

TECHNICAL SERVICE MANUAL

Fancoil unit

Four-way cassette 600x600

Models:

KFZF30H0EN1

KFZF38H0EN1

KFZF43H0EN1

KFZF48H0EN1



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※ Manufacture reserves the right to discontinue, or change at any time, specifications or designs without notices and without incurring obligations.

1. External Appearance



2. Features

- Four-way air distribution gives individual comfort.
- Electric control box is inside the body, which is convenient to maintain.
- The unique design of the centrifugal fan ensures extra-quiet operation.
- Four speeds indoor unit.
- With the function of auto-restart.
- High capacity of cooling / heating performance, high efficiency and energy-saving.
- KPU65-C panel.

3. Specifications

2 pipe units

TYPE		KFZF30H0EN1	KFZF38H0EN1	KFZF43H0EN1	KFZF48H0EN1
Airflow	CFM	300	400	450	500
	m ³ /h	510	680	765	850
Cooling capacity	W	3000	3700	4100	4500
Heating capacity	W	4000	5100	5600	6000
Noise	dB(A)	36	42	43	45
Water flow	m ³ /h	0.52	0.64	0.7	0.77
Water resistance	kPa	12	13	14	15
Indoor coil	Number of rows	2			
	Tube pitch(a) × row pitch(b)	mm 21×13.37			
	Fin spacing	mm 1.3			
	Fin type	Hydrophilic aluminium			
	Tube outside dia. and type	mm Φ7, bare pipe			
	Coil length×height×width	mm 1315×210×26.74			
	Number of circuits	5	6	6	7
Fan motor	Type	Low noise 4-speed fan motor			
	Number	YDK15-6P	YDK37-4P		
	Model	1			
	Input	W 37.8/31.1/26.9	65/46/32	70/46/32	80/46/32
	Capacitor	μF 1.5uF/450V	2uF/450V	2.5uF/450V	
Indoor unit	Dimension(W×H×D)	mm 575×260×575			
	Packing (W×H×D)	mm 705×340×705			
	Net/Gross weight	kg 17.5/22.5			
Panel	Dimension (W×H×D)	mm 647×50×647			
	Packing (W×H×D)	mm 705×340×705			
	Net/Gross weight	kg 3/5			
Pipe	Condensate outlet	G3/4			
	Water-return pipe	G3/4			
	Condensate outlet	ODΦ25			

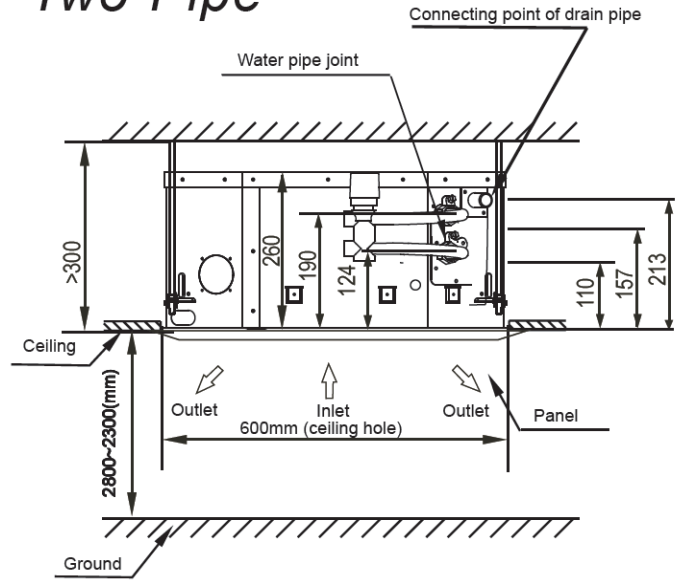
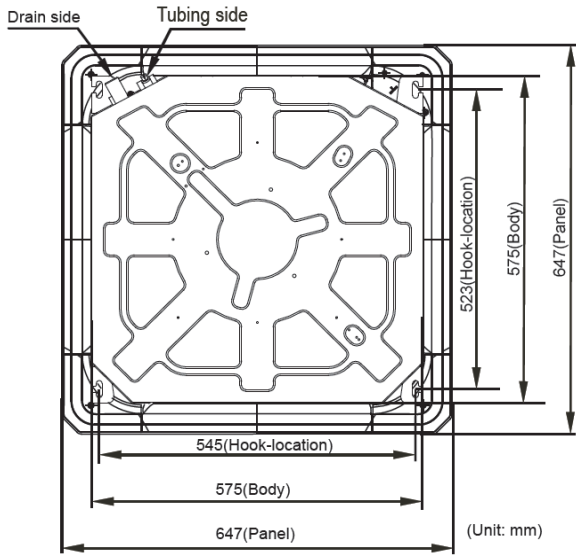
Remark:

1. All performance data above is based upon 0Pa ambient static pressure.
2. Cooling conditions: 27°C DB /19°C WB entering air temperature, 7°C/12°C entering and leaving water temperature at high fan speed.
3. Heating conditions: 20°C entering air temperature, 50°C entering water temperature at high fan speed.
4. Noise level is tested in full-anechoic room.

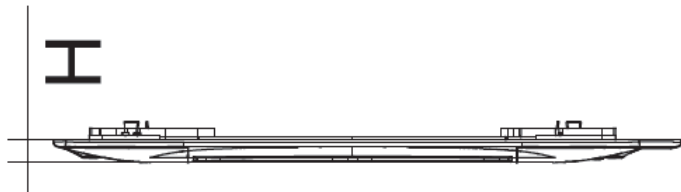
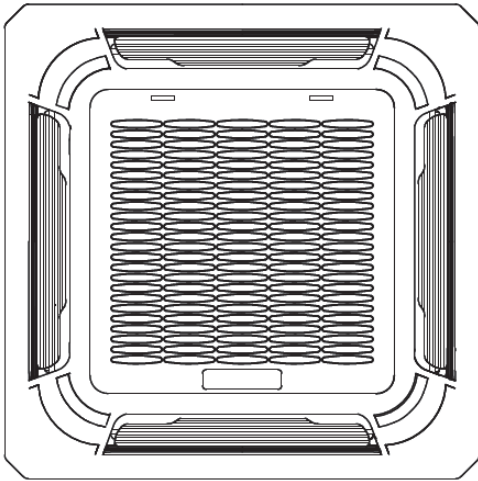
4. Dimension

