



### 3 Technical data

Rated voltage	maxi. AC 250 V
Permissible operating voltage	maxi. AC 265 V
Rated current (in compliance with VDE 0298)	maxi. 10 A
Ambient temperature	-50 °C up to +60 °C
Operating temperature range without thermostat	-50 °C up to +180 °C
Operating temperature range with thermostat (with type of heater 27-2261 .../... and 27-2263 .../...)	-50 °C up to +80 °C
Operating temperature range with thermostat (with type of heater 27-226A .../... and 27-226B .../...)	-50 °C up to +180 °C
Installation position: Vertical flow through fins	
Switching capacity of thermostat and failure alarm	16 A, AC 250/400 V

Special voltages are possible with appropriate output adaptation and component selection.

#### Conformity to standards

- EN 60079-0: 2006 EN 55014-1: 2006
- EN 60079-1: 2004 EN 60529: 1991+A1: 2000
- EN 60079-18: 2004
- EN 61241-0: 2006
- EN 61241-1: 2004
- EN 61241-18: 2004

## 1 Use

The HCS radiators are produced in compliance with Directive 94/9/EC and approved for direct heating by flange mounting and/or for room heating by natural convection. They can be used in hazardous areas in accordance with the Ex marking specified under point 2.

The standard version has thermostats integrated in the connection cable as protection against frost. Versions without thermostat can be used as protection against condensation or with an external controller for temperature maintenance.

## 2 Explosion protection

#### EC Type Approval Certificate:

PTB 03 ATEX 1139 X

#### Ex marking:

(depending on the type being used: the following maximum Ex protection type)

⊕ II 2G Ex D IIC or dm IIC resp. T4, T3

⊕ II 2D Ex tD or tDmD resp. A21 IP 65 T 135 °C, T 200 °C

## 4 Installation

During unpacking and transport, take care not to bend or place weights on the connection cable. The radiator must be mounted as shown in point 9 with fins in a vertical position in order to ensure effective convection. The specified minimum distances from the ground, walls and neighbouring devices must be adhered to.

The connection cable must be firmly laid with mechanical protection up to the entry into the terminal box provided by the customer while complying with the permissible bending radius of 5 x external diameter. If connected in a hazardous area, it must be connected through an enclosure that meets the requirements of the types of protection specified in EN 60079-0 Section 1. During installation the max. permissible temperatures of the neighbouring components must be observed. When determining the operating temperature, the max. permissible ambient temperature, self-heating and perhaps the heat conduction (medium) must be taken into account. In Types 27-2061.../... and Type 27-2063 The thermostat must be built into an enclosure that corresponds to the requirements in 60079-18 section 7.1. A 16-A fuse in conformance to DIN 41571 or IEC 60127 must be connected upstream as a protection against short circuits. This fuse may be accommodated in the associated supply device or must be connected upstream separately. The safety rated voltage must be equal to or greater than the thermostat's specified nominal voltage.

21-2000-7D0001-07/10-BEH-292957

The connection capacity of the automatic circuit breaker must be equal to or greater than the maximum assumable short-circuit current at the site of installation. The equipotential bonding or grounding must be ensured by mounting the thermostat onto the entire system.

There is the optional possibility of using external thermostats that have a separate EC Type Examination Certificate.

## 5 Connection

The radiator may be connected and secured only by a specialist complying with the "rated voltage" and "rated current" specified on the type label:

The radiator has reached its rated power once the operating voltage = rated voltage. Mains voltage fluctuations up to 10 % are permissible then.

To protect against short-circuits and for cable protection, circuit breakers with type B characteristic up to 16 A can be used. Additional equipotential bonding is necessary. The terminal block provided for this has the earthing sign. Residual current devices increase safety for people and protection for equipment and are therefore recommended.

## 6 Commissioning

When the radiator has been installed in accordance with the guidelines given under points 3 and 4 and it has been ensured that effective convection is not obstructed at any time by inadmissible covers, the radiator may be switched on.

A temperature fuse will permanently open the heating circuit if these installation instructions are not observed.

## 7 Maintenance

Thanks to its type of construction, the radiator does not require any maintenance work. The intervals for the performance and safety tests can be freely selected in accordance with the owner/managing operator's applicable regulations.

