# FLF - Zone 1, 2, 21, 22 - Excellent "CX" coefficient - Easy re-lamping - Designed to last over time 4 Joule shock resistant borosilicate glass Simplified maintenance Cable entry Lighting fixtures with LED lamps NEW ED.2014 A.40

CORTEM GROUP®

## FLF series Lighting fixtures for fluorescent tubes and LED

FLF series lighting fixtures 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. Unlike the FLFE series, as specified in the appropriate installation standard (EN/IEC 60079-14), entry to the fixture 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. FLF series has been designed to facilitate and speed up maintenance operations. 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.







Chemical and petrochemical plants



Oil and combustible liquid depots



Offshore Onshore plants plants



Stair handrails



Chemical Farm produce applications



Cortem product

## **CERTIFICATION DATA**

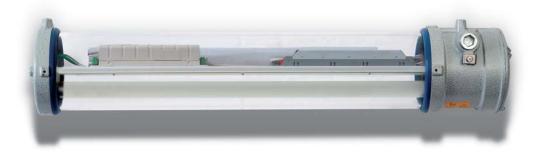
Degree of protection:

Application sectors:

Classification: 94/9/EC Group II Category 2GD Installation: EN 60079.14 zone 21 - zone 22 (Dust) zone 1 - zone 2 (Gas) C€ 0722 €x II 2GD Ex d IIC T6 - Ex tb IIIC T67°C÷T80°C Db IP66 Marking: **ATEX CESI 09 ATEX 008** Certification: CES 11.0021 **IECE**x All IEC Ex and GOST R certification data can be **AVAILABLE** GOST R Standards: CENELEC EN60079-0: 2012, EN60079-1: 2007, EN60079-31: 2009 and EUROPEAN DIREC-TIVE 94/9/EC: 1994 IEC60079-0:2004, IEC60079-1:2007, IEC60079-7:2006, IEC61241-0:2004, IEC61241-1:2004 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) with emergency system normal Ambient temperature: 20°C +50°C

**IP66** 

# FLF series Lighting fixtures for fluorescent tubes and LED





ORIGINAL PRODUCT

#### **MECHANICAL FEATURES**

**Body:** Low copper content aluminium alloy heads

**External tube:** Shock and high temperature resistant borosilicate glass

Gaskets: Acid/hydrocarbon resistant NBR on cover White painted aluminium that acts as reflector

Bolts and screws: Stainless steel
Cap chain: Stainless steel

**Mounting:** Fixture pre-drilled with 2 x M8 holes

Entries:  $2 \times 3/4$ " threaded NPT. Fixture set with 1 x PLG2N plug

Coating: Epoxy coating Ral 7035 (Light grey)

Corrosion Resistance: 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)

#### **ELECTRICAL FEATURES**

Lamp holders: Bi-pin G13

Ballast: Single channel electronic

Rated voltage: 230 V AC Rated frequency: 50/60 Hz

**Connection:** Direct to internal jumper connections for input/output L, N, Pe section 4 mm<sup>2</sup>

Power factor: 0.98

Emergency unit: Electronic inverter 110/230V, 50/60Hz, 18...58 W. Ni/Cd batteries, 4 Ah or 7 Ah, 6 V,

battery charging monitored by high luminosity red LED (estimated LED lifespan 50,000 hours)

Wiring: Silicone rubber cables with glass braid insulation for high temperatures

**Safety:** Emergency safety switch fitted inside lighting fixture

#### **ACCESSORIES AVAILABLE / SPECIAL REQUESTS**

2 pin Ø26 fluorescent tubes model T8

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 Rated voltage: 277 V with double channel electronic ballast (code FLF-236EF4/277)

110/240 V with double channel electronic ballast (code FLF-236EF4S)

GAS UNI ISO 7/1 thread

Can also be supplied in single tube normal operation version: FLF-118 / FLF-136 / FLF-158

Rated voltage: 24 Vdc only for normal operation (Code FLF-118/24)

Execution with LED tubes from 22 W. Rated voltage: 100/240 Vac (Code FLF-122L and FLF-222L). LED tubes included.

Execution for compact fluorescent tubes 4 pins only for normal operation (Code FLF-136C e FLF-236C).

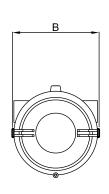


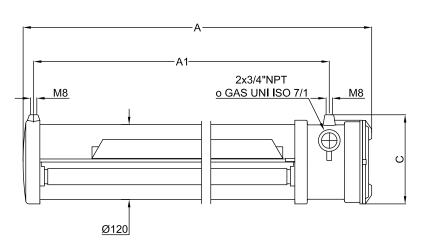
# FLF series selection chart

# Double lamp

Code	Dim A	nensio A1	ns B	mm C	Operating type	N° of lamps	Power supply	Watt	Discharge time	Weight Kg	mm
FLF-218	725	640	142	145	-	2	230 V 50/60 Hz.	18	-	6,0	240x230x800
FLF-236	1325	1240	142	145	-	2	230 V 50/60 Hz.	36	-	9,4	240x230x1410
FLF-258	1625	1540	142	145	-	2	230 V 50/60 Hz.	58	-	11,6	240x230x1700
FLF-218EF4	725	640	142	145	normal + emergency	2	230 V 50/60 Hz.	18	120'	7.3	240x230x800
FLF-236EF4	1325	1240	142	145	normal + emergency	2	230 V 50/60 Hz.	36	90'	10.7	240x230x1410
FLF-258EF4	1625	1540	142	145	normal + emergency	2	230 V 50/60 Hz.	58	70'	12.8	240x230x1700
FLF-218EF7	725	640	142	145	normal + emergency	2	230 V 50/60 Hz.	18	200'	7.0	240x230x800
FLF-236EF7	1325	1240	142	145	normal + emergency	2	230 V 50/60 Hz.	36	180'	10.2	240x230x1410
FLF-258EF7	1625	1540	142	145	normal + emergency	2	230 V 50/60 Hz.	58	150'	12.5	240x230x1700

### **DIMENSIONAL DRAWING**





Dimensions in mm