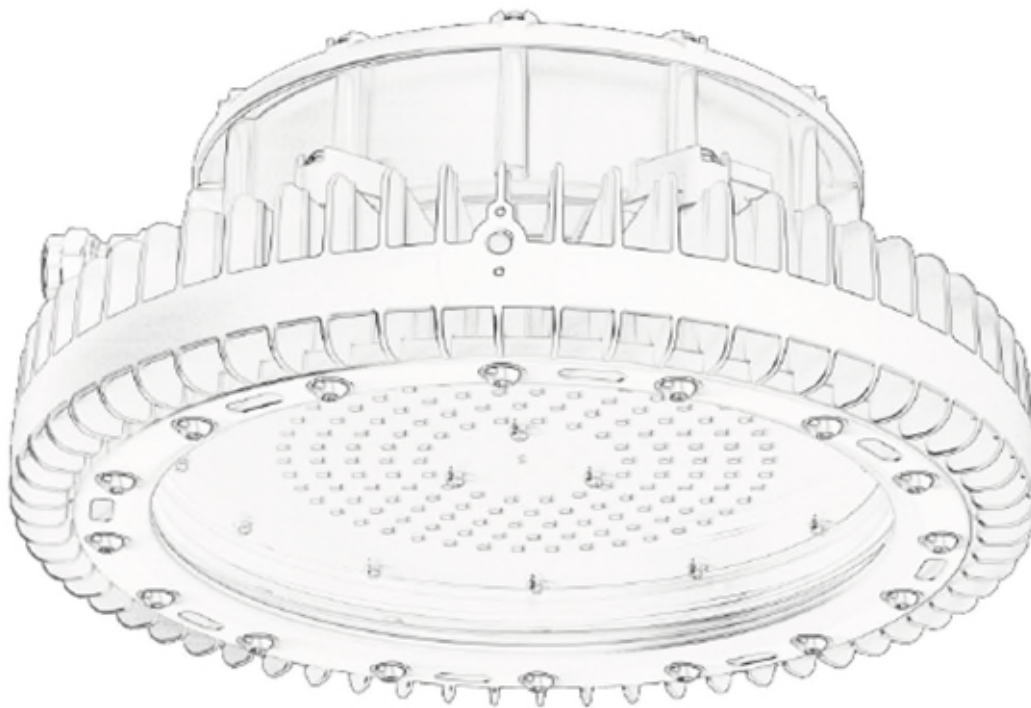


FlutLED Ex 150W

Manual



VERSION	MODIFICATIONS
1.0	First edition
2.0	Edited

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1 General information

1.1 Marking concept for hazards and hints

Hazard

Hazardous situation which will cause serious injury or even death if it is not prevented.

Caution

Hazardous situation which could cause slight to moderate injury if it is not prevented.

Hint

Indicates information which does not concern personal injury, e. g. hints in respect of material damage.

Protective measures

Increase safety by applying a protective measure.

1.2 Responsibilities of the operator

- Make sure that this document is always kept in a safe place in a legible form together with the product.
- Read these instructions carefully before first start-up of the product.
- This product has been developed and produced exclusively for the use indicated in these documents. Every other use, which is not mentioned explicitly, could affect the intactness of the product and/or could constitute a source of danger.
- The manufacturer rejects any liability for damage which has been caused by incorrect or non-intended use of the product.
- In countries, which do not belong to the European Community, the national legal reference regulations as well as the standards and regulations applicable in these countries have to be observed for warranty of a corresponding safety level.
- The installation has to be carried out according to the applicable regulations.
- The manufacturer assumes no liability for inexperienced execution of installation as well as deformations which may occur during operation.
- The electric power supply has to be switched off before executing any action on the installation.
- Exclusively original parts of the manufacturer shall be used for maintenance. Maintenance work may be carried out by qualified staff only.
- All procedures which are not explicitly mentioned by the manufacturer in the instructions are not permitted.
- The packing material must not be stored within the reach of children as it could be a potential source of danger.

2 Introduction

To ensure proper installation, the following steps and notes must be complied with under all circumstances. Only this way can it be ensured that the product will work to complete satisfaction.

Hint

Read all instructions before starting installation. Our sales department will be happy to answer any questions you may have.

This user manual covers the FlutLED Ex 150W. These luminaires are constructed with corrosion resistant epoxy coated die casting aluminum alloy body and high impact resistance tempered glass diffuser.

2.1 Cleaning of luminaire

The complete luminaire (without disassemble) can be cleaned with neutral water solution. After cleaning, rinse or wipe dry with clean water.

It is forbidden to use any chemical or hydrocarbon solvent cleaner to clean the diffuser, otherwise serious damage may be caused.

Please clean the luminaire once a year if it is used under dust environment.

2.2 Disposal of Material

General

Disposal of the luminaire as waste should be carried out in accordance with national regulations. Any disposal must satisfy the requirements of the WEEE directive [2012/19/EU] and therefore must not be treated as commercial waste. The unit is mainly made from incombustible materials. The control gear contains plastic, resin and electronic components. All electrical components may give off noxious fumes if incinerated.

2.2.1 Battery Disposal

Ni-Cd batteries are defined as 'controlled waste' under the hazardous waste regulations and the person disposing needs to observe a 'duty of care'. They must be stored and transported safely and any necessary pollution control forms completed prior to transportation. Take care to fully discharge batteries before transporting, or otherwise ensure that there can be no release of stored energy in transit. For further details refer to our technical department.



