



► **KaCool D AF**
Chilled water air conditioning systems

KaCool D AF


Comfortable feeling of well-being, thanks to
AtmosFeel

► **Technical catalogue**

Kampmann.eu/kacool-d-af
Kampmann.co.uk/kacool-d-af

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KaCool D AF:
Comfortable feeling
of well-being,
thanks to AtmosFeel



Side air outlets ensure draught-free airflows and maximum comfort (AtmosFeel).

01 ▶ Product information



Example: models 1 – 4

KaCool D AF - Comfortable feeling of well-being, thanks to AtmosFeel

KaCool D AF – AtmosFeel for the highest standards of comfortable air supply and design. The ceiling cassettes provide a wide spectrum of cooling and heating outputs in different output ranges.

The design panel has been developed specifically for maximum comfort and the ultimate in design standards. Cold air passes through four side air outlets along the ceiling and into the room and is perfectly dissipated. The so-called Coanda effect is used for this, which produces a comfortable room climate without draughts. The outlet slats can be manually adjusted. The minimal installation height of the ceiling cassettes and the flat design panel are both ideal for all rooms with a suspended ceiling. The units can be operated using a room thermostat, infra-red remote control or, ultra-conveniently, using the KaControler.

Fresh air

The supply of primary air enters through a pre-punched opening on the housing, to which a circular hose can be connected. An additional fan is then needed on site for this configuration.

Supply to adjacent rooms

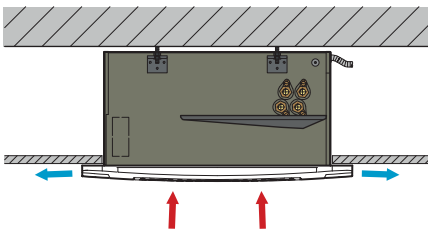
Depending on the size of the unit, one or two connecting spigots can be connected to the punched opening(s) to provide an air supply discharged into an adjacent room. The air volume can be regulated by closing one or both discharge openings.

Valves

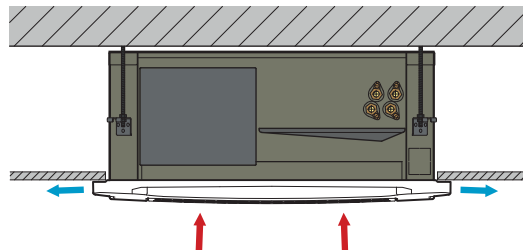
3-way or 2-way valves can optionally be provided separately for installation on site. They include an actuator and the required pipework to connect the valve to the cassette. There is an option of factory integrating the valves into the cassette with larger order quantities. They are completely pre-assembled and wired inside the cassette.

Cooling example

Models 1 – 4



Model 5 – 7



Product data



Product advantages

- ▶ draught-free air supply into rooms through side air outlets
- ▶ minimalist cassette design
- ▶ whisper-quiet EC technology
- ▶ easy to install
- ▶ fully automatic KaControl or connection to an existing, external building automation system



Example: models 1 – 4

Features

- ▶ 7 overall sizes
- ▶ ABS panel with AF (AtmosFeel) in RAL 9010 (pure white)
- ▶ optionally with "metal grid casing panel" colour coordinated to meet customer requirements and fitting precisely into 625 x 625 standard European ceiling grids (models 1 – 4)
- ▶ staged fans or 0-100% infinitely adjustable EC fans
- ▶ optional primary air connection
- ▶ 2- or 3-way valves available as accessories, optionally factory-installed in the cassette with larger order volumes

Heating

- ▶ LPHW

Cooling

- ▶ CHW

Installation

- ▶ ceiling-mounted

Heat exchanger

- ▶ 2-pipe

- ▶ 4-pipe

- ▶ optional

KaControl

- ▶ optional

Infra-red remote control

- ▶ optional

Condensation pump

- ▶ 480 mm head from stylish casing

Condensation connection:

- ▶ outside diameter 13.5 mm

Performance data

Cooling output¹⁾ [kW]

- ▶ 1.97 – 11.00

Heat output²⁾ [kW]

- ▶ 1.91 – 22.66

Operating limits

- ▶ max. operating pressure: 8 bar
- ▶ min. entering water temperature: 5 °C
- ▶ max. entering water temperature: 75 °C
- ▶ min. entering air temperature: 5 °C
- ▶ max. entering air temperature: 35 °C
- ▶ relative humidity: 15 – 75%

Applications

Buildings of all kinds, which require whisper-quiet cooling and/or heating from a visually subtle design.



Hotels / motels



Sales rooms and showrooms



Office and meeting rooms



Restaurants and cafés

¹⁾ at CHW 7/12 °C and $t_{L1} = 27$ °C and 48% relative humidity

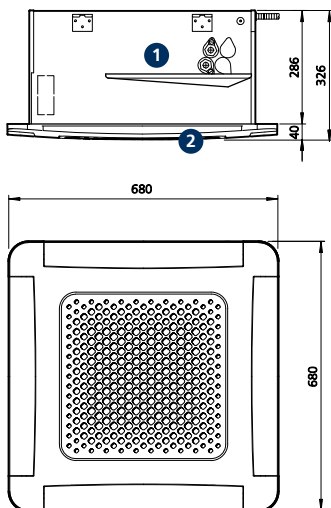
²⁾ at LPHW 70/60 °C, $t_{L1} = 20$ °C.

Selection guide: Overview of models

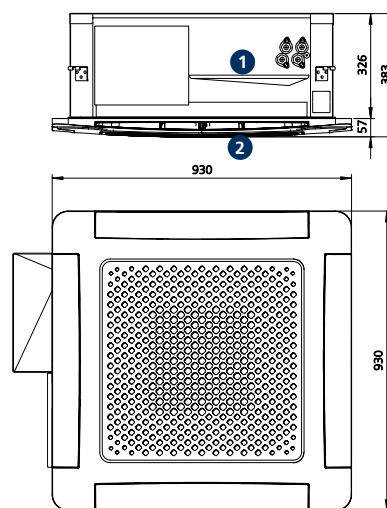
Fan	Cooling outputs ¹⁾ [W]	Heat outputs ²⁾ [W]	Model	Dimensions [mm]	Further information
2-pipe system					
AC	2017 – 2776	3848 – 5268	1	680 x 680	▶ Page 14
	2217 – 4406	4189 – 8186	2		
	2792 – 5163	5171 – 9859	3		
	4123 – 5598	8212 – 10878	4		
	4286 – 6346	8460 – 12852	5	930 x 930	▶ Page 16
	5500 – 9775	9218 – 17298	6		
	5501 – 11259	10089 – 22656	7		
EC	2017 – 2776	3848 – 5268	1	680 x 680	▶ Page 18
	2217 – 4406	4189 – 8186	2		
	2792 – 5163	5171 – 9859	3		
	4123 – 5598	8212 – 10878	4		
	4286 – 6346	8460 – 12852	5	930 x 930	▶ Page 20
	5500 – 9775	9218 – 17298	6		
	5501 – 11259	10089 – 22656	7		
4-pipe system					
AC	1937 – 2818	2450 – 3500	1	680 x 680	▶ Page 14
	1958 – 3485	2450 – 4450	2		
	2046 – 3981	1910 – 3300	3		
	2723 – 4574	2390 – 3710	4		
	4163 – 6365	5800 – 9000	5	930 x 930	▶ Page 16
	4419 – 7391	6300 – 10500	6		
	4623 – 9034	6800 – 12500	7		
EC	1937 – 2818	2450 – 3500	1	680 x 680	▶ Page 18
	1958 – 3485	2450 – 4450	2		
	2046 – 3981	1910 – 3300	3		
	2723 – 4574	2390 – 3710	4		
	4163 – 6365	5800 – 9000	5	930 x 930	▶ Page 20
	4419 – 7391	6300 – 10500	6		
	4623 – 9034	6800 – 12500	7		

Dimensions

KaCool D AF: models 1 – 4



KaCool D AF: models 5 – 7



- 1 Condensation drip tray for valve assembly
- 2 RAL 9010 panel (pure white)

1) at CHW 7/12 °C, t_{L1} = 27 °C, 48 % relative humidity.
 2) at LPHW 70/60 °C, t_{L1} = 20 °C.

KaCool D AF at a glance

- 1 Compact basic housing
- 2 Punched opening for external air outlet
- 3 Punched opening for optional fresh air connection
- 4 AtmosFeel air outlet
- 5 Electrical junction box
- 6 Design panel



Features

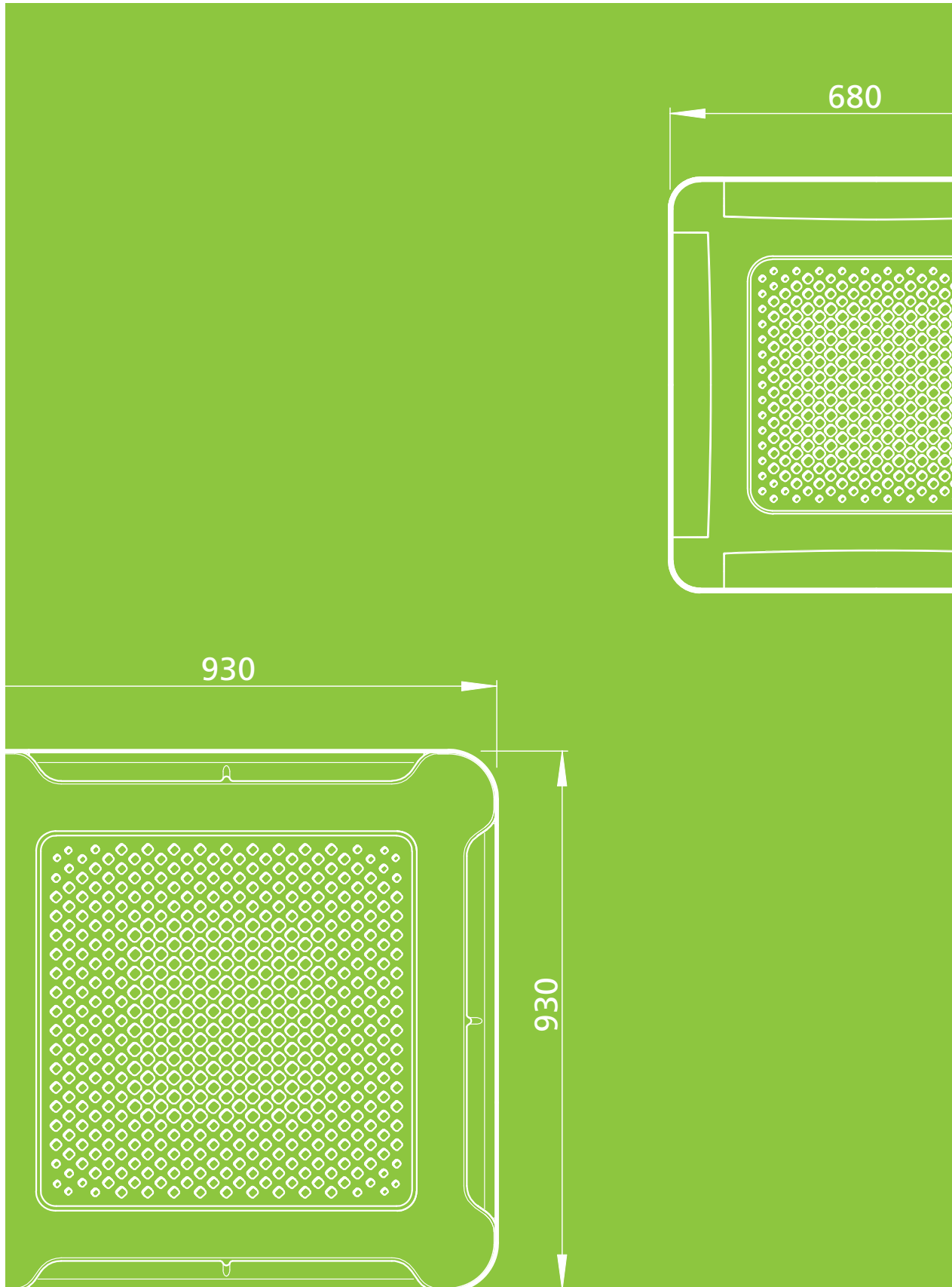




Example: models 1 – 4

- 1 Compact basic housing:**
 - ▶ made of galvanised sheet steel
 - ▶ the outside has a fleece coating for improved insulation from the environment
 - ▶ the inside has high-grade 10 mm vapour diffusion-tight polyethylene foam matting
- 2 Punched opening for external air outlet:**
 - ▶ connection option for air outlets (see p 25)
- 3 Punched opening for optional fresh air connection:**
 - ▶ models 4 – 7 per spigot (max. 2) 80 m³/h
 - ▶ models 5 - 7, max. 120 m³/h
- 4 AtmosFeel air outlet:**
 - ▶ four manually adjustable outlet air slats
 - ▶ smooth plastic
 - ▶ easy to clean
- 5 Electrical junction box for control PCBs:**
 - ▶ KaControl
 - ▶ infra-red electronic receiver
 - ▶ terminals only, for on-site control
- 6 Stylish casing similar to RAL 9010 (pure white):**
 - ▶ outlet optimised for maximum comfort through side air outlets and utilisation of the Coanda effect
 - ▶ IR receiver concealed within the design panel
- 7 Condensation connection:**
 - ▶ outside diameter 13.5 mm
- 8 Air filter Coarse:**
 - ▶ simple to remove
 - ▶ easy to clean
- 9 Air inlet grille:**
 - ▶ large free cross-section to minimise pressure losses
- 10 Hydraulic connections:**
 - ▶ for CHW, LPHW and condensation drain
 - ▶ valve drip tray drains any condensation produced into the condensation tray
 - ▶ drip tray is supplied with the unit
 - ▶ available with built-in valves with corresponding order volumes (fig. 14)
- 11 Condensation pump and float switch:**
 - ▶ easily accessible by removal of the polystyrene condensation tray
 - ▶ integrated condensation pump drains the condensation up to a max. head of 480 mm
 - ▶ pump activation by a two-stage float switch
 - ▶ the pump is switched on when the first stage is reached, the second stage activates an evaluable alarm contact
- 12 Fans:**
 - ▶ 3-stage AC fans
 - ▶ continuously variable EC fans
 - ▶ efficient and low-noise
 - ▶ protection class IP 44, insulation class B
 - ▶ integrated thermal contact to prevent the motor from overheating
- 13 Heat exchanger:**
 - ▶ made of copper pipe with aluminium fins
 - ▶ 2-/ 4-pipe version
 - ▶ vent and drain valves on the outside of the unit
- 14 Valves (optional):**
 - ▶ optionally factory-integrated

02 ▶ Technical data



Advice on measuring conditions

The cooling and heat outputs have been calculated in line with DIN EN 1397: 2015-11 „Water-air fan convectors, test methods for establishing the performance“.

The specific requirements for cooling and heating mode are taken into account in DIN EN 1397. Eurovent measurements are also based on them, permitting certification following measurements in accredited test laboratories.

