



air-only



electric wire heater



### BASIC FEATURES

- **EC version airflow** up to **2850 CFM** (\* AMCA certified)
- **Straw System**– maximising the screening effect
- Recommended installation height **up to 10 ft / 3m**
- Length: **3.2; 4.9; 6.5; 8.2 ft / 1.0; 1.5; 2.0; 2.5m**
- Low profile design
- Integrated **AirGENIO PRIME**

ESSENSSE NEO is a low profile air curtain designed for horizontal installation at the entry doors of **retail shops, shopping centres, restaurants, administrative buildings, and manufacturing facilities** with a recommended installation height up to 10 ft / 3m\*.

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

The air curtain has a self-supporting casing made from a galvanized metal sheet powder-coated in **RAL9016** colour in a glossy smooth finish; any RAL colour may be provided upon the customer's request.

The air curtain is equipped with a cross-flow fan optionally with energy-efficient EC motor. The fan motors feature integrated maintenance free ball-bearings and thermal protection.

The air curtain has an option for heating and it can be equipped with electric wire heater.

The air curtain's exhaust nozzle is equipped with a unique **Straw System Technology**, which relies on a special tubing system to control airflow performance and maximise the screening effect. The Straw System ensures a laminar, compact and stable airflow across the entire exhaust nozzle. The exhaust nozzle can be set up from 3° to 15° angle to direct the airflow stream against the door opening.

The air curtain features an integrated control system **AirGENIO PRIME**, which optimizes the air curtain's operation to ensure interior comfort while minimizing operating cost.

The air curtain shall be installed indoors in a dry environment with ambient temperatures ranging from **32 °F up to 104 °F (0 °C up to +40 °C)** and relative humidity of up to 80%. It is designed to convey air free of fine dust, grease, chemical fumes, and other impurities. The IP rating of the air curtain is **IP20**. 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.

Type	Recommended installation height [m]	Airflow (cfm) <sup>*1</sup>					Sound power [dB(A)] <sup>*2</sup>
		20%	40%	60%	80%	100% *	
VCES4B100-N2EC	3	450	640	850	1060	1097	79
VCES4B150-N2EC		470	760	1030	1320	1679	77
VCES4B200-N2EC		640	1090	1470	1880	2345	82
VCES4B250-N2EC		880	1410	1940	2440	2852	81
VCES4B100-NAEC		440	630	830	1020	1097	79
VCES4B150-NAEC		470	760	1030	1320	1679	77
VCES4B200-NAEC		640	1090	1470	1880	2345	82
VCES4B250-NAEC		880	1410	1940	2440	2852	81

\*1 Airflow volume according AMCA Standart 220-05, (ISO 27327-1-1:2009), Figure 1A

\*2 Sound power (LWA) measurements according to AMCA Standart 300-14, Figure 1 Setup, Installation Type A

**Data for 3x208V**

Air curtain type:	Heat output	Total power input	Total Voltage / Current	Operation Fan Voltage / Current	Start-up Peak Fan Voltage / Current	Delta T	Frequency	Weight
	kW	kW	V / A	V / A	V / A	°F	Hz	lb
VCES4B100-N2EC	2.6	3.00	208 / 13,5	208 / 1,5	208 / 2,8	39.0	50 / 60	51.1
VCES4B150-N2EC	8	8.40	208 / 23,8	208 / 1,9	208 / 3	48.0		65.3
VCES4B200-N2EC	8	8.44	208 / 24,4	208 / 2,8	208 / 3,4	43.0		76.0
VCES4B250-N2EC	10.2	10.60	20 / 30,4	208 / 2,9	208 / 3,5	43.0		91.5