To comply with the Waste Electrical and Electronic Equipment directive 2012/19/EU the apparatus cannot be classified as commercial waste and as such must be disposed of or recycled in such a manner as to reduce the environmental impact.

2.3 Transportation

Weatherproof measures should be taken during transportation.

It is strictly forbidden to load and unload violently, and it is strictly forbidden to drop and roll from high altitude, so as to prevent mechanical damage.

2.4 Storage

The luminaire should be stored in ventilated, non-dropping and non-liquid warehouse at the temperature of -20°C to +40°C and °C relative humidity ≤95%RH.


The surroundings should be kept from corrosive gases which may damage metal and insulation.

The battery should be fully charged and discharged at least once every 6 months.

3 Technical data

Type of Protection: Ex db , Ex tb
 Protection Standards: (IEC)EN 60079-0, (IEC)EN 60079-1, (IEC)EN 60079-7, (IEC)EN 60079-18, (IEC)EN 60079-31, EN 55015, EN 61547, EN 61000-3-2, EN 61000-3-3, EN 60598-1, EN 60598-2-5, EN 62031, EN 62493, IEC 62321-4, IEC 62321-5, IEC 62321-6, IEC 62321-7-1, IEC 62321-7-2, IEC 62321-8
 Area Classification : Zone 1 and Zone 2 Areas to (IEC)EN 60079-10-1, Zone 21 and Zone 22 Areas to (IEC)EN 60079-10-2
 Installation : (IEC)EN 60079-14
 Certificate : TÜV 20 ATEX 8608 X, IECEx TUR 20. 0068X
 Equipment Coding : II 2 G Ex db IIC T4/T5 Gb
 II 2 D Ex tb IIIC T115°C/105°C/T95°C Db IP66

Temperature Class :	Rated power (W)	-20°C ≤ Ta ≤ +55°C with Battery		-40°C ≤ Ta ≤ +55°C	
		Gas	Dust	Gas	Dust
	150W	T5	T95°C	T5	T95°C

ATEX Coding:  II 2 G / II 2 D
 Ingress Protection: IP66 (IEC)EN 60529
 CE Mark: The CE marking of this product applies to EU directives 2014/35/EU, 2014/30/EU, 2012/19/EU and 2014/34/EU respectively.
 The Equipment is declared to meet the provisions of the ATEX directive (2014/34/EU) by reason of the EC Type Examination and compliance with the Essential Health and Safety Requirements

3.1 Electrical Supplies

Large size: Ø330*197mm	
Voltage Range(AC)	100~277VAC (Standard) 347~480VAC/20~30VDC
Frequency Range(Hz)	50/60Hz
Power Watts(W)	150W
Standard Current Range(A)	0.54~1.5

3.2 Emergency parameters

Voltage Range (AC): 200~240VAC
 Battery: 9.6V 4Ah, Ni-MH
 Emergency Duration: ≥180minute
 Emergency power: 10W
 Charge time: ≥24hours
 Power Factor: ≥0.95

4 General

- These instructions should be read fully and carefully before attempting to install the luminaire. For details of servicing operations, opening etc. see section 7&8.
- Copies of these instructions should be held in a safe place for future reference. It is the responsibility of the installer to ensure that the apparatus selected is fit for its intended purpose and that the installation, operation and maintenance of the apparatus complies with applicable regulations, standards or codes of practice. Installation should be carried out in accordance with (IEC)EN60079-14 or with a local hazardous area code of practice, whichever is appropriate.
- Risk of electrostatic discharge:
 - a. Avoid mounting near fast moving streams of air
- Any specific installation instructions must be referred to the luminaire should be considered Class I to EN 60598 and effectively earthed. Certification details on the nameplate must be verified against the application requirements before installation.
- The information in this leaflet is correct at the time of publication. The company reserves the right to make specifications changes as required without notice. The luminaires are shipped with the battery pack disconnected, connection must be made on the initial insulation.
- Use in Combustible Dust Atmospheres.
 - a. De-rating of the surface temperature will be required where dust clouds may be present
 - b. Do not allow dust to accumulate in layers
 - c. Dust in layers has the potential to form ignitable clouds and to burn at lower temperatures
- Refer to EN(IEC)60079-10-1, EN(IEC)60079-10-2&EN(IEC)60079-14 for additional details of selection and installation.

4.1 Tools

4 mm and 5 mm flat blade screwdriver, large cross head screwdriver and inner hexagon counter wrench, suitable spanners for installing cable gland, pliers, knife, wire stripper and cutter.

4.2 Mounting

Luminaire should be installed where access for maintenance is practical and in accordance with lighting design information. Refer to the note in 4. concerning electrostatic charge.

See 7. installation diagram for installation mode and method.

4.3 Cabling and cable gland

The temperature conditions at the supply cable entry point are such that 70°C (ordinary PVC) cable can be used.

Equipment certified cable gland and sealing plugs must have suitable IECEX / ATEX approval. When installed the cable gland or sealing plug should maintain the IP rating of the enclosure IP66.

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4.4 Electrical connections and testing

- If any operation is to be done on any luminaire already connected to the electrical system, the luminaire must be isolated from the system.
- To access the mains terminals, loosen the fixing screws, remove the power cover.
- The cable connection method is detailed in 7.7 The maximum amount of insulation allowed beyond the throat of the terminal is 4mm².
- The normal method of insulation testing is to connect Live and neutral together and test between this point. However, if this is not possible luminaire can be tested with an insulation tester that complies with IEC 364 with a maximum output current of 1mA and output voltage of 500V dc. (Units damaged by incorrect insulation testing can be detected). Before completing the wiring, ensure that all the connections are correctly introduced into place before reassembling the luminaire.

