

# ROOM CONTROLLERS WITH AUTOMATIC MOTOR SPEED AND SEASON SEASON CHANGE OVER



**DBTA-387**

## FUNCTION

2- or 4- pipe fan coil with 3- speed motor fan control for room temperature applications with:

- knob adjustment max/comfort/min;
- automatic season change over, referred to temperature of water supplied to the fan coil and measured by the water sensor for 2- pipe systems or to room temperature for 4- pipe systems;
- 3 motor speed change according on the measured temperature and the setpoint;

- additional electric heater control by ON/OFF/electric heater switch;
- indication for dirty filter (red led) and active output (green led);
- "silence" working, overriding the fan to the minimum speed;
- air mixing cycle (fan on every 10 minutes);
- internal or remote temperature sensor (optional).

TYPE	SYSTEMS (PIPE)	ON/OFF/RES.	AUTO/SILENCE	S/W	3- SPEED
DBTA-387-566	4	•	•	auto	auto
DBTA-387-866	2	•	•	auto	auto

**auto** season change over selection (S/W) by water sensor

### On request:

optional remote 1 m cable sensor, selectable by jumper; ordering code: NTA010-623.

## TECHNICAL FEATURES

- Power supply:** 230 Vac  $\pm$  10%, 50-60 Hz
- Max load:** 6 A for motor output, valves or electric heater relay
- Output:** 5 relays 230 Vac 6 A
- Power cons.:** 1 W
- Sensor:** NTC 10K, air sensor and water sensor
- Setpoint:** summer:  $+24 \pm 5$  K  
winter:  $+20 \pm 5$  K  
mechanical limitation of the setpoint adjustment
- Differential:** 0.5 K
- Working:** 0... $+40$  °C  
10...90% r.h. (non condensing)
- Storage:** -20... $+70$  °C  
< 95 % r.h.
- Housing:** ABS self-extinguished according to UL94 V-0 color (RAL 9010)
- Protection:** IP30, class II
- Size:** 144 x 82 x 34 mm
- Weight:** 210 g

### Jumper setting:

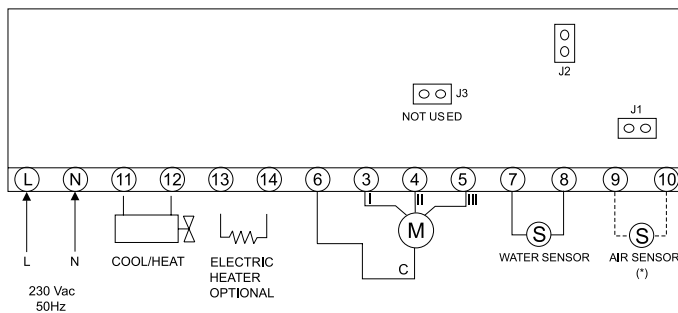
- J1 closed = internal sensor
- J1 opened = remote sensor
- J2 closed = air mixing cycle
- J2 opened = no air mixing cycle

The products are factory supplied with internal sensor and with air mixing cycle.

## ELECTRICAL WIRING

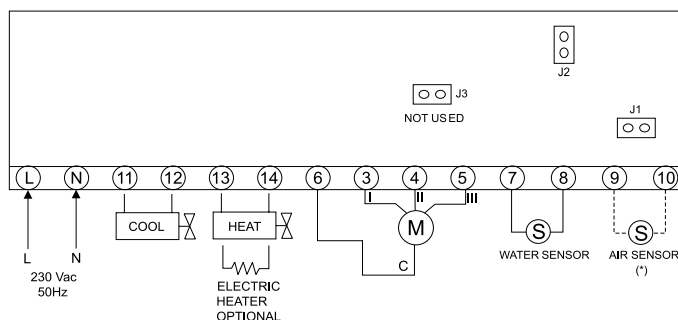
Terminal connections for air conditioning and heating systems.

### 2- pipe



(\*) optional remote sensor

### 4- pipe



(\*) optional remote sensor



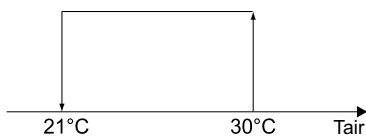
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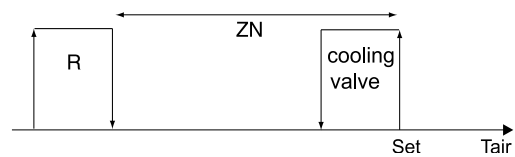
The water sensor is used as automatic season change over in 2- pipe systems and minimum temperature thermostat in 4- pipe systems.  
With 2- pipe systems the season is selected automatically by sensing the temperature of the water supplied to the fan coil upstream the valve.

Switch is on electric heater position:  
- summer: it is possible to heat if the temperature drops by 4.5 °C below the setpoint (for spring and autumn or offices with different thermic loads);  
- winter: 2-stage heating is provided.  
With 4-pipe systems the season is selected comparing the room temperature with the setpoint and maintaining a dead zone of 4 °C.

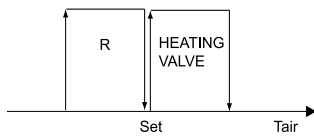
2- pipe: logic of season season change over



2- pipe: logic of cooling



2- pipe: logic of heating



4- pipe: logic of operating

