

BASIC FEATURES

- Lengths: 1.0; 1.5; 2.0; 2.5 m
- **Air flow up to 3500 m³/h** (ISO 27 327-1)
- **Straw System** – maximized screening effect
- Low profile
- Universal interface for AirGENIO AC control module connection (BASIC, COMFORT, SUPERIOR)
- Standard colour RAL 9016 (any RAL – based colours may be provided on customer's request)

The ESSENSSE NEO is low profile design air curtain for use in **retail shops, shopping centres, restaurants, administrative buildings and manufacturing facilities** with a recommended installation height up to 3 m*.

* *Maximum recommended installation height – may vary according the particular conditions at the installation site.*

The air curtain shall be installed indoors in a dry environment with ambient temperatures ranging from 0 °C up to +40 °C and relative humidity of up to 80 %. It is designed for conveying air free of fine dust, grease, chemical fumes, and other impurities. IP rating of the air curtain is IP 20. It is recommended that air curtain projects always be developed by an HVAC designer or engineer.

PRIMARY PARAMETERS

Air curtains with electric heaters are equipped with an automatic heat thermostat and emergency thermostat with manual reset. Air curtains with LPHW coil are designed for a maximum operating water temperature of +130 °C and a maximum operating pressure of 1.6 MPa.

VCES3-B 50/60Hz

Type	Recommended installation height [m]	Air output [m³/h] *1			Acoustic pressure at 3m [dB(A)]*2			Sound power [dB(A)]*3
		Speed 3	Speed 2	Speed 1	Speed 3	Speed 2	Speed 1	
VCES3 B 100-E0	3	1350	900	700	48	38	29	69
VCES3 B 150-E0		2200	1550	1150	50	54	35	71
VCES3 B 200-E0		3000	2200	1450	51	45	34	72
VCES3 B 250-E0		3500	3200	2350	52	52	45	74
VCES3 B 100-E1		1350	900	700	48	38	29	69
VCES3 B 150-E1		2200	1550	1150	50	54	35	71
VCES3 B 200-E1		3000	2200	1450	51	45	34	72
VCES3 B 250-E1		3500	3200	2350	52	52	45	74
VCES3 B 100-E2		1350	900	700	48	38	29	69
VCES3 B 150-E2		2200	1550	1150	50	54	35	71
VCES3 B 200-E2		3000	2200	1450	51	45	34	72
VCES3 B 250-E2		3500	3200	2350	52	52	45	74
VCES3 B 100-V2		1300	900	700	47	40	37	68
VCES3 B 150-V2		2000	1500	1150	49	44	37	71
VCES3 B 200-V2		2950	2300	1650	51	48	39	73
VCES3 B 250-V2		3700	3200	2350	52	52	44	74
VCES3 B 100-S0		1350	900	700	48	38	29	69
VCES3 B 150-S0		2200	1550	1150	50	54	35	71
VCES3 B 200-S0		3000	2200	1450	51	45	34	72
VCES3 B 250-S0		3500	3200	2350	52	52	45	74

Type	Heater power output [kW] (*LPHW 90/70°C)		Total power input [kW]	Total voltage/current [V/A]	Motor voltage/current [V/A]	Temperature increase Δt [°C]*4	Frequency [Hz]*6	Weight [kg]*5
	1st level	2nd level						
VCES3 B 100-E0	3,2	4,7	4,90	400 / 13,7	230 / 0,6	10,3	50/60	23,0
VCES3 B 150-E0	3,8	7,5	7,70	400 / 11,9	230 / 0,9	10,1		29,0
VCES3 B 200-E0	4,8	9,5	9,80	400 / 15,8	230 / 1,4	9,4		37,0
VCES3 B 250-E0	6,9	12,2	12,60	400 / 19,4	230 / 1,4	10,4		44,0
VCES3 B 100-E1	3,2	6,3	6,50	400 / 14,4	230 / 0,6	13,9		23,0
VCES3 B 150-E1	5	10	10,20	400 / 21,3	230 / 0,9	13,5		29,0
VCES3 B 200-E1	6,3	12,6	12,90	400 / 27,9	230 / 1,4	12,5		37,0
VCES3 B 250-E1	8,2	16,3	16,70	400 / 26	230 / 1,4	13,8		44,0
VCES3 B 100-E2	4,7	9,5	9,70	400 / 14,3	230 / 0,6	20,9		23,0
VCES3 B 150-E2	7,5	15	15,20	400 / 22,6	230 / 0,9	20,3		29,0
VCES3 B 200-E2	9,5	19	19,30	400 / 28,8	230 / 1,4	18,8		37,0
VCES3 B 250-E2	12,2	24,5	24,90	400 / 36,8	230 / 1,4	20,8		44,0
VCES3 B 100-V2	16,0	-	0,20	230 / 0,6	230 / 0,6	36,4		25,0
VCES3 B 150-V2	23,6	-	0,20	230 / 0,9	230 / 0,9	35,0		31,0
VCES3 B 200-V2	34,0	-	0,30	230 / 1,4	230 / 1,4	34,1		41,0
VCES3 B 250-V2	42,9	-	0,40	230 / 1,4	230 / 1,4	34,3		48,0
VCES3 B 100-S0	-	-	0,10	230 / 0,6	230 / 0,6	-		22,0
VCES3 B 150-S0	-	-	0,20	230 / 0,9	230 / 0,9	-		28,0
VCES3 B 200-S0	-	-	0,30	230 / 1,4	230 / 1,4	-		36,0
VCES3 B 250-S0	-	-	0,40	230 / 1,4	230 / 1,4	-		42,0

*1 Airflow volume according ISO27327-1

*2 Acoustic pressure values at 3 distance for maximum speed. Directional factor: Q=2.

*3 Sound power (LWA) measurements according to ISO 27327-2.

*4 Intake air temperature +18 °C, at maximum heating level and highest fan speed.

*5 Weight without controls.

*6 The data is for 50Hz frequency

LPHW coil parameters for water temperature gradient of 90/70 °C

Type	Air output	Heating output	Temperature at exhaust	Pressure loss	Water flow
	[m³/h]	[kW]	[°C]	[kPa]	[l/s]
VCES3 B 100-V2	1300	16,0	54,4	14,8	0,20
VCES3 B 150-V2	2000	23,6	53,0	10,5	0,29
VCES3 B 200-V2	2950	34,0	52,1	14,6	0,42
VCES3 B 250-V2	3700	42,9	52,3	24,4	0,53

* Temperature of intake air: +18 °C

LPHW coil parameters for water temperature gradient of 80/60 °C

Type	Air output	Heating output	Temperature at exhaust	Pressure loss	Water flow
	[m³/h]	[kW]	[°C]	[kPa]	[l/s]
VCES3 B 100-V2	1300	13,2	48,0	10,5	0,16
VCES3 B 150-V2	2000	19,4	46,7	7,3	0,24
VCES3 B 200-V2	2950	27,9	46,0	10,2	0,34
VCES3 B 250-V2	3700	35,3	46,3	17,2	0,43

* Temperature of intake air: +18 °C

LPHW coil parameters for water temperature gradient of 70/50 °C

Type	Air output	Heating output	Temperature at exhaust	Pressure loss	Water flow
	[m³/h]	[kW]	[°C]	[kPa]	[l/s]
VCES3 B 100 V2	1300	10,3	41,5	6,9	0,12
VCES3 B 150 V2	2000	15,1	40,4	4,7	0,18
VCES3 B 200 V2	2950	21,8	39,9	6,5	0,27
VCES3 B 250 V2	3700	27,7	40,2	11,1	0,34

