ROOM CONTROLLERS WITH AUTOMATIC SPEED AND ECONOMY FUNCTION

DB-TA-3D3-00A

FUNCTION

2-, 4-pipe and 3-speed fan coils control for room temperature regulation:
- local or remote changeover based on temperature water supply for 2-pipe system or based on room temperature for 4-pipe systems;
- automatic 3-speed selection based on room temperature and setpoint or continuous selectable speed;
- additional electric heater control;
- dirty filter managemement with operating fan hours indication and dirty filter signalling;
- minimum thermostat temperature activation selectable for 4-pipe systems;
- hot start management for 2-pipe systems;
- air mixing cycle selectable;
- economy function
- internal or remote sensor (optional).

The thermostat has a LCD display with +/- keys for the selection of parameters, status unit visualization and possible alarm condition indications.
In normal conditions of use the room (or water) temperature sensor is visualized with a step of 0.1 °C.

TYPE	PIPE	ON/OFF	3-SPEED	S/W
DB-TA-3D3-00A	2	on/off/res (par) •	out/cont1/cont2/ cont3 (par)	par
	4			auto

par setting by keys and display
auto s/w change-over with water sensor

Note: The controllers are supplied with water sensor model: NTA020-027P.

On request:
optional remote 2 m cable sensor, selectable by jumper; ordering code: NT0220-NTC10-02.

TECHNICAL DATA

Power supply: 230 Vac ± 10%, 50/60 Hz
Outputs: valves: 2 outputs 0,5 A 230 Vac
speed: 3 outputs 3 A 230 Vac
Power cons.: 1 W
Sensor: NTC 10K
Water sensor: NT0220-NTC10-02 (optional)
Setpoint: +7...+30 °C
Economy: 2 pipes: adjustable range between +5...+30°C (replaced the working setpoint)
4 pipes: adjustable range between 0...+5°C
Display: resolution 0.1 °C
Working: 0...+40 °C
10...90% r.h. (without condensing)
Storage: -20...+70 °C
< 95 % r.h.
Housing: ABS fireproof according to UL94 V-0 color (RAL 9010
Protection class: IP30, class II
Size: 144 x 82 x 34 mm
Weight: 220 g

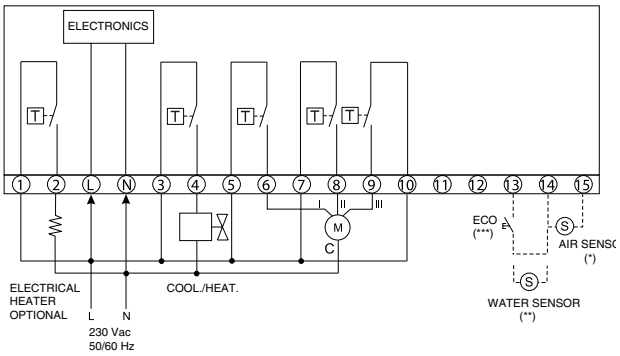
Jumper setting:

- J1, J2 closed = internal sensor
- J1, J2 open = remote sensor

The units are factory supplied with internal sensor.

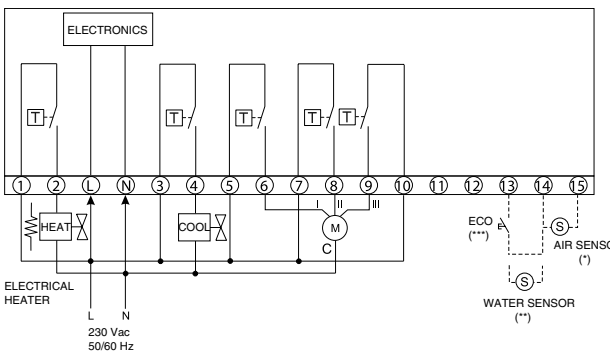
WIRING DIAGRAM

Terminal connections for heating and cooling systems:
2-pipe system



(*) remote sensor (optional) with 2 m cable length: NT0220-NTC10-02
(**) water sensor (optional)
(***) remote contact (optional)
ECO contact closed: economy function inserted
ECO contact open: economy function not inserted

4-pipe system



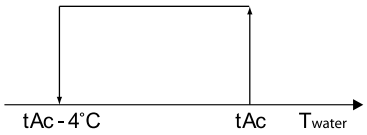
(*) remote sensor (optional) with 2 m cable length: NT0220-NTC10-02
(**) water sensor (optional)
(***) remote contact (optional)
ECO contact closed: economy function inserted
ECO contact open: economy function not inserted

FUNCTION

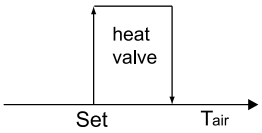
The water sensor can be used as automatic changeover in 2-pipe systems or as minimum thermostat for 4-pipe systems. For 2-pipe systems the working season can be selected by sensing the temperature of water delivered to the fan at the inlet of the valve.

With electric heater operating mode:
- summer: it is possible to heat when temperature decreases from setpoint substracted to neutral zone value (spring or autumn or offices with different thermical load);
- winter: it is possible to have a second heating stage.

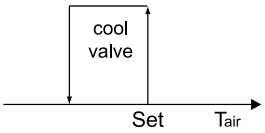
2-pipe systems: automatic changeover selection



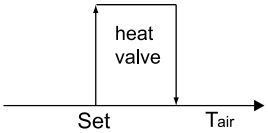
2-pipe systems: heating without electric heater



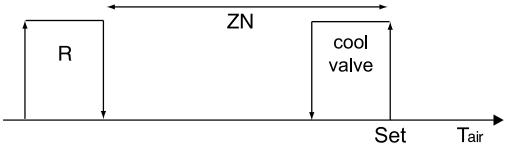
2-pipe systems: cooling without electric heater



2-pipe systems: heating with electric heater

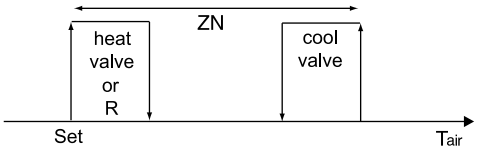


2-pipe systems: cooling and heating with electric heater



4-pipe systems: operating mode

For 4-pipe systems the season is selected according to room temperature and setpoint with a neutral zone selectable.



ECONOMY FUNCTION

The economy function can be inserted manually by parameter or with an external contact when the water sensor is not used for automatic changeover for 2-pipe systems or is not used as minimum thermostat for 4-pipe systems.

For 2-pipe systems the working setpoint is the heating or cooling economy setpoint according to the working season.

For 4-pipe systems the activation points for heating and cooling move away in order to heat and cool less.