## 8 Safety Instructions

When mounted in an exposed position, there is a risk of injury from the rib ends and hot surfaces:

- Max. 160 °C for T3 heaters
- Max. 100 °C for T4 heaters
- The thermostat must be mounted assembled in the air

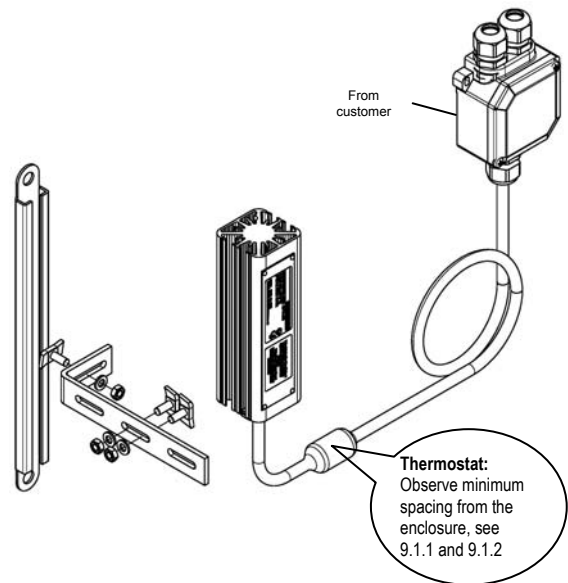
## 9 Installation position and minimum spacing



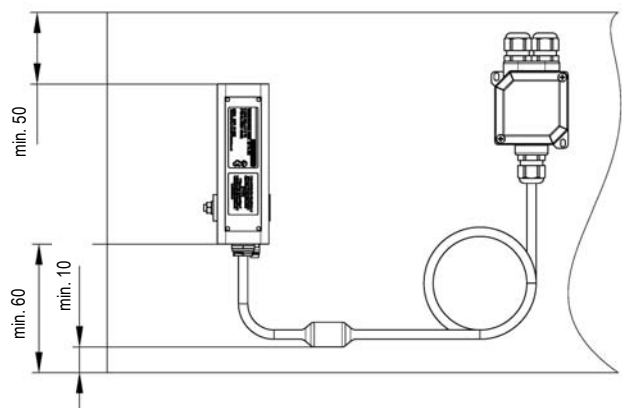
When assembling, the following must be observed:

- the ribs must be vertical
- the minimum distance from the enclosure must be adhered to, see 9.1.1 and 9.1.2
- the type label must stay legible
- measurements must be given in mm

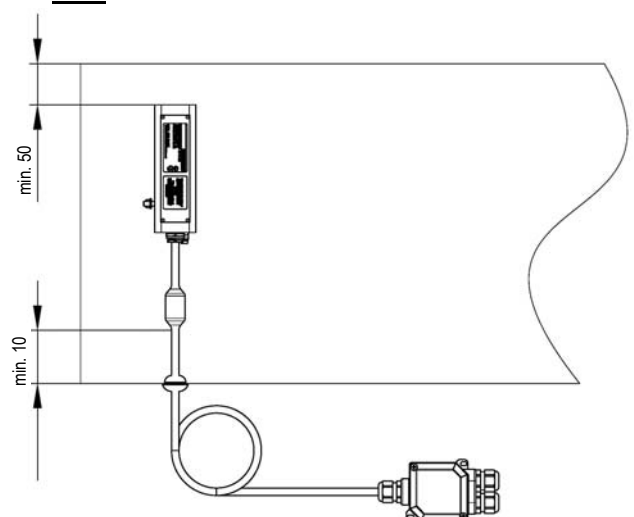
### 9.1 HCS



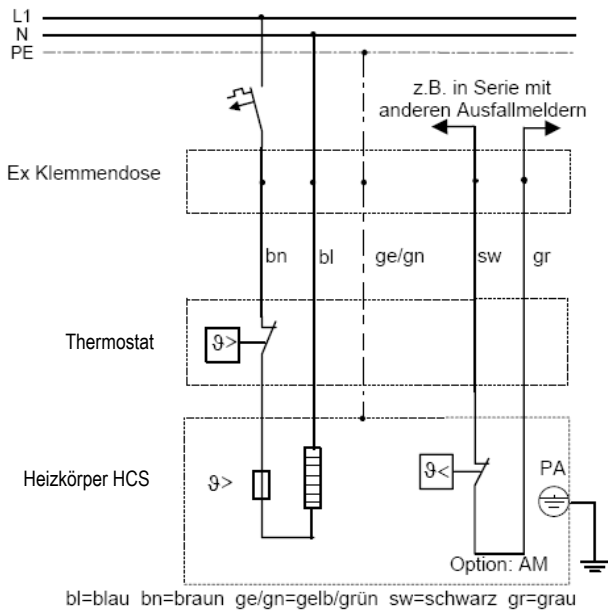
#### 9.1.1 with wiring box provided by the customer inside