* Temperature of intake air: +18 °C

LPHW coil parameters for water temperature gradient of 60/40 °C

Type	Air output	Heating output	Temperature at exhaust	Pressure loss	Water flow
	[m³/h]	[kW]	[°C]	[kPa]	[l/s]
VCES3 B 100 V2	1300	7,4	34,9	3,8	0,09
VCES3 B 150 V2	2000	10,8	33,9	2,5	0,13
VCES3 B 200 V2	2950	15,6	33,7	3,5	0,19
VCES3 B 250 V2	3700	20,1	34,0	6,2	0,24

* Temperature of intake air: +18 °C

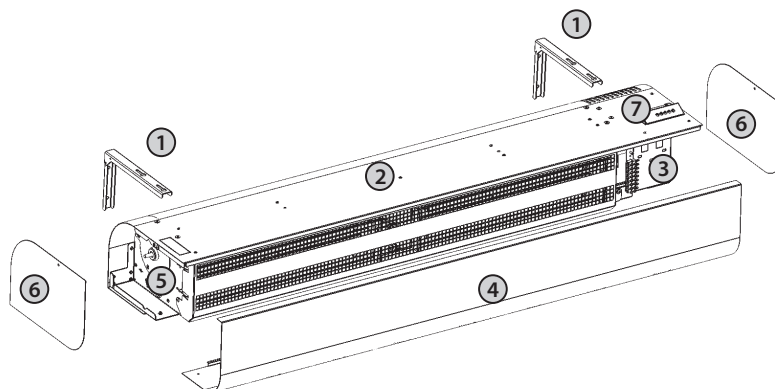
Recommended mixing points for LPHW coil 2-way valve

Type	Control module	90/70 °C	80/60 °C	70/50 °C	60/40 °C
		2-way valve			
VCES3 B 100 V2	RGJ-VCES2-BA	ZV2-230-08,0-20	ZV2-230-08,0-20	ZV2-230-08,0-20	ZV2-230-08,0-20
	RGJ3-VCES2-CO	ZV2-230-08,0-20	ZV2-230-08,0-20	ZV2-230-08,0-20	ZV2-230-08,0-20
	RGJ3-VCES2-SU	ZV2-024-08,0-20	ZV2-024-08,0-20	ZV2-024-08,0-20	ZV2-024-08,0-20
VCES3 B 150 V2	RGJ-VCES2-BA	ZV2-230-08,0-20	ZV2-230-08,0-20	ZV2-230-08,0-20	ZV2-230-08,0-20
	RGJ3-VCES2-CO	ZV2-230-08,0-20	ZV2-230-08,0-20	ZV2-230-08,0-20	ZV2-230-08,0-20
	RGJ3-VCES2-SU	ZV2-024-08,0-20	ZV2-024-08,0-20	ZV2-024-08,0-20	ZV2-024-08,0-20
VCES3 B 200 V2	RGJ-VCES2-BA	ZV2-230-08,0-20	ZV2-230-08,0-20	ZV2-230-08,0-20	ZV2-230-08,0-20
	RGJ3-VCES2-CO	ZV2-230-08,0-20	ZV2-230-08,0-20	ZV2-230-08,0-20	ZV2-230-08,0-20
	RGJ3-VCES2-SU	ZV2-024-08,0-20	ZV2-024-08,0-20	ZV2-024-08,0-20	ZV2-024-08,0-20
VCES3 B 250 V2	RGJ-VCES2-BA	ZV2-230-21,0-20	ZV2-230-08,0-20	ZV2-230-08,0-20	ZV2-230-08,0-20
	RGJ3-VCES2-CO	ZV2-230-21,0-20	ZV2-230-08,0-20	ZV2-230-08,0-20	ZV2-230-08,0-20
	RGJ3-VCES2-SU	ZV2-024-16,0-25	ZV2-024-08,0-20	ZV2-024-08,0-20	ZV2-024-08,0-20

Recommended mixing points for LPHW coil 3-way valve

Type	Control module	90/70 °C	80/60 °C	70/50 °C	60/40 °C
		3-way valve			
VCES3 B 100 V2	RGJ-VCES2-BA	ZV3-230-04,0-20	ZV3-230-04,0-20	ZV3-230-04,0-20	ZV3-230-04,0-20
		RT-3-07	RT-3-07	RT-3-07	RT-3-07
	RGJ3-VCES2-CO	ZV3-230-04,0-20	ZV3-230-04,0-20	ZV3-230-04,0-20	ZV3-230-04,0-20
		RT-3-07	RT-3-07	RT-3-07	RT-3-07
RGJ3-VCES2-SU	ZV3-024-04,0-20	ZV3-024-04,0-20	ZV3-024-04,0-20	ZV3-024-04,0-20	
VCES3 B 150 V2	RGJ-VCES2-BA	ZV3-230-21,0-20	ZV3-230-04,0-20	ZV3-230-04,0-20	ZV3-230-04,0-20
		RT-3-07	RT-3-07	RT-3-07	RT-3-07
	RGJ3-VCES2-CO	ZV3-230-04,0-20	ZV3-230-04,0-20	ZV3-230-04,0-20	ZV3-230-04,0-20
		RT-3-07	RT-3-07	RT-3-07	RT-3-07
RGJ3-VCES2-SU	ZV3-024-06,3-20	ZV3-024-04,0-20	ZV3-024-04,0-20	ZV3-024-04,0-20	
VCES3 B 200 V2	RGJ-VCES2-BA	ZV3-230-21,0-20	ZV3-230-21,0-20	ZV3-230-21,0-20	ZV3-230-04,0-20
		RT-3-07	RT-3-07	RT-3-07	RT-3-07
	RGJ3-VCES2-CO	ZV3-230-21,0-20	ZV3-230-21,0-20	ZV3-230-21,0-20	ZV3-230-04,0-20
		RT-3-07	RT-3-07	RT-3-07	RT-3-07
RGJ3-VCES2-SU	ZV3-024-06,3-20	ZV3-024-06,3-20	ZV3-024-06,3-20	ZV3-024-04,0-20	
VCES3 B 250 V2	RGJ-VCES2-BA	ZV3-230-21,0-20	ZV3-230-21,0-20	ZV3-230-21,0-20	ZV3-230-04,0-20
		RT-3-07	RT-3-07	RT-3-07	RT-3-07
	RGJ3-VCES2-CO	ZV3-230-21,0-20	ZV3-230-21,0-20	ZV3-230-21,0-20	ZV3-230-04,0-20
		RT-3-07	RT-3-07	RT-3-07	RT-3-07
RGJ3-VCES2-SU	ZV3-024-10,0-25	ZV3-024-06,3-20	ZV3-024-06,3-20	ZV3-024-04,0-20	