**Data for 3x230V**

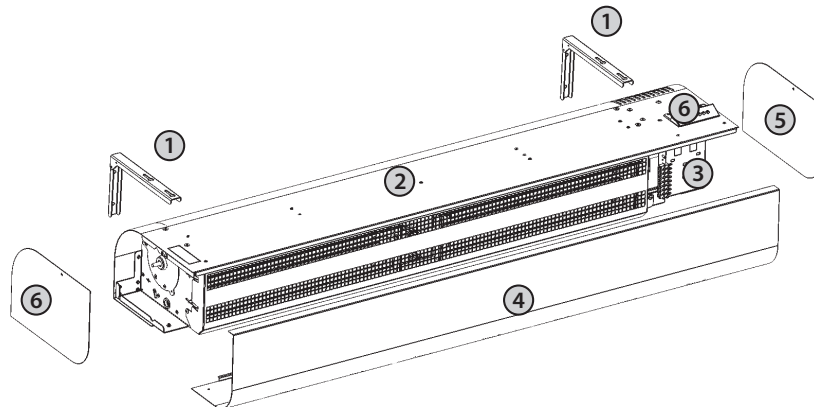
Air curtain type:	Heat output	Total power input	Total Voltage / Current	Operation Fan Voltage / Current	Start-up Peak Fan Voltage / Current	Delta T	Frequency	Weight
	kW	kW	V / A	V / A	V / A	°F	Hz	lb
VCES4B100-N2EC	3.1	3.50	230 / 16,9	230 / 1,5	230 / 2,8	40.0	50 / 60	51.1
VCES4B150-N2EC	9.5	9.90	230 / 27,8	230 / 1,9	230 / 3	51.0		65.3
VCES4B200-N2EC	9.5	9.94	230 / 28	230 / 2,8	230 / 3,4	45.0		76.0
VCES4B250-N2EC	11.2	11.64	230 / 34,5	230 / 2,9	230 / 3,5	45.0		91.5

**Data for 3x208V / 3x230V**

Air curtain type:	Heat output	Total power input	Total Voltage / Current	Operation Fan Voltage / Current	Start-up Peak Fan Voltage / Current	Delta T	Frequency	Weight
	kW	kW	V / A	V / A	V / A	°F	Hz	lb
VCES4B100-N2EC	-	0.40	208 - 230 / 2,8	208 - 230 / 1,5	208 - 230 / 2,8	-	50 / 60	47.2
VCES4B150-N2EC	-	0.40	208 - 230 / 3	208 - 230 / 1,9	208 - 230 / 3	-		61.3
VCES4B200-N2EC	-	0.44	208 - 230 / 3,4	208 - 230 / 2,8	208 - 230 / 3,4	-		72.0
VCES4B250-N2EC	-	0.44	208 - 230 / 3,5	208 - 230 / 2,9	208 - 230 / 3,5	-		85.3



### MAIN PARTS

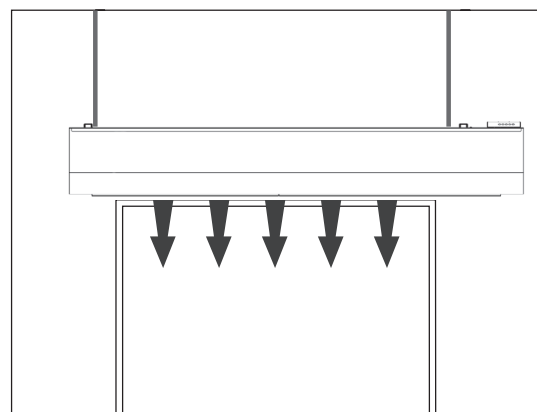
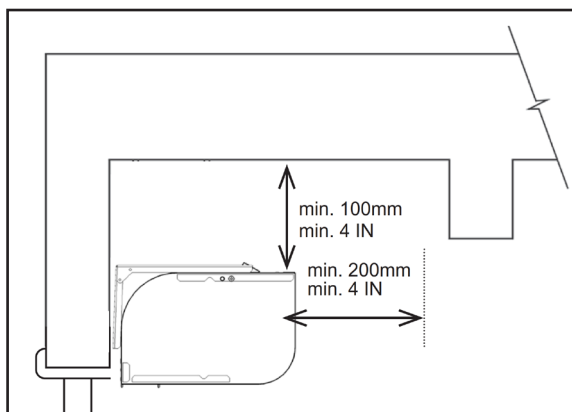


- ① Mounting brackets (included with delivery)
- ② Top cover / Inlet grill
- ③ Main power supply and control
- ④ Front cover / Intake grill
- ⑤ Side cover
- ⑥ Main power supply connection



