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USER MANUAL FOR EXPLOSION PROOF FLUORESCENT LIGHTING FITTING TYPE FLX 118, FLX 124, FLX 136, FLX 140, FLX 155, FLX 218, FLX 224, FLX 236, FLX 240, FLX 255

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PURPOSE

Explosion-protected fluorescent lighting fitting, type FLX are intended for use in hazardous areas:

- in hazardous areas due to the presence of flammable and explosive gases, vapours or mists in Zones 1 and 2 in accordance with EN 60079-10,
- in hazardous areas due to the presence of flammable and explosive dust in Zones 21, 22 in accordance with EN 61241-10.

MODEL CODE

FLX . . . / . .

Basic type code
Number of fluorescent tubes in lamp:
- 1 – one tube
- 2 – two tubes

Nominal wattage of tube:
- 18 - 18 W TC-L
- 24 - 24 W TC-L
- 36 - 36 W TC-L
- 40 - 40 W TC-L
- 55 - 55 W TC-L

Type of ballast:
- 0 - magnetic ballast with starter (EEI=B2) (only for types FLX .18, FLX .24, FLX .36)
- 1 - electronic ballast with preheat start (EEI=A2)

Type of entries:
- 0 - Ex d threaded cable entries 3xM20,ISO 965-1, ISO 965-3
- 1 - Ex d threaded cable entries 3 x 3/4"NPT, ANSI/ASME B1.20.1
- 2 - Ex d cable entries 2 x M20, ISO 965-1, ISO 965-3 with one Ex de adapter type ADP 03/24 and one Ex d plug

TYPE OF PROTECTION

The explosion-protection ensure "Flameproof enclosures" type of protection, utilizing "General requirements" according to EN 60079-0:2005, EN 60079-7:2006. The product is in comformity to standard EN 61241-0:2007 i EN 61241-1:2005 - "General requirements", "Protection by enclosure »tD«".

Apparatus category:
- II 2G
- II 2D

Marking of explosion-protection type FLX . . . / 1 .
- II 2G Ex de IIC T6 or Ex d IIC T6
- II 2D tD A21 T80°C IP66 or IP66/IP67
- ambient temperature: -20ºC ≤ T_a ≤ +40ºC

Marking of explosion-protection type FLX . . . / 0 .
- II 2G Ex de IIC T5 or Ex d IIC T5
- II 2D tD A21 T95°C IP66 or IP66/IP67
- ambient temperature: -20ºC ≤ T_a ≤ +50ºC

Degree of protection (IP Code): IP 66/IP67 in accordance with EN 60529:1991/A1
Degree of protection (IK Code): IK 08 in accordance with EN 50102:1995/A1
Insulation class : I (protective earthing) in accordance with EN 61140:2002/A1
Electromagnetic compatibility: in accordance with the Directive 89/336 EEC

TECHNICAL DATA

Rated voltage:	- FLX .../1 . - 100 V...280 V / 50Hz, 60Hz, DC - FLX .../0 . - 230 V (+6% -10%) / 50 Hz (240 V/50 Hz, 220 V/60 Hz on special request)
Nominal current:	- 1 A max.
Power factor:	- FLX .../1 . - λ = 0,98 - FLX .../0 . - cos φ > 0,95 ind.
Energy classification:	- FLX .../1 . - EEI=A2 - FLX .../0 . - EEI= B1
Power and type of lamp:	- 18 W, 24 W, 36 W, 40 W, 55 W, compact fluorescent lamps TC-L lampholder 2G11, according to EN 60061-1 Bl. 7004-82
Luminous flux:	- TC-L 18 W - 1100 lm (DULUX L 18W/840, R_a = 1B) - TC-L 24 W - 1800 lm (DULUX L 24W/840, R_a = 1B) - TC-L 36 W - 2800 lm (DULUX L 36W/840, R_a = 1B) - TC-L 40 W - 3500 lm (DULUX L 40W/840, R_a = 1B) - TC-L 55 W - 4700 lm (DULUX L 55W/840, R_a = 1B)

