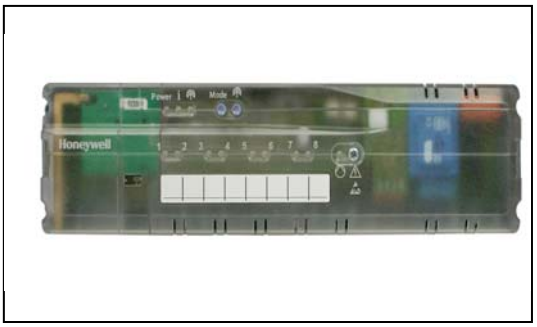
Honeywell

HCE80/HCC80/HCE80R/HCC80R

UNDERFLOOR HEATING-ZONEING CONTROLLERS

PRODUCT DATA



FEATURES

- **Easy and fast installation because the new wiring design**
- **Pluggable terminals for fast wiring connection because clamp contacts**
- **Integrated pump relay for pump control Relay (230V AC non potential free contact)**
- **Integrated antenna for the controllers HCC80 and HCC80R only**
- **External antenna for HCE80 and HCE80R only**
- **Up to 3 controllers can be connected to one antenna external HRA80 or integrated antenna**
- **Basic 5 configuration 5 zones**
- **Easy extendable with HCS80 for up to 8 zones**
- **Central operating via HCM200D / CM67z possible**
- **LED indication for voltage, operation mode, status and errors, RF check**
- **Outputs for a maximum of 24 thermal actuators**
- **Analogue output for boiler feedback to MCR200 / MCR40/ Panther / Smile (only HCE80/HCC80)**
- **Boiler control with integrated boiler relay potential free contact 42V (only HCE80R and HCC80R)**
- **Boiler feedback in dependence of valve setting with HC60NG possible**
- **Switchable between normally closed/open thermal actuators**
- **Potential free switch over contact heating / cooling**

GENERAL

The underfloor heating-zoning controllers are used for individual room temperature control. The applications are underfloor heating and radiator control as well. Each zone can be controlled with easily operating devices used as analogue or digital interface. The controllers are designed with an intelligent control algorithm (Fuzzy control) to keep the room setpoint temperature constant. Because of the used system components HCW82/HCF82/CM67z the measured room temperature will be sent to the controllers. The basic configuration of each controller HCE80/HCC80/HCE80R and HCC80R is 5 zones however it can be upgraded up to 8 zones by using the extension module HCS80.

Each zone can be controlled individually with time program by using the CM67z and HCM200D. With HCM200D up to 16 zones can be controlled with their own time program which save energy costs.

Two types of controllers are provided with internal and external antenna HRA80. Up to 3 controllers can be connected to one antenna. The controllers HCE80/HCE80R are connected with the external antenna HRA80. The controllers HCC80/HCC80R include the antenna on the circuit board. The antenna includes also the transceiver 868,3MHZ.

Because of the new wiring concept the thermal actuators can be installed very fast and pre wired without screws. All connectors are pluggable.

Cooling applications are also possible by switching from heating into the cooling mode with potential free change over contact.

Note: The controllers HCE80/HCC80/HCE80R and HCC80R have the same functionality exception the output for the boiler feedback.
HCE80/HCC80: Analogue output for OTC controllers MCR, Panther, Smile (additional boiler relay not available)
HCE80R/HCC80R: Additional boiler relay 42V (analogue output for OTC controllers is not available

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SPECIFICATIONS

Electrical

Voltage supply **:** 230 V AC, 50 Hz + 10 % / -15

Power consumption **:**max. 1750 VA with connected Pump6A)
max180 VA without pump

Integrated pump relay : 42 Volt potential contact, 6A

Safety fuse : Ceramics safety fuse 230 VAC, 2,5 A swift, 5 x 20 mm

Optional : Expansion module HCS80 enhance the controller to 8 zones

Wiring

Admissible cable types and lengths :

