



1 **EC TYPE-EXAMINATION CERTIFICATE**

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

3 Certificate Number: **Sira 04ATEX3131X** Issue: **2**

4 Equipment: **GRN8 Junction Box**

5 Applicant: **ABTECH Limited**

6 Address: Sanderson Street  
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 61241-0: 2006  
EN 60079-7: 2003 EN 61241-1: 2006

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 T6  
Ex tD A21 IP66 T85°C

Project Number 51A17090  
C. Index 04

C Ellaby  
Certification Officer

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## SCHEDULE

### EC TYPE-EXAMINATION CERTIFICATE

Sira 04ATEX3131X  
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#### 13 DESCRIPTION OF EQUIPMENT

The GRN8 junction box is a plastic enclosure comprising a base and lid that is fitted with up to four terminal blocks. Each terminal block comprises a pair of Weco terminal posts covered by PTB 03ATEX1117U, coded EEx e II, that are moulded into a nylon base. The base is fixed to the enclosure with a self tapping screw. The terminals are rated at a maximum voltage of 550 V.

The total dissipated power for the enclosure shall be calculated in accordance with EN 50019:2000, Annex C,C.2 and shall not exceed 10 W.

An internal earth facility is provided. This comprises one or two brass or copper earth bars fixed to pillars in the sides of the enclosure. The connections are made using a proprietary earth rail clamp or by crimp type cable lugs fixed with screws, nuts and washers. Alternatively one of the Weco terminals may be used as an earth terminal.

**Variation 1** - This variation introduced the following changes:

- i. The option to fit the GRN8 Junction Box with any increased safety terminals that have been ATEX certified by a notified body

**Variation 2** - This variation introduced the following changes:

- i. Following appropriate re-assessment to demonstrate compliance with the requirements of the EN 60079 and the EN 61241 series of standards, the documents originally listed in section 9, EN 50014:1997 (amendments A1 to A2), EN 50019:2000 and EN 50281-1-1:1998, were replaced by EN 60079-0:2006, EN 60079-7:2003, EN 61241-0:2006 and EN 61241-1:2006, the markings in section 12 were updated accordingly.

#### 14 DESCRIPTIVE DOCUMENTS

##### 14.1 Drawings

Refer to Certificate Annexe.

##### 14.2 Associated Sira Reports and Certificate History

Issue	Date	Report No.	Comment
0	21 April 2004	R53A10153A	The release of prime certificate.
1	28 April 2005	R51V12564A	The introduction of Variation 1
2	26 February 2008	R51A17090G	This Issue covers the following changes: <ul style="list-style-type: none"><li>• All previously issued certification was rationalised into a single certificate, Issue 2, Issues 0 to 1 referenced above are only intended to reflect the history of the previous certification and have not been issued as documents in this format.</li><li>• The change of the company name from AB Controls and Technology, first recognised 31 January 2007.</li><li>• The introduction of Variation 2.</li></ul>

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## SCHEDULE

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**Issue 2**

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

- 15.1 The GRN8 junction box is suitable only for areas where there is a low risk of impact.
- 15.2 The user/installer shall comply with any Special Conditions for Safe Use and limitations contained within the certification associated with the terminals that need to be addressed when this equipment is being installed and used.

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 manufacturer shall conduct an electric strength test on the junction box only if wiring is included between terminals. The test shall be conducted in accordance with EN 60079-7: 2003 clause 7.1.
- 17.4 This certificate relies on the following previously certified products. When used as part of the GRN8 Junction Box, the key attributes listed in the table below shall still be maintained by their original certificate.

Product	Certificate number	Key attributes
Weco terminal post, DFB-*-AX, DFG-*-AX, DFG-*-E-AX	PTB 03 ATEX 1117 U	EEx e II
Weidmuller, ZB4 earth clamp	DEMKO 03ATEX136028U	EEx e II
Terminals	As applicable	EEx e II

- 17.5 The manufacturer shall fit all terminals in accordance with any Special Conditions for Safe Use and limitations that are contained within their associated certification, in addition, the manufacturer shall ensure that the minimum creepage and clearance distances have been met.
- 17.6 The manufacturer shall take all reasonable steps to ensure that the user/installer complies with any Special Conditions for Safe Use and limitations contained within the certification associated with the terminals that need to be addressed when this equipment is being installed and used.

