



**Electric heaters, water
coils and controls for
ventilation units and
systems**

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About us

VENTMATIKA UAB has been counting its years of successful activity since 2003. The company specializes in development and manufacturing of electronic, electrical, control automation products and water coils for ventilation units and systems.

The range of products and their individual components is wide, the quality meets all the required standards. The aim is to always meet the customer's needs by selecting the most optimal and up-to-date technical solutions.

Certified for: ISO 9001:2015, ISO 14001:2015, ISO 45001:2018.

VENTMATIKA Mission

- ★ Be the best choice for heating, controls and accessories for ventilation industry
- ★ Continue applying knowledge and experience of VENTMATIKA specialists
- ★ Keep using advanced technologies and strive to apply even more
- ★ Keep investing and improving manufacturing machinery and processes
- ★ Keep and assure product quality

VENTMATIKA Vision

- ✔ Lead the industry with innovative solutions
- ✔ Remain a loyal and reliable partner
- ✔ Create more value for customers.

Electric heaters

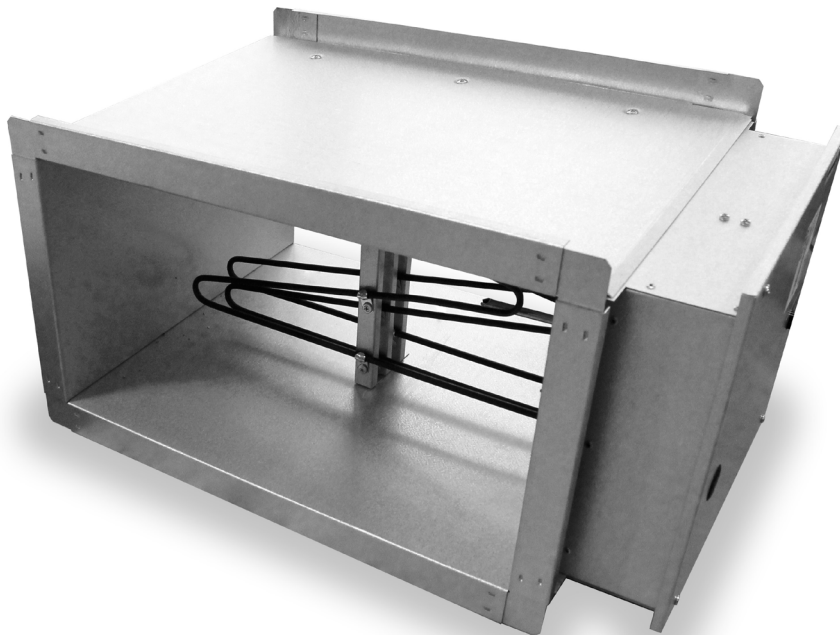
- ▶ Using precision machinery and experience acquired through years of designing and manufacturing we offer durable electric heaters with various control options. This allows flexibility and creativity in offering tailor made solutions for our clients.
- ▶ There are no moving parts in the heater as the load is controlled by a triac, which ensures a long product lifetime. Aluzinc coating provides protection from rust for up to 15 years!
- ▶ The standard range of electric heaters consists of circular and rectangular duct mounted electric heaters with various control options.

Circular heaters standard sizes, ϕ in mm:

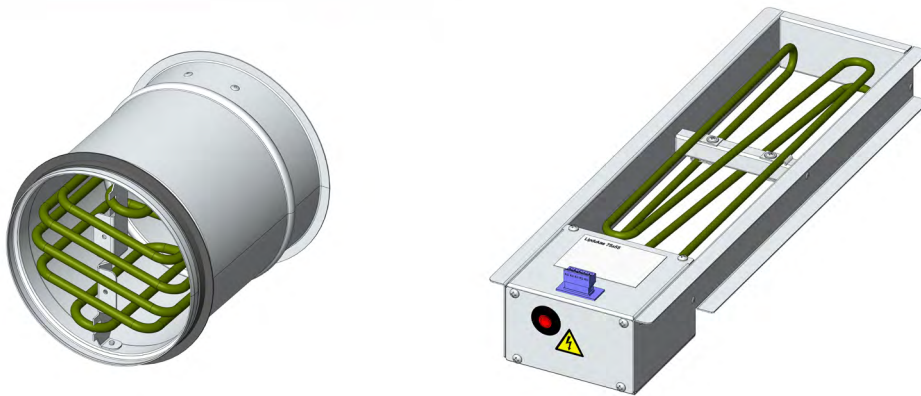
100	125	150	160	200	250	315	355	400	450	500
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Rectangular heaters standard sizes, mm:

400x200	500x200	500x250	500x300	600x350	700x400	800x500	1000x500
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- ▶ Bespoke heaters developed by provided requirements - size, shape, power output, control options. R&D will always work close with a client to achieve the best result.
- ▶ Power output starting from 0.3kW. Various combinations available.
- ▶ Pricelist of standard sizes and outputs provided upon request.
- ▶ Warranty - 2 years. 100% of products are checked by QA before leaving the factory.



- 1** Manual reset 50°C
Automatic reset 100°C
- 2** Possible accessories:
Differential pressure switch,
air flow sensor, contactors
- 3** LED fault indication
- 4** Standard- AluZinc

Possible options: Galvanized or
Stainless steel (only for
rectangular heaters)
- 5** Rubber seals for duct
connection
- 6** Heating elements made from
Stainless steel AISI304



Electric heaters

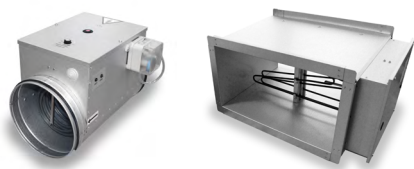
For air handling units

- ▶ Used internally in air handling units, these heaters are designed and manufactured per project basis, as every project might require different parameters.
- ▶ Frame is made using Aluzinc coated steel, which is highly resistant to corrosion.
- ▶ Heating elements are made from stainless steel AISI304.
- ▶ All heaters are made with thermal protections- automatic at 50°C and manual- 100°C. Other options available!
- ▶ These heaters do not have limits on size and power output, therefore please contact our sales team with an inquiry for an offer or partnership possibilities.
- ▶ We are in Aircalc++ AHU builder. Dll library to implement to custom software also available.

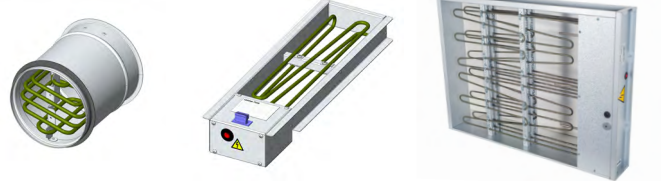


Electric heaters

Control options



- ▶ **Type ON/OFF**
Heater is controlled by external ON/OFF switch.



- ▶ Possible accessories:
EKR 6 EKR 15.1 EKR 30



- ▶ **Type NV**
Setpoint (0...30) on casing.
Heater works autonomously.

- ▶ Required accessories:
TJK-10K*



- ▶ **Type NV PTC/PS**
Setpoint (-10...50) on casing.
Equipped with an airflow sensor & a differential pressure switch.
Heater works autonomously.

- ▶ Required accessories:
TJK-10K*



- ▶ **Type NI**
Requires external temperature setpoint (0...30): TR5K, TR5KNTC10 (with internal sensor)
Heater works autonomously.

- ▶ Required accessories
TJK-10K* TR5K TR5KNTC10



- ▶ **Type NIS**
External 0...10V control

- ▶ **Type ESKM**
External 6...24V PWM control. Additional automatic thermostat of 70°C for ESKM module protection.

- ▶ **Type ModBus**
External control via ModBus RTU protocol. RS485 connection.

*Included in price of the heater

EKR series

For single and two-phase duct heaters

EKR 6.1



- ▶ **EKR 6.1** is a PWM controller for electric heater control.
- ▶ Has a built in and a possibility to connect a duct mounted sensor to control supplied, or room temperature.
- ▶ Setpoint can be chosen 0...30°C or 0...60°C.
- ▶ Operation modes are chosen with help of jumpers.
- ▶ When working by room air temperature supply air temperature MIN,MAX values must be set with help of potentiometers inside the controller.
- ▶ Timer (NIGHT FUNCTION) - possibility to reduce heating setpoint at night up to 10°C with externally connected timer.