Normative reference

The standard refers to:

- ▶ EN 23741; Determining the sound power levels of noise sources
- ▶ EN 45001; General criteria for the operation of test laboratories
- ▶ ISO 5801; Industrial fans; performance testing using standardised airways
- ▶ ISO 5221; Air distribution and air diffusion; rules to methods of measuring air flow rate in an air handling duct

The entering air temperature of the ceiling cassette is selected as the reference/air temperature, which should not be confused with the ambient temperature.

In practice, most ceiling cassettes are mainly positioned underneath the slab ceiling and within a suspended ceiling. Due to the temperature stratification that occurs, the entering air temperature differs from the air temperature in the room (measured at a height of 1.5 m).

In cooling mode, the room temperature is significantly lower than the entering air temperature, depending on the distance from the air inlet. Therefore, if an entering air temperature of 27 °C is assumed when calculating the output, the room temperature will be much lower.

To avoid the build-up of heat in heating mode, the position of the outlet louvres can be varied. The warm air can therefore be targeted specifically to where it is needed.

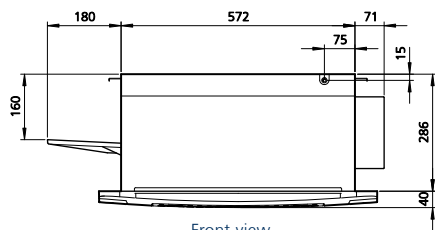


Sound measurement laboratory, example: models 1 – 4

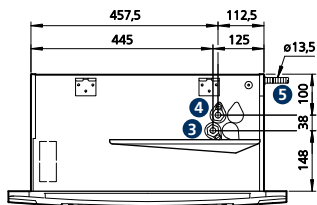
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Models 1 – 4, staged AC fans

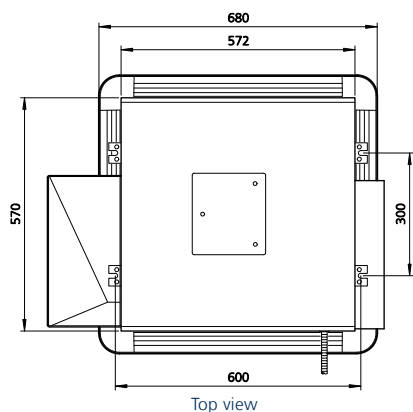
Technical drawings (dimensions in mm)



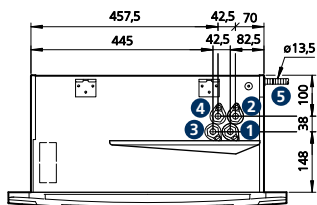
Front view



Water connection side 2-pipe



Top view



Water connection side 4-pipe

- 2-pipe:
- ③ Water inlet
 - ④ Water outlet
 - ⑤ Condensation drain
- 4-pipe:
- ① Hot water inlet
 - ② Hot water outlet
 - ③ Cold water inlet
 - ④ Condensation outlet
 - ⑤ Condensation drain

Specifications

Water connections

Model	2-pipe	4-pipe
1	1/2"	1/2"
2-4	3/4"	1/2"

Weights

Model	Basic unit		Stylish casing	Total	
	2-pipe	4-pipe		2-pipe	4-pipe
	[kg]	[kg]	[kg]	[kg]	[kg]
1	21	24	3	24	27
2	23	24	3	26	27
3	23	24	3	26	27
4	24	24	3	27	27

Design: 2-pipe



Model	Fan stage	Air volume	Cooling mode ¹⁾				Heating mode			Power consumption	Current consumption	Sound pressure level ³⁾	Sound power level
			Cooling output (total)	Cooling outlet (sensitive)	Medium flow	Pressure loss	Heat output ²⁾	Medium flow ²⁾	Pressure loss ²⁾				
		V[m ³ /h]	Q _k [W]	Q _s [W]	V[l/h]	dP[kPa]	Q _h [W]	V[l/h]	dP[kPa]	P[W]	I[A]	[dB(A)]	[dB(A)]
1	3	398	2776	2072	477	17	5268	462	15	43	0.19	35	44
	2	355	2530	1852	434	15	4760	418	12	37	0.16	32	41
	1	269	2017	1453	346	10	3848	338	9	26	0.11	25	34
2	3	550	4406	3171	756	25	8186	719	15	63	0.28	43	52
	2	398	3157	2221	541	19	5873	516	14	43	0.19	35	44
	1	269	2217	1522	380	11	4189	368	9	26	0.11	25	34
3	3	660	5163	3769	886	25	9859	866	21	75	0.33	49	58
	2	468	3785	2682	649	19	6917	607	17	52	0.23	40	49
	1	328	2792	1944	479	17	5171	454	15	33	0.14	30	39
4	3	760	5598	4083	961	31	10878	955	27	89	0.39	53	62
	2	660	4836	3430	830	25	9910	870	24	75	0.33	50	59
	1	550	4123	2864	707	19	8212	721	18	63	0.28	44	53

Design: 4-pipe



Model	Fan stage	Air volume	Cooling mode ¹⁾				Heating mode			Power consumption	Current consumption	Sound pressure level ³⁾	Sound power level
			Cooling output (total)	Cooling outlet (sensitive)	Medium flow	Pressure loss	Heat output ²⁾	Medium flow ²⁾	Pressure loss ²⁾				
		V[m ³ /h]	Q _k [W]	Q _s [W]	V[l/h]	dP[kPa]	Q _h [W]	V[l/h]	dP[kPa]	P[W]	I[A]	[dB(A)]	[dB(A)]
1	3	398	2818	2025	484	15	3500	307	15	43	0.19	35	44
	2	355	2470	1753	424	13	3050	268	12	37	0.16	32	41
	1	269	1937	1373	332	10	2450	215	9	26	0.11	25	34
2	3	550	3485	2615	598	18	4450	391	18	63	0.28	43	52
	2	398	2614	1914	449	15	3500	307	15	43	0.19	35	44
	1	269	1958	1393	336	11	2450	215	9	26	0.11	25	34
3	3	550	3981	2923	683	23	3300	290	23	63	0.28	43	52
	2	398	3071	2205	527	20	2670	235	19	43	0.19	35	44
	1	269	2046	1433	351	16	1910	168	14	26	0.11	25	34
4	3	660	4574	3421	785	29	3710	326	27	75	0.33	49	58
	2	468	3543	2574	608	23	2980	262	24	52	0.23	40	49
	1	328	2723	1934	467	18	2390	210	17	33	0.14	30	39

¹⁾ at CHW 7/12 °C, t_{l1} = 27 °C, 48% relative humidity.

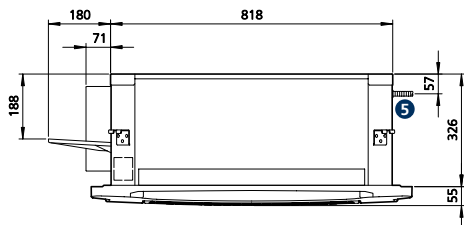
²⁾ at LPHW 70/60 °C, t_{l1} = 20 °C

³⁾ Sound pressure data at: room size 100 m³, reverberation time 0.5 seconds, sound absorption 9 dB(A).

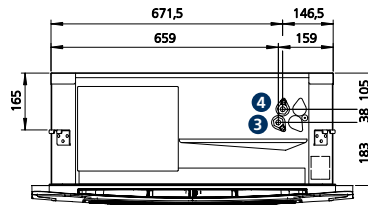
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Models 5 – 7, staged AC fans

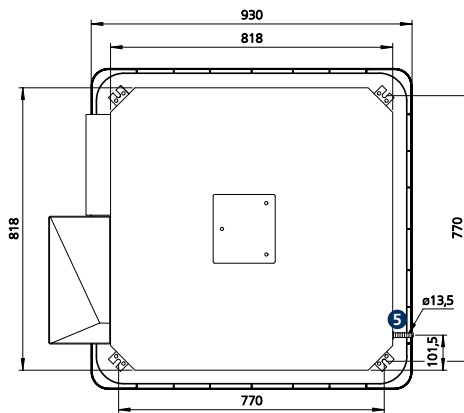
Technical drawings (dimensions in mm)



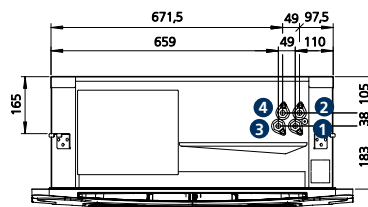
Front view



Water connection side 2-pipe



Top view



Water connection side 4-pipe

2-pipe:

- ③ Water inlet
- ④ Water outlet
- ⑤ Condensation drain

4-pipe:

- ① Cold water inlet
- ② Condensation outlet
- ③ Hot water inlet
- ④ Hot water outlet
- ⑤ Condensation drain

Specifications

Water connections

Model	2-pipe	4-pipe
5-7	3/4"	3/4"

Weights

Model	Basic unit		Stylish casing	Total	
	2-pipe	4-pipe		2-pipe	4-pipe
	[kg]	[kg]	[kg]	[kg]	[kg]
5	40	43	5	45	48
6	45	48	5	50	53
7	45	48	5	50	53

Design: 2-pipe



Model	Fan stage	Air volume	Cooling mode ¹⁾				Heating mode			Power consumption	Current consumption	Sound pressure level ³⁾	Sound power level
			Cooling output (total)	Cooling outlet (sensitive)	Medium flow	Pressure loss	Heat output ²⁾	Medium flow ²⁾	Pressure loss ²⁾				
		V[m ³ /h]	Q _k [W]	Q _s [W]	V[l/h]	dP[kPa]	Q _h [W]	V[l/h]	dP[kPa]	P[W]	I[A]	[dB(A)]	[dB(A)]
5	3	1023	6346	4627	1089	33	12852	1129	21	102	0.52	41	50
	2	763	5117	3630	878	22	10050	882	15	50	0.25	34	43
	1	623	4286	3017	735	17	8460	743	10	35	0.18	27	36
6	3	1270	9775	6501	1678	35	17298	1519	23	108	0.6	46	55
	2	858	6823	4407	1170	14	11978	1052	10	65	0.36	36	45
	1	662	5500	3508	944	9	9218	810	7	47	0.26	29	38
7	3	1536	11259	8107	1933	55	22656	1990	48	127	0.75	51	60
	2	1175	9080	6302	1558	38	17386	1527	29	93	0.45	41	50
	1	669	5501	3765	944	13	10089	886	10	47	0.23	35	44

Design: 4-pipe



Model	Fan stage	Air volume	Cooling mode ¹⁾				Heating mode			Power consumption	Current consumption	Sound pressure level ³⁾	Sound power level
			Cooling output (total)	Cooling outlet (sensitive)	Medium flow	Pressure loss	Heat output ²⁾	Medium flow ²⁾	Pressure loss ²⁾				
		V[m ³ /h]	Q _k [W]	Q _s [W]	V[l/h]	dP[kPa]	Q _h [W]	V[l/h]	dP[kPa]	P[W]	I[A]	[dB(A)]	[dB(A)]
5	3	1023	6365	4595	1092	22	9000	790	24	98	0.52	41	50
	2	763	5031	3563	863	14	7000	615	16	50	0.25	34	43
	1	623	4163	2905	715	10	5800	510	11	35	0.18	27	36
6	3	1270	7391	5456	1268	31	10500	922	33	106	0.6	46	55
	2	858	5356	3842	919	19	8000	703	21	65	0.36	36	45
	1	662	4419	3104	758	12	6300	554	14	46	0.25	29	38
7	3	1536	9034	6788	1551	40	12500	1098	43	127	0.75	51	60
	2	1175	6827	4986	1172	26	9500	834	29	95	0.46	41	50
	1	669	4623	3244	793	15	6800	597	16	47	0.23	35	44

¹⁾ at CHW 7/12 °C, t_{l1} = 27 °C, 48% relative humidity.

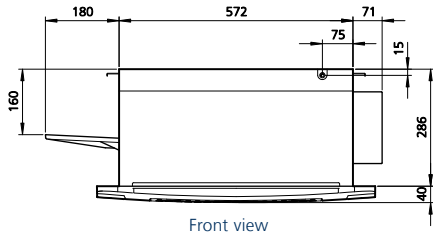
²⁾ at LPHW 70/60 °C, t_{l1} = 20 °C

³⁾ Sound pressure data at: room size 100 m³, reverberation time 0.5 seconds, sound absorption 9 dB(A).

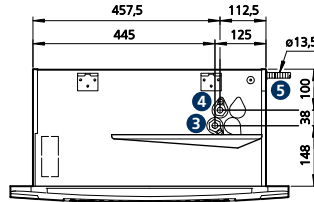
KaCool D AF

Models 1 – 4, continuously variable EC fans

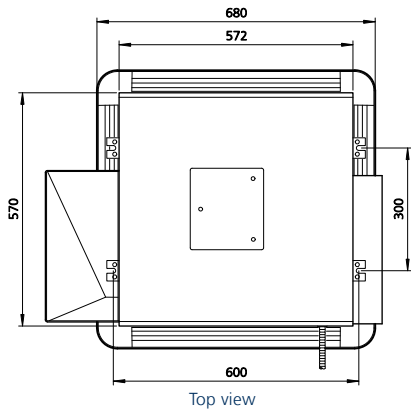
Technical drawings (dimensions in mm)



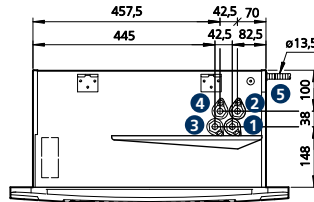
Front view



Water connection side 2-pipe



Top view



Water connection side 4-pipe

2-pipe:

- ③ Water inlet
- ④ Water outlet
- ⑤ Condensation drain

4-pipe:

- ① Hot water inlet
- ② Hot water outlet
- ③ Cold water inlet
- ④ Condensation outlet
- ⑤ Condensation drain

Specifications

Water connections

Model	2-pipe	4-pipe
1	1/2"	1/2"
2-4	3/4"	1/2"

Weights

Model	Basic unit		Panel	Total	
	2-pipe	4-pipe		2-pipe	4-pipe
	[kg]	[kg]	[kg]	[kg]	[kg]
1	21	24	3	24	27
2	23	24	3	26	27
3	23	24	3	26	27
4	24	24	3	27	27

Design: 2-pipe



Model	Fan stage	Air volume	Cooling mode ¹⁾				Heating mode			Power consumption	Current consumption	Sound pressure level ³⁾	Sound power level
			Cooling output (total)	Cooling outlet (sensitive)	Medium flow	Pressure loss	Heat output ²⁾	Medium flow ²⁾	Pressure loss ²⁾				
		V[m ³ /h]	Q _k [W]	Q _s [W]	V[l/h]	dP[kPa]	Q _h [W]	V[l/h]	dP[kPa]	P[W]	I[A]	[dB(A)]	[dB(A)]
1	3	398	2776	2072	477	17	5268	462	15	11	0.11	35	44
	2	355	2530	1852	434	15	4764	418	12	9	0.1	32	41
	1	269	2017	1453	346	10	3848	338	9	6	0.01	25	34
2	3	550	4406	3171	756	25	8186	719	15	26	0.22	43	52
	2	398	3157	2221	541	19	5873	516	14	11	0.12	35	44
	1	269	2217	1522	380	11	4189	368	9	6	0.07	25	34
3	3	660	5163	3769	886	25	9859	866	21	45	0.33	49	58
	2	468	3785	2682	649	19	6917	607	17	18	0.23	40	49
	1	328	2792	1944	479	17	5171	454	15	8	0.12	30	39
4	3	760	5598	4083	961	31	10878	955	27	65	0.47	53	62
	2	660	4836	3430	830	25	9910	870	24	42	0.4	50	59
	1	550	4123	2864	707	19	8212	721	18	27	0.31	44	53

Design: 4-pipe



Model	Fan stage	Air volume	Cooling mode ¹⁾				Heating mode			Power consumption	Current consumption	Sound pressure level ³⁾	Sound power level
			Cooling output (total)	Cooling outlet (sensitive)	Medium flow	Pressure loss	Heat output ²⁾	Medium flow ²⁾	Pressure loss ²⁾				
		V[m ³ /h]	Q _k [W]	Q _s [W]	V[l/h]	dP[kPa]	Q _h [W]	V[l/h]	dP[kPa]	P[W]	I[A]	[dB(A)]	[dB(A)]
1	3	398	2818	2025	484	15	3500	307	15	11	0.11	35	44
	2	355	2470	1753	424	13	3050	268	12	9	0.1	32	41
	1	269	1937	1373	332	10	2450	215	9	6	0.09	25	34
2	3	550	3485	2615	598	18	4450	391	18	26	0.22	43	52
	2	398	2614	1914	449	15	3500	307	15	11	0.12	35	44
	1	269	1958	1393	336	11	2450	215	9	6	0.07	25	34
3	3	550	3981	2923	683	23	3300	290	23	26	0.22	43	52
	2	398	3071	2205	527	20	2670	235	19	11	0.12	35	44
	1	269	2046	1433	351	16	1910	168	14	6	0.07	25	34
4	3	660	4574	3421	785	29	3710	326	27	40	0.33	49	58
	2	468	3543	2574	608	23	2980	262	24	18	0.23	40	49
	1	328	2723	1934	467	18	2390	210	17	8	0.12	30	39

¹⁾ at CHW 7/12 °C, tL1 = 27 °C, 48% relative humidity.

