



1 **EC TYPE-EXAMINATION CERTIFICATE**

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

3 Certificate Number: **Sira 07ATEX3338** Issue: **3**

4 Equipment: **SXCS1* Range of Control Stations**

5 Applicant: **ABTECH Ltd**

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

7 This equipment 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 equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential reports listed in Section 14.2.

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 60079-0: 2006 EN 60079-7: 2007 EN 61241-0: 2006 EN 61241-1: 2004

10 If the sign 'X' is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule to this certificate.

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

12 The marking of the equipment shall include the following:

All sizes other than SX225 enclosure



II 2 G D
Ex e II T4
Ex ed IIC T4
Ex tD A21 IP66

SX225 enclosure



II 2 G
Ex e II T4
Ex ed IIC T4

(* The protection concept letters and gas group are applied as appropriate for any control components fitted.)

Project Number 51A18939
C. Index 20

C Ellaby
Certification Officer

This certificate and its schedules may only be reproduced in its entirety and without change.



SCHEDULE

EC TYPE-EXAMINATION CERTIFICATE

Sira 07ATEX3338
Issue 3

13 DESCRIPTION OF EQUIPMENT

The SXCS 1* Control Stations comprising enclosure covered by certificate number Sira 99ATEX3170U that is fitted with an arrangement of suitably certified terminals. The total dissipated power for the enclosure shall be calculated in accordance with EN 60079-7:2007, Annex E,E.2 and shall not exceed the figures given in the table below:

SX Ref.	Length (mm)	Width (mm)	Height (mm)		Maximum Power Dissipation (W) Ta +55°C [Ⓢ] (max)
			Min.	Max.	
SX0	229	152	140	500	5.5
SX0.5	274	184	140	500	6
SX1	324	234	140	500	8
SX1.5	306	306	140	500	9
SX2	324	372	140	500	10
SX3	448	372	140	500	12
SX4	510	372	140	500	12.5
SX5	510	510	140	500	14
SX6	780	510	140	500	16
SX7	950	650	140	500	19.5
SX8	1250	800	140	500	34
SX225	2000	2000	140	500	103
SX66	152	152	102 (Nominal)		4

([Ⓢ]) These figures are actually based on a 60°C ambient, however, the manufacturer has requested that the products should be marked as suitable for 55°C.)

Control stations of size not specified in the table may be manufactured subject to the maximum dissipated power being based on a smaller enclosure. 2.5 mm² size terminals are limited to a maximum current of 15 A or less as permitted by their marking. The following control components can be fitted:

Product	Certificate number	Code
BARTECH, Illumination Module	PTB 97 ATEX 1064 U	II 2 G EEx de IIC I M 2 EEx de I
Rockwell Automation/Allen Bradley, Lamp Module	PTB 01 ATEX 1037 U	II 2 G EEx de IIC
BARTEC, Circuit Module and Control Circuit Switch	PTB 99 ATEX 1043 U	II 2 G EEx de IIC I M 2 EEx de I
Rockwell Automation/Allen Bradley, Switch Module	PTB 01 ATEX 1040 U	II 2 G EEx de IIC
Rockwell Automation/Allen Bradley, Pilot Light Lens	PTB 01 ATEX 1035U	II 2 G EEx e II
Rockwell Automation/Allen Bradley, Push Button, Key Switch or Selector Switch Operator	PTB 01 ATEX 1035U	II 2 G EEx e II II 2 D Ex tD A21
BARTEC, Control and Signalling Device Adapters	PTB 00 ATEX 3114 U	II 2 G EEx e II
BARTEC, Push Button, Key Switch or Selector Switch Operator	PTB 00 ATEX 3114 U	II 2 G EEx e II

Note: Although some of the control devices are not certified for use in areas where there is a dust ignition hazard, their suitability has been evaluated as part of the assessment associated with this certificate.

This certificate and its schedules may only be reproduced in its entirety and without change.



SCHEDULE

EC TYPE-EXAMINATION CERTIFICATE

**Sira 07ATEX3338
Issue 3**

Variation 1 - This variation introduced the following change:

- i. The introduction of the following components, which have been added to the list of permitted devices used in the Control Stations:
 - Rockwell Automation/Allen Bradley Push Button, Key Switch or Selector Switch Operator used in conjunction with Switch Block
 - Bartech, Push Button, Key switch or Selector Switch Operators used in conjunction with Switch Block

Variation 2 - This variation introduced the following changes:

- i. The option to fit a 4 mm thick Glass Window in the enclosure lid was approved, this applies to enclosure sizes SX66 and larger.
- ii. The option to fit the following listed Certified Component Ammeters approved by DNV-2008-OSL-ATEX-21659U was recognised, certified to EN 60079-0:2006 and EN 60079-0:2003 (for ATEX) and IECEx CQM 08.0007U, certified to IEC 60079-0:2004 and EN 60079-7:2001.

Ammeter Type	Current Rating	Coding
CZ0205-6DA/5	0-5A	Ex e II (-40°C to +60°C)
CZ0205-6DA/1	0-1A	Ex e II (-40°C to +60°C)

14 **DESCRIPTIVE DOCUMENTS**

14.1 **Drawings**

Refer to Certificate Annexe.