Type	Controlled load [kW]	Max. controlled current [A]	Voltage [V]
EKR6.1	3,2/230V 6,4/400V	16	1x230/2x400

For three-phase duct heaters

EKR 15.1
EKR 15.1P



EKR 30
EKR 30P

- ▶ **EKR15.1, EKR30** are PWM controllers for electric heaters.
- ▶ **EKR15.1P, EKR30P** are PWM controllers for multistep (up to 5 steps) electric heaters
- ▶ Setpoint can be chosen 0...30°C or 0...60°C
- ▶ Operation modes are chosen with a help of jumpers.
- ▶ When working by room air temperature. (external potentiometer with NTC sensor must be used) Supplied air temperature MIN, MAX must be set with a help of potentiometers inside the controller.
- ▶ Timer (NIGHT FUNCTION) - possibility to reduce heating setpoint at night up to 10°C with externally connected timer.
- ▶ All above mentioned controllers can be controlled by external 0...10V signal. In this case temperature must be measured and heating demand is determined by external controller.
- ▶ There are two ways to control additional steps: **Binary or Sequential**.
- ▶ **EKR 15.1P**
 - Using Sequential code for step control each step must be equal. 15kw+15kw+15kw+15kw.
Total controlled load 75kw.
 - Using Binary code for step control each step must be twice bigger than previous one. 15kw+30kw+60kw+120kw.
Total controlled load 240kw.
- ▶ **EKR 30P**
 - Using Sequential code for step control each step must be equal. 30kw+30kw+30kw+30kw.
Total controlled load 150kw.
 - Using Binary code for step control each step must be twice bigger than previous one. 30kw+60kw+120kw+240kw.
Total controlled load 480kw.

Type	Controlled load [kW]	Relay output	Voltage [V]	Max load
EKR15.1	(9) 15	1x5A/230V	(3x230) 3x400	30kw
EKR15.1P	(9) 15	4x5A/230V	(3x230) 3x400	240kw
EKR30	(18) 30	1x5A/230V	(3x230) 3x400	60kw
EKR30P	(18) 30	4x5A/230V	(3x230) 3x400	480kw

Water coils

For heating and cooling

- ▶ We offer a wide range of finned coils for heating or cooling systems.
- ▶ Selection tool available for implementing to AHU builder software or as stand-alone version.
- ▶ The geometry of the heat exchanger was developed by a group of experienced engineers and tested in external laboratories. The product was developed together with the DMT laboratory in Germany in order to guarantee effective heating and cooling.

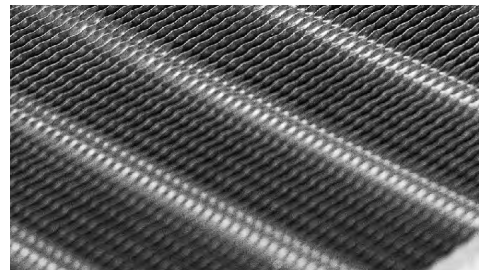
TUBES

- Diameter: 12.7 mm / ½"
- Copper
- Resistant to the vast majority of primary fluids



