



# Type Approval Certificate

This is to certify that the undernoted products have been tested with satisfactory results in accordance with the relevant requirements of the Lloyd's Register Type Approval System.

This certificate is issued to:

**PRODUCER** Abtech Limited

**PLACE OF PRODUCTION** 199 Newhall Road Lower Don Valley Sheffield S9 2QJ England

**DESCRIPTION** Enclosures and Junction boxes for safe and hazardous areas

**TYPE:** BPG, SX, and ZAG Ranges of Junction Boxes and Enclosures

## RATINGS

### BPG Range of Junction Boxes and Enclosures

BPG	1	2	3	4	5	6	7	8	9	10	11	12	13	13.5	14	15
Length	80	110	160	190	230	122	220	160	260	360	560	255	400	400	600	400
Width	75	75	75	75	75	120	120	160	160	160	160	250	250	250	250	405
Height	55	55	55	55	55	90	90	90	90	90	90	120	120	160	120	120

### BPG Range of and Enclosures:

II 1 GD or II 2 GD or II2 GD

Ex ia II C Ga Ex e IIC Gb Ex ib IIC Gb

Ex ta IIIC Da IP6X Ex tb IIIC Db IP6X Ex tb IIIC Db IP6X

Ex Certificate No.: Sira 99ATEX3172U, issue: 7

### BPG Range of Junction Boxes:

II 1 GD or II 1 GD

Ex e II C T6 Gb(Ta= -65°C to #°C) Ex ia II C T6 Ga(Ta= -65°C to #°C)

Ex e II C T5 Gb(Ta= -65°C to #°C) Ex ia II C T5 Ga(Ta= -65°C to #°C)

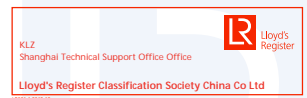
Ex e II C T4 Gb(Ta= -65°C to #°C) Ex ia II C T4 Ga(Ta= -65°C to #°C)

**Certificate No.** 16/80028

**Issue Date** 22 April 2016

**Expiry Date** 21 April 2021

**Sheet** 1 of 5



KL Zhang  
Shanghai Technical Support Office

Lloyd's Register Classification Society (China)Co., Ltd  
19<sup>th</sup> Floor, Ocean Towers, 550 Yan An Dong Road, Shanghai 200001

Is a member of Lloyd's Register Group Limited



**RATINGS** (Cont'd)

Ex ib II C T6 Gb(Ta= -65°C to #°C)

Ex ta III C T85°C Da(Ta= -65°C to #°C)

Ex ib II C T5 Gb(Ta= -65°C to #°C)

Ex ta III C T100°C Da(Ta= -65°C to #°C)

Ex ib II C T4 Gb(Ta= -65°C to #°C)

Ex tb III C T85°C Db(Ta= -65°C to #°C)

Ex tb III C T100°C Db(Ta= -65°C to #°C)

Ex Certificate No.: Sira 99ATEX3173X, issue:11

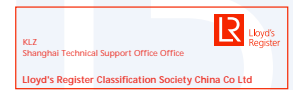
<b>SX Range of Enclosures:</b>					
SX Ref.	Group and Category	Length(mm)	Width(mm)	Depth(mm)	
				Min.	Max.
SX0	II 2 GD	229	152	140	2000
SX0.5	II 2 GD	274	184	140	2000
SX1	II 2 GD	324	234	140	2000
SX1.5	II 2 GD	306	306	140	2000
SX2	II 2 GD	324	372	140	2000
SX3	II 2 GD	448	372	140	2000
SX4	II 2 GD	510	372	140	2000
SX5	II 2 GD	510	510	140	2000
SX6	II 2 GD	780	510	140	2000
SX7	II 2 GD	950	650	140	2000
SX8	II 2 GD	1250	800	140	2000
SX225	II 2 GD	2000	2000	140	2000
SX45	II 2 GD	114	114	51(Nominal)	
SX64	II 2 GD	152	102	63(Nominal)	
SX66	II 2 GD	152	152	102(Nominal)	
II 1 GD		II 2 GD			
Ex ia II C Ga		Ex e IIC Gb			
Ex ta IIIC Da		Ex ib IIC Gb			
		Ex tb IIIC Db			
Ex Certificate No.: CML 15ATEX3078U, issue: 0					

**Certificate No.** 16/80028

**Issue Date** 22 April 2016

**Expiry Date** 21 April 2021

**Sheet** 2 of 5



**KL Zhang**  
Shanghai Technical Support Office

*Lloyd's Register Classification Society (China)Co., Ltd*  
19<sup>th</sup> Floor, Ocean Towers, 550 Yan An Dong Road, Shanghai 200001

Is a member of Lloyd's Register Group Limited

Lloyd's Register Group Limited, its affiliates and subsidiaries and their respective officers, employees or agents are, individually and collectively, referred to in this clause as the 'Lloyd's Register'. Lloyd's Register assumes no responsibility and shall not be liable to any person for any loss, damage or expense caused by reliance on the information or advice in this document or howsoever provided, unless that person has signed a contract with the relevant Lloyd's Register entity for the provision of this information or advice and in that case any responsibility or liability is exclusively on the terms and conditions set out in that contract.



