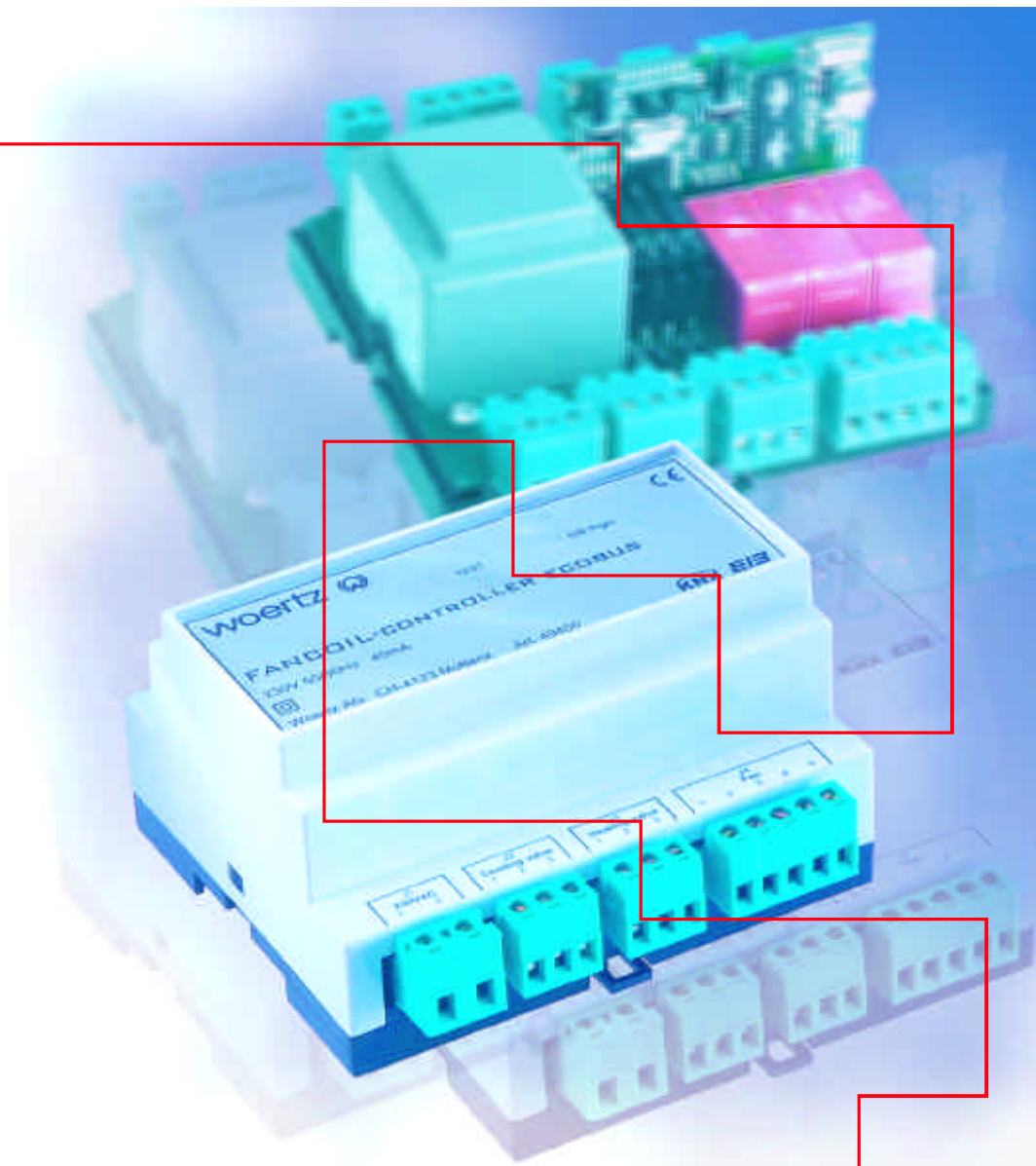


# FAN COIL CONTROLLER ecobus

**EIB**

**woertz**



Innovation

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# Device description / Application

Fan coil devices can be used for the individual heating and cooling of rooms and can be applied wherever a central hot and cold supply has been implemented.

