



1 **EC TYPE-EXAMINATION CERTIFICATE**

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

3 Certificate Number: **Sira 07ATEX3297X** Issue: **5**

4 Equipment: **BPG 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:



II 2 G D
Ex e II T4 or Ex ed IIC T4
Ex tD A21 IP66 or IP65
(T_a = -20°C to +55°C) or (T_a = -20°C to +40°C)

(The protection concept letters, gas group and ambient temperature range are applied as appropriate for the control components fitted.)

Project Number 51A19903
C. Index 20

C Ellaby
Certification Officer

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SCHEDULE

EC TYPE-EXAMINATION CERTIFICATE

**Sira 07ATEX3297X
Issue 5**

13 DESCRIPTION OF EQUIPMENT

The BPG range of Control Stations utilises a BPG enclosure covered by certificate number SIRA99ATEX3172U and are fitted with an arrangement of suitably certified terminals.

BPG Reference	6	7	8	9	10	11	12	13	14	15
Length (mm)	122	220	160	260	360	560	255	400	600	400
Width (mm)	120	120	160	160	160	160	250	250	250	405
Height (mm)	90	90	90	90	90	90	120	120	120	120

The total dissipated power for the enclosure shall be calculated in accordance with EN 60079-7:2006, Annex C,C.2 and shall not exceed the figures given in the table below:

Maximum Power Dissipation (W) Ta +55°C (max)

BPG Reference	6	7	8	9	10	11	12	13	14	15
T4, Screw terminals	4.5	5.0	5.0	5.75	6.5	9.0	7.5	10.0	15.0	15.5
T4, Cage clamp terminals	2.00	2.30	2.00	2.30	4.50	6.68	2.30	5.20	7.97	8.26

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	EEx de IIC
Rockwell Automation/Allen Bradley, Lamp Module	PTB 01 ATEX 1037 U	EEx de IIC
BARTECH, Circuit Module and Control Circuit Switch	PTB 99 ATEX 1043 U	EEx de IIC
Rockwell Automation/Allen Bradley, Switch Module	PTB 01 ATEX 1040 U	EEx de IIC
Rockwell Automation/Allen Bradley, Pilot Light Lens	PTB 01 ATEX 1035U	EEx e II
Rockwell Automation/Allen Bradley, Push Button, Key Switch or Selector Switch Operator	PTB 01 ATEX 1035U	EEx e II Ex tD A21
BARTECH, Control and Signalling Device Adapters	PTB 00 ATEX 3114 U	EEx e II
BARTECH, Push Button, Key Switch or Selector Switch Operator	PTB 00 ATEX 3114 U	EEx e II
Warom, Flameproof Push Button Type BA8050	LCIE 07 ATEX 0006 U	Ex de IIC
CZ Explosion-Proof Appliances Co. Ltd., CZ0205-6DA/5 and CZ0205-6DA/1 Ammeters	DNV-2008-OSL-ATEX-21659U and IECEX CQM 08.0007U	Ex e II
CZ Explosion-Proof Appliances Co. Ltd., CZ Switch Block	IECEX CQM 08.0005U	Ex de IIC
CZ Explosion-Proof Appliances Co. Ltd., CZ Push Button, Key Switch, Selector Switch Operator	IECEX CQM 08.0012U	Ex e II Ex tD A21
CZ Explosion-Proof Appliances Co. Ltd., CZ Signal Lamp Cover	IECEX CQM 08.0012U	Ex e II Ex tD A21
CZ Explosion-Proof Appliances Co. Ltd., CZ LED Lamps type CZ0202, with mounting bezel	IECEX CQM 08.0006U	Ex de IIC

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.

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Sira Certification Service

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SCHEDULE

EC TYPE-EXAMINATION CERTIFICATE

Sira 07ATEX3297X
Issue 5

Variation 1 - This variation introduced the following change:

- i. The introduction of the Warom flameproof push button, type BA8050, to be used in conjunction with one of the previously approved operating devices, (certificate number PTB01ATEX1035U or PTB00ATEX3114U.).

Variation 2 - 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 3 - 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 BPG6 and larger, with this option fitted, the Control Stations have an Index Protection rating IP65.
- 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)

Variation 4 - This variation introduced the following changes:

- i. The introduction of the following IECEx certified components manufactured by CZ Explosion-Proof Electric Appliances Co. Ltd., the list of permitted devices that can be used in the Control Stations was changed to add these devices and to remove superfluous information.
 - CZ Switch Block used in conjunction with Push Button, Key switch or Selector Switch Operators certified under IECEx CQM 08.00012U (Note: when applying the 250 V, 16 A rating, the ambient temperature range that is applicable to the Control Stations is -20°C to +40°C).
 - CZ Push Button, Key Switch, Selector Switch Operator used in conjunction with Switch Block certified under IECEx CQM 08.0005U.
 - CZ Signal Lamp Cover used in conjunction with IECEx CQM 08.0006U.
 - CZ LED Lamps type CZ0202, complete with mounting bezel.



SCHEDULE

EC TYPE-EXAMINATION CERTIFICATE

Sira 07ATEX3297X
Issue 5

14 DESCRIPTIVE DOCUMENTS

14.1 Drawings

Refer to Certificate Annexe.