Thermal actuators	
Cable diameter	Min. 3.5 mm/Max. 5.3mm
Cable length	Max. 400 m
Cable cross-section	Max. 1.0 mm²
Strip length	4 mm
Network and pump connection 230 VAC	
Outside cable diameter	Min. 8.0 mm/Max. 11 mm
Cable length	Max. 100 m
Cable cross-section	Max. 1.5 mm²
Strip length	7 mm
Antenna	
Cable length	Max. 30 m
Cable cross-section / type	JE-LiYCY 2x2x0.8 mm²; JE-Y(St)2Y 2x2x0.8 mm²; 2 x 0.5 mm²
Heating / Cooling, Boiler feedback	
Cable length	Max. 100 m
Cable cross-section / type	JE-LiYCY 2x2x0.8 mm²; JE-Y(St)2Y 2x2x0.8 mm²; 2 x 0.5 mm²

RF COMMUNICATION

RF band : 868,3 MHz Transceiver (integrated in the antenna)

The external HRA80 includes the transceiver used for HCE80 and HCE80R

HCC80 and HCC80R includes the antenna and transceiver on the circuit board

Receiver class : 2

RF communication range : 30m in a residential building environment

RF communication : short, high rate transmission to

Technology minimize air time and avoid collisions

ENVIRONMENTAL and STANDARDS

Mounting : Wall mounting or DIN track

Measurements (WxHxD) : 350 x 52 x 82 mm

Protection class : IP 30

Operating temperature : 0…+50 °C

Storage temperature : -20.....+70 °C

Relative humidity : max. 5…93 %

Fire protection class : 0

Authorization : C

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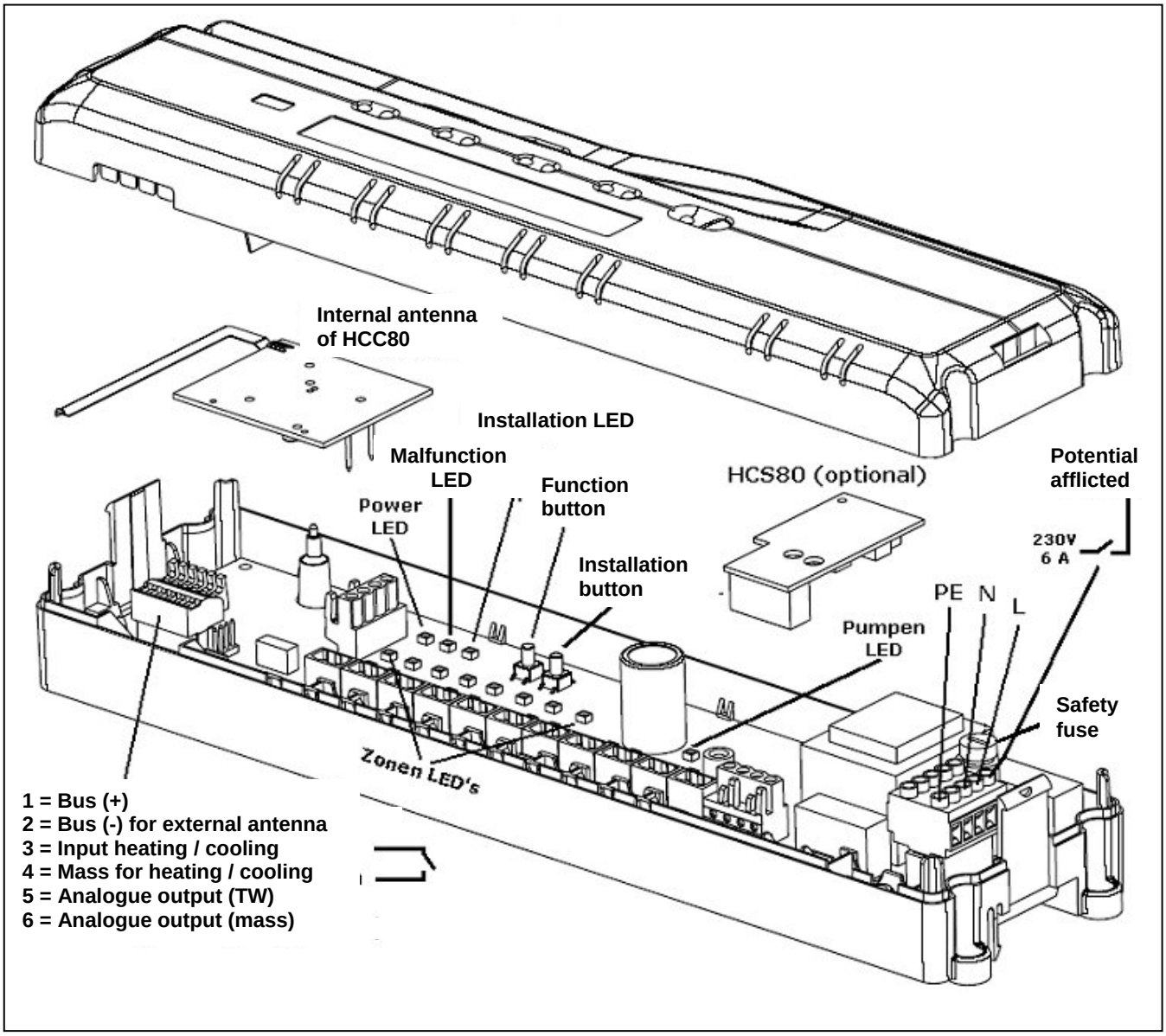
Internal antenna of HCC80
Installation LED
Malfunction LED
Power LED
Function button
Installation button
HCS80 (optional)
Potential afflicted
230V 6 A
PE N L
Pumpen LED
Safety fuse
Zonen LED's
1 = Bus (+)
2 = Bus (-) for external antenna
3 = Input heating / cooling
4 = Mass for heating / cooling
5 = Analogue output (TW)
6 = Analogue output (mass)