Lifetime of sources:	- FLX .../1 . - 18000 h - FLX .../0 . - 10000 h
Luminaire efficiency:	- FLX 1../.. ~ 80 % - FLX 2../.. ~ 60 %
Cable entries:	- 3 x M20, according to EN 60079-1, ISO 965-1, ISO 965-3 or - 3 x 3/4"NPT, according to ANSI/ASME B1.20.1 or - 3 x M20, according to EN 60079-1, ISO 965-1, ISO 965-3, With two Ex d plugs and one adapter type ADP 03/24, II 2GD Ex de IIC T6 IP66 T80°C, for cable $Ø_v$ 6-15 mm
Connection terminals into Ex de adaptera ADP 03/23:	- L + N + PE; 2,5 mm^2 solid, stranded - tightening torque for clamp screw 1 Nm
Connection terminals:	- L + N + PE; max 2 x 2,5 mm^2 solid, strandes - through-wired, I_{max}= 16 A
External PA/PE terminals:	- max 2 x 6 mm^2 solid, stranded - tightening torque for clamp screw 2 Nm
Tightening torque:	housing of Ex de adapter, type ADP 03/24 and Ex d plug 3,5Nm - cable gland on adapter ADP03/24 2,5 Nm - screw clamp in adapter ADP 03/24 2,0 Nm
Cable termal stability:	- FLX .../1 . - without limitation - FLX .../0 . -20°C < T_a < 35°C without limitation -20°C < T_a < 40°C cable suitable for a minimum temperature of 85°C -20°C < T_a < 50°C cable suitable for a minimum temperature of 95°C
Dimension LxWxH (over all)	- FLX .18/.. - 332 x 160 x 180 mm - FLX .24/.. - 432 x 160 x 180 mm - FLX .36/.. - 520 x 160 x 180 mm - FLX .40/.. - 646 x 160 x 180 mm - FLX .55/.. - 646 x 160 x 180 mm

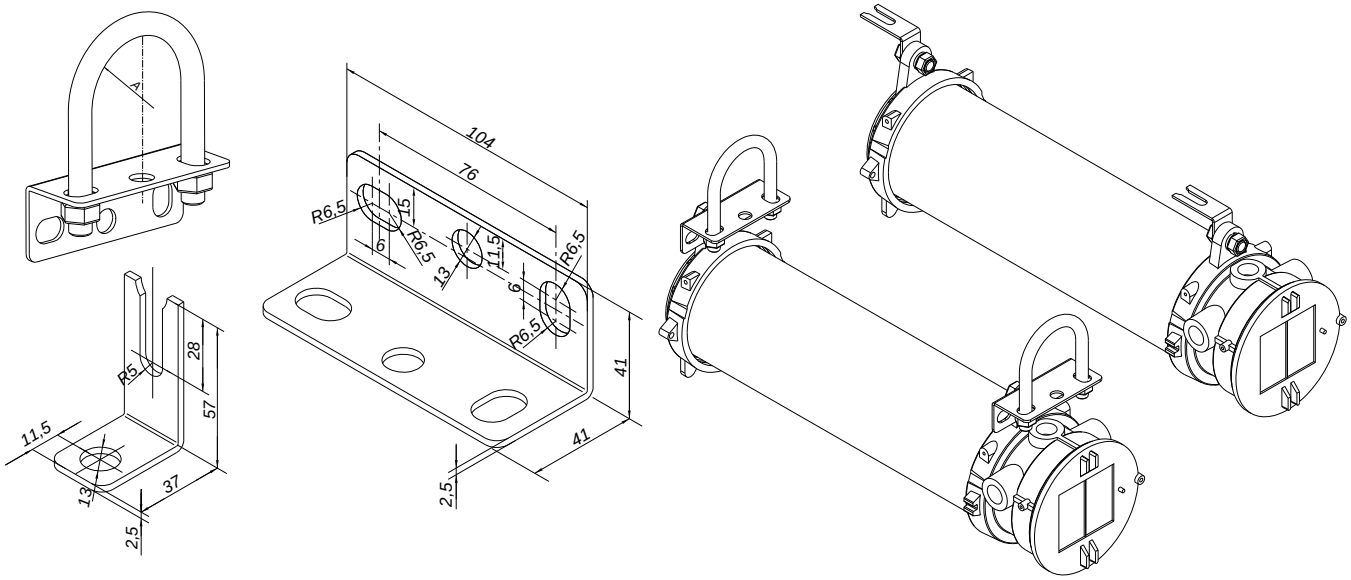
Weight:		
	- FLX 118/0. - 4,40 kg	- FLX 218/0. - 4,60 kg
	- FLX 124/0. - 5,20 kg	- FLX 224/0. - 5,50 kg
	- FLX 136/0. - 5,40 kg	- FLX 236/0. - 5,80 kg
	- FLX 118/1. - 3,30 kg	- FLX 218/1 . - 3,30 kg
	- FLX 124/1. - 3,60 kg	- FLX 224/1 . - 3,60 kg
	- FLX 136/1. - 5,10 kg	- FLX 236/1 . - 5,10 kg
	- FLX 140/1. - 8,00 kg	- FLX 240/1 . - 8,00 kg
	- FLX 155/1. - 8,00 kg	- FLX 255/1 . - 8,00 kg

