



Product manual

Air curtains

SONATA-V

Air distribution

Version 1.0.1
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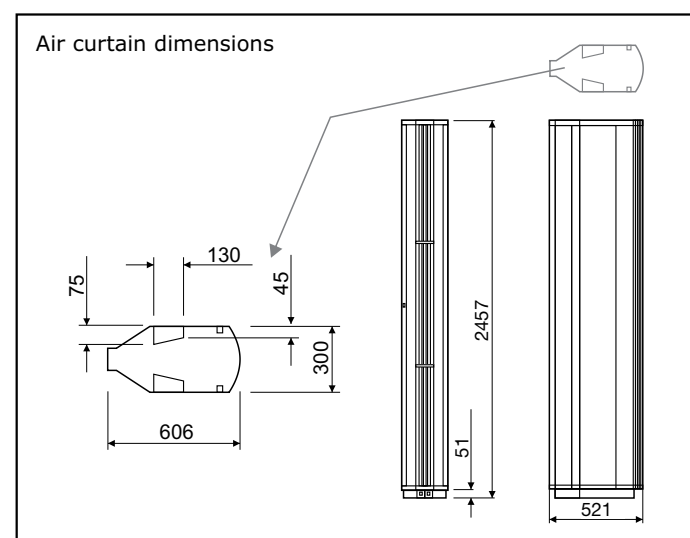
SONATA-V

- Length 2.5 m
- Air flow up to 4700 m³/h (ISO 27 327-1)
- The construction of the adjustable exhaust lamellas ensures a high output
- The insulated shell means completely silent curtain operation, even at full output
- Easy installation
- Control (CO,SU)
- Standard colour RAL 9016 (any RAL – based colours may be provided on customer's request)

Sonata V is a vertical air curtain for right and left installation for use in representative premises, such as banks, offices, restaurants and shopping centres with a recommended width up to 4 m.

The product is for use in dry indoor environments with an ambient temperature of +5 °C to +35 °C, and relative humidity up to 80 %. It is suitable for moving air that is free of large dust particles, grease, chemical vapours and other impurities. The air curtain has IP 20 electrical protection. The air curtain's installation must always be planned by a heating and cooling technician.

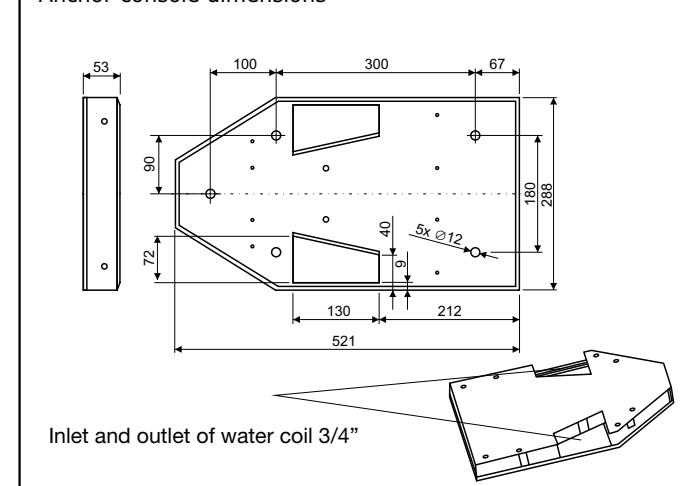
DIMENSIONS



PRIMARY PARAMETERS

Air curtains with an electric heater unit are equipped with an operational thermometer with automatic reset for temperatures above 50°C and an emergency thermometer with manual reset, which turns the entire device off if the temperature inside the air curtain exceeds 115 °C. Air curtains with LPHW coil are designed for a maximum operational water temperature of +100 °C and maximum operational pressure of 1.6 MPa

Anchor console dimensions



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- air-only
- water heater
- electric wire heater

Type	Recommended installation width [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	
SONATA-V-4-N	4,0	4700	3400	2450	55	49	41	76
SONATA-V-4-E24		4600	3300	2400	55	48	40	76
SONATA-V-4-W		4350	3100	2200	54	48	40	76

*1 Airflow volume according ISO27327-1

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

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

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]	Weight [kg]*5
	1st level	2nd level						
SONATA-V-4-N	-	-	1,65	230/7	230/6,5	-	50	95
SONATA-V-4-E24	13	24,0	25,65	400/42	230/6,5	15,5*1	50	103
SONATA-V-4-W	-	50,1*2	1,65	230/7	230/6,5	34,4	50	104

*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.