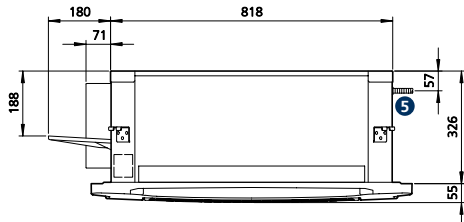
²⁾ at LPHW 70/60 °C, tL1 = 20 °C

³⁾ Sound pressure data at: room size 100 m³, reverberation time 0.5 seconds, sound absorption 9 dB(A).

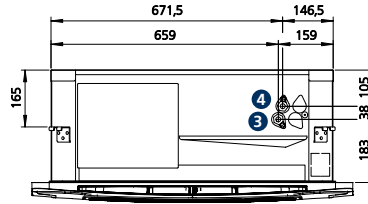
KaCool D AF

Models 5 – 7, continuously variable EC fans

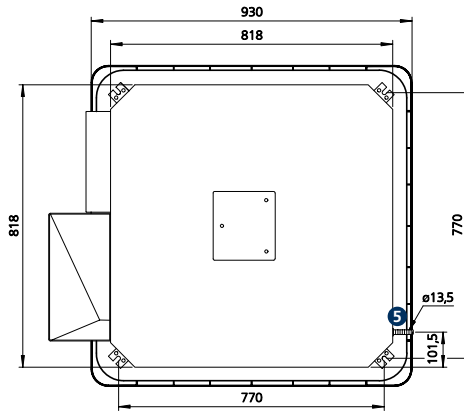
Technical drawings (dimensions in mm)



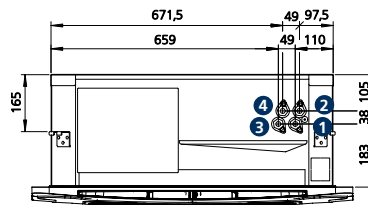
Front view



Water connection side 2-pipe



Top view



Water connection side 4-pipe

- 2-pipe:
- ③ Water inlet
 - ④ Water outlet
 - ⑤ Condensation drain

- 4-pipe:
- ① Cold water inlet
 - ② Condensation outlet
 - ③ Hot water inlet
 - ④ Hot water outlet
 - ⑤ Condensation drain

Specifications

Water connections

Model	2-pipe	4-pipe
5-7	3/4"	3/4"

Weights

Model	Basic unit		Panel	Total	
	2-pipe	4-pipe		2-pipe	4-pipe
	[kg]	[kg]	[kg]	[kg]	[kg]
5	40	43	5	45	48
6	45	48	5	50	53
7	45	48	5	50	53

Design: 2-pipe



Model	Fan stage	Air volume	Cooling mode ¹⁾				Heating mode			Power consumption	Current consumption	Sound pressure level ³⁾	Sound power level
			Cooling output (total)	Cooling outlet (sensitive)	Medium flow	Pressure loss	Heat output ²⁾	Medium flow ²⁾	Pressure loss ²⁾				
		V[m ³ /h]	Q _k [W]	Q _s [W]	V[l/h]	dP[kPa]	Q _h [W]	V[l/h]	dP[kPa]	P[W]	I[A]	[dB(A)]	[dB(A)]
5	3	1023	6346	4627	1089	33	12852	1129	21	81	0.66	41	50
	2	763	5117	3630	878	22	10050	882	15	30	0.3	34	43
	1	623	4286	3017	735	17	8460	743	10	15	0.16	27	36
6	3	1270	9775	6501	1678	35	17298	1519	23	89	0.7	46	55
	2	858	6823	4407	1170	14	11978	1052	10	33	0.33	36	45
	1	662	5500	3508	944	9	9218	810	7	18	0.19	29	38
7	3	1536	11259	8107	1933	55	22656	1990	48	127	1.26	51	60
	2	1175	9080	6302	1558	38	17386	1527	29	69	0.6	41	50
	1	669	5501	3765	944	13	10089	886	10	18	0.19	35	44

Design: 4-pipe



Model	Fan stage	Air volume	Cooling mode ¹⁾				Heating mode			Power consumption	Current consumption	Sound pressure level ³⁾	Sound power level
			Cooling output (total)	Cooling outlet (sensitive)	Medium flow	Pressure loss	Heat output ²⁾	Medium flow ²⁾	Pressure loss ²⁾				
		V[m ³ /h]	Q _k [W]	Q _s [W]	V[l/h]	dP[kPa]	Q _h [W]	V[l/h]	dP[kPa]	P[W]	I[A]	[dB(A)]	[dB(A)]
5	3	1023	6365	4595	1092	22	9000	790	24	45	0.54	41	50
	2	763	5031	3563	863	14	7000	615	16	24	0.25	34	43
	1	623	4163	2905	715	10	5800	510	11	14	0.15	27	36
6	3	1270	7391	5456	1268	31	10500	922	33	74	0.66	46	55
	2	858	5356	3842	919	19	8000	703	21	29	0.29	36	45
	1	662	4419	3104	758	12	6300	554	14	16	0.17	29	38
7	3	1536	9034	6788	1551	40	12500	1098	43	121	0.97	51	60
	2	1175	6827	4986	1172	26	9500	834	29	63	0.56	41	50
	1	669	4623	3244	793	15	6800	597	16	16	0.17	35	44

¹⁾ at CHW 7/12 °C, t_{L1} = 27 °C, 48% relative humidity.

²⁾ at LPHW 70/60 °C, t_{L1} = 20 °C

³⁾ Sound pressure data at: room size 100 m³, reverberation time 0.5 seconds, sound absorption 9 dB(A).

03 ▶ Design information



Information on planning and design

The unit size of chilled water air conditioning systems depends on the cooling outputs calculated as well as on the structural conditions.

The cooling load required is calculated in line with VDI 2078 (VDI regulations governing cooling loads).

The usual cold water temperature spread is approximately 5K. Take into account the effective unit outputs in line with the technical conditions of installation and use. Check the suitability of all components (circulation pump etc.) for use with cold water, noting the minimum temperatures.

Choice of installation site

Take into account the following requirements when choosing your installation location:

- ▶ no obstacles to air distribution and air intake
- ▶ sealed ceiling system to ensure air routing parallel to the ceiling
- ▶ minimum gap of 1.5 m between the unit and the nearest wall and a maximum installation height of the unit of 3.5 m above floor level
- ▶ pre-adjustment of louvres for optimum air discharge
- ▶ ease of access to pipes and electrical connections
- ▶ positioning of the cooling unit to fit in with the architecture and environment (e.g. ceiling lights)

Avoid:

- ▶ location with direct sunlight
- ▶ installation close to heat sources
- ▶ impaired air circulation due to lamps, furniture or shelves

Ceiling-mounted

KaCool D AF ceiling cassettes are manufactured to European standard ceiling grid dimensions. Models 5 – 7 can be installed centrally within four grids. The ceiling panels are then simply trimmed to fill in the gaps.

Caution!

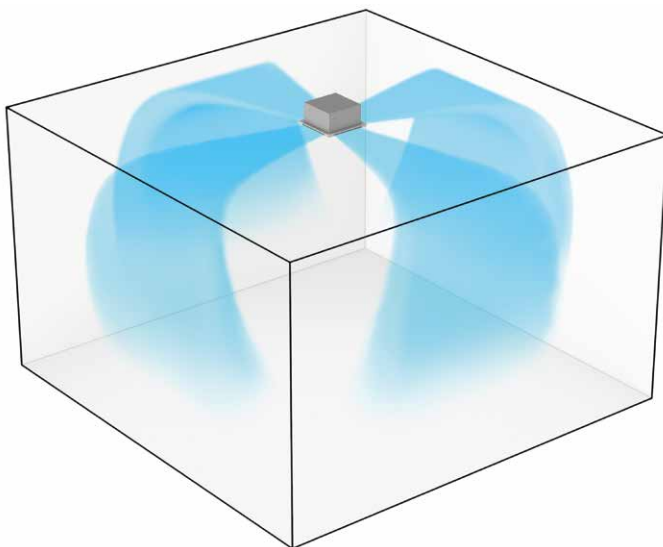
Provide access panels for maintenance work on the unit with closed ceiling systems. Ensure that the unit is precisely horizontal to prevent the condensation tray from overflowing. Ensure that the depth of the suspended ceiling is sufficient to accommodate the unit.

AF - AtmosFeel

Coanda effect

The air outlet is located at the side to guarantee maximum comfort (AtmosFeel). This cool air flows along the ceiling, is dispersed and falls to the floor (see figures). This avoids draughts as much as possible.

In heating mode, the position of the slats can be altered, if required, with the ABS design panel, which means that the air stream can be specifically directed downwards.



Casing panels

ABS design panel

The ABS design panel is supplied as standard with KaCool D AF units, combining design, maximum comfort (AtmosFeel) and unbeatable value for money.

It is available in two different sizes:

- 1) Model 1 – 4: 680x680 mm
- 2) Model 5 – 7: 930x930 mm



1) Model 1 – 4: 680x680 mm

Metal grid casing panel

A painted galvanised steel casing panel can also be used as an alternative to the ABS design casing panel, available for 625x625 mm ceiling grids (models 1 - 4) and 900 x 900 mm (models 5 – 7).

It is supplied as standard in pure white, similar to RAL 9010, but in larger order volumes can also be adapted to customer requirements.

It is available in two different sizes:

- 1) Model 1 – 4: 625x625 mm
- 2) Model 5 – 7: 900x900 mm



1) Model 1 – 4: 625x625 mm



2) Model 5 – 7: 930x930 mm



2) Model 5 – 7: 900x900 mm

Air connections

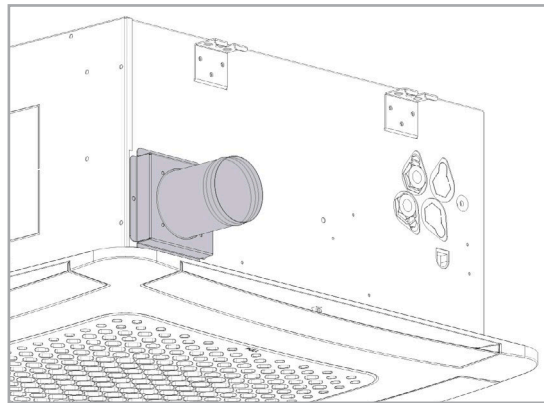
Primary air spigots for the fresh air supply

KaCool D AF units can be supplied with primary air, which is then supplied to the room through the units. The pre-conditioned air needs to be cleaned and have a minimum temperature of 14°C and a maximum temperature of 25°C.

A primary air spigot, available as an accessory, is needed for the connection. It is fixed to the side of the cassette.

Models 1 – 4: max. two primary air connections, each 80 m³/h

Models 5 – 7: one primary air connection, max. 120 m³/h

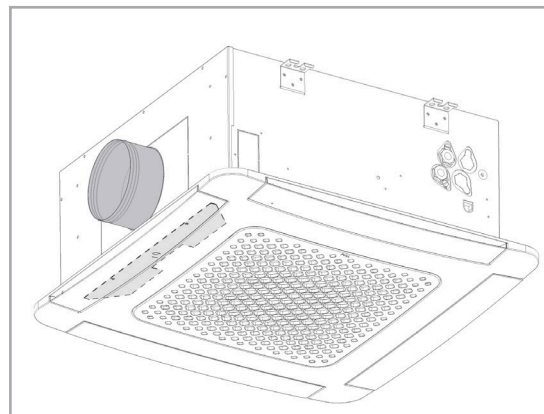


Fresh air connection, models 1 – 4

External air outlet

An air line can be connected to the ceiling cassette to provide adjacent rooms (e.g. changing rooms) with conditioned air. A pre-punched opening with a diameter of 150 mm needs to be removed on the side of the cassette to which an on-site flange must be fitted. An insulated air line and outlets can be connected to it. Seal the respective air outlets with adhesive tape.

Make sure that you keep the pressure loss at the outlet and air line as low as possible (max. 15 Pa total pressure loss). As a result, up to 15% of the total air volume of the ceiling cassette can be moved.



Models 1 – 4

Valve kits

The accessories range includes 2-way and 3-way valves. The valve kit contains an Open / Close actuator and connecting pipes as standard. Other valves (e.g. continuous) are available on request. The valves are supplied as separate accessories and need to be fitted on site. Any condensation produced is collected in a valve drip tray, provided with every unit and drained to the condensation pump of the ceiling cassette.

Actuators

Voltage supply	Current consumption	Power consumption
	[A]	[W]
230V	0.25	1.8
24V	0.35	1.8

Valve lift 2.5 mm

M 30 x 1.5 threaded connection

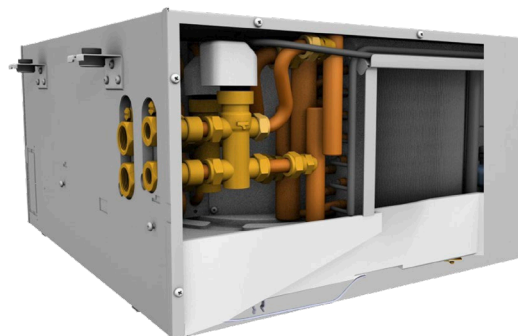
Actuator mode: On / Off, NC (normally closed)

Valves

Model	Connection		KVS value	
	2-pipe	4-pipe	2-pipe	4-pipe
1	1/2"	2x1/2"	1.7	1.7
2	3/4"	2x1/2"	2.8	1.7
3	3/4"	2x1/2"	2.8	1.7
4	3/4"	2x1/2"	2.8	1.7
5	3/4"	2x3/4"	2.8	2.8
6	3/4"	2x3/4"	4.0	2.8
7	3/4"	2x3/4"	4.0	2.8

Built-in pre-fitted valves

There is an option to factory integrate the valves into the ceiling cassette with larger order volumes. The valves can then either be accessed from below after removing the condensation tray or from the side. The side cover of the housing can be removed for this purpose.

