

Technical Manual Fan Coil Unit

(High wall-mounted Type)

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Part 1 Unit

1. Feature

The fan coil units mainly consist of centrifugal fan, coil heat exchanger, etc., they are the terminal devices of central air conditioning system, which are widely used in buildings with multi-rooms or industrial and household air conditioning occasions, for example: hotels, restaurants, factories, hospitals, exhibition halls, markets and office buildings, etc. These units can meet many requirements, like cooling, dehumidification and heating, etc., and make a clean, quiet and comfortable working and living environment.

Compared with other types of fan coil units, the wall-mounted type has the following advantages: it can be mounted on any location of indoor wall and will not occupy extra space; it's easy for installation and maintenance, and can perfectly match with indoor decoration. The wall-mounted type fan coil units:

Application occasions:

Small-size supermarkets, restaurants, office buildings, meeting rooms, villa living rooms and family living rooms, etc., and it is also suitable for old building air conditioning betterment projects, which decreases pipes and saves much cost.

Features:

- ◇ It can be mounted on any location of indoor wall and will not occupy extra space, which makes it very suitable for family and public places use;
- ◇ Excellent quality: The units adopt superb components to ensure its quality. The strict test during manufacturing process and 100% ex-factory test guarantee the reliable quality.
- ◇ Beautiful appearance and low noise: Resin type skin with thin and beautiful appearance; new turbine blade makes operation quiet and with low noise.
- ◇ Special heat isolation design, excellent heat isolation effect, and the casing will not get condensing water;
- ◇ Long-term air filter adopted, its cleaning period is 1/2 of the normal filter, which make maintenance easier;
- ◇ Plastic drip tray, adopts innovative foam-PS combination technology, the plastic surface thickness reaches 1mm. These features make the drip tray structure firmer and also avoid leakage;
- ◇ The unit reserve central control function, which can combine several independent units into a central-controlled system by concentrator.
- ◇ Safe and reliable, long-term lifetime: Each fan coil unit is conducted by leakage test with pressure; the inlet/outlet pipes (copper head) adopt forging brass structure to ensure its reliability.
- ◇ High EER: The unit design is customized and adopts high efficiency heat exchanger, which makes a perfect combination of large air flow volume, low noise fan and motor, in order to enhance heat transfer ability and make the unit EER more superior.
- ◇ The unit reserve auto-restart function;
- ◇ The unit adopts brand new diversified micro-pc control system, and with remote controller;
- ◇ The unit is equipped with failure auto-check function. If it gets failure, the light will blink and failure code will display on the wired controller, which makes troubleshooting easier.

Function Introduction

Type	Item	MFP-					
		200	300	400	500	600	800
Protect	Sensor failure alarm	●	●	●	●	●	●
	Failure code display function	●	●	●	●	●	●
Comfort	Cooling	●	●	●	●	●	●
	Heating	●	●	●	●	●	●
	3-Speed	●	●	●	●	●	●
	Adjustable ESP	—	—	—	—	—	—
	Auto-restart(Optional)	●	●	●	●	●	●
	Timing ON/OFF	●	●	●	●	●	●
Control	Time display	●	●	●	●	●	●
	Operation mode display	●	●	●	●	●	●
	Fan speed display	●	●	●	●	●	●
	Timing ON/OFF display	●	●	●	●	●	●
	Wind angle display	●	●	●	●	●	●
	Sleeping mode display	●	●	●	●	●	●
Operation	Auto operation	●	●	●	●	●	●
	Dehumidification operation	●	●	●	●	●	●
	Ventilation mode	●	●	●	●	●	●
	Long-distance control function	●	●	●	●	●	●
Health	Washable air filter	●	●	●	●	●	●
	Fresh air interface	—	—	—	—	—	—
Installation	Left/right drainage	●	●	●	●	●	●
	Left/right pipe connection	●	●	●	●	●	●
	Down/back air suction	—	—	—	—	—	—
	Installation indicating board	—	—	—	—	—	—

Remarks:“●”Stands for “YES”

“—” Stands for “NO”