Body

Two-Pipe



Panel

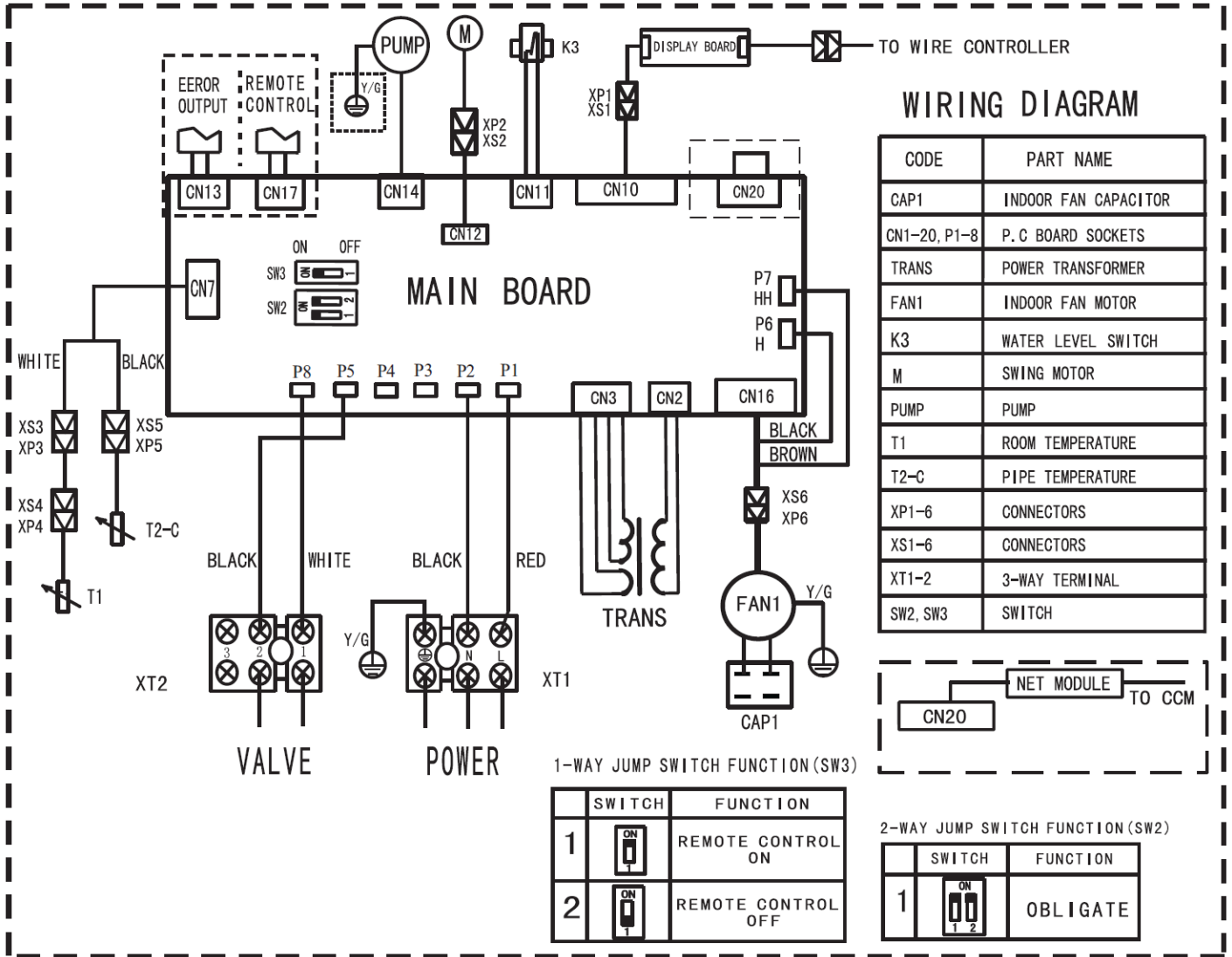


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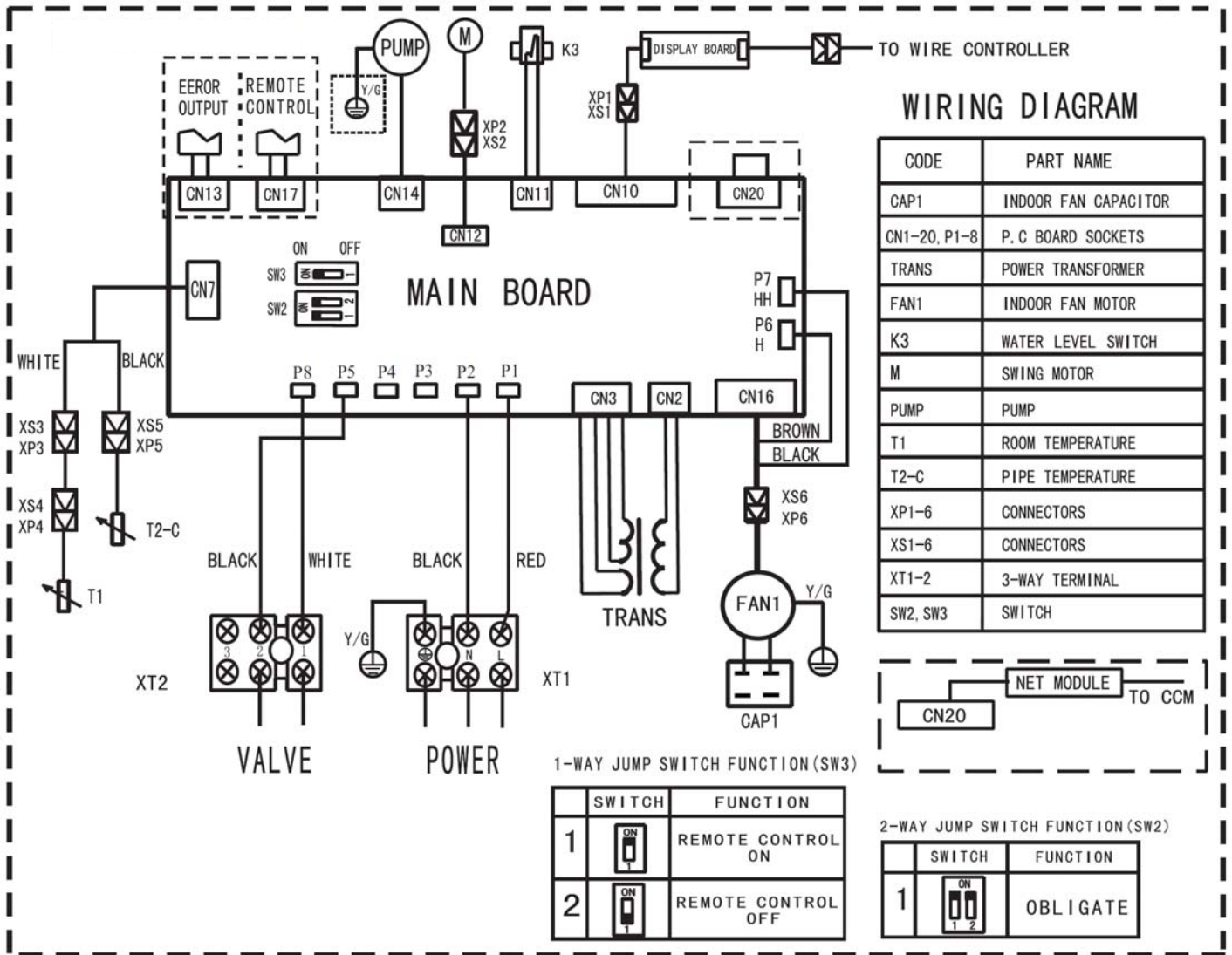
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5. Wiring Diagrams