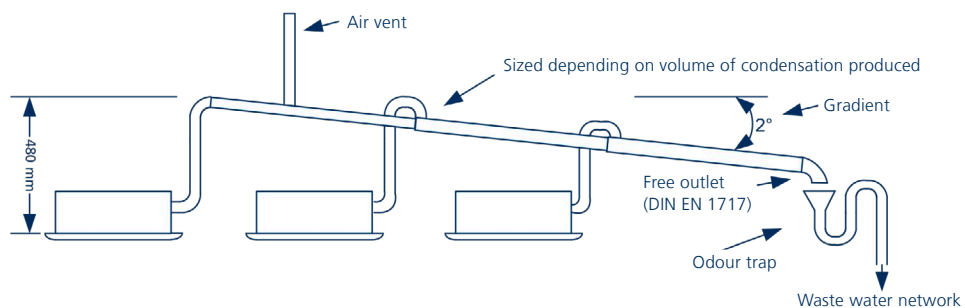


Condensation drain

Condensation will be produced if the ceiling cassettes are operated at a temperature below the dew point. The condensation from the heat exchanger drips into the condensation tray underneath. From here, it is pumped out of the unit by a condensation pump. The condensation produced from the condensation pump hose has to be drained from the unit down a 2% gradient. The condensation has to be collected in a pool pump on site if it has to be drained higher than the integrated pump allows.

Volume of condensation produced per cassette

Air intake:	27°C / 48%			30°C / 75%
Water temp.:	6 / 12°C	7 / 12°C	10 / 16°C	6 / 12°C
Model	[l/h]	[l/h]	[l/h]	[l/h]
1	1.3	1.1	0.6	5.6
2	2.3	2.2	0.7	9.3
3	2.5	2.4	0.9	11
4	2.6	2.6	1	11.2
5	2.7	2.6	1.1	13
6	5.2	5.1	1.5	21
7	5.5	5.4	2.2	23

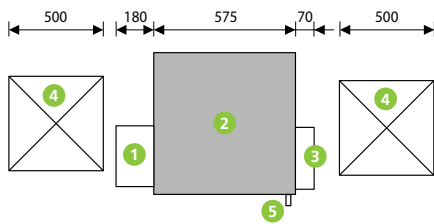


Schematic diagram

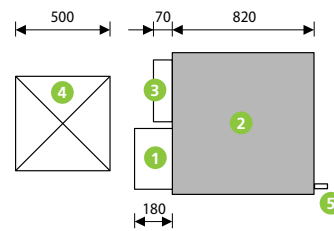
Service opening connection

Appropriate service openings are needed to service and maintain units installed in permanently sealed ceilings.

Models 1–4



Models 5–7



- 1 Condensation tray for valves
- 2 Ceiling cassette
- 3 Electrical junction box
- 4 Service openings (suggested 500x500)
- 5 Condensation connection (depending on the design of the transition between the condensation connection and the on-site condensation line, it may be necessary to provide for an additional service opening)

04 ▶ Controls



Control overview of KaCool D AF with AC fans

KaCool D AF units with AC fans can be connected to BMS systems as well as to thermostats and operated with them.

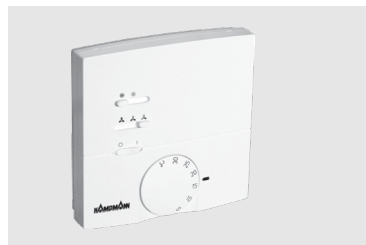
All models of the units have a built-in PCB. A float switch monitors the condensation level in the condensation tray and switches on the condensation pump, as required. If the condensation level continues to rise, despite the pump running, the cooling valve is closed and an alarm is emitted which can be evaluated on site.

KaCool D AF – AC rating values

Model	Power consumption	Current consumption
	P [W]	I [A]
1	43	0.19
2	63	0.28
3	75	0.33
4	89	0.39
5	102	0.52
6	108	0.60
7	156	0.75

The power and current consumption of the actuators is not taken into account.

Electromechanical control



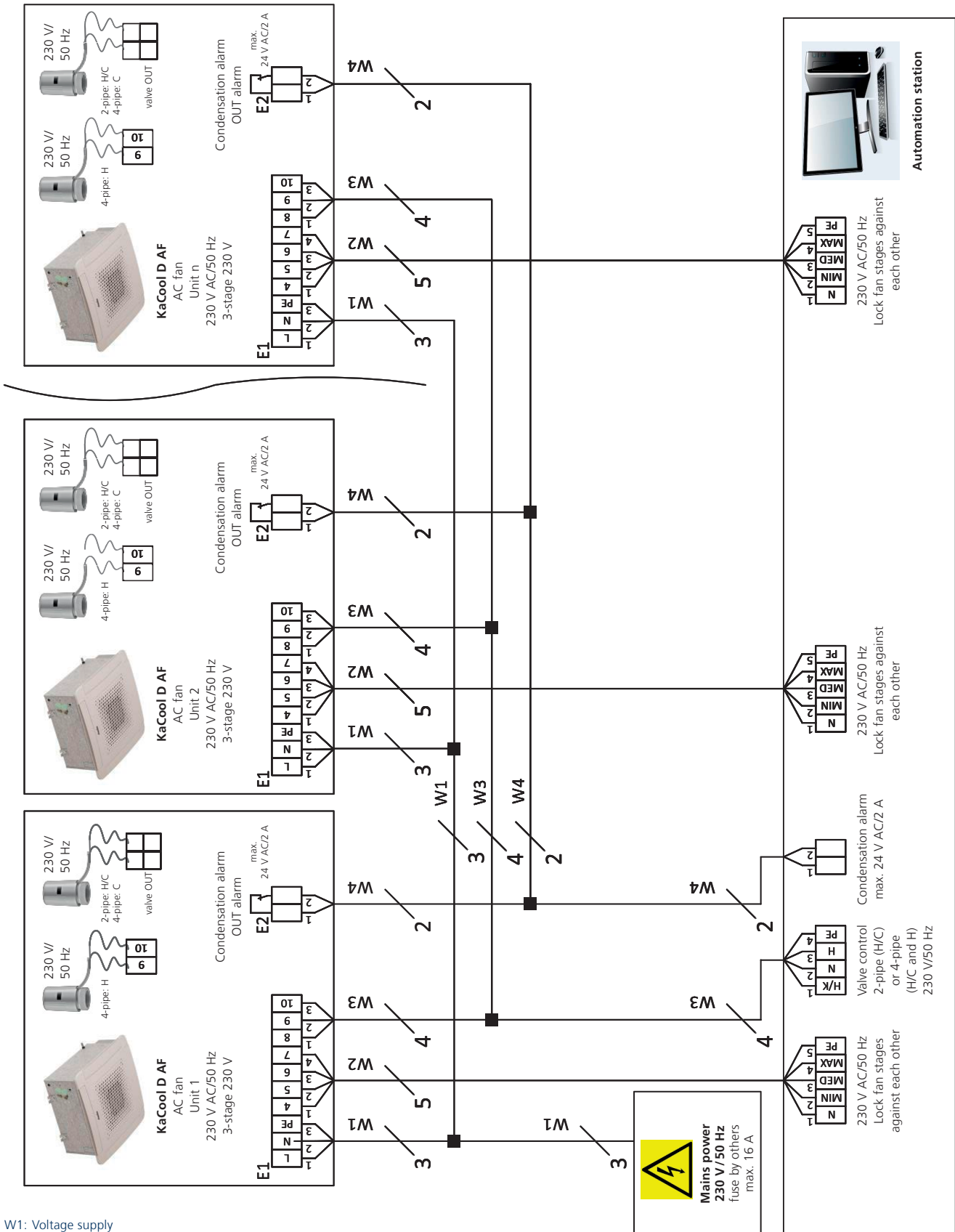
Electromechanical room thermostat
Type 148916/148917/148918

Visually appealing room thermostat as a cost-effective 3-stage speed control.

Product features

- ▶ cost-effective control components
- ▶ easy to use
- ▶ functional and robust design

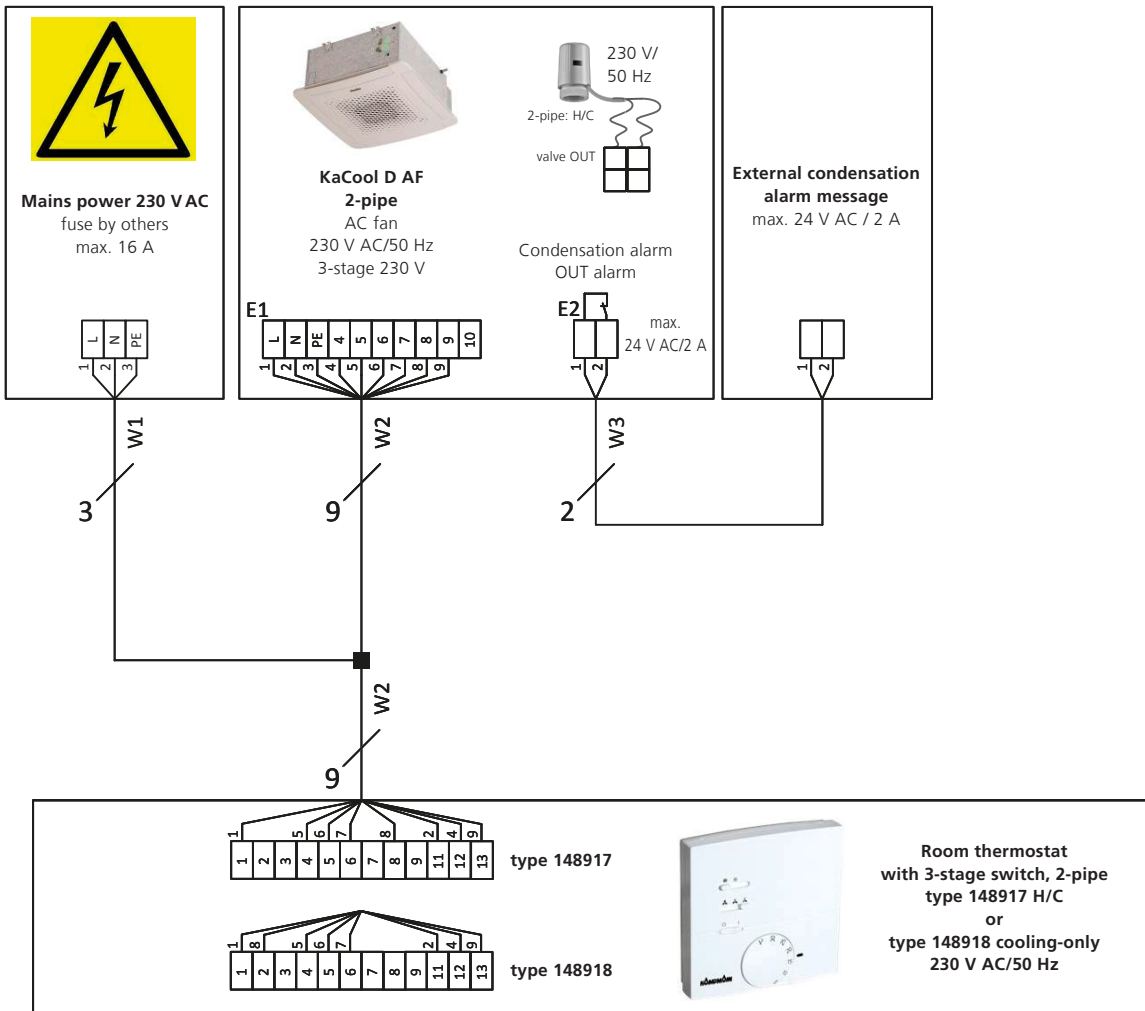
Electrical cabling – BMS control



W1: Voltage supply
 W2: Speed control
 W3: Valve control
 W4: Condensation alarm message
 The number of connecting wires required including fuses is given on the individual control units.
 Electrical supply: observe the technical connection requirements laid down by the utility companies!

