



# IECEx Certificate of Conformity

## INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit [www.iecex.com](http://www.iecex.com)

Certificate No.: **IECEx CSA 21.0047X** Page 1 of 3 [Certificate history:](#)

Status: **Current** Issue No: 0

Date of Issue: 2022-02-17

Applicant: **Dialight Corporation**  
1501 Route 34 South  
Farmingdale, NJ 07727  
**United States of America**

Equipment: **SafeSite Bulkhead BH\*\*\*\*\*, BP\*\*\*\*\* AND BZ\*\*\*\*\* series**

Optional accessory:

Type of Protection: **Ex e, m, t**

Marking: Ex eb mb IIC T5/T4 Gb  
Ex tb IIIC 95°C/T130°C Db  
Ex ec IIC T5/T4 Gc  
Ex tc IIIC 95°C/T130°C Dc  
Ta = -20°C to +55°C for T5 and 95°C  
Ta = -40°C to +65°C for T4 and 130°C

Approved for issue on behalf of the IECEx  
Certification Body:

**Dorin Stochitoiu**

Position:

**Technical Oversight Specialist**

Signature:  
(for printed version)

Date:  
(for printed version)

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 [www.iecex.com](http://www.iecex.com) or use of this QR Code.



Certificate issued by:

**CSA Group**  
178 Rexdale Boulevard  
Toronto, Ontario M9W 1R3  
Canada





# IECEX Certificate of Conformity

Certificate No.: **IECEX CSA 21.0047X**

Page 2 of 3

Date of issue: 2022-02-17

Issue No: 0

Manufacturer: **Dialight Corporation**  
1501 Route 34 South  
Farmingdale, NJ 07727  
**United States of America**

Manufacturing locations: **Dialight Corporation Penang Sdn Bhd**  
1666, Lorong Perusahaan Maju 8  
Pulau Pinang 13600 Perai  
**Malaysia**

**DIALIGHT DE MEXICO, S.R.L. DE C.V.**  
(Plant 1) C. Lirios S/N, Col. Carlos Pacheco  
Ensenada Baja California 22830  
**Mexico**

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 equipment 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 60079-0:2017** Explosive atmospheres - Part 0: Equipment - General requirements  
Edition:7.0

**IEC 60079-18:2017** Explosive atmospheres - Part 18: Protection by encapsulation "m"  
Edition:4.1

**IEC 60079-31:2013** Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"  
Edition:2

**IEC 60079-7:2017** Explosive atmospheres - Part 7: Equipment protection by increased safety "e"  
Edition:5.1

This Certificate **does not** indicate compliance with 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:

**CA/CSA/ExTR21.0041/00**

Quality Assessment Report:

**GB/SIR/QAR11.0014/11**



# IECEX Certificate of Conformity

Certificate No.: **IECEX CSA 21.0047X**

Page 3 of 3

Date of issue: 2022-02-17

Issue No: 0

## EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

The BH\*\*\*\*\*, BP\*\*\*\*\* AND BZ\*\*\*\*\* series SafeSite Bulkhead have an aluminium enclosure which consists of an aluminium (top and bottom) housing, and a window (lens cover) which is made of plastic (clear/diffused). The enclosure (top and bottom) is fixed by four M6x1x40 stainless steel socket head type screws. The plastic window (lens cover) is secured within the aluminium enclosure by six M4x10 screws. There are two terminal block located, inside the aluminium enclosure, one on each side of the LED driver. The bottom enclosure housing can have upto four cable entries (two on each side) which are used to install M20 certified cable glands or stopping plugs with suitable IP code.

Refer to Annex for additional information.

## SPECIFIC CONDITIONS OF USE: YES as shown below:

- The equipment shall not be installed in a location where the external conditions are conducive to the build-up of electrostatic charge on such surfaces. In addition, the equipment shall only be cleaned with a damp cloth.
- All cable entry holes shall be fitted with either an IECEx / ATEX certified cable gland or an IECEx / ATEX certified stopping plug that is suitable for the application. The type of cable, glands and stopping plugs shall have temperature ratings of at least 70°C.
- The terminals shall only be fitted with wires that have cross sectional area falling within the following limitations:
  - WAGO 2004-conductor series terminals: single-core, finely stranded and standard: min. 0.5 mm<sup>2</sup> to 6 mm<sup>2</sup>
  - WAGO 862-conductor series terminals: single-core, finely stranded and standard: min. 0.5 mm<sup>2</sup> to 4 mm<sup>2</sup>
- The tighten torque of the screws used to fix enclosure shall be equal to 5.0±0.5Nm.
- The equipment shall be installed such that the supply cable is protected from mechanical damage. The cable shall not be subjected to tension or torque. If the cable is to be terminated within an explosive atmosphere then the free end shall be terminated in a suitably certified termination facility.
- Use only replaceable battery pack 9100BHD000100
- Clean the luminaire regularly to prevent dust accumulation.
- IP64 was followed in accordance with IEC/EN 60079-0, IEC/EN 60079-7 and IEC 60079-31
- Temperature code depends on ambient temperature as follows:

T-code / Max surface temperature	Ambient temperature
T5 and T95°C	-20°C to 55°C
T4 and T130°C	-40°C to 65°C

Note: BH\*\*\*\*\*E, BH\*\*\*\*\*F, BH\*\*\*\*\*G, BP\*\*\*\*\*E, BP\*\*\*\*\*F, BP\*\*\*\*\*G, BZ\*\*\*\*\*E, BZ\*\*\*\*\*F, BZ\*\*\*\*\*G, luminaire can be used in ambient temperature “-20°C to 55°C” only.

## Annex:

[Annex to IECEx CSA 21.0047X Issue 0.pdf](#)



Annex to: IECEx CSA 21.0047X Issue 0

Applicant: Dialight Corporation

Apparatus: SafeSite Bulkhead BH\*\*\*\*\*,  
BP\*\*\*\*\* AND BZ\*\*\*\*\* series

The full description is repeated for clarity.

The BH\*\*\*\*\* , BP\*\*\*\*\* AND BZ\*\*\*\*\* series SafeSite Bulkhead have an aluminum enclosure which consists of an aluminum (top and bottom) housing, and a window (lens cover) which is made of plastic (clear/diffused). The enclosure (top and bottom) is fixed by four M6x1x40 stainless steel socket head type screws. The plastic window (lens cover) is secured within the aluminum enclosure by six M4x10 screws. There are two terminal block located, inside the aluminum enclosure, one on each side of the LED driver. The bottom enclosure housing can have up to four cable entries (two on each side) which are used to install M20 certified cable glands or stopping plugs with suitable IP code.

The third character in the model name distinguish a Zone 1/21 version from a Zone 2/Zone 22 version. See model designation below. The Zone 1/Zone 21 version is identified by third character (A) and Zone 2 /Zone 22 version is identified by third character (B).

Zone 1/21 version and Zone 2/22 version are identical to each other with the following difference:

- a) The light engine, hall sensor PCB and battery pack indicator PCB are all encapsulated for Zone 1/21 version.
- b) For Zone 2/22, light engine is not potted.
- c) Different LED drivers. The driver for Zone 2/22 version is only "ec" hence it cannot be used for Zone 1/21 version. The driver for Zone 1/21 version is "eb" "mb" and can be used for Zone 2/22 version.

For Zone 1/21 version, the light engine, hall sensor PCB, battery indicator PCB complies with "mb" requirements. The terminal block (certified as a component as "eb"), battery pack and connectors complies with "eb". The enclosure complies with "eb" and "tb". The power supply is certified as a component using "eb" "mb".

For Zone 2/22 version, the light engine, hall sensor PCB, battery indicator PCB complies with "ec" requirements. The terminal block (certified as a component as "eb"), battery pack and connectors complies with "eb". The enclosure complies with "eb" and "tb". The power supply is certified as a component using "ec".

The following terminal blocks are installed in the lower enclosure for installation:

Terminal Blocks			
Manufacturer	Type	Certificate No.	Code
WAGO Kontakttechnik GmbH	WAGO 4 conductor device connector type 862-****/999-950	IECEX PTB 05.0003U PTB 03 ATEX 1189U	Ex eb IIC Gb Ex eb I Mb
WAGO Kontakttechnik GmbH	WAGO type PE & Through terminal blocks type TOP JOB S2004-*** and	IECEX PTB 05.0033U PTB 05 ATEX 1095U	Ex eb IIC Gb Ex eb I Mb



Annex to: IECEx CSA 21.0047X Issue 0

Applicant: Dialight Corporation

Apparatus: SafeSite Bulkhead BH\*\*\*\*\*,  
BP\*\*\*\*\* AND BZ\*\*\*\*\* series

Terminal Blocks			
Manufacturer	Type	Certificate No.	Code
	type TOP JOB S 2004-***7 series		

The following certified stopping plug are installed at two side walls of lower enclosure for installation:

Stopping Plug			
Manufacturer	Type	Certificate No.	Code
Hummel AG	type V-Ex, V-MS-*, V-INOX-* (blanking elements)	IECEX BVS 07.0021 DMT 03 ATEX E 049	Ex eb IIC Gb Ex ta IIIC Da

A driver with protection type with either Ex eb and mb or Ex ec is installed inside the lower enclosure housing which has been certified separately as an Ex component, the detail information of certification listed as below:

Driver	Type	Certificate No.	Code
Dialight Corporation	8850***1**8**	IECEX SIR 19.0072U Sira 19ATEX5244U	Ex eb mb IIC Gb
Dialight Corporation	8850*****4**	IECEX SIR 19.0056U Sira 19ATEX4141U	Ex ec IIC Gc

The Ni-MH battery packs are an optional part which are installed inside the aluminum lower enclosure housing. The specification of battery packs is 7.2Vdc/6Ah.

LEDs are encapsulated with the optics part which is made of plastic and the heatsink by potted compound and installed inside the upper housing. There are 114 LEDs (White) or 68 LEDs (Green/Amber) for all models.

The luminaire can be mounted via flush bracket, angle bracket (30°) or an adjustable mounting bracket for different installation angles.

Rating:

Voltage:

100Vac – 277Vac ,50Hz/60Hz;  
230Vac/240Vac 50Hz;  
120Vac 60Hz;  
120Vdc – 250Vdc;

Max. Power:

BH \*\*\*\*\* series: 49W Max.  
BP \*\*\*\*\* series: 49W Max.  
BZ \*\*\*\*\* series: 49W Max.



Annex to: IECEx CSA 21.0047X Issue 0

Applicant: Dialight Corporation

Apparatus: SafeSite Bulkhead BH\*\*\*\*\*,  
BP\*\*\*\*\* AND BZ\*\*\*\*\* series

Ambient temperature:

Type	Ambient Temperature
BH*****E, BH*****F, BH*****G,  BP*****E, BP*****F, BP*****G,  BZ*****E, BZ*****F, BZ*****G,  (with battery pack)	-20°C to 55°C
BH*****N BP*****N BZ*****N  (without battery pack)	-40°C to 65°C

Temperature Class:

Ambient Temperature	T-code
-20°C to 55°C	T5 and T95°C
-40°C to 65°C	T4 and T130°C

Model designation of BH\*\*\*\*\*, BP\*\*\*\*\* AND BZ\*\*\*\*\* are as follows:

Model	Type designation key	Designator & application
BH*****, BP***** AND BZ*****	1st and 2nd character: Product Series	BH: Bulkhead BP: Bulkhead – Polemount (35mm spigot entry) BZ: Bulkhead – Polemount (44mm spigot entry)
	3rd character: Certification	A: ATEX/IECEx Zone 1, 21 B: ATEX/IECEx Zone 2, 22
	4th character: Lens Options	4: Polycarbonate - Clear 5: Polycarbonate – Diffused 6: Polycarbonate - Dome
	5th character: Optics	B: 360 U: Ultra wide (Type I)
	6th character: CCT & CRI	C: Cool White 5000K - 80 CRI N: Neutral White 4000K - 80 CRI W: Warm White 2700K - 80 CRI G: Green A: Amber



Annex to: IECEx CSA 21.0047X Issue 0

Applicant: Dialight Corporation

Apparatus: SafeSite Bulkhead BH\*\*\*\*\*,  
BP\*\*\*\*\* AND BZ\*\*\*\*\* series

Model	Type designation key	Designator & application
	7th character: Operating Voltage	1: 110/120 VAC Battery Backup 2: 100 - 277 VAC/120-250 VDC G: 230/240 VAC Battery Backup
	8th character: Lumen Output Range	3: 2000 – 3000 Lumens 5: 4001 – 5000 Lumens 6: 5001 – 6000 Lumens
	9th character: Controls	N: No Options
	10th character: Mounting Options	F: Flush Bracket N: No Mounting
	11th character: Hardware/Cable Options	N: Standard (1 entry pole mount – M25) N: Standard 2 at one end M20 Entry G: Standard (2+2) at ends M20 Entry
	12th character: Electrical Options	V: Terminal Block – Push Down – 4mm U: Terminal Block – Spring Cage – 6mm
	13th character: Finish	G: Grey Y: Yellow O: Orange W: White
	14th character: Battery Backup	E: 60 min, Integrated (Emergency) F: 90 min, Integrated, (Emergency) G: 180 min, Integrated, (Emergency) N: Standard, No Battery