5 Safety instruction

Read this leaflet carefully before commencing to install the luminaire unit and retain it for future use. Installation can only be carried out by suitably qualified personnel.

Check the certification to ensure that the Zone, mains supply, ambient temperature present and "T" rating are suitable for the environment the unit is being installed in.

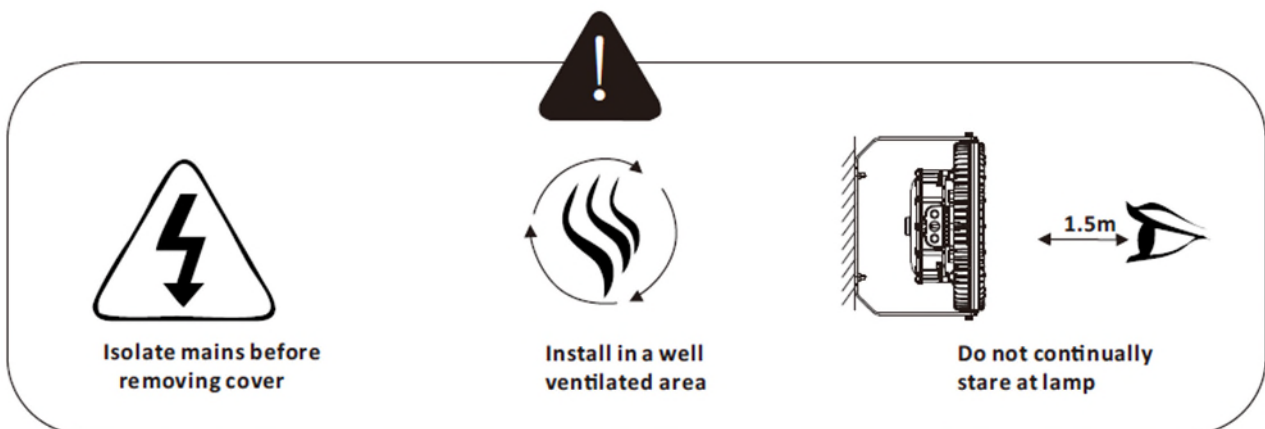
Check Product Important Information in this user manual to ascertain type of threaded cable entry on the luminaire. Select suitably certified ATEX/IECEX cable glands and stopper plugs with a minimum of 5 full thread engagement and be of a medium/fine tolerance to ISO965-1 and ISO965-3. The cable entry devices selected must maintain the IP rating of the luminaire.

The incoming mains cable should not exceed a temperature rise of 20°C above the ambient conditions; select suitable cable.

To ensure the safety of the equipment, ensure that the 'flame-path' on Zone 1 variants are free from any corrosion. No repairs are possible to flameproof joints if in doubt please consult the manufacturer.

External fasteners must have a yield strength of at least 450N/mm²

On Zone 1 variants the LED assembly contains no user service able parts, the luminaire must not be operated without all the individual LED covers in position, the IP66 rating must be maintained.



6 Emergency Operation

6.1 General description of operation

Connect the lead wire of B in the terminal box and then connect to AC power supply to start emergency function.

Luminaire faults are shown by a flashing red LED.

Charging is indicated by flashing green LED.

The luminaire will go seamlessly into emergency mode at not less than 60% rated supply voltage and will remain in mains mode above 85% of rated supply voltage.

The charging function is monitored continuously, there is a check for over charging and no charging. In case of a control gear error, red LED flashes. Batteries will be fully charged within 24hrs. After a complete battery discharge, the unit will switch over to a low discharge current mode.

6.2 Emergency indicator status

The green LED will flash slowly, if the batteries are being charged.

The green LED will be steady at full charge.

The red LED will flash quickly if there is a fault or a warning.

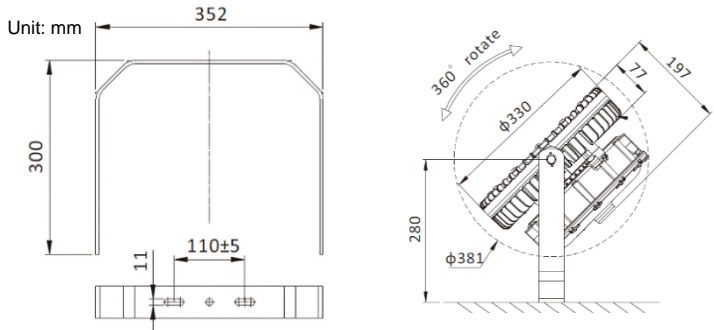
The green LED will be off during emergency mode.

The red LED and green LED will flash alternately if the battery voltage is less than 8.5V.

