



air-only



water heater



electric wire heater

ENERGY
SAVINGLOW
NOISEWIRE
HEATERMODULAR
CONTROLFACE
2in1**BASIC FEATURES**

- Lengths: 1; 1.5; 2; 2.5 m
- **Air flow up to 4313 m³/h** (ISO 27 327-1)
- Universal interface for AirGENIO control module connection (BASIC, COMFORT, SUPERIOR)
- *FACE 2 in 1* - suction grille + filter = 2 in 1
- Low noise
- Easy installation and service
- Standard colour RAL 9016 (any RAL - based colours may be provided on customer's request)

FINESSE

Discrete and high-performance recessed air curtain for use in **entrance areas of banks, administrative centres, luxury boutiques, shopping centres and airport halls** with a recommended installation height up to 4 m*.

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

The air curtain shall be installed indoor in a dry area with ambient temperatures ranging from +5 °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. The air curtain project shall always be developed by the HVAC designer.


PRIMARY PARAMETERS

Air curtains with electric heater are fitted with automatic heat thermostat and emergency thermostat with manual reset. The air curtains with LPHW coil are designed for the maximum operating water temperature of +100 °C and maximum operating pressure of 1.6 MPa.

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	
VCF-B-100-E-...	4,0	1778	1217	814	58	50	42	76
VCF-B-150-E-...		2552	1738	1130	60	52	43	78
VCF-B-200-E-...		3444	2307	1485	61	53	44	79
VCF-B-250-E-...		4187	2844	1880	63	55	45	80
VCF-B-100-V-...		1691	1146	758	58	50	41	75
VCF-B-150-V-...		2449	1643	1082	60	52	42	77
VCF-B-200-V-...		3381	2267	1422	61	53	44	79
VCF-B-250-V-...		4061	2765	1825	63	54	45	80
VCF-B-100-S-...		1793	1225	822	58	50	42	76
VCF-B-150-S-...		2591	1770	1193	60	52	43	78
VCF-B-200-S-...		3476	2402	1659	62	54	45	79
VCF-B-250-S-...		4313	2899	1959	63	54	45	80

*1 Airflow volume according ISO27327-1

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

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

Type	Heater power output [kW]		Total power input [kW]*1	Total voltage/ current [V/A]	Motor voltage/ current [V/A]	Temperature increase Δt [°C]	Frequency [Hz]	Weight [kg]*3
	1st level	2st level						
VCF-B-100-E-...	4,6	9,4	10,1	400/16,3	230/2,75	15,7*1	50	39,5
VCF-B-150-E-...	7,6	15	16	400/26,1	230/4,0	17,5*1	50	54,5
VCF-B-200-E-...	9,8	19	20,5	400/32,4	230/5,3	16,4*1	50	71,0
VCF-B-250-E-...	12,5	24,5	26,1	400/42,2	230/6,5	17,4*1	50	85,0
VCF-B-100-V-...	24,8*2		0,63	230/2,75	230/2,75	36,2*2	50	41,0
VCF-B-150-V-...	38,8*2		0,9	230/4,0	230/4,0	38,1*2	50	56,0
VCF-B-200-V-...	52,6*2		1,2	230/5,3	230/5,3	37,6*2	50	73,0
VCF-B-250-V-...	62,3*2		1,5	230/6,5	230/6,5	37,3*2	50	87,0
VCF-B-100-S-...	-	-	0,63	230/2,75	230/2,75	-	50	37,5
VCF-B-150-S-...	-	-	0,9	230/4,0	230/4,0	-	50	51,0
VCF-B-200-S-...	-	-	1,2	230/5,3	230/5,3	-	50	66,0
VCF-B-250-S-...	-	-	1,5	230/6,5	230/6,5	-	50	80,0

*1 At the maximum air flow and maximum heater power

*2 Intake air temperature +18°C, water temperature gradient of 90/70 °C and highest fan speed.

*3 Weight without controls.

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

Type	Air output	Heat output	Temperature at exhaust	Pressure loss	Water flow
	[m³/h]	[kW]	[°C]	[kPa]	[l/s]
VCF-B-100-V-...	1691	20,5	54,2	9	0,25
VCF-B-150-V-...	2449	31,3	56,1	22	0,38
VCF-B-200-V-...	3381	42,6	55,6	16	0,52
VCF-B-250-V-...	4061	50,7	55,3	13	0,62

* Temperature of intake air: +18 °C

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

Type	Air output	Heat output	Temperature at exhaust	Pressure loss	Water flow
	[m³/h]	[kW]	[°C]	[kPa]	[l/s]
VCF-B-100-V-...	1691	16,8	47,7	8	0,2
VCF-B-150-V-...	2449	25,9	49,5	16	0,32
VCF-B-200-V-...	3381	35,1	49	13	0,43
VCF-B-250-V-...	4061	41,8	48,7	10	0,51

* Temperature of intake air: +18 °C

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

Type	Air output	Heat output	Temperature at exhaust	Pressure loss	Water flow
	[m³/h]	[kW]	[°C]	[kPa]	[l/s]
VCF-B-100-V-...	1691	13,1	41,1	5	0,16
VCF-B-150-V-...	2449	20,4	42,9	11	0,25
VCF-B-200-V-...	3381	27,6	42,4	9	0,33
VCF-B-250-V-...	4061	32,8	42,1	8	0,4

* Temperature of intake air: +18 °C

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

Type	Air output	Heat output	Temperature at exhaust	Pressure loss	Water flow
	[m³/h]	[kW]	[°C]	[kPa]	[l/s]
VCF-B-100-V-...	1691	9,3	34,4	4	0,11
VCF-B-150-V-...	2449	14,9	36,1	8	0,66
VCF-B-200-V-...	3381	20	35,7	6	0,24
VCF-B-250-V-...	4061	23,7	35,4	5	0,28

