



# 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](http://www.iecex.com)

Certificate No.: IECEx CML 16.0117X Issue No: 0 Certificate history:  
Status: Current Page 1 of 3 Issue No. 0 (2016-12-27)  
Date of Issue: 2016-12-27  
Applicant: **Dong-A Bestech Co. Ltd.**  
13-16 Samjeong-dong  
Ojeong-ku  
Bucheon-city  
Kyunggi-do  
Korea, Republic of  
Equipment: **GRP Junction Box DJBG**  
*Optional accessory:*  
Type of Protection: **Ex e, Ex i, Ex t**  
Marking:  
Ex ia IIC T\* Ga or Ex eb IIC T\* Gb and/or Ex tb IIIC T\*°C Db or Ex ia IIIC T\*°C Db  
Ta= -60 °C to +80 °C (T4/ T135°C)  
Ta= -60 °C to +55 °C (T5/ T100°C)  
Ta= -60 °C to +40 °C (T6/ T85°C)

Approved for issue on behalf of the IECEx  
Certification Body:

H M Amos MIET

Position:

Technical Manager

Signature:  
(for printed version)

Date:

December 27, 2016

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](http://www.iecex.com).

Certificate issued by:

Certification Management Limited  
Unit 1, Newport Business Park  
New Port Road  
Ellesmere Port, CH65 4LZ  
United Kingdom





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Manufacturer: **Dong A Bestech**  
13-16 Samjeong-dong  
Ojeong-ku  
Bucheon-city  
Kyunggi-do  
**Korea, Republic of**

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:

<b>IEC 60079-0 : 2011</b> Edition:6.0	Explosive atmospheres - Part 0: General requirements
<b>IEC 60079-11 : 2011</b> Edition:6.0	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
<b>IEC 60079-31 : 2013</b> Edition:2	Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
<b>IEC 60079-7 : 2015</b> Edition:5.0	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/CML/ExTR16.0152/00](#)

Quality Assessment Report:

[GB/CML/QAR16.0019/00](#)



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## Schedule

### EQUIPMENT:

*Equipment and systems covered by this certificate are as follows:*

The GRP Junction Box DJBG are rectangular terminal enclosures consisting of body and removable cover. The terminal boxes are intended for fixed mounting only for use with suitably certified terminals mounted on terminal rails.

**See Annex for full Description and conditions of manufacture**

**CONDITIONS OF CERTIFICATION: YES as shown below:**

**See Annex for Specific Conditions of Certification**

### Annex:

[Certificate Annex IECEx CML.16.0117X.pdf](#)





The total dissipated power for the particular application must be calculated in accordance with IEC 60079-7, Annex E and shall not exceed the values in the table below

Model		EPL	Temperature Class/ Maximum Surface Temperature		
			T6 / T85°C	T5 / T100°C	T4 / T135°C
			Tamb ≤ 40 °C	Tamb ≤ 55 °C	Tamb ≤ 80 °C
DJBG-	112.5A	Ga, Gb, Db	4.95 W	4.95 W	4.95 W
	112.5B	Ga, Gb, Db	5.04 W	5.04 W	5.04 W
	160A-1	Ga, Gb, Db	7.3 W	7.3 W	7.3 W
	160B-1	Ga, Gb, Db	7.6 W	7.6 W	7.6 W
	160C-1	Ga, Gb, Db	8.56 W	8.56 W	8.56 W
	200A-1	Ga, Gb, Db	9.24 W	9.24 W	9.24 W
	250A-1	Ga, Gb, Db	10.59 W	10.59 W	10.59 W

## Conditions of Manufacture

The following conditions are required of the manufacturing process for compliance with the certification.

- 1 Where the product incorporates certified parts or safety critical components the manufacturer shall ensure that any changes to those parts or components do not affect the compliance of the certified product that is the subject of this certificate.
- 2 The power and voltage rating marking on the label will be allocated in accordance with the table detailed in the description. The manufacturer will take all reasonable steps to ensure that the power dissipated by the terminal box does not exceed the maximum value stipulated in the table detailed in the description, and shall supply all the relevant information that will allow the installer/user to calculate the power dissipation (Watts) in accordance with IEC/EN 60079-7, Annex E, E.2 for each terminal box and install in accordance with IEC/EN 60079-14
- 3 When terminals are supplied with the enclosure they shall be appropriately certified Ex components. They shall be installed in accordance with the certification documentation and the manufacturer's instructions. All Specific Conditions of Certification/ Special Conditions for Safe Use/ Schedule of Limitations must be satisfied. A copy of the approved terminals certification shall be provided with the terminal box documents.

All creepage and clearance distances as defined in IEC 60079-7 Table 2 shall be observed for the voltage rating marking.



The terminals fitted shall be suitable for the lower operating temperature marked on the certification label and must have a minimum operating temperature suitable for the temperature class as specified in the table below:

Temperature Class	Minimum Upper Continuous Operating Temperature
T4/ T135°C	120°C
T5/ T100°C	95°C
T6/ T85°C	80°C

- 4 If the terminals are fitted with cables/wiring by the manufacturer; all creepage and clearance distances as defined in IEC 60079-7 Table 2 shall be observed. A routine dielectric strength test shall be carried out on each unit in accordance with IEC/EN 60079-7:2015, clause 7.1.

The test voltage shall be determined on the basis of the marked maximum rated voltage, with the appropriate safety factor and test duration applied in accordance with IEC/EN 60079-7:2015, clause 6.1.

No flashover or breakdown shall occur.

## Conditions of Certification

The following conditions are required when installed for compliance with the certification.

- 1 POTENTIAL ELECTROSTATIC CHARGING HAZARD, equipment shall only be cleaned with a damp cloth to prevent the risk of electrostatic discharge.
- 2 All cable glands and plugs/stoppers for unused entries shall be suitable for use with the equipment and shall be:
  - certified as groups II and III, and have Ex eb and/or Ex tb marking (as applicable).
  - have a minimum ingress protection of IP 66.
- 3 The cable entry point may be +40K above ambient. Use appropriate rated cables.
- 4 When used for 'Ex ia IIIC T\*\*°C Db' applications, the enclosures shall only be used in either Zone 21 or 22 locations and circuits are required to be supplied via an over-power protection supply marked [Ex ia IIIC Da or Db] (See Note Below)

Note: For Zone 0, 1 and Zone 21 applications (Ex e, Ex ia IIC Ga, Ex ia IIIC Db and Ex tb)

The temperatures of the terminal enclosures are based on the temperature rise testing carried out under no dust layers for a 40K rise, power limitations as per table stated in the description. As the 'Ex ia IIIC Db marking has not been tested under a dust layer and due to potential misunderstanding of the 'Ex ia IIIC' aspect of the marking, a condition of safe use has been included for clarification