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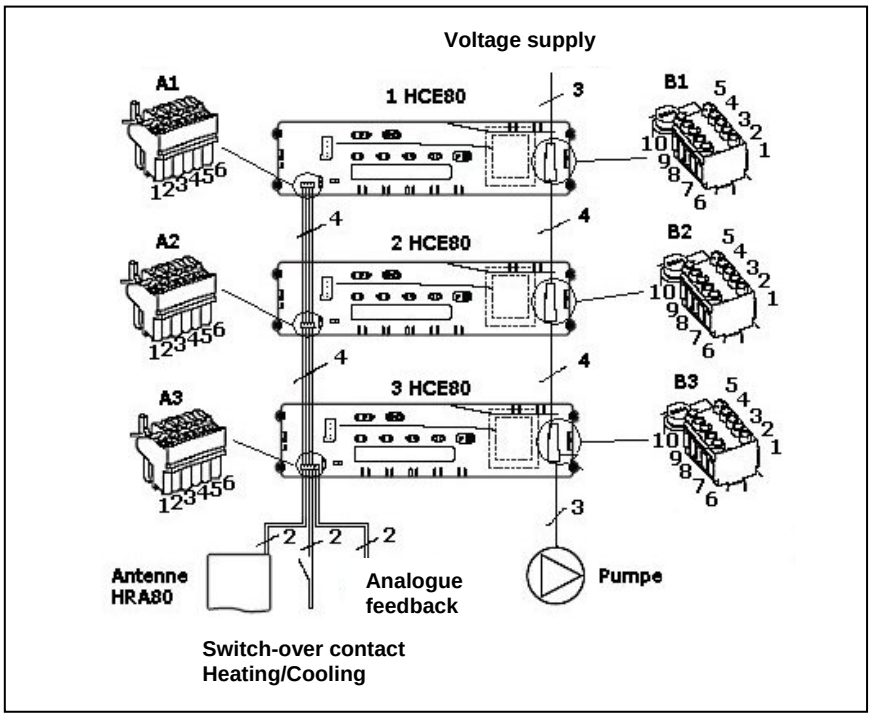
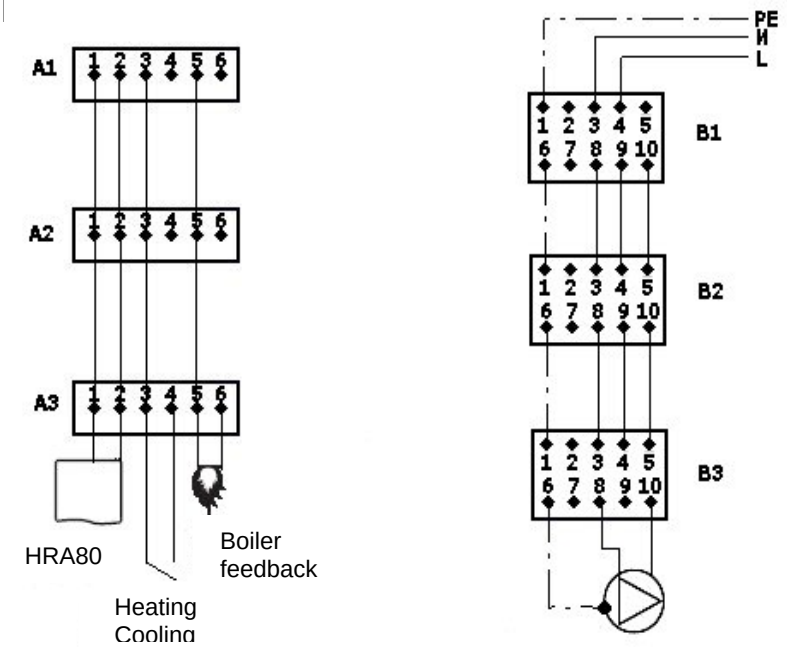
Wiring connections