2. Specification

※ Please refer to EXCEL

3. Capacity amendment

2.3.1 Table of variable working condition performance for cooling capacity

Table of variable working condition performance parameter under cooling mode

Unit: W

Air inlet temperature °C			26°C DB/18.7°C WB						27°C DB/19°C WB					
Water inlet temperature °C			5		7		9		5		7		9	
Model (CFM)	Water flow (kg/h)	Water pressure drop (kPa)	TH	SH	TH	SH	TH	SH	TH	SH	TH	SH	TH	SH
200	150	2.3	1404	1064	1241	997	1064	872	1433	1123	1308	1056	1101	923
	250	5.5	1606	1199	1413	1110	1214	969	1650	1265	1458	1169	1258	1029
	350	10	1913	1300	1688	1195	1457	1038	1957	1360	1733	1255	1502	1113
	450	14.5	2091	1327	1861	1216	1601	1053	2143	1394	1883	1283	1653	1120
300	300	3.5	1906	1445	1686	1355	1445	1184	1947	1525	1776	1435	1495	1254
	400	5.9	2181	1628	1919	1507	1648	1316	2241	1718	1980	1588	1708	1397
	500	8.7	2575	1750	2273	1609	1961	1398	2635	1831	2333	1690	2022	1499
	600	12	2854	1811	2540	1660	2186	1437	2925	1902	2570	1751	2257	1528
400	430	8.1	2549	1932	2254	1811	1932	1583	2603	2039	2375	1918	1999	1677
	550	11.5	2914	2176	2565	2014	2202	1759	2995	2296	2646	2122	2283	1867
	650	15.5	3440	2338	3037	2150	2620	1868	3521	2446	3118	2258	2701	2002
	750	20	3807	2417	3389	2214	2916	1917	3902	2538	3429	2336	3011	2039
500	600	18	3184	2413	2815	2262	2413	1977	3251	2547	2966	2396	2497	2095
	700	24	3639	2717	3203	2516	2750	2197	3740	2868	3304	2650	2851	2331
	800	30	4296	2920	3793	2685	3272	2333	4397	3054	3893	2819	3373	2500
	900	37	4750	3015	4228	2762	3638	2392	4868	3167	4278	2914	3756	2543
600	750	21.5	3817	2893	3375	2712	2893	2371	3897	3054	3556	2873	2993	2511
	850	26.8	4361	3256	3839	3015	3296	2633	4482	3437	3959	3175	3417	2794
	950	32.7	5138	3492	4536	3211	3914	2790	5258	3653	4656	3372	4034	2990
	1050	39	5688	3611	5063	3308	4357	2864	5830	3792	5124	3490	4498	3046
800	900	14.8	5644	4278	4991	4011	4278	3506	5763	4516	5258	4248	4426	3713
	1100	21	6450	4815	5677	4458	4874	3894	6628	5082	5855	4696	5053	4131
	1300	28	7611	5173	6719	4757	5798	4133	7790	5411	6898	4995	5976	4430
	1500	36	8402	5333	7478	4886	6436	4231	8611	5601	7568	5154	6644	4499

Variable working condition performance parameter table (continued)