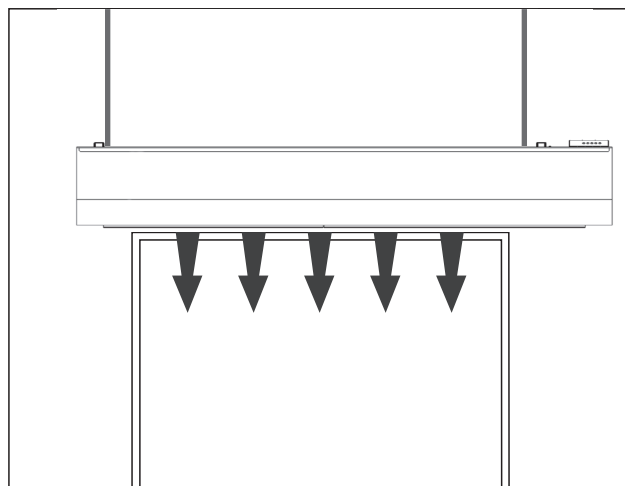
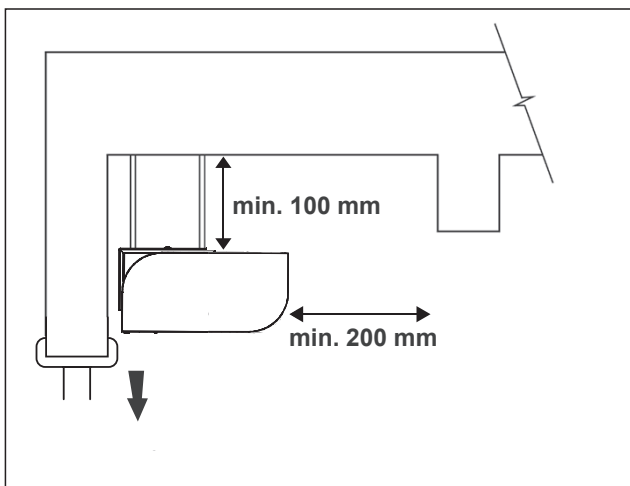
MAIN PARTS



- ① Mounting brackets (included with delivery)
- ② Top cover
- ③ Connection dock for controls module
- ④ Intake grill
- ⑤ Connection dock for LPHW (only on water versions)
- ⑥ Side cover
- ⑦ Main power supply connection

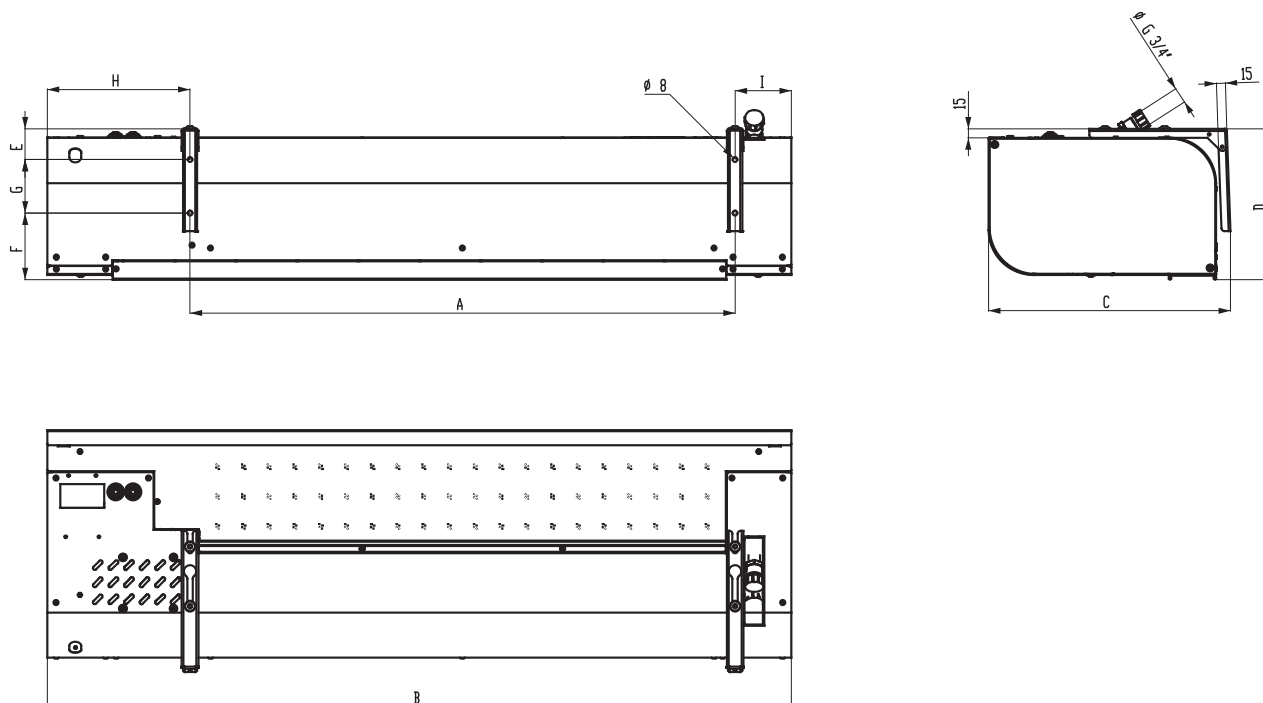
INSTALLATION AND ASSEMBLY

- The air curtain must be installed in a horizontal position only.
- The air curtain shall be located as close as possible to the top edge of the doorway, and a distance from walls that is in accordance with fire safety and building codes of the country where unit is installed. For manufacturer recommended distance see figures below.
- To ensure proper function it is recommended that the air curtain overlaps the doorway by 100 mm on both sides.
- Correct operation of the air curtain requires that specified distances from the surrounding objects are observed, see figure.
- Please take note of water and power supply connections when installing air curtain.
- The air curtain shall be installed using supplied brackets.





AIR CURTAIN DIMENSIONS



Type	A	B	C	D	E	F	G	H	I
VCES3B 100	916	1252	407	252	51	111	90	240	95
VCES3B 150	1325	1660	407	252	51	111	90	240	95
VCES3B 200	1825	2160	407	252	51	111	90	240	95
VCES3B 250	2235	2570	407	252	51	111	90	240	95



CONTROL

Overview of functions and sensor connections



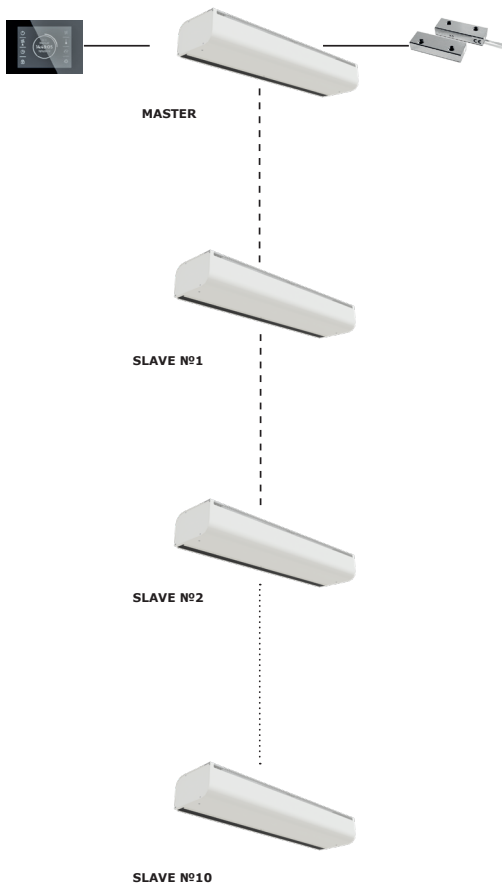
AirGENIO control system		BASIC RGJ-VCES2-BA	COMFORT RGJ3-VCES2-CO	SUPERIOR RGJ3-VCES2-SU
	Type of controller	Manual	Touch screen	Touch screen
	Mode	Manual	Manual / Auto	Manual / Auto
	Control of air output	3 speeds	3 speeds	3 speeds
	Control of electric heater	OFF / Level1 / Level2	OFF / Level1 / Level2	YES (PWM)
	Control of water heater	ON/OFF	ON/OFF	0-10V
	Antifreeze protection of LPHW	NO	YES	YES
	Possibility of connecting a door contact	YES (230V)	YES (12V)	YES (12V)
	External control	NO	YES	YES
	Temperature measurement	NO	YES (NTC)*	YES (NTC)*
	Chaining air curtains	NO	YES - max 10+1 pcs	YES - max 10+1 pcs
	Indication of selected function	NO	YES (Display)	YES (Display)
	Controller connection to air curtain	Power wire	Communication cable (UTP)	Communication cable (UTP)
	Self learning mode	NO	YES	YES
	BMS connection	NO	Modbus RTU	Modbus RTU, Modbus TCP, BACnet
	Error contact	NO	YES	YES
	2 nd control panel ready	NO	YES	YES