Electrical cabling – Room thermostat control

Stand-alone unit, stage thermostat



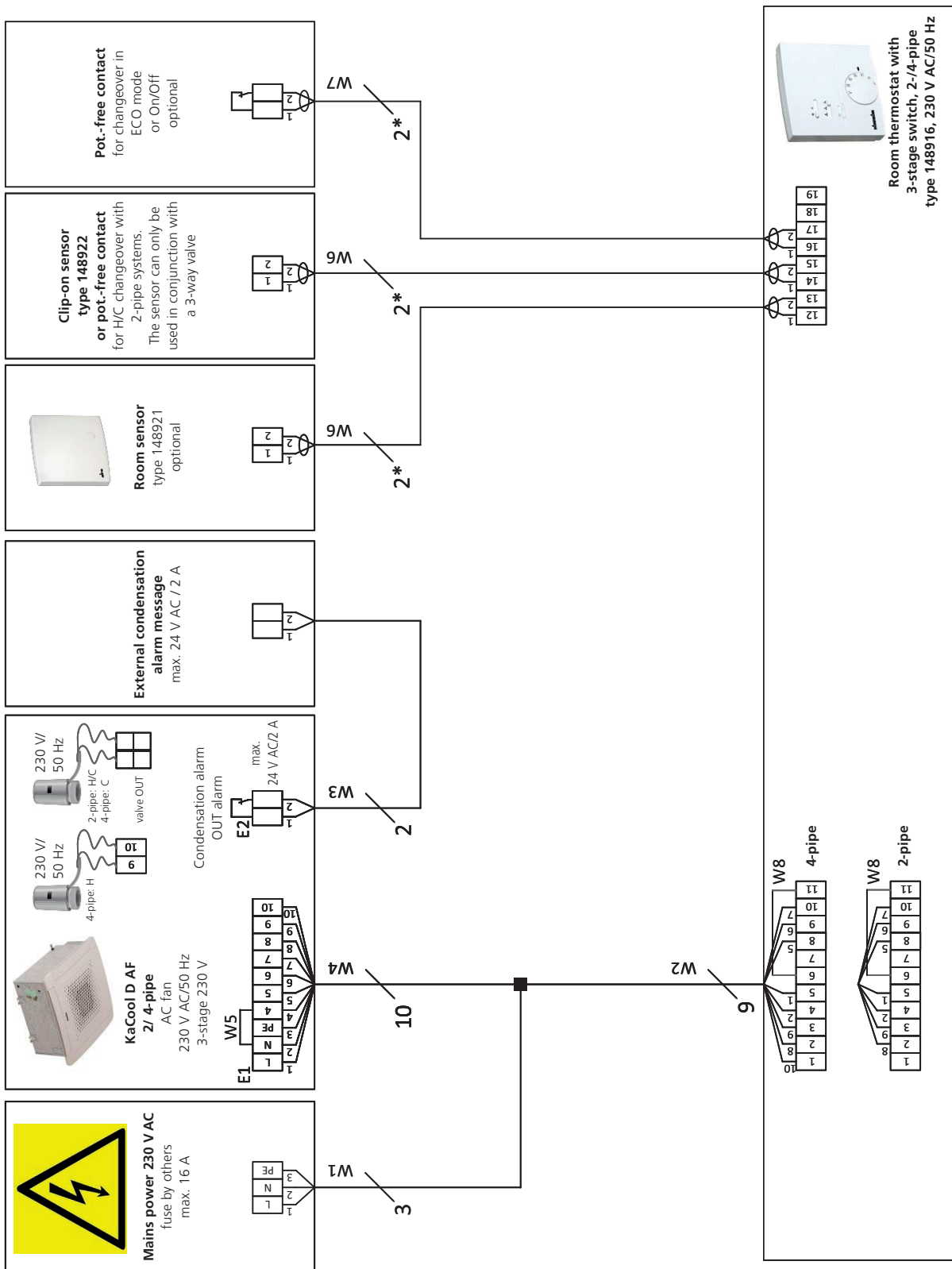
W1: Voltage supply

W2: Voltage supply, fan control, valve control

W3: Condensation alarm message to external control

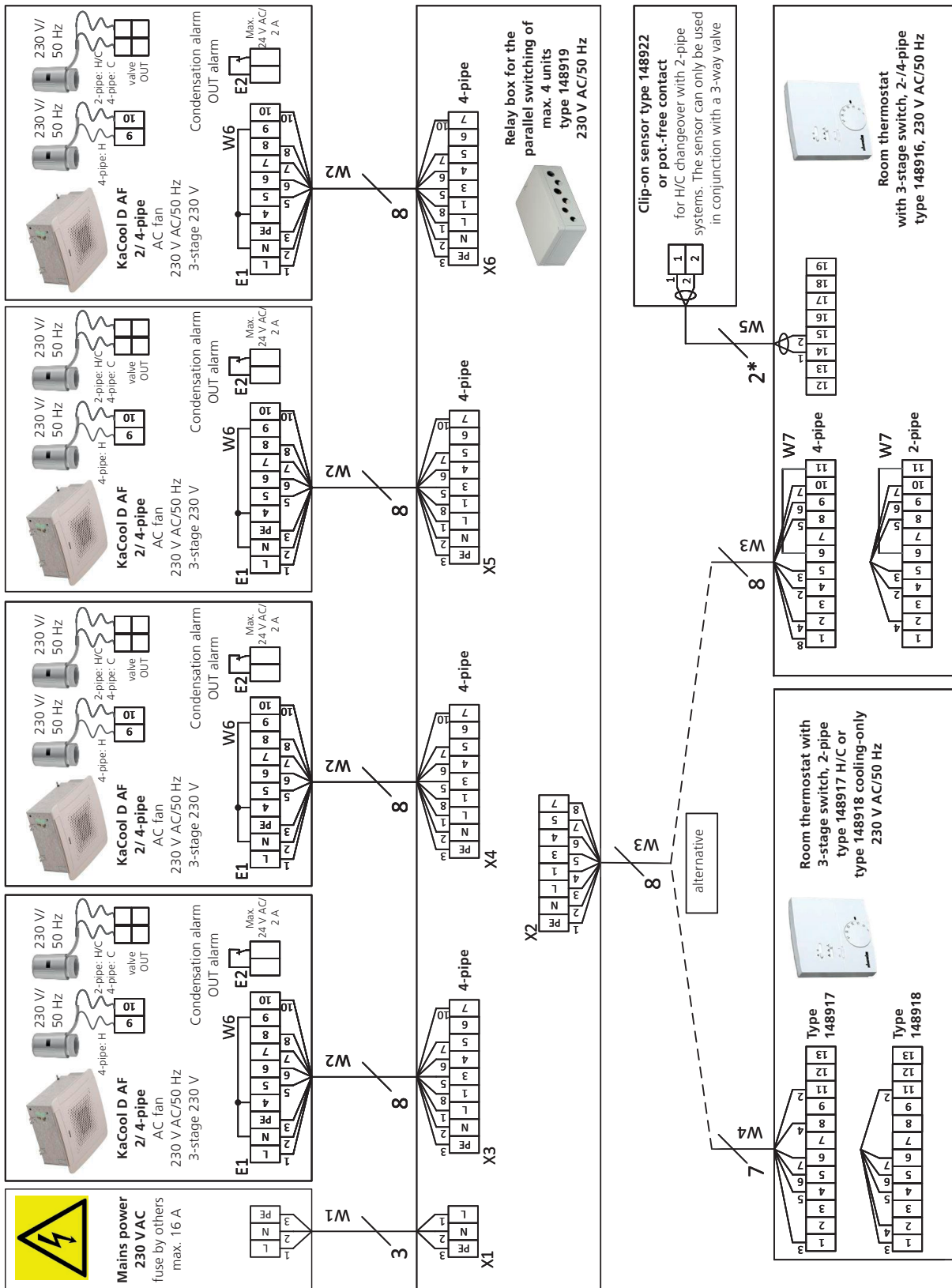
The number of connecting wires required including fuses is given on the individual control units.

Electrical supply: observe the technical connection requirements laid down by the utility companies!



- *) Lay shielded line 0.5 mm² e.g. J-Y(ST)Y, 2 x 2 x 0.8 mm, max. 50 m, separately from power cables!
- W1: Voltage supply
 - W2: Voltage supply, fan speed control, valve control; only 8 wires with 2-pipe systems – wire 10 is omitted
 - W3: Condensation alarm message to external control
 - W4: Voltage supply, fan speed control, valve control; only 9 wires with 2-pipe systems – wire 10 is omitted
 - W5: Insert wire jumpers on site or route wire 4 to the on-site intermediate junction box
 - W6: Low voltage signal
 - W7: Low voltage signal; a wire jumper needs to be inserted if the input is not used
 - W8: Insert on-site wire jumper
- The number of connecting wires required including fuses is given on the individual control units.
 Electrical supply: observe the technical connection requirements laid down by the utility companies!

Group formation, stage thermostat



*) Lay shielded line 0.5 mm² e.g. J-Y(ST)Y, 2 x 2 x 0.8 mm, max. 50 m, separately from power cables!
 W1: Voltage supply
 W2: Voltage supply, fan speed control, valve control; only 7 wires with 2-pipe systems – wire 10 is omitted
 W3: Voltage supply, fan speed control, valve control; only 7 wires with 2-pipe systems – wire 8 is omitted
 W4: Voltage supply, fan control, valve control
 W5: Low voltage signal
 W6, W7: Insert on-site wire jumper
 The number of connecting wires required including fuses is given on the individual control units.
 Electrical supply: observe the technical connection requirements laid down by the utility companies!

Control overview of KaCool D AF with EC Fans

KaCool D AF units with EC fans can be selected with various control configurations. All models of the cassettes have a built-in PCB.

A float switch monitors the condensation level in the condensation tray and switches on the condensation pump as required. If the condensation level continues to rise, despite the pump running, the cooling valve is closed and an alarm is emitted which can be evaluated on site.

The Kampmann KaControl is the most convenient and comprehensive control.

A high-performance parameterised microprocessor is designed to carry out all necessary functions. Each KaCool D AF unit therefore has its own “intelligence” and can be operated in groups via Kampmann-T-LAN or CAN bus networks.

Connection to building automation systems

KaCool D AF with KaControl can be equipped with plug-in communication interfaces for controlled operation in individual rooms or for linking into higher-order control systems: BACnet, CAN bus, LON, KNX and Modbus.

KaCool D AF – EC rating values

Model	Power consumption	Current consumption
	P [W]	I [A]
1	11	0.11
2	26	0.22
3	45	0.33
4	65	0.47
5	81	0.52
6	89	0.55
7	155	0.72

The power and current consumption of the actuators is not taken into account.

KaController operating unit



The „face“ of the KaControl building automation system is the KaController unit.

Product features

- ▶ room operating units for wall mounting with a high-quality design
- ▶ available with or without function buttons on the side
- ▶ plastic housing, colour similar to RAL 9010
- ▶ communication interface to the Kampmann T-LAN bus system
- ▶ push-turn navigator dial with endless turn/lock function
- ▶ built-in weekly switching program
- ▶ password-protected parameter level

Infra-red remote control



The infra-red remote control is available for retrofitting into existing buildings.

Product features

- ▶ convenient operation of all cassette functions:
 - ▶ temperature
 - ▶ fan speed
 - ▶ mode

Room thermostat type 30155



Room thermostat for manual 3-stage or continuously variable speed control in automatic mode for surface-mounted wall installation in an attractive retrained design.

Product features

- ▶ colour: pure white (similar to RAL 9010)
- ▶ user-friendly
- ▶ functional and robust design
- ▶ 2- and 4-pipe applications
- ▶ Day/ECO/Off operating mode with room frost protection function
- ▶ built-in room sensor, connection option for external room sensor
- ▶ digital input for switchover between ECO and OFF
- ▶ digital output for heating/cooling changeover with 2-pipe systems
- ▶ only in conjunction with 230 V actuator

KaControl Touch SEL



KaControl Touch SEL offers users the option of calling up all system statuses and modifying system parameters via an intuitive user interface.

The touch-screen operation consists of switchable parameter windows, which show all settings and options at a glance and are specifically designed for manual operation on the screen.

Users can also operate the operating pages through Internet Explorer via an Ethernet cable in addition to standard functions, like calling up temperatures and specifying setpoints.

Product features

- ▶ display size: 7" (diagonal)
- ▶ supply voltage: 24 VDC
- ▶ protection class: IP 65 (front panel)
- ▶ interface (protocol): Modbus RTU
- ▶ dimensions W x H x D: 187 x 147 x 49 mm
- ▶ max. number of zones: 24 zones (= 24 mode cards)

KaControl SEL control panel

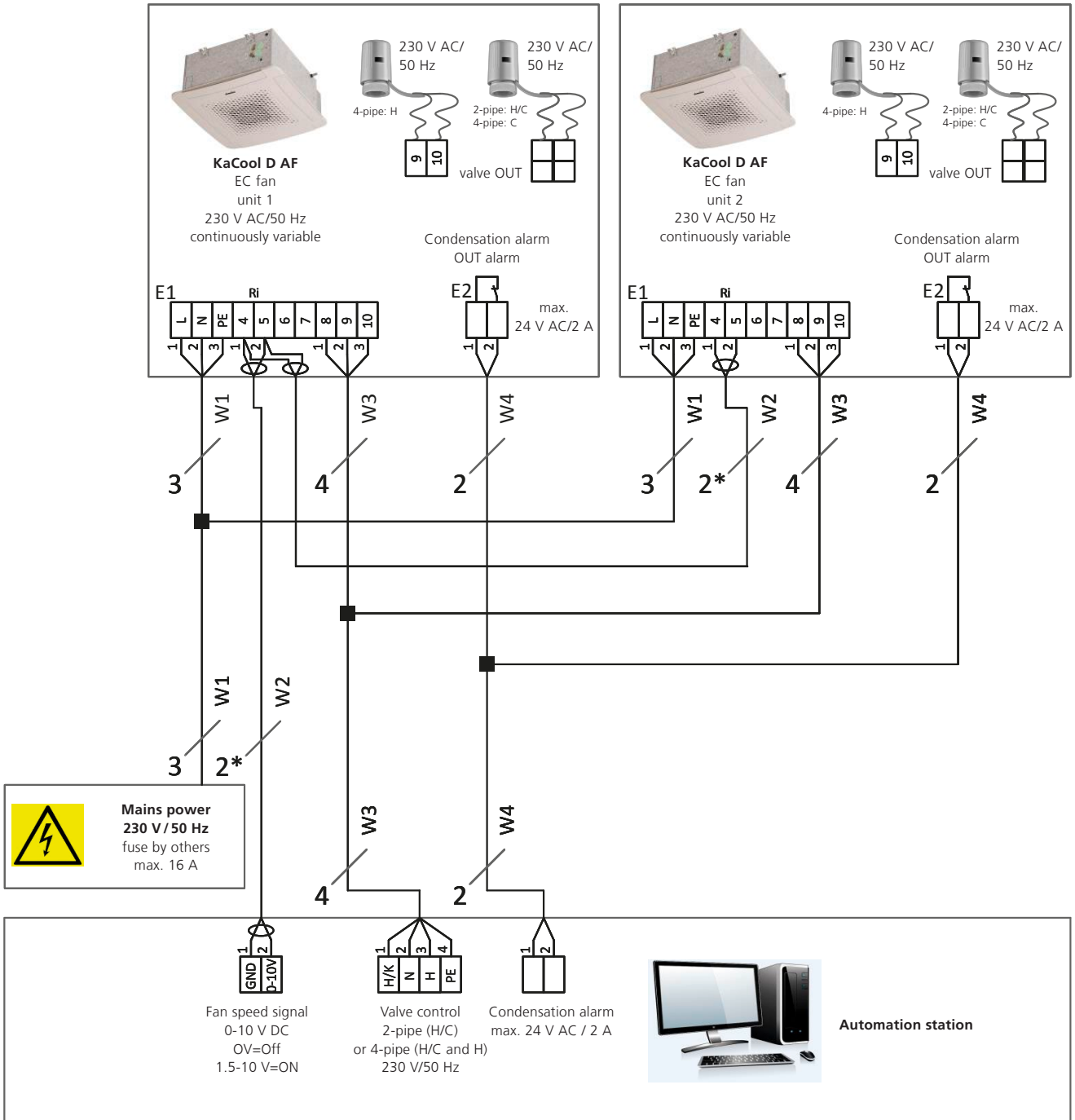


For the central control and monitoring of up to 24 temperature zones, units groups or rooms.

Product features

- ▶ 3 timer programs; for 24 zones
- ▶ summer compensation
- ▶ room temperature setpoints / actual values
- ▶ central heating/cooling switchover in 2-pipe systems by external switching contact
- ▶ centralised temperature target value specification by an external signal 0 – 10V
- ▶ demand for heating via digital output
- ▶ demand for cooling via digital output
- ▶ collective fault alert in Kampmann system via digital output
- ▶ fault detection in chiller or heat pump
- ▶ heating/cooling changeover
- ▶ heat generator activation
- ▶ chiller or heating/cooling heat pump activation
- ▶ fault monitoring in single units (only if all units have Modbus cards, max. 24)
- ▶ switchover of individual control zones:
 - ▶ ON / OFF or ECO / DAY
 - ▶ ON / OFF or ECO / DAY entire system via external contact
- ▶ optional BACnet gateway

Electrical cabling – BMS control



*) Lay shielded cables e.g. B. J-Y(St)Y, 0.8 mm separately from power cables.

