



## LFX Floodlight & LHX Highbay Features

- ATEX and IECEx approved for Zone 1 and 21 explosive gas and dust atmospheres
- Quick and easy to install, with fast fit cable terminations
- Range of lumen outputs - from 6,483 to 25,932lm
- Optimised thermal management for extending service life in extreme conditions
- Fully optimised LED driver system for enhanced lifetime, performance, durability and efficiency
- CE and UKCA marked
- Powder coated marine grade aluminium construction
- Suitable for use in ambient temperature of up to 65°C

**WOLF SAFETY LAMP COMPANY**  
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LM-0256 - ISSUE 4  
DF670

Authorised Representative (EU)2019R1020:  
Authorised Representative Service, 77 Camden Street Lower, Dublin, D02 XE80, Ireland

## ATEX INSTALLED LED LIGHTING

### LFX FLOODLIGHT LHX HIGHBAY

### ZONE 1





## Wolf Installed LFX Floodlight & LHX Highbay

### Installation, Operation and Maintenance Instructions

Please Retain - Read Before Use

#### EU/UK Declaration of Conformity

This Wolf Installed LFX Floodlight & LHX Highbay ranges meet all relevant provisions of the 2014/34/EU Explosive Atmospheres (ATEX Equipment) Directive by virtue of the issued EU type examination certificate, and subsequent review confirming compliance with all relevant harmonised standards and essential health and safety requirements.

The Wolf Installed LFX Floodlight & LHX Highbay range is an efficient, robust and durable luminaire constructed of a cast aluminium enclosure protected by a powder coated finish. Models are available in a variety of input voltages. Approval is as Group II, Category 2 equipment for use in zone 1 & 2 potentially explosive atmospheres containing gases, vapours, mists and dusts where the T4 temperature class/T110°C maximum surface temperature permits.

#### Approval Code / Certification:



II 2GD Ex eb mb IIC T4 Gb  
Ex tb IIIC T110°C Db IP66 / IP67  
-50°C ≤ Ta ≤ +35°C up to +65°C

(dependant on model type and orientation)

EU Type examination certificate:

**ExVeritas19ATEX0586X**

Notified Body:  
SGS FIMKO OY, P.O. Box 30 (Särkiniementie 3)  
00211 HELSINKI, Finland.

Notified body number: **0598**

Harmonised standards applied:  
EN IEC 60079-0:2018, EN60079-18:2015+A1:2017,  
EN IEC 60079-7:2015+A1:2018, EN60079-31:2014

Ingress protection: **IP66 and IP67** to EN 60529:1992

The Wolf Installed LFX Floodlight & LHX Highbay ranges also meet the requirements of the 2014/30/EU EMC Directive to the following harmonised standards:

EN 55015: 2013 +A1:2015, EN 61547: 2009,  
EN 61000-3-2:2019, EN 61000-3-3:2013 +A1:2019

The Wolf Installed LFX Floodlight & LHX Highbay luminaires are also compliant with the 2011/65/EU EU RoHS Directive to the harmonised standard EN IEC 63000:2018.

**The LFX Floodlight & LHX Highbay luminaires therefore meet the UK requirements for the UKCA "Fast Track" process permitting UKCA marking.**

This declaration is issued under the sole responsibility of Wolf Safety Lamp Company.

Alex Jackson – Managing Director,  
Wolf Safety Lamp Company Ltd.,  
Sheffield, S8 0YA, UK.  
Dated 01 April 2024.

#### IECEx Scheme Certification

Certificate number: **IECEx EXV 19.0079X**

Certification/Approval Code:

Ex eb mb IIC T4 Gb

Ex tb IIIC T110°C Db

Ta -50°C to +35°C up to +65°C

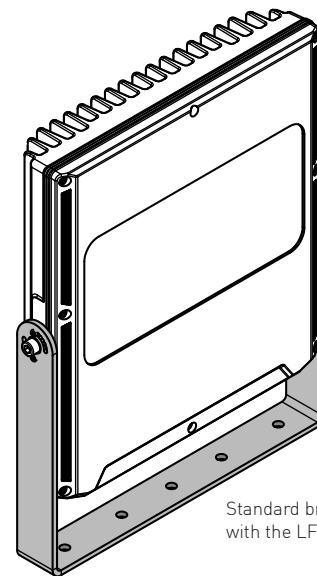
(dependant on model type and orientation)