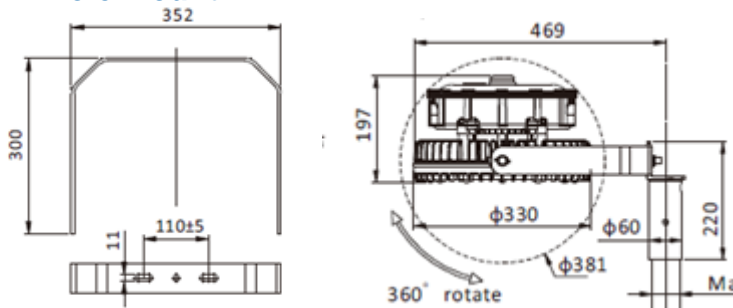
7 Installation method

Based on the use of the scene and actual requirements, we have designed the following installation methods for customers to choose from:

7.1 Stanchion Mount

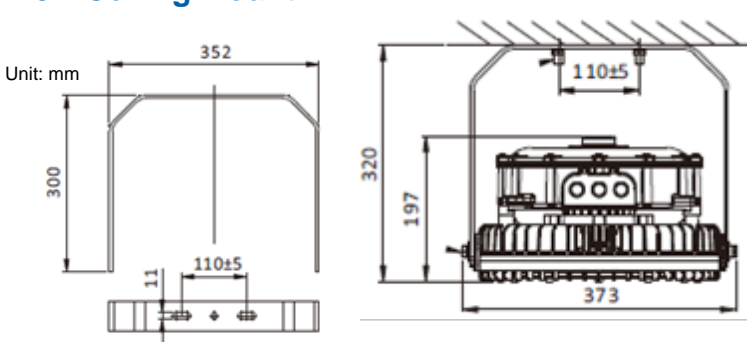


7.2 Pole Mount

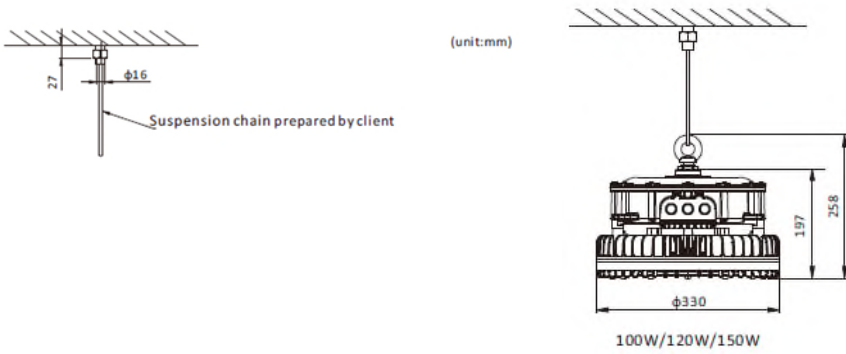


lamp pole prepared by the customer

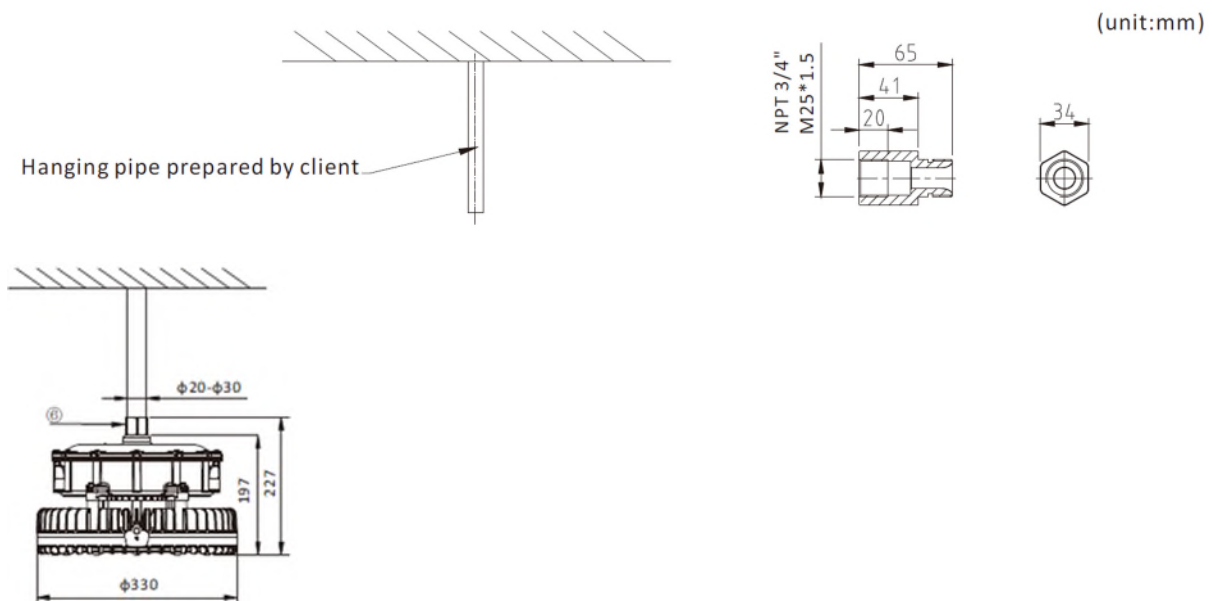
7.3 Ceiling Mount



7.4 Pendant Mount



7.5 Pipe Mount



Hint

External grounding cable cross-sectional area is not less than 4mm².

Entries into enclosures torque of locking cable introduction device 35 N. M-40 N. M.

Select the cable glands or plug that meets the requirements in the IEC60079-0 and IEC60079-1 and the relevant requirements in the IEC60079-14.