^{*)} Temperature sensor included in standard. Temperature shown on display.

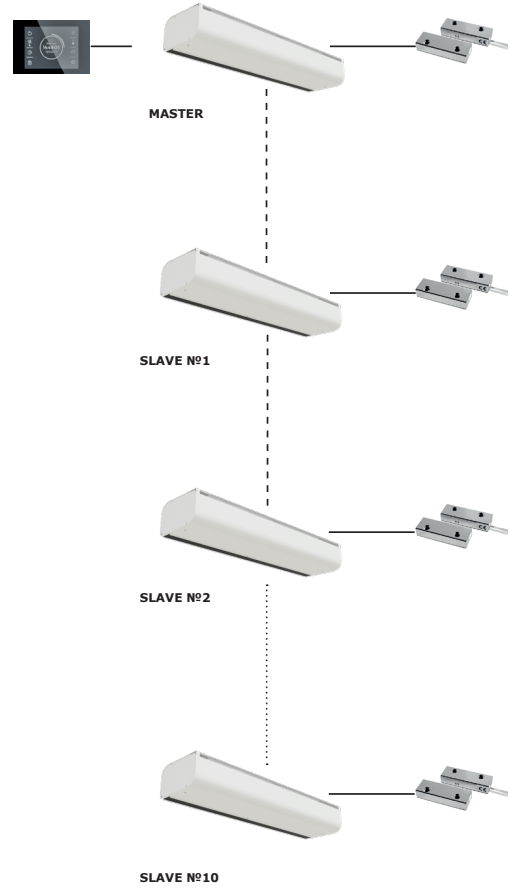


CHAINING EXAMPLE

COMFORT / SUPERIOR
Global Door contact function active
(Single door with multiple air curtians)



COMFORT / SUPERIOR
Global Door contact function not active
(Multiple doors with own door contact)





ACCESSORIES

REQUIRED ACCESSORIES

These accessories are required to make the curtain functional.

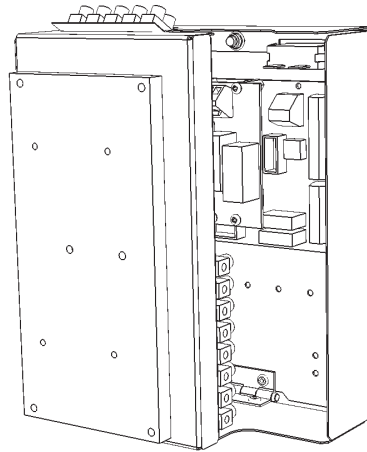
AirGENIO Control module

A control module is a required accessory for ESSENSSE NEO air curtain and are required for each air curtain.

A control panel is included in the delivery with the control module. The ordering key for control modules is provided below.

The control panel of Basic control module is connected using common wiring cable (230 V control voltage). A suitable cross-section of the cable shall be determined based on the particular installation conditions. This cable should be provided by a company performing the air curtain electrical wiring.

The control panel of Comfort/Superior module is connected using UTP communication cable (not included).



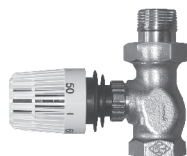
RGJ3-VCES2-SU-E-MA-1-AC

- AC** – AC motor
- 1** – only for E versions, air curtain length 100, 150
- 2** – only for E versions, air curtain length 200, 250
- SL** – SLAVE (only for CO, SU)
- MA** – MASTER (only for CO, SU)
- S** – without heating regulation
- E** – with electric heater regulation
- V** – with water heater regulation
- BA** – Basic control (mechanical)
- CO** – Comfort control (touch screen)
- SU** – Superior control (touch screen)
- VCES2** – air curtain Essensse NEO
- RGJ** – Controls (BA)
- RGJ3** – Controls (CO, SU)

OPTIONAL ACCESSORIES

More details can be found on the relevant page in this catalogue

2-way Thermostatic valve TV-1-1/1
TV-1-1/1



2-way or 3-way valve with servo drive (230V)
ZV2-230-xx,x-xx
ZV3-230-xx,x-xx
(for control BASIC, COMFORT)



2way or 3-way valve with servo drive (0-10V)
ZV2-024-xx,x-xx
ZV3-024-xx,x-xx
(for control SUPERIOR)



3-way valve with servo drive RT
RT-3-07 (K_{vs} 7)
(for control BASIC, COMFORT)



Mixing node
SMU2-230-xx (for control BASIC, COMFORT)
SMU2-024-xx (for control SUPERIOR)



Room thermostat
TER-P



Room temperature sensor
CT-ROOM



Mechanical door switch (230V)
DS



Magnetic door contact (12V) in a metal housing with higher protection against mechanical damage
DK-B-3



	BASIC RGJ-VCES2-BA	COMFORT RGJ3-VCES2-CO	SUPERIOR RGJ3-VCES2-SU
 DS	✓	✓*	✓*
DK-B-3	✗	✓	✓

* Recommended for industry use

2nd Control panel
ND-REMOTE-CONTROL (for control CO, SU)