Unit: W

Air inlet temperature °C			27°C DB/19.5°C WB						28°C DB/22°C WB					
Water inlet temperature °C			5		7		9		5		7		9	
Model (CFM)	Water flow (kg/h)	Water pressure drop (kPa)	TH	SH	TH	SH	TH	SH	TH	SH	TH	SH	TH	SH
200	150	2.3	1485	1101	1315	1019	1211	1016	1862	1380	1684	1306	1522	1128
	250	5.5	1709	1236	1517	1140	1321	1080	2139	1546	1946	1462	1754	1268
	350	10	2047	1345	1808	1233	1577	1169	2533	1664	2324	1584	2092	1374
	450	14.5	2217	1379	1987	1253	1736	1176	2780	1730	2536	1599	2269	1411
300	300	3.5	2017	1495	1786	1385	1645	1380	2528	1874	2288	1774	2067	1532
	400	5.9	2321	1678	2060	1548	1794	1467	2904	2099	2643	1985	2382	1722
	500	8.7	2756	1810	2434	1660	2123	1574	3410	2240	3128	2133	2816	1850
	600	12	3026	1882	2712	1710	2369	1604	3795	2361	3461	2182	3097	1926
400	430	8.1	2697	1999	2388	1851	2199	1845	3381	2506	3059	2371	2764	2049
	550	11.5	3102	2243	2753	2068	2397	1960	3881	2806	3532	2653	3183	2301
	650	15.5	3682	2419	3252	2217	2836	2102	4555	2993	4179	2849	3763	2472
	750	20	4037	2511	3618	2282	3161	2140	5063	3149	4617	2911	4131	2570
500	600	18	3368	2497	2983	2313	2747	2304	4223	3131	3821	2962	3452	2559
	700	24	3874	2801	3438	2583	2994	2448	4847	3504	4411	3313	3975	2873
	800	30	4598	3021	4061	2769	3542	2625	5689	3737	5219	3558	4699	3087
	900	37	5036	3133	4514	2847	3944	2671	6316	3929	5760	3632	5154	3206
600	750	21.5	4038	2993	3576	2772	3293	2762	5063	3753	4580	3551	4139	3068
	850	26.8	4643	3356	4120	3095	3587	2933	5808	4199	5286	3971	4763	3443
	950	32.7	5499	3613	4857	3312	4236	3140	6804	4470	6242	4256	5620	3692
	1050	39	6031	3752	5406	3409	4723	3198	7564	4706	6899	4350	6173	3840
800	900	14.8	5971	4426	5288	4100	4869	4085	7486	5550	6773	5251	6120	4537
	1100	21	6866	4964	6093	4577	5305	4338	8590	6210	7817	5872	7044	5092
	1300	28	8146	5352	7195	4906	6275	4651	10079	6621	9246	6304	8325	5469
	1500	36	8909	5542	7985	5035	6976	4724	11173	6950	10190	6426	9117	5672

2.3.2 Table of variable working condition performance for heating capacity

Table of variable working condition performance parameter under heating mode

Unit: W

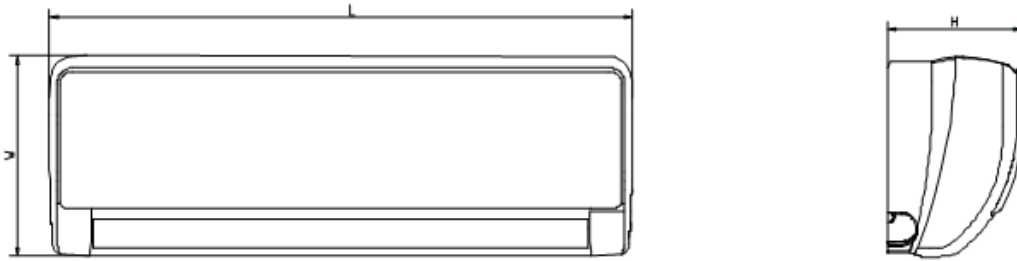
Air inlet temperature °C			18°C DB						20°C DB					
Water inlet temperature °C			40	45	50	60	70	80	40	45	50	60	70	80
Model (CFM)	Water flow (kg/h)	Water pressure drop (kPa)												
200	150	2.3	1312	1608	1913	2505	3099	3700	1194	1498	1787	2387	2988	3581
	250	5.5	1409	1728	2055	2692	3338	3976	1283	1602	1921	2566	3204	3850
	350	10	1530	1881	2224	2918	3619	4306	1396	1739	2090	2791	3478	4179
	450	14.5	1613	1988	2348	3076	3811	4546	1470	1830	2205	2933	3668	4403
300	300	3.5	1882	2308	2744	3594	4445	5306	1712	2148	2563	3424	4285	5136
	400	5.9	2021	2479	2947	3862	4788	5703	1841	2298	2756	3681	4596	5522
	500	8.7	2182	2682	3171	4161	5161	6140	1990	2480	2980	3980	4959	5959
	600	12	2297	2831	3344	4380	5427	6474	2094	2607	3141	4177	5224	6271
400	430	8.1	2508	3075	3656	4790	5924	7072	2282	2863	3415	4563	5711	6845
	550	11.5	2694	3303	3927	5146	6380	7599	2453	3062	3672	4905	6125	7358
	650	15.5	2850	3504	4143	5436	6743	8022	2600	3240	3893	5200	6479	7786
	750	20	3057	3768	4451	5830	7224	8618	2787	3470	4181	5560	6954	8347
500	600	18	3135	3844	4570	5987	7404	8839	2852	3578	4269	5704	7138	8556
	700	24	3366	4128	4907	6431	7972	9496	3065	3827	4588	6130	7653	9195
	800	30	3632	4465	5280	6928	8594	10224	3313	4129	4961	6627	8257	9923
	900	37	3819	4707	5559	7282	9023	10763	3481	4334	5222	6945	8685	10426
600	750	21.5	3762	4612	5483	7183	8883	10605	3422	4293	5122	6843	8564	10265
	850	26.8	4038	4952	5887	7715	9564	11392	3677	4591	5505	7354	9182	11031
	950	32.7	4302	5288	6253	8205	10177	12107	3924	4889	5875	7848	9778	11751
	1050	39	4579	5644	6667	8733	10820	12907	4175	5197	6262	8328	10415	12503
800	900	14.8	5260	6449	7668	10045	12423	14830	4785	6003	7162	9570	11977	14355
	1100	21	5648	6927	8235	10791	13378	15934	5143	6421	7700	10286	12842	15429
	1300	28	6095	7492	8860	11624	14419	17154	5560	6927	8324	11119	13854	16649
	1500	36	7889	9319	12206	15124	18042	5835	7264	8753	11641	14558	17476	5567