* Temperature of intake air: +18 °C

Recommended mixing points for LPHW coil

Type	Control module	90/70 °C	80/60 °C	70/50 °C	60/40 °C
		2-way valve			
VCF-B-100-V	VCS-R2-BA	ZV2-230-08,0-20	ZV2-230-08,0-20	ZV2-230-08,0-20	ZV2-230-08,0-20
	VCS-R4-CO	ZV2-230-08,0-20	ZV2-230-08,0-20	ZV2-230-08,0-20	ZV2-230-08,0-20
	VCS-R4-SU	ZV2-024-08,0-20	ZV2-024-08,0-20	ZV2-024-08,0-20	ZV2-024-08,0-20
VCF-B-150-V	VCS-R2-BA	ZV2-230-08,0-20	ZV2-230-08,0-20	ZV2-230-08,0-20	ZV2-230-08,0-20
	VCS-R4-CO	ZV2-230-08,0-20	ZV2-230-08,0-20	ZV2-230-08,0-20	ZV2-230-08,0-20
	VCS-R4-SU	ZV2-024-08,0-20	ZV2-024-08,0-20	ZV2-024-08,0-20	ZV2-024-08,0-20
VCF-B-200-V	VCS-R2-BA	ZV2-230-08,0-20	ZV2-230-08,0-20	ZV2-230-08,0-20	ZV2-230-08,0-20
	VCS-R4-CO	ZV2-230-08,0-20	ZV2-230-08,0-20	ZV2-230-08,0-20	ZV2-230-08,0-20
	VCS-R4-SU	ZV2-024-08,0-20	ZV2-024-08,0-20	ZV2-024-08,0-20	ZV2-024-08,0-20
VCF-B-250-V	VCS-R2-BA	ZV2-230-08,0-20	ZV2-230-08,0-20	ZV2-230-08,0-20	ZV2-230-08,0-20
	VCS-R4-CO	ZV2-230-08,0-20	ZV2-230-08,0-20	ZV2-230-08,0-20	ZV2-230-08,0-20
	VCS-R4-SU	ZV2-024-08,0-20	ZV2-024-08,0-20	ZV2-024-08,0-20	ZV2-024-08,0-20

Recommended mixing points for LPHW coil 3-way valve

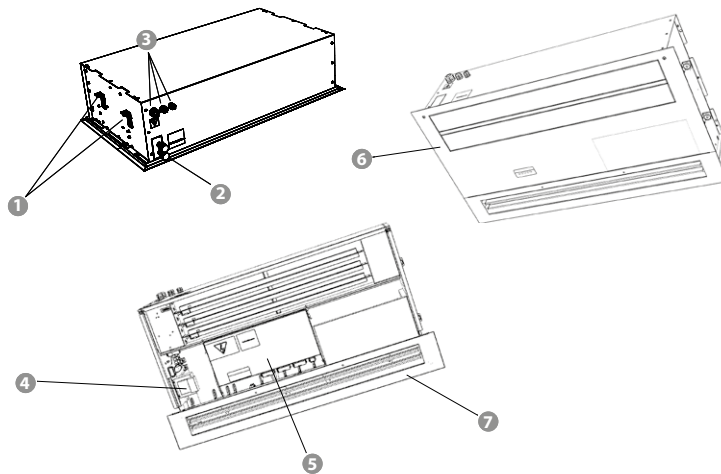
Type	Control module	90/70 °C	80/60 °C	70/50 °C	60/40 °C
		3-way valve			
VCF-B-100-V	VCS-R2-BA	ZV3-230-04,0-20	ZV3-230-04,0-20	ZV3-230-04,0-20	ZV3-230-04,0-20
		RT-3-07	RT-3-07	RT-3-07	RT-3-07
	VCS-R4-CO	ZV3-230-04,0-20	ZV3-230-04,0-20	ZV3-230-04,0-20	ZV3-230-04,0-20
		RT-3-07	RT-3-07	RT-3-07	RT-3-07
	VCS-R4-SU	ZV3-024-04,0-20	ZV3-024-04,0-20	ZV3-024-04,0-20	ZV3-024-04,0-20
	VCF-B-150-V	VCS-R2-BA	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
VCS-R4-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
VCS-R4-SU		ZV3-024-04,0-20	ZV3-024-04,0-20	ZV3-024-04,0-20	ZV3-024-04,0-20
VCF-B-200-V		VCS-R2-BA	ZV3-230-21,0-20	ZV3-230-21,0-20	ZV3-230-21,0-20
	RT-3-07		RT-3-07	RT-3-07	RT-3-07
	VCS-R4-CO	ZV3-230-21,0-20	ZV3-230-21,0-20	ZV3-230-21,0-20	ZV3-230-21,0-20
		RT-3-07	RT-3-07	RT-3-07	RT-3-07
	VCS-R4-SU	ZV3-024-06,3-20	ZV3-024-06,3-20	ZV3-024-06,3-20	ZV3-024-06,3-20
	VCF-B-250-V	VCS-R2-BA	ZV3-230-21,0-20	ZV3-230-21,0-20	ZV3-230-21,0-20
RT-3-07			RT-3-07	RT-3-07	RT-3-07
VCS-R4-CO		ZV3-230-21,0-20	ZV3-230-21,0-20	ZV3-230-21,0-20	ZV3-230-21,0-20
		RT-3-07	RT-3-07	RT-3-07	RT-3-07
VCS-R4-SU		ZV3-024-06,3-20	ZV3-024-06,3-20	ZV3-024-06,3-20	ZV3-024-06,3-20



PRIMARY PARAMETERS

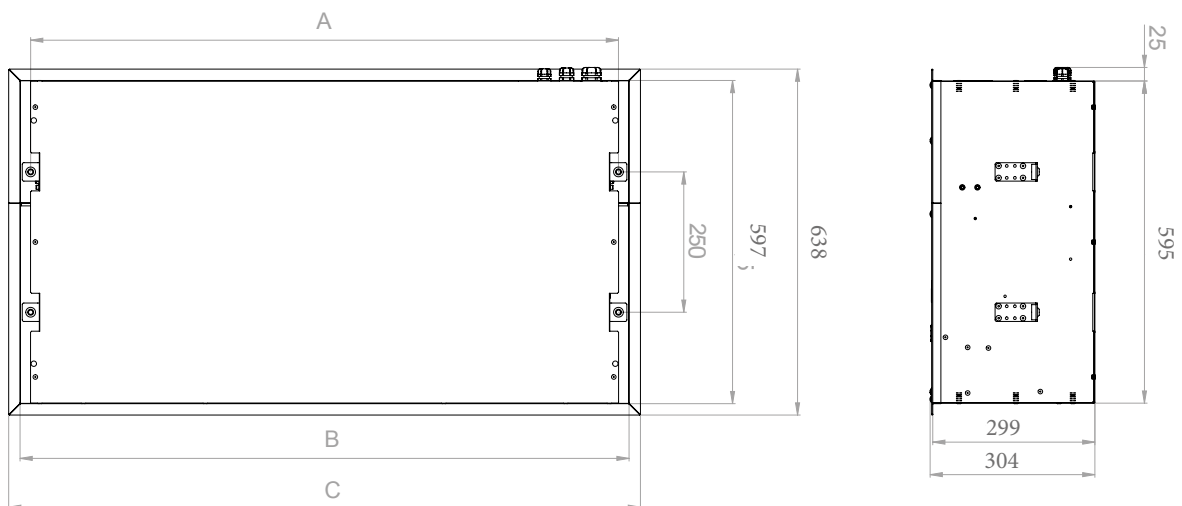
MAIN PARTS

- ① Suspension holders
- ② Water coil connection 3/4"
- ③ Power supply cable plug
- ④ Power supply connectors and fuse location
- ⑤ Control modul socket
- ⑥ Inlet face cover
- ⑦ Outlet grid



