



1 **EC TYPE-EXAMINATION CERTIFICATE**

2 Component intended for use in Potentially Explosive Atmospheres Directive 94/9/EC

3 Certificate Number: Sira99ATEX3170U

4 Equipment: SX Range of Enclosures

5 Applicant: AB Controls & Technology

6 Address: Sanderson Street
Lower Don Valley
Sheffield
S9 2UA

7 This component and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

8 Sira Certification Service, notified body number 0518 in accordance with Article 9 of Directive 94/9/EC of 23 March 1994, certifies that this component has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of component intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in confidential report number R51X6055C.

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the schedule to this certificate, has been assured by compliance with the following documents:

EN 50 014:1997
EN 50 019:1994
EN 50281-1-1:1999

10 The sign 'U' is placed after the certificate number to indicate that the product assessed is a component and may be subject to further assessment when incorporated into equipment. Any special conditions for safe use are listed in the schedule to this certificate.

11 This EC type-examination certificate relates only to the design and construction of the specified component. If applicable, further requirements of this Directive apply to the manufacture and supply of this component.

12 The marking of the component shall include the following:



II 2 G D or II 2 G
EEx e II

Project Number 51X6055
Date 24 February 2000
C. Index 04

M D Shearman
Certification Manager

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Sira Certification Service

Rake Lane, Ecclestone, Chester, CH4 9JN, England
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SCHEDULE

EC TYPE-EXAMINATION CERTIFICATE

Sira99ATEX3170U

13 DESCRIPTION OF COMPONENT

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

SX Ref.	Group and Category	Length (mm)	Width (mm)	Height (mm)	
				Min.	Max.
SX0	II 2 G D	229	152	140	500
SX0.5	II 2 G D	274	184	140	500
SX1	II 2 G D	324	234	140	500
SX1.5	II 2 G D	306	306	140	500
SX2	II 2 G D	324	372	140	500
SX3	II 2 G D	448	372	140	500
SX4	II 2 G D	510	372	140	500
SX5	II 2 G D	510	510	140	500
SX6	II 2 G D	780	510	140	500
SX7	II 2 G D	950	650	140	500
SX8	II 2 G D	1250	800	140	500
SX225	II 2 G	2000	2000	140	500
SX45	II 2 G D	114	114	51 (Nominal)	
SX64	II 2 G D	152	102	63 (Nominal)	
SX66	II 2 G D	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.

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. Threaded bosses may be provided welded, brazed or soldered into position.

An M6 internal and external earth stud is provided on all Enclosures.

Gaskets are manufactured from closed cell polychloroprene, neoprene bonded cork or closed cell silicone rubber strip.

The ambient temperature range of the Junction Boxes is extended to -50°C when closed cell silicone rubber gaskets are used on the lid and neoprene bonded cork on the gland plates.

14 DESCRIPTIVE DOCUMENTS

14.1	Drawing No.	Rev.	Sheet	Date	Title
	ABT 10257	1 of 1	A	21 Dec 99	External label (SX) Maximum Box Size S8
	ABT 10302	1 of 1	A	16 Nov 99	SX Manufacturing specification
	ABT 10371	1 of 1	A	10 Jan 00	SX Range Enclosures

14.2 Report No. R51X6055C

Date 24 February 2000

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SCHEDULE

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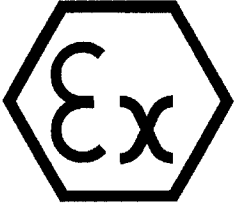
- 15 **SPECIAL CONDITIONS FOR SAFE USE** (denoted by X after the certificate number)
None
- 16 **ESSENTIAL HEALTH AND SAFETY REQUIREMENTS OF ANNEX II (EHSR'S)**
The relevant EHSRs that are not addressed by the standards listed in this certificate have been identified and individually assessed in Report No. R51X6055C.
- 17 **CONDITIONS OF CERTIFICATION**
- 17.1 The use of this certificate is subject to the Regulations Applicable to Holders of SCS Certificates.
- 17.2 Suitably certified Ex e equipment such as breathing devices and blanks may be fitted to the enclosure providing the enclosure maintains compliance with BS EN 60529:1992 code IP64 or better.

Date 24 February 2000

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EC TYPE-EXAMINATION CERTIFICATE VARIATION

CERTIFICATE NUMBER Sira 99ATEX3170U Dated 24 February 2000

VARIATION NUMBER 1 (ONE) Dated 28 September 2001

VARIATION TO COMPONENT

To permit:

- 1 A minor revision of the information marked on the label.

DESCRIPTIVE DOCUMENTS

Number	Sheet	Rev	Date	Description
ABT 10257	1 of 1	B	20 July 01	External Label (SX) Maximum Box Size S8

ADDITIONAL CONDITIONS OF CERTIFICATION

None

File No 53V7936

Report No. NA

M D Shearman
Certification Manager

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Page 1 of 1



EC TYPE-EXAMINATION CERTIFICATE VARIATION

CERTIFICATE NUMBER Sira 99ATEX3170U **Dated** 24 February 2000

VARIATION NUMBER 2 (TWO) **Dated** 29 July 2002

VARIATION TO COMPONENT

To permit:

- 1 The use of a solid silicone rubber cover-sealing gasket.

