BUILDING AUTOMATION CONTROL TECHNOLOGY SENSORS



## **BACnet room controller**

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Smart solutions for smart buildings

Smart solutions for smart buildings



## **BACnet room controller KTRBUu-217.456**

The alre BACnet room controller with graphic display is suited to time-based heating and cooling operation in 2- or 4-pipe systems. The operating interface is both attractive and intuitive and has proven itself over the years in other product ranges from ALRE-IT Regeltechnik GmbH.

The controller can be used in various sectors, such as hotels, apartments, offices and business premises as well as hospitals and schools.

#### **BENEFITS FOR YOU**

- Room control unit with controller function (B-AAC)
- Flush-mounted integration in all common switch ranges (50 mm / 55 mm / 60 mm)
- Investment and start-up deliver savings
- No extra gateways needed (BACnet MS/TP)
- Reduction in installation and operating costs
- Application can be selected for various user applications





## **OVERVIEW**

The unit communicates using BACnet in accordance with DIN EN ISO 16464-5 with the network protocol BACnet MS/TP. The room controller is therefore compatible with all common building automation systems. The controller has a "B-AAC" BACnet profile (BACnet Advanced Application Controller).

The benefit of the BACnet interface is that an extra gateway is not needed for implementation and communication with the management level when using other fieldbus interfaces (such as LON or KNX). Money can therefore be saved because a service technician with various qualifications is not needed to commission the system. Combining the room control unit and single-room controller in one device also saves money compared with distributed solutions.

The controller is intended for assembly in the flush-mounted socket. The housing fits in 50 x 50 mm, 55 x 55 mm and 60 x 60 mm design frames from the wide rocker switch ranges of manufacturers such as Berker, Busch-Jaeger, Gira, Jung, Merten, Peha, Hager or Feller (CH).

Most uses of room automation are covered by the predefined applications. The application table on the next page contains more details. Other hardware equipment variants are possible.

The BACnet room controller has been awarded the BTL certificate for the conformance of BACnet standard ISO 16484-5, which has been proven by means of a BTL compliance test.







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#### Refer to the following application table for more technical details.

		Systems					Ext. sensors					Actuators								
2 = 2-pipe system 4 = 4-pipe system RA = Radiator FB = Floor temperature control KD = Ceiling temperature control UK = Underfloor convector HR = Heating coil KR = Cooling coil		pe system	pe system	lator	r temperature control	ing temperature control	lerfloor convector	ting coil	ling coil	Dew point sensor	Thermal cut-out	ply air temperature	m air temperature	eed temperature	010V	010V	ting valve	oling valve	ting / cooling valve	ay ball cock 010V
Туре	Application	2-pi	4-pi	Rad	Floc	Ceili	Und	Неа	Coc	TP	- E	Sup	Roo	Scre	Fan	VAV	Неа	000	Неа	9-N
2-pipe system, underfloor heating with screed tempera- ture sensor	2FB001	•			•									•			•			
2-pipe system, underfloor heating with cut-out	2FB002	•			•						•						٠			
2-pipe system, cooling/heating ceiling with dew point monitor	2KD001	•				•				•									•	
2-pipe system, cooling/heating coil with fan and supply air temperature	2HRKR001	•						•	•			•			•				•	
2-pipe system with radiator with external room tempera- ture sensor	2RA001	•		•									٠				•			
4-pipe system, radiator (heating), cooling ceiling with dew point monitor	4RAKD001		•	•		•				•							•	•		
4-pipe system radiator, cooling coil with fan and supply air thermal $\operatorname{cut-off}^{\!\!\!*}$	4RAKR001		•	•					•		•				•		•	٠		
2-pipe system, underfloor convector with room tempera- ture sensor and fan	2UK001	•					•						•		•				•	
4-pipe system, floor temperature control with thermal cut-out	4FB001		•		•						•						•	•		
4-pipe system, cooling/heating ceiling with dew point monitor and 6-way ball cock	4KD001		•			•				•										•
4-pipe system, cooling/heating ceiling with dew point monitor and VAV	4KD002		•			•				•						•	•	•		
4-pipe system, cooling/heating ceiling with dew point monitor	4KD003		•			•				•							•	•		
4-pipe system, cooling and heating coil with fan and supply air temperature	4HRKR001		•					•	•			•			•		•	•		
4-pipe system, underfloor convector with dew point	4UK001		•				•			•					•		•	•		

monitor and fan







Operating voltage	230 V AC, 50 Hz				
Keys	4				
Interface	BACnet MS/TP RS485, baud rate can be configured via display menu Baud rates: 9600, 19200, 38400, 57600, 76800, 115200				
BACnet profile	B-AAC				
BACnet protocol revision	Version 1, revision 12, (135-2010)				
Room sensor	NTC internal				
I1 input	NTC 47K Ohm can be connected externally Dew point sensor Potential free switching contact				
I2 input	BACnet connection cables				
O1 and O2 output	Switching contact: 2 relays / normally open contacts Switching capability: per 3 (0.5) A / 230V~, max. 5 valve actuators per output				
O3 analogue output	0-10V (SELV), max. 5mA for fan/ball cock activation				
Setting ranges	5 30°C heating, 18 40°C cooling				
Switching difference	<1K				
Display	Illuminated, graphic display				
Controller type	PID				
Electric connection	Screwed plug-in terminals				
Connection cross-sections	At mains voltage end: 0.75 - 2.5 mm <sup>2</sup> At low voltage end: 0.08 - 1.5 mm <sup>2</sup>				
Power consumption	max. 1W, approx. 2.2 VA				
Type of protection	IP 30				
Protection class	II, following appropriate mounting				
Power reserve	Around one day				
Permissible air humidity	max. 95%, non-condensing				
Storage temperature	20 + 70°C				
Ambient temperature	0 40°C				
Housing colour	Pure white, pearl white or traffic white				
Housing material	PC, PMMA, ABS				
Mounting / attachment	In flush-mounted socket				
Applications	2-pipe systems 2-pipe systems with fan coil 4-pipe systems 4-pipe systems with fan coil 4-pipe systems, 6-way valve				





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