

# FLFE..L FLF..L

- Zone 1, 2, 21, 22
- With LED tubes
- Easy re-lamping
- Designed to last over time



*"Ex e" terminal board housing*

*Simplified maintenance*

*4 Joule shock resistant borosilicate glass*



*White painted reflector/frame*

*Ex d execution type FLF..L*



# FLFE...L, FLF...L series Lighting fixtures with LED tubes

Lighting fixtures for LED tubes FLFE-...L (Ex de) and FLF-...L (Ex d) series have two low copper content aluminium heads fitted with G13 lamp holder, a tempered borosilicate glass tube that is resistant to changes in heat and a white painted aluminium reflector. The 'Ex de' lighting fixture features an "Ex e" terminal board housing that allows entry to the lamp with a cable gland with an "Ex" seal (normal) as specified in installation standard (EN/IEC 60079.14). The entry to the 'Ex d' lighting fixtures must be through an Ex "barrier" cable gland (sealed) or, in the case of a conduit system, with an EYS, EZS series sealing fittings. The round cross section of the lamp provides a better "Cx" coefficient with less resistance to the wind and less accumulation of dust. For this reason, these units are recommended for use in hazardous places where climatic and environmental conditions are severe and as they require less maintenance thanks to a very high ageing index. As the electrical components are housed on a frame with guides, re-lamping is quick and efficient. The fact that the fixture is fitted with a glass tube as opposed to a plastic material, makes it more effective and with a longer lifespan.

## Application sectors:



## CERTIFICATION DATA

**Classification:** 94/9/EC

Group II

Category 2GD

**Installation:** EN 60079.14

zone 1 - zone 2 (Gas)

zone 21 - zone 22 (Dust)

**Marking:**

CE 0722 Ex II 2GD Ex de IIC T6 Gb - Ex tb IIIC T67°C÷T80°C Db IP66

CE 0722 Ex II 2GD Ex d IIC T6 Gb - Ex tb IIIC T67°C÷T80°C Db IP66

**Certification:**

ATEX CESI 09 ATEX 008

IECEX CES 11.0021

GOST R AVAILABLE

INMETRO DNV 12.0159

All IEC Ex, GOST R and INMETRO certification data can be downloaded at [www.cortemgroup.com](http://www.cortemgroup.com)

**Standards:**

CENELEC EN 60079-0: 2012, EN 60079-7: 2007, EN 60079-31: 2009 and EUROPEAN DIRECTIVE 94/9/EC: 1994  
IEC 60079-0:2004, IEC 60079-1:2007, IEC 60079-7:2006, IEC 61241-0:2004, IEC 61241-1:2004  
European Directive 2006/95 Low voltage  
European Directive 2004/108 Electromagnetic compatibility  
European Directive 2003/108 WEEE Waste electrical and electronic equipment  
European Directive 2011/64 RoHS

**Class temperature:**

85°C (T6)

**Ambient temperature:**

normal  
-20°C +55°C

**Degree of protection:**

IP66

## FLFE...L, FLF...L series Lighting fixtures with LED tubes

FLFE...L (Ex de)



FLF...L (Ex d)



### MECHANICAL FEATURES

<b>Body:</b>	Low copper content aluminium alloy heads
<b>External tube:</b>	Shock and high temperature resistant borosilicate glass
<b>Gaskets:</b>	Acid/hydrocarbon resistant NBR on covers
<b>Inner frame:</b>	White painted aluminium that acts as reflector
<b>Bolts and screws:</b>	Stainless steel
<b>Cap chain:</b>	Stainless steel
<b>Mounting:</b>	2 x M8 holes
<b>Entries:</b>	2 x ISO M25 entries. Fixture kit with PLG2IB plug and REV2IB cable gland
<b>Coating:</b>	Epoxy coating Ral 7035 (Light grey)
<b>Corrosion Resistance :</b>	The STANDARD of the aluminium alloy used by Cortem has passed the tests required by standards EN60068-2-30 (hot/humid cycles) and EN60068-2-11 (salt mist tests)



