



# 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)

### Ex COMPONENT CERTIFICATE

Certificate No.:	<b>IECEx CML 15.0039U</b>	Page 1 of 4	<u>Certificate history:</u>
Status:	<b>Current</b>	Issue No: 4	Issue 3 (2019-08-27)
Date of Issue:	2022-02-23		Issue 2 (2017-06-23)
Applicant:	<b>Abtech Limited</b> 199/201, Newhall Road Lower Don Valley Sheffield S9 2QJ <b>United Kingdom</b>		Issue 1 (2017-03-21)
Ex Component:	SX Range of Empty Enclosures		Issue 0 (2015-07-27)
<i>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).</i>			
Type of Protection:	<b>Increased safety, Intrinsically safe and Dust</b>		
Marking:	Ex eb IIB/IIC Gb or Ex ia IIB/IIC Ga or Ex ib IIB/IIC Gb or Ex ta IIIC Da or Ex tb IIIC Gb or Ex ec IIC Gc or Ex nR IIC Gc		

Approved for issue on behalf of the IECEx  
Certification Body:

**D R Stubbings**

Position:

**Certification Officer**

Signature:  
(for printed version)

Date:  
(for printed version)

2022-02-23

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](http://www.iecex.com) or use of this QR Code.



Certificate issued by:

**Eurofins E&E CML Limited**  
**Unit 1, Newport Business Park**  
**New Port Road**  
**Ellesmere Port, CH65 4LZ**  
**United Kingdom**





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Page 2 of 4

Date of issue: 2022-02-23

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Manufacturer: **Abtech Limited**  
199/201, Newhall Road  
Lower Don Valley  
Sheffield  
S9 2QJ  
**United Kingdom**

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 60079-0:2011](#) Explosive atmospheres - Part 0: General requirements  
Edition:6.0

[IEC 60079-11:2011](#) Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"  
Edition:6.0

[IEC 60079-15:2017](#) Explosive atmospheres - Part 15: Equipment protection by type of protection "n"  
Edition:5.0

[IEC 60079-31:2013](#) Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"  
Edition:2

[IEC 60079-7:2015](#) Explosive atmospheres – Part 7: Equipment protection by increased safety "e"  
Edition:5.0

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/CML/ExTR15.0053/00](#)  
[GB/CML/ExTR22.0017/00](#)

[GB/CML/ExTR17.0045/00](#)

[GB/CML/ExTR17.0108/00](#)

Quality Assessment Report:

[GB/CML/QAR16.0021/07](#)



# IECEX Certificate of Conformity

Certificate No.: **IECEX CML 15.0039U**

Page 3 of 4

Date of issue: 2022-02-23

Issue No: 4

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

The SX Range of Empty Enclosures are manufactured from steel, stainless steel or brass, other alloys of steel or other alloys of copper.

**See Annex for full description and Conditions of Manufacture and Certification**

**SCHEDULE OF LIMITATIONS:**

**See Annex for Schedule of Limitations**



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Certificate No.: **IECEX CML 15.0039U**

Page 4 of 4

Date of issue: 2022-02-23

Issue No: 4

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

### Issue 1

1. The introduction of an alternative flange gasket and lid sealing arrangement option.
2. To allow units with shared gland plate dimensions to be bolted together.
3. The introduction of a hank bushing fixing arrangement option for the gland plates.

### Issue 2

1. To update IEC 60079-7:2006 standard to the latest edition IEC 60079-7:2015
2. To update the marking to reflect latest edition of IEC 60079-7:2015
3. To include an option to allowed the enclosure to be painted with a coating thickness up to 2mm for 'IIB' applications. The description and marking has been modified accordingly.
4. To correct typographic errors on drawings, including number drawing references listed in earlier certificate issues.

### Issue 3

1. To update QAR reference

### Issue 4

1. To update the following standards to the latest editions, IEC 60079-0:2011 and IEC 60079-7:2015.
2. To reduce the lower service temperature to -65°C, the Schedule of Limitations have been updated in accordance with this modification.
3. A typographical error was corrected with regards to the service temperature range for the window option.
4. To align the relevant construction options and drawings between the empty enclosure and the SX junction box enclosure.
5. To allow the enclosures to be additionally marked Ex nR IIC Gc and Ex ec IIC Gc.