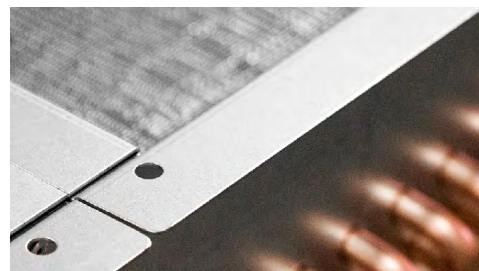
FINS

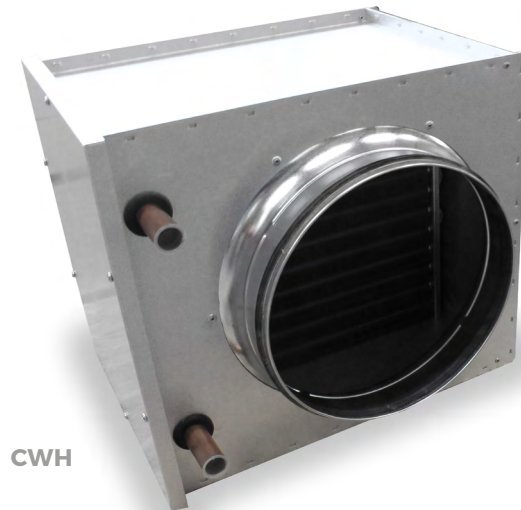
- Aluminium 0.2mm



FRAME

- Galvanized steel, aluzinc
- Max fluid velocity: 3 m/s in tubes
- Max operating pressure: 2.2 MPa
- Max operating temperature: 100oC
- Normal air velocity: 3-4 m/s
- Max air velocity: 5 m/s
- Airflow range at a temperature of -40oC: 0.03-40 m3/s
- Water, ethylene glycol, propylene glycol





- ▶ 6 standard sizes
- ▶ Hot water coil with 2 or 3* tube rows
- ▶ Duct connection with rubber seals
- ▶ Air tightness class D to EN 15727
- ▶ Removable cover for inspection and cleaning
- ▶ Aluzinc coated steel casing



- ▶ Max operating temperature: +110 C°
- ▶ Max operating pressure: 1,0 MPa (10 bar)
- ▶ The coils are tested for leakage

CWH size table, 2 and 3* tube rows, ϕ in mm	
CWH 125-2	CWH 125-3
CWH 160-2	CWH 160-3
CWH 200-2	CWH 200-3
CWH 250-2	CWH 250-3
CWH 315-2	CWH 315-3
CWH 400-2	CWH 400-3

* 3 tube rows made from hydrophilic aluminum



CWC

- ▶ 6 standard sizes
- ▶ 3 tube rows, made from hydrophilic aluminum
- ▶ Stainless steel condensate tray
- ▶ Duct connection with rubber seals;
- ▶ Air tightness class D to EN 15727
- ▶ Removable cover for inspection and cleaning
- ▶ Aluzinc coated steel casing



- ▶ Max operating temperature: +110 C°
- ▶ Max operating pressure: 1.0 MPa (10 bar)
- ▶ The coils are tested for leakage

CWC size table, 3 rows, ϕ in mm:

CWC 125-3
CWC 160-3
CWC 200-3
CWC 250-3
CWC 315-3
CWC 400-3

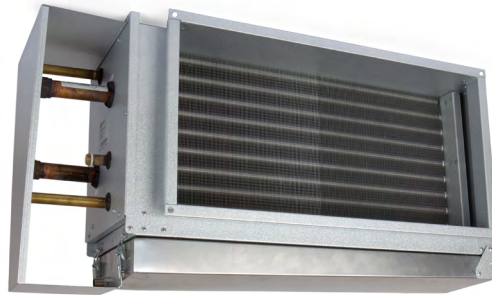


RWH

- ▶ 10 standard sizes
- ▶ How water coil with 2 or 4 tube rows
- ▶ Easy to mount duct connection
- ▶ Air tightness class C to EN 15727
- ▶ Aluzinc coated steel casing
- ▶ Max operating temperature: +110 C°
- ▶ Max operating pressure: 1,0 MPa (10 bar)
- ▶ The coils are tested for leakage

RWH size table, 2 and 4 tube rows, duct connection in mm

RWH 250x150-2	RWH 250x150-4
RWH 400x200-2	RWH 400x200-4
RWH 500x250-2	RWH 500x250-4
RWH 500x300-2	RWH 500x300-4
RWH 600x300-2	RWH 600x300-4
RWH 600x350-2	RWH 600x350-4
RWH 700x400-2	RWH 700x400-4
RWH 800x500-2	RWH 800x500-4
RWH 1000x500-2	RWH 1000x500-4
RWH 1200x600-2	RWH 1200x600-4