ORIGINAL PRODUCT

### ELECTRICAL FEATURES

<b>Lamp holders:</b>	Bi-pin G13
<b>Rated voltage:</b>	220/240 V AC
<b>Rated frequency:</b>	50/60 Hz
<b>LED tubes:</b>	11-22-31 W
<b>Connection:</b>	Direct to the terminal board L, N, Pe section 4 mm <sup>2</sup> with jumpers suitable for input/output
<b>Wiring:</b>	Silicone rubber cables with glass braid insulation for high temperatures

### ACCESSORIES AVAILABLE / SPECIAL REQUESTS

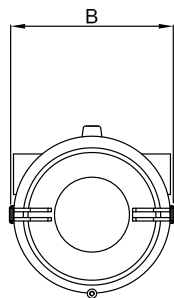
- Installation mounting brackets
- Stainless steel or galvanized steel guard with external aluminium protection
- External aluminium protection recommended for outdoor installations
- Re-lamping bracket for use on in-line lighting fixtures
- Cable gland: FGAB2NBK for armoured cable or FB2NBK for non-armoured cable (only for FLF...L)

# FLFE...L, FLF...L series Lighting fixtures with LED tubes

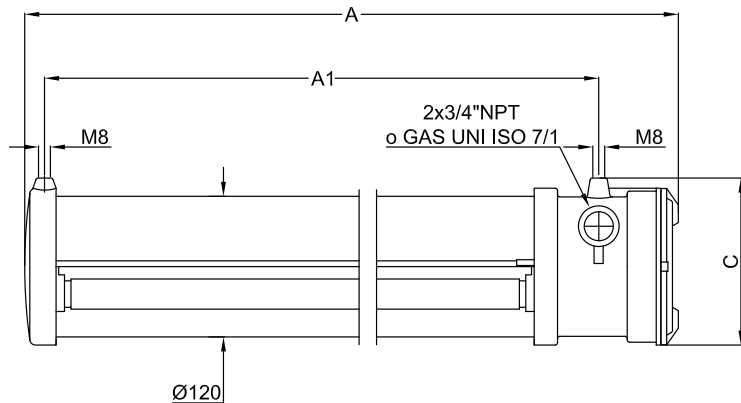
## Ex de lighting fixtures

Code	Dimensions mm				N° of lamps	Power supply	Watt	Weight Kg	mm
	A	A1	B	C					
FLFE-111L	725	640	142	197	1	220/240 Vac	11	5,0	240x230x800
FLFE-211L	725	640	142	197	2	220/240 Vac	11	5,0	240x230x800
FLFE-122L	1325	1240	142	197	1	220/240 Vac	22	7,8	240x230x1410
FLFE-222L	1325	1240	142	197	2	220/240 Vac	22	7,8	240x230x1410
FLFE-131L	1625	1540	142	197	1	220/240 Vac	31	9,5	240x230x1700
FLFE-231L	1625	1540	142	197	2	220/240 Vac	31	9,5	240x230x1700