LPHW coil parameters

Type	Air output	Heating output	Temperature at exhaust	Pressure loss	Water flow
	[m³/h]	[kW]	[°C]	[kPa]	[l/s]
LPHW coil parameters for water temperature gradient 60/40 °C					
SONATA-V-4-W	4350	24,2	34,6	19	0,3
LPHW coil parameters for water temperature gradient 70/50 °C					
SONATA-V-4-W	4350	32,9	40,6	34	0,4
LPHW coil parameters for water temperature gradient 80/60 °C					
SONATA-V-4-W	4350	41,5	46,5	52	0,5
LPHW coil parameters for water temperature gradient 90/70 °C					
SONATA-V-4-W	4350	50,1	52	73	0,6

* Temperature of intake air +18 °C

Recommended mixing points for LPHW 2-way valve

Type	Control module	90/70 °C	80/60 °C	70/50 °C	60/40 °C
		2-way valve			
SONATA-V-4-W	COMFORT	ZV2-230-08,0-20	ZV2-230-08,0-20	ZV2-230-08,0-20	ZV2-230-08,0-20
	SUPERIOR	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 3-way valve

Type	Control module	90/70 °C	80/60 °C	70/50 °C	60/40 °C
		2-way valve			
SONATA-V-4-W	COMFORT	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
	SUPERIOR	ZV3-024-10,0-25	ZV3-024-10,0-25	ZV3-024-10,0-25	ZV3-024-10,0-25

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ORDERING KEY

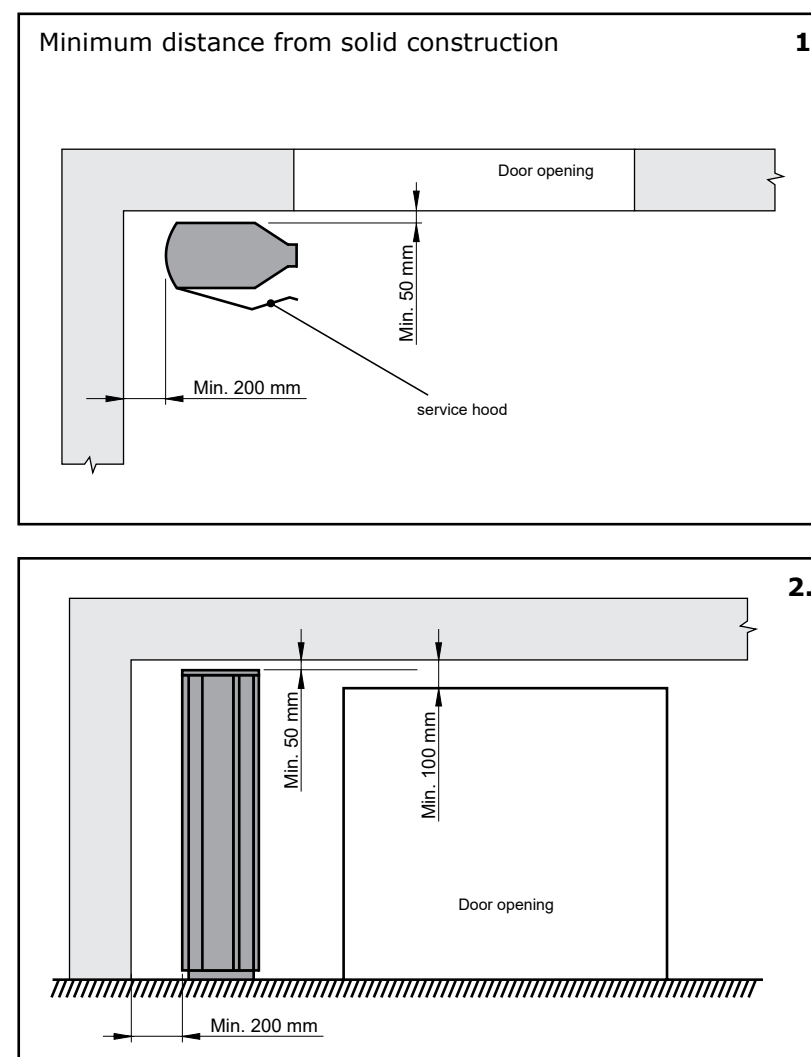
AIR CURTAINS

ORDERING KEY

(1) Air curtain		(2) Installation width		(3) Control		(4) Heater options		(5) Heater output
Sonata-V		-	4	-	CM	-	W	- 24
(1) Air curtain: Sonata-V		(2) 4 - Recommended width		(3) CM – Comfort master CS – Comfort slave SM – Superior master SS – Superior slave		(4) N – without heating regulation E24 – with electric heater regulation E36 – with electric heater regulation W – with water heater regulation		

INSTALLATION AND ASSEMBLY

- Air curtain is intended for vertical installation.
- The air curtain must be placed as close as possible to the upper edge of the door opening (see illustration.1).
- For correct operation, we recommend that the air curtain be higher than the door opening (optimally by 100 mm) see illustration 2.
- The anchor stand and its cover are included. All necessary connections can be routed through the stand, e.g., electrical power, water, communication cable, etc.
- Connections can also be made from the top down, through a special opening in the air curtain's upper cover.
- For the air curtain to operate correctly, it must be installed at the correct distance (see illustrations 1 and 2).
- The air curtain is universally designed for two-sided operation. Thus, the direction of the service cover can be selected. It should always point into the room.