**RATINGS** (Cont'd)

**SX Range of junction boxes :**

SX Ref. : SX0, SX0.5, SX1, SX1.5, SX2, SX3, SX4, SX5, SX6, SX7, SX8, SX225, SX45, SX64, SX66

EPL: Ga, Gb, Db, Da

II 2 GD	II 2 GD	II 1 GD
Ex e II C T#Gb	Ex e op pr II C T#Gb	Ex ia II C T#Ga
Ex ib II C T#Gb	Ex ib op pr II C T#Gb	Ex ia op is II C T#Ga
Ex e op is II C T#Gb	Ex ia op pr II C T#Gb	Ex op is II C T#Ga
Ex ib op is II C T#Gb	Ex op pr II C T#Gb	Ex ta III C T#°C Da
Ex tb III C T#°C Db	Ex tb III C T#°C Db	
Ta= - #°C to +#°C	Ta= - 40°C to +#°C	Ta= - #°C to +#°C

Ex Certificate No.: CML 14ATEX3123X, issue: 0

**ZAG Range of Enclosures:**

II 1 GD	or II 2 GD	or II 2 GD
Ex ia II C Ga	Ex e IIC Gb	Ex ib IIC Gb
Ex ta IIIC Da IP6X	Ex tb IIIC Db IP6X	Ex tb IIIC Db IP6X

ZAG Reference	Length	Width	Height
2	58	64	36
3	98	64	36
4	150	64	36
5	75	80	57
6	125	80	57
7	175	80	57
9	122	120	80
10	220	120	80
10/9	220	120	90
11	160	160	90
12	260	160	90
13	360	160	90

**Certificate No.** 16/80028

**Issue Date** 22 April 2016

**Expiry Date** 21 April 2021

**Sheet** 3 of 5



KL Zhang  
Shanghai Technical Support Office

Lloyd's Register Classification Society (China)Co., Ltd  
19<sup>th</sup> Floor, Ocean Towers, 550 Yan An Dong Road, Shanghai 200001

Is a member of Lloyd's Register Group Limited

Lloyd's Register Group Limited, its affiliates and subsidiaries and their respective officers, employees or agents are, individually and collectively, referred to in this clause as the 'Lloyd's Register'. Lloyd's Register assumes no responsibility and shall not be liable to any person for any loss, damage or expense caused by reliance on the information or advice in this document or howsoever provided, unless that person has signed a contract with the relevant Lloyd's Register entity for the provision of this information or advice and in that case any responsibility or liability is exclusively on the terms and conditions set out in that contract.

15	202	232	114
16	332	232	113

Ex Certificate No.: Sira 99ATEX3174U, issue:10

**ZAG Range of junction boxes:**

II 1 GD	or	II 2 GD	or	II2 GD
Ex ia IIC T <sup>①</sup> Ga		Ex e IIC T <sup>①</sup> Gb		Ex ib IIC T <sup>①</sup> Gb
Ex ta IIIC T <sup>②</sup> Da IP6X		Ex tb IIIC T <sup>②</sup> Db IP6X		Ex tb IIIC T <sup>②</sup> Db IP6X

Ambient Range -③°C to +④°C

① The temperature class may be T6, T5, T4, or T3 depending on the application;

② The maximum surface temperature for dust may be T85°C, T100°C, T135°C, or T180°C depending on the application;

③ The minimum ambient temperature may be either -60 °C or -65 °C depending upon the use of a glass window. If the equipment is without the window the minimum ambient may be -65 °C;

④ The max. ambient temperature is either +40°C, +55°C, +70°C, +90°C, +105°C, +135°C or +150°C depending on the application;

ZAG Box Ref.: 2, 3, 4, 5, 6, 7, 9, 10, 10/9, 11, 12, 13, 15, 16; EPL: Ga Gb Db Da

Ex Certificate No.: Sira 99ATEX3175X, issue:11

**APPLICATION**

Marine, offshore, and industrial use.