5.1 KFZF30H0EN1, KFZF38H0EN1, KFZF43H0EN1



5.2 KFZF48H0EN1



6. Capacity Tables

2-pipe units

Cooling Capacity:

Model	Speed	Air On FCU		Water		Delta Water Temp.	ESP	Speed of Fan	Air Flow	Air Off FCU		Capacity		Water Flow	Water Pressure Drop	Weight	Input		
		DB	WB	EWT	LWT					DB	WB	Total	Sens.				VE/CE	PWR	Fan Motors
		°C	°C	°C	°C					°C	°C	Pa	rpm				m³/h	°C	°C
KFZF30H0EN1	High	26.7	19.4	7	12	5	0	670	510	13.87	13.25	3.10	2.48	0.53	14.50	17.5	37.8	1	
				5.5	14.5	9	0	670	510	15.96	14.75	2.30	2.02	0.40	3.00	17.5	37.8	1	
		27	19	7	12	5	0	670	510	13.77	13.13	3.00	2.40	0.52	14.00	17.5	37.8	1	
				5.5	14.5	9	0	670	510	15.82	14.66	2.20	1.94	0.38	2.90	17.5	37.8	1	
		29	21	7	12	5	0	670	510	13.96	13.44	3.21	2.57	0.55	15.00	17.5	37.8	1	
				5.5	14.5	9	0	670	510	15.98	14.87	2.38	2.09	0.41	3.20	17.5	37.8	1	
	Mid	26.7	19.4	7	12	5	0	540	490	11.93	11.26	2.67	2.13	0.46	12.47	17.5	31.1	1	
				5.5	14.5	9	0	540	490	13.73	12.54	1.98	1.74	0.34	2.58	17.5	31.1	1	
		27	19	7	12	5	0	540	490	11.84	11.16	2.58	2.06	0.44	12.04	17.5	31.1	1	
				5.5	14.5	9	0	540	490	13.61	12.46	1.89	1.66	0.33	2.49	17.5	31.1	1	
		29	21	7	12	5	0	540	490	12.01	11.42	2.76	2.21	0.47	12.90	17.5	31.1	1	
				5.5	14.5	9	0	540	490	13.74	12.64	2.05	1.80	0.35	2.75	17.5	31.1	1	
	Low	26.7	19.4	7	12	5	0	430	380	10.40	9.67	2.23	1.79	0.38	10.44	17.5	26.9	1	
				5.5	14.5	9	0	430	380	11.97	10.77	1.66	1.46	0.28	2.16	17.5	26.9	1	
		27	19	7	12	5	0	430	380	10.33	9.58	2.16	1.73	0.37	10.08	17.5	26.9	1	
				5.5	14.5	9	0	430	380	11.87	10.70	1.58	1.39	0.27	2.09	17.5	26.9	1	
		29	21	7	12	5	0	430	380	10.47	9.81	2.31	1.85	0.40	10.80	17.5	26.9	1	
				5.5	14.5	9	0	430	380	11.99	10.86	1.71	1.51	0.29	2.30	17.5	26.9	1	

Remark:

ESP: external static pressure; **DB:** dry bulb temp.; **WB:** wet bulb temp.; **EWT:** enter water temp.;
LWT: leaving water temp.; **PWR:** power; **nos:** numbers. **CE:** ceiling exposed type;

KFZF four-way cassette 600x600 fancoil unit

Model	Speed	Air On FCU		Water		Delta Water Temp.	ESP	Speed of Fan	Air Flow	Air Off FCU		Capacity		Water Flow	Water Pressure Drop	Weight	Input	
		DB	WB	EWT	LWT					DB	WB	Total	Sens.				VE/CE	PWR
		°C	°C	°C	°C	°C	Pa	rpm	m ³ /h	°C	°C	kW	kW	m ³ /h	kPa	kg	W	nos.
KFZF38H0EN1	High	26.7	19.4	7	12	5	0	875	680	14.02	13.44	3.80	3.04	0.65	15.60	17.5	65	1
				5.5	14.5	9	0	875	680	16.25	15.18	2.66	2.34	0.46	4.10	17.5	65	1
		27	19	7	12	5	0	875	680	13.95	13.25	3.70	3.00	0.64	15.00	17.5	65	1
				5.5	14.5	9	0	875	680	16.02	14.91	2.60	2.38	0.45	3.80	17.5	65	1
		29	21	7	12	5	0	875	680	14.06	13.49	3.92	3.14	0.67	16.00	17.5	65	1
				5.5	14.5	9	0	875	680	16.41	15.22	2.79	2.46	0.48	4.00	17.5	65	1
	Mid	26.7	19.4	7	12	5	0	710	540	12.06	11.42	3.27	2.61	0.56	13.42	17.5	46	1
				5.5	14.5	9	0	710	540	13.98	12.90	2.29	2.01	0.39	3.53	17.5	46	1
		27	19	7	12	5	0	710	540	12.00	11.26	3.18	2.55	0.55	12.90	17.5	46	1
				5.5	14.5	9	0	710	540	13.78	12.67	2.24	1.97	0.38	3.27	17.5	46	1
		29	21	7	12	5	0	710	540	12.09	11.47	3.37	2.70	0.58	13.76	17.5	46	1
				5.5	14.5	9	0	710	540	14.11	12.94	2.40	2.11	0.41	3.44	17.5	46	1
	Low	26.7	19.4	7	12	5	0	570	440	10.52	9.81	2.74	2.19	0.47	11.23	17.5	32	1
				5.5	14.5	9	0	570	440	12.19	11.08	1.92	1.69	0.33	2.95	17.5	32	1
		27	19	7	12	5	0	570	440	10.46	9.67	2.66	2.13	0.46	10.80	17.5	32	1
				5.5	14.5	9	0	570	440	12.02	10.88	1.87	1.65	0.32	2.74	17.5	32	1
		29	21	7	12	5	0	570	440	10.55	9.85	2.82	2.26	0.49	11.52	17.5	32	1
				5.5	14.5	9	0	570	440	12.31	11.11	2.01	1.77	0.35	2.88	17.5	32	1