PRIMARY PARAMETERS

Air curtain dimensions



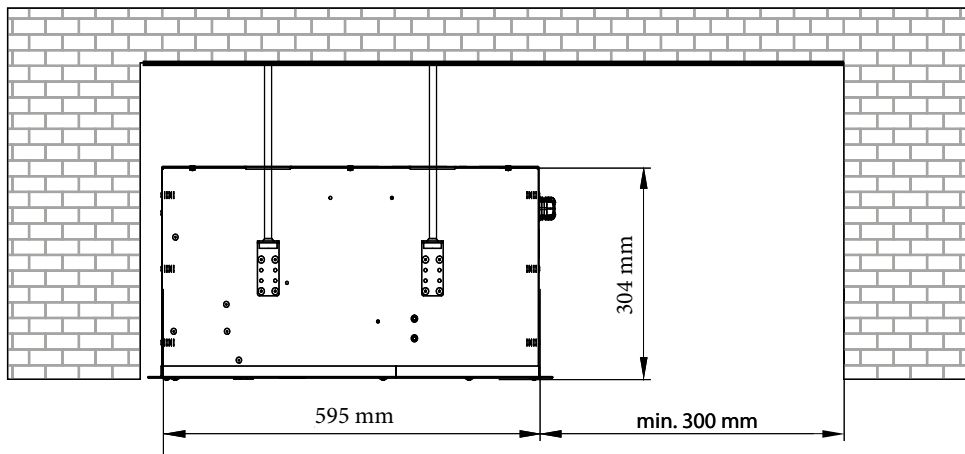
Type	A	B	C
VCF-x-100-x-...	1085	1124	1166
VCF-x-150-x-...	1585	1624	1666
VCF-x-200-x-...	2085	2124	2166
VCF-x-250-x-...	2465	2504	2546

The tube diameters for connecting the LPHW coil are G3/4".



INSTALLATION AND ASSEMBLY

- The air curtain shall be installed in a horizontal position only.
- The air curtain shall be located as close to the top edge of the doorway as possible, see figure.
- To ensure a correct 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.
- Position of the heating water and power supply connections and service access shall be taken into consideration during installation.
- Suspension holders are used for installing the air curtains see ACCESSORIES.
- The air curtain shall be installed separated from flammable materials and safe operation has to be kept.



CONTROL

The **FINESSE** air curtains are produced with universal interface for AirGENIO control module connection. There are three types of control modules available (BASIC, COMFORT and SUPERIOR). Control module is a required accessory for each air curtain. Additional change of control system is available. Control module is connected with air curtain by quick connection sockets. The basic differences among individual control module types are given in table underneath.



CONTROL

Overview of functions and sensor connections



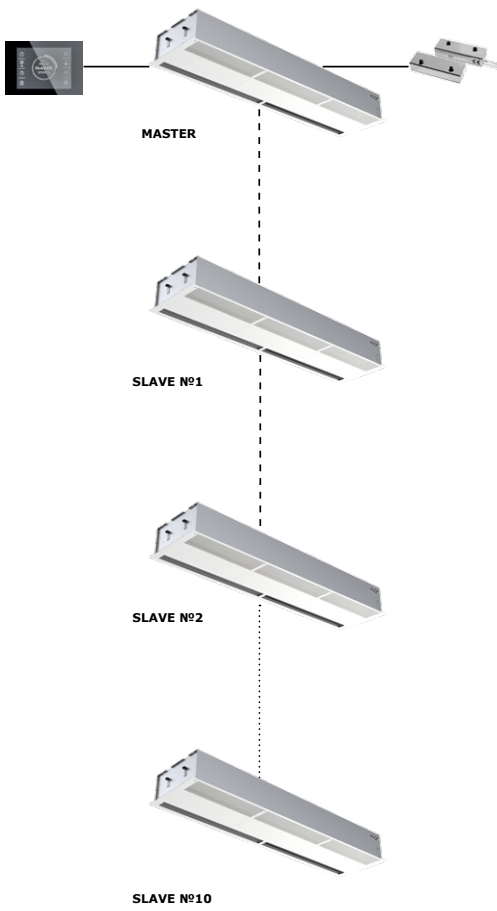
AirGENIO control		BASIC VCS-R2-BA	COMFORT VCS-R4-CO	SUPERIOR VCS-R4-SU
	Type of controller	Manual	Touch screen	Touch screen
	Mode	Manual	Manual / Auto	Manual / Auto
	Control of air output	3 speeds	3 speeds	3 speeds
	Control of electric heater	OFF / Level1 / Level2	OFF / Level1 / Level2	YES (PWM)
	Control 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.

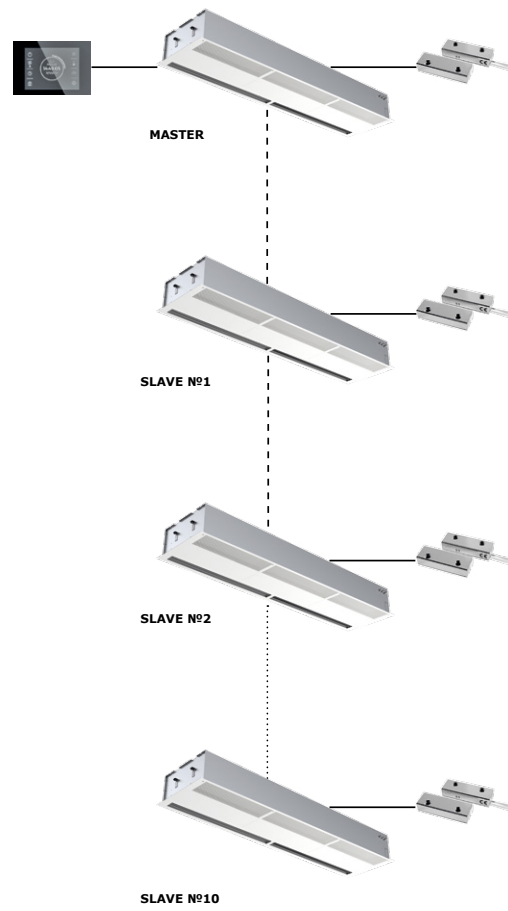


Chaining example

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



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





ACCESSORIES

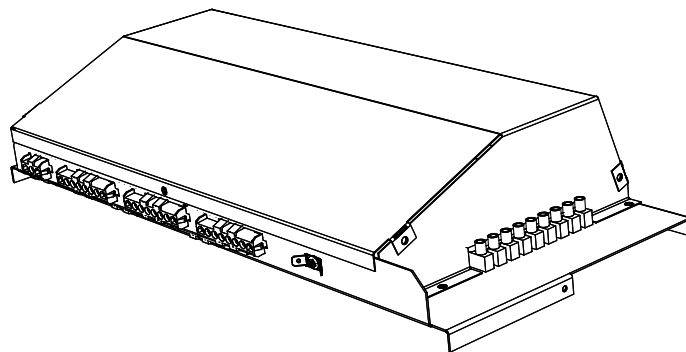
REQUIRED ACCESSORIES

These accessories shall be ordered to make the air curtain functional.

