

WPA Series LED fixture for hazardous areas.



## DC Version Operating Instructions

### Important Information:

These instructions contain important safety information, read and follow them carefully. Dialight will not accept any responsibility for injury, damage or loss which may occur due to incorrect installation, operation or maintenance.



### Safety Instructions:



**The installation, operation and maintenance must be carried out by an electrician suitably trained in hazardous areas and with knowledge of increased safety explosion protection IEC 60079-14**

- **The technical data indicated on the LED fixture are to be observed.**
- **Changes of the design and modifications to the LED fixture are not permitted.**
- **Repairs must only be carried out by a qualified electrician with hazardous area knowledge.**
- **Only genuine Dialight replacement parts must be used when unforeseen repairs are required.**
- **Observe the national safety rules and regulations during installation.**
- **Do not keep these operating instructions inside the LED fixture during operation.**
- **Do not open the LED fixture when energised.**
- **Wait 10 minutes before opening after de-energising the LED fixture.**

### Technical Data

Category of application	Ex d e mb IIC T6 Gb Ex tb IIIC T85°C Db IP66/67 ⊕ II 2GD
IECEx ATEX	IECEx BAS 10.0051X Baseefa10ATEX0092X
Rated Input Voltage:	24-48 VDC
Rated Input Current:	1A at 24V / 0.5A at 48V Typical
Housing Material:	LM6 Copper free Alu.
Storage Temp. Original packaging:	-60°C to +60°C
Dimensions:	See Figure 1
Protection Glass:	Toughened Glass Frosted or Clear
Cable Entries:	M20 M25 3/4" NPT Refer To Part Code
Tightening Torque:	See table
Weight:	4.75kg (10.50 lbs)



Figure 1. Dimensions in mm [inches] (shown with flush mount bracket)