If using cable gland and stopping plug of KHJ, please refer to below table for cable spec (including but not limited to):

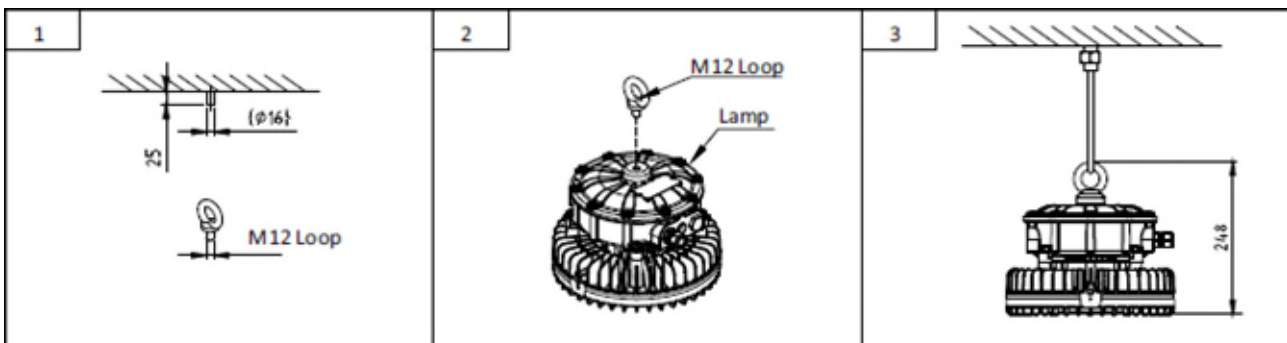
Type Outer diameter(mm)	Outer diameter(mm)	Inner diameter(mm)
M20 Armoured cable gland	12.5-20.9	6.5-13.9
M25 or 3/4 NPT Armoured cable gland	14-22	11.1-19.9
M20 Non-Armoured cable gland	6.1-13.2	/
M25 or 3/4 NPT Non-Armoured cable gland	12.5-20.5	/

If you need to use other cables or different threads in actual installation, please contact the local dealer or our sales specialist.

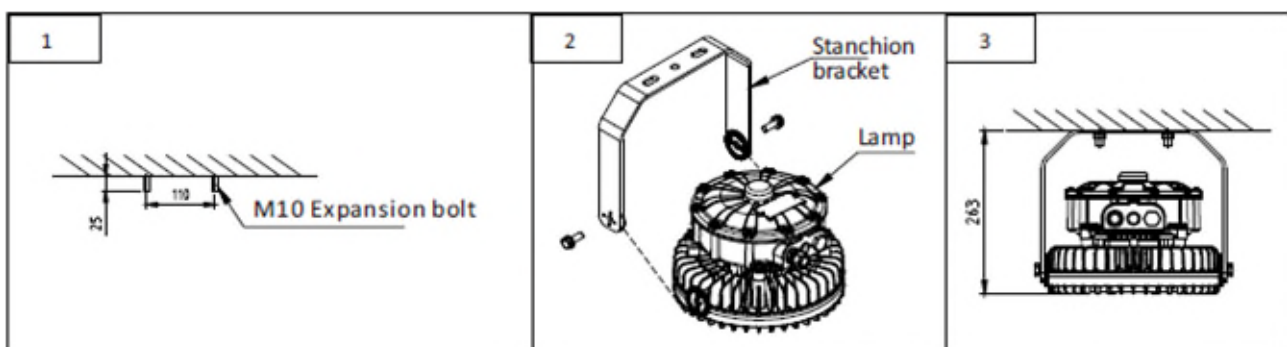
7.6 Installation decomposition

It is the responsibility of the installer to ensure that the apparatus selected is fit for its intended purpose and that the installation, operation and maintenance of the apparatus complies with applicable regulations, standards or codes of practice. Installation should be carried out in accordance with (IEC) EN 60079-14 or with local hazardous area code of practice, whichever is appropriate. Please refer to the following installation drawing for different installation methods.