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Model	Speed	Air On FCU		Water		Delta Water Temp °C	ESP Pa	Speed of Fan rpm	Air Flow m ³ /h	Air Off FCU		Capacity		Water Flow m ³ /h	Water Pressure Drop kPa	Weight kg	Input	
		DB	WB	EWT	LWT					DB	WB	Total	Sens.				PWR	Fan Motors
		□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	W
KFZF43H0EN1	High	26.7	19.4	7	12	5	0	1000	765	14.02	13.44	4.21	3.37	0.68	16.05	17.5	80	1
				5.5	14.5	9	0	1000	765	16.25	15.18	2.87	2.53	0.40	4.15	17.5	80	1
		27	19	7	12	5	0	1000	765	13.95	13.25	4.1	3.31	0.7	15.5	17.5	80	1
				5.5	14.5	9	0	1000	765	16.02	14.91	2.8	2.55	0.41	3.9	17.5	80	1
		29	21	7	12	5	0	1000	765	14.06	13.49	4.31	3.45	0.75	16.45	17.5	80	1
				5.5	14.5	9	0	1000	765	16.41	15.22	2.99	2.64	0.49	4.15	17.5	80	1
	Mid	26.7	19.4	7	12	5	0	710	555	12.06	11.42	3.49	2.79	0.75	13.48	17.5	46	1
				5.5	14.5	9	0	710	555	13.98	12.90	2.38	1.99	0.38	3.49	17.5	46	1
		27	19	7	12	5	0	710	555	12.00	11.26	3.39	2.7	0.76	13.01	17.5	46	1
				5.5	14.5	9	0	710	555	13.78	12.67	2.32	1.9	0.38	3.28	17.5	46	1
		29	21	7	12	5	0	710	555	12.09	11.47	3.57	2.9	0.92	13.81	17.5	46	1
				5.5	14.5	9	0	710	555	14.11	12.94	2.48	2.08	0.46	3.49	17.5	46	1
	Low	26.7	19.4	7	12	5	0	570	455	10.52	9.81	2.94	2.35	0.70	10.69	17.5	32	1
				5.5	14.5	9	0	570	455	12.19	11.08	2.01	1.69	0.35	2.77	17.5	32	1
		27	19	7	12	5	0	570	455	10.46	9.67	2.86	2.29	0.71	10.32	17.5	32	1
				5.5	14.5	9	0	570	455	12.02	10.88	1.96	1.64	0.36	2.6	17.5	32	1
		29	21	7	12	5	0	570	455	10.55	9.85	3.01	2.41	0.86	10.96	17.5	32	1
				5.5	14.5	9	0	570	455	12.31	11.11	2.09	1.76	0.43	2.76	17.5	32	1

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KFZF four-way cassette 600x600 fancoil unit

Model	Speed	Air On FCU		Water		Delta Water Temp.	ESP	Speed of Fan	Air Flow	Air Off FCU		Capacity		Water Flow	Water Pressure Drop	Weight	Input	
		DB	WB	EWT	LWT					DB	WB	Total	Sens.				VE/CE	PWR
		°C	°C	°C	°C	°C	Pa	rpm	m ³ /h	°C	°C	kW	kW	m ³ /h	kPa	kg	W	nos.
KFZF48H0EN1	High	26.7	19.4	7	12	5	0	1000	850	14.02	13.35	4.62	3.70	0.72	16.50	17.5	80	1
				5.5	14.5	9	0	1000	850	15.88	14.95	3.08	2.71	0.5	4.20	17.5	80	1
		27	19	7	12	5	0	1000	850	13.97	13.21	4.50	3.62	0.7	16.00	17.5	80	1
				5.5	14.5	9	0	1000	850	15.75	14.83	3.00	2.72	0.49	4.00	17.5	80	1
		29	21	7	12	5	0	1000	850	14.19	13.41	4.70	3.76	0.74	16.90	17.5	80	1
				5.5	14.5	9	0	1000	850	15.94	15.00	3.19	2.81	0.52	4.30	17.5	80	1
	Mid	26.7	19.4	7	12	5	0	710	570	11.50	10.68	3.70	2.96	0.6	13.53	17.5	46	1
				5.5	14.5	9	0	710	570	13.02	11.96	2.46	1.97	0.4	3.44	17.5	46	1
		27	19	7	12	5	0	710	570	11.46	10.57	3.60	2.88	0.59	13.12	17.5	46	1
				5.5	14.5	9	0	710	570	12.92	11.86	2.40	1.92	0.4	3.28	17.5	46	1
		29	21	7	12	5	0	710	570	11.64	10.73	3.76	3.01	0.62	13.86	17.5	46	1
				5.5	14.5	9	0	710	570	13.07	12.00	2.55	2.04	0.43	3.53	17.5	46	1
	Low	26.7	19.4	7	12	5	0	570	470	9.81	8.81	3.14	2.51	0.5	10.15	17.5	32	1
				5.5	14.5	9	0	570	470	11.12	9.87	2.09	1.68	0.35	2.58	17.5	32	1
		27	19	7	12	5	0	570	470	9.78	8.72	3.06	2.45	0.5	9.84	17.5	32	1
				5.5	14.5	9	0	570	470	11.03	9.79	2.04	1.63	0.34	2.46	17.5	32	1
		29	21	7	12	5	0	570	470	9.93	8.85	3.20	2.56	0.52	10.39	17.5	32	1
				5.5	14.5	9	0	570	470	11.16	9.90	2.17	1.74	0.36	2.64	17.5	32	1

Remark:

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Heating Capacity:

Model	Air flow volume (Hi)	Water temp. change	Air inlet temp. (20°C DB)																								
			Water inlet temp. (°C)																								
			35			40			45			50			55			60			65			70			
			Capacity	Water flow volume	Water pressure drop	Capacity	Water flow volume	Water pressure drop	Capacity	Water flow volume	Water pressure drop	Capacity	Water flow volume	Water pressure drop	Capacity	Water flow volume	Water pressure drop	Capacity	Water flow volume	Water pressure drop	Capacity	Water flow volume	Water pressure drop	Capacity	Water flow volume	Water pressure drop	
m ³ /h	°C	kW	m ³ /h	kPa	kW	m ³ /h	kPa	kW	m ³ /h	kPa	kW	m ³ /h	kPa	kW	m ³ /h	kPa	kW	m ³ /h	kPa	kW	m ³ /h	kPa	kW	m ³ /h	kPa		
KFZF30H0EN1	510	10	0.80	0.07	1.84	1.75	0.15	4.01	2.69	0.23	6.14	3.59	0.31	8.21	4.50	0.39	10.30	5.41	0.47	12.38	6.36	0.55	14.55	7.25	0.62	16.50	
		8	1.21	0.13	3.45	2.10	0.23	6.01	3.03	0.33	8.68	3.95	0.42	11.29	4.82	0.52	13.78	5.74	0.62	16.40	6.68	0.72	19.10	7.61	0.82	21.77	
		7	1.37	0.17	4.47	2.28	0.28	7.44	3.22	0.40	10.53	4.09	0.50	13.37	5.00	0.61	16.34	5.90	0.72	19.28	6.87	0.84	22.45	7.83	0.96	25.60	
		6	1.53	0.22	5.82	2.45	0.35	9.35	3.38	0.48	12.90	4.27	0.61	16.29	5.18	0.74	19.75	6.06	0.87	23.11	7.06	0.87	23.08	8.05	0.99	26.31	
		5	1.69	0.29	7.72	2.63	0.38	10.02	3.54	0.61	16.22	4.45	0.77	20.37	5.36	0.92	24.52	6.22	1.07	28.47	7.25	1.25	33.18	8.27	1.42	37.82	
KFZF38H0EN1	680	10	1.02	0.09	1.89	2.22	0.19	4.11	3.41	0.29	6.30	4.55	0.39	8.43	5.71	0.49	10.57	6.87	0.59	12.70	8.07	0.69	14.93	9.20	0.79	17.00	
		8	1.53	0.16	3.54	2.67	0.29	6.17	3.85	0.41	8.90	5.01	0.54	11.59	6.11	0.66	14.14	7.28	0.78	16.83	8.47	0.91	19.60	9.66	1.04	22.34	
		7	1.73	0.21	4.58	2.89	0.35	7.64	4.09	0.50	10.81	5.19	0.64	13.72	6.34	0.78	16.77	7.48	0.92	19.78	8.72	1.07	23.04	9.94	1.22	26.26	
		6	1.94	0.28	5.98	3.11	0.45	9.59	4.29	0.62	13.24	5.42	0.78	16.71	6.57	0.94	20.26	7.69	1.10	23.71	8.96	1.10	23.68	10.21	1.25	26.99	
		5	2.14	0.37	7.93	3.33	0.48	10.28	4.50	0.77	16.64	5.65	0.97	20.90	6.80	1.17	25.16	7.90	1.36	29.22	9.20	1.58	34.04	10.49	1.80	38.81	
KFZF43H0EN1	765	10	1.11	0.10	2.07	2.42	0.21	4.50	3.71	0.32	6.89	4.95	0.43	9.21	6.21	0.54	11.56	7.47	0.64	13.88	8.77	0.75	16.32	10.00	0.86	18.50	
		8	1.67	0.18	3.87	2.90	0.32	6.74	4.19	0.45	9.73	5.45	0.59	12.67	6.65	0.72	15.46	7.91	0.85	18.40	9.21	0.99	21.42	10.50	1.13	24.42	
		7	1.89	0.23	5.01	3.14	0.39	8.35	4.45	0.55	11.82	5.65	0.70	15.00	6.90	0.85	18.33	8.14	1.00	21.62	9.48	1.17	25.18	10.80	1.33	28.71	
		6	2.11	0.31	6.54	3.38	0.49	10.49	4.67	0.67	14.47	5.89	0.85	18.27	7.14	1.03	22.15	8.36	1.20	25.92	9.74	1.20	25.88	11.10	1.36	29.50	
		5	2.33	0.40	8.67	3.62	0.52	11.24	4.89	0.84	18.19	6.14	1.06	22.84	7.39	1.27	27.50	8.59	1.48	31.94	10.00	1.72	37.21	11.40	1.96	42.42	
KFZF48H0EN1	850	10	1.20	0.10	2.24	2.61	0.22	4.88	4.00	0.34	7.48	5.35	0.46	9.99	6.71	0.58	12.54	8.06	0.69	15.06	9.47	0.81	17.71	10.80	0.92	20.00	
		8	1.80	0.19	4.20	3.13	0.34	7.31	4.52	0.49	10.56	5.88	0.63	13.74	7.18	0.77	16.77	8.54	0.92	19.96	9.95	1.07	23.24	11.34	1.22	26.50	
		7	2.04	0.25	5.44	3.39	0.42	9.06	4.80	0.59	12.82	6.10	0.75	16.27	7.45	0.91	19.88	8.79	1.08	23.46	10.23	1.26	27.32	11.66	1.43	31.15	
		6	2.27	0.33	7.09	3.65	0.52	11.38	5.04	0.72	15.70	6.36	0.91	19.82	7.71	1.11	24.03	9.03	1.29	28.12	10.52	1.29	28.08	11.99	1.47	32.01	
		5	2.51	0.43	9.40	3.91	0.56	12.19	5.28	0.91	19.74	6.63	1.14	24.78	7.98	1.37	29.84	9.27	1.59	34.65	10.80	1.86	40.37	12.31	2.12	46.03	

Heating capacity modification coefficient table:

Model	KFZF30H0EN1	KFZF38H0EN1	KFZF43H0EN1	KFZF48H0EN1
Mid-speed	0.87	0.84	0.82	0.8
Low-speed	0.76	0.73	0.7	0.68

7. Installation

7.1 Installation space

The indoor unit should be installed in a location that meets the following requirements:

- There is enough room for installation and maintenance.
- The ceiling is horizontal, and its structure can endure the weight of the indoor unit.
- The outlet and the inlet are not impeded, and the influence of external air is the least.
- The air flow can reach throughout the room.
- The connecting water pipe and drainpipe could be extracted out easily.
- There is no direct radiation from heaters.

