex:

[IECEX SIR 07.0045U Annexe Issue 8.pdf](#)

Annexe to: IECEx SIR 07.0045U Issue 8

Applicant: Hazardous Location Solutions LLC

Apparatus: Breather Drain Plugs / Type 'Bd' & Type 'Be'



General Design Options

Threadforms, All products may be machined with the following typical thread forms of the nearest equivalent recognized thread size. Thread combinations are such that minimum wall thicknesses are maintained:

- ISO Metric to IEC 60423:1993, sizes above M75 may be manufactured with a 1.5 mm pitch
- NPT to ANSI/ASME B1.20.1:1983 (R2001)
- NPS (ANSI/ASME B1.20.1:1983 (R2001)
- ISO Pipe Thread to ISO 7-2:1988
- UNI 6125
- PG to DIN 40430

O-ring seals, O-ring seals materials fitted to male thread forms may be provided in the following materials to suit the application:

- Nitrile (IRHD 70) or Silicone (EPDM)

Material of manufacture, The following materials are used as appropriate:

- Brass (CuZn39Pb3/4 or CuZn36Pb3)
- Steel (ISO EN 1A or 12L 14)
- Stainless Steel (316 S1)

Surface coating, The products may additionally be metallic plated (0.008 mm thick max.) to suit the application.

Type 'L1' Hexagonal Lock Nuts, Products marked Ex e II in the following metric male thread sizes can be supplied with the manufacturers brass locknuts for clearance hole applications:

M20, M25, M32, M40, M50, M63, M75 (1.5 mm pitch) M80, M85, M90, M100 (2.0 mm pitch)

Product Nomenclature, *AB.C.D.E.F*

A	-	Alphabetical product type designation (see description above)
B	-	Numerical body style number (as applicable, see description above)
C	-	Male (typically) thread size and form e.g. Metric 16, NPT 1/2, NPS 1/2S, ISO parallel 1/2P, ET 1/2E, PG 7
D	-	Female (typically) thread size and form e.g. Metric 16, NPT 1/2, NPS 1/2S, ISO parallel 1/2P, ET 1/2E, PG 7
E	-	Material of manufacture e.g. B brass, S steel, SS stainless steel
F	-	O-ring seal material when fitted e.g. SC Silicone (EPDM), NT Nitrile (IRHD 70)

Date: 09 March 2022

Page 1 of 2

Annexe to: IECEx SIR 07.0045U Issue 8

Applicant: Hazardous Location Solutions LLC

Apparatus: Breather Drain Plugs / Type 'Bd' & Type 'Be'



Full certificate change history

Issue 1 – this Issue introduced the following change:

1. Following appropriate assessment to demonstrate compliance with the latest technical knowledge, IEC 60079-0:2004 Edition: 4, IEC 60079-1: 2003 Edition: 5, IEC 60079-7 : 2001 Edition: 3, IEC 61241-0 : 2004 Edition: 1 and IEC 61241-1 : 2004 Edition: 1, were replaced by those currently listed, the markings were updated accordingly.

Issue 2 – this Issue introduced the following changes:

1. The clarification of the schedule of limitations relating to the wall thickness of the enclosures that the Type 'Be' Breather Drain Plugs' are fitted into.
2. The marking in this certificate was amended to correct a typographical error.

Issue 3 – this Issue introduced the following change:

1. The list of standards was updated to recognise compliance with the requirements of the latest version of IEC 60079-0.

Issue 4 – this Issue introduced the following change:

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.

Issue 5 – this Issue introduced the following change:

1. Following appropriate assessment to demonstrate compliance with the latest Technical Knowledge, IEC 60079-7:2006-07 Ed 4 was replaced with IEC 60079-7:2015-06 Ed 5.

Issue 6 – this Issue introduced the following change:

1. Following appropriate assessment to demonstrate compliance with the latest technical knowledge IEC 60079-0:2011 Ed.6 was replaced by IEC 60079-0:2017 Ed.7.

Issue 7 – this Issue introduced the following change:

1. The certificate holders address was changed:

From	To
22755-D Savi Ranch Parkway Yorba Linda CA 92887 United States	22755-E Savi Ranch Parkway Yorba Linda CA 92887 United States

Issue 8 – this Issue introduced the following changes:

1. Following appropriate assessment to demonstrate compliance with the requirements of the latest standards, IEC 60079-7:2015 Ed.5 is replaced with IEC 60079-7:2017 Ed.5.1.
2. Removal of IP6X rating from the dust marking string. As a result, the Marking was amended.