DESCRIPTION

The controlling module VNT20 is an integrated controller of the rotation speed of the ventilator and the room thermostat.

- has two functions: one of the controller of the rotation speed of the ventilator and that of the room thermostat;
- cooperates with the water heaters LEO type M;
- it is capable of controlling max 10 heater;
- compact, small and ergonomic casing;
- regulation of the rotations through the analogue output 0-10V (the voltage output);
- it has the following modes of work: MANUAL/AUTO.

TECHNICAL DATA

Supply voltage	230VAC/50Hz
Output controlling signal	Analogue 0-10V
Modes of control/regulation	Buttons
Range of temperature control	+5 ÷ +50°C
Range of rotations control	10 ÷ 100%
Range of working temprature	-10 ÷ +60°C
Temperatures sensor	Internal/External PT-1000
Regulation parameters	Built-in PI regulator
Protection rating	IP20
Mounting advice	Wall-mounted
Casing	ABS
Weekly programmer	No
Casing dimensions (HxWxL)	25 x 70 x 120mm
Load carrying capacity of the contact	inductive 3A resistivity 8A

FUNCTION MODE

AUTO mode:
the VNT20 controller automatically decreases the air throughput at the moment of approaching the temperature set for the room/hall. The temperature is regulated through the variable speed of the ventilator. **In this mode you can resign from the valve provided LEO heaters cooperate with a boiler with a modulated burner which controls the heating medium flow.**

MANUAL mode:
the VNT20 controller - the integrated thermostat with a smooth regulation of rotations, standby mode, ON/OFF mode, controlling the servomotor of the valves, continuous and thermostatic mode of work of the ventilator.

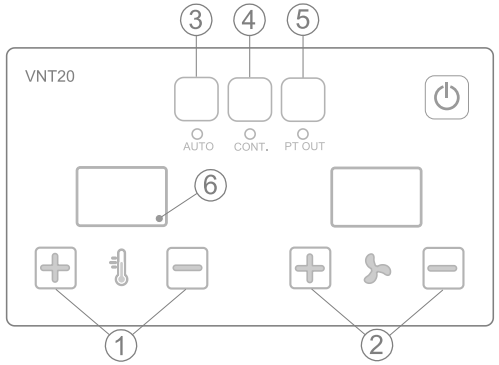
continuous - the ventilator works at the set speed, after reaching the set temperature the relay cuts off power from the valve while the ventilator continues its work.

thermostatic - after achieving the set temperature the ventilator is cut off, the valve is closed by the relay

ANTIFREEZE

ANTIFREEZE prevent freezing the room. Default mode is Tf=12°C. After temperature decrease under tAF, Leo heater is turned on with maximal speed and valve is opened. ANTIFREEZE is deactivated after reaching tAF + 1°C. To change default tAF temperature see chapter PARAMETERS SETTING. To turn off/on ANTIFREEZE protection push and keep AUTO and PT OUT buttons. Turned on ANTIFREEZE protection is signalized in down-right temperature display corner.

PANEL DESCRIPTION



① Temperature setting,
② Air volume setting,
③ AUTO - AUTO / MANUAL switch
(Led on: AUTO, Led off MANUAL),
④ CONT. - operating mode,
(Led on – **continuous**, Led off – thermostatic)
⑤ PT OUT - choosen temperature sensor,
(Led on - external sensor, Led off - built in sensor),
⑥ ANTIFREEZE Led

PARAMETERS SETTING

Switch OFF controller.
Push and keep AUTO button by 3sec.

 - use buttons to set temperature

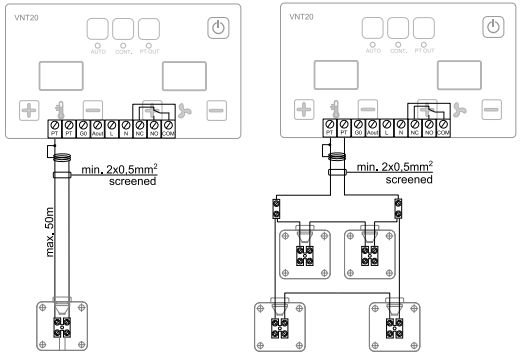
 - use buttons to set air volume.

Parameter	Regulation range	Description
Aut	10 – 50 %	Minimal air volume in AUTO mode
tAF	0 – 15°C	ANTIFREEZE temperature
Cor	± 3°C	Correction of readed temperature

To safe changed settings push AUTO button.

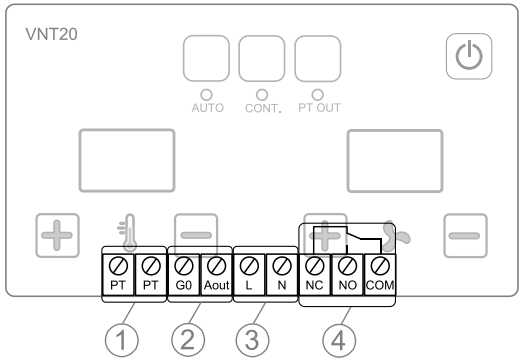
TEMP. SENSOR

Internal – temp. Tm is measured by built-in sensor.
External – temp. Tm measured by external sensor PT-1000 (accessory). To VNTLCD is possible to connect 1, 4 or multiple-4 sensors.



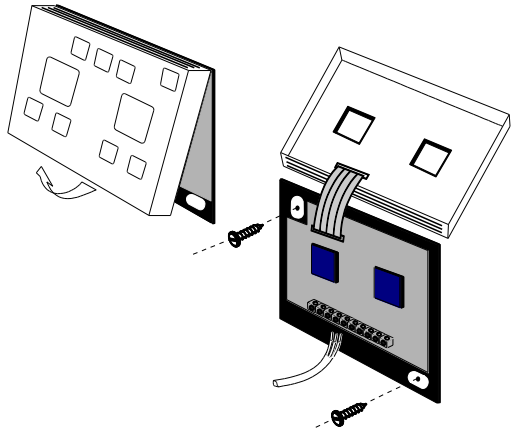
Attention!
In case of external sensor failure Err=2 will appear on display, In case of wrong connection of external sensor Err=2 will appear on display,

CONTROLLER TERMINALS



① external temperature sensor
② 0-10V output
③ Power supply VNT20 (230V/50Hz)
④ Valve acturator terminals (max loads: resistive: 8A; inductive 3A)

INSTALLATION



NOTE!
Mind to disconnect VNT20 before starting work.

- Wires must me finished with cord end terminals;
- Wires size should be chosen by the designer.
- Dimension of supplying wire is min. OMY 2x1mm^2
- Analog signal must be distributed with screened wire LIYCY min. 2x0,5mm^2 (screen-wire must be connected with G0 connector)
- Close the cover before start-up
- VNT20 panel should be installed approx 1,5 m over the floor, apart of heat or chill source.