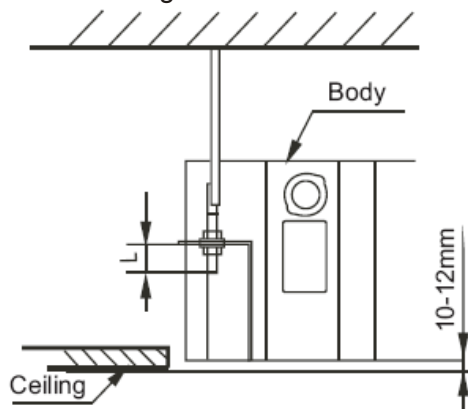
Caution:

Keep indoor unit, outdoor unit, power supply wiring and transmission wiring at least 1 meter away from televisions and radios. This is to prevent image interference and noise in those electrical appliances. (Noise may be generated depending on the conditions under which the electric wave is generated, even if 1 meter is kept.)

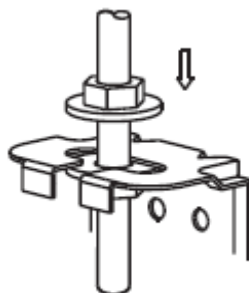
7.2 Install the main body

A. The existing ceiling (to be horizontal)

- Cut a quadrangular hole of 880×880mm in the ceiling according to the shape of the installation paper board.
 - The center of the hole should be at the same position of that of the air conditioner body.
 - Determine the lengths and outlets of the connecting pipe, drain pipe and cables.
 - To balance the ceiling and to avoid vibration, please enforce the ceiling when necessary.
- Select the position of installation hooks according to the hook holes on the installation board.
 - Drill four holes of $\varnothing 12\text{mm}$, 50~55mm deep at the selected positions on the ceiling. Then embed the expansible hooks (fittings).
 - Face the concave side of the installation hooks toward the expansible hooks. Determine the length of the installation hooks from the height of ceiling, and then cut off the unnecessary part.
 - If the ceiling is extremely high, please determine the length of the installation hook according to facts.
- Adjust the hexangular nuts on the four installation hooks evenly, to ensure the balance of the body.
 - If the drainpipe is awry, leakage will be caused by the malfunction of the water-level switch.
 - Adjust the position to ensure the gaps between the body and the four sides of ceiling are even. The body's lower part should sink into the ceiling for 10~12 mm.

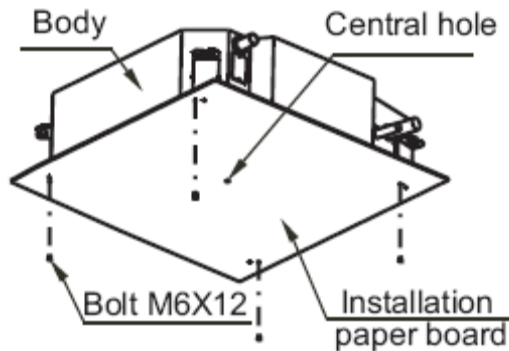


- In general, L is half of the screw length of the installation hook.
- Locate the air conditioner firmly by wrenching the nuts after having adjusted the body's position well.



B. New built houses and ceilings

- a. In the case of new built house, the hook can be embedded in advance (refer to the A.b mentioned above). But it should be strong enough to bear the indoor unit and will not become loose because of concrete shrinking.
- b. After installing the body, please fasten the installation paper board onto the air conditioner with bolts (M6*12) to determine in advance the sizes and positions of the hole opening on ceiling.



- Please first guarantee the flatness and horizontal of ceiling when installing it.
- Refer to the A.a mentioned above for others.
- c. Refer to the A.c mentioned above for installation.
- d. Remove the installation paper board.

Caution:

After installing the body, the four bolts(M6x12) must be fastened to the air conditioner onto ensure the body is grounded well.

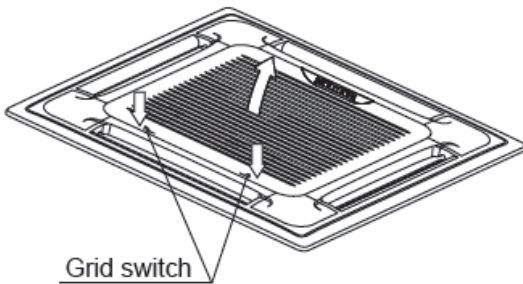
7.3 Install the Panel

Caution:

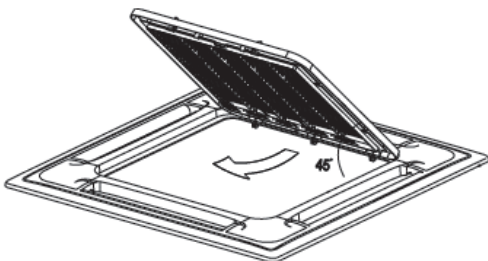
Never put the panel face down on floor or against the wall, or on bulgy objects.
Never crash or strike it.

(1) Remove the air inlet grill.

- a. Slide two grid switches toward the middle at the same time, and then pull them up.

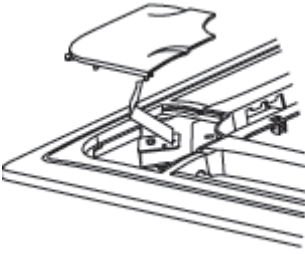


- b. Draw the grid up to an angle of about 45°, and remove it.



(2) Remove the installation covers at the four corners.

Wrench off the bolts, loose the rope of the installation covers, and remove them.



(3) Install the panel

- a. Align the swing motor on the panel to the tubing joints of the body properly.
- b. Fix hooks of the panel at swing motor and its opposite sides to the hooks of corresponding water receiver. Then hang the other two panel hooks onto corresponding hangers of the body.

Cautions

Do not coil the wiring of the swing motor into the seal sponge.

- c. Adjust the four panel hook screws to keep the panel horizontal, and screw them up to the ceiling evenly.
- d. Regulate the panel in the direction of the arrow slightly to fit the panel's center to the center of the ceiling's opening. Guarantee that hooks of four corners are fixed well.
- e. Keep fastening the screws under the panel hooks, until the thickness of the sponge between the body and the panel's outlet has been reduced to about 4~6mm. The edge of the panel should contact with the ceiling well.

If the gap between the panel and ceiling still exists after fastening the screws, the height of the indoor unit should be modified again.

You can modify the height of the indoor unit through the openings on the panel's four corners; if the lift of the indoor unit and the drainpipe is not influenced.

(4) Hang the air-in grid to the panel, and then connect the lead terminator of the swing motor and that of the control box with corresponding terminators on the body respectively.

(5) Relocate the air-in grid in the procedure of reversed order.

(6) Relocate the installation cover.