Table of c variable working condition performance parameter under heating mode (continued)

Unit: W

Air inlet temperature °C			21°C DB						22°C DB					
Water inlet temperature °C			40	45	50	60	70	80	40	45	50	60	70	80
Model	Water flow (kg/h)	Water pressure drop (kPa)												
200	150	2.3	1142	1431	1727	2328	2929	3514	1075	1364	1668	2269	2862	3455
	250	5.5	1216	1543	1862	2507	3145	3790	1150	1476	1795	2433	3078	3716
	350	10	1321	1672	2015	2709	3411	4097	1254	1597	1948	2642	3336	4037
	450	14.5	1403	1763	2130	2858	3593	4328	1320	1688	2048	2783	3518	4261
300	300	3.5	1638	2052	2478	3339	4200	5040	1542	1957	2393	3254	4105	4955
	400	5.9	1745	2213	2670	3596	4511	5437	1649	2117	2575	3490	4415	5330
	500	8.7	1884	2384	2873	3863	4863	5842	1788	2277	2778	3767	4757	5757
	600	12	1998	2510	3034	4070	5117	6164	1880	2404	2916	3963	5010	6068
400	430	8.1	2182	2735	3302	4450	5598	6718	2055	2608	3189	4337	5470	6604
	550	11.5	2325	2949	3559	4792	6011	7245	2198	2821	3431	4650	5884	7103
	650	15.5	2461	3114	3754	5047	6354	7633	2336	2975	3629	4922	6215	7522
	750	20	2659	3342	4039	5418	6812	8205	2503	3200	3882	5276	6669	8077
500	600	18	2728	3419	4127	5562	6997	8396	2568	3259	3986	5420	6837	8254
	700	24	2905	3685	4447	5988	7512	9053	2746	3525	4287	5811	7352	8876
	800	30	3136	3969	4784	6432	8098	9728	2977	3792	4625	6273	7920	9586
	900	37	3321	4174	5044	6767	8508	10248	3126	3996	4849	6589	8330	10088
600	750	21.5	3273	4102	4952	6673	8394	10073	3081	3910	4782	6503	8203	9903
	850	26.8	3486	4421	5335	7184	9012	10861	3294	4230	5144	6971	8821	10648
	950	32.7	3714	4700	5666	7617	9589	11520	3525	4490	5477	7428	9380	11352
	1050	39	3983	5005	6049	8115	10202	12290	3749	4792	5815	7902	9989	12098
800	900	14.8	4577	5736	6925	9332	11739	14087	4309	5468	6687	9094	11472	13849
	1100	21	4875	6183	7462	10048	12605	15191	4608	5916	7194	9751	12337	14894
	1300	28	5262	6660	8027	10792	13587	16322	4995	6362	7760	10524	13289	16084
	1500	36	6996	8455	11343	14261	17178	5240	6699	8128	11045	13963	16910	16910