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# Certificate Annexe

**Certificate Number:** Sira 04ATEX3131X  
**Equipment:** GRN8 Junction Box  
**Applicant:** ABTECH Limited



## Issue 0

Drawing No.	Sheet	Rev.	Date	Description
ABT13228	1 of 1	A	23 Jul 03	GRN Enclosure
ABT13909	1 of 1	A	15 Apr 04	GRN 8 Certification label

## Issue 1

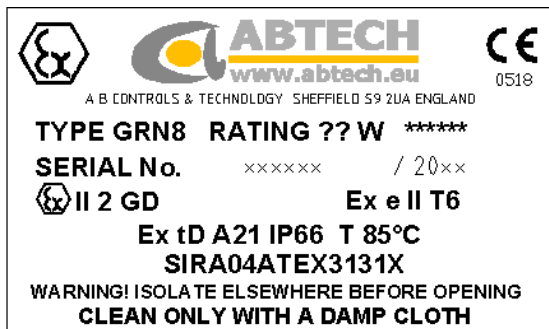
Drawing No.	Sheet	Rev.	Date	Description
ABT14381	1 of 1	-	06 Oct 04	GRN Alternative Terminals

## Issue 2

Drawing No.	Sheet	Rev.	Date	Description
ABT 13228	1 of 1	B	11 Jan 08	General Assembly
ABT 14381	1 of 1	B	14 Jan 08	General Assembly - Alternative Terminals
ABT 13909	1 of 1	B	11 Jan08	Certification Label

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## INSTALLATION, OPERATION & MAINTENANCE INSTRUCTIONS FOR ABTECH 'GRN8' Enclosure – SIRA04ATEX3131X



### 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 \_\_\_\_ 10 W.

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 two mounting holes for M6 fixing studs at 148 +/- 2 mm centres.
- 3) Tap thread into mounting holes if required.
- 4) a) If clearance mounting holes are used, insert one mounting screws through one of the mounting holes and hold in place with a spring washer and nut. Slide the box in place under the screw head and insert the second mounting screw. Secure the second mounting screw with a spring washer and nut and tighten both mounting screws.  
b) If threaded mounting holes are used, locate the end of the mounting screw over the threaded hole and, using an appropriate screwdriver, screw it part way in. Slide the box in place under the screw head and locate the second mounting screw. Using an appropriate screwdriver screw the mounting screw all the way in. Now tighten the first mounting screw.
- 5) Install and secure the cable glands in accordance with the manufacturers instructions.
- 6) Pull the cables into the box, leaving trailing leads of length no more than 205 mm and secure any cable armour in accordance with site practice.
- 7) Strip the conductor insulation for a minimum of 8 mm and a maximum of 10 mm. Terminate the conductors in the terminals provided in accordance with the requirements of BS EN 60079-14:1997. No more than two conductors are permitted per terminal post. Conductor insulation must extend to within 2 mm of the terminal post.
- 8) 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 ABTECH range enclosures are:-

<b>Activity</b>	<b>Frequency</b>
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	Annually
4 Check the security of all cable glands	Annually
5 Check that all screw clamp terminals are secure	As manufacturers recommendations
6 Check enclosure for damage	Annually

### **Chemical Attack**

The ABTECH BPG range of enclosures are manufactured using the following materials:-glass reinforced polyester resin, (with or without carbon loading), 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. BPGC9), 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.

### **Protection From Foreseeable Faults**

Circuits connected in the enclosure must be externally protected using suitable circuit interruption devices to prevent overloading. Provided the enclosure is correctly installed, there should be no foreseeable faults.