Standards applied: IEC 60079-0:2017, IEC 60079-7: 2017,  
IEC 60079-18: 2017, IEC 60079-31:2013

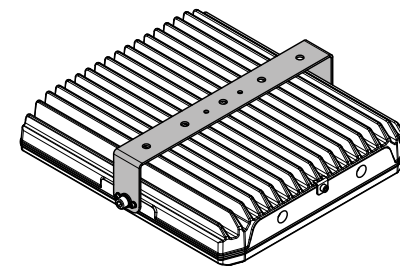
Ingress protection: IP66 and IP67 to EN 60529:1992

#### LFX / LHX STANDARD BRACKETS

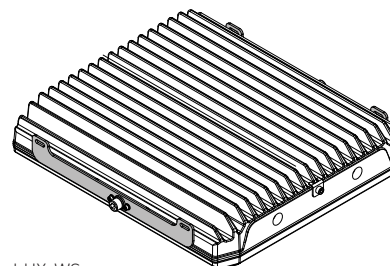
The LFX & LHX products are supplied with the following straight mounting brackets as standard:



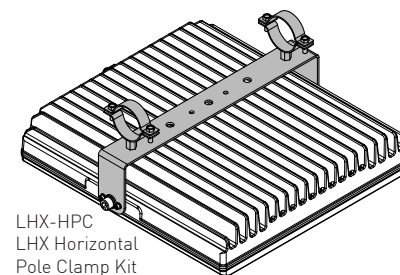
Standard bracket supplied with the LFX Floodlight



Standard bracket supplied with the LHX Highbay



LHX-WS  
LHX Wire Suspension  
Kit (wires not included)

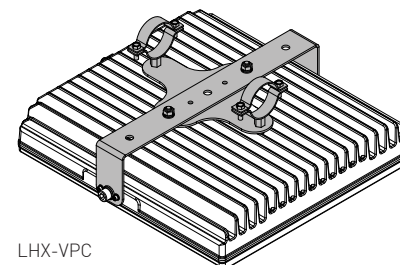


LHX-HPC  
LHX Horizontal  
Pole Clamp Kit

#### ACCESSORIES

The following mounting accessories are available to be purchased separately. Pole clamps are available to fit pole diameters from 15-163mm.

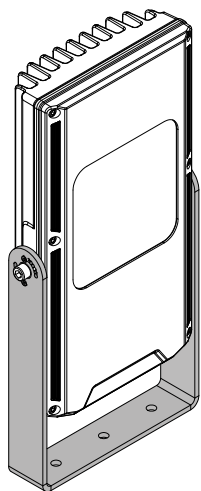
Refer to GA-0004 for more information:



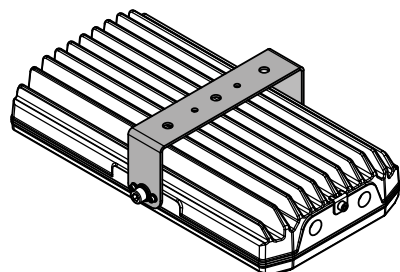
LHX-VPC  
LHX Vertical Pole  
Clamp Kit

## LFX / LHX STANDARD BRACKETS

The LFX & LHX products are supplied with the following straight mounting brackets as standard:



Standard bracket supplied with the LFX Floodlight

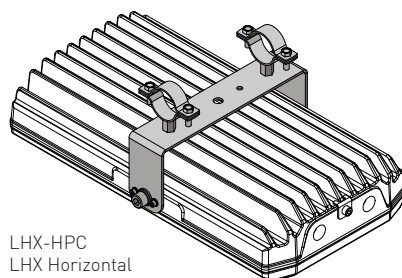


Standard bracket supplied with the LHX Highbay

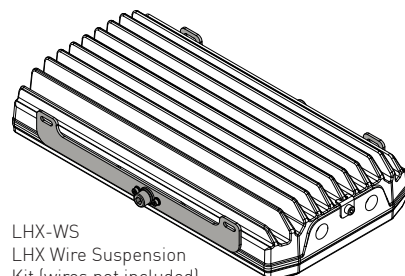
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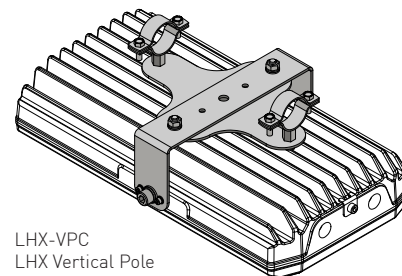
Refer to GA-0004 for more information:



LHX-HPC  
LHX Horizontal  
Pole Clamp Kit



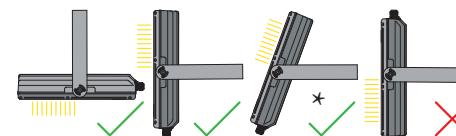
LHX-WS  
LHX Wire Suspension  
Kit (wires not included)



LHX-VPC  
LHX Vertical Pole  
Clamp Kit

## IMPORTANT: SPECIAL CONDITIONS FOR SAFE USE (X)

1. Cable entries into the equipment shall utilise suitably certified cable glands and shall provide a minimum degree of protection of IP66 or IP67 (dependent on the installation environment).
2. Unused cable entry apertures shall be closed with suitably certified blanking plugs which provide a minimum degree of protection of IP66 or IP67 (dependent on the installation environment).
3. When used in potentially hazardous dust atmospheres, the equipment shall be installed so as to minimize the risk from electrostatic discharge. In particular, the equipment shall not be installed where there is a likelihood of there being a static generating mechanism, such as steam generation or fast-moving particles over the surface of the equipment.
4. The equipment shall only be used with a power source having a prospective short circuit current which does not exceed 1500A.
5. A reduced upper ambient applies to LFX2-32 models if used in uplight orientations. The equipment must be installed with the cable entry at the bottom.



\* Refer to table for any temperature reductions on LFX2S-32 uplighting applications

LFX2S-32 only

## SAFETY, OPERATION, INSTALLATION & MAINTENANCE INSTRUCTIONS



1. Please read these installation, operation and maintenance instructions carefully before commencing installation or maintenance and retain for future use.
2. All Wolf LFX Floodlights & LHX Highbay luminaires must be installed in accordance with EN IEC 60079-14 Electrical installations design, selection and erection standard, and maintained in accordance with EN IEC 60079-17 Electrical installations inspection and maintenance standard or the local hazardous area code of practice. If any parts are damaged or missing, the luminaire should be replaced in accordance with these instructions.

3. **IMPORTANT.** The installation area should be made safe and luminaires should be allowed to cool before commencing installation or maintenance work. Any installation or maintenance work should be carried out by suitably qualified and experienced electricians only.

4. Do not change or alter any internal wiring.

5. **IMPORTANT.** No modifications are permitted to the LFX Floodlight & LHX Highbay luminaires, unauthorized modifications or spare parts will invalidate certification.

6. The rating label must be checked to ensure the unit is being used within the correct ambient temperature and environmental conditions, and that the power supply is suitable.

7. In the UK the requirements of the 'Health and Safety at Work Act' must be met. Handling and electrical work associated with this product to be in accordance with the 'Manual Handling Operations Regulations' and 'Electricity at Work Regulations'.

8. Insulation resistance testing should be carried out in accordance with the latest applicable wiring regulations. Maximum insulation resistance test 500V DC. LEDs should be disconnected from the circuit before performing this test.

9. Incoming mains cable should be suitable for use at the peak ambient temperature expected to be found where the unit is sited, plus 16°C.

10. Suitably certified ATEX/IECEx M20x1.5 cable glands and/or stopper plugs must be used when installing the LFX Floodlight & LHX Highbay range of luminaires. Glands must be suitable for the ambient temperature, cable type, diameter and intended environment to ensure correct IP rating. Threads must be parallel with a minimum thread length of 7.5mm. If you are unsure, please contact Wolf Safety.

11. Type C MCBs are recommended when installing these products.

12. If the luminaire is to be installed in an area of high vibration or shock conditions, consult with Wolf Safety.

13. These floodlights are photobiological safety risk group 1 - No photobiological hazard under normal behavioural limitations.