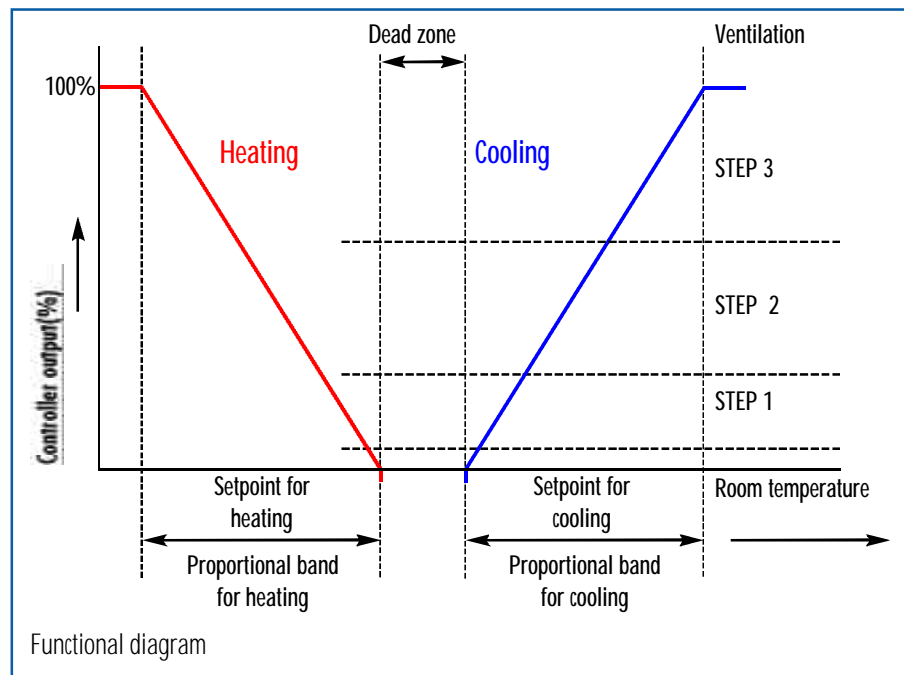
Both four- and two-pipe systems are used for supply with hot and cold water. The ambient air is circulated past the heat exchangers in a low-noise operation via step-controlled fans.

The fan coil controller from Woertz has a room temperature sensor which can be directly connected. The recorded values are supplied to the controller as actual values. It is possible to imple-

ment further external sensors via the integrated EIB interface in order to set the individual comfort zone.

The modification of the temperature setpoint values or the use of an absence button on the room's external operator panel helps for example to save energy when you leave the room.

The fan speeds can also be controlled. Window contact sensors influence the performance of the fan coil when the window is opened. In the standard design, the outputs of the fan coil controller act on 3-step motor valve drives or thermal valve drives and alter the flow of energy for heating and cooling.



- ◇ Control of single- or two-step convector fans/air conditioning units for heating and/or cooling mode
- ◇ Regulation of the room temperature in heating or cooling mode
- ◇ EIB interface for controlling the device using operator panels or via the building management system
- ◇ Measurement of the actual temperature via local temperature sensors or EIB temperature sensors
- ◇ PWM control for thermal valve drives, three-step control for motor-operated valve drives
- ◇ Connection for temperature sensor, window contact, overflow contact for condensed water drip trays
- ◇ Potential-free inputs for window contact and overflow contact
- ◇ Internal power supply for heating and cooling valve drives
- ◇ 230 V AC operating voltage
- ◇ For mounting on DIN rail

# Technical data

## Technical data (room temperature $T_a = 25^\circ\text{C}$ )

Supply voltage	230 V AC $\pm 10\%$ , 50/60 Hz
Power consumption	max. 9 VA
Measuring range with temperature sensor	$-40^\circ\text{C} \dots +70^\circ\text{C}$
Switched outputs for fans	3
Switched outputs for valves	4
Type of valve drive	Three-step actuator or thermal valve drive for 24 V AC
Network interface	<i>EIB</i>

## Pin configuration

### Input

Room temperature sensor	Semiconductor sensor with PWM output*
Setpoint temperature adjustment (local)	Potentiometer, $4.7\text{ k}\Omega$ , linear
Window contact	Input voltage 10-30 V AC/DC
Overflow contact (condensed water)	Input voltage 10-30 V AC/DC

### Output

Heating/cooling valve	Nominal output voltage 24 V AC (max. 5 VA)
Fan output	Relay output, switching current/voltage max. 6 A AC / 250 V AC
Auxiliary voltage output	24 V AC (max. 5 mA)
Max. cable lengths	30 m each for inputs and outputs

## Display and operating elements

LED	<i>EIB</i> programming
<i>EIB</i> Pgrmbutton	<i>EIB</i> programming
Testbutton	Service program

## Mechanical data

Dimensions W x H x D	105 x 107 x 58 mm
Weight	0.4 kg
Terminals	plug-in
Nominal cross-section of terminals	$2.5\text{ mm}^2$
Installation	on DIN rail