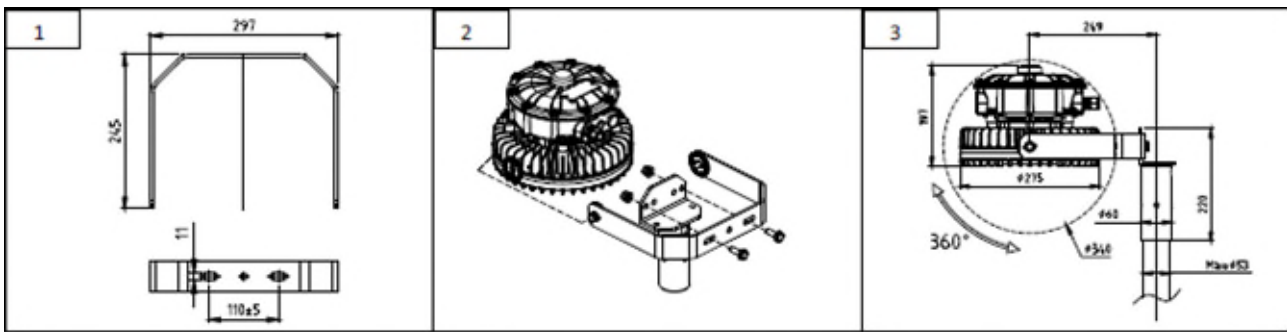
7.6.1 Pendant mount



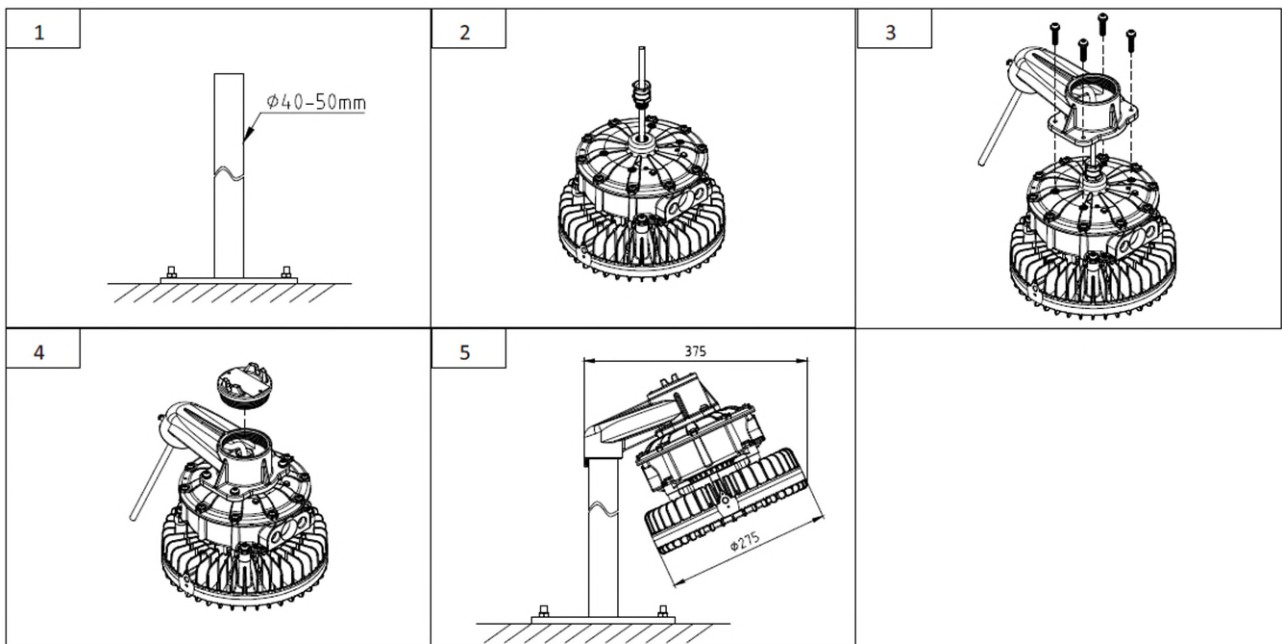
7.6.2 Ceiling mount



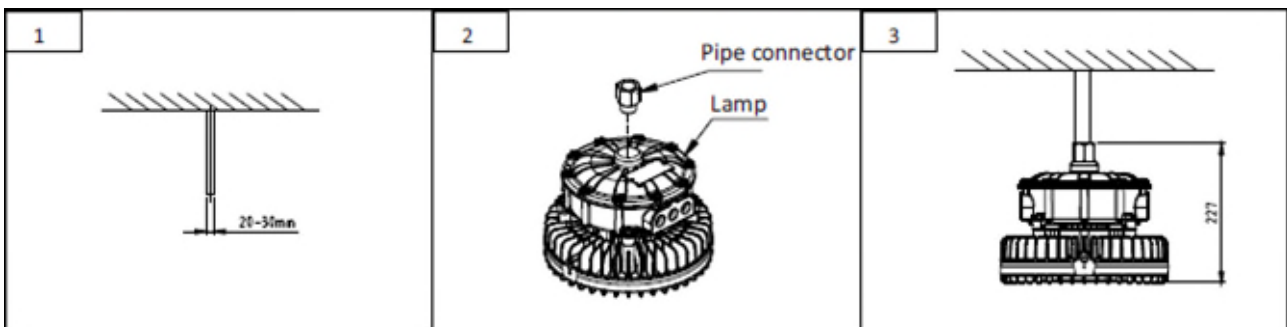
7.6.3 Pole mount



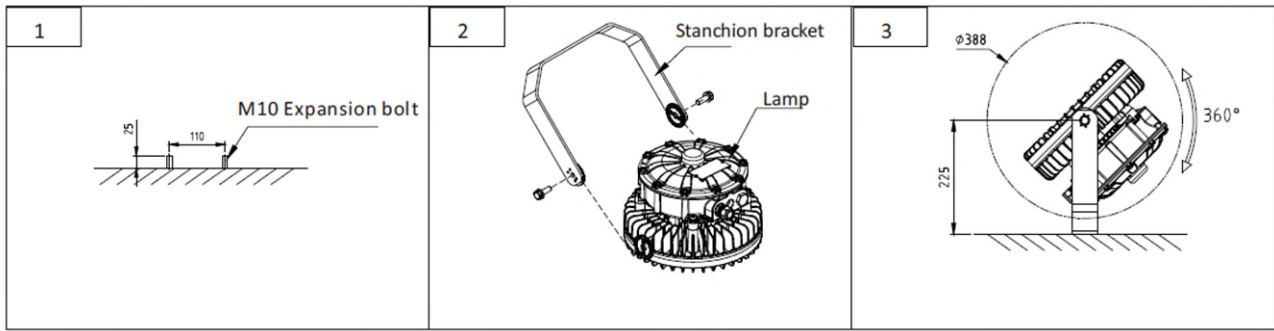
7.6.4 Pole mount (25°)