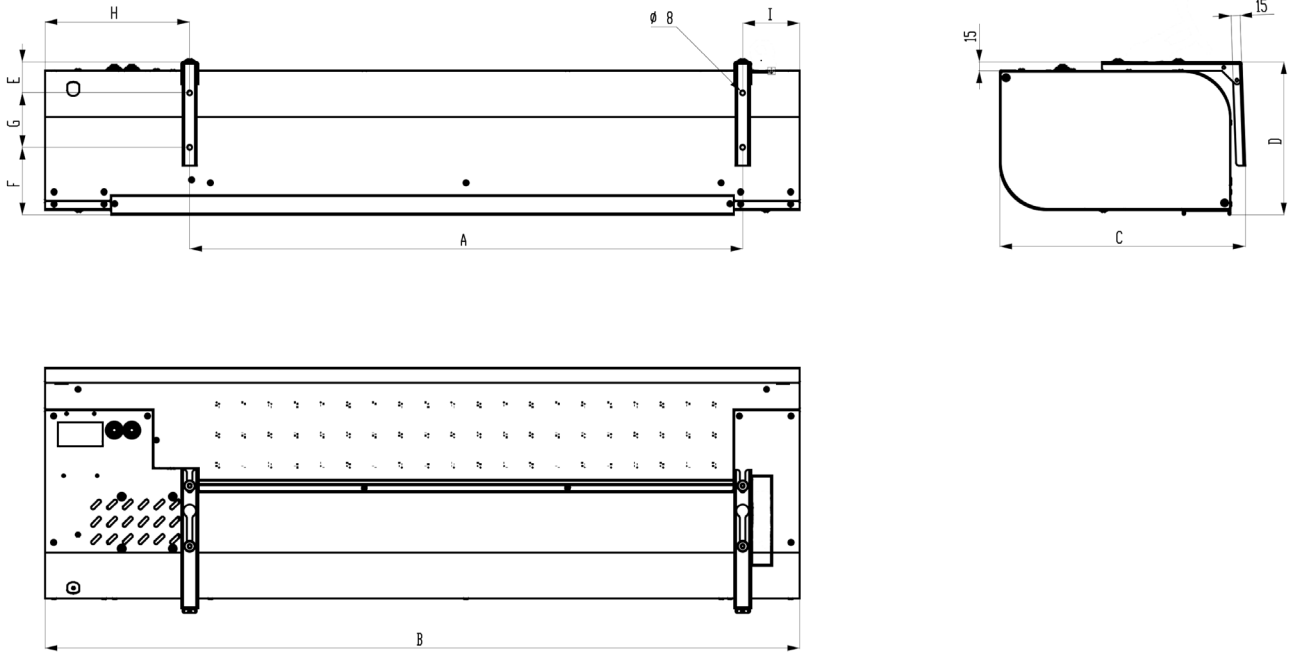
### INSTALLATION AND ASSEMBLY

- 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 4 ft / 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



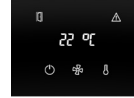
TIP	A	B	C	D	E	F	G	H	I
	(mm)								
VCES4 B 100	916	1252	407	252	51	111	90	240	95
VCES4 B 150	1325	1660	407	252	51	111	90	240	95
VCES4 B 200	1825	2160	407	252	51	111	90	240	95
VCES4 B 250	2235	2570	407	252	51	111	90	240	95

TIP	A	B	C	D	E	F	G	H	I
	(inch)								
VCES4 B 100	36,06	49,29	16,02	9,92	2,00	4,37	3,54	9,44	3,74
VCES4 B 150	52,16	65,35	16,02	9,92	2,00	4,37	3,54	9,44	3,74
VCES4 B 200	71,85	85,03	16,02	9,92	2,00	4,37	3,54	9,44	3,74
VCES4 B 250	87,99	101,18	16,02	9,92	2,00	4,37	3,54	9,44	3,74



