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| TEPEX d.o.o. tel. 049 222 900, fax 049 426 450 e-mail: tepex@tepex.hr www.tepex.hr | USER MANUAL FOR EXPLOSION PROTECTED FLUORESCENT LIGHT FITTING TYPE SIF 236/436 | |
| | Broj: TEPEX.RS.026 | Rev : 2 |

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1. MANUFACTURER

TEP Ex d.o.o.
 Prilaz dr. Franje Tuđmana 6 HR-49210 ZABOK
 Tel: +385 49 222 900
 Web: www.tepex.hr

2. GENERAL SAFETY INFORMATIONS



WARNING!

The user manual contains basic information about the product. Mounting, installation, usage and maintenance should be carried out under this user manual to provide and ensure safe operation within the nominal characteristics. This user manual complement national Regulation and Standards. The responsible person shall ensure their implementation. Failure off implement this user manual can reduce explosion protection and endanger people, property and the environment. Any improper and illegal actions as well as non-compliance with the provisions of this user manual excludes all responsibility by manufacturer side.

Before installation/commissioning:

- Carefully read all instructions,
- Execute proper training of responsible personnel,
- Check that the contents of these instructions is fully understandable by the responsible personnel,
- Make sure that all the requirements and national Regulations as well as all special security measures are applied.

In lack of understanding:

- Contact the manufacturer.

During operation:

- Ensure that this user manual and other work instructions are available to the responsible staff at all times,
- Check the implementation of these instructions and all other safety user's instructions

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| | | Date: 03.2014. |

3. PURPOSE

Explosion proof fluorescent lighting fitting type SIF 236/436 intended for use in industrial areas endangered explosive atmosphere, in Zones 1,2 and in areas endangered by explosive and flammable mixtures of dust and air in Zones 21, 22 accordance with EN 60079-10-1/-2: 2009.

4. PRODUCT COMPLIANCE

Design of lighting fitting and electronic ballast is accordance with the standard EN 60598-1:2008 and all related standards. The product is in compliance with Regulations concerning equipment and protective systems for use in potentially explosive atmosphere, NN br. 34/10.

The product complies with the ATEX Directive 94/9 EC and standards:

- EN 60079-0:2012,
- EN 60079-1:2007,
- EN 60079-7:2007,
- EN 60079-18:2009,
- EN 60079-31:2009.


The product has been developed, manufactured and tested according to the existing state of technique accordance with the standards EN 9001:2008 and EN ISO / IEC 80079-34:2011.

The product is in compliance with the LV Directive 2006/95 EC.

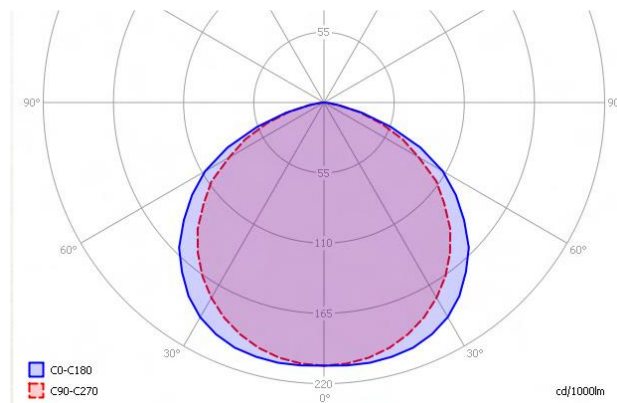
The product is in compliance with the RoHS Directive 2002/95 EC.