7.6.5 Pipe mount



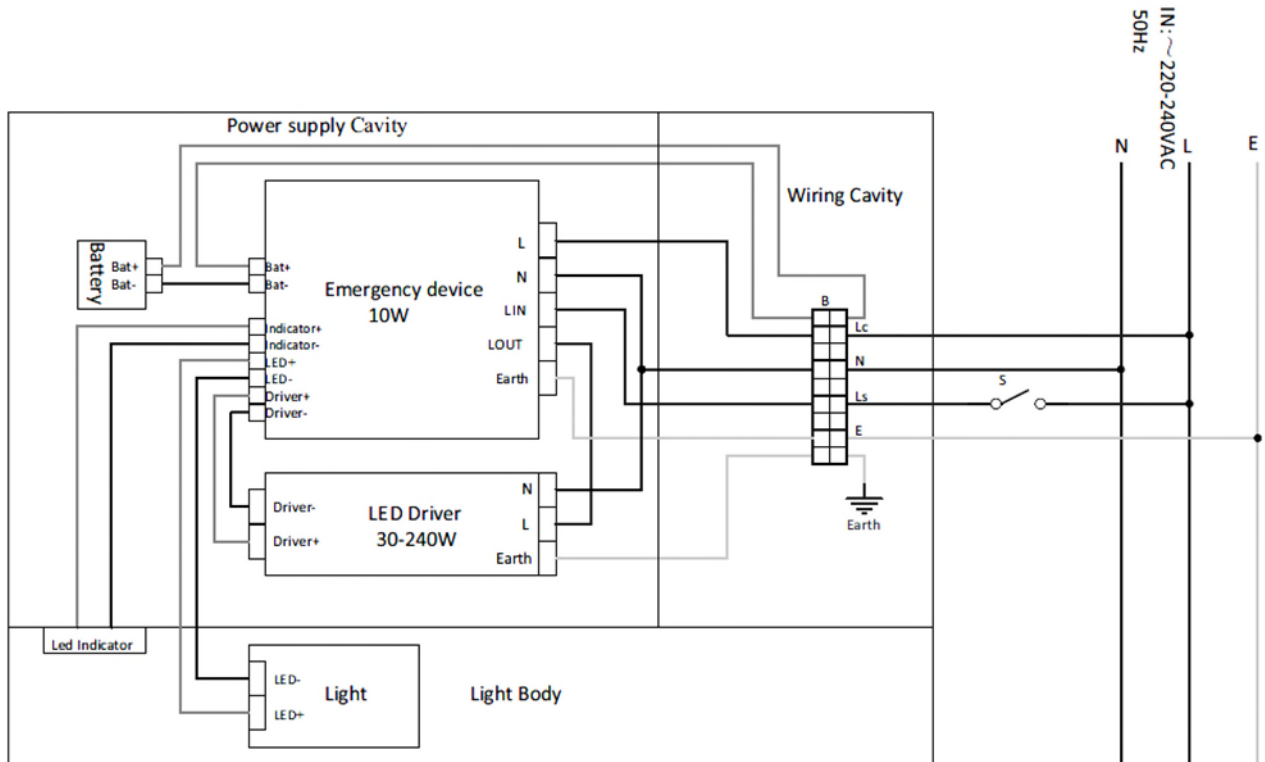
7.6.6 Stanchion mount / Wall mount



7.7 Electrical Principles and Connections

In addition to referring to the relevant contents of this manual, the certified personnel who have obtained the corresponding certificate according to IEC60079-14 shall strictly comply with the requirements of IEC60079-14 when installing luminaire. When installed, ensure that the luminaire is effectively grounded (internal or external).

7.7.1 Electrical Principles (Emergency type)

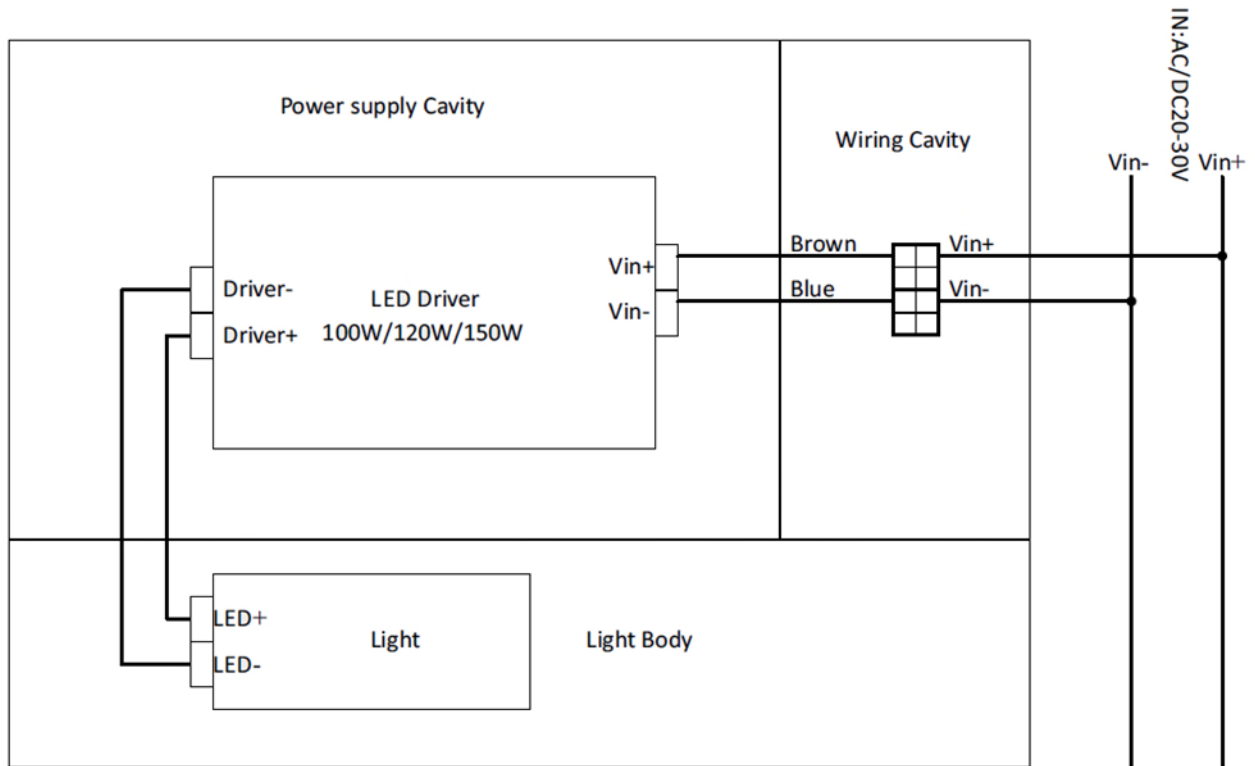


Hint

In order to protect battery, the "B" was turned off after finished production. Turn on "B" during installation, start the emergency function.

