IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.:	IECEx SIR 12.0116U	Issue No: 1	Certificate history:
			Issue No. 1 (2014-05-27)
Status:	**Current**	Page 1 of 5	Issue No. 0 (2012-10-08)
Date of Issue:	**2014-05-27**		
Applicant:	**ABTECH Limited** Sanderson Street Lower Don Valley Sheffield S9 2UA **United Kingdom**		
Electrical Apparatus:	**ZAG Range of Enclosures**		
Optional accessory:			
Type of Protection:	**Increased safety, Intrinsically safe and dust**		

Marking:

Ex ia IIC Ga	Or	Ex e IIC Gb	Or	Ex ib IIC Gb
Ex ta IIIC Da IP6X		Ex tb IIIC Db IP6X		Ex tb IIIC Db IP6X

Approved for issue on behalf of the IECEx Certification Body: P J Walsh

Position: Technical Advisor

Signature:
(for printed version)

Date:

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 the Official IECEx Website.

Certificate issued by:

SIRA Certification Service
Rake Lane
Eccleston
Chester
CH4 9JN
United Kingdom

IECEx Certificate of Conformity

Certificate No:	IECEx SIR 12.0116U	Issue No: 1
Date of Issue:	**2014-05-27**	Page 2 of 5
Manufacturer:	**ABTECH Limited** Sanderson Street Lower Don Valley Sheffield S9 2UA **United Kingdom**	
Additional Manufacturing location(s):		

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 electrical apparatus 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 Edition:6.0	Explosive atmospheres - Part 0: General requirements
IEC 60079-11 : 2011 Edition:6.0	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
IEC 60079-26 : 2006 Edition:2	Explosive atmospheres - Part 26: Equipment with equipment protection level (EPL) Ga
IEC 60079-31 : 2008 Edition:1	Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosure 't'
IEC 60079-7 : 2006-07 Edition:4	Explosive atmospheres - Part 7: Equipment protection by increased safety "e"

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in

Test Report:

GB/SIR/ExTR12.0245/00 GB/SIR/ExTR13.0296/00

Quality Assessment Report:

GB/SIR/QAR06.0046/04 GB/SIR/QAR06.0046/05

IECEx Certificate of Conformity

Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The ZAG range of enclosures are manufactured from aluminium alloy in the following sizes:

Z A Reference	GLength(mm)	Width(mm)	Height(mm)	Z A Reference	GLength(mm)	Width(mm)	Height(mm)
2	58	64	36	10	220	120	80
3	98	64	36	10/9	220	120	90
4	150	64	36	11	160	160	90
5	75	80	57	12	260	160	90
6	125	80	57	13	360	160	90
7	175	80	57	15	202	232	114
9	122	120	80	16	332	232	113

The enclosures may also be manufactured in sizes not specified in the 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 lids may be hinged or detachable and are retained with captive screws. The enclosures are sealed to IP66 by gaskets of closed cell silicone rubber.

Entries may be provided either through the sides or the rear of the enclosure and external and internal earthing facilities are provided. There is an option to fit slotted trunking inside the enclosures, this trunking may be sited as required.

CONDITIONS OF CERTIFICATION: NO

IECEx Certificate of Conformity

EQUIPMENT (continued):

Conditions of manufacture

The Manufacturer shall comply with the following:

1. If the Enclosures are supplied with blanking plugs, reducers, adapters and breather drains, then the manufacturer shall ensure that:
   - The device does not adversely affect the minimum IP rating of the enclosure
   - There are no special conditions of for safe use (conditions of certification) associated with the device that will impinge upon the use and installation of the Enclosure, e.g. “These components shall not be used for applications where there is a ‘high’ risk of mechanical damage”.
   - The coding reflects the “worst case” item fitted.
2. The manufacturer shall take all reasonable steps to ensure that the following items used in the construction of the Enclosure are used within the minimum and maximum service temperature stated in the condition for safe use, in addition, the manufacturer shall provide the user/installer with a copy of the certificate associated with any blanking plugs, reducers, adapters and breather drains:

   Item: Solid silicone rubber gasket

   Glass window

   Blanking plugs, reducers, adapters and breather drains
3. When trunking is fitted, it may be sited as required and the minimum creepage and clearance distances shall still be met.
4. When the optional earth bar is fitted it shall allow for a size of conductor connection in accordance with Clause 15.3 of IEC 60079-0.
5. When an individual earth connection to the earth bar is secured via thread sealant alone it shall be ensured that the thread sealant used has a suitable temperature range to account for the lowest ambient temperature and at least the T-class applied.
6. The earth bar connection screws, nuts and washers shall not be constructed of light metals.

Schedule of limitations

The user/installer shall comply with the following:

1. These enclosures shall be used within the following temperature ranges:

Material	Without 4 mm glass window	With 4 mm glass window
Closed cell silicone rubber	-65°C to +180°C	-60°C to +90°C

2. The materials used in the construction of this equipment contain levels of Al, Mg, Ti, Zi that are greater than that allowed for EPL Ga by clause 8.3 of IEC 60079-0, therefore in rare cases, ignition sources due to impact and friction sparks could occur. The equipment shall therefore be protected from such impact and friction when installed.

IECEx Certificate of Conformity

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

Issue 1 – this Issue introduced the following changes:	
1.	Using IEC 60079-26, the enclosures were allowed to be marked with 'Ex ia' and 'Ex ta' concepts for EPL levels Ga and Da. This change necessitated the introduction of a Schedule of Limitations.
2.	The introduction of one or more optional Earth Bars. Each earth bar is manufactured from copper or brass, which may optionally be plated, and are mounted and fixed to at least two welded pillars, welded studs, or internal earth mounting plate (if fitted). Each earth bar is connected to the main internal earth point of the enclosure in which it is fitted. Individual earth connection is made via a threaded entry using a screw and self locking nut, or screw and nut and anti-vibration washer, or locked via the use of thread sealant, and designed to accept a crimped conductor lug. This change necessitated the introduction of new Conditions of Manufacture.
3.	Because light metals are used in the construction of these enclosures, a Schedule of Limitations was applied.