AirGENIO Control module

A control module is a required accessory for air curtain and shall be ordered for each air curtain. Control panel is included in delivery of control module. The ordering key for control modules is provided below.

Communication cable has to be ordered separately as an optional accessory.



VCS-R4-SU-E-SL-AC

- AC** - AC motor
- 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)
- R2** - control system (BA)
- R4** - control system (CO, SU)
- VCS** - air curtain Standesse

OPTIONAL ACCESSORIES

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

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 BA, CO control)



3-way valve with servo drive RT
RT-3-07 (K_{vs} 07)
(for BA, CO control)



Water valve (0-10V)
ZV2-024-xx
ZV3-024-xx
(for control SU control)



Mixing node
SMU2-230-xx (for BA, CO control)
SMU2-024-xx (for SU control)



Room thermostat
TER-P



Room temperature sensor
CT-ROOM



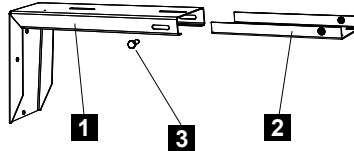
Wall mounting bracket

Bracket designed for mounting the air curtain to the wall.

- 1 Bracket
- 2 Hanging strip
- 3 Securing screw

VCS4-KONZ-STE

- for B and C air curtains (2 pcs. in package)
- wall mounting bracket



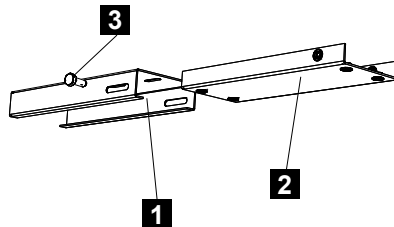
Ceiling holder

The holder is designed for attaching the air curtain to a ceiling.

- 1 Ceiling bracket
- 2 Hanging strip
- 3 Securing screw

VCS4-KONZ-STR

- for B and C air curtains (2 pcs. in package)
- ceiling holder



Exit sign for marking of emergency exits.

Suitable for all types of air curtains.

VCS4-EXIT



2nd Control panel

ND-REMOTE-CONTROL

(for control CO,SU)



Mechanical door switch (230V)
DS



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



	BASIC VCS-R2-BA	COMFORT VCS-R4-CO	SUPERIOR VCS-R4-SU
DS	✓	✓*	✓*
DK-B-3	✗	✓	✓

* Recommended for industry use



WIRING DIAGRAMS

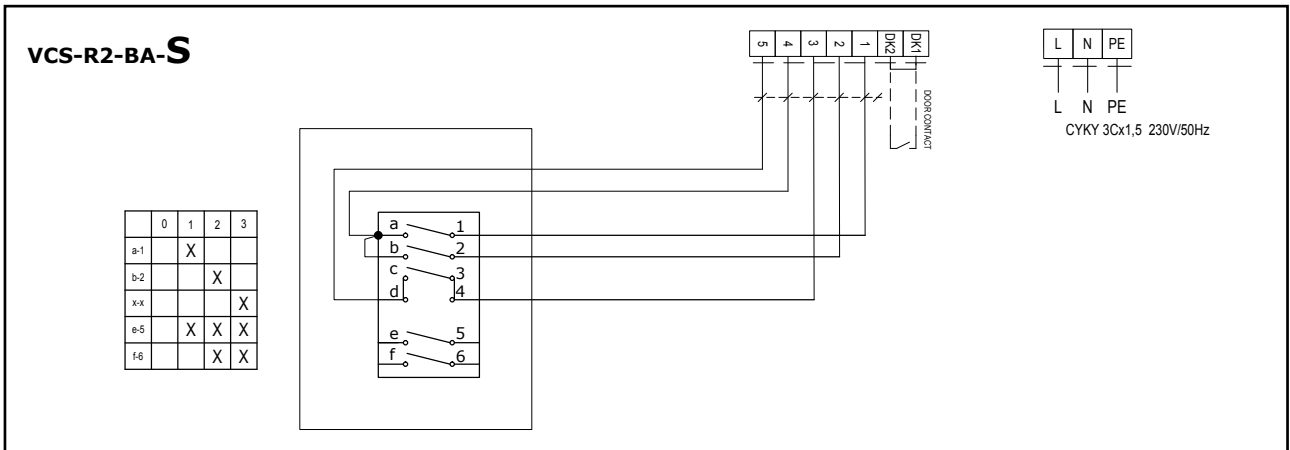
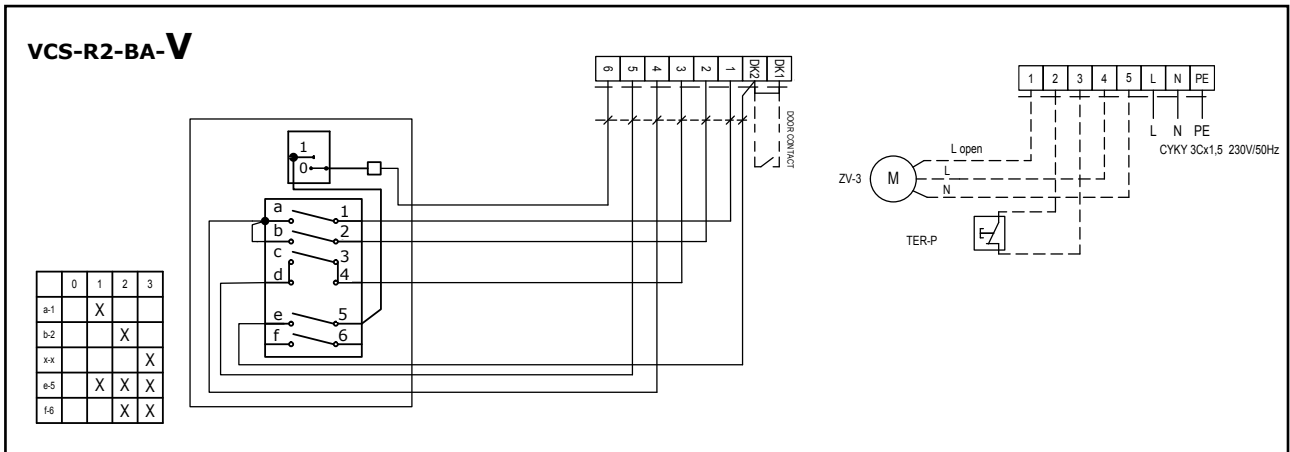
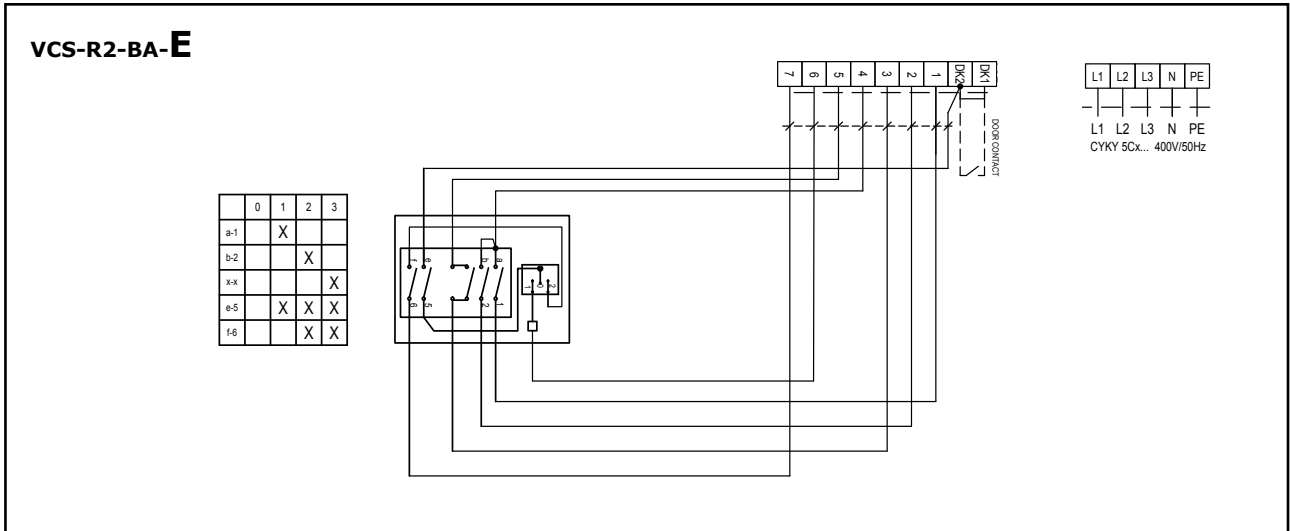
The recommended cross-section of the main power supply cables is stated in the Instruction Manual. All wiring diagrams provided in the technical catalog are indicative only. When assembling the product, carefully observe the nameplate ratings as well as directions and diagrams affixed directly to the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