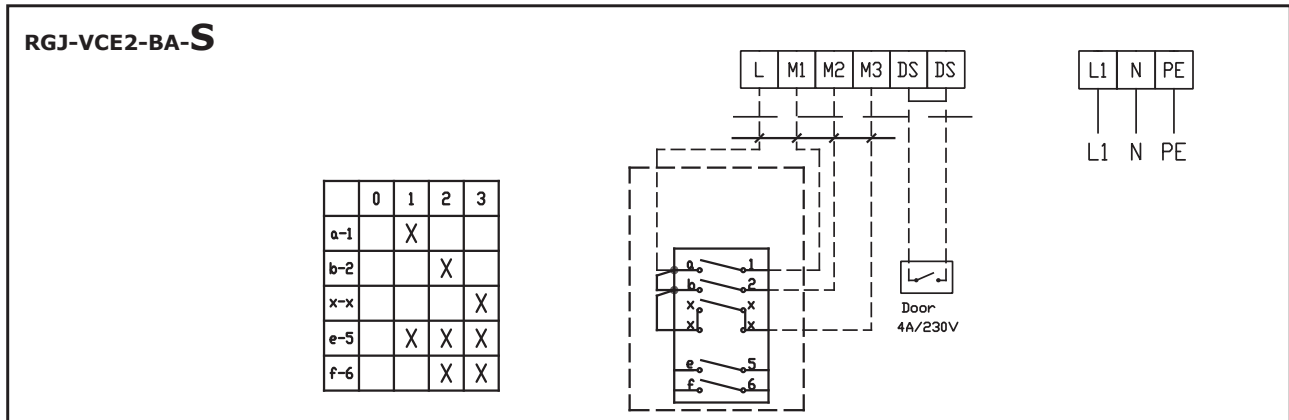
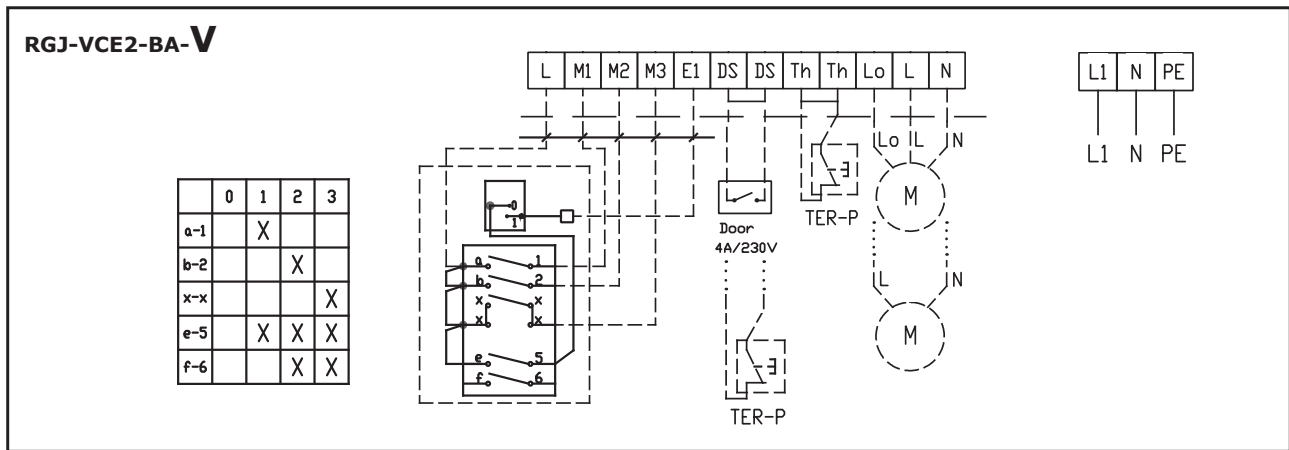
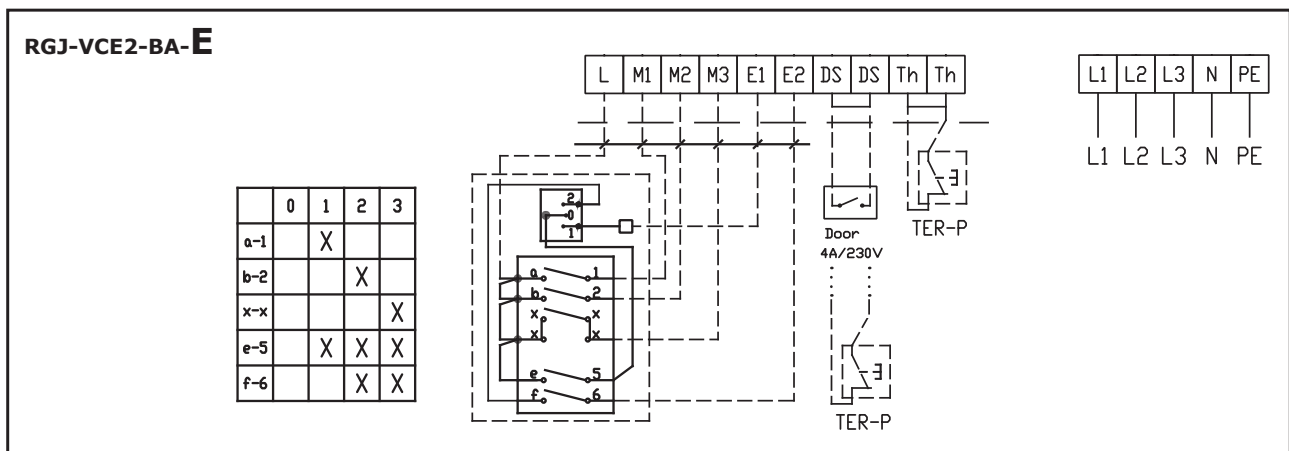


WIRING DIAGRAMS

The recommended cross-section of the main power supply cables is stated in the Instruction Manual. All wiring diagrams provided in the technical catalog are indicative only. When assembling the product, carefully observe the nameplate ratings as well as directions and diagrams affixed directly to the product or enclosed with the product.



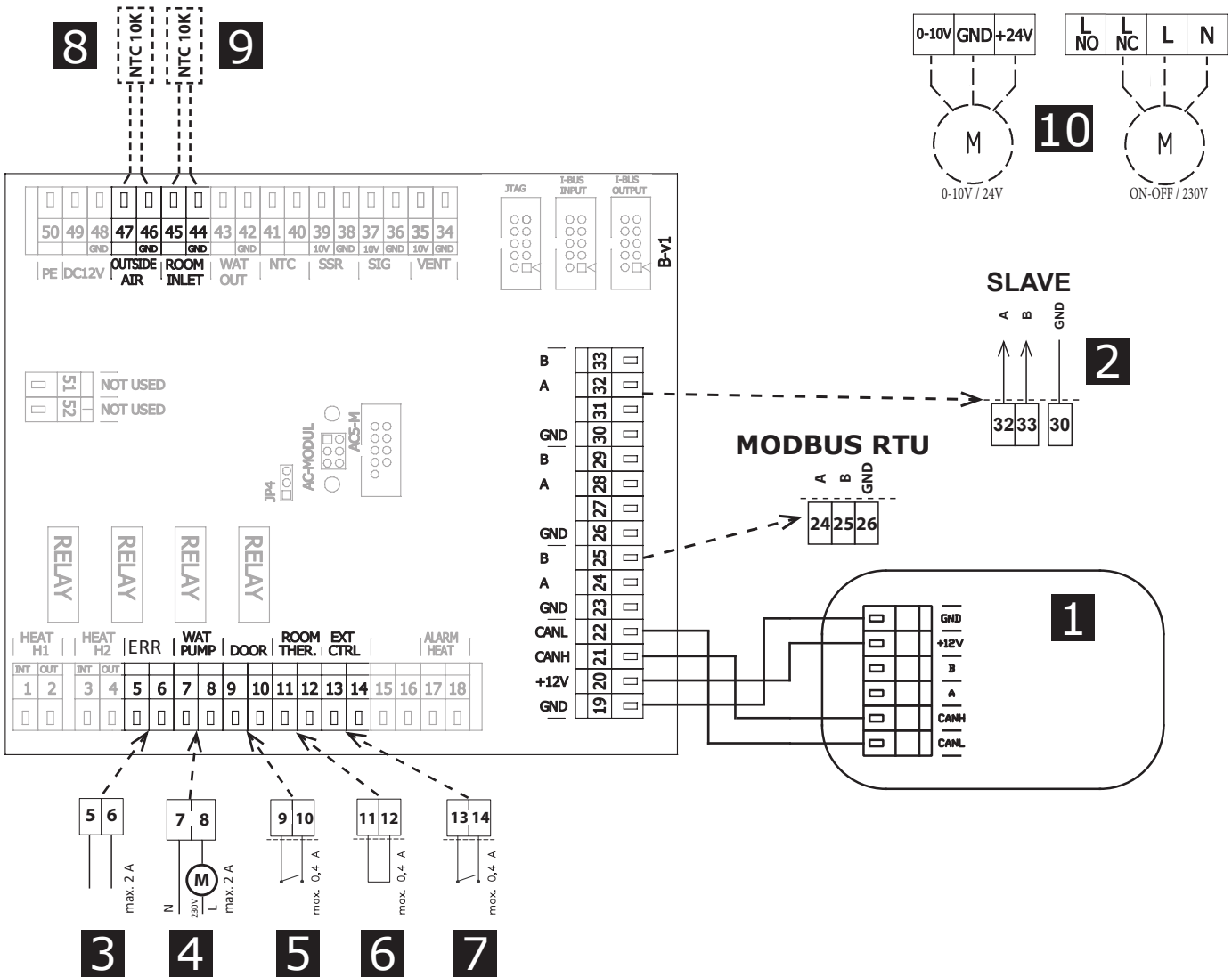
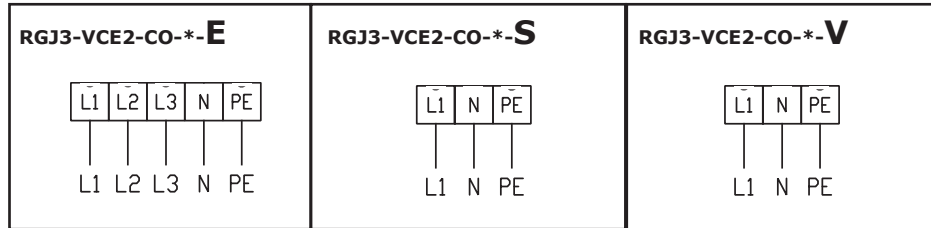
AirGENIO BASIC