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INSTALLATION

CONTROL

The Sonata-V air curtains are produced with COMFORT or SUPERIOR controls (CO and SU). The basic differences among individual control types are given in table underneath.



Control		COMFORT	SUPERIOR
	Type of controller Steuerungstyp	Touch screen Touch-screen	Touch screen Touch-screen
	Mode Modus	Manual / Auto Manuell / Automatisch	Manual / Auto Manuell / Automatisch
	Control of air output Steuerung des Luftausstoßes	3 speeds 3 Geschwindigkeiten	3 speeds (AC) 3 Geschwindigkeiten (AC)
	Control of electric heater Steuerung des Elektrowärmetauschers	OFF / Level1 / Level2 AUS / Stufe 1 / Stufe 2	NO NEIN
	Control of water heater Steuerung des Wasserwärmetauschers	ON/OFF AN/AUS	0-10V 0-10V
	Antifreeze protection of LPHW Frostfreihaltung des Wasserwärmetauschers	YES JA	YES JA
	Possibility of connecting a door contact Türkontakt anschliessbar	YES (12V) JA (12V)	YES (12V) JA (12V)
	External control Externbedienung	YES JA	YES JA
	Temperature measurement Temperaturmessung	YES (NTC)* Ja (NTC)*	YES (NTC)* Ja (NTC)*
	Chaining air curtains Luftschleierverkettung	YES – max 10+1 pcs JA – max 10+1 Stk.	YES – max 10+1 pcs JA – max 10+1 Stk.
	Indication of selected function Anzeige der gewählten Funktion	YES (Display) JA (Anzeige)	YES (Display) JA (Anzeige)
	Controller connection to air curtain Verbindung des Steuergerätes mit dem Luftschleier	Communication cable (UTP) Kommunikationskabel (UTP)	Communication cable (UTP) Kommunikationskabel (UTP)
	Self learning mode Selbstlernmodus	NO NEIN	YES JA
	BMS connection BMS-Anschluss	Modbus RTU	Modbus RTU, Modbus TCP, BACnet
	Error contact Fehlerkontakt	YES JA	YES JA
	2 nd control panel ready 2. Bedienelement bereit	YES JA	YES JA

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

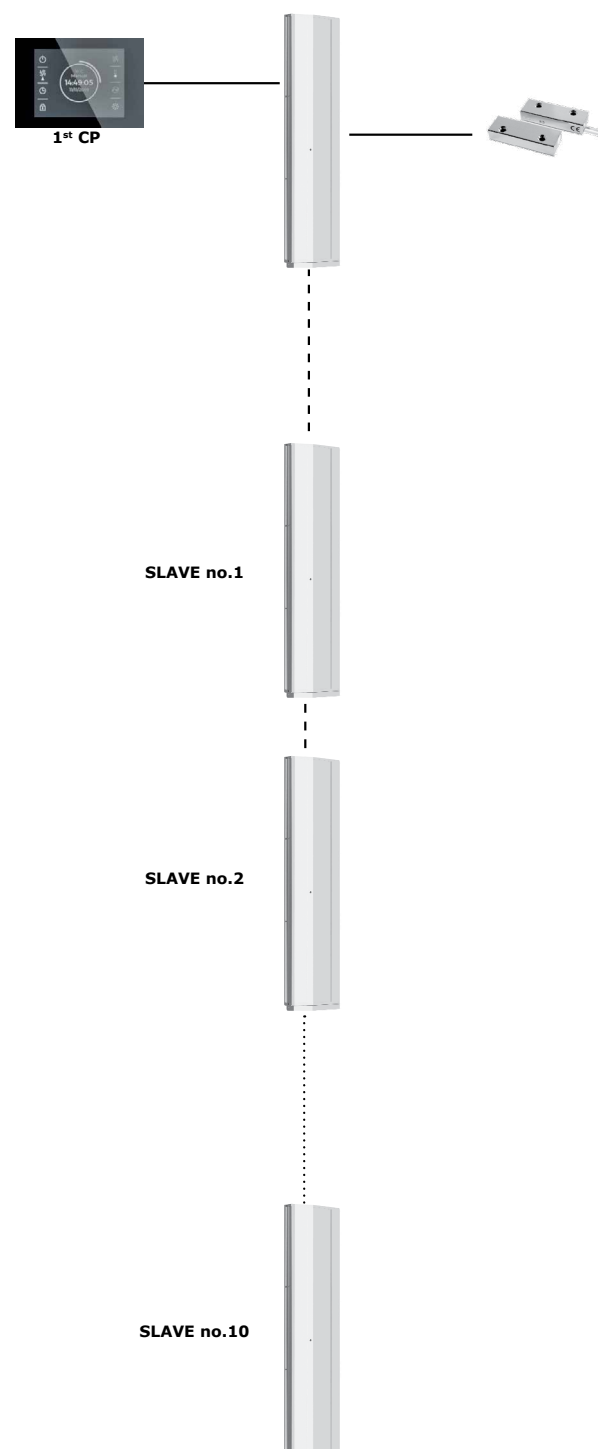
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CONTROL