WIRING DIAGRAMS



AirGENIO BASIC

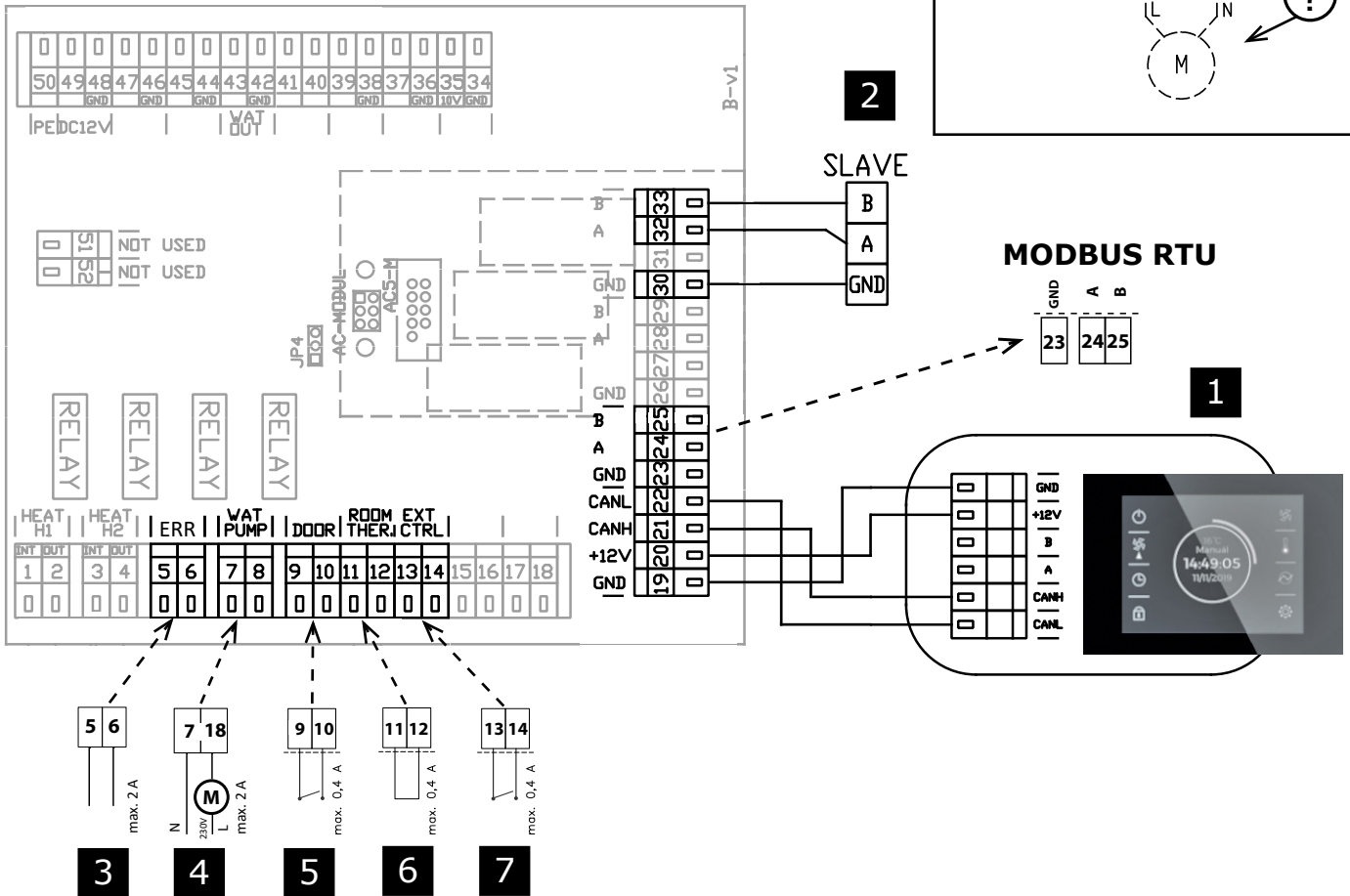
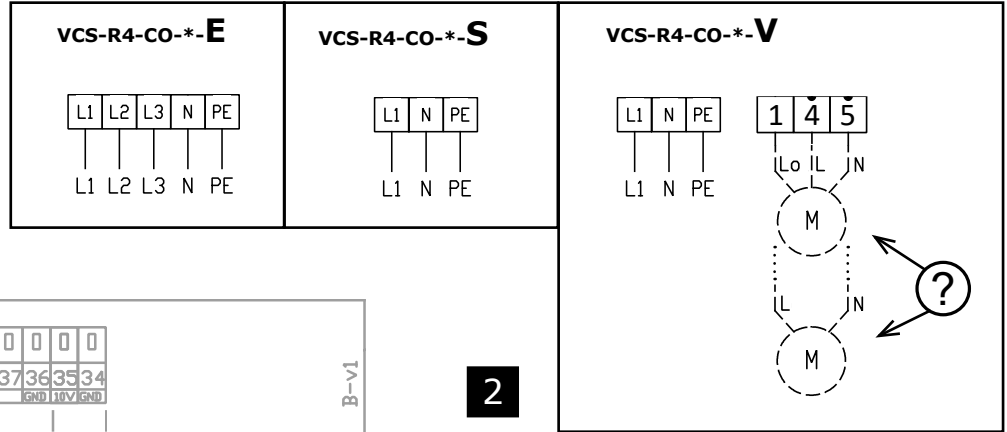