### Annex:

[Certificate Annex IECEx CML 15.0039U Issue 4\\_1.pdf](#)

**Annexe to:** IECEx CML 15.0039U Issue 4  
**Applicant:** Abtech Ltd  
**Apparatus:** SX Range of Empty Enclosure

## Description

The SX Range of Empty Enclosures are manufactured from steel, stainless steel or brass, other alloys of steel or other alloys of copper, and are manufactured in the following standard sizes:

SX Ref.	Category	Length (mm)	Width (mm)	Depth (mm)	
				Min.	Max.
SX0	Ga, Gb, Gc, Da, Db, Dc	229	152	140	2000
SX0.5	Ga, Gb, Gc, Da, Db, Dc	274	184	140	2000
SX1	Ga, Gb, Gc, Da, Db, Dc	324	234	140	2000
SX1.5	Ga, Gb, Gc, Da, Db, Dc	306	306	140	2000
SX2	Ga, Gb, Gc, Da, Db, Dc	324	372	140	2000
SX3	Ga, Gb, Gc, Da, Db, Dc	448	372	140	2000
SX4	Ga, Gb, Gc, Da, Db, Dc	510	372	140	2000
SX5	Ga, Gb, Gc, Da, Db, Dc	510	510	140	2000
SX6	Ga, Gb, Gc, Da, Db, Dc	780	510	140	2000
SX7	Ga, Gb, Gc, Da, Db, Dc	950	650	140	2000
SX8	Ga, Gb, Gc, Da, Db, Dc	1250	800	140	2000
SX225	Ga, Gb, Gc (Not 'nR')	2000	2000	140	2000
SX45	Ga, Gb, Gc, Da, Db, Dc	114	114	51 (Nominal)	
SX64	Ga, Gb, Gc, Da, Db, Dc	152	102	63 (Nominal)	
SX66	Ga, Gb, Gc, Da, Db, Dc	152	152	102 (Nominal)	

Enclosures may also be manufactured to sizes not specified in the above table. This assumes that any given dimension is not larger than the respective dimension of the largest enclosure or smaller than the respective dimension of the smallest enclosure.

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The lid may be hinged and gland plates may be provided on the base, top, sides or back of the enclosure.

Cable entries may be provided either through the gland plates or in the enclosure walls. Additionally, threaded bosses may be provided, welded, brazed or soldered into position.

An external and optional internal earth stud is provided on all enclosures (Min. size M6) and gaskets are manufactured from a closed cell silicone rubber strip or solid silicone rubber.

Optionally, the enclosures may be provided with a glass window or painted.

## Conditions of Manufacture

The following conditions are required of the manufacturing process for compliance with the certification.

- i. The manufacturer shall take all reasonable steps to ensure the items used in the construction of the enclosure are used within the minimum and maximum service temperatures stated in the 'schedule of limitations/conditions of safe use'. When supplied, the manufacturer shall the installer/user with a copy of the certificate(s) associated with any blanking plugs, adapters, reducers or breather drains.
- ii. If the enclosures are supplied with blanking plugs, reducers, adapters or breather drains, then the manufacturer shall ensure that:
  - The fitted items do not affect the installation of the enclosure, e.g. any conditions of safe use that would alter the allowable specification of the enclosure, such as reduced levels of mechanical protection.
  - The fitted items do not adversely affect the minimum IP rating of the enclosure.
  - That when fitted, the enclosure marking reflects the "worst case" item fitted.
- iii. When trunking is fitted, it may be sited as required, provided the minimum creepage and clearance distances are met.
- iv. When the optional earth bar is provided, it shall allow for a conductor size that is in accordance with IEC 60079-0, clause 15.3.
- v. The earth bar connection washers, screws and nuts, shall not be constructed of light metals.
- vi. When the earth connection to the earth bar is secured via thread sealant alone, it shall be ensured that the sealant used has a suitable operating temperature range to account for the lowest ambient range and the T-class to be applied.
- vii. The window option stated on the construction specification document is not permitted on the flanged lid enclosure arrangements.
- viii. When marked for 'nR', the enclosure shall either be provided with a test port/facilities for fitting a test report or undergo a routine restricted breathing test in accordance with IEC 60079-15:2017, clause 12.2.2.1.2.

## Specific Conditions of Use

The following conditions relate to safe installation and/or use of the component.

- i. The following parts used in the construction have the maximum service temperature ranges listed below and shall not be exceeded:

Item	Service Temperature Range	
	Minimum	Maximum
Closed cell silicone strip gasket	-65°C	180°C
Solid silicone rubber gasket	-65°C	180°C
Glass window	-65°C	80°C
Blanking plugs, reducers, adapters and breather drains	Refer to individual certificate(s)	Refer to individual certificate(s)

Note: Where components will be utilised at ambient/service temperatures lower than -60°C, a Specific Condition of Use shall be applied to prevent the enclosure being opened or worked on.

### Components covered by Ex Certificates issued to older editions of Standards

None