14.2 **Associated Sira Reports and Certificate History**

Issue	Date	Report No.	Comment
0	20 December 2007	R51A17649A	The release of the prime certificate.
1	24 September 2008	R51A18802A	The introduction of Variation 1.
2	24 February 2009	R51A18939A	The introduction of Variation 2.
3	15 September 2009	N/A	Issued to correct the marking of the SX225 enclosure

15 **SPECIAL CONDITIONS FOR SAFE USE** (denoted by X after the certificate number)

None

16 **ESSENTIAL HEALTH AND SAFETY REQUIREMENTS OF ANNEX II** (EHSRs)

The relevant EHSRs that are not addressed by the standards listed in this certificate have been identified and individually assessed in the reports listed in Section 14.2.

This certificate and its schedules may only be reproduced in its entirety and without change.



SCHEDULE

EC TYPE-EXAMINATION CERTIFICATE

Sira 07ATEX3338
Issue 3

17 CONDITIONS OF CERTIFICATION

- 17.1 The use of this certificate is subject to the Regulations Applicable to Holders of Sira Certificates.
- 17.2 Holders of EC type-examination certificates are required to comply with the production control requirements defined in Article 8 of directive 94/9/EC.
- 17.3 The Control Stations covered by this certificate incorporate 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 Sira of any modifications of the devices that may impinge upon the explosion safety design of the Control Stations.
- 17.4 The manufacturer shall modify the marking to include additional protection concept letters and gas group as appropriate for any control devices fitted, e.g. Ex ed IIC (T_a = -20°C to +55°C).
- 17.5 The total dissipated power for the enclosure shall be calculated in accordance with EN 60079-7:2007, Annex E, E.2 and shall not exceed the maximum power rating defined in this certificate.
- 17.6 The manufacturer shall carry out a dielectric strength test in accordance with clause 6.1, EN 60079-7 on all pre-wired junction boxes.
- 17.7 Any suitably certified, increased safety terminal may be fitted in the junction boxes providing that they conform with the following requirements:
- The terminals are compliant with the EN 60079 series of standards
 - The terminals shall be fitted in accordance with the manufacturer's instructions and any special conditions for safe use that are specified in their certificate.
 - When installed, the terminals shall have the minimum clearance to earth that is shown on the specified drawings.
 - Weidmuller WDU 1.5 and WDU 2.5 terminals must be limited to a maximum current of 15 A.
- The user/installer of the SXCS1* Range of Control Stations shall be provided with a copy of the certificate that appertains to the particular terminals that are fitted in the box.
- 17.8 When the enclosures are fitted with a 4 mm Glass Window they shall be marked IP65.

Certificate Annexe

Certificate Number: Sira 07ATEX3338
Equipment: SXCS1* Range of Control Stations
Applicant: ABTECH Ltd



Issue 0

Drawing No.	Sheets	Rev.	Date	Description
ABT18370	1 of 1	A	17 Dec 07	SX Control Stations
ABT18731	1 of 1	A	14 Dec 07	Certification label SXCS1*

Issue 1

Drawing No.	Sheets	Rev.	Date	Description
ABT18370	1 of 1	B	05 Aug 08	SXCS Control Stations
ABT18509	1 of 1	B	05 Aug 08	ABCSW Control Stations

Issue 2

Drawing No.	Sheets	Rev.	Date (Sira stamp)	Description
ABT18370	1 of 1	D	19 Feb 09	SXCS Control Stations

Issue 3 No new drawings were introduced.

This certificate and its schedules may only be reproduced in its entirety and without change.

INSTALLATION, OPERATION & MAINTENANCE INSTRUCTIONS FOR ABTECH 'SXCS' Range Enclosures – SIRA07ATEX3338



Marking

The marking shown is for an apparatus certified terminal box.

The maximum power dissipation permitted in this terminal box is marked on the label and identified by RATING _____ WATTS.

The ambient temperature range for which this product is suitable is marked on the label and identified by Ta -20°C to +55°C.

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 M10 fixing studs
- 3) Insert the top two studs leaving 8 to 10mm protruding and 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) Pull the cables into the box leaving trailing leads of a length specified by site practice or the site engineer and secure any cable armour in accordance with site practice.
- 6) Terminate the cables in the terminals which form part of the control units or into additional terminals as provided in accordance with the requirements of BS EN 60079-14:[latest edition]. Consideration must be given to any use limitations or special conditions detailed on the certificates for the terminals fitted.
- 7) Secure the lid by closing the lid and tightening the lid fixing screws and ensure that all gland plate securing screws are tightened.
- 8) 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 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	Every 3 years
5 Check the security of all control unit and lens bezels	Every 3 years
6 Check the security of all cable glands	Every 3 years
7 Check the enclosure for damage	Every 3 years
8 Check that all screw clamp terminals are secure	As manufacturers recommendation

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.

Vibration

SX range terminal boxes are designed for use in areas subject to normal industrial levels of vibration. They are not designed for use in areas subject to intentional or extreme conditions of vibration.