W1: Voltage supply

W2: Fan speed signal 0-10 V DC, Ri = 100 kOhm, max. line length 10 m from the BMS system to the 2nd unit

W3: Valve control

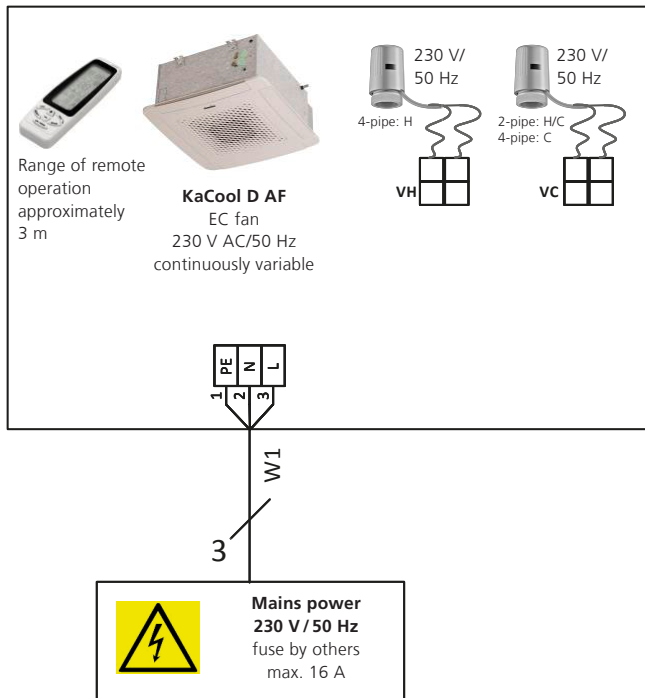
W4: Condensation alarm message

The number of connecting wires required including fuses is given on the individual control units.

Electrical supply: observe the technical connection requirements laid down by the utility companies!

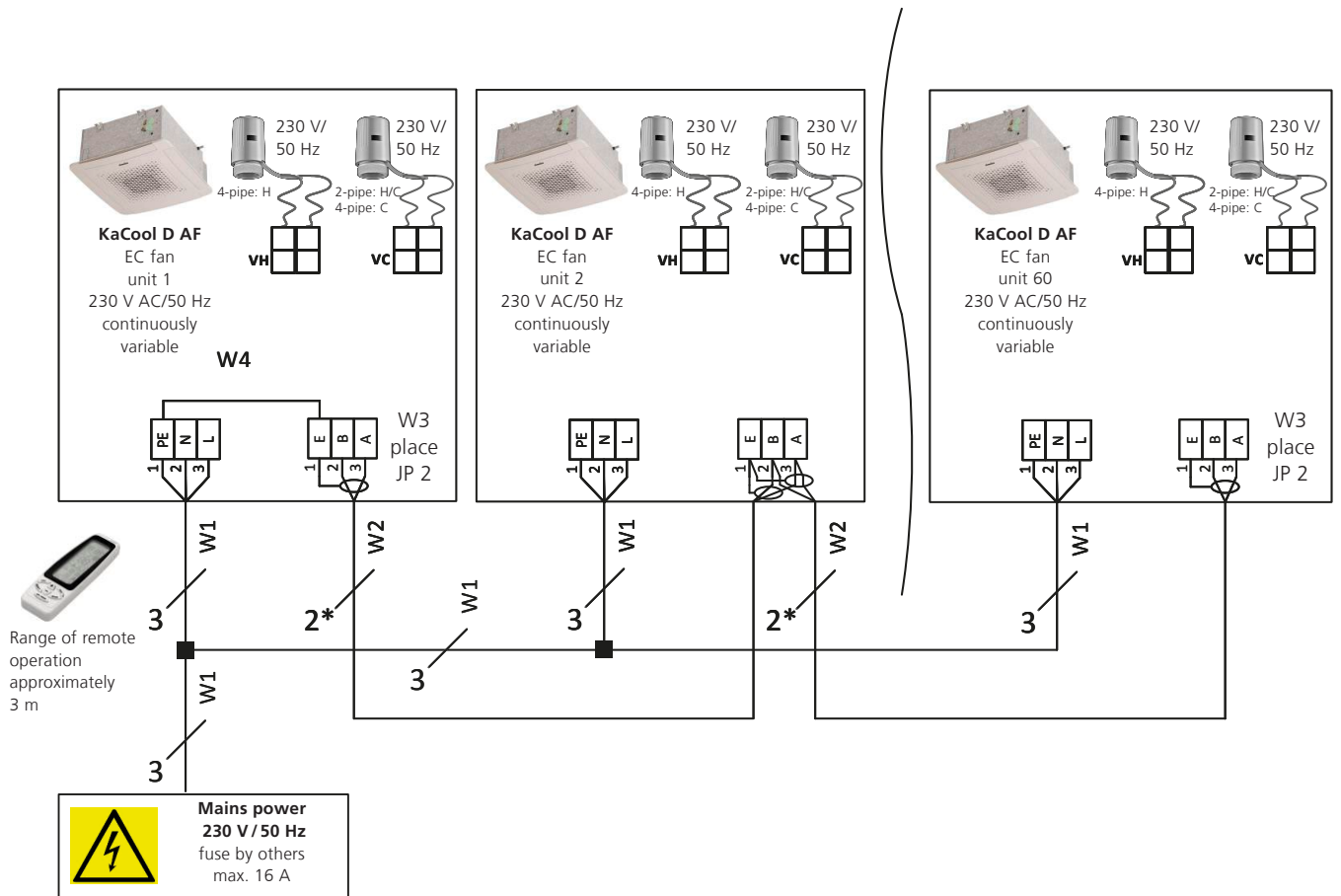
Cabling – Infra-red remote control

Single unit, infra-red remote control



W1: Voltage supply
The number of connecting wires required including fuses is given on the individual control units.
Electrical supply: observe the technical connection requirements laid down by the utility companies!

Group formation, infra-red remote control



*) Lay shielded data cable, twisted pairs, e.g. UNITRONIC® BUS LD 1 x 2 x 0.22 mm² or similar, linear but separate from power lines.

W1: Voltage supply

W2: Bus signal RS485, max. cable length 700 m

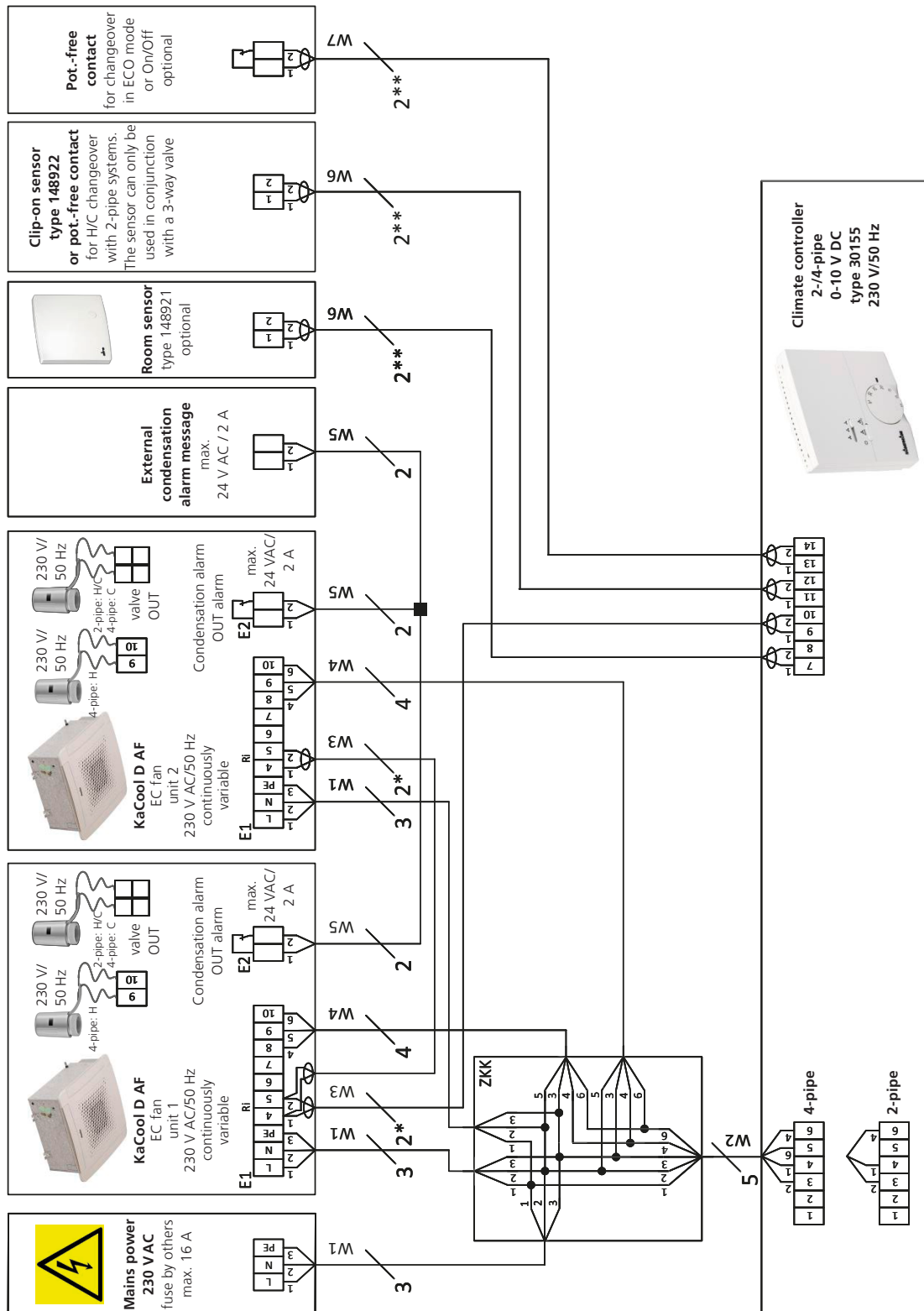
W3: Place JP 2 "End of the line" for 120 Ohm terminal resistance at the first and last unit

W4: Insert on-site wire jumper

The number of connecting wires required including fuses is given on the individual control units.

Electrical supply: observe the technical connection requirements laid down by the utility companies!

Electrical cabling – Control by climate controller type 30155



*) Lay shielded cables e.g. B. J-Y(ST)Y, 0.8 mm separately from power cables!

**) Lay sensor connection cable 0.5 mm² e.g. J-Y(ST)Y, 2 x 2 x 0.8 mm, max. 50 m, separately from power cables!

W1: Voltage supply

W2: Voltage supply, valve control; only 4 wires with 2-pipe systems – wire 6 is omitted

W3: Fan speed signal 0-10 V DC, Ri = 100 kOhm, max. line length 10 m from the climate controller to the 2nd unit

W4: Valve control; only 3 wires with 2-pipe systems – wire 6 is omitted

W5: Condensation alarm message to external control

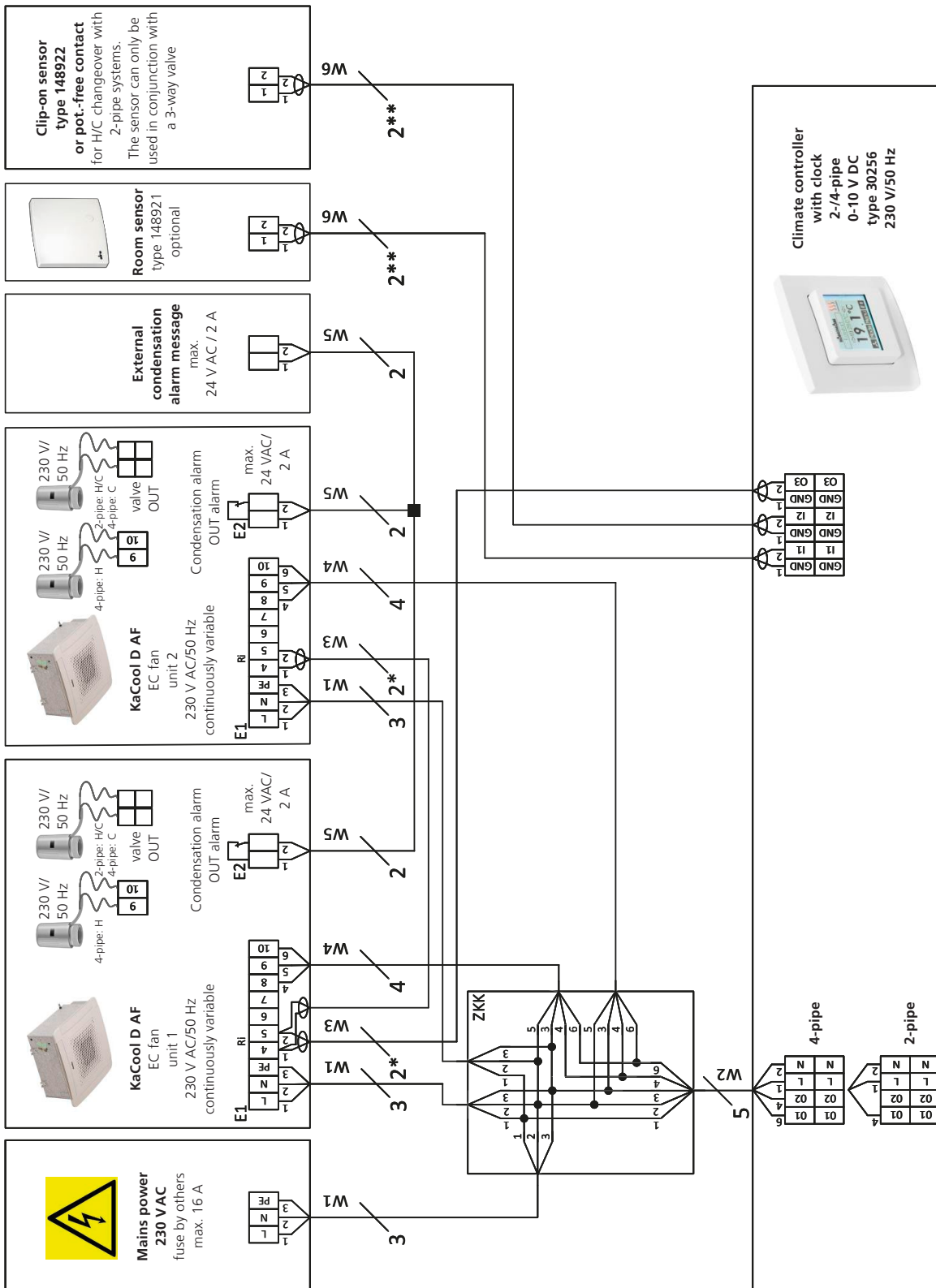
W6: Low voltage signal

W7: Low voltage signal; a wire jumper needs to be inserted if the input is not used

The number of connecting wires required including fuses is given on the individual control units.

Electrical supply: observe the technical connection requirements laid down by the utility companies!

Electrical cabling – Control by climate controller with clock type 30256



*) Lay shielded cables e.g. B. J-Y(St)Y, 0.8 mm separately from power cables!