CHAINING EXAMPLE

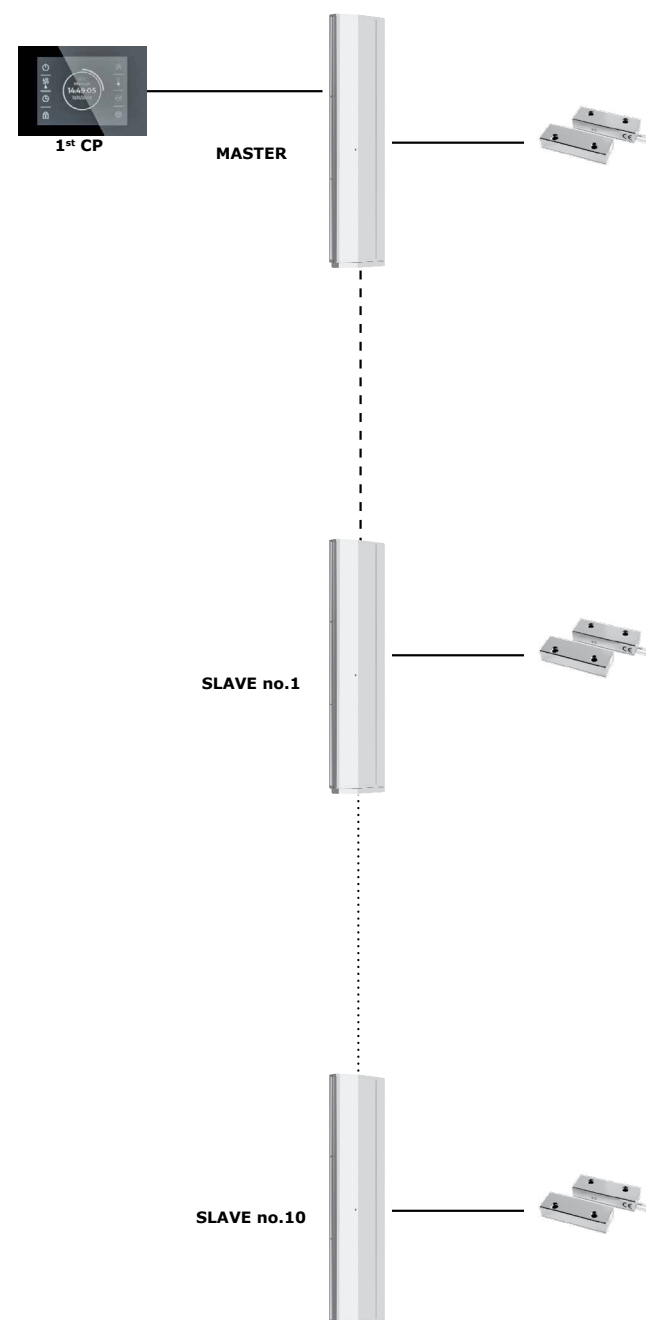
COMFORT / SUPERIOR

Global Door contact function active



COMFORT / SUPERIOR

Global Door contact function not active



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CONTROL

ACCESSORIES

REQUIRED ACCESSORIES
For air curtain with water heater only.

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



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



2-way or 3-way valve with servo drive (0-10V)
ZV2-24-xx,x-xx
ZV3-24-xx,x-xx
(for control SU)



Door contact in a metal housing
DK-B-3



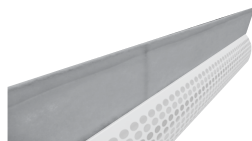
Room thermostat
TER-P



Flexible connection hoses
OH-XXX



Filter for SONATA V products
(only N and W versions of the product)