### CONTROL

Overview of functions and sensor connections

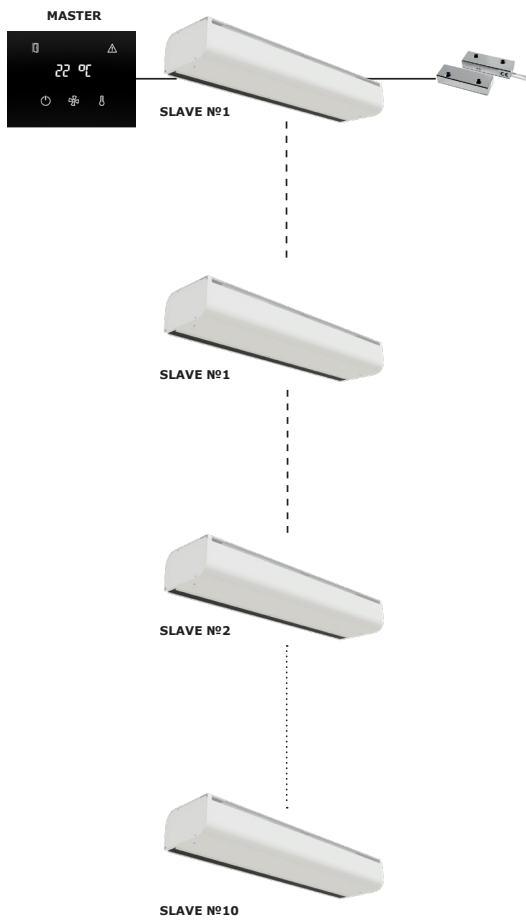


	AirGENIO control	PRIME
	<b>Control type</b>	7-segment display with 3 capacity buttons
	<b>Mode</b>	Manual / Auto
	<b>EC Fan control</b>	EC – PWM/0-10V
	<b>Electric heater control</b>	PWM
	<b>Status indication</b>	Yes (LED on display)
	<b>AirGENIO PRIME application</b>	Change of settings
	<b>Auto-speed control</b>	Yes
	<b>Timer</b>	Yes
	<b>Temperature control</b>	Yes (NTC) Built in control panel
	<b>DOOR contact connection</b>	Yes Settable logic (NO/NC)
	<b>Summer mode</b>	Yes
	<b>Chaining</b>	Yes (max. 10pcs)
	<b>ERROR contact</b>	Yes (Jumper setting) / HEAT or RUN+ERROR
	<b>RUN contact</b>	Yes (Jumper setting) / HEAT or RUN+ERROR
	<b>External control</b>	Yes settable logic (NO/NC)
	<b>BMS connection</b>	Modbus RTU
	<b>Clean intervals</b>	Yes