**) Lay sensor connection cable 0.5 mm² e.g. J-Y(ST)Y, 2 x 2 x 0.8 mm, max. 50 m, separately from high-voltage cables!

W1: Voltage supply

W2: Voltage supply, valve control; only 4 wires with 2-pipe systems – wire 6 is omitted

W3: Fan speed signal 0-10 V DC, Ri = 100 kOhm, max. line length 10 m from the climate controller to the 2nd unit

W4: Valve control; only 3 wires with 2-pipe systems – wire 6 is omitted

W5: Condensation alarm message to external control

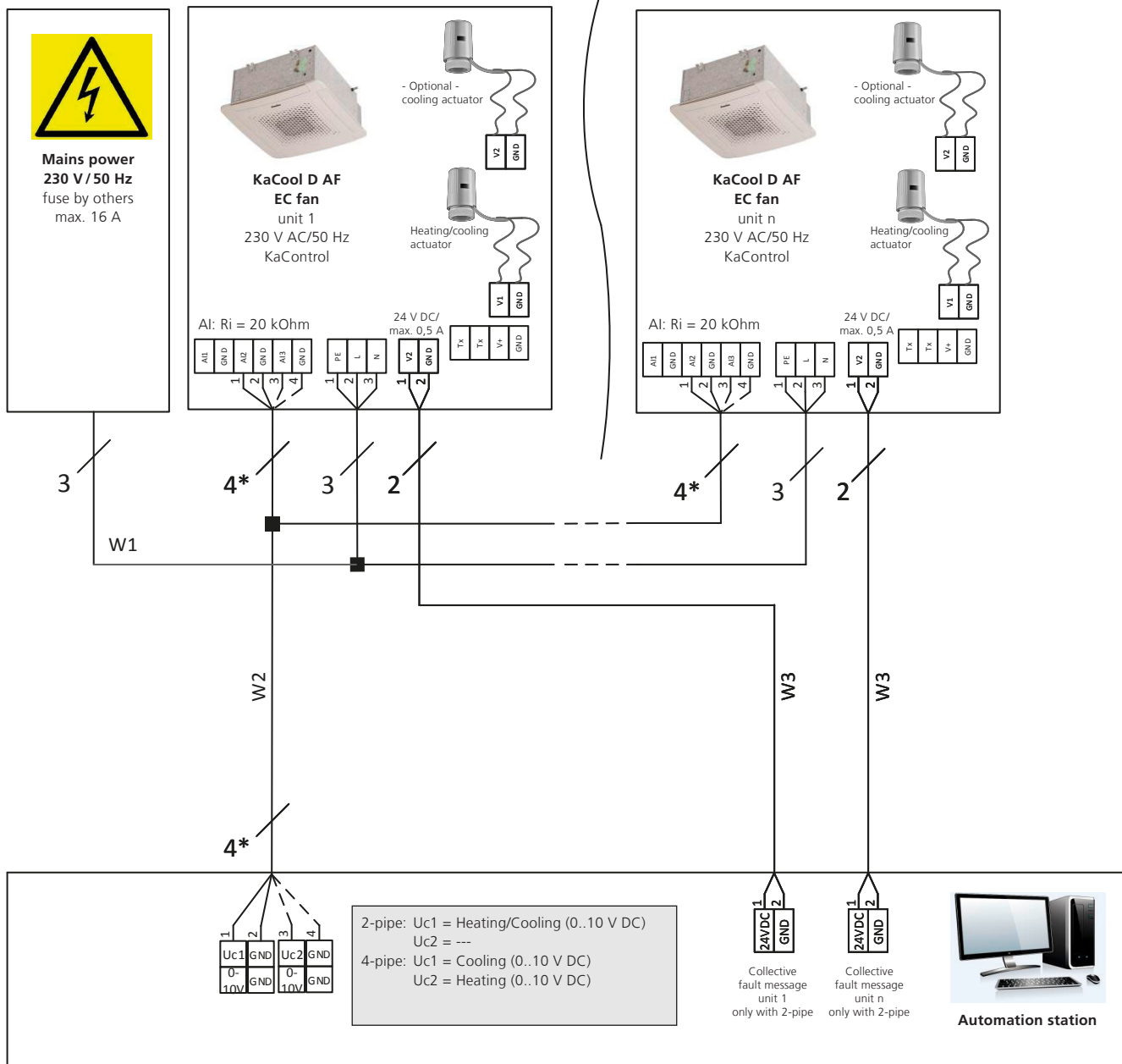
W6: Low voltage signal; if the input is to remain inoperational, the ECO function needs to be selected and the input unwired.

The number of connecting wires required including fuses is given on the individual control units.

Electrical supply: observe the technical connection requirements laid down by the utility companies!

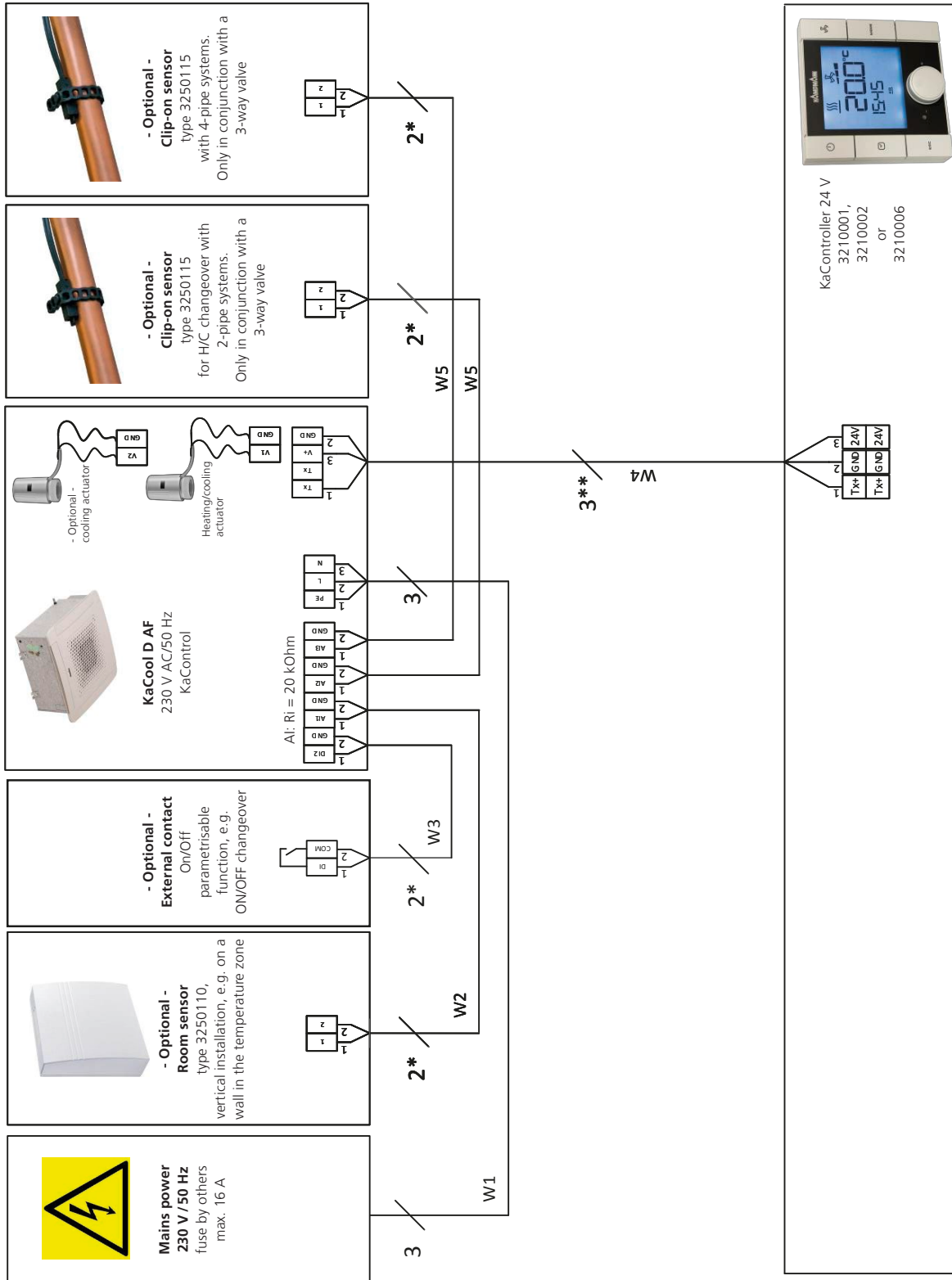
Cabling – KaControl

BMS, KaControl



*) Low voltage line, lay separately from power cables!
 W1: Voltage supply
 W2: Control signal for fan and actuators
 W3: Collective fault message, only with 2-pipe units, non-floating, 24 V DC/max. 0.5A
 The number of connecting wires required including fuses is given on the individual control units.
 Electrical supply: observe the technical connection requirements laid down by the utility companies!

Stand-alone unit, KaControl



*) Lay shielded cable e.g. B. J-Y(ST)Y, 0.8 mm separately from power cables.

***) Lay shielded data cable, twisted pairs, e.g. UNITRONIC® BUS LD 2 x 2 x 0.22 mm² or similar, linear but separately from power lines.

W1: Voltage supply

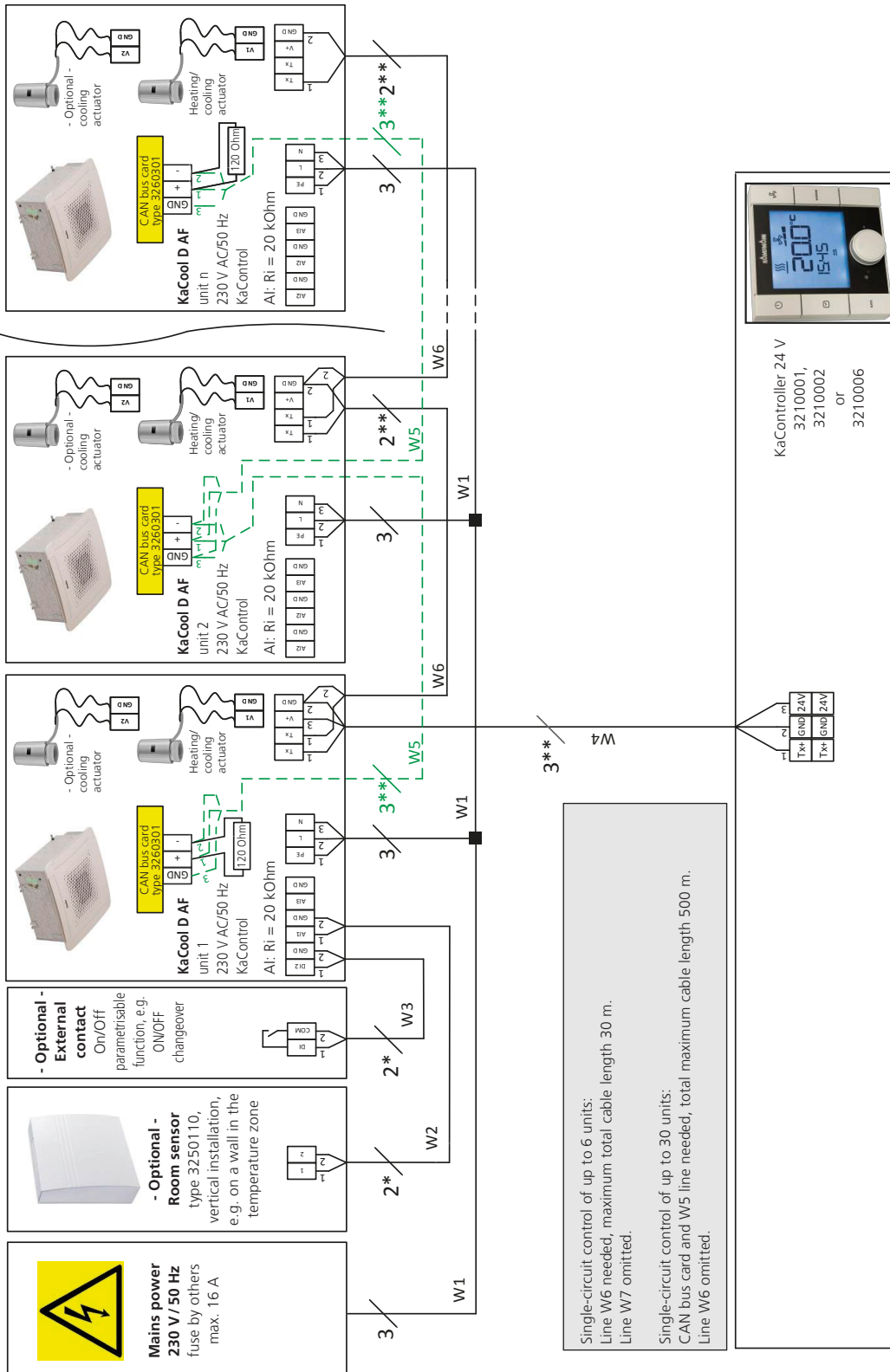
W2: Analogue input AI1 (optionally connectible), max. cable length 10 m, from 1 mm² 30 m, disconnect factory-fitted intake sensor.

W3: Digital input DI1 (optionally connectible), max. cable length 30 m, from 1 mm² 100 m

W4: Bus signal (tLan), max. cable length 30 m

W5: Analogue input A1 (optionally connectible), max. cable length 10 m, from 1 mm² 30 m

KaControl group formation max. 6 units or 30 units with CAN bus card



*) Lay shielded cable e.g. B. J-Y(St)Y, 0.8 mm separately from high-voltage cables.

**) Lay shielded data cable, twisted pairs, e.g. UNITRONIC® BUS LD 2 x 2 x 0.22 mm² or similar, linear but separately from power lines.