RWC

- ▶ 10 standard sizes
- ▶ 3 tube rows
- ▶ Easy to mount duct connection
- ▶ Air tightness class C to EN 15727
- ▶ Aluzinc coated steel casing
- ▶ Stainless steel condensation tray

RWC size table, 3 tube rows, duct connection in mm

RWC 250x150-3
RWC 400x200-3
RWC 500x250-3
RWC 500x300-3
RWC 600x300-3
RWC 600x350-3
RWC 700x400-3
RWC 800x500-3
RWC 1000x500-3
RWC 1200x600-3

Controllers

ReguLite, ReguLar

Heat recovery and air handling unit controls

- ▶ ReguLite and ReguLar units are meant to control a HRU - heat recovery unit.
- ▶ ReguLite - perfect for small, compact heat recovery units. Possibility to add various accessories of choice makes the controller versatile.
- ▶ ReguLar - has more inputs and outputs than ReguLite, which help it satisfy a demand for bigger, more complex and accessory ridden units. Possibility to connect a CO2 sensor, pressure transmitters - can control fan speeds by pressure. With its sleek and compact design it will fit in any unit.
- ▶ Both units have a different amount of inputs and outputs, shown in „Inputs/Outputs Table“. Both have pre-set possible choices for accessory control, which may be manually configured with our PC software „PRV Controller“ and installed to a PCB in a matter of minutes. One controller for all units!

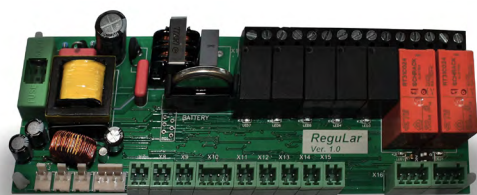
Configuration options for inputs and outputs are listed in next page.

Feature	ReguLite/ReguLar
Ambient temperature	0...50 °C
Relative humidity	Max. 90 % RH
Storage temperature	-20...70 °C
Protection class	IP00

Dimensions, mm:	
ReguLite	125x51x35
ReguLar	152x55x35



ReguLite



ReguLar

Inputs/Outputs Table:	ReguLite	ReguLar
Temperature sensors NTC10K	3	3
Temperature and humidity sensor DTJ	1	1
Analog Output (0...10V)	4	4
Analog Output (0...10V) / Digital Input	0	3
Analog Input(0...10V) / Digital Input / temp. sesnos input (AD11 only)	3	3
Relay Outputs 230VAC	4(1-16A; 3-5A) / AC1	7(2-16A; 5-5A) / AC1

Controllers

ReguLite, ReguLar

Configuration options for inputs and outputs

- List contains only inputs and outputs which may be configured by the user to customize the controller to specific AHU with pre-set options.

Analog output (0...10V)	Available options
ReguLite - 4 ReguLar - 7	Rotary heat exchanger motor control By-pass damper control Preheater control Electrical or Water Heater control Electrical Heater control(PWM) (output 6VDC) Water or Freon cooler control
Relay outputs / 230VAC	Available options
ReguLite - 4 ReguLar - 7	Rotary heat exchanger motor control(on/off) By-pass damper open (3-pos.) By-pass damper close (3-pos.) Preheater control (on/off) Electrical Heater control (on/off) Freon cooler control (on/off) Air damper actuator (open/close) Fans (system) ON AHU (system) OFF Water Heater circulating pump (on/off) Dehumidifier control (on/off)
Analog input (0...10V) / Digital input / Temperature sensor input	Available options for analog input
ReguLite - 3 ReguLar - 3	Supply air pressure transmitter (0...10V)
	Extract air pressure transmitter (0...10V)
	CO transmitter (0...10V)
	Available options for digital input
	External Start/Stop (NO/NC)
	Fan Boost (NO/NC)
	Fireplace (NO/NC)
	Fire alarm (NO/NC)
	Air filter pollution (diff.press.switch) (NO/NC)
	Fan alarm (NO/NC)
	Supply air fan speed (RPM)
	Extract air fan speed (RPM)
	Electrical heater overheating (NO/NC)
	Plate heat exchanger antifrost (diff.press.switch) (NO/NC)
	Rotary heat exchanger motor alarm (NO/NC)
	One temperature sensor NTCK (AD11 only)
	Cooker hood DI1 (NO/NC)
Cooker hood DI2 (NO/NC)	
Analog output (0...10V) / Digital input	Available options for analog input
ReguLar - 3	Same as defined Analog output (0...10V) above
	Available options for digital input
	Same as defined Digital input above