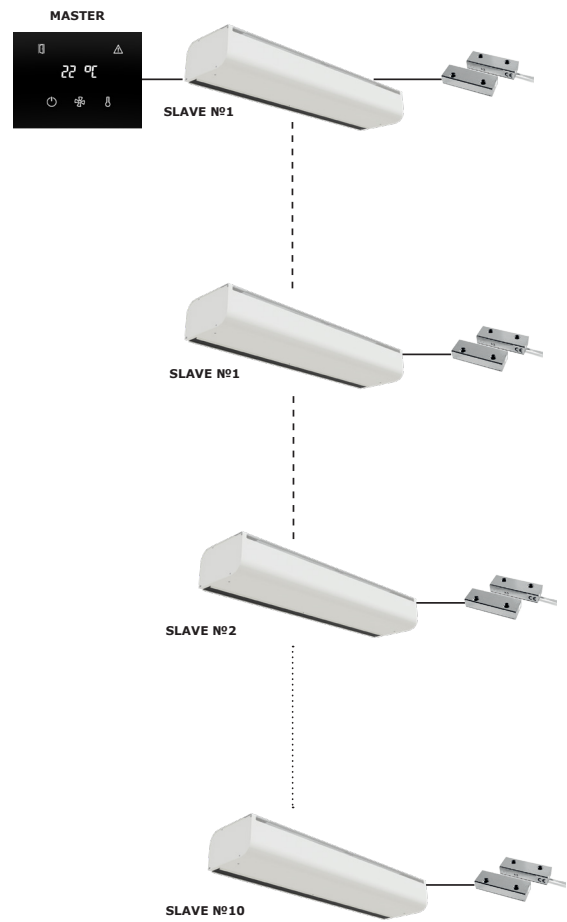


CHAINING EXAMPLE

Global Door contact function active



Global Door contact function NOT active





### OPTIONAL ACCESSORIES

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

### Control panel



### KEY TO CODING

CP-CB-AP1-EX-A3

**A3** - AC fans 3 speeds (PRIME control)

**EC** - EC fans (PRIME control)

**EX** - Electric version

**VX** - Water version

**AM** - Ambient - No heating



### TEMPERATURE SENSOR: CT-NTC-OUTDOOR

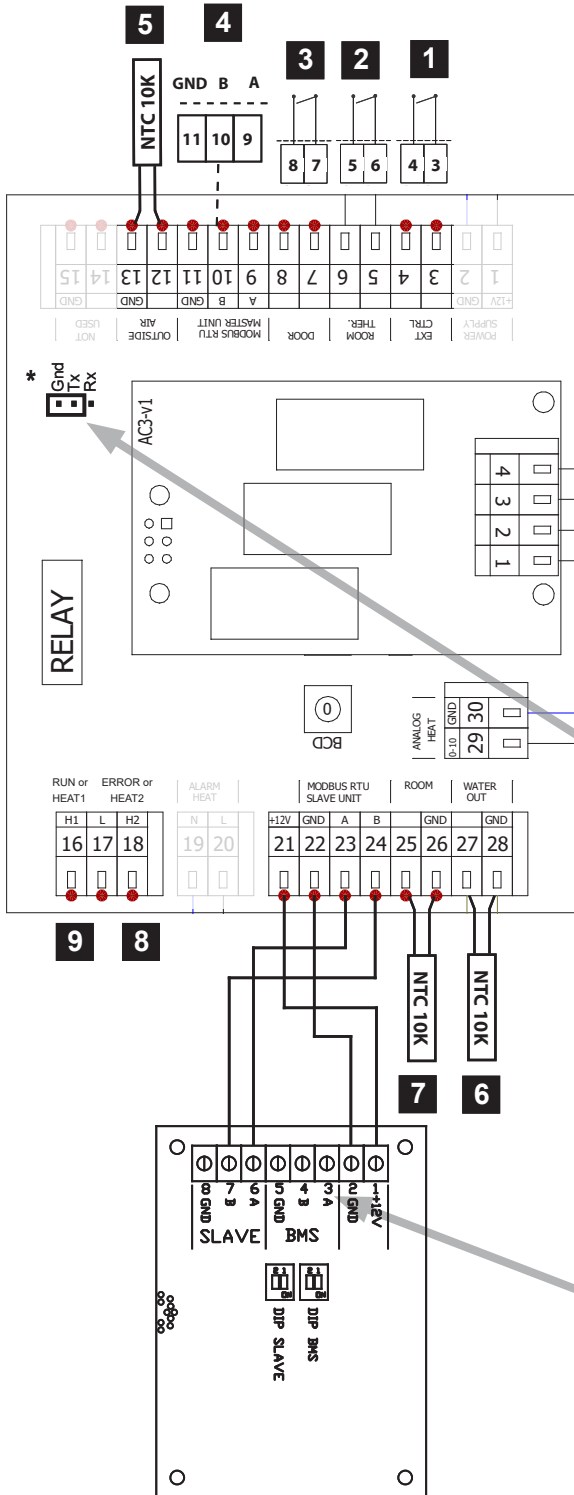
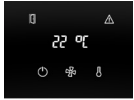
Temperature sensor 10m, IP68



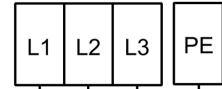


WIRING DIAGRAMS

AirGENIO PRIME MASTER



CONTROL PANEL - MASTER



3~208VAC L1 L2 L3 EG  
 3~240VAC L1 L2 L3 EG  
 1~240VAC L1 L2 EG

1	External control - (input, ON/OFF)
2	Room Thermostat (input, NO/NC)
3	DOOR contact (input, NO/NC)
4	SLAVE unit connection
5	Outside air sensor (not included in delivery)
7	Room sensor (not included in delivery)
8	ERROR
9	RUN