Example



1 = (+) Bus for external antenna
2 = (-) Bus for external antenna
3 = Input heating / cooling
4 = Mass for heating / cooling
5 = Analogue output (TW)
6 = Analogue output (mass)

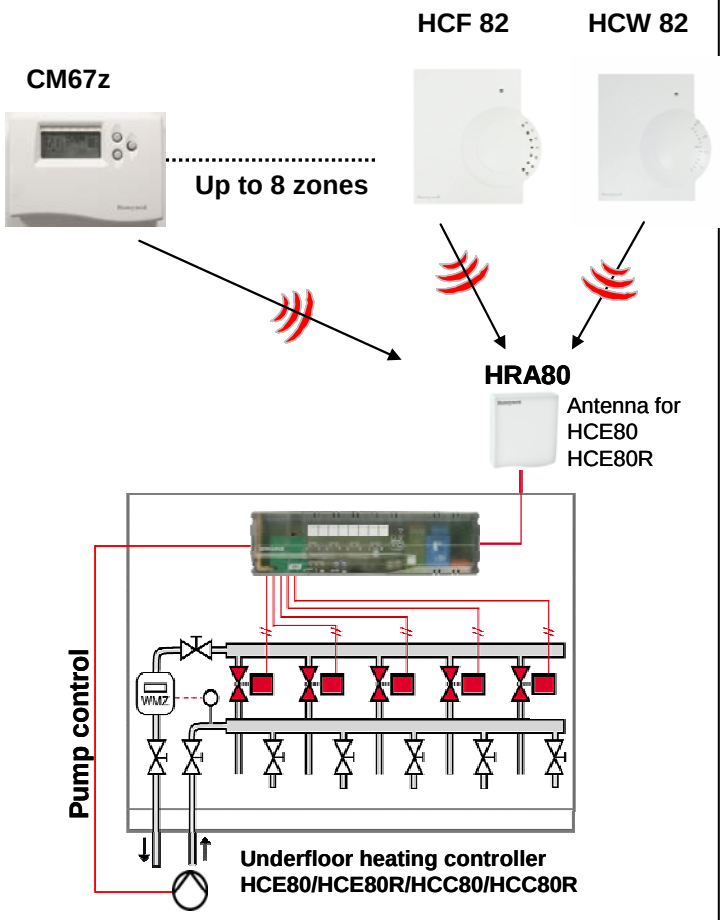
1 + 6 = Ground wire (PE)
3 + 8 = Neutral wire (N)
4 + 9 = Phase (L)
5 + 10 = Pump outlet (220 V)