WIRING DIAGRAMS

AirGENIO COMFORT MASTER

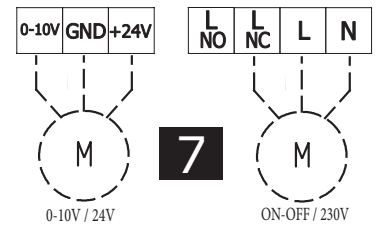
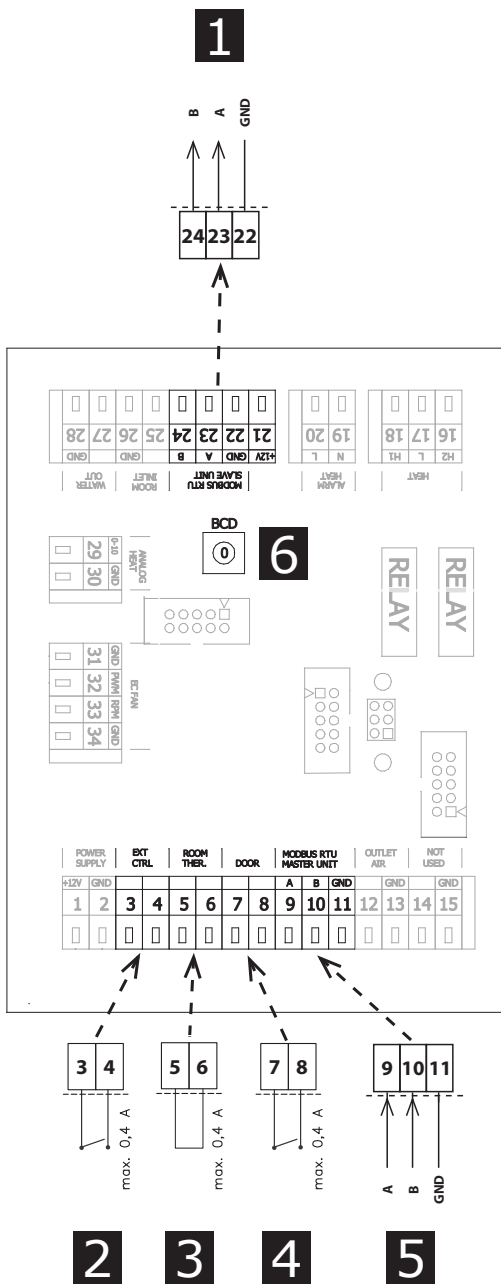
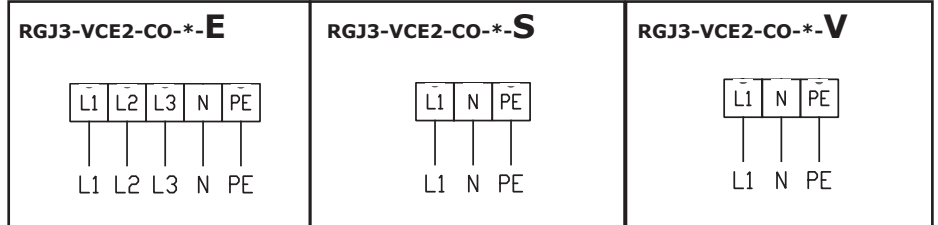


EN	
1	Control panel
2	Signal to SLAVE unit
3	ERROR contact (relay contact, NO/NC)
4	Water pump (relay contact)*
5	DOOR contact (input, NO/NC)
6	Room thermost (input, NO/NC)
7	External control (input, NO/NC)
8	Outside air temp. sensor (include delivery)
9	Room temp. sensor (include delivery)
10	Water valve control connection