WIRING DIAGRAMS



AirGENIO COMFORT MASTER

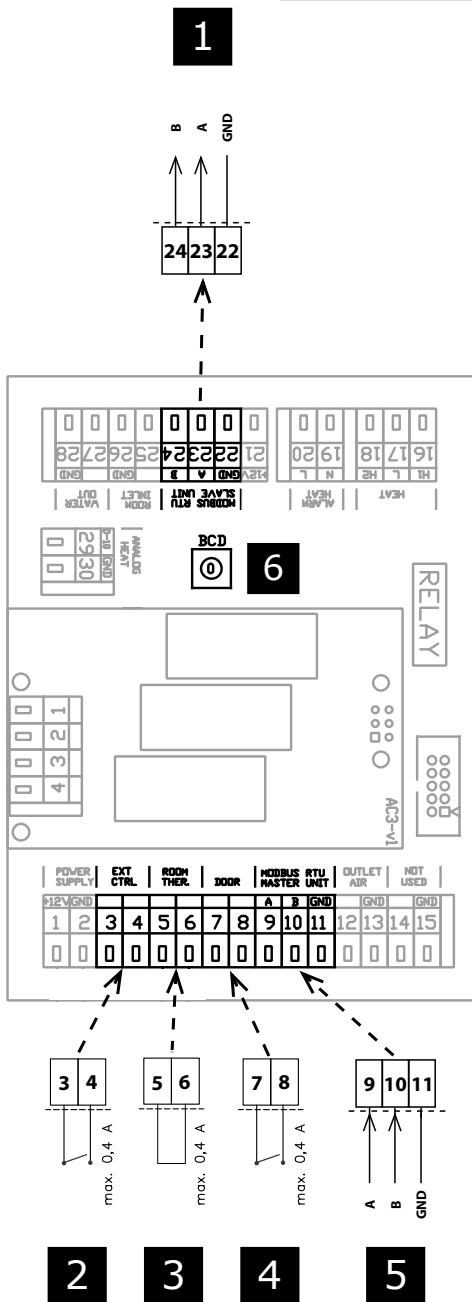
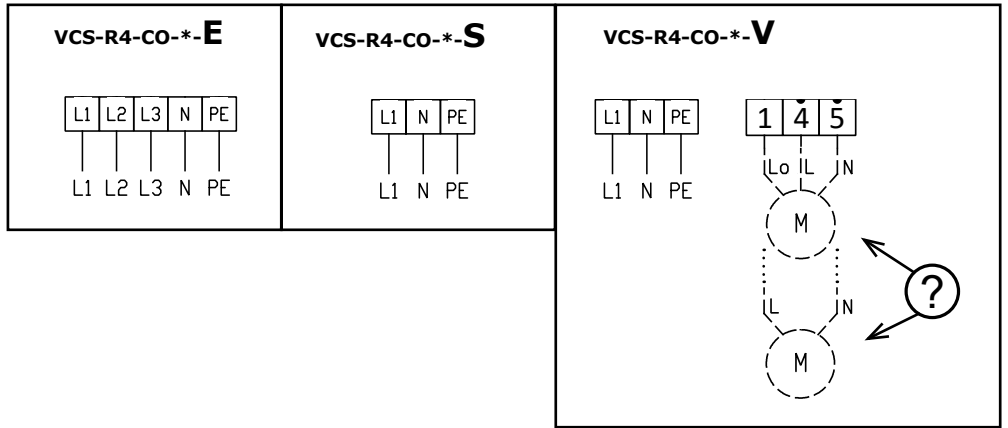


1	Control panel
2	Signal to SLAVE unit
3	ERROR contact (relay contact, NO/NC)
4	Water pump (relay contact)
5	DOOR contact (input, NO/NC)
6	Room thermostat (input, NO/NC)
7	External control (input, NO/NC)
8	Outside air temp. sensor (include delivery)
9	Room temp. sensor (include delivery)



WIRING DIAGRAMS

AirGENIO COMFORT
SLAVE



Signal	Description
1	Signal to SLAVE unit
2	External control - ON/OFF
3	Room thermostat (input)
4	DOOR contact (input)
5	Signal from MASTER unit