The product is in compliance with EMC Directive 2004/108 EC

5. DEGREE OF PROTECTION AND DATA

| | |
|------------------------------------|---|
| Certificate: | EXA 13 ATEX 0015 |
| Category and explosion protection: |  II 2G Ex d e mb IIC T4 Gb II 2D Ex tb IIIC T80°C Db |
| Ambient temperature: | -20°C ≤ T _a ≤ +50°C |
| Mechanical protection: | IP66, category 1 |
| Resistance to shock: | IK 08 |
| Class of protection: | I (PE - protective earthing) |
| Rated voltage: | 220-240 V ±10 % 50/60 Hz |
| Rated current: | - SIF 236 - . - 0,33 A - SIF 436 - . - 0,66 A |
| Light source: | - SIF 236 - ., 2 x 36 W T8/G13 - SIF 436 - ., 4 x 36 W T8/G13 |
| Power factor: | λ=0,95 |
| Light source: | - fluorescent lamp 36W, T8-Ø26 mm, accordance EN 60081:2008+A4:2012 - luminous flux 3350 lm, OSRAM LUMILUX 36W/830 |
| Lampholder: | G13 accordance EN 60061-1:2008+A45:2012 |
| Ballast: | One/two dual-channel II 2G Ex mb IIC T4 Gb electronic ballast |
| Energy classification: | EEI = AA2 |
| Safety lock: | ensures voltage free lampholders by the open cover |
| Estimate service life | 70.000 working hours at T _{amb} =40°C |
| Entries: | - on the sides of enclosure two entries Ø 25,5 ^{+0,2} _{-0,4} mm with one Ex e cable entries M25x1,5 for diameter cable Ø6-15 mm and one Ex e plug, accordance EN 62444:2013 |
| Connection terminals: | - terminal L1+L2+L3+ N + PE; max 3 x 4 mm ² , solid, stranded - terminal for protective earthing -PE; max 2 x 6 mm ² solid, stranded - terminal for external grounding, equipotential bounding, max 2 x 6 mm ² solid, stranded, flexible |
| Housing: | Epoxi/polyester powder-coated sheet steel, color RAL 9000 |
| Diffuser: | flat borosilicate glass with a high thermal and mechanical stability |
| Glass holder screw: | screw M6x30 (Z4) - 4.8 A2 |

| | |
|--------------------|--|
| Tightening torque: | - glass holder screw 2,0 Nm - enclosure Ex e terminals 2,5 Nm - pressure screw 2,5 Nm - intermediate gland and plug M25 3,5 Nm |
| Through wiring: | 5 x 2,5mm ² H05SJ-K (L1,L2,L3,N,PE), max. 16A |
| Mounting: | - pendant mounting on two ring bolt M8 DIN 580 on distance 900 mm - wall, ceiling, on pipe mounting by accessories 2 x (2 x M6) on distance 900 mm - recessed mounting in opening 1350 x 420 mm by accessories |
| Dimension: | 1340 x 380 x 125 mm (L x W x H) |
| Weight: | ca 28 kg |

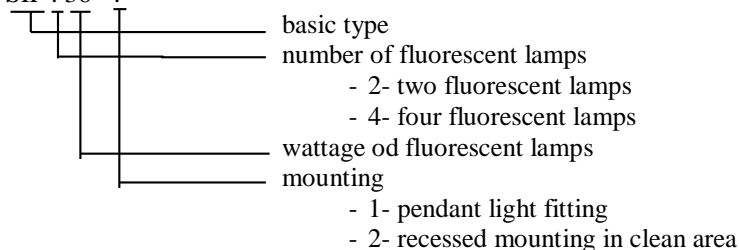
LUMINAIRE POLAR CURVE:

Light efficiency in operation: SIF 236 - . approx. 75%

SIF 436 - . approx. 60%

6. TYPE

Flourescent light fitting, tip SIF . 36 - .

**7. MOUNTING AND INSTALLATION**

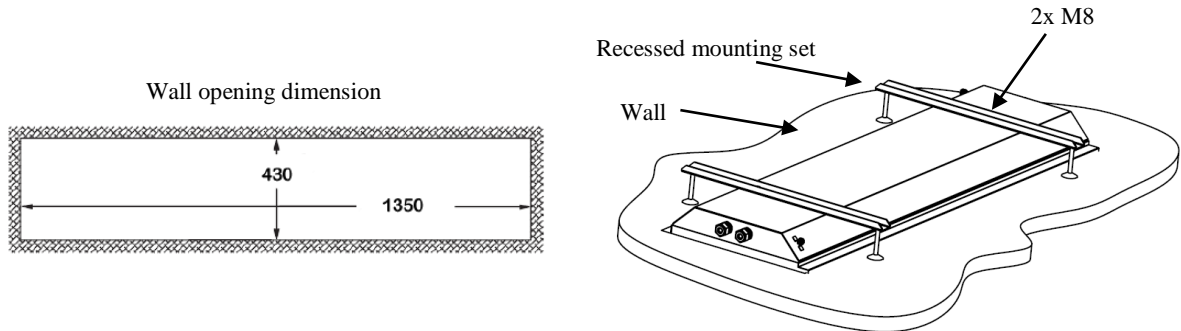
Mounting and installation of lamps is should be carried out according to the technical data marking plate of the lamp, and the additional manufacturer's instructions, national rules and regulations, as well as the generally recognized rules of technique.

The quality of the used materials ensures compliance in the standard industrial atmosphere. For special requirements please contact the drive manufacturer.