- a. Fasten the rope of installation cover on the bolt of the installation cover. (Refer to chart 16-left)
- b. Press the installation cover into the panel slightly. (Refer to chart 16-right)

11.4 Connect the Drain Pipe

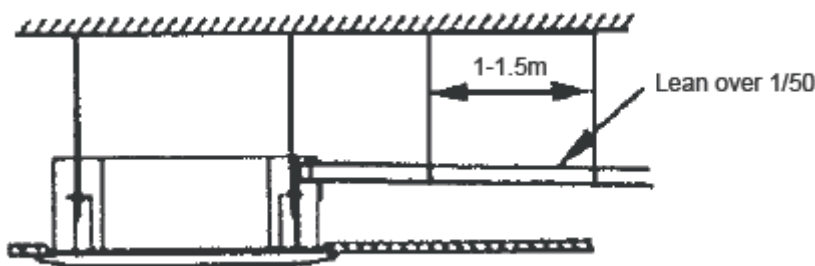
11.4.1 Install the drainpipe

- You can use a polyethylene tube as the drainpipe (out-dia. 37~39mm, in-dia. 32mm). It could be bought at local market or from your dealer.
- Set the mouth of the drainpipe onto the root of the body's pump-pipe, and clip the drainpipe and the out-let pipe sheath (fittings) together firmly with the out-let pipe clasp (fitting).

Cautions:

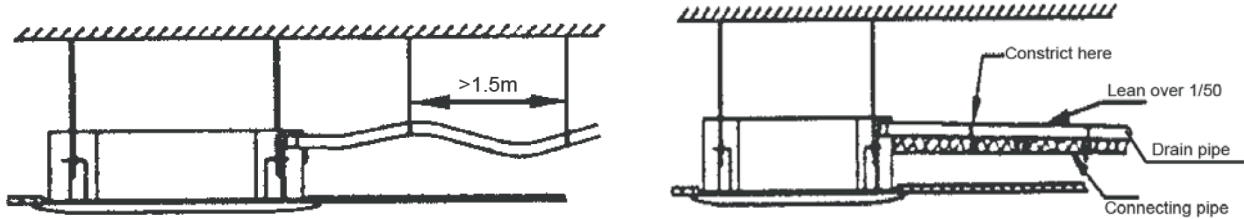
Use your strength carefully to prevent the pump-pipe from breaking.

- The body's pump pipe and the drainpipe (especially the indoor part) should be covered evenly with the out-let pipe sheath (fittings) and be bound tightly with the constrictor to prevent condensation caused by entered air.
- To prevent water from flowing backwards into the air conditioner while the air conditioner stops, please lean the drainpipe down toward outdoor (outlet-side) at a degree of over 1/50. And please avoid any bulge or water deposit. (Refer to the following)

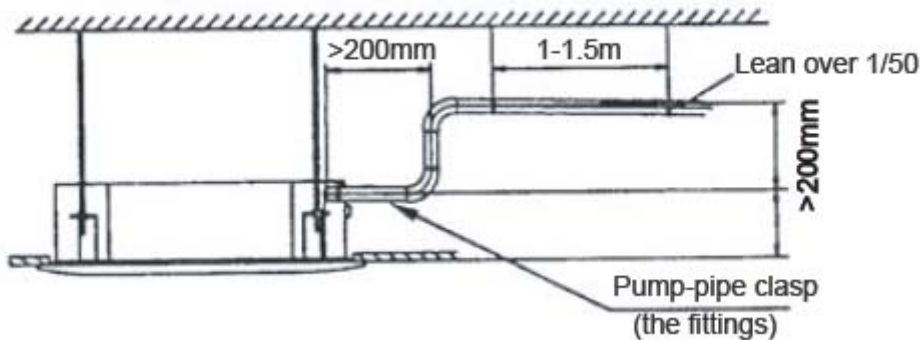


- Do not drag the drainpipe violently when connecting to prevent the body from being pulled.

- Meanwhile, one support-point should be set every 1~1.5m to prevent the drainpipe from yielding. Or you can tie the drainpipe with the connecting pipe to fix it.



- In the case of prolonged drainpipe, you had better tighten its indoor part with a protection tube to prevent it from loosening.
- If the outlet of the drainpipe is higher than the body's pump joint, the pipe should be arranged as vertically as possible. And the lift distance must be less than 500mm, otherwise the water will overflow when the air conditioner stops.



- The end of the drainpipe should be over 50mm higher than the ground or the bottom of the drainage chute, and do not immerse it in water. If you discharge the water directly into sewage is sure to make a U-form aqua seal by bending the pipe up to prevent the smelly gas entering the house through the drain pipe.

Cautions:

All the joints of the drain system must be sealed to prevent water leakage.

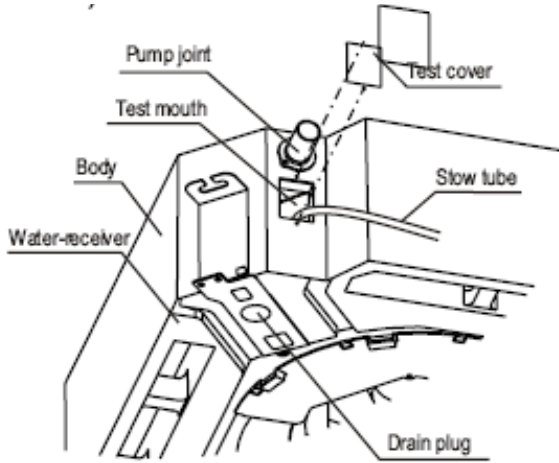
1. All field piping must be provided by a licensed water technician and must comply with the relevant local and national codes.
2. Do not let air, dust, or other impurities fall in the pipe system during the time of installation.
3. The connecting pipe should not be installed until the indoor and outdoor units have been fixed already.
4. Keep the connecting pipe dry, and do not let moisture in during installation.

Note:

All the pictures in this manual are for explanation purpose only. They may be slightly different from the air conditioner you purchased (depend on model).The actual shape shall prevail.

11.4.2 Drainage test

- Check whether the drainpipe is unhindered.
 - New built house should have this test done before paving the ceiling.
1. Remove the test cover, and stow water of about 2000ml to the water receiver through the stow tube.



2. Turn on the power, and operate the air conditioner under the "COOLING" mode. Listen to the sound of the drain pump. Check whether the water is discharged well (a lag of 1min is allowed before discharging, according to the length of the drain pipe), and check whether water leaks from the joints.

Cautions: If there is any malfunction, please resolve it immediately.

3. Stop the air conditioner for three minutes, check if everything is ok. If the drain hose is located unreasonable, water overflow will cause the Alarm indicator lamp flashing (For both cooling and heating type or cooling only type), even the water leak out from the water receiver.
4. Check the drain pump whether drain water immediately when alarm sound for the high water lever. If the water lever can't come down below to the limited water lever, the air conditioner will stop. Restart it until turn off the power and drain off all the water.
5. Turn off the power, drain the water away.
 - The drain plug is used to empty the water-receiver for maintenance of the air conditioner. Please stuff it imposition at all times during operation to avoid leakage.