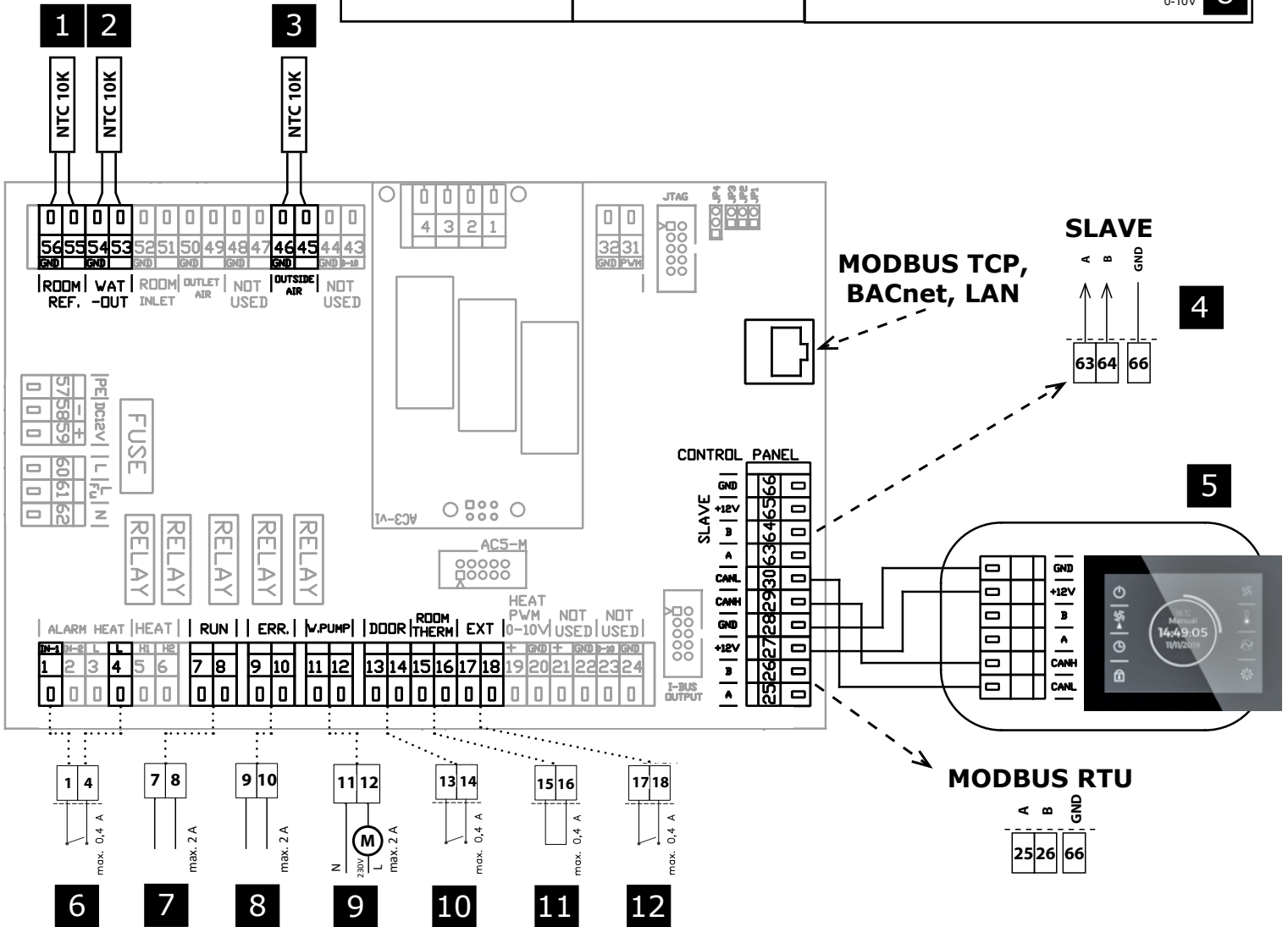
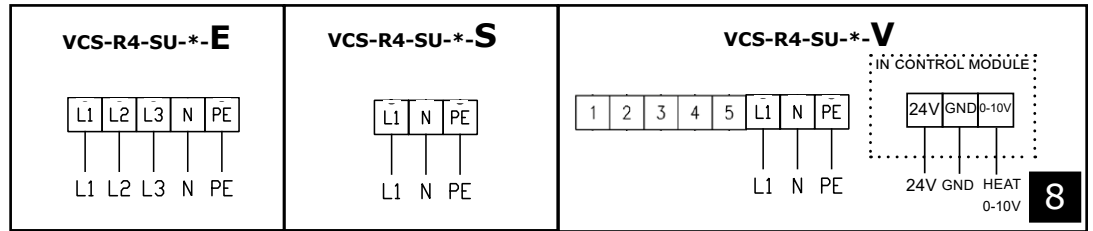
6

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

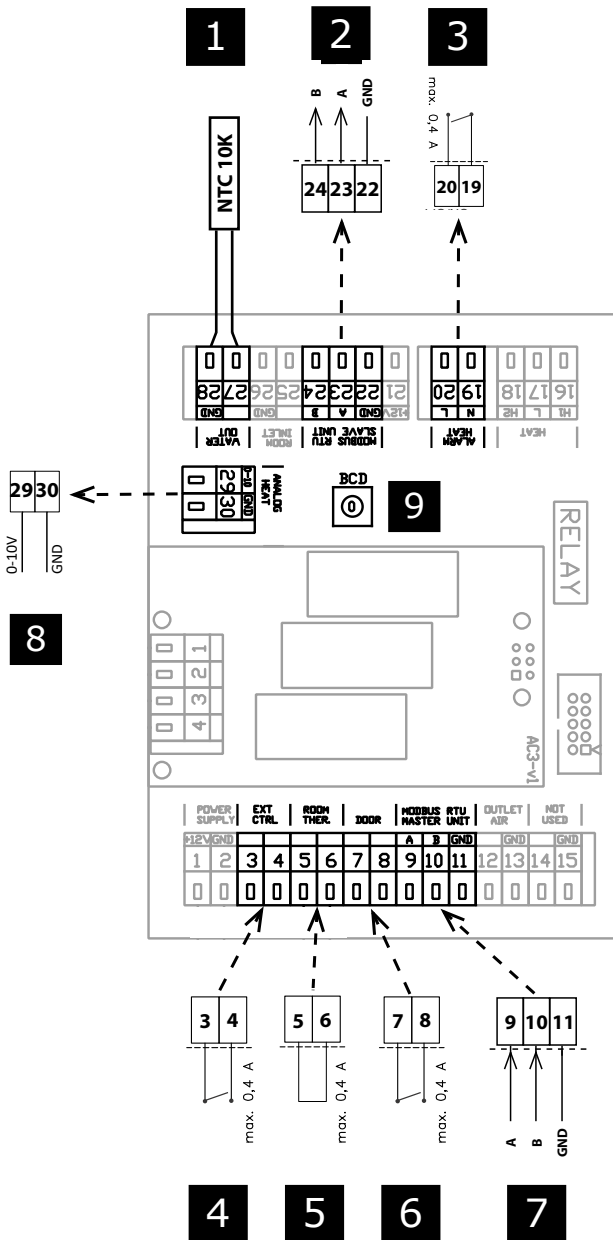
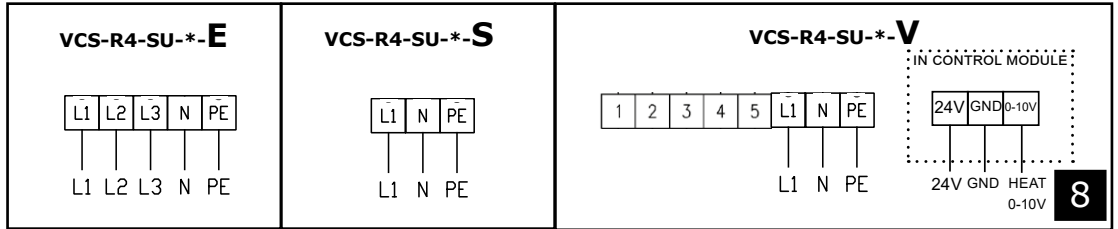