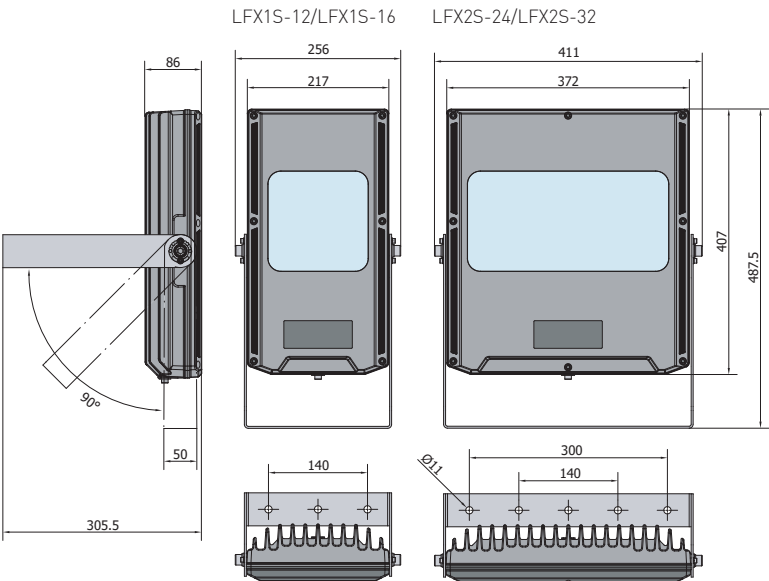
14. The luminaire enclosure contains non-metallic materials in the form of high-performance silicones used for the seals. The performance of these materials must be taken into consideration with respect to the atmosphere present in the hazardous area, and if in doubt, contact Wolf Safety.

15. The external faces of the luminaire may be cleaned with water containing a small amount of detergent only. Chemicals and oils may cause premature failure of seals.

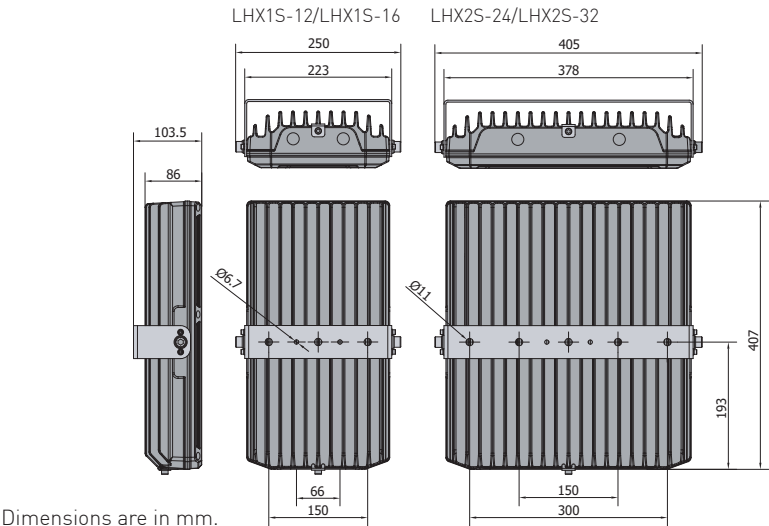
MOUNTING

There are two M10 fixing screw locations on the either side of the LFX Floodlight and LHX Highbay luminaires designed for mounting to the stirrup brackets.

The LFX Floodlight luminaires are supplied with an adjustable stirrup bracket which is designed to be mounted to a flat surface with two or more M10 bolts. The bracket allows locked indexed adjustment of the luminaire angle, secured with a lock screw.