7.5 Wiring

Caution:

1. The air conditioner should use separate power supply with rated voltage.
2. The external power supply to the air conditioner should have ground wiring, which is linked to the ground wiring of the indoor and outdoor unit.
3. The wiring work should be done by qualified persons according to circuit drawing.
4. An all-pole disconnection switch having a contact separation of at least 3mm in a pole should be connected in fixed wiring.
5. Be sure to locate the power wiring and the signal wiring well to avoid cross-disturbance.
6. Do not turn on the power until you have checked carefully after wiring.

Note:

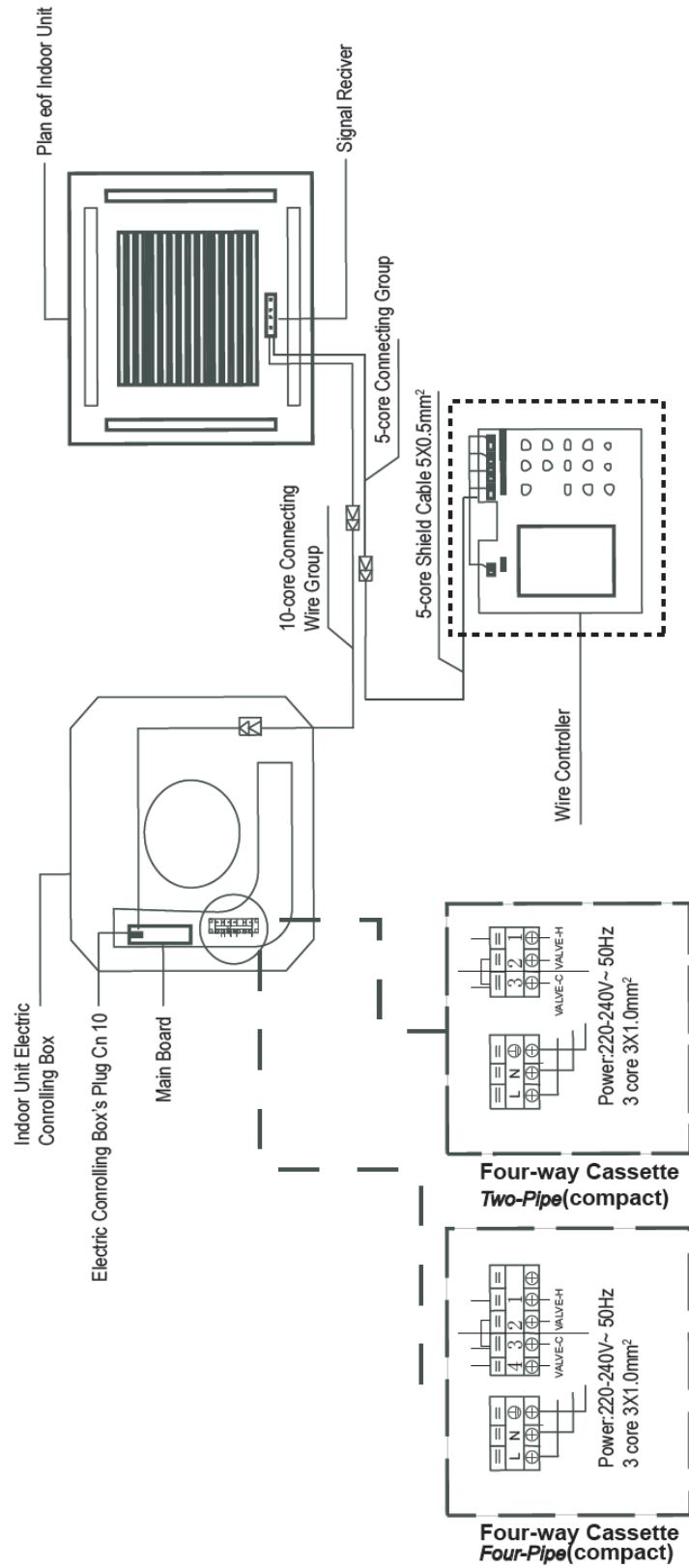
Remark per EMC Directive 89/336/EEC to prevent flicker impressions during the start of the compressor (technical process), following installation conditions do apply.

1. The power connection for the air conditioner has to be done at the main power distribution. The distribution has to be of a low impedance, normally the required impedance reaches at a 32A fusing point.
2. No other equipment has to be connected with this power line.
3. For detailed installation acceptance please refer to your power supplier, if restrictions do apply for products like washing machines, air conditioners or electrical ovens.
4. For power details of the air conditioner refer to the rating plate of the product.
5. For any question contact your local dealer.

11.5.1 Connect the cable

- Disassemble the bolts from the cover.(If there isn't a cover on the outdoor unit, disassemble the bolts from the maintenance board, and pull it in the direction of the arrow to remove the protection board.)
- Connect the connective cables to the terminals as identified with their respective matched numbers on the terminal block of indoor and outdoor units.
- Re-install the cover or the protection board.

7.5.2 Wiring figure



AIR CONDITIONER AND WIRE CONTROLLER WIRING

7.6 Test operation

(1) The test operation must be carried out after the entire installation has been completed.

(2) Please confirm the following points before the test operation.

The indoor unit and outdoor unit are installed properly.

Tubing and wiring are correctly completed.

The refrigerant pipe system is leakage-checked.

The drainage is unimpeded.

The ground wiring is connected correctly.

The length of the tubing and the added stow capacity of the refrigerant have been recorded.

The power voltage fits the rated voltage of the air conditioner.

There is no obstacle at the outlet and inlet of the outdoor and indoor units.

The gas-side and liquid-side stop valves are both opened.

The air conditioner is pre-heated by turning on the power.

(3) According to the user's requirement, install the remote controller when the remote controller's signal can reach the indoor unit smoothly.

(4) Test operation

Set the air conditioner under the mode of "COOLING" with the remote controller, and check the following points.

- Whether the switch on the remote controller works well.
- Whether the buttons on the remote controller works well.
- Whether the air flow louver moves normally.
- Whether the room temperature is adjusted well.
- Whether the indicator lights normally.
- Whether the temporary buttons works well.
- Whether the drainage is normal.
- Whether there is vibration or abnormal noise during operation.
- Whether the air conditioner heats well in the case of the HEATING/COOLING type.