


Instruction Manual Explosion Proof Radiators

Instruction Manual for Explosion Proof Radiators type ECEX6010

1. Scope

- 1.1 This equipment is ATEX certified (European Directive 94/9/CE).
- 1.2 EC type examination certificate: LCIE 03 ATEX 6282X, classified as  II 2 G Ex d IIC T3.
- 1.3 The radiator can be used in the risk zone 1 and 2, in a gas environment classified as gas group IIC.
- 1.4 The radiator is designed for heating ambient hazardous atmosphere in environments from -20°C to max. 40°C, with 95% max. relative humidity.
- 1.5 Design, choice and installing electrical equipment in hazardous areas, should be according the rules mentioned in NEN-EN-IEC 60079-14:2003 nl.

2. Description

This radiator is made up of:

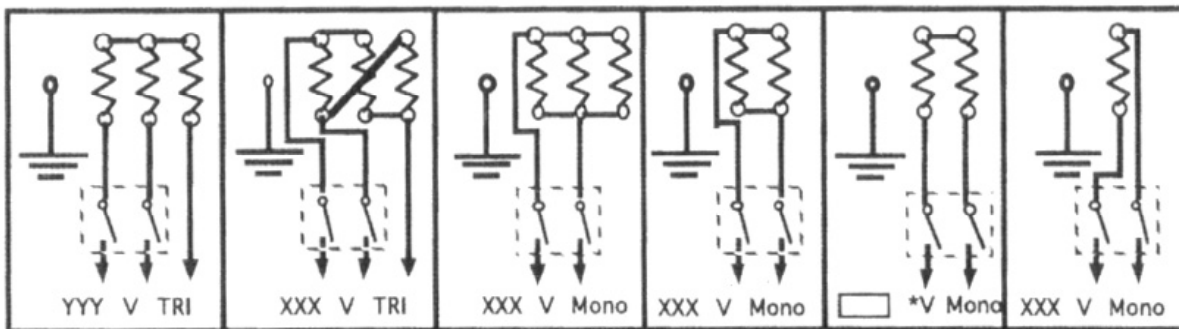
- 2.1 - Two or three heating cartridges installed inside finned thermo-wells.
- 2.2 - An openwork steel galvanised protection grille with side flanges fitted with attaching feet.
- 2.3 - An Ex d IIC flame-proof box, IP55, provided with a ground terminal and one certified cable gland for an unarmed round cable having a diameter $\varnothing 8,5-16\text{mm}$.
- 2.4 - A room thermostat, directly switching the mains voltage to heating elements. Its measurement sensor is installed inside a thermo-well. The thermostat is adjustable from 0-50°C.

3. Precautions of use

- 3.1 Check if the radiator is applied in an ATEX 137 zone and is allowed for use in that area.
- 3.2 Check if the mains voltage corresponds to the rated value printed on the name plate of the radiator. It should not exceed by more than 10% the rated value.
- 3.3 Dismantle and mounting the cable gland should only be carried out in the manufacturer factory.
- 3.4 It is prohibited to open the cover in a hazardous area when the radiator is connected to the mains supply voltage.
- 3.5 Comply with the operating temperature range under these conditions (-20...+40°C), take all necessary precautions to prevent any heat transfer to the terminal box, whose temperature at the cable input must not exceed +80°C; if necessary install a sun shield or suitable ventilation.
- 3.6 It is essential for the packing of the cable gland to be compatible with the used cable. Standard packing is designed for cables with cylindrical outer sheets within the range $\varnothing 8,5-16\text{mm}$.
- 3.7 Before closing the cover, make sure that the flame choke surfaces (facing of box, body and cover) are free of mechanical defects or foreign particles. Clean these surfaces if necessary.
- 3.8 Do not exchange the covers of two different boxes.
- 3.9 Do not energize the electrical installation until the cover has been closed correctly..
- 3.10 The radiator should be installed in a horizontal position (attaching feet to the ground or on wall brackets). This condition is imperative to guarantee operational safety.
- 3.11 The radiator should not be covered and should enable free circulation of air by natural convection. Its grille must not be dusted up.
- 3.12 Before opening the terminal box , wait min. 15 minutes after the mains supply voltage is switched off.
- 3.13 Connection should be done with equipment suitable for use in the specific hazardous area for gas group IIC.

4. Elektrical connection

- 4.1 Cover disassembly (wait min. 15 minutes after the mains supply voltage is switched off):
- remove the four attaching screws.
 - take of the cover: Be careful because it is specific to this box body! Do not exchange the covers of two different radiators. To prevent clamping of the cover pull it out gently straight out the box.
- 4.2 insert the cable through the cable gland and then connect the two or three phases to the terminals, as per one of the following scheme 4.2: (where XXX is the voltage of each heating element and YYY is the star coupling three-phase.)



Schema 4.2

- 4.3 It is mandatory to connect the ground terminal to the installation ground.
- 4.4 Check that all the connections are properly tightened.
- 4.5 Tighten the cable gland packing to obtain tightness on the cable sheath.
- 4.6 Adjust the thermostat at the desired value.
- 4.7 Fit the cover by engaging it fully (to comply with the required length of flame choke interstice seal).
- 4.8 Screw down fully and tighten the four screws.

5. Commissioning procedure

Before connections to the mains supply voltage, check the following points:

- 5.1 Check if the mains voltage corresponds to the rated value printed on the name plate of the radiator. It should not exceed by more then 10% the rated value.
- 5.2 The radiator should not be covered and should enable free circulation of air by natural convection.
The radiator should be installed in a horizontal position
- 5.3 Adjust the internal thermostat: check that turning the knob starts-on and switches-off the heating. (whereas radiator is de-energised or in a non-hazardous area).
Note: The information printed on the dial scale of the thermostat is not significant of temperature at which the room will be regulated; this one depends on the installation conditions. If necessary, make successive adjustments to obtain the required temperature (always whereas radiator is de-energised or in a non-explosive atmosphere).
- 5.4 Switch on the mains supply voltage.

6. Maintenance

- 6.1 Check the recommendations according par. 3, 4 and 5 have been followed up.
- 6.2 After 50 hours of operation, check that the connections are still tight (for disassembly and assembly see par. 4 and check the recommendations according par. 3, 4 and 5 have been followed up.
- 6.3 Make sure that the grille and the finned tube heating elements are not dusted up (clean them if necessary).
- 6.4 IF it becomes necessary to replace the heating elements, consult Enon.

7. Guarantee:

Guarantee is according our general supply and sales conditions.

We are not responsible for any damage caused by:

- Use with a mains supply voltage which exceed by more then 10% the rated value as mentioned on the name plate.
- Failure to comply with the operating limits.
- Lack of servicing, an impact, or by clumsy or inexperienced users.
- Failures because not complying to this manual, or common rules concerning electrical installation.
- Corrosion phenomena

Overige productgroepen

- Verwarmingselementen
- Ruimteverwarming
- Procesverwarming
- Explosieveilige verwarming
- Vloerverwarming
- Opritverwarming
- Tracing
- Meet- & regelapparatuur

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