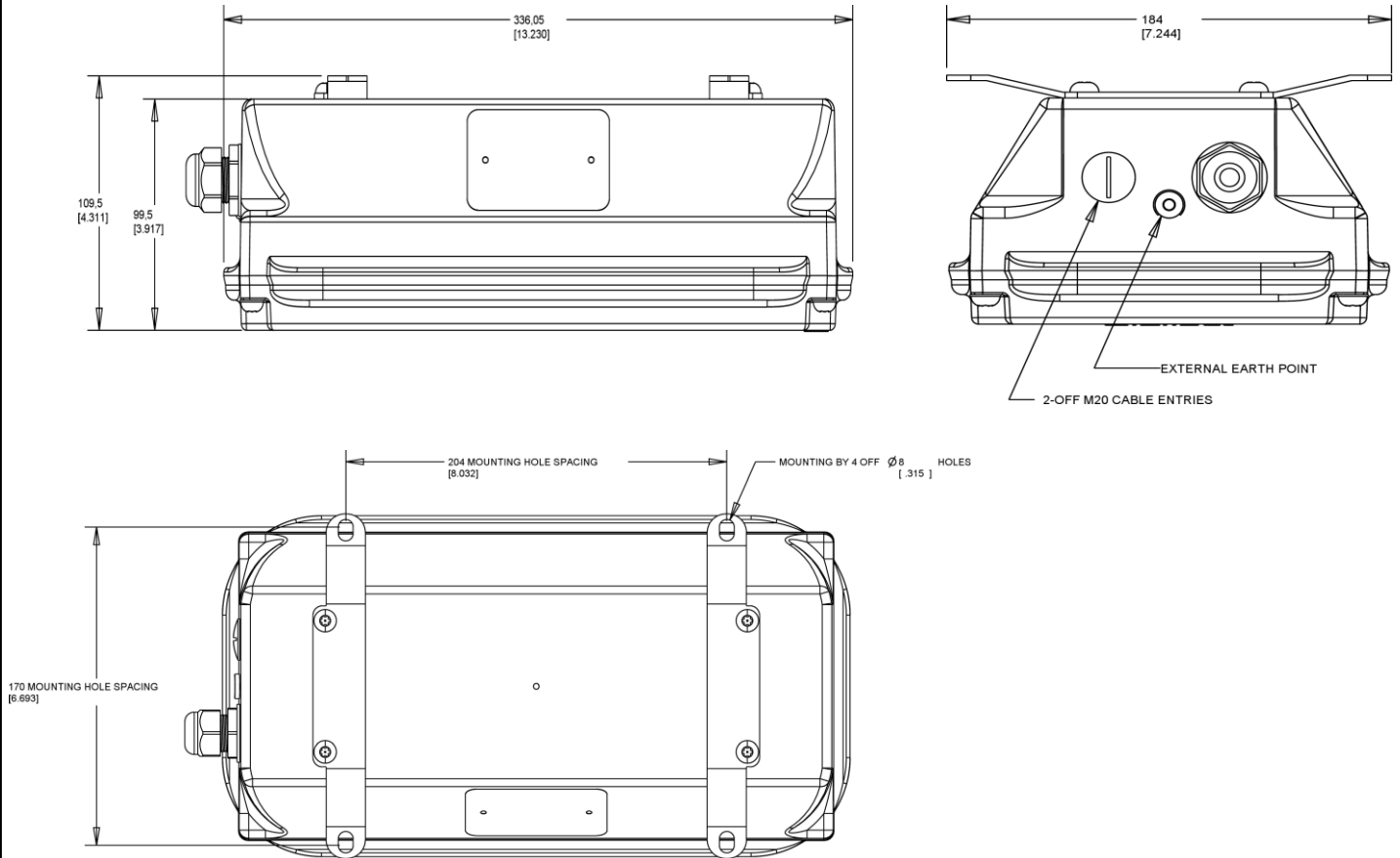
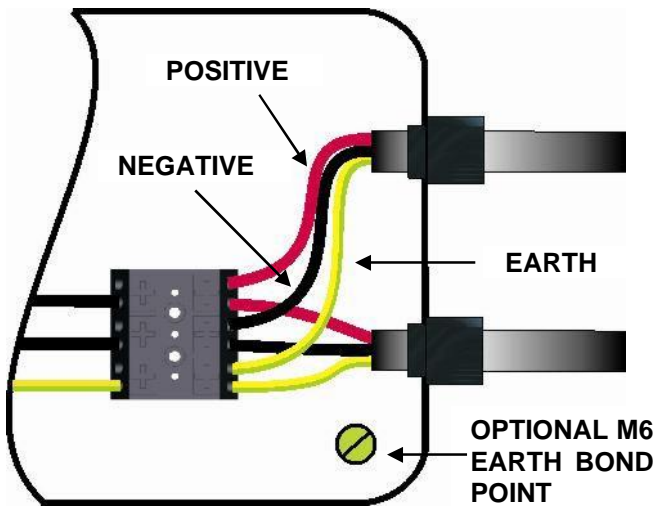


Figure 2. Electrical Connection



Electrical Connection:-

The terminal block is suitable for multi-stranded and single core cables up to a maximum of 4mm<sup>2</sup>, strip length 10mm

The POSITIVE, NEGATIVE and EARTH connections are clearly marked on label.

Single Luminaire Electrical Connections:-

Push down at the 'cross point' insert correct cable and release, ensuring the cable has been securely retained.

Loop Thru Electrical Connections:-

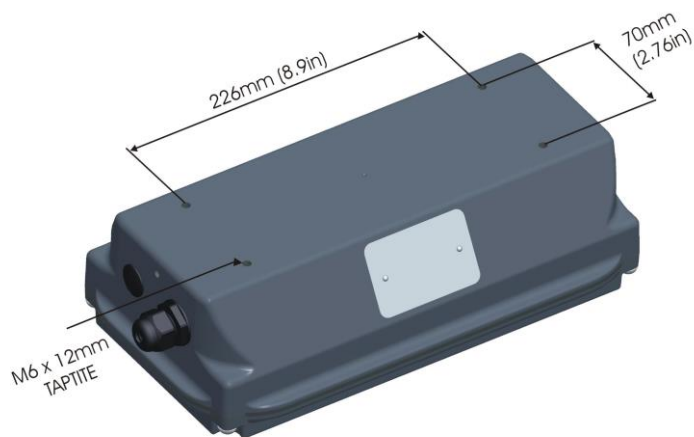
Connect incoming cable as above then connect the outgoing cable to the associated adjoining connection to pass to the next luminaire.