- ▶ Ventik is a plug-and-play control system for a simple AHU without heat exchanger with electric or water heater.
- ▶ All components come built in plastic electrical box as shown in picture. Ventik set includes everything required to run the unit.
- ▶ Additional components (e.g.frequency inverter, antifrost thermostat, etc.) can be built inside the unit upon request.

Technical specifications/control options:

Feature	VENTIK-6	VENTIK-15	VENTIK-W
Dimensions, (L x W x H) mm	248x198x106	328x239x129	248x198x106 328x239x129
Controller power supply, VAC	1-230 / 2-400	3-400	1-230
Fan power supply	230VAC, 50Hz		
Fan (AC) control with autotransformer			
Max fan current, A	1,5 / 4	4 / 7	1,5 / 4 / 7
Fan voltage for speed 1, VAC	120		
Fan voltage for speed 2, VAC	170		
Fan voltage for speed 3, VAC	230		
Fan (EC) control with analog 0-10V output (ordered separately)			
Max fan current, A	10		
Fan speed 1, %	20-100		
Fan speed 2, %	20-100		
Fan speed 3, %	20-100		
Fan (AC) control with frequency inverter (ordered separately)			
Max fan current, A	Depending on the fan motor power		
Fan speed 1, %	20-100		
Fan speed 2, %	20-100		
Fan speed 3, %	20-100		
Heater	Electrical		Water
Heater power	3,2kW / 6kW	15kW	-
Heater power supply	1-230VAC / 2-400VAC	3-400VAC	
Heater control signal	PWM	PWM	0-10V
Cooler control signal	-	-	ON/OFF(+24VDC)
Air damper control	ON/OFF 230VAC		

Control systems and components for AHU



3S

▶ **Remote controller 3S:**

- Capacitive touch screen
- Start-up wizard - personalized comfort in 5 easy steps
- 7 preset modes - including boost and fireplace
- 24/7 schedule
- Alarm display
- 3 second touch for a manual

Technical data

Data transfer	RS485 (ModBus RTU)
Dimensions, mm (WxHxL)	138x90x16
Protection class	IP20



Klik

▶ **Remote controller Klik:**

- Fault and error indication
- Manual or Auto mode

Technical data

Data transfer	RS485
Dimensions, mm (WxHxL)	70x70x15
Protection class	IP20



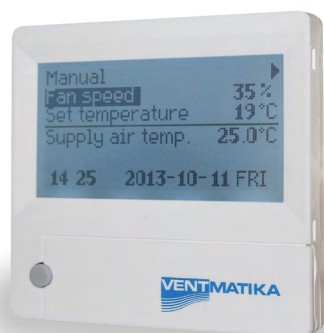
TPC

▶ **Main screen display and functions:**

- Touch screen LCD display
- Manual mode
- Display of alarm signals
- Date and time display

Technical data

Data transfer	RS485
Dimensions, mm (WxHxL)	104x93x17,5
Protection class	IP30



RCW

▶ **Main screen display and functions:**

- Operation mode setting and display
- 24/7 schedule
- Display of alarm signals
- Date and time display
- Fast button

Technical data

Data transfer	RS485
Dimensions, mm (WxHxL)	104x93x17,5
Protection class	IP30

Electronic room humidistat HPE



HPE

- ▶ Room humidistat is used to measure and control room humidity with help of relay output. Hysteresis can be selected.

Type	IP Class	Relay output	Hysteresis	Range
HPE	IP20	6A/230V	2...10%	0...100%

Electronic room thermostat TPE



TPE

- ▶ Electronic room thermostat is used to control heating or cooling with help of relay output. Temperature can be measured with internal or external sensor. Set point range and hysteresis can be selected.