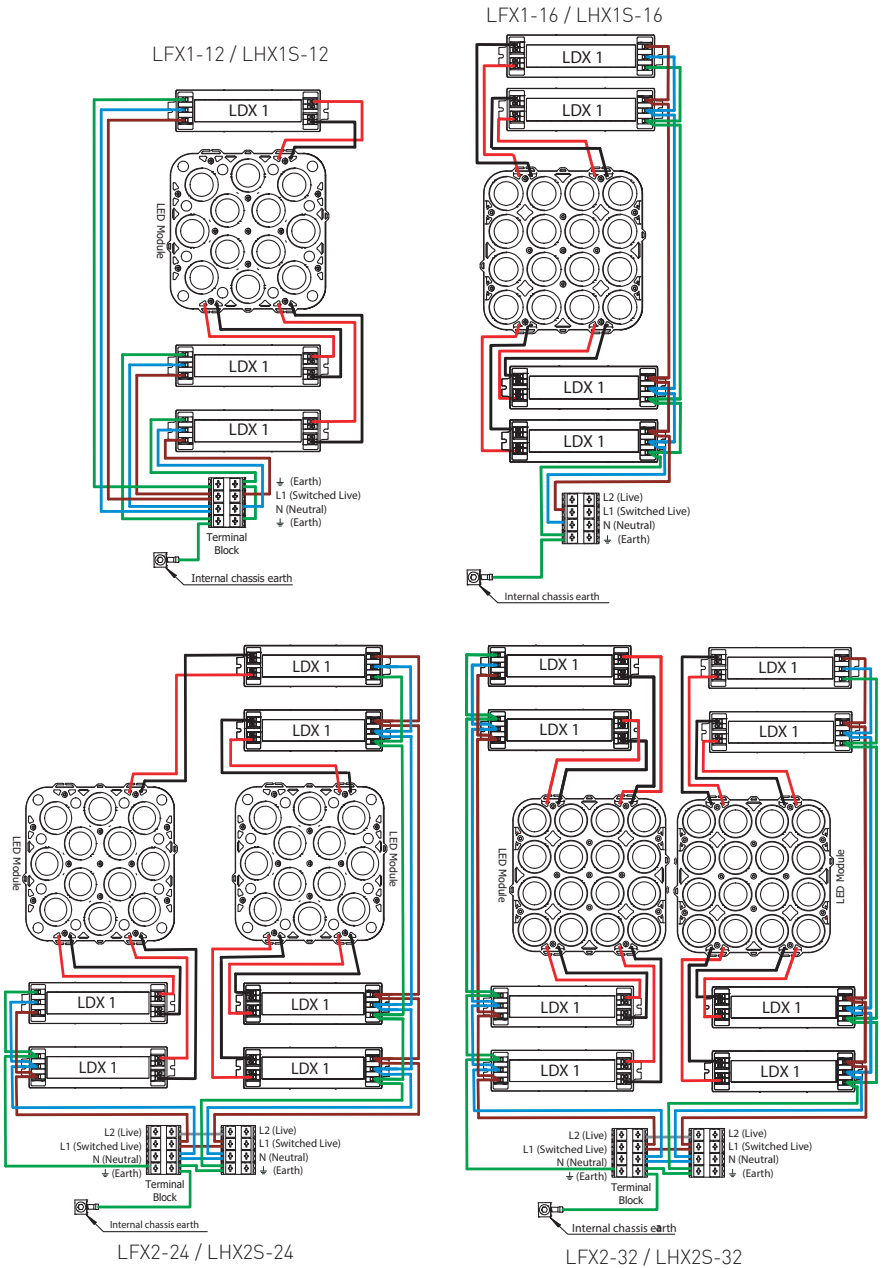
The LHX Highbay luminaires are supplied with a short straight stirrup bracket which is designed to be mounted to a flat surface with two or more M10 bolts.



Dimensions are in mm.

WIRING

The unit contains a terminal block designated for Mains field wiring connections behind the front cover. The terminal block poles are labelled L2 (Live), L1 (Switched Live), N (Neutral) and  $\downarrow$  (Earth). For details of connections, see wiring diagrams below.