Dimensions in mm



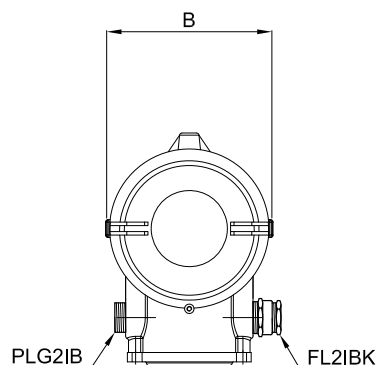
### DIMENSIONAL DRAWING



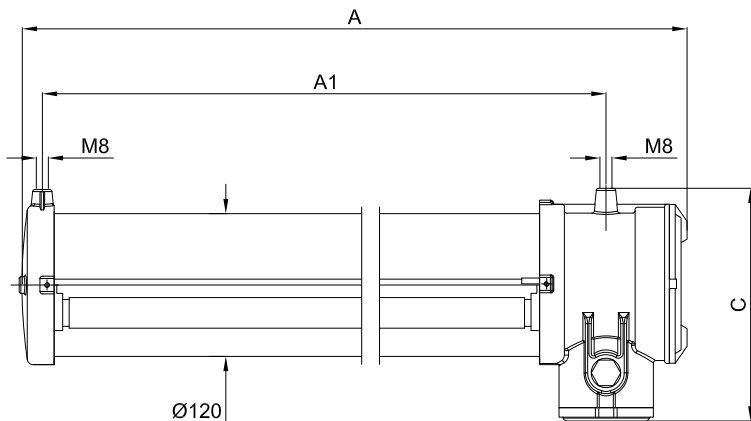
## Ex d lighting fixtures

Codice	Dimensioni mm				Lampade n°	Alimentazione	Watt	Peso Kg	mm
	A	A1	B	C					
FLF-111L	725	640	142	145	1	220/240 Vac	11	4,5	240x230x800
FLF-211L	725	640	142	145	2	220/240 Vac	11	4,5	240x230x800
FLF-122L	1325	1240	142	145	1	220/240 Vac	22	7,3	240x230x1410
FLF-222L	1325	1240	142	145	2	220/240 Vac	22	7,3	240x230x1410
FLF-131L	1625	1540	142	145	1	220/240 Vac	31	9,0	240x230x1700
FLF-231L	1625	1540	142	145	2	220/240 Vac	31	9,0	240x230x1700









Dimensions in mm



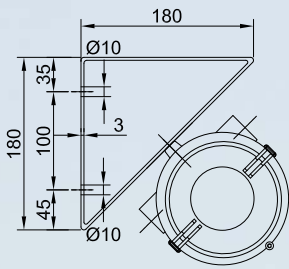
### DIMENSIONAL DRAWING



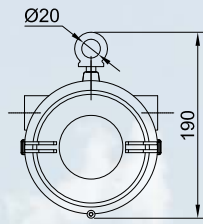
# FLFE...L, FLF...L series Accessories and spare parts available

ILLUSTRATION	DESCRIPTION	MODEL	FEATURES	CODE	KEY
	LED tubes G13 fitting	11 W 22 W 31 W	Contact our Sales Office for availability		
M8 	Tige	Length: 250 mm	Material: stainless steel	BRF8MIN/250	 
	Type O eyebolt		Material: galvanised steel	G0F-8	 
	Type U bracket		Material: galvanised steel	G-244	 
	Type V bracket		Material: galvanised steel	G-263	 
	Type D bracket		Material: galvanised steel	G-258	 
	Type P bracket		Material: galvanised steel	G-0480	 
	Guard with Light blue/white painted 20/10 aluminium external protection		Stainless steel guard	G36-0529	 
			Galvanised steel guard	G36-0529G	
	External protection		Light blue/white painted 20/10 aluminium external protection	G36-568	 
	Cable gland		For models and codes, visit <a href="http://www.cortemgroup.com">www.cortemgroup.com</a>	FB2NBK FGAB2NBK	 
	Lamp holder	FLF.-1..L	G13 250 V, 4 A	STU3249-12/S	
		FLF.-2..L		STU254/S	
	Re-lamping bracket with clip system for use on in-line lighting fixtures		Material: galvanised steel	G-0318 + G-0318/1	 

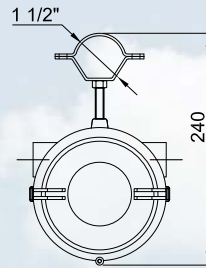
# Installation and mounting methods and photometric diagrams