## General data

Type of protection	IP 20
Degree of pollution	2
Operating temperature	$-5^\circ\text{C}$ to $+50^\circ\text{C}$

## Approval

EMC requirements	<i>EIB</i> , CE
Electrical safety	complies with EN 50090-2-2, EN 61000-6-2, EN 61326-1
	complies with EN 60950

## Manufacturer

Woertz AG

## Designation

Fan coil controller *ecobus-EIB* No. 49550

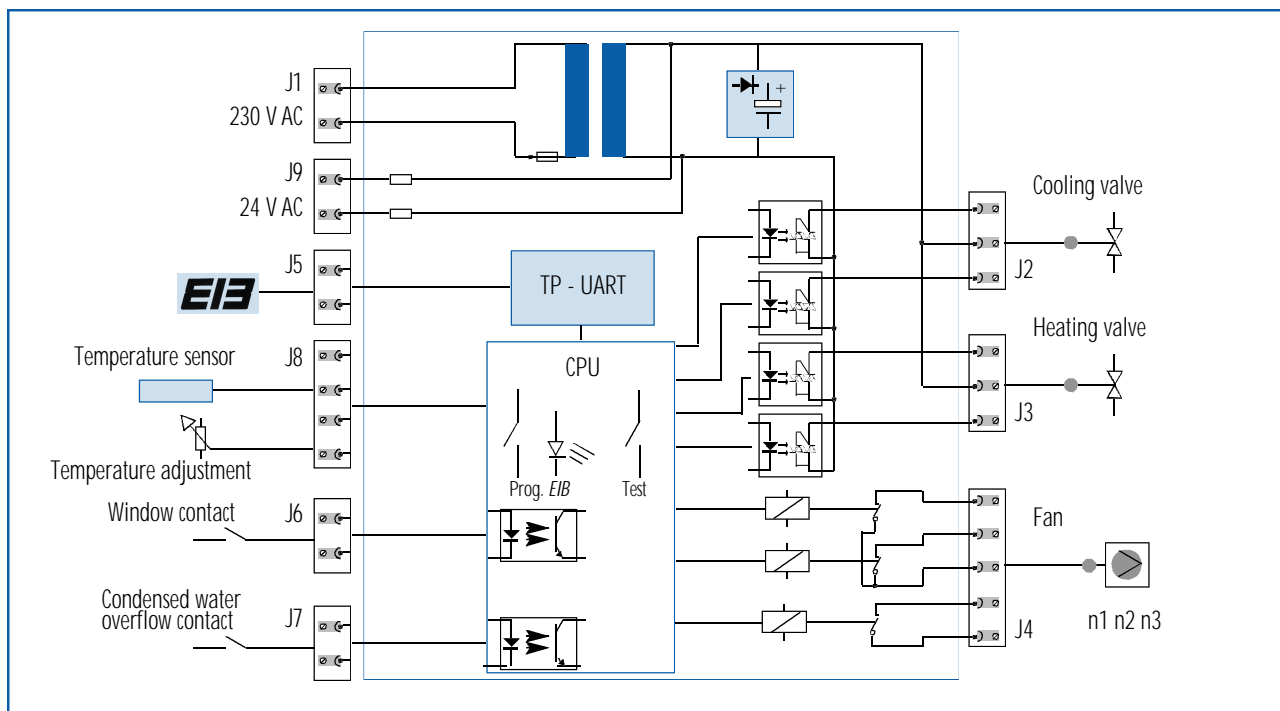
## Accessories

Temperature sensor, prewired with 2 m cable No. 49570

\* **Caution:** Only the temperature controller specified by Woertz may be used



# Block diagram



## Fan coil controller and flat cables

The Woertz flat cable systems are increasingly used in applications for electrical installations. Their widespread and successful implementation ranges from buildings with sophisticated technical requirements to those in which the simplicity and flexibility of the installation plays an important role.

The modularity of the installation is a characteristic of these systems which is of particular value since it enables modifications and extensions to be carried out at a later date without any problems. The time savings and resulting efficiency can thereby be achieved.

With the flat cable system, it is not necessary to cut the installed cables. Junctions can be created e.g. for the fan coil controller using special outlet boxes in the exact position required - even at a later date if necessary. The power supply and data bus interface of the device are implemented on the same flat cable.

Prefabrication is highly recommended to achieve even greater operating efficiency: the connected appliances may be completely wired beforehand and fitted with the flat cable boxes. On the building site the connection boxes are then simply placed on the flat cable and the pointed screws tightened in order to establish the electrical contact.

Since the reliability of the flat cable installation systems is extremely high, they are more and more integrated in very important industrial projects.

