

BA_W5-001_EN



• General

The electric heating plate EHP 50, EHP 200 T4, T3 is equipment and protective system intended for use in potentially explosive atmospheres.

The heating plate 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 Certific. : EPS 15 ATEX 1041
 IECEx Certificate of Conformity : IECEx EPS 15.0055
 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 plate EHP 50, EHP 200 is intended for heating manifolds, protection boxes or small enclosures. Inside the heating plate there are several PTC heating elements or a cartridge heater with self-limiting temperature characteristic. A continuous temperature control is attained due to increasing ohmic resistance with increasing temperatures.

An internal thermal cut-off fuse prevents the heater from exceeding the maximum allowable surface temperature defined by the specified temperature class.

The following options are available:

- R = Cooling fins and mounting brackets
- F = Failure switch T < 5°C (250VAC, 5A)
- B = Cooling fins, mounting brackets and failure switch
- Armoured cable or other options on request

• Technical Data

Rated voltage: 110-250VAC
 Max. Rated current: EHP 50 0,5A, EHP 200 2A
 Rated Power: EHP 50 T4: 50W, EHP 50 T3: 80W, EHP 200 T4/T3: 200W
 Connection cable: SIHF 3 x or 5 x 1 mm², 3 m long
 Dim. EHP 50: L x W x H 160 x 30 x 60 mm without fins
 Dim. EHP 200: L x W x H 190 x 30 x 90 mm without fins
 Weight EHP 50: 0,8 kg
 Weight EHP 200: 1,5 kg
 Ambient temp.: -60°C to +80°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 electric heating plate EHP can be mounted with the attached mounting brackets or with the slots and holes onto the object to be heated. The mounting position can be randomly chosen.

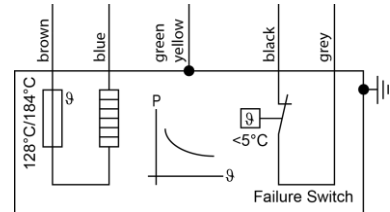
During disassembly, turn off the power supply, remove the electrical connections and remove the mounting screws.

• Commissioning

The electric heating plate EHP is delivered operable from the manufacture. The connecting cable of the EHP 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 EHP 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 EHP 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 (max. cable length 3m).

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

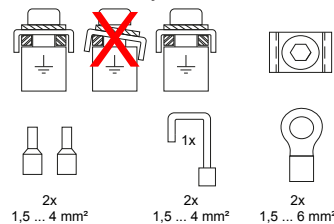
In a TT or TN system also a compact protection device (RCBO) which combine the overcurrent function of a MCB with the earth fault functions of a RCD can be used.

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 EHP is a protective conductor connection for connecting to the external potential equalization. The potential bonding conductor shall be connected as shown. 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.