Water valve control is in default 0-10V

\*For **NO/OFF water valve control**, it is necessary to connect the jumper between GND and Tx



Enable **ON/OFF** valve and deactivate RUN/ERROR

The default setting from the factory is without the jumper



Enable **RUN/ERROR** and deactivate ON/OFF valve

Modbus RTU  
(A - 3, B - 4, GND - 5)

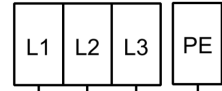
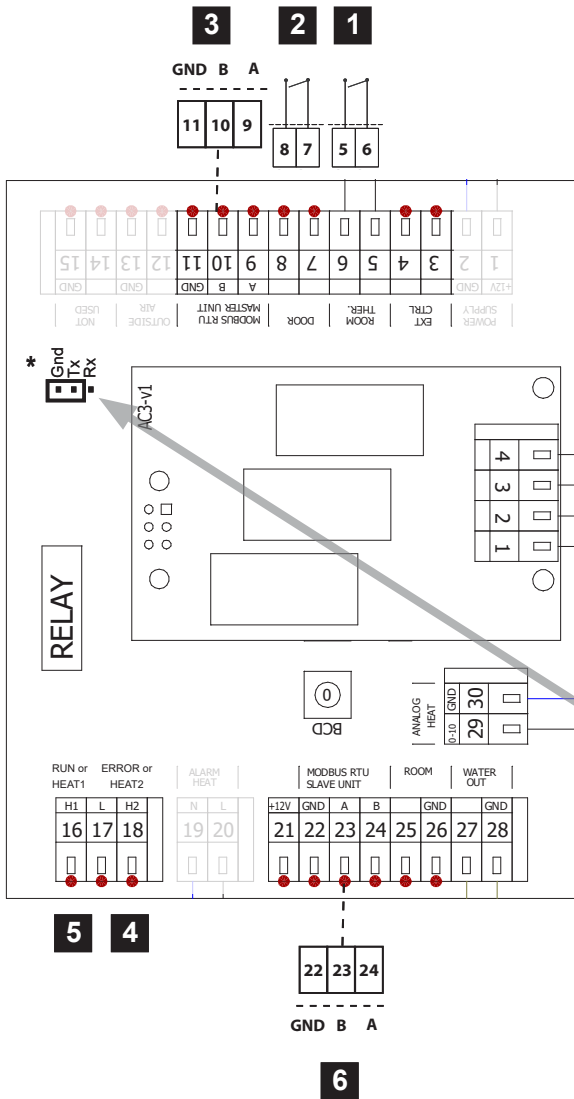
To connect the controller with the unit control, we recommend using a shielded cable such as UTP CAT5. The maximum recommended cable length is 130 ft / 40m!





WIRING DIAGRAMS

AirGENIO PRIME  
SUBUNITS



3~208VAC L1 L2 L3 EG  
 3~240VAC L1 L2 L3 EG  
 1~240VAC L1 L2 EG

Terminal	Description
1	Room Thermostat (input, NO/NC)
2	DOOR contact (input, NO/NC)
3	SLAVE unit connection
4	ERROR
5	RUN
6	MASTER unit connection



Water valve control is in default 0-10V

\*For **NO/OFF water valve control**, it is necessary to connect the jumper between GND and Tx



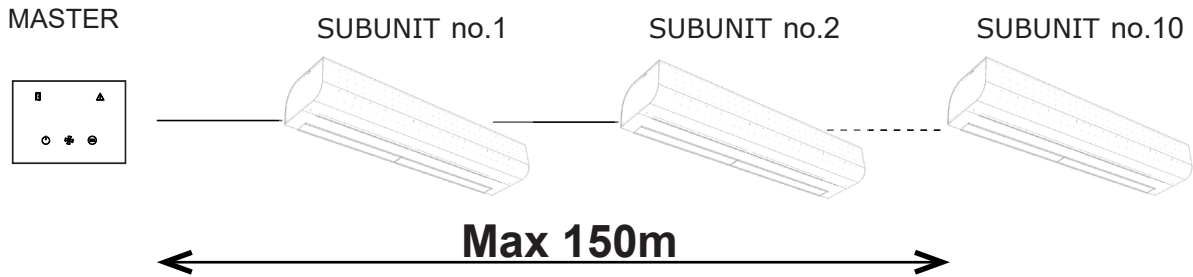
Enable **ON/OFF** valve and deactivate RUN/ERROR