Terminal	Description
1	Room sensor (accessories)
2	LPHW out sensor (included in delivery)
3	Outside air sensor (included in delivery)
4	Signal to SLAVE unit
5	Control panel
6	Antifreeze thermostat (NC)
7	RUN contact (relay contact, NO/NC)
8	ERROR contact (relay contact, NO/NC)
9	Water pump (relay contact)
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



Terminal	Description
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

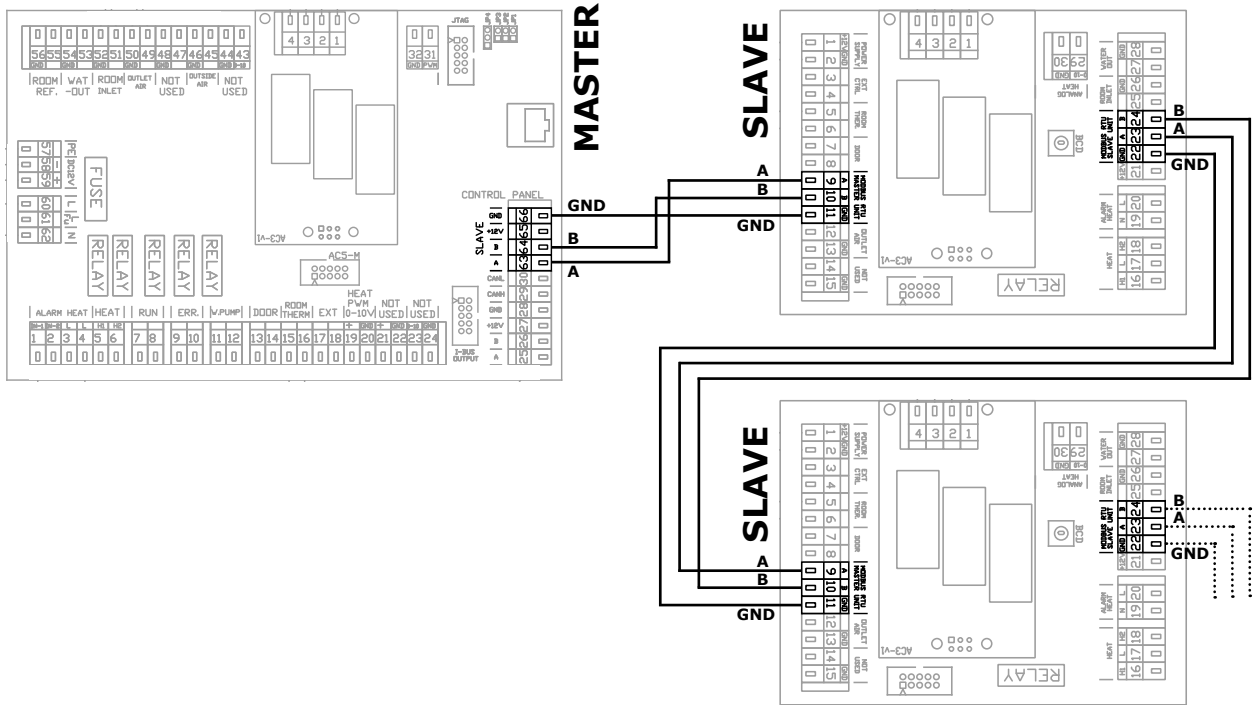
SLAVE	BCD
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	A



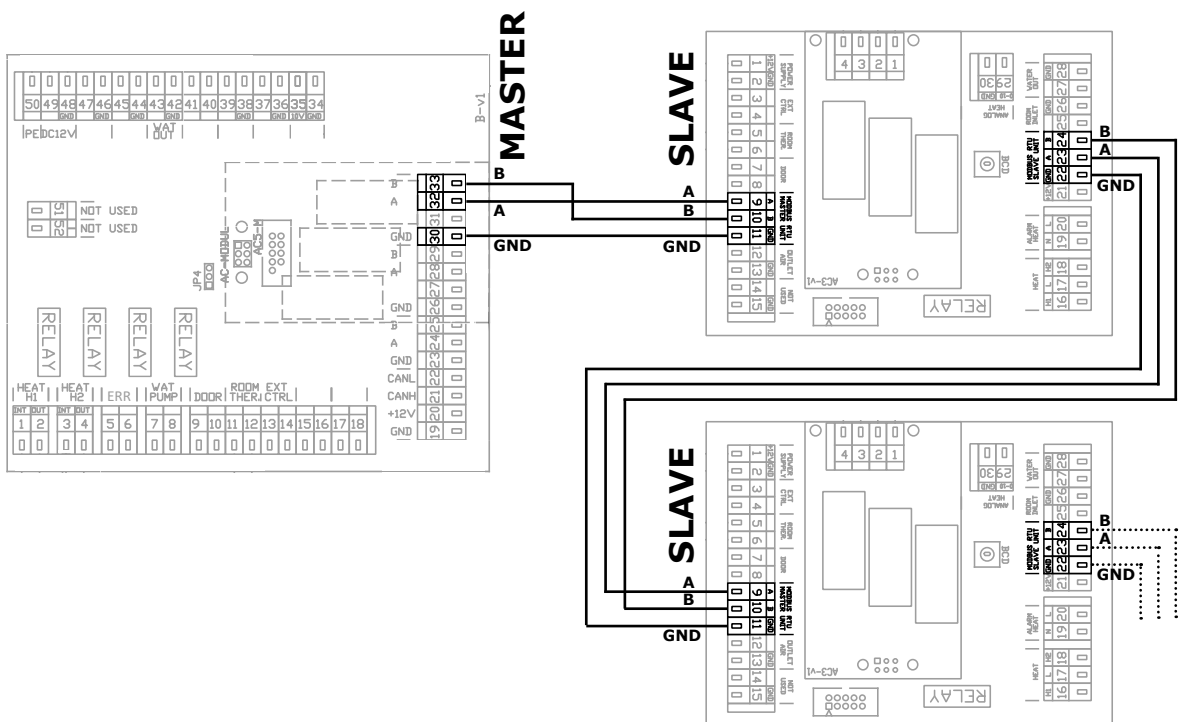
WIRING DIAGRAMS

Chaining

AirGENIO SUPERIOR



AirGENIO COMFORT





KEY TO CODING

VCF-B-100-E-ZP-0-0

0 - 2VW version

9 - Atyp RAL

0 - Standard RAL

ZP - Control ready

E - Electric heater

V - Water heater

S - Air-only

100 - Nominal width 1000 mm

150 - Nominal width 1500 mm

200 - Nominal width 2000 mm

250 - Nominal width 2500 mm

B - B Output series

VCF - Air Curtain FINESSE