1 Use

The HCM 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 a thermostat 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 Examination Certificate:

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Ex marking:

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

Ⓔx II 2G Ex d IIC and dm IIC respectively T4, T3

Ⓔx II 2D Ex tD and tDmD resp. A21 IP 65 T 135 °C, T 200 °C

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

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. When installing, 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 27-2161 …./…. and 27-2163 …./…. 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.

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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. Repairs may be done only by the manufacturer.

8 Safety Instructions

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

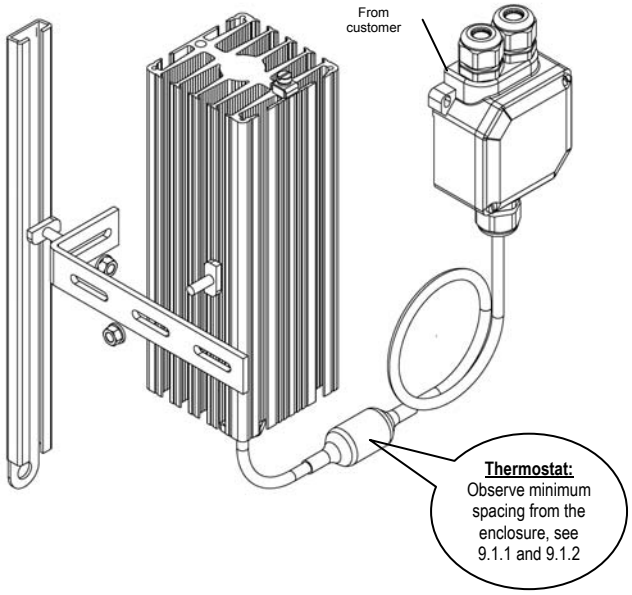
- Max. 160 °C for T3 heaters
- Max. 100 °C for T4 heaters
- The thermostat must be mounted assembled in the air

9 Installation position and minimum spacing

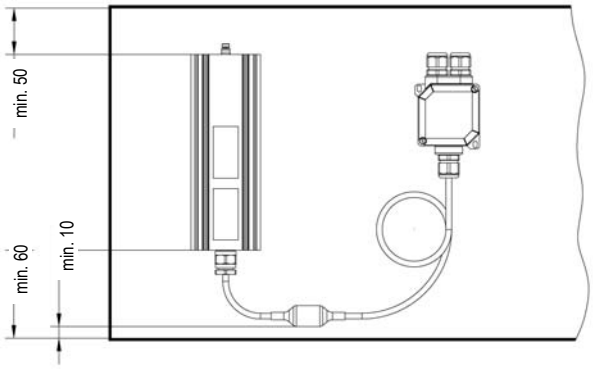
When assembling, the following must be ensured:

- The ribs must be vertical
- The minimum distances 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

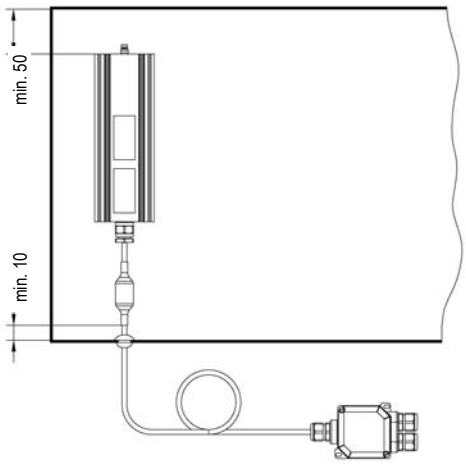
9.1 HCM



9.1.1 with wiring box provided by the customer inside



9.1.2 with wiring box provided by the customer outside



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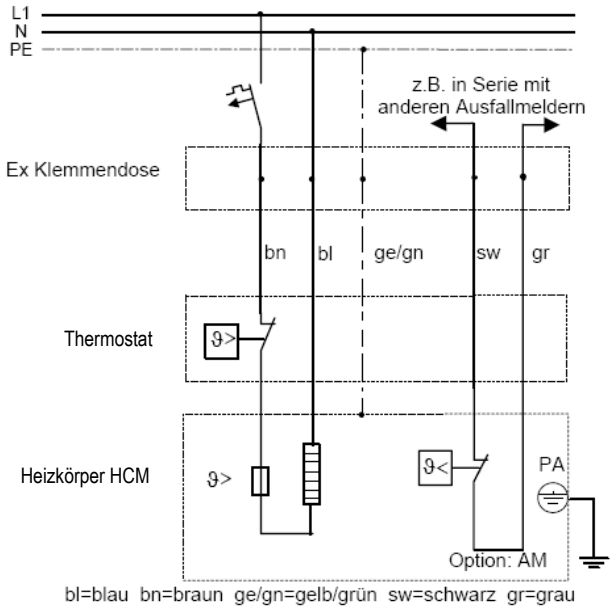
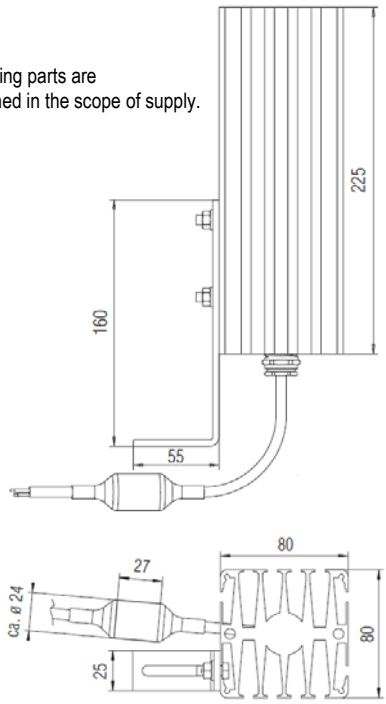
10 Wiring diagram



Dimensions

Fastening parts are contained in the scope of supply.



11 Service address

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Erklärung der Konformität
Declaration of Conformity
Attestation de conformité

Nº **21-2000-7C0002**

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

CE

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 / Heater plate / Plaque chaufante
HCL, HCM, HCS / HCL, HCM, HCS / 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 / **ATEX-Directive 94/9/EC** / **ATEX-Directive 94/9/CE**
EMV-Richtlinie 2004/108/EG / **EMC-Directive 2004/108/EC** / **CEM-Directive 2004/108/CE**
RoHS 2002/95/EG / **RoHS 2002/95/EC** / **RoHS 2002/95/CE**
WEEE 2002/96/EG / **WEEE 2002/96/EC** / **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

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CE 0044

Bad Mergentheim, den 25.11.2009

Dr. Anjou Appelt
Geschäftsleitung / General Manager