APPLICATION EXAMPLES

Application A

Underfloor heating with and without time program .
The room unit CM67z can control up to 2 zones with individual time program. Only the zone 1 of the CM67z includes the room sensor for zone 2 the HCF82 must be additional allocated for the room temperature measurement to the same zone of the underfloor heating controller. The HCW82 is sending the room temperature and setpoint offset to the allocated zones without time program.
Communication 868,3 MHZ



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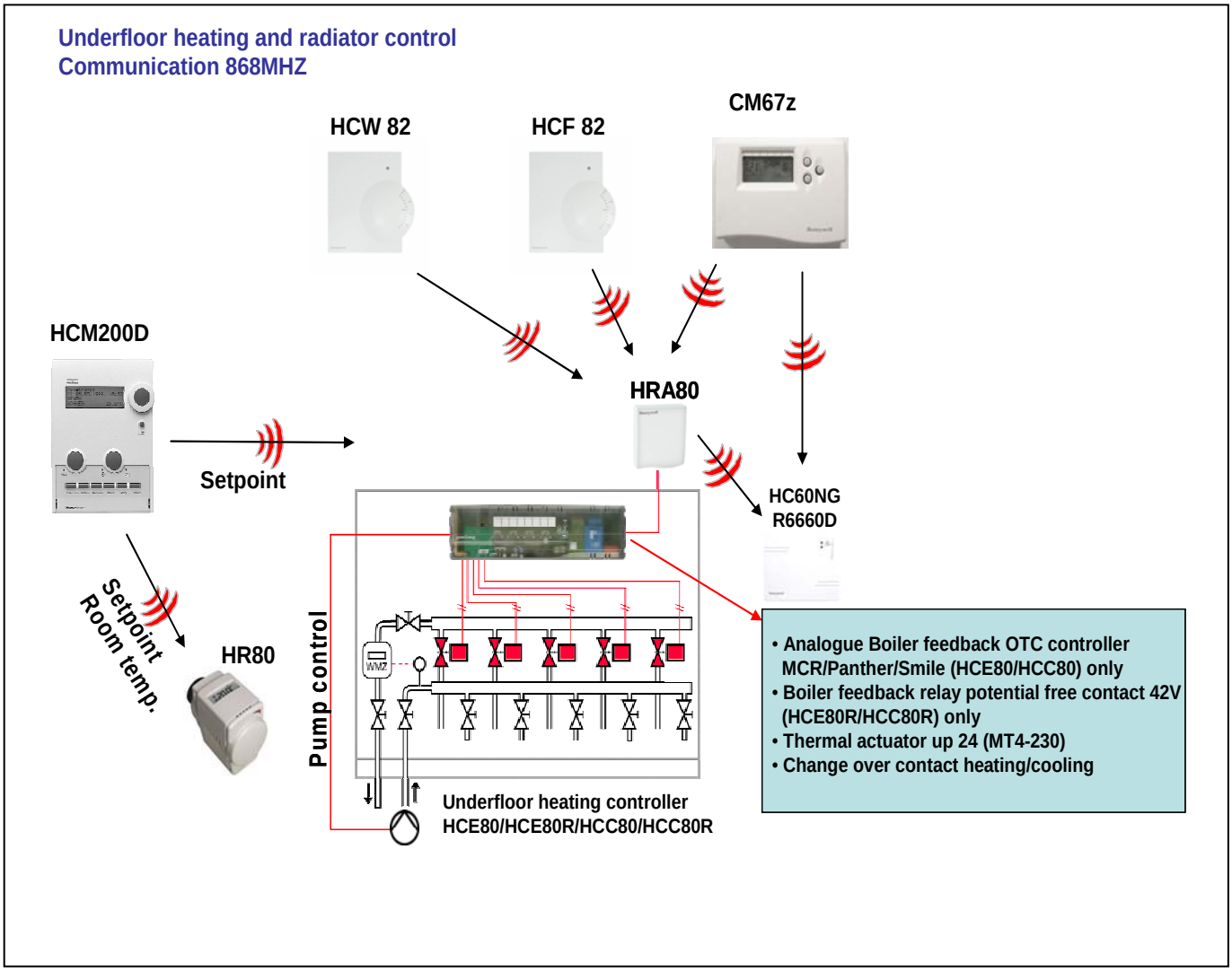
Application B



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