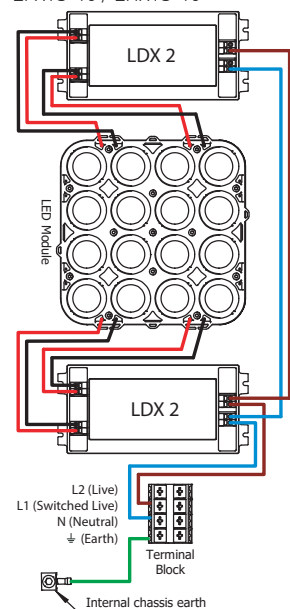




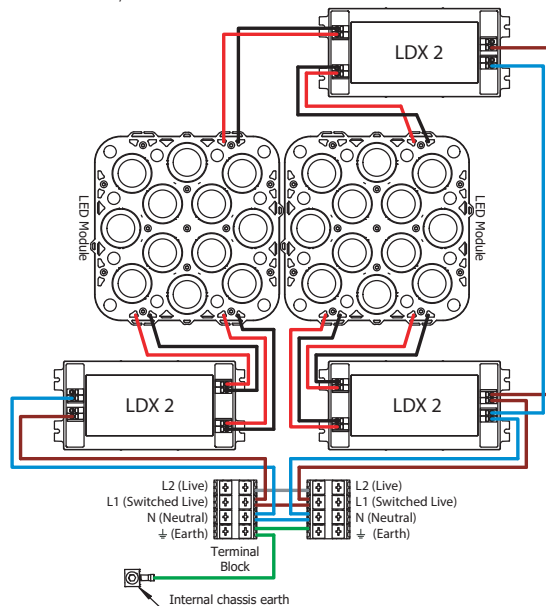
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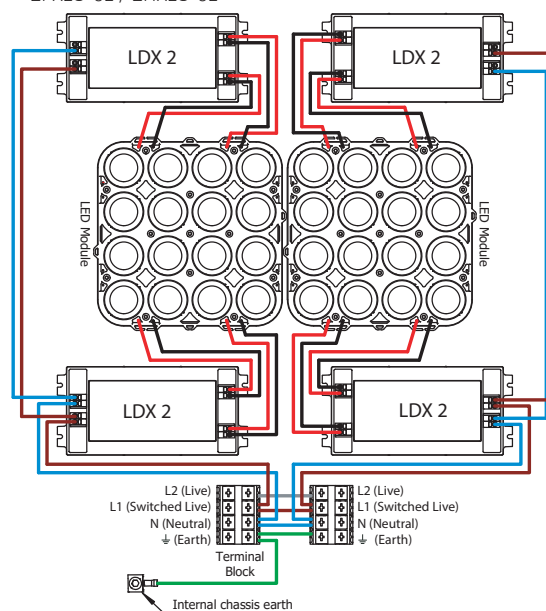
LFX1S-16 / LHX1S-16



LFX2S-24 / LHX2S-24



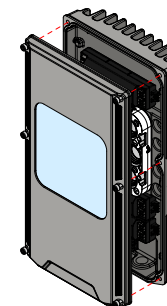
LFX2S-32 / LHX2S-32



## OPENING

To allow access to the internals of the unit, the bolts securing the front assembly must first be removed. An internal tether allows the lid to hang out of the way. The cover fixing screws are retained in the cover.

When replacing the cover fixings, recommended torque for fixing screws is 4.5Nm.



## MAINS TERMINALS

Terminal wiring must be carried out in accordance with these instructions:

- Insulation strip length of 10-11mm
- Only one wire should be connected to each clamping point

Mains cable cross-section:

- 0.5-4mm<sup>2</sup> when using solid or stranded cable
- 0.5-2.5mm<sup>2</sup> when using an un-insulated bootlace ferrule
- 0.5-1.5mm<sup>2</sup> when using an insulated bootlace ferrule

The luminaire must be connected to earth. An external earth connection point is available for up to 4mm<sup>2</sup> connection. An internal earth point is also provided.

## CABLE ENTRIES

There are two M20x1.5 threaded cable entries on the unit. The product is supplied with one of these entries blanked by an Ex certified blanking plug. The second entry is blanked with a dust cap. When wiring the unit, this dust cap must be replaced with a suitably certified cable gland.

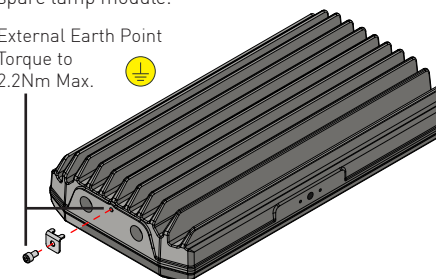
## LOOP-IN LOOP-OUT

Two cable glands may be used for a loop-in loop-out arrangement. The through wiring in this product has a Cross Sectional Area of 2.5mm<sup>2</sup> and the terminal blocks are rated for a current carrying capacity of 28A max.

## LAMP MODULE REPLACEMENT

For lamp module replacement instructions, please refer to the instruction sheet supplied with the spare lamp module.

External Earth Point  
Torque to 2.2Nm Max.



## SERVICE LIFE & ROUTINE INSPECTION

**Refer to the Safety, Operation, Installation & Maintenance section of this document before commencing any routine inspection work.**

Frequency of maintenance will depend on the procedures in place on the site where the unit is installed, the installation location of the unit and the local operating conditions.

1. Check for mechanical damage and/or corrosion of enclosure, gaskets and fastenings. Replace damaged parts.
2. Check for loose connections including internal and external earth connections. Tighten any loose connections.
3. Check for accumulations of dust or dirt and clean if necessary.
4. Check tightness of fixing, glands, blanking plugs etc to ensure IP rating is maintained.
5. Check for unauthorised modifications.
6. Check for any accumulation of moisture.