WIRING DIAGRAMS

AirGENIO COMFORT SLAVE



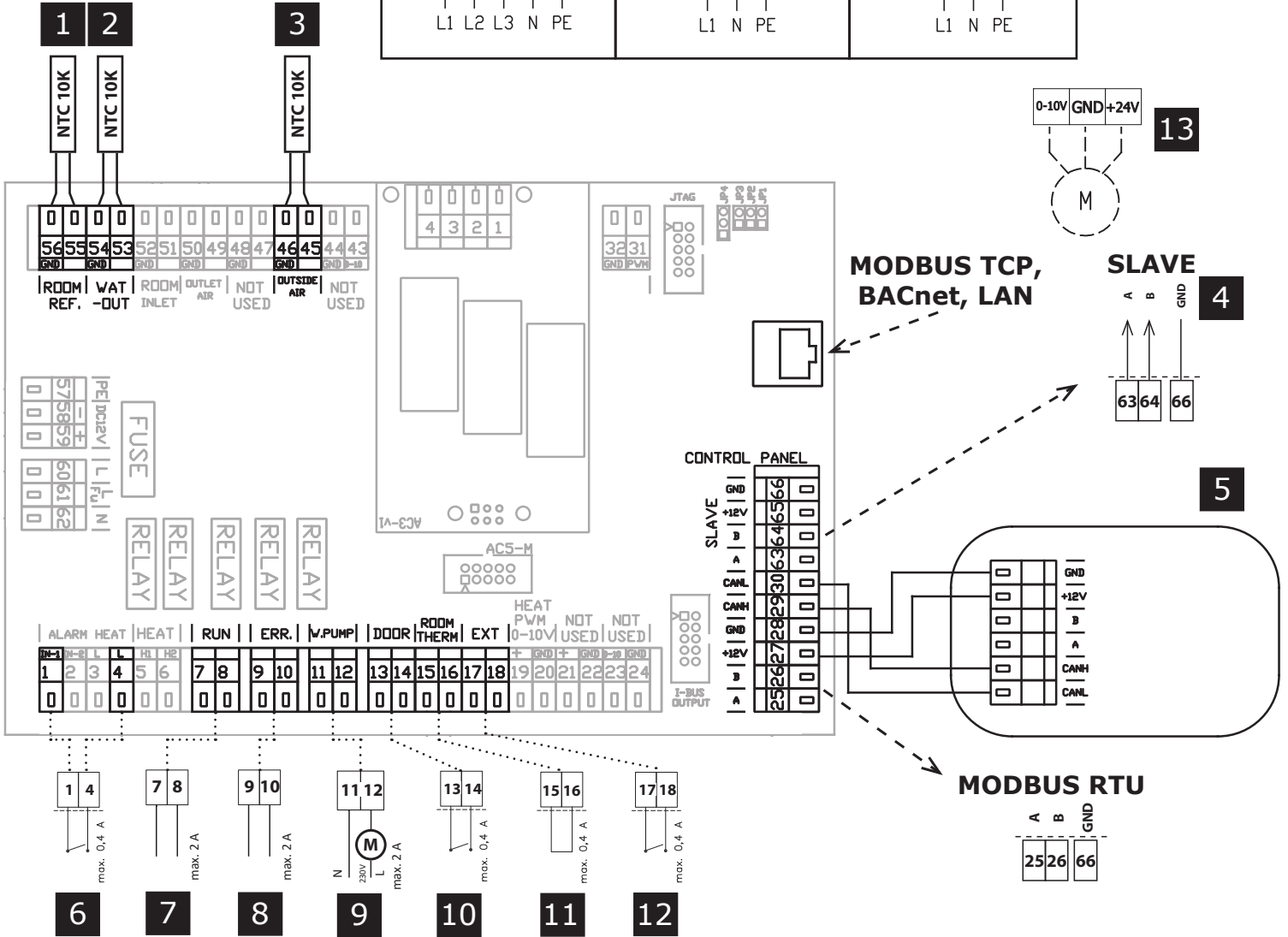
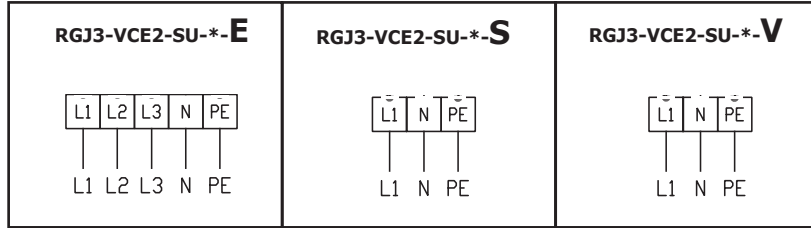
EN	
1	Signal to SLAVE unit
2	External control - ON/OFF
3	Room thermostat (input)
4	DOOR contact (input)
5	Signal from MASTER unit
6	Address of the slave air curtain
7	Water valve control connection

6	
SLAVE	BCD
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	A

WIRING DIAGRAMS



AirGENIO SUPERIOR MASTER

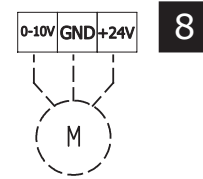
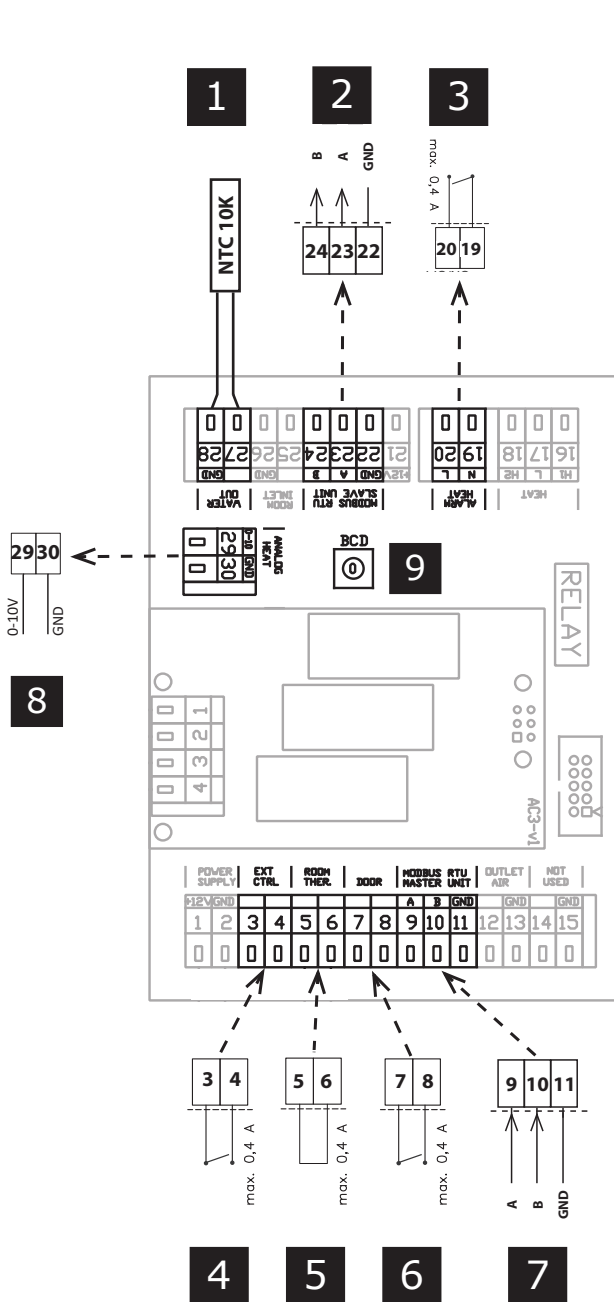
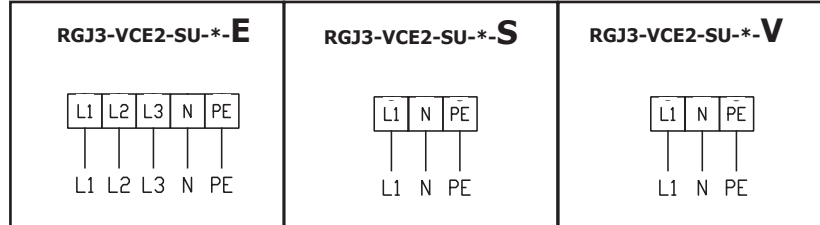


EN	
1	Room sensor (accessories)
2	LPHW out sensor (included in delivery)
3	Outside air sensor (included in delivery)
4	Signal to SLAVE unit
5	Control panel
6	Antifreeze thermostat (NC)
7	RUN contact (relay contact, NO/NC)
8	ERROR contact (relay contact, NO/NC)
9	Water pump (relay contact)
10	DOOR contact (input, NO/NC)
11	Room thermostat (input, NO/NC)
12	External control (input, NO/NC)
13	Water valve control (0-10V)



WIRING DIAGRAMS

AirGENIO SUPERIOR SLAVE



EN	
1	LPHW out sensor (included in delivery)
2	Signal to SLAVE unit
3	Antifreeze thermostat (NC)
4	External control - ON/OFF
5	Room thermostat (input)
6	DOOR contact (input)
7	Signal from MASTER unit
8	Water valve control (0-10V)