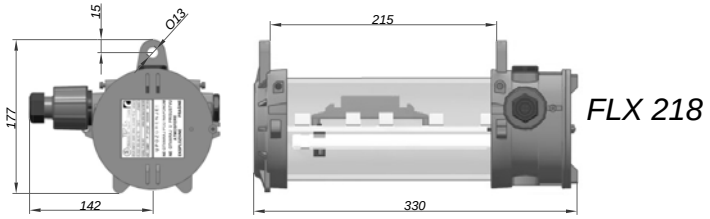
Marking:	CE

ASSEMBLAGE AND REPLACING THE LIGHT SOURCE

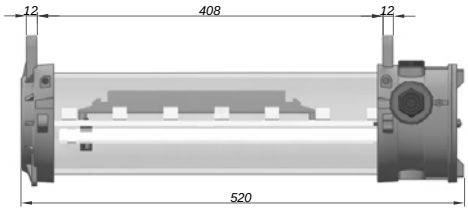
The opening of the enclosure is exclusively allowed in a non-voltage state while respecting the warnings on the label.

The non-voltage state should be secured by shutting the voltage off on the main switch. Before opening the casing by screwing the lid, it is necessary to unblock it mechanically by twisting the blockade screw M5x10 ISO 4027 on the lid. The electric connection is performed by linking power supply cable on the plug on terminals on the motherboard: L-phase conductor, N-neutral conductor, PE-protective grounding. The outer grounding, the equalization of potentials- connect the IP to the outer terminal. EEx d glands and plugs or EEx ed adapters for introducing the cables into the casing of the lamp are not a part of the original product, and are secured by the user. During installation, one must follow the instructions of the manufacturers of the glands, plugs, and the adapters. After every opening of the lamp the screw joint should be protected by the lubricating grease “Baplex” protective solution (manufacturer’s recommendation). The closing of the casing should be done by a reverse sequence of action. During installation one must also be careful that the maximum number of FLX lamps on one automatic installation fuse IpC 10A is not greater then 8, and on the IpC 16A, not greater then 13. A standard assembly of the lamp is done on a vertical suspension over the eye bolt with a Ø13 mm hole on the casing. With the proper equipment, assembly is possible on other ways:

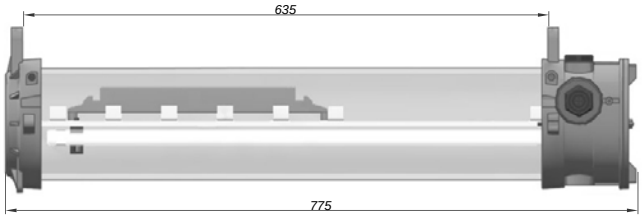




FLX 218



FLX 236



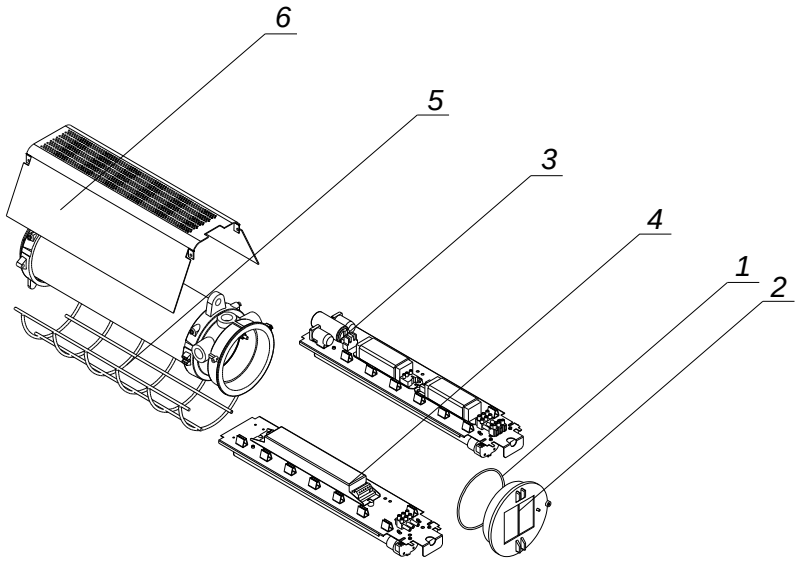
FLX 255

REVIEW, MAINTENANCE AND REPAIR

It is necessary to conduct review and maintenance on all parts on which the explosion proof protection depends in accordance to standards IEC 60079-17, general and individual demands of the manufacturer and the regulations of the user, and especially:

- that all enclosures ,all parts of the casing, the protective glass and the gasket of the cover are completely without a crack or damage
- that the enclosure is completely closed by its cover and that the mechanical blockage against selfopening is done
- that the EEx d glands and the plugs and the adapters are installed by the instructions of the manufacturer and that they are tightened with ratio Moment.

The repair of the lamp is done by the manufacturer or a person legally authorized by the manufacturer, with original pieces from the products documentation, and in accordance to the IEC 600079-19 standards. If the repair is done by a third person, the manufacturer is freed of all responsibility from the product, and the declaration of the conformity of the manufacturer becomes null and void.



Spare parts:

1. Cover gasket FLX …,
2. Cover FLX, compl.
3. Base plate with component FLX…/0
4. Base plate with component FLX …/1

Accessories:

5. Protective gird FLX …, compl.
6. External reflector FLX …, compl.
7. Fluorescent tube .. W TL-C, Dulux L..W/840
8. Starter Does ST 171
9. Assembly kit for quick fixing FLX
10. Assembly kit for fixing 1”1/2 or 1”1/4 on tube
    Assembly kit for fixing 2” on tube
11. Assembly kit for ceiling mounting

RESPONSIBILITY AND AUTHORIZATION

Responsibility and authorization are defined by the "Regulation on technical supervision over the electrical stations, installations and equipment intended for usage in potentially explosive atmospheres" . This Manual represents the most relevant information about the product. Adequate national laws and regulations supplement it. The person in charge is required to secure its employment in the industrial unit. Every improper usage, as well as every unofficial restructuring, repair or restoration of the product, release the manufacturer of all responsibilities.

STORAGE AND TRANSPORT

Transport and storage is only allowed in the original packaging, on the way pointed out on the carton box.