#### 9.1.2 with wiring box provided by the customer outside



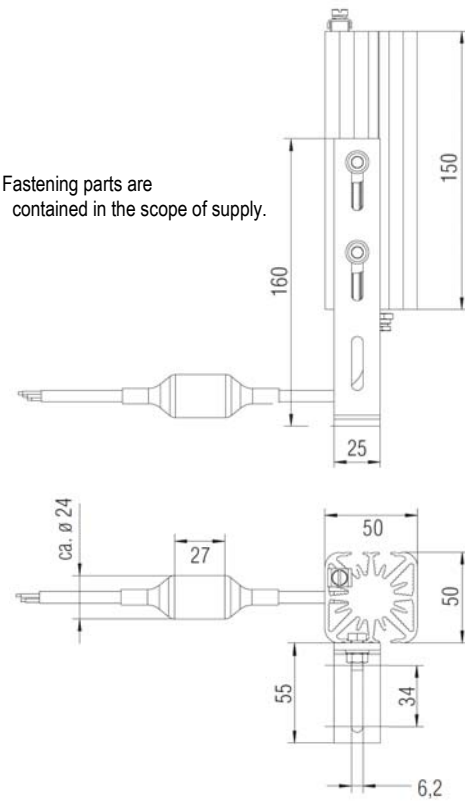
## 10 Wiring diagram



## Dimensions



Fastening parts are contained in the scope of supply.



## 11 Service address

BARTEC GmbH  
Max-Eyth-Straße 16  
D-97980 Bad Mergentheim

Tel. + 49 7931 597-0  
Fax + 49 7931 597119

E-mail: [info@bartec.de](mailto:info@bartec.de)  
Web: [www.bartec.de](http://www.bartec.de)

Erklärung der Konformität  
 Declaration of Conformity  
 Attestation de conformité

**BARTEC**  
 BARTEC GmbH  
 Max-Eyth-Straße 16  
 97980 Bad Mergentheim  
 Germany

N° 21-2000-7C0002



Wir

We

Nous

**BARTEC GmbH,**

erklären in alleiniger Verantwortung, dass das Produkt

declare under our sole responsibility that the product

attestons sous notre seule responsabilité que le produit

**Heizkörper  
 HCL, HCM, HCS**

**Heater plate  
 HCL, HCM, HCS**

**Plaque chauffante  
 HCL, HCM, HCS**

**Typ 27-206\*-\*\*\*\*/\*\*\*\* Typ 27-216\*-\*\*\*\*/\*\*\*\* Typ 27-226\*-\*\*\*\*/\*\*\*\***

auf das sich diese Erklärung bezieht den Anforderungen der folgenden Richtlinien (RL) entspricht

to which this declaration relates is in accordance with the provision of the following directives (D)

se référant à cette attestation correspond aux dispositions des directives (D) suivantes

**ATEX-Richtlinie  
 94/9/EG  
 EMV-Richtlinie  
 2004/108/EG  
 RoHS  
 2002/95/EG  
 WEEE  
 2002/96/EG**

**ATEX-Directive  
 94/9/EC  
 EMC-Directive  
 2004/108/EC  
 RoHS  
 2002/95/EC  
 WEEE  
 2002/96/EC**

**ATEX-Directive  
 94/9/EC  
 CEM-Directive  
 2004/108/CE  
 RoHS  
 2002/95/CE  
 WEEE  
 2002/96/CE**

und mit folgenden Normen oder normativen Dokumenten übereinstimmt

and is in conformity with the following standards or other normative documents

et est conforme aux normes ou documents normatifs ci-dessous

**EN 60079-0:2006  
 EN 61241-0:2006  
 EN 55014-1:2006**

**EN 60079-1:2004  
 EN 61241-1:2004  
 EN 60529:1991+A1:2000**

**EN 60079-18:2004  
 EN 61241-18:2004**

**Kennzeichnung**

**Marking**

**Marquage**

**II 2 G Ex d IIC bzw. dm IIC T4, T3  
 II 2 D Ex tD bzw. tDmD A21 IP65 T135°C, T200°C**

**Verfahren der EG-Baumusterprüfung**

**Procedure of EC-Type Examination**

**Procédure d'examen CE de type**

**PTB 03 ATEX 1139 X**

**CE 0044**

Bad Mergentheim, den 25.11.2009

Dr. Anjou Appelt  
 Geschäftsleitung / General Manager