**STANDARD**

Manufacture's technical specification  
IEC60079-0: 2012, IEC60079-7: 2007, IEC60079-11: 2012 IEC60079-26: 2007,  
IEC60079-31: 2009

**OTHER  
CONDITIONS**

1. *Special conditions for safe use, as indicated in the individual EX certificates, shall be complied with during application.*
2. *Type Approval does not eliminate the need for normal inspection and survey procedures required by the Rules and Regulations.*
3. *If the specified standards are amended during the validity of this certificate, the product is to be re-approved prior to it being supplied to vessels to which the amended standards apply.*
4. *(In case of applications other than Marine) The application of this Type Approval Certificate will be limited to the relevant scope of the Specified Standards and acceptance thereof by the local authorities.*

**Certificate No.**

16/80028

**Issue Date**

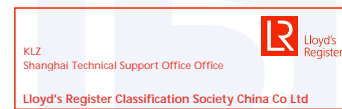
22 April 2016

**Expiry Date**

21 April 2021

**Sheet**

4 of 5



KL Zhang  
Shanghai Technical Support Office

*Lloyd's Register Classification Society (China)Co., Ltd*  
19<sup>th</sup> Floor, Ocean Towers, 550 Yan An Dong Road, Shanghai 200001

Is a member of Lloyd's Register Group Limited



Lloyd's  
Register

*"This Certificate is not valid for equipment, the design, ratings or operating parameters of which have been varied from the specimen tested. The manufacturer should notify Lloyd's Register Classification Society (China) Co., Ltd. of any modification or changes to the equipment in order to obtain a valid certificate."*

*The attached Design Appraisal Document No. STS/TA/305455, Issue No. 0, dated 22 April 2016 and its supplementary Type Approval Terms and Conditions form part of this Certificate.*

**Certificate No.** 16/80028  
**Issue Date** 22 April 2016  
**Expiry Date** 21 April 2021  
**Sheet** 5 of 5



KL Zhang  
Shanghai Technical Support Office

*Lloyd's Register Classification Society (China)Co., Ltd  
19<sup>th</sup> Floor, Ocean Towers, 550 Yan An Dong Road, Shanghai 200001*

Is a member of Lloyd's Register Group Limited

Lloyd's Register Group Limited, its affiliates and subsidiaries and their respective officers, employees or agents are, individually and collectively, referred to in this clause as the 'Lloyd's Register'. Lloyd's Register assumes no responsibility and shall not be liable to any person for any loss, damage or expense caused by reliance on the information or advice in this document or howsoever provided, unless that person has signed a contract with the relevant Lloyd's Register entity for the provision of this information or advice and in that case any responsibility or liability is exclusively on the terms and conditions set out in that contract.



Lloyd's  
Register

**Lloyd's Register Classification Society  
(China) Co., Ltd.**

**Shanghai Technical Support Office**

19<sup>th</sup> Floor Ocean Towers, No. 550 Yan An Dong Road  
Shanghai 20001 P.R. China

Page 1 of 1
Document number STS/TA/305455
Issue number 0

**DESIGN APPRAISAL DOCUMENT**

Date 22 April 2016	Quote this reference on all future communications STS/TA/KLZ/LIV1600211/STS/O-305455
-----------------------	---

**LLOYD'S REGISTER TYPE APPROVAL SYSTEM, 2014.**

**Issued to: Abtech Limited**

**For: Enclosures and Junction boxes for safe and hazardous areas**

**TYPE APPROVAL CERTIFICATE No. 16/80028**

The undernoted documents have been reviewed for compliance with the requirements of the Lloyd's Register Type Approval System, 2014 and this Design Appraisal Document forms part of the Certificate.

**APPROVAL DOCUMENTATION**

1. Application Checklist, undated;
2. Form2502, dated 16<sup>th</sup>, Feb, 2016.
3. Type Approval Document (combined).
4. Production Quality Assessment report, undated.

**Supplementary Type Approval Terms and Conditions**

*Type Approval certifies that a representative sample of the product(s) referred to herein has/have been found to meet the applicable design criteria for the use specified herein. It does not mean or imply approval for any other use, nor approval of any product(s) designed or manufactured otherwise than in strict conformity with the said representative sample.*

*Type Approval is based on the understanding that the manufacturer's recommendations and instructions and any relevant requirements of the Rules and Regulations are complied with.*

*Type Approval does not eliminate the need for normal inspection and survey procedures required by the Rules and Regulations.*

*Lloyd's Register reserves the right to cancel or withdraw this Type Approval Certificate in accordance with the Lloyd's Register Type Approval System Procedure.*



KL Zhang  
Senior Specialist  
Type Approval Section  
Shanghai Technical Support Office  
Lloyd's Register Classification Society (China) Co., Ltd.  
Tel.: +86(0)215158 7935  
Email: ke-lin.zhang@lr.org

**Subject: Electrical Equipment(Not Environmentally Tested)**

**Product: Enclosure System (Part 1B)**

Producer/Licence No.	Description of Product				Cert. No.
	Type	Details of Approval	Application	Remarks	
Abtech Limited  199 Newhall Road Lower Don Valley Sheffield S9 2QJ England	Enclosures and Junction boxes for safe and hazardous areas  BPG, SX, and ZAG Ranges of Junction Boxes and Enclosures	Details as indicated in TA certificate	Marine, offshore, and industrial use.  <b>STANDARD</b> Manufacture's technical specification IEC60079-0: 2012, IEC60079- 7: 2007, IEC60079-11: 2012 IEC60079-26: 2007, IEC60079- 31: 2009	Expires: 21 April 2021	16/80028