B	Lc, N	S	LED Light
ON	ON	ON	ON
ON	ON	OFF	OFF
ON	OFF	ON/OFF	ON (Back up by battery)

7.7.2 Electrical Principles (Non Emergency type)



7.8 Cascade

MCB Type	Rating	150W
B	16A	4
C	16A	8
According to MCB data sheet, the qty of luminaires in one parallel connection is calculated at 230VDC		

8 Repairs Maintenance

Visual tests and checks should be carried out at intervals described by the appropriate regulations, EN 60079-17, and should include the following (including but not limited to).

- Check for mechanical damage/corrosion.
- Check connections, fixings, glands and plugs.
- Check for undue accumulations of dust, dirt or moisture.
- Check for unauthorized modifications.

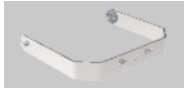


Periodic inspection of the enclosure seal should be checked out to ensure that the seal is sound. If the luminaire has been subject to abnormal conditions, for example, severe mechanical impact or chemical spillage, it must be de-energised until it has been inspected by an authorized and competent person.

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9 Warning

- The end user shall use more than a 4mm² wire for external earthing purpose
- End user shall use certified cable glands with suitable type of protection for installation purpose
- Minimum IP66 for chosen cable glands
- Clearances and creepage distances should be considered when installing the power cables
- The specification and installation of power cables must be in accordance with user manual. The power cable shall be fixed as close as possible to the enclosure of the lamp after installation
- Use only replaceable battery pack of HRH26/51(C) 4000TX8 9.6V
- Clean the luminaire regularly to prevent dust accumulation
- All maintaining and repairing must be carried out by the qualified staff recognized by the manufacturer
- POTENTIAL ELECTROSTATIC CHARGING HAZARD

10 Optional Parts

No.	Installation Accessories	Part No.	Picture	Weight (Kg)	QTY	Remarks
1	Stanchion Bracket	230131		1.5	1	Ceiling Mount Stanchion Mount Wall Mount (100W/120W/150W)
2	Loop	230132		0.26	1	Pendant Mount
3	Pole Mount Bracket	230133		3.76	1	Pole Mount (100W/120W/150W)

11 Declaration of conformity

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EU-KONFORMITÄTSERKLÄRUNG / EU-DECLARATION OF CONFORMITY / DECLARATION UE DE CONFORMITE

Wir / We / Nous: **GIFAS-ELECTRIC GmbH, 9424 Rheineck**

erklären in alleiniger Verantwortung, dass das nachfolgend aufgeführte Produkt aufgrund seiner Bestückung und Bauart in der von uns in Verkehr gebrachten Ausführung den einschlägigen Sicherheits- und Gesundheitsanforderungen der EU-Richtlinie entspricht. Bei einer nicht mit uns abgestimmten Änderung des Produkts verliert diese Erklärung ihre Gültigkeit.

declare under our sole responsibility that the product about the equipment and construction as we put the execution into circulation of the appropriate security and health requested, correspond with the European guideline. Any change on the product without our agreement has the consequence, that the declaration will lose its validity.

déclarons sous notre seule responsabilité que le produit sousmentionné correspond aux exigences de sécurité et de santé des lignes d'application CE, en raison de son équipement et son genre de construction. Cette déclaration perd sa validité lors de modification du produit sans notre accord.

Produkt:	LED Flächenstrahler	
Product:	Explosion-proof LED floodlight	
Produit:	Projecteur LED Ex	
Typ / Type / Type:	FlutLED Ex 150W	
EU-Richtlinien:	ATEX Herstellerrichtlinie 2014/34/EU EMV Richtlinie 2014/30/EU	
EC-Guidelines:	ATEX Directive 2014/34/EU EMC Guideline 2014/30/EU	
Directives de la CE:	Directive ATEX 2014/34/UE Directive CEM 2014/30/UE	
Angewandte Normen/ Applied standards/ Normes:	EN 60079-0:2018 EN 60079-1:2014 EN 60079-31:2014 EN 61547:2009 EN 55015:2013/A1:2015 EN 62493 :2015	EN 61000-3-2:2014 EN 61000-3-3 :2013/A1:2019 EN 60598-1:2015/A1:2018 EN 60598-2-5:2015 EN 62031 :2008/A1 :2013/A2:2015

Zertifizierungsstelle: TÜV Rheinland Industrie Service GmbH, D-51105 Köln
 EG-Baumusterprüfbescheinigungsnummer: TÜV 20 ATEX 8608 X
 Überwachende Stelle: DAkkS Deutsche Akkreditierungsstelle

9424 Rheineck, 15.02.2022

GIFAS-ELECTRIC GmbH



Y. Rödiger, Geschäftsführer
 Y. Rödiger, Managing Director
 Y. Rödiger, Président-directeur général

12 Service

12.1 Service addresses

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12.2 Imprint

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