

BA_W5-003_EN



•General

The electric heating radiator EHR T4, T3 is equipment and protective system intended for use in potentially explosive atmospheres.

The heating radiator can be used in areas in which an explosive atmosphere occurs in operation occasionally (Zone 1). The mixture can either be consisting of air together with flammable substances in the form of gas/vapor or with a cloud of combustible dust (G/D).

EU-Type Examination Certificate : EPS 18 ATEX 1036
 IECEx Certificate of Conformity : IECEx EPS 18.0024
 EAC Ex Certificate : RU C-DE.EX01.B.00032/19

Marking: II 2 G Ex db IIC T4 / T3 Gb
 II 2 D Ex tb IIIC T135°C / T200°C Db

•Function

The electric heating radiators, EHR are intended for heating protection boxes, cabinets or shelters.

The heaters are designed for operation with an external temperature controller or switch.

Attach the temperature controller or switch in an area with a regulated temperature. Advisable are areas where free air flow is possible. With respect to cabinet dimensions we recommend a position at the bottom close to the cabinet centre as temperature might slightly vary throughout the cabinet height.

Inside the EHR flameproof enclosure is a manual reset, bimetal actuated temperature limiting thermostats to protect exceeding the maximum allowable surface temperature defined by the specified temperature class.

The temperature limiter is voltage maintained. The resetting of the electrical interlock and latching function is done by disconnecting the heater from power supply.

The Electric Heating Radiators are available in a short 200mm or a long 400mm enclosure with a heating power from 200W to 1000W for horizontal or vertical mounting.

For detailed information look up our catalogue.

Failure switch (250VAC, 16A), temperature sensors (PT100), armoured cable or other options on request.

•Technical Data

Rated voltage: 120 / 250 VAC
 Rated power Rated Current:
 120 / 250 VAC

200 W	1,7 / 0,9 A
300 W	2,5 / 1,2 A
500 W	4,2 / 2,0 A
750 W	6,3 / 3,0 A
1000 W	8,4 / 4,0 A

Connection cable: SIHF 3 x or 5 x 2,5 mm², 3 m long
 Ambient temp.: T4: -60°C to +80°C, T3: -60°C to +140°C
 Operating temp.: T4: -60°C to +120°C, T3: -60°C to +180°C
 Protection degree: IP 68

For installation and operation it is essential to follow this Manual and the relevant national regulations in addition to generally accepted good engineering practice and the IEC 60079/14 "Electrical installation design, selection and erection".

The specified rated data on the type plate of the heater must always be taken in account.

•Mounting

The electrical heating radiator can be mounted directly at the mounting plate or cabinet bottom with the enclosed mounting brackets.

For a perfect antifreeze effect a vertical mounting position of the cooling fins must be provided because of correct convection.

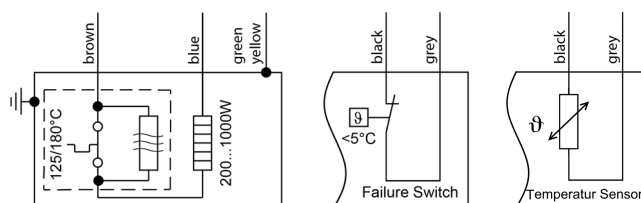
During disassembly, turn off the power supply, remove the electrical connections and remove the mounting screws.

•Commissioning

The electric heating radiator EHR is delivered operable from the manufacture. The connecting cable of the EHR is foreseen to be joined in a junction box according to wiring diagram. The junction box must comply with the requirements of an approved type of protection according to IEC 60079-0, if the connection is in a hazardous area.

The EHR is intended for stationary installation, so the connection cable must be protected against mechanical damage.

The equipotential bonding and earthing shall be ensured by connecting the EHR to the entire system.



•Electrical Protection

Line and short circuit protection

The switch-off and electrical isolation of all circuit power supply conductors including the neutral should be done by Miniature Circuit Breaker (MCB) in a switchgear. The rated current should be limited to 32A .

Residual current circuit breakers and insulation monitoring

To limit the heating effect due to earth-fault and earth-leakage currents the additional protection is required:

In a TT or TN system a residual current device (RCD) with a rated residual operation current not exceeding 100mA shall be used. Preference should be given to RCDs with a rated residual operating current of 30mA.

Residual current circuit breakers with overcurrent protection

In a TT or TN system also a compact protection device (RCBO) which combine the overcurrent function of a MCB with the earth fault functions of a RCD can be used.

Overcurrent protection

The rated current and the tripping characteristic of an overcurrent protection must be matched to the rated current of the switching or control device possibly used.

Potential equalization

At the metallic housing of the EHR is a protective conductor connection for connecting to the external potential equalization. The potential bonding conductor shall be connected properly. When connecting two conductors, they must have the same size.

•Operation, Maintenance

Devices in hazardous area must be installed, supervised, maintained and kept in good conditions by the owner of the plant. For information, refer to IEC 60079-17. Only skilled workers are allowed to do maintenance and the elimination of disturbance work. Do not perform any independent repair of defective heating plates, but send it back to SCHRAMM. Unauthorized repairs and disassembly will automatically eliminate warranties and liabilities.