14.2 Associated Sira Reports and Certificate History

Issue	Date	Report no.	Comment
0	14 December 2007	R51A16822A	The release of the prime certificate.
1	21 December 2007	R51A16822B	Report number R51A16822A was replaced by R51A16822B, the certificate was therefore modified to reflect the report changes and to introduce corrections.
2	20 February 2008	R51A17883A	The introduction of Variation 1.
3	24 September 2008	R51A18802A	The introduction of Variation 2.
4	24 February 2009	R51A18939A	The introduction of Variation 3.
5	22 April 2009	R51A19903A	The introduction of Variation 4.

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

15.1 The enclosure is non-conducting and may generate an ignition-capable level of electrostatic charges under certain extreme conditions. The user should ensure that the equipment is not installed in a location where it may be subjected to external conditions (such as high-pressure steam), which might cause a build-up of electrostatic charges on non-conducting surfaces. Additionally, cleaning of the equipment should be done only with a damp cloth.

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.

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 to select the gas group, ambient temperature range and Index Protection rating that are appropriate the combination of devices that are fitted, e.g. Ex ed IIC, Ex tD A21 IP66 ($T_a = -20^{\circ}\text{C}$ to $+55^{\circ}\text{C}$).

17.5 The total dissipated power for the enclosure shall be calculated in accordance with EN 60079-7:2006, Annex C,C.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.

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**Sira 07ATEX3297X
Issue 5**

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.
- Weidmüller WDU 1.5 and WDU 2.5 terminals must be limited to a maximum current of 15 A.

The user/installer of the BPG 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.

Certificate Annexe

Certificate Number: Sira 07ATEX3297X
Equipment: BPG Control Stations
Applicant: ABTECH Ltd



Issues 0 and 1

Drawing	Sheet	Rev.	Date	Description
ABT17737	1 of 1	A	08 Jun 07	BPG Control Stations
ABT18362	1 of 1	A	06 Dec 07	Certification label ABCS1*

Issue 2

Drawing	Sheet	Rev.	Date	Description
ABT18509	1 of 1	A	08 Jun 07	ABCSW Control Stations

Issue 3

Drawing	Sheet	Rev.	Date	Description
ABT17737	1 of 1	B	05 Aug 08	BPG Control Stations

Issue 4

Drawing	Sheets	Rev.	Date (Sira stamp)	Description
ABT17737	1 of 1	D	19 Feb 09	BPG Control Stations

Issue 5

Drawing	Sheet	Rev.	Date	Description
ABT17737	1 of 1	E	19 Mar 09	BPG Control Stations

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INSTALLATION, OPERATION & MAINTENANCE INSTRUCTIONS FOR ABTECH 'ABCS' Range Enclosures – SIRA07ATEX3297



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 Tamb _____.

Installation

These instructions assume that the required cable entries have been pre-drilled. Cable entries may be threaded.

- 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 M6 fixing studs.
- 3) Tap thread into those mounting holes at user's discretion.
- 4) Place a mounting screw through one mounting hole in the box so that the thread of the screw protrudes from the back of the box. Lift the box into place, using such assistance as may be necessary to avoid personal injury and:-
 - a) If clearance mounting holes are used, insert the protruding thread through the appropriate clearance hole and secure with a nut on the other side of the mounting surface.
 - Or
 - b) If threaded holes are used, locate the end of the mounting screw over the threaded hole and, using an appropriate screwdriver, tighten the screw.
- 5) Rotate the box to line up the remaining mountings and repeat (4) above until all mounting screws have been fitted.
- 6) Install and secure the cable entry devices, cable glands and blanking plugs in accordance with the respective manufacturer's instructions.
- 7) 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.
- 8) Terminate the cables in the terminals provided on the control units and apply a minimum torque of 0.4 Nm, maximum torque 0.7 Nm.
- 9) When intermediate terminal are fitted consideration must be given to any use limitations or special conditions detailed on the certificates for those terminals.
- 10) Secure the lid by closing the lid and tightening the lid fixing screws.

Earthing/Grounding

The enclosure may be provided with an external earth/ground connection. If such a connection is provided it 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 of 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. If the enclosure is fitted with an external earth/ground facility it must be connected to the earth bonding circuit at all times when power is connected to the enclosure contents.

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 periodic checks that are advisable to ensure the efficiency of ABCS range control stations are:-

Activity		Frequency
1	Check that the lid seal is in place and not damaged	Each time the enclosure is opened
2	Check that all lid fixing screws are in place and secured	Each time the enclosure is closed
3	Check that the mounting bolts are tight and free of corrosion	Every 3 years
4	Check the security of all cable glands and entry devices	Every 3 years
5	Check the security of all control unit and lens bezels	Every 3 years
6	Check that all screw clamp terminals are secure	As manufacturers recommendations
7	Check enclosure for damage	Every 3 years

Chemical attack

The ABTECH BPG range of enclosures are manufactured using the following materials:-glass reinforced polyester resin, (with or without carbon loading), Thermoplast, EPDM rubber, neoprene or silicone rubber, 316 stainless steel, Brass

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

Glass reinforced polyester resin has a surface resistance greater than 10E9 Ohms. They can present a hazard from static electricity and may not be cleaned except with a damp cloth.

Carbon loaded glass reinforced, identified by the suffix 'C', (e.g. ABCSC), have a surface resistance between 10E6 and 10E9 Ohms. They do not present a hazard from static electricity.

Vibration

BPG 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.