**ONLY SINGLE CABLES TO BE USED ON EACH CONNECTION.**

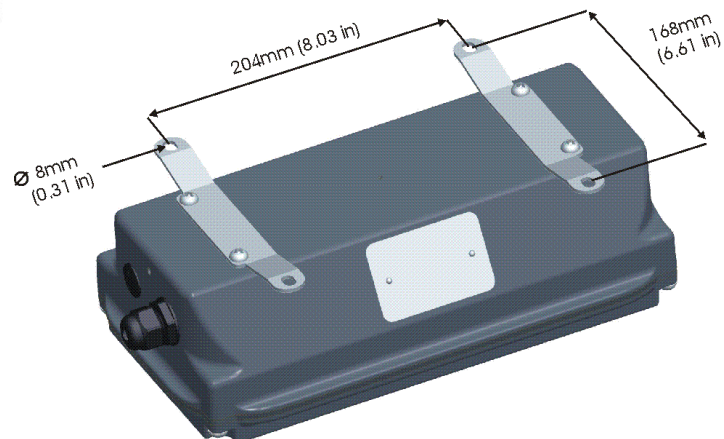


## Luminaire Mounting Options:-

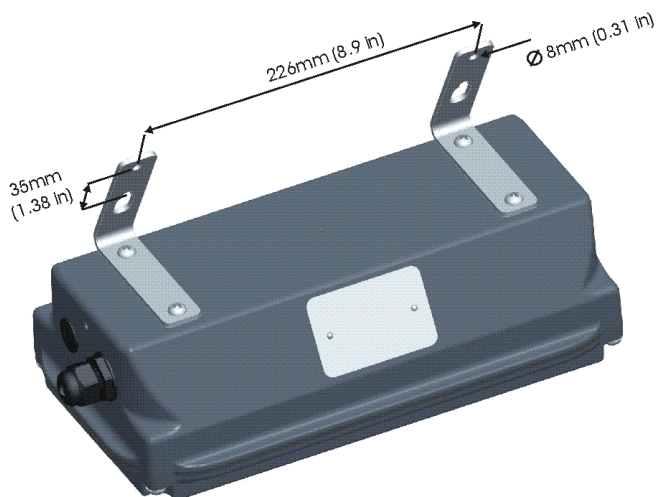
### Option 1: Direct Mounting



### Option 2: Flush Bracket Mounting



### Option 3: 30° Angle Bracket Mounting



Tightening Torques	
Front assembly to main body	3.6Nm / 32.0 in lb
Body mounting	8.0Nm / 71.0 in lb
Certified Blanking Plug	2.0Nm / 18.0 in lb

Note:- All TORX fittings are T30

**WARNING:- DO NOT OVERTIGHTEN AS THIS MAY COMPROMISE THE IP RATING.**

### Contents Supplied with Luminaire:-

- 1 x WP Luminaire
- 4 x TORX M6 x 12mm TAPTITE
- 1 x ATEX Certified Blanking Plug
- 1 x Dust Plug (used for shipping purpose only)

Mounting Bracket (optional)

### Electrical Connection Data:-

Terminal capacity - 0.5 – 4mm<sup>2</sup>  
(solid , stranded or fine stranded)

Optional ferrule or crimp pin maximum cable size  
2.5mm<sup>2</sup>

Cable strip length - 10-11mm



## Conformity with Standards

This equipment conforms to the standards specified in the Declaration of Conformity.

It has been designed, manufactured and tested in accordance with BS EN 9001.

2014/34/EU: Equipment and protective systems intended for use in potentially explosive atmospheres.  
2014/30/EU: EC Directive for electromagnetic compatibility.