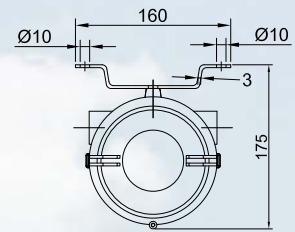
45° angle mounting  
TYPE "D"



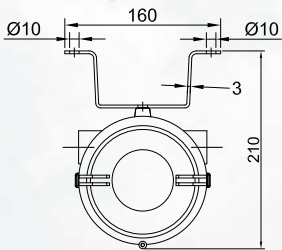
Pendant mounting with  
eyebolt TYPE "O"



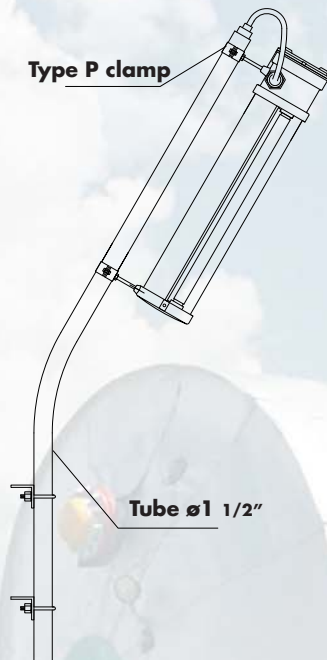
Mounting using 1.1/2"  
metal clamps TYPE "P"



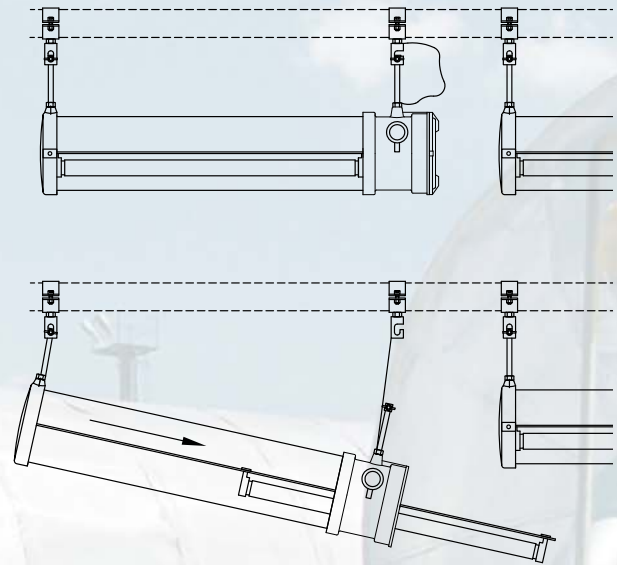
Low ceiling mounting with  
clamp TYPE "U"



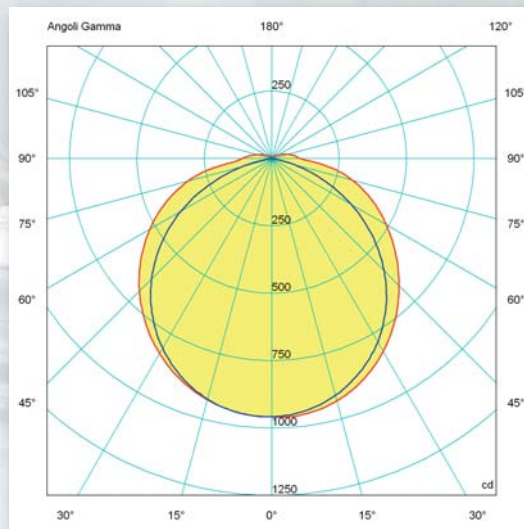
High ceiling mounting with  
clamp TYPE "V"



Pole mounting for FLF...L  
with barrier cable gland



Mounting system with quick release clip for easy  
fluorescent tube replacement. System suitable for  
installing in-line lighting fixtures.



FLFE-222L / FLF-222L

Cortem Group can supply photometric diagram files on request for use in special lighting design projects.  
Contact the Sales Office for further information

— = plane 90270  
— = plane C 0180