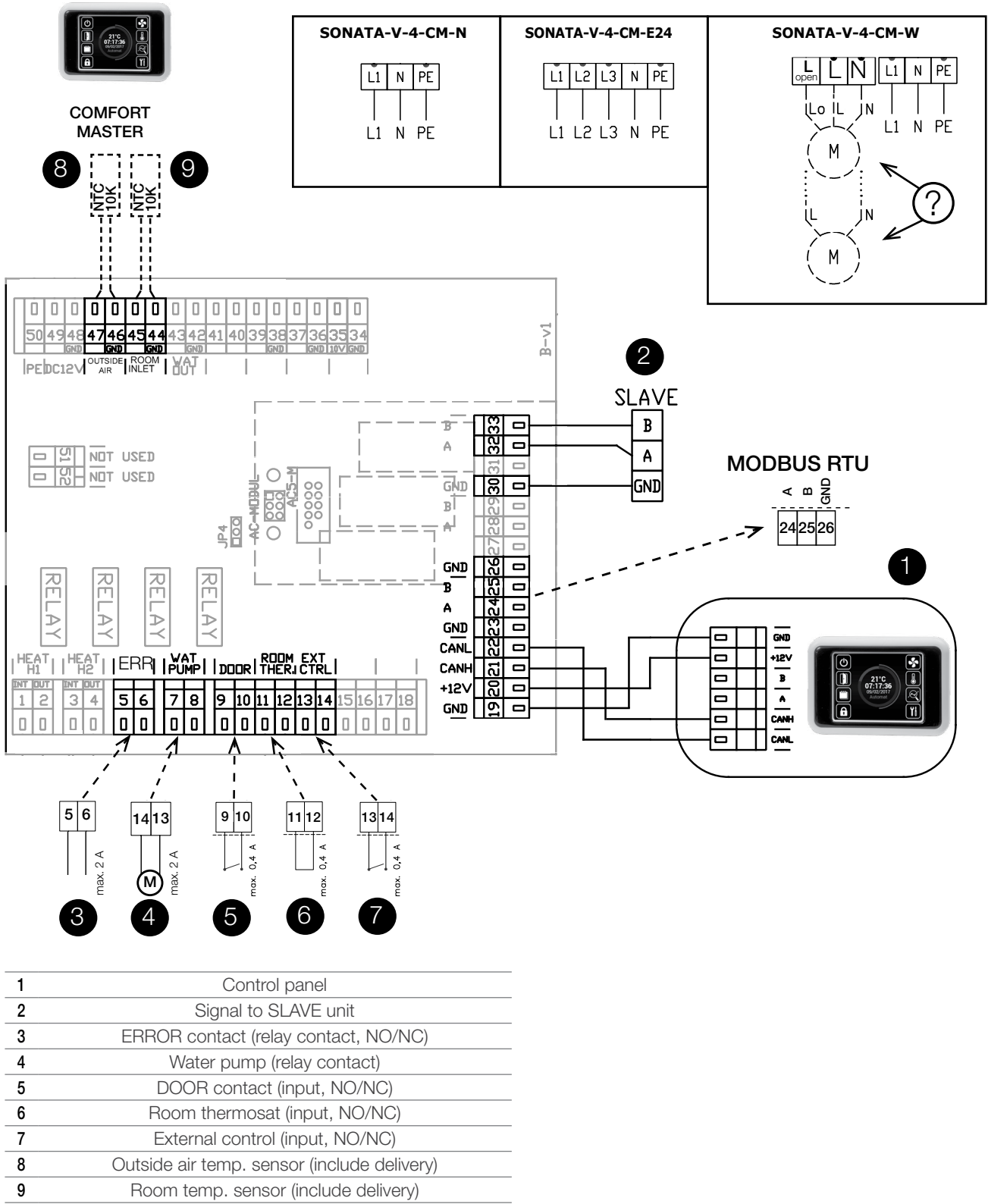


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ACCESSORIES

WIRING DIAGRAMS

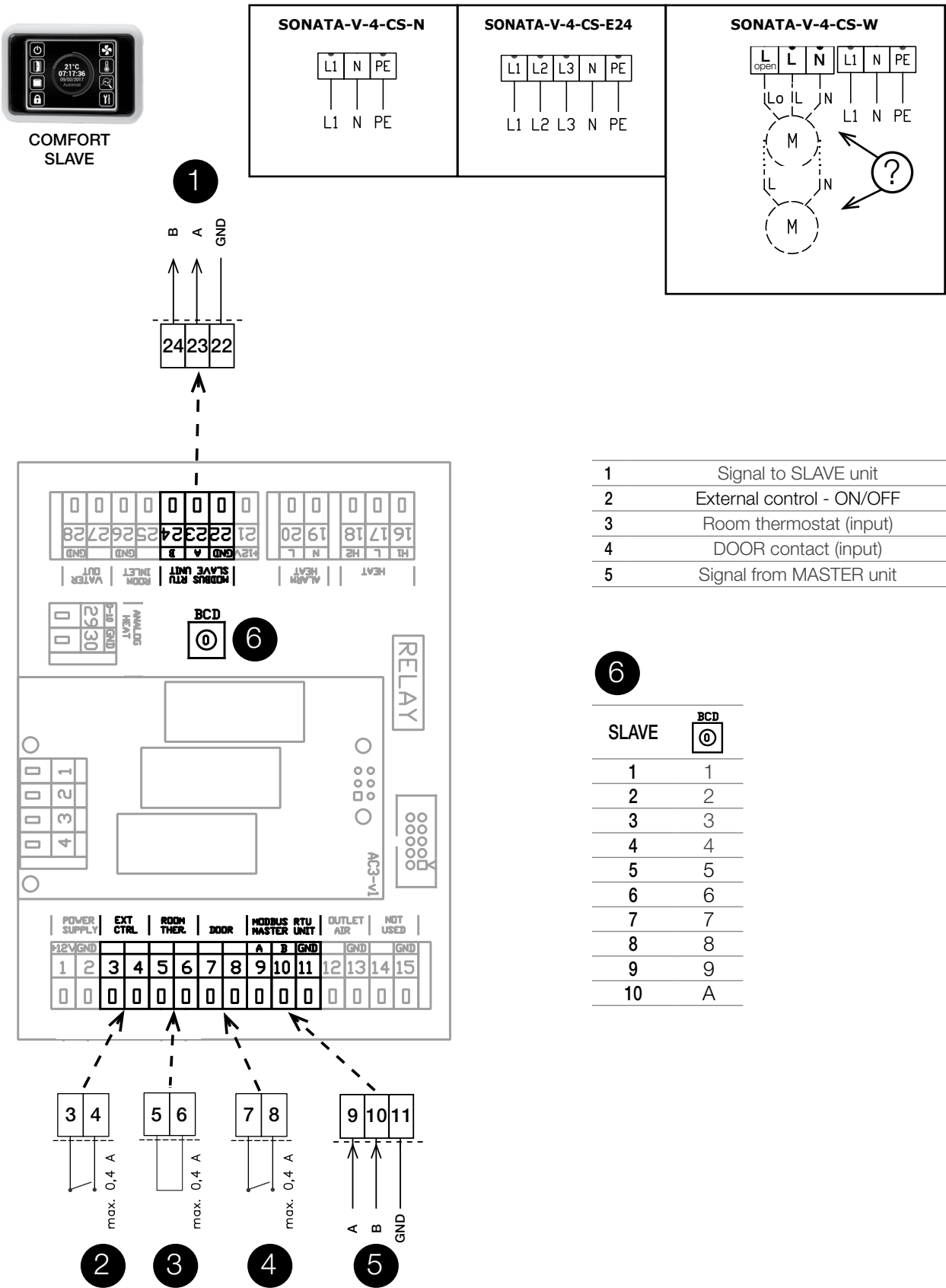
All connection schematics shown in the catalogue are for information only. When assembling the product, follow only the values, instructions and schematics shown on the product itself or delivered with the product.