The lamp comes standard with two ring bolt M8 DIN 580 for pendant mounting. Distance between screw is 900 mm.

For special order producer will delivery:

- accessories for celing mounting,
- accessories for wall mounting,
- accessories for recessed mounting.



Recessed mounting

Cables should be installed in housing via provided cable gland. It is necessary to check that the cables are clean and undamaged. Particular attention should be paid to the selection of the inner sealing rings of the cable glands to the outside diameter of the cable. Pressure screw and intermediate gland have to be tightened with nominal torque. Unused entries should be closed by provided Ex d plug.

Electrical connection is made with connecting cables on mentle terminals L1, L2, L3, N, PE and tightening the clamps with nominal torque. At the tree-phase through wiring should be taken of the balancing phase and optionally reconnect phase connections electronic balast.

Always look on the maximum number of lights on one switch, automatic installation:

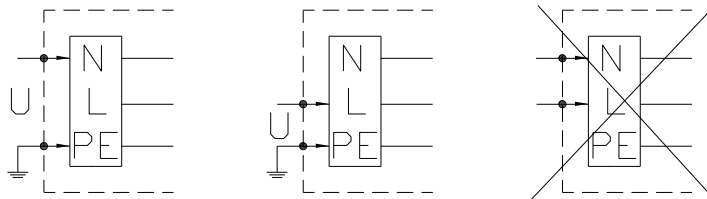
| Installation automatic switch: | 1p B 10A | 1p C 10A | 1p B 16A | 1p C 16A |
|--------------------------------|-----------------------------|-----------------------------|-----------------------------|------------------------------|
| Max. No. of lamps | SIF 236 - 10 SIF 436 - 5 | SIF 236 - 16 SIF 436 - 8 | SIF 236 - 16 SIF 436 - 8 | SIF 236 - 28 SIF 436 - 14 |

Mounting a fluorescent lamp is done in a way that the foot fluorescent lamp, the opening in the housing lampholder, gently pressing injection into the contact inside lampholder. Flourescent lamp is then roteted by 90° in the blocking position. Extraction of flourescent lamp is carried out described above in reverse order of actions. Closing the housing is done by tightening the screw frame glass with nominal torque.

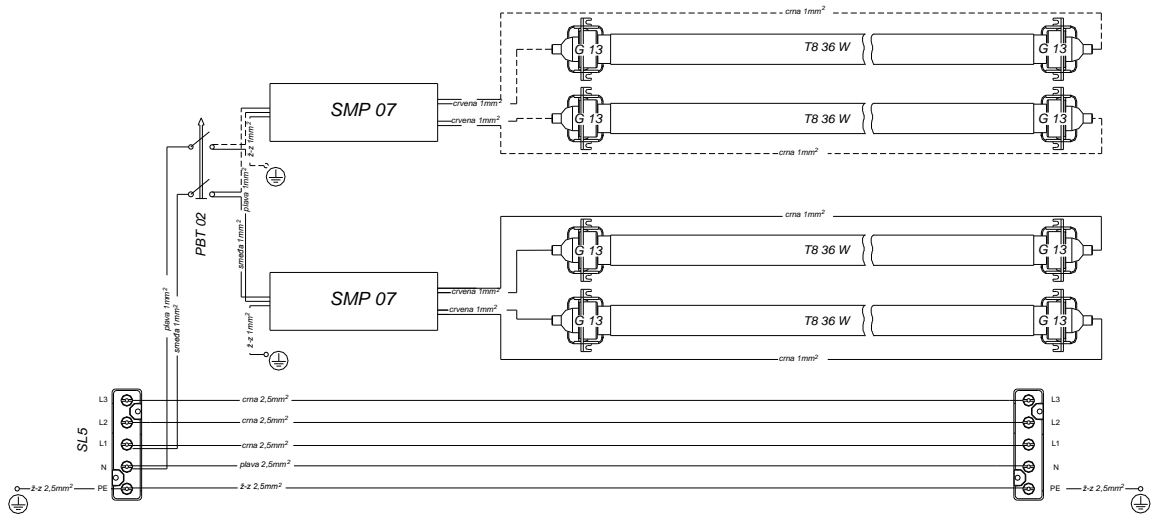
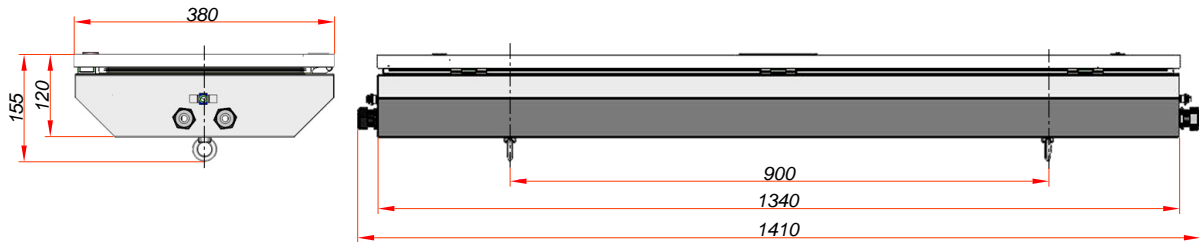
With the commissioning the control measurements of the isolation should be performed with the test voltage max. 1000 V DC and a test current 1 mA between:

- Neutral and earth conductor
- Phase and earth conductor

Testing between the phase and neutral conductor is not allowed and will get the wrong value because the electronic ballast is connected to the input circuit. For successful testing is necessary to disconnect the electronic ballast via NC switch when glass cover is opened



Wiring diagram - SIF 436:

**8. DIMENSION****9. INSPECTION, MAINTENANCE, REPAIR AND OVERHAUL**

Inspections are carried out in accordance with IEC 60079-17:2007 / C 1: 2008, general and special conditions of manufacturer and users Regulations and includes supervision of parts on which the explosion protection depends, especially:

- the housing, glass cover, cable gland, plugs, protective glass and seal are without rupture and damage,
- the glands, plugs, terminals, pressure screw, intermediate gland, screw of the glass cover are fastened with nominal torque


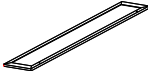






All the repairs are performed by the manufacturer or the manufacturer's authorized personal and the original parts must be provided according to the product documentation, all in accordance with EN 60079-19:2011.

Overhaul and modifications are not allowed.

If repair or any other procedure are performed on the product by unauthorized person, all producer responsibility for the product and the warranty and the manufacturer's declaration of conformity becomes invalid.

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10. SPARE PARTS AND ACCESSORIES

| SKETCH | DESCRIPTION | CODE | SKETCH | DESCRIPTION | CODE |
|---|-------------------------|------------|--|--------------------------|------------|
|  | Gasket SIF | SIF 10-130 |  | Glass cover SIF | SIF 10-140 |
|  | El. ballast SMP 07 | SMP 07/12 |  | Wall mounting set on 45° | SIF 20-140 |
|  | Ring bolt M8 | SIF 20-130 |  | Recessed mounting set | SIF 20-150 |
|  | Ex e cable gland SPU 25 | SPU 25 |  | Ex e plug SPC 25 | SPC 25 |

11. RESPONSIBILITY AND AUTHORIZATION

This instruction is the basic information about the product. It is completed by the corresponding national laws and regulations.

Production, use, certification and supervision are determined at the national level:

- a) Regulations concerning equipment and protective systems intended for use in potentially explosive atmospheres EU directive 94/9 EC (ATEX 94)
- b) Regulations on minimum requirements for safety and health protection of workers and technical inspection of facilities, equipment, installations and equipment in hazardous areas EU directive 1999/92/EC (ATEX 137).

The responsible person shall ensure their implementation at the working facility

12. STORAGE AND TRANSPORT

Transportation and warehousing of the lamps is only allowed in the original packaging, as outlined in a cardboard box.

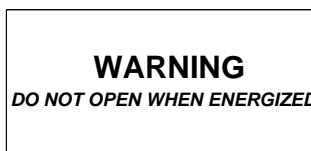
13. MANUFACTURER'S WARRANTY

The manufacturer provides a warranty on the product for a period of one year under the provisions of this user manual and the law on obligations. This statement has the force of Warranty sheet.

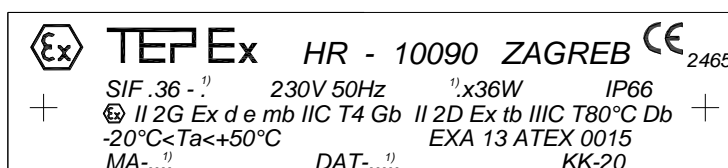
14. MARKING

Explosion protected fluorescent lighting fitting type SIF .36- is marked with:

- the label with wiring diagram on reflector the inside housing,
- warning label on reflector the inside housing



- marking label on framework housing of lamp and marking label on base plate inside housing with technical and certification data



¹⁾entered manufacturer data