If there is any doubt that the luminaire remains safe and suitable in the installation location, contact Wolf Safety for advice.

## PATENT

The light emitting devices within these luminaires are covered by UK patent 2571713A.

## DISPOSAL OF WASTE MATERIAL

Disposal of packaging, Wolf products and any component parts should be carried out in accordance with applicable regulations, (WEEE).

The Wolf Safety Lamp Co. Ltd has a policy of continuous product improvement. Changes may be made to the above specification without notification, details are available on request. E&OE. All information has been gathered under laboratory conditions, the user must regard the values given as approximate. A copy of these instructions with any relevant revisions can be found at [www.wolfsafety.com](http://www.wolfsafety.com).

<div>TECHNICAL DATA</div> <div>Wolf Safety Lamp Co. reserves the right to change technical specifications without prior notice.</div>	LFX1S-12-65-230 LHX1S-12-65-230	LFX1S-12-55-230 LHX1S-12-55-230	LFX1S-16-55-230 LHX1S-16-55-230	LFX1S-16-45-230 LHX1S-16-45-230	LFX2S-24-60-230 LHX2S-24-60-230	LFX2S-24-50-230 LHX2S-24-50-230	LFX2S-32-55-230 LHX2S-32-55-230	LFX2S-32-50-230 LHX2S-32-50-230	LFX1S-12-65-110 LHX1S-12-65-110	LFX1S-12-55-110 LHX1S-12-55-110	LFX1S-16-55-110 LHX1S-16-55-110	LFX1S-16-45-110 LHX1S-16-45-110	LFX2S-24-60-110 LHX2S-24-60-110	LFX2S-24-50-110 LHX2S-24-50-110	LFX2S-32-55-110 LHX2S-32-55-110	LFX2S-32-50-110 LHX2S-32-50-110
Input Voltage Range	180-277 V AC								80-140 V AC							
Input Power	45W	67.5W	60W	90W	90W	135W	120W	180W	45W	67.5W	60W	90W	90W	135W	120W	180W
Max. Input Current	0.3A	0.45A	0.4A	0.6A	0.6A	0.9A	0.8A	1.2A	0.6A	0.9A	0.8A	1.2A	1.2A	1.8A	1.6A	2.4A
Frequency	50 - 60 Hz															
Power Factor	>0.95															
Enclosure Size	Small				Large				Small				Large			
Driver Type	3 x LDX1L	3 x LDX1H	2 x LDX2L	2 x LDX2H	3 x LDX2L	3 x LDX2H	4 x LDX2L	8 x LDX1H	3 x LDX1L	3 x LDX1H	2 x LDX2L	4 x LDX1H	3 x LDX2L	6 x LDX1H	4 x LDX2L	8 x LDX1H
Lumen Output	6,483	9,724	8,644	12,996	12,996	19,449	17,288	25,932	6,483	9,724	8,644	12,996	12,996	19,449	17,288	25,932
LEDs	12 LED		16 LED		24 LED		32 LED		12 LED		16 LED		24 LED		32 LED	
Beam Angles	36°, 45°, 62°, 102°															
Ingress Protection	IP66 & IP67															
Weight	9.5kg				15.5kg				9.5kg				15.5kg			
Gas Temperature Class	T4															
Dust Surface Temperature	T110°C															
Lower Temperature Limit	-50°C															
Upper Temperature Limit	65°C	55°C	55°C	45°C	60°C	50°C	55°C*	50°C*	65°C	55°C	55°C	45°C	60°C	50°C	55°C	50°C
Upper Temperature Limit (upight)	65°C	55°C	55°C	45°C	60°C	50°C	53°C	49°C	65°C	55°C	55°C	45°C	60°C	50°C	55°C	50°C
No. of Cable Entries	2 x M20x1.5 threaded															
Inrush Current (Peak)	10.0A															
Inrush Current Duration	150µs															
Total Harmonic Distortion	<15%															

LFX2-32 models not to be used with cable entry pointing upwards.

\* When lamp is mounted with light shining at any angle above horizontal the maximum ambient temperature limit is reduced as stated in the table

Note - Luminaires with other operational temperatures will be marked accordingly.