Type	IP Class	External temp. sensor	Range	Hysteresis	Relay output
TPE	IP20	TJK10K (NTC10K, 10 kΩ at 25°C)	0...30°C or 0...60°C	1...3°C	6A/230Vac

Room temperature transmitter KPT

KPT



- ▶ Room temperature transmitter is used for room temperature measurement and data conversion to analogue signal output. Temperature range can be selected 0...30 °C or 0...60 °C. Measurement can be selected with internal or external sensor.

Type	Power supply	Temp. external sensor	Output	Measurement range °C	Accuracy	IP Class
KPT	15...24 VDC	TJK10K (NTC10K, 10 kΩ at 25°C)	0...10 VDC	0...30 °C or 0...60 °C	0,5 °C	IP20

Room humidity transmitter KPH

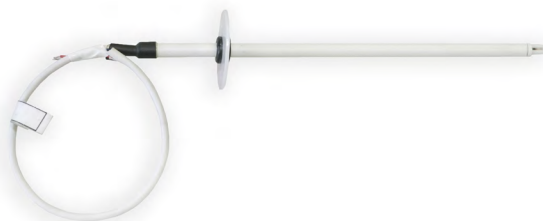
KPH



- ▶ Room humidity transmitter is used to measure room humidity and convert data to analog signal output.

Type	Power supply	Output	Measurement range	Accuracy	IP Class
KPH	15...24 VDC	0...10 VDC	0...100%	4%	IP20

Temperature sensors TJK



TJK

- Used for air temperature measurement in ventilation system ducts. Duct temperature sensors are delivered with installation flange. Insertion length can be adjusted with flange.

Type	Thermistor	Measurement accuracy	Sensor tube	Length	Diameter	Cable length	IP class
TJK10K	NTC10K (10K @ 25°C) range 30..105°C	± 1°C (NTC10K)	Plastic	200 mm	7,5 mm	1500 mm	IP20
TJK PT1000	PT1000 (1K @ 25°C) range 30..105 °C	± 0,5°C (PT1000)	Plastic	200 mm	7,5 mm	1500 mm	IP20

Temperature sensors TJP



TJP

- Used for surface (water pipe) temperature measurement.

Type	Thermistor	Measurement accuracy	Sensor tube	Length	Diameter	Cable length	IP class
TJP10K	NTC10K (10K @ 25°C) range 30 to 105°C	± 1°C(NTC10K)	Metallic	55 mm	7,5 mm	1500 mm	IP65
TJP PT1000	PT1000 (1K @ 25°C) range 30 to 105 °C	± 0,5°C(PT1000)	Metallic	55 mm	7,5 mm	1500 mm	IP65

Accessories: remote temperature potentiometers for controllers EKR



TR1K / TR5K

- ▶ Wired remote set points TR5K and TR1K are used for external temperature set point using them together with heating controllers EKR15.1, EKR15.1P, EKR30, EKR30P and electrical heaters type NI.

Type	Potentiometer	Setpoint range	Thermistor	IP Class	Dimensions
TR1K	1K Ω	0..30°C.	IP20	IP20	71x71x25 mm
TR5K	5K Ω	0..30°C.	IP20	IP20	71x71x25 mm

TR5KNTC10 / TR1KPT1000

- ▶ Wired remote set points TR5KNTC10 and TR1KPT1000 are used for external temperature set-point and temperature measurement using them together with heating controllers EKR15.1, EKR15.1P, EKR30, EKR30P and electrical heaters type NI.

Type	Potentiometer	Setpoint range	Thermistor	IP Class	Dimensions
TR1KPT100	1K Ω	0..30°C.	PT1000 (1000 Ω at 25°C)	IP20	71x71x25 mm
TR5KNTC10	5K Ω	0..30°C.	NTC10K (10K Ω at 25°C)	IP20	71x71x25 mm



TR0-10

- ▶ TR0-10 is used for external setpoint with signal 0...10VDC.

Type	Power supply	Setpoint range	Output signal	IP Class	Dimensions
TR0-10	15..24VDC/VAC	0..100%	0...10VDC	IP20	71x71x25 mm



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