DESCRIPTIVE DOCUMENTS

Number	Sheet	Rev	Date	Description
ABT 10302	1 of 1	C	4 July 02	SX Manufacturing Specification

ADDITIONAL CONDITIONS OF CERTIFICATION

None

File No. 53A7250

Report No. R53A7250A



R Cooper IEng LInstMC
Deputy Chief Executive

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EC TYPE-EXAMINATION CERTIFICATE VARIATION

CERTIFICATE NUMBER Sira 99ATEX3170U Dated 24 February 2000

VARIATION NUMBER 3 (THREE) Dated 22 February 2005

VARIATION TO COMPONENT

To permit:

- 1 The increase of the maximum permitted window size of the SX enclosures

DESCRIPTIVE DOCUMENTS

Number	Sheet	Rev	Date	Description
ABT 14398	1 of 1	A	20 Oct 04	SX Range large window

ADDITIONAL CONDITIONS OF CERTIFICATION

None

D R Stubbings BA MIEE
Certification Manager

File No. 51A12595

Report No. R51A12595A

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EC TYPE-EXAMINATION CERTIFICATE VARIATION

CERTIFICATE NUMBER Sira 99ATEX3170U Dated 24 February 2000

VARIATION NUMBER 4 (FOUR) Dated 25 April 2006

VARIATION TO COMPONENT

To permit:

- 1 The inclusion of reinforcement, as required, to the inside or outside of the enclosure to withstand possible submersion pressures.

DESCRIPTIVE DOCUMENTS

Number	Sheet	Rev	Date	Description
ABT 10302	1 of 1	D	(Sira stamp) 25 Apr 06	SX Manufacturing Specification
ABT 10371	1 of 1	B	25 Apr 06	SX Range of Enclosures

ADDITIONAL CONDITIONS OF CERTIFICATION

None

File No. 51V14986

Report No. R51V14986A

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C Ellaby
Certification Officer

Sira Certification Service

Rake Lane, Eccleston, Chester, CH4 9JN, England

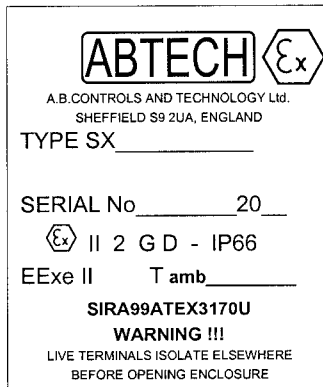
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INSTALLATION, OPERATION & MAINTENANCE INSTRUCTIONS FOR ABTECH 'S' RANGE ENCLOSURES – SIRA99ATEX3170U



Marking

The marking shown is for a component certified enclosure. The user must submit the completed unit for type examination if it is to be used in a hazardous area.

The ambient temperature range for which this product is suitable is marked on the label and identified by T amb ____.

Installation

- 1) Using the mounting dimensions data provided, either in the product catalogue data sheets or on the drawings supplied (as part of the project documentation) mark out the positions for the mounting holes on the surface where installation is required.
- 2) Drill the mounting holes for either M8 or M9 fixing studs (for size S64 upwards) or for M6 fixing studs for size S45.
- 3) Insert the top two studs leaving 8 to 10mm protruding. Lift the enclosure into position using such assistance as may be necessary to avoid injury and hang the top fixing brackets of the box onto the studs. Ensuring that the box is secure, insert and tighten the bottom two studs. Now complete tightening the top two studs.
- 4) Install and secure the cable glands in accordance with the manufacturers instructions.
- 5) Secure the lid by closing the lid and tightening the lid fixing screws and ensure that all gland plate securing screws are tightened.
- 6) For additional security a padlock may be fitted to all box sizes larger than and including size S0.

Earthing/Grounding

All S range enclosures are provided with an internal and external earthing/grounding facility. This must be connected to the appropriate earth bonding circuit before electrical power is connected to the contents of the enclosure.

Operation

1. The lid must be secured using all the lid screws provided in order to maintain the IP rating.
2. No attempt must be made to remove the enclosure lid whilst electrical power is connected to the contents of the enclosure.
3. The earthing/grounding facility must be connected to the earth bonding circuit at all times when electrical power is connected to the enclosure.

Maintenance

Routine maintenance is a requirement of BS5345 : Part 1 : 1989 and is also likely to be a requirement of local Health and Safety legislation. The laws of the applicable country must be considered and maintenance checks carried out accordingly.

Additional checks that are advisable to ensure the efficiency of ABTECH 'S' range enclosures are:-

Activity	Frequency
1 Check that the lid seal is not damaged and is in place	Each time the enclosure is opened
2 Check that all lid fixing screws are in place and secured	Each time the enclosure is opened
3 Check that all gland plate fixing screws are in place and secured	Each time the enclosure is opened
4 Check that the mounting bolts are tight and free of corrosion	Annually
5 Check the security of all cable glands	Annually
6 Check the enclosure for damage	Annually

Chemical attack

The ABTECH S range enclosures are available in mild steel or 316 stainless steel. The following additional material are also used :-

Neoprene or silicone rubber,
Brass.

If the enclosure is of mild steel it may be zinc plated prior to painting. The standard paint finish is epoxy polyester grey hammer.

Stainless steel enclosures are not painted except to customer specifications.

Consideration should be given to the environment in which these enclosures are to be used to determine the suitability of these materials to withstand any corrosive agents that may be present.

Static hazard

S range enclosures do not present a hazard from static electricity.