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DIAGRAMS

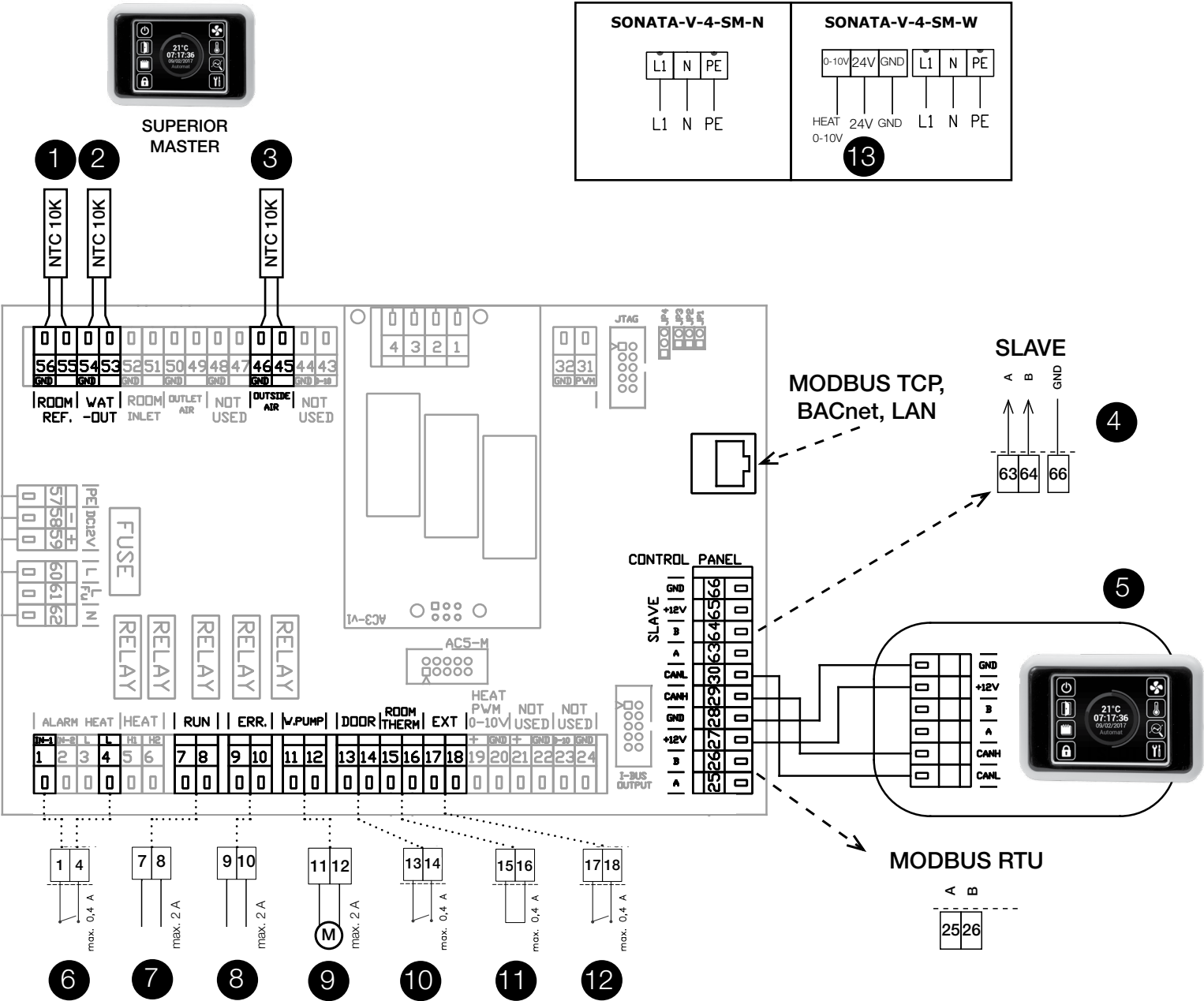
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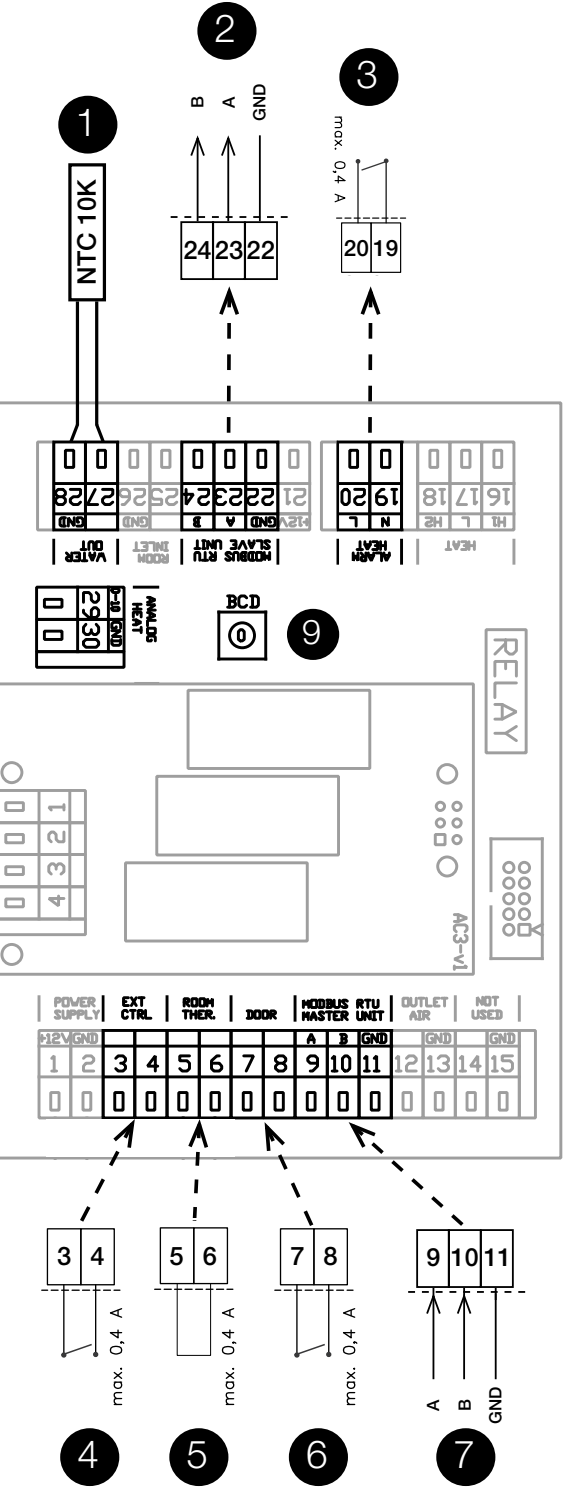


1	Room sensor (accessories)
2	LPHW out sensor (included in delivery)
3	Outside air sensor (included in delivery)
4	Signal to SLAVE unit
5	Control panel
6	Antifreeze thermostat (NC)
7	RUN contact (relay contact, NO/NC)
8	ERROR contact (relay contact, NO/NC)
9	Water pump (relay contact)
10	DOOR contact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

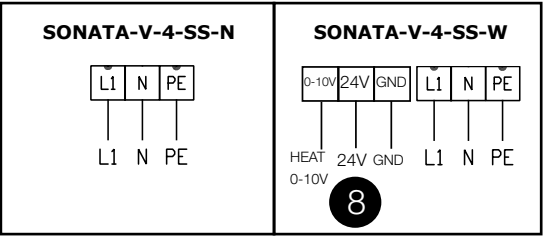
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WIRING DIAGRAMS