W1: Voltage supply

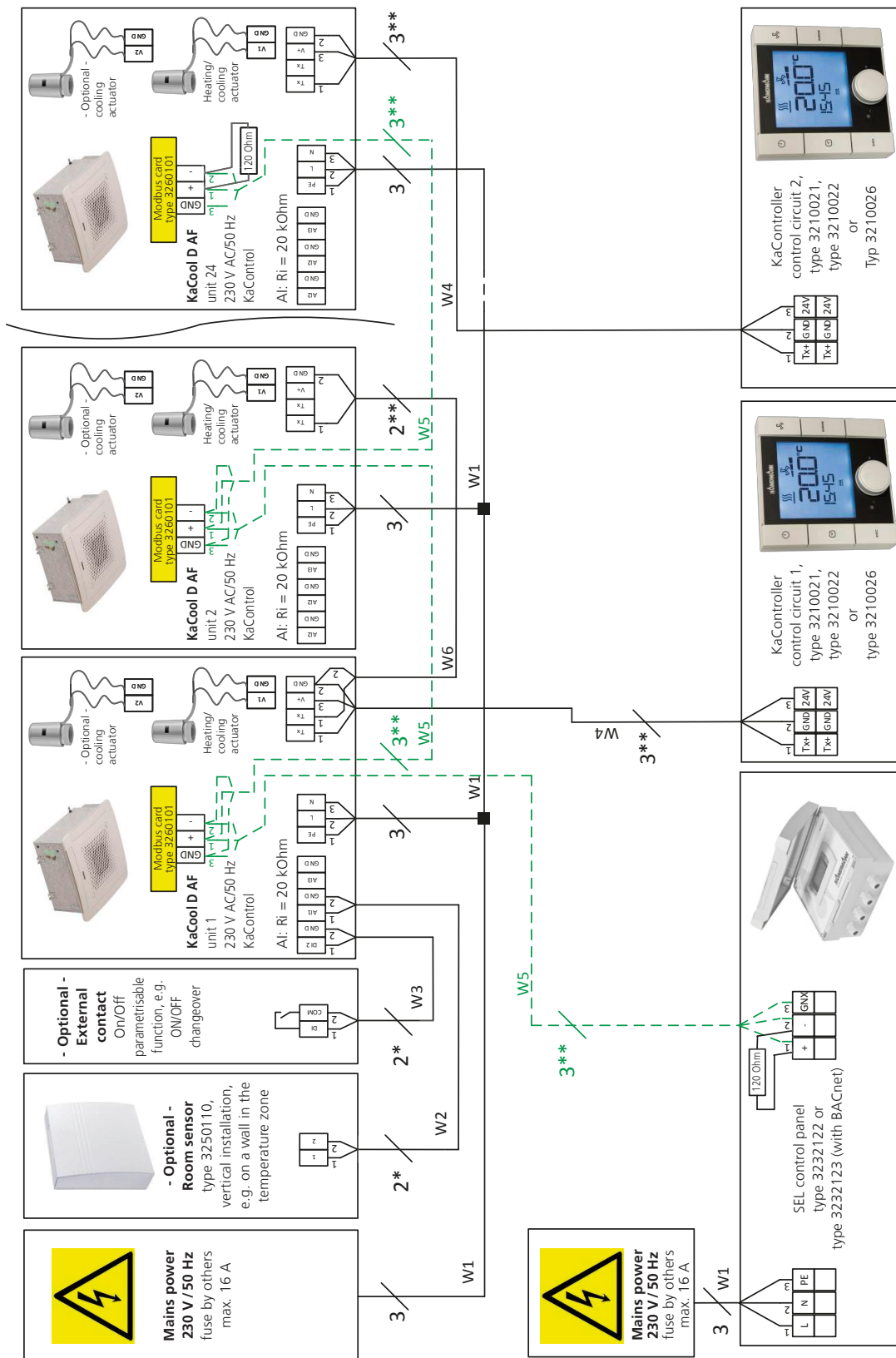
W2: Analogue input AI1 (optionally connectible), max. cable length 10 m, from 1 mm² 30 m, disconnect factory-fitted intake sensor

W3: Digital input DI1 (optional connection), max. cable length 30 m, from 1 mm² 100 m

W4, W6: Bus signal (tLan), max. cable length in each case 30 m

W5: Bus signal (CAN bus)

Electrical cabling – control via KaControl SEL control panel



*) Lay shielded cables e.g. B. J-Y(St)Y, 0.8 mm separately from high-voltage cables.

**) Lay shielded data line in pairs e.g. UNITRONIC® BUS LD 2 x 2 x 0.22 mm² or similar, linear but separately from power lines.

W1: Voltage supply

W2: Analogue input AI1 (optionally connectible), max. cable length 10 m, from 1 mm² 30 m, disconnect factory-fitted intake sensor

W3: Digital input DI1 (optionally connectible), max. cable length 30 m, from 1 mm² 100 m

W4, W6: Bus signal (tLan), max. cable length in each case 30 m

W5: Bus signal (Modbus)

05 Ordering information

KaCool D AF, 2-pipe

Model	Design	Cooling output ¹⁾	Heat output ²⁾	Air volume	Sound pressure level ³⁾	Control option	Art. no.
		[W]	[W]	[m ³ /h]	[db(A)]		
1	AC	2017 – 2776	3848 – 5268	269 – 398	25 – 35	without built-in control	32500811200100
	EC					without built-in control	32500821200100
						KaControl	325008212001C1
						IR control	325008212001IR
2	AC	2217 – 4406	4189 – 8186	269 – 550	25 – 43	without built-in control	32500812200100
	EC					without built-in control	32500822200100
						KaControl	325008222001C1
						IR control	325008222001IR
3	AC	2792 – 5163	5171 – 9859	328 – 660	30 – 49	without built-in control	32500813200100
	EC					without built-in control	32500823200100
						KaControl	325008232001C1
						IR control	325008232001IR
4	AC	4123 – 5598	8212 – 10878	550 – 760	44 – 53	without built-in control	32500814200100
	EC					without built-in control	32500824200100
						KaControl	325008242001C1
						IR control	325008242001IR
5	AC	4286 – 6346	8460 – 12852	623 – 1023	27 – 41	without built-in control	32500815200100
	EC					without built-in control	32500825200100
						KaControl	325008252001C1
						IR control	325008252001IR
6	AC	5500 – 9775	9218 – 17298	662 – 1270	29 – 46	without built-in control	32500816200100
	EC					without built-in control	32500826200100
						KaControl	325008262001C1
						IR control	325008262001IR
7	AC	5501 – 11259	10089 – 22656	669 – 1536	35 – 51	without built-in control	32500817200100
	EC					without built-in control	32500827200100
						KaControl	325008272001C1
						IR control	325008272001IR

¹⁾ at CHW 7/12 °C, t_{L1} = 27 °C, 48% relative humidity

²⁾ at LPHW 70/60 °C, t_{L1} = 20 °C.

³⁾ Sound pressure data at: room size 100 m³, reverberation time 0.5 seconds, sound absorption 9 dB(A).

KaCool D AF, 4-pipe



Model	Design	Cooling output ¹⁾	Heat output ²⁾	Air volume	Sound pressure level ³⁾	Control option	Art. no.
		[W]	[W]				
1	AC	1937 – 2818	2450 – 3500	269 – 398	25 – 35	without built-in control	32500811400100
	EC					without built-in control	32500821400100
						KaControl	325008214001C1
						IR control	325008214001IR
2	AC	1958 – 3485	2450 – 4450	269 – 550	25 – 43	without built-in control	32500812400100
	EC					without built-in control	32500822400100
						KaControl	325008224001C1
						IR control	325008224001IR
3	AC	2046 – 3981	1910 – 3300	269 – 550	25 – 43	without built-in control	32500813400100
	EC					without built-in control	32500823400100
						KaControl	325008234001C1
						IR control	325008234001IR
4	AC	2723 – 4574	2390 – 3710	328 – 660	30 – 49	without built-in control	32500814400100
	EC					without built-in control	325008244000C1
						KaControl	325008244001C1
						IR control	325008244001IR
5	AC	4163 – 6365	5800 – 9000	623 – 1023	27 – 41	without built-in control	32500815400100
	EC					without built-in control	32500825400100
						KaControl	325008254001C1
						IR control	325008254001IR
6	AC	4419 – 7391	6300 – 10500	662 – 1270	29 – 46	without built-in control	32500816400100
	EC					without built-in control	32500826400100
						KaControl	325008264001C1
						IR control	325008264001IR
7	AC	4623 – 9034	6800 – 12500	669 – 1536	35 – 51	without built-in control	32500817400100
	EC					without built-in control	32500827400100
						KaControl	325008274001C1
						IR control	325008274001IR

¹⁾ at CHW 7/12 °C, t_{L1} = 27 °C, 48% relative humidity

²⁾ at LPHW 70/60 °C, t_{L1} = 20 °C.

³⁾ Sound pressure data at: room size 100 m³, reverberation time 0.5 seconds, sound absorption 9 dB(A).

Accessories

Figure	Article	Properties	Suitable for	Art. no.
Valves				
	2-way valve kit	Open / Close 2-pipe 230 V drive	KaCool D AF without KaControl, Model 0 – 1	325009012110
			KaCool D AF without KaControl, Model 2 – 4	325009022110
			KaCool D AF without KaControl, Model 5	325009032110
			KaCool D AF without KaControl, Models 6 – 7	325009042110
		Open / Close 2-pipe 24 V drive	KaCool D AF with KaControl, Models 0 – 1	325009012112
			KaCool D AF with KaControl, Models 2 – 4	325009022112
			KaCool D AF with KaControl, Model 5	325009032112
			KaCool D AF with KaControl, Models 6 – 7	325009042112
		Open / Close 4-pipe with 230 V drive	KaCool D AF without KaControl, Models 0 – 4	325009014110
			KaCool D AF without KaControl, Models 5 – 7	325009024110
		Open / Close 4-pipe 24 V drive	KaCool D AF with KaControl, Models 0 – 4	325009014112
			KaCool D AF with KaControl, Models 5 – 7	325009024112
	3-way valve kit	Open / Close 2-pipe with 230 V drive	KaCool D AF without KaControl, Models 0 – 1	325009012120
			KaCool D AF without KaControl, Models 2 – 4	325009022120
			KaCool D AF without KaControl, Model 5	325009032120
			KaCool D AF without KaControl, Models 6 – 7	325009042120
		Open / Close 2-pipe 24 V drive	KaCool D AF with KaControl, Models 0 – 1	325009012122
			KaCool D AF with KaControl, Models 2 – 4	325009022122
			KaCool D AF with KaControl, Model 5	325009032122
			KaCool D AF with KaControl, Models 6 – 7	325009042122
		Open / Close 4-pipe with 230 V drive	KaCool D AF without KaControl, Models 0 – 4	325009014120
			KaCool D AF without KaControl, Models 5 – 7	325009024120
		Open / Close 4-pipe 24 V drive	KaCool D AF with KaControl, Models 0 – 4	325009014122
			KaCool D AF with KaControl, Models 5 – 7	325009024122

[more »](#)

Accessories

Figure	Article	Properties	Suitable for	Art. no.
Connections				
	Primary air connection spigot	For the connection of external primary air.	KaCool D AF models 0-4	325009010300
			KaCool D AF models 5-8	325009020300
	ABS design panel RAL 9010	Included with units with article number 325008XXX001XX. To order these units without design panel, replace the 1 in the article number by a 0 and order the metal casing panel separately.	KaCool D AF models 0-4, without IR remote control	Included as standard
			KaCool D AF models 0-4, with IR remote control	
			KaCool D AF models 5-8, without IR remote control	
			KaCool D AF models 5-8, with IR remote control	
	RAL 9010 metal panel	The ABS design panel is included with ceiling cassettes with article number 325008XXX001XX. To order these units without design panel, replace the 1 in the article number by a 0 and order the metal casing panel separately.	KaCool D AF models 0-4, without IR remote control	325009010020
			KaCool D AF models 0-4, with IR remote control	325009010021
			KaCool D AF models 5-8, without IR remote control	325009020020
			KaCool D AF models 5-8, with IR remote control	325009020020
Control accessories, electro-mechanical				
	Electromechanical room thermostat	Only suitable for cooling with 3-stage fan speed switch Fan speed Colour: white Voltage: 230 V, 50 Hz, max. 3 A W x H x D: 170x70x44 mm	All models, 2-pipe AC valve configuration	196000148918
		Electromechanical room thermostat with manual cooling/heating switch, with 3-speed fan speed switch Colour: white Voltage: 230 V, 50 Hz, max. 3 A W x H x D: 170x70x44 mm	All models, 2-pipe AC valve configuration	196000148917
		Electromechanical room thermostat with automatic cooling/heating switch, with 3-speed fan speed switch Colour: white Voltage: 230 V, 50 Hz, max. 3 A W x H x D: 170x70x44 mm	All models, 2-pipe or 4-pipe AC valve configuration	196000148916
	EC climate controller	Heating/cooling climate controller 2- / 4-pipe systems. Operating modes AUTO / MAN / OFF. Fan speed can be set using 3-stage switch (parametrisable). Room frost protection function, internal temperature sensor, DIP switch for function selection. Plastic housing, pure white, similar to RAL 9010, surface-mounted Three inputs for: external flow sensor (47 kOhm) / heating/cooling changeover contact, external room temperature sensor (47 kOhm), ECO/Day or On/Off changeover Three outputs for: speed control (0-10 V DC/5 mA), fan actuators (230 VAC/5(1) A) Operating voltage: 230 V AC / 50 Hz / <2 VA Protection class IP30 Dimensions W x H x D: 110x111x26 mm	Ceiling cassettes with EC fan without KaControl, only in conjunction with valve kits with 230 V actuator	196000030155

[more »](#)

Accessories

Figure	Article	Properties	Suitable for	Art. no.
	EC climate controller with clock	<p>Climate controller for heating / cooling systems in 2-/4-pipe configurations with timer program. Summer/winter time changeover, mode switch (with room frost protection monitoring), manual 10-stage speed switch. Flush-mounted, pure white, similar to RAL 9010.</p> <p>Two inputs for: external dewpoint sensor, external flow sensor, external room temperature sensor, heating/cooling, ECO/Day or On/Off changeover</p> <p>Analogue output: 0-10 V/5 mA</p> <p>2 switching contacts per 230 V/3 (0.5) A</p> <p>Control range: 5-30 °C heating and 18...40 °C cooling</p> <p>Power reserve: approx. 3 days</p> <p>Operating voltage: 230 V/50 Hz / <2.2 VA</p> <p>Protection class: IP 30</p> <p>Dimensions W x H x D: 81 x 85 x 18 mm (installation height, +29 mm installation height, flush)</p>	Ceiling cassettes with EC fan without KaControl, only in conjunction with valve kits with 230V actuator	19600030256
	Relay box	For group formation (max. 4 units) with electromechanical control	All models with AC fan	196000148919
KaControl accessories				
	KaController operating unit with one-touch operation	Room control unit, wall-mounted, in a high-quality design, plastic housing, colour similar to RAL 9010, large LCD multifunctional display, built-in room temperature sensor, communication interface to the Kampmann T-LAN bus system, automatically switching LED backlighting, press/turn navigator dial with endless turn/lock function, individually adjustable basic display, integrated day, night and week program, password-protected parameter level for C1 control option	All models	196003210001
	KaController operating unit with side operating keys	For quick access to fan settings, operating modes, Eco mode, time and timer program, otherwise as art. no. 196003210001	All models	196003210002
	KaController without function keys, black	Room control unit for wall mounting, high-quality design, plastic housing, Traffic black (similar to RAL 9017), otherwise as art. no. 196003210001	All KaControl secondary units	196003210006

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Figure	Article	Properties	Suitable for	Art. no.
KaControl accessories				
	KaControl Touch SEL	Touch panel for complete building management of up to 24 rooms or temperature zones. Housing for mounting in the front panel. One serial RS485 card, type. no. 196003260101, is required per room / zone	All models	196003210311
	KaControl SEL panel without BACnet	KaControl electronics housed in a surface-mounted wall housing, wired ready-for-use, including KaControl operating unit for the central control of Kampmann products via a serial bus communication (Modbus); for integration of a maximum of 24 units (Modbus subscribers) (optionally with a maximum of 6 BACnet objects in a BACnet/IP network)	All models	196003232122
	KaControl SEL panel with BACnet			196003232123
	KaControl room temperature sensor	For wall mounting, IP30 surface-mounted, white RAL 9010, alternative to the temperature sensor in the KaController	All models	196003250110
	Pipe clip-on sensor	For detecting the temperature of the medium, including strap, 3 m cable, to protect the unit from frost	All models	196003250115
	Serial CAN bus card	To increase the number of units in a single-circuit control system	All models	196003260101
	Serial Modbus card	For connection to Modbus networks	All models	196003260101
	Serial Konnex card	For integration into KNX/EIB networks	All models	196003260701
	Serial LON FTT10A card	For integration into a LON FTT10A network	All models	196003260501



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