## Equipment Application

This lighting equipment is intended for use in a potentially explosive atmosphere in Zones 1 and 2 to the requirements of the ATEX Directive 2014/34/EU. The product can be used inside or outside to illuminate areas with potentially explosive atmosphere.

## Installation

Ensure that the mains voltage supply is disconnected before connecting the luminaire. Install the equipment in accordance with the manufacturers instructions as well as any other applicable electric codes.

Always transport and store the equipment in its original packaging and keep in a dry location.

When unpacking check for any cracks or damage in the housing, glass and gasket seal, if in doubt do not install!

*The improper installation, operation and maintenance of these luminaires may result in the invalidation of the guarantee.*

## Mounting Luminaire

There are 3 mounting options for this luminaire, depending which mounting accessories were supplied on purchase (See Luminaire Mounting Options).

### Option 1. Direct Mounting

For directly mounting the luminaire to a cable tray or similar no brackets are supplied and the fixture can be secured directly using the 4 TORX screws supplied, refer to table for tightening torques. Rear access required.

### Option 2. Ceiling or Flat Wall Mounting

Assemble the mounting brackets to the luminaire with the 4 TORX screws supplied, refer to table for tightening torques.

Use the dimensions in Option 2 to locate the luminaire into the desired position. Maximum screw/bolt size 8mm (not supplied).

### Option 3. 30° Angled Bracket

Assemble the 30° angled mounting bracket to the luminaire with the 4 TORX screws provided, refer to table for tightening torques.

Use the dimensions in Option 3 to locate lighting equipment into the desired position. Maximum screw/bolt size 8mm (not supplied).

### Opening the Luminaire



**ATTENTION:**

***Always disconnect from the power supply before opening the luminaire.***

***Wait 10 minutes after disconnection before opening.***

Unscrew the 4 front TORX bolts to gain access to the wiring tray. The front of the fixture with LED tray can now be lowered and supported by the drop cable.

***Do not allow sudden or excessive forces to be applied to the drop cable as this could damage the LED tray.***

### Cable Entries and Cables



**IMPORTANT:**

***The cable glands used with this fixture must be certified to the Ex e requirements.***

***The cable used must be suitable for the site application and/or the site requirements.***

When assembling the cable entries for the mains connection, always observe the manufacturer's specifications for the glands used.

Unused cable entries must be closed and sealed by a certified blanking plug.

***Note:- This fixture is supplied with one dust cap and one certified blanking plug.***

The cable entries should be securely tightened to ensure that the minimum protection rating is achieved. The cable entry should be rated to minimum of IP66 to maintain the protection level of the fixture.

***Do not over tighten as the protection rating may be compromised.***

***Always refer to gland manufacturers data for torque settings.***



## Cable Entries and Cables Continued

### Special Conditions for Safe Use

Suitably certified cable entries must be used which include a sealing washer to maintain the IP66/67 rating of the enclosure.

The supply to the luminaire must include a fuse which is capable of interrupting a 1500A short circuit current.

The glands must be suitable for use within an operating temperature range of -40°C to +80°C.

The gland is required for increased safety protection, the entry thread shall be suitable sealed (in accordance with IEC 60079-14) to maintain the ingress protection rating of the fixture.

When used with steel basket weave armour or braided (screened) cable the basket weave armour or braid is unable to carry the cable load without fracture therefore the cable must be clamped and cleated to prevent pulling on the cable being transmitted to the cable terminations.

### Electrical Connection

See Figure 2. Electrical Connection

When connecting the conductors extra care should be taken in order to maintain the hazardous protection. The insulation of the conductors shall reach up to the terminal block. The conductor itself shall not be damaged. The connectible minimum and maximum conductor cross sections shall be observed (see electrical connection data).

### Closing the LED Luminaire

#### **Remove any foreign bodies from the fixture**

Pay attention when fitting the LED tray to the enclosure, make sure the seals are clean and undamaged. Do not allow any cables to become trapped between the LED tray and the enclosure. Tighten all 4 TORX screws evenly (see table)

### Taking into operation

Prior to operating, check the luminaire for its correct installation in compliance with these operating instructions and other applicable regulations.