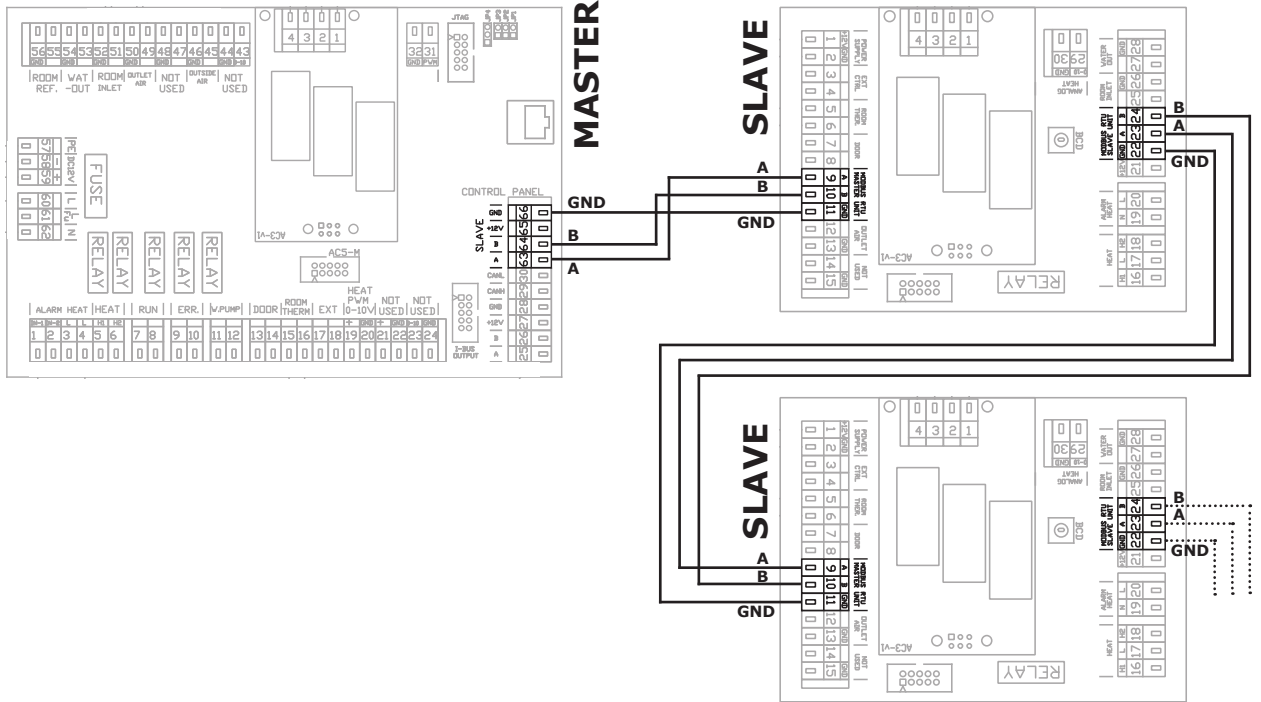
9	
SLAVE	BCD
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	A



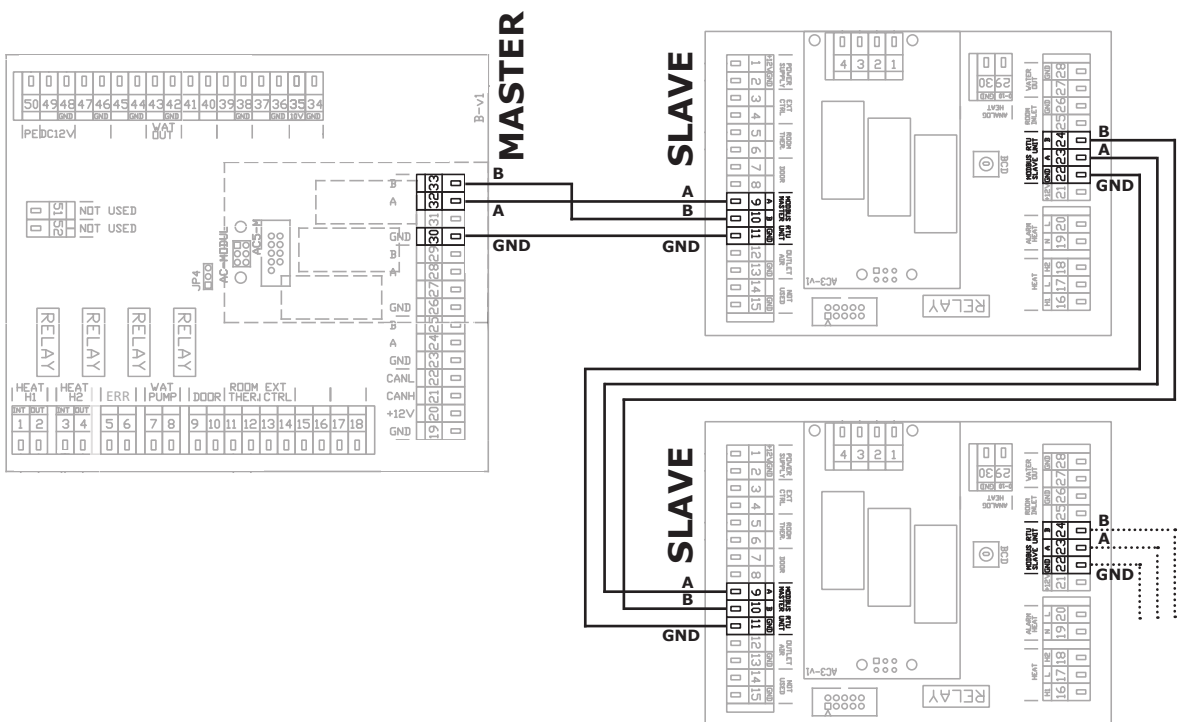
WIRING DIAGRAMS

Chaining

AirGENIO SUPERIOR

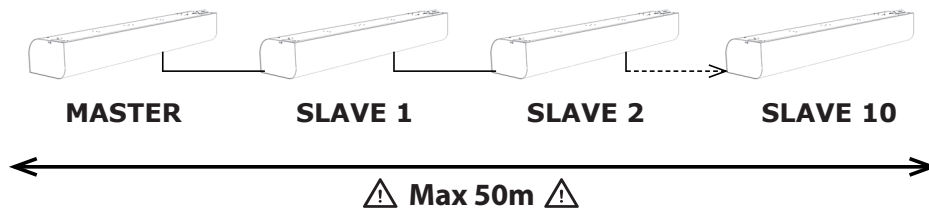


AirGENIO COMFORT





CHAINING



KEY TO CODING

VCES3 B 100-E0 AC-CR-0 A0

- A0** - 2V version
- 9** - Atyp RAL
- 0** - Standard RAL
- CR** - Control ready
- AC** - AC motor
- E0** - Electric heater with reduced power
- E1** - Electric heater (*standard*)
- E2** - Electric heater with increased power
- V2** - Water heater
- S0** - Air-only (*ambient*)
- 100** - Nominal width 1000 mm
- 150** - Nominal width 1500 mm
- 200** - Nominal width 2000 mm
- 250** - Nominal width 2500 mm
- B** - Output series
- VCES3** - Air Curtain ESSENSSE NEO