SUPERIOR
SLAVE

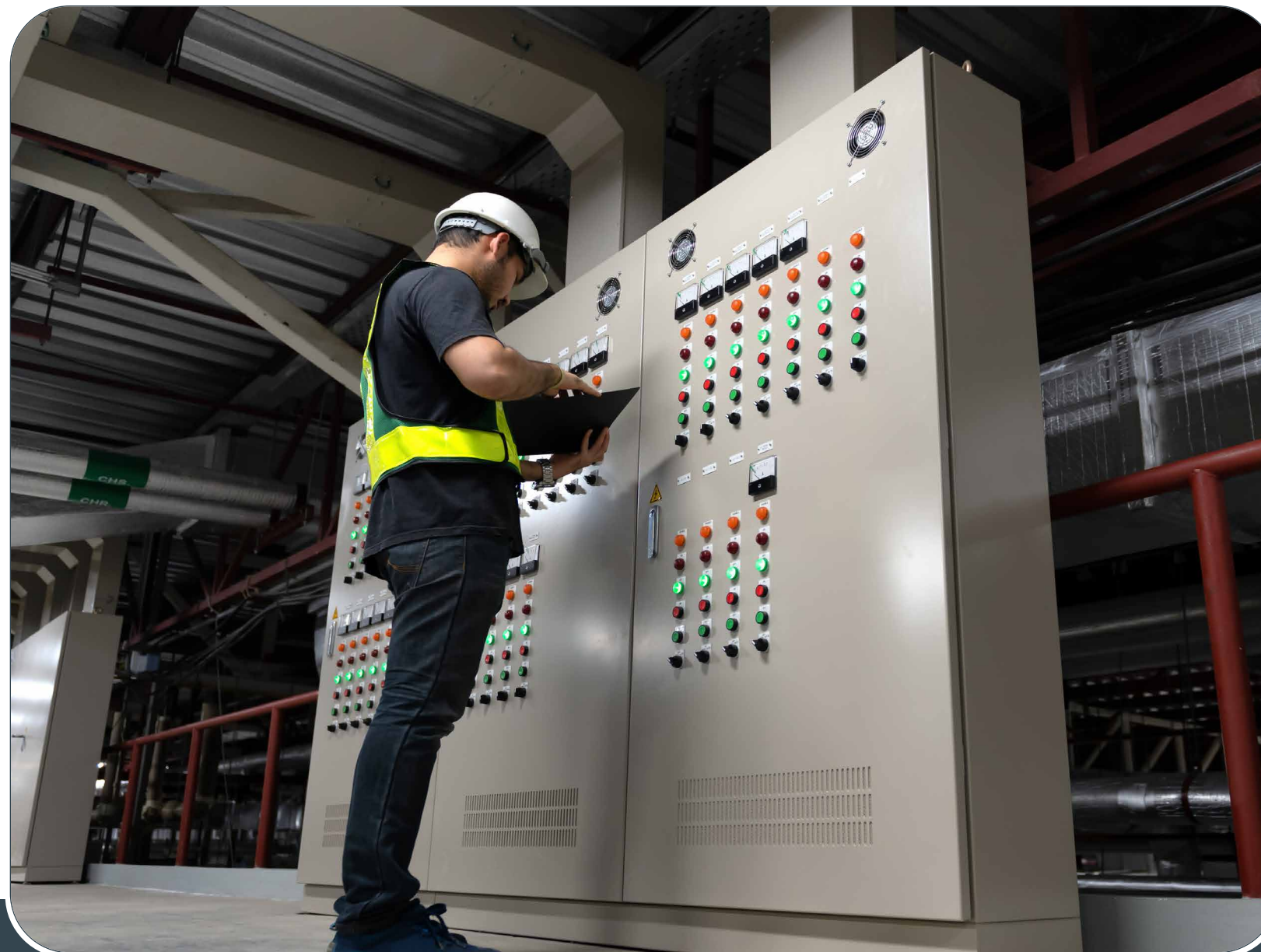


1	LPHW out sensor (included in delivery)
2	Signal to SLAVE unit
3	Antifreeze thermostat (NC)
4	External control - ON/OFF
5	Room thermostat (input)
6	DOOR contact (input)
7	Signal from MASTER unit
8	Water valve control (0-10V)

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

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MAINTENANCE

AIR CURTAINS

TRANSPORT

After arrival, check the product for transport damage and shortcomings. In case of any damage or shortcomings, immediately contact your supplier.

STORAGE

If the product is not installed immediately:

- Remove any wrapping.
- Protect product from dust and contamination.
- Do not expose the damper to the effects of weather, store the damper in a dry place.

Please properly dispose of packaging material!

MAINTENANCE AND OPERATION

Klimaoprema products are designed as such do not require cleaning and regular maintenance. However, mechanism should be systematically cleaned for proper operation.

- Provide a systematic cleaning of dust
- Cleaning instruction: clean with a sponge, with water or a mild detergent

COMMISSIONING

- Carefully unpack - be careful of sharp edges and do not use excessive force for unpacking
- Ensure that all grilles are clean and free from residues and foreign matter.
- Ensure that the devices have been correctly installed
- Before commissioning: check the product functions



AIR CURTAINS / LUFTSCHLEIER

Images are for informational purposes only and may differ from the actual product.
Follow the latest versions of the catalog on the website.

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