The default setting from the factory is without the jumper



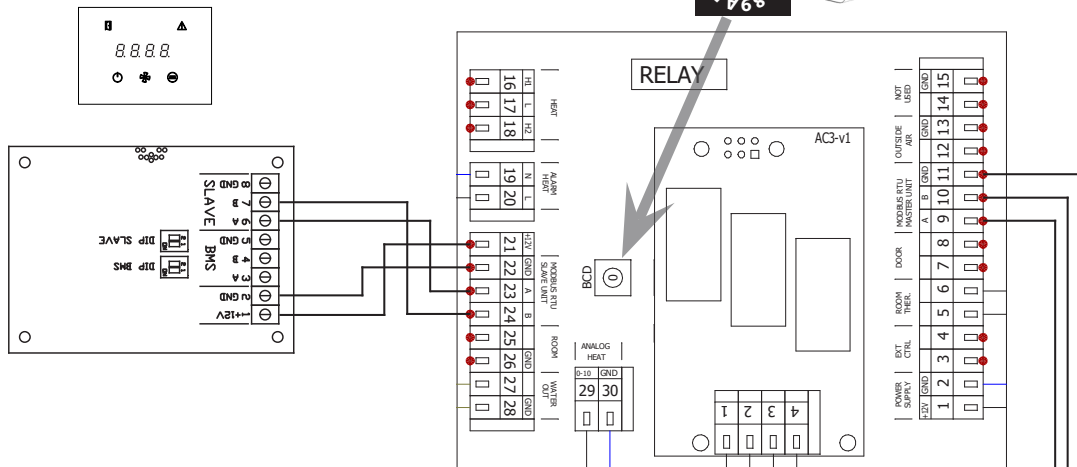
Enable **RUN/ERROR** and deactivate ON/OFF valve

 WIRING DIAGRAMS



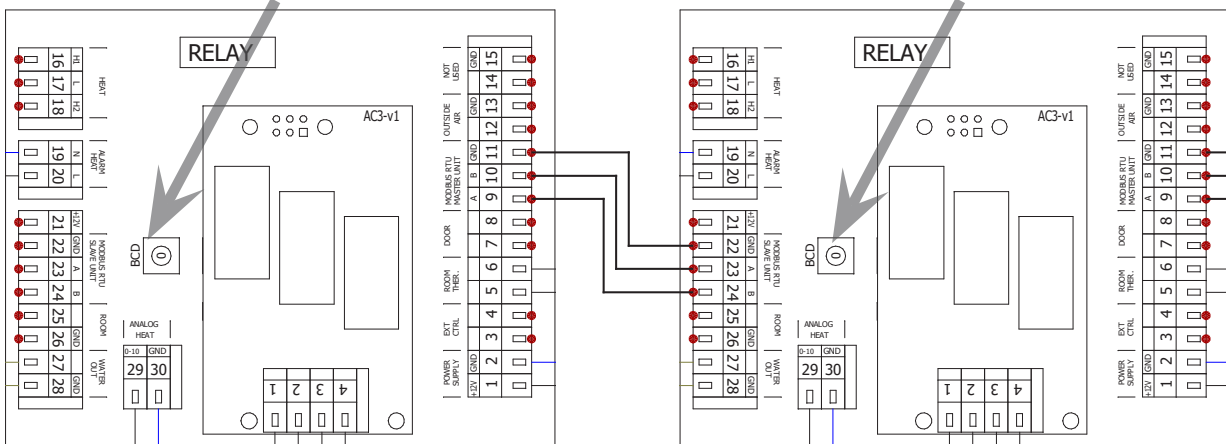
**MASTER**

**SUBUNIT 1**



**SUBUNIT 2**

**SUBUNIT 3**





**KEY TO CODING**

**VCES4 B 100-NA EC-PS-0 U0**