**Attention: Only fully certified equipment may be put into operation.**

Improper installation and operation of this luminaire may invalidate the warranty.

## Maintenance



### WARNING:

***Disconnect the power supply to the luminaire before maintenance or repair.***

***Wait at least 10 minutes before opening the LED luminaire after de-energising.***

This LED luminaire should not require any regular repair or maintenance. If any unforeseen repairs are required then always observe explosion protection regulations and requirements.

### Inspection

Within the scope of the maintenance or inspection routine the following should be included.

Protective hoses covering the connecting cables.

Cable entries must be free from corrosion.

### Repairs / Overhaul / Modification

***The relevant national regulations which apply to the maintenance/servicing of electrical apparatus in explosive atmospheres shall be observed.***

Any unforeseen repairs or overhaul may only be carried out with genuine Dialight spare parts.

***Should the luminaire enclosure be damaged, only a replacement will be permitted. In case of doubt, the equipment should be returned to Dialight for inspection/repair.***

***Modifications to the device or changes of its design are not permitted.***

This equipment must be operated according to the intended purpose in a perfect and undamaged condition.

### Disposal/Recycling

When the apparatus is disposed of, the respective national regulations on waste disposal should be observed.

### Ordering Spare Parts

Should any unforeseen spares be required then please contact Dialight for availability.



### **Chemical Compatibility Guide**

The chemical compatibility data referenced in this manual was supplied by the raw material manufacturers and is intended as a general guide. The data represents the basic material properties and does not necessarily represent the performance of the final product due to manufacturing process and design variations for each final product. Chemical compatibility is highly dependent on concentration, temperature, humidity, and other environmental conditions and therefore the customer assumes responsibility for evaluation of gaseous or direct contact chemical compatibility at their site prior to product installation.

[www.dialight.com/pubs/MDTFCHEMRFLX001.pdf](http://www.dialight.com/pubs/MDTFCHEMRFLX001.pdf)

### **Official Statement**

All statements, technical information, and recommendations contained herein are based on information and tests that Dialight believes to be reliable. The accuracy or completeness thereof is not guaranteed. In accordance with Dialight "Terms and Conditions of Sale" and since conditions of use are outside our control, the purchaser should determine the suitability of the product for his or her intended use and assumes all risk and liability whatsoever in connection therewith.





## EU DECLARATION OF CONFORMITY

**Manufacturer:** Dialight Corporation  
1501 Route 34 South, Farmingdale, New Jersey, 07727  
1 (732) 919 3119

**Equipment:** Bulkhead LED Luminaire

**Model Series:** WPA Series, WEA Series LED Luminaire

**Directives:** Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres  
Directive 2014/34/EC  
Electromagnetic Compatibility Directive 2014/30/EC

**Standards:**

Radio Disturbance	EN 55015:2013+A1:2015
EMC - Immunity	EN 61547:2009 (includes):
EMC - Electromagnetic compatibility	EN 61000-4-2:2009
	EN 61000-4-3: 2006
	EN 61000-4-4: 2004
	EN 61000-4-5: 2006
	EN 61000-4-6: 2006
	EN 61000-4-11: 2004
	EN 60079-0:2009
Explosive Atmospheres - General Requirements	
Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"	EN 60079-1:2007
Explosive Atmospheres - Part 7 : Increased Safety "e"	EN 60079-7:2007
Explosive Atmospheres - Part 18 : Encapsulation "m"	IEC 60079-18:2009
Explosive Atmospheres - Part 31: Dust Ignition Protection "t"	IEC 60079-31:2008

**Equipment Marking** is based on type examination via Baseefa, File 10ATEX0092X / IECEx BAS 10.0051X

Ex d e mb IIC T6 Gb  
Ex tb IIIC T85°C Db IP66/67  
Ta = -40°C to +50°C

**Quality Assurance Notification:** Baseefa file (5801)

**Quality Management System Accreditation to ISO 9001:** BSI file FM518958

We declare that our products to which this declaration relates are in conformity with the listed directives per the provisions of the aforementioned standards.

X  Date: 18 - JAN - 2017

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