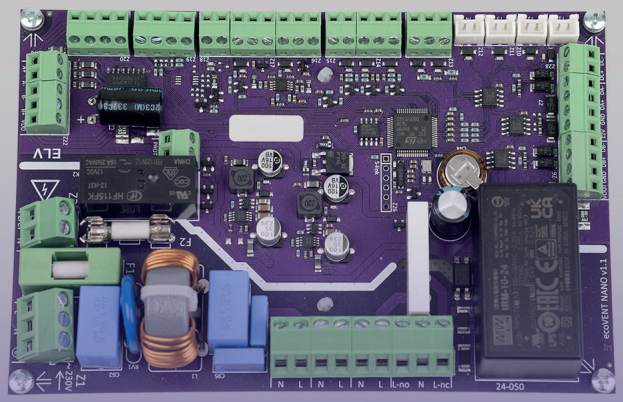
plum HVAC



ecoVENT NANO

controller for air handling units and recuperation

The ecoVENT NANO controller is designed for built-in installation. It allows to control small, medium and large ventilation units.

Built-in support for a stepper motor and cooperation with sensors (humidity, temperature, air quality) allows to design the most cost-effective solution.

Why you should choose ecoVENT NANO controller?

- reduce the cost of your recuperator
- activate zone control, save energy by enjoying fresh air according to real demand
- enable installers to easily connect devices with the ecoNEXT Installation Assistant and the ecoNEXT app
- connect recuperation and heat pump in a single system via ecoNET Cloud

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National Waste Database No. 000009381

hvac.plum.pl
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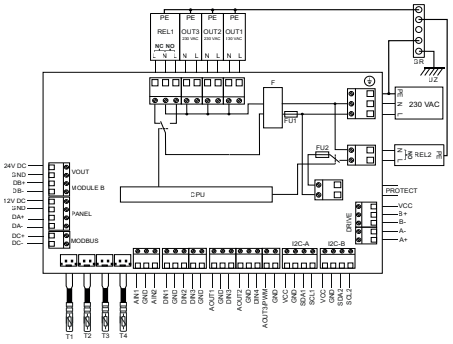
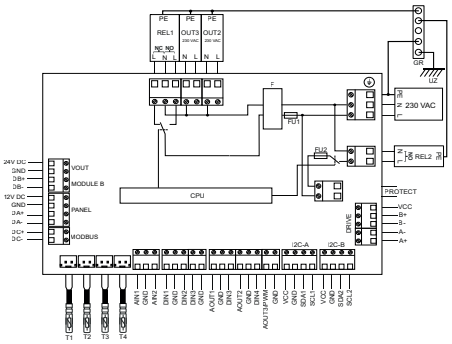
edition
1.0, 03.09.2024

electrical scheme

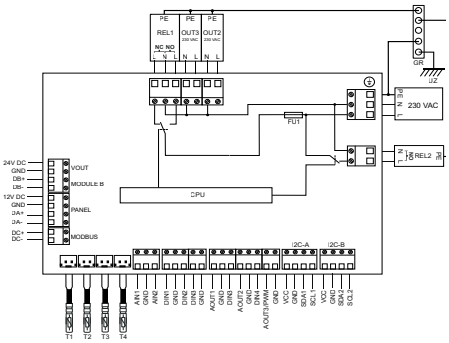
FULL



LITE K



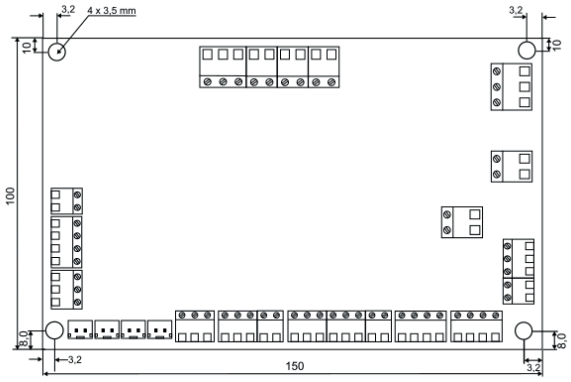
LITE

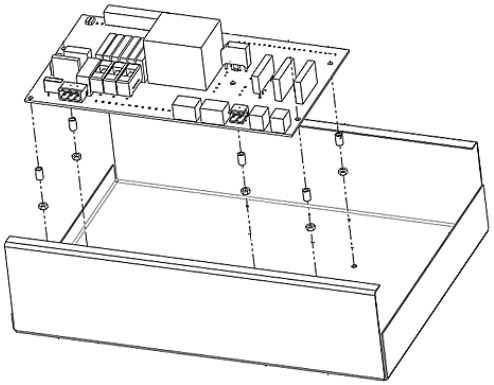


The controller allows any configuration of the outputs depending on the needs of the ventilation system. Possible configuration of the FULL version is described below.

