

# Installation, Operation, Maintenance:

## ZAG RANGE (COMPONENT)



### Certification Details

ATEX: ABTECH Ltd.	Ex II 2 G D	CML 21ATEX3136U
UKEX: ABTECH Ltd.	Ex II 2 G	CML 21UKEX3137U
IECEX: ABTECH Ltd.	Ex eb IIC Gb	IECEX SIR 12.0116U



### Marking

The marking shown is for a component certified enclosure and will be found on the inside of the 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 extends from -65°C to +150°C.

The marking:

Ex eb IIC Gb Ex tb IIC Db may be replaced by  
Ex ib IIC Gb Ex tb IIC Db or  
Ex ia IIC Ga Ex ta IIC Da.

The standard coating finish is  $\leq 0.2\text{mm}$ . If the client specified paint finish  $> 0.2\text{mm}$  the IIC marking will be replaced by IIB.

Enclosures marked Ex ia or Ex ib may only be used for terminating intrinsically safe circuits.

### NOTE:

*The materials used in the construction of this equipment contain levels of Al, Mg, Ti, Zr 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.*

### Installation

These instructions assume that the required cable entries have been pre-drilled. Cable entries may be threaded. All cable entry devices must be appropriately certified to the latest standards and match the certification of the box. i.e. ATEX certified devices are required for ATEX certified enclosures and IECEx certified devices are required for IECEx certified enclosures.

- 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 M4 fixing studs (for size ZAG1 to ZAG8) or for M6 fixing studs (for larger sizes) as applicable.
- 3) Tap thread into mounting holes if required.
- 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 enclosure into position using such assistance as may be necessary to avoid 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 thread 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) Where slotted trunking has been supplied (solid trunking is not permitted) ensure that it is suitable for the proposed service temperature of the enclosure. Where a window is fitted metallic slotted trunking must be used. Trunking may be mounted in any orientation in the box, vertically, horizontally or diagonally.
- 7) Secure the lid by closing the lid and tightening the lid fixing screws to a torque of 1.5Nm minimum, 2.0Nm maximum.

Torque Ratings for Lid Fixings	
1.5Nm Minimum	2.0Nm Maximum

**Earthing/Grounding**

The enclosure is provided with an external earth/ground connection. This must be connected to the appropriate earth bonding circuit before electrical power is connected to the contents of the enclosure.  
An equipotential bonding connection is provided between the box and the lid. Care must be taken to ensure this is not damaged during installation or maintenance.

**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, unless the enclosure marking shows Ex ib or Ex ia.
- 3. The enclosure 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 checks that are advisable to ensure the efficiency of ABTECH ZAG 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 the mounting bolts are tight and free of corrosion	Annually
4	Check the security of all cable glands	Annually
5	Check the enclosure for damage	Annually

**Chemical Attack**

The ABTECH ZAG range of enclosures are manufactured using the following materials: -

- Aluminium Alloy
- 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**

The ZAG range do not normally present a hazard from static discharge. Ensure that the marking is appropriate to the gas group as this may be affected by a client specified coating thickness.