voltage outputs	
OUT1, OUT2, OUT3	voltage outputs 230 VAC to supply peripherals
VOUT	voltage 24VDC (FULL)/ 12VDC (LITE K / LITE) to supply module B or peripheries
relay outputs (potential)	
REL1, REL2	bypass, rotary exchanger, heater, etc.
sensor channels	
I2C-A, I2C-B	(free configuration) humidity sensor/ CO2 /differential pressure sensor/ pressure sensors ecoPRESS IN (SDP810)
stepper motor	
DRIVE	power and control of a unipolar stepper motor, e.g. of a mixing chamber damper
analogue outputs (0...10 V/ PWM)	
AO1 , AO2, AO3 (0-10 V/PWM)	(free configuration) pre-heater, water secondary heater, electric secondary heater, chiller, cooler, bypass damper, rotary heat exchanger, mixing chamber actuator, supply and exhaust fans
two-state inputs	
DIN1, DIN2, DIN3	(free configuration) pre-heater thermostat, electric secondary heater thermostat, water secondary heater thermostat, unit signals (alarm/ defrost), cooler fault, control panel signal, fire alarm system (FAS) signal, filter pressure switch signals, fan operation confirmation signals, CO2 sensor signal, humidity sensor signal, Boost signal, remote shutdown signal
IND1 , IND2	TACHO - monitoring of fan operation
contact inputs	
PROTECT	heater thermal protection contact
analogue inputs (0...10 V)	
AI1 , AI2	(free configuration) humidity sensor/ CO2 sensor/ VOC sensor (PM 2.5 or PM 10)
resistance inputs (NTC 10K)	
T1, T2, T3, T4	sensors required for correct operation of ventilation: supply, extract, exhaust and air intake (outdoor temperature sensor)
sensors channels	control panel, module B, BMS

assembly and installation





technical data

hardware execution	FULL	LITE K	LITE
power supply/ current drawn/ max. rated current	230 VAC, 50 Hz/ 40 mA/ 6 (6) A		
surge voltage	2500 V		
protection degree	IP 00, for incorporation into class I devices		
operating temperature storage temperature working conditions	0...50 °C 0...65 °C 5...85% RH (non-condensing), low-dust enclosed rooms		
software	PLUM software, class A		
communication	3 x communication port (RS485, modbus RTU protocol)		
outputs	• 2 x potential 230 V relay • 3 x 230 V output for power supply periphery • 1 x thermal heater protection • 2 x analogue 0-10 V • 1 x analogue PWM (or 0-10 V) • 1 x 24 VDC output	• 2 x potential 230 V relay • 2 x 230 V output for peripheral power supply • 1 x heater thermal protection • 2 x analogue 0-10 V • 1 x analogue PWM (or 0-10 V) • 1 x 12 VDC output	• 2 x potential 230 V relay • 2 x 230 V output for power supply peripheries • 2 x analogue 0-10 V • 1 x analogue PWM (or 0-10 V) • 1 x 12 VDC output
inputs	• 4 x resistive (CT14 NTC 10k) • 2 x TACHO/ fan operation monitoring • 3 x DIN binary inputs • 2 x analogue 0-10 V • 2 x I2C sensor		
extensions	• 1 x stepper motor support, unipolar 24 VDC / max 6 W • 1 x interference filter F • 1 x protection FU2: 20 A of the heater • 1 x additional module B for the installer	• 1 x stepper motor support, unipolar 12 VDC/ max 6W • 1 x interference filter F • 1 x protection FU2: 20 A of the heater • 1 x additional module B for the installer	• 1 x additional module B for the installer
screw terminals, angled	mains: conductor cross-section: 0.5..2.5 mm^2, tightening 0.4 Nm, insulation off 7...8 mm signal: conductor cross-section: 0.25...1.5 mm^2, tightening 0.2 Nm, insulation off 7 mm		
dimensions	150 x 100 mm, height 34 mm (including 9 mm spacers)		
installation method	to be built in		

accessories

SCO2 EX1

CO2 relative humidity
and temperature sensor

ecoPRESS
EX1 - 01/ EX1 - 02

differential pressure
sensor

ecoPRESS IN

differential pressure
sensor

SCO2 IN1

sensor CO2, relative
humidity and
temperature

SRHT IN1

relative humidity
and temperature sensor