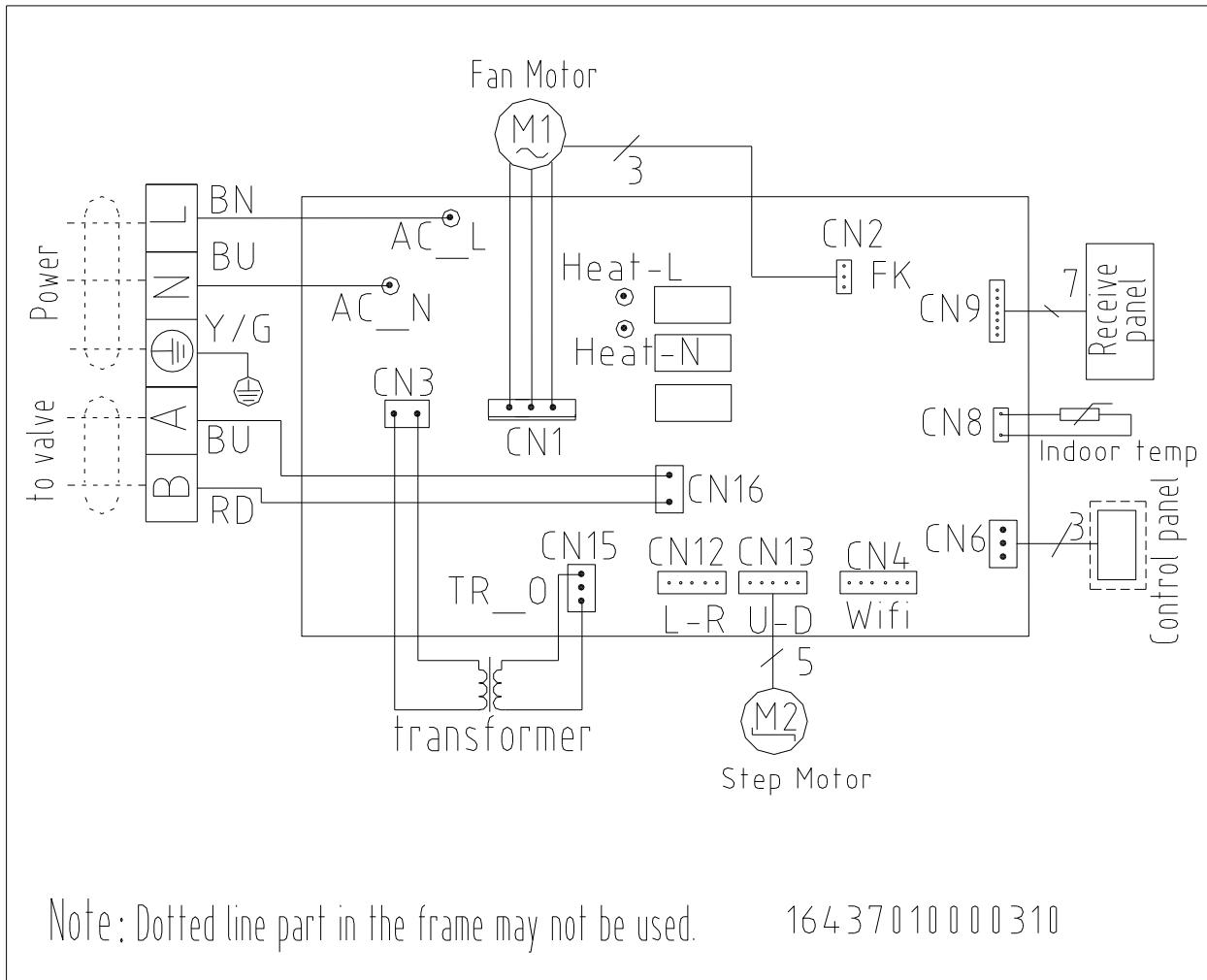
4. Dimension



Model Item	200CFM	300CFM	400CFM	500CFM	600CFM	800CFM
L	850	850	850	970	970	1100
W	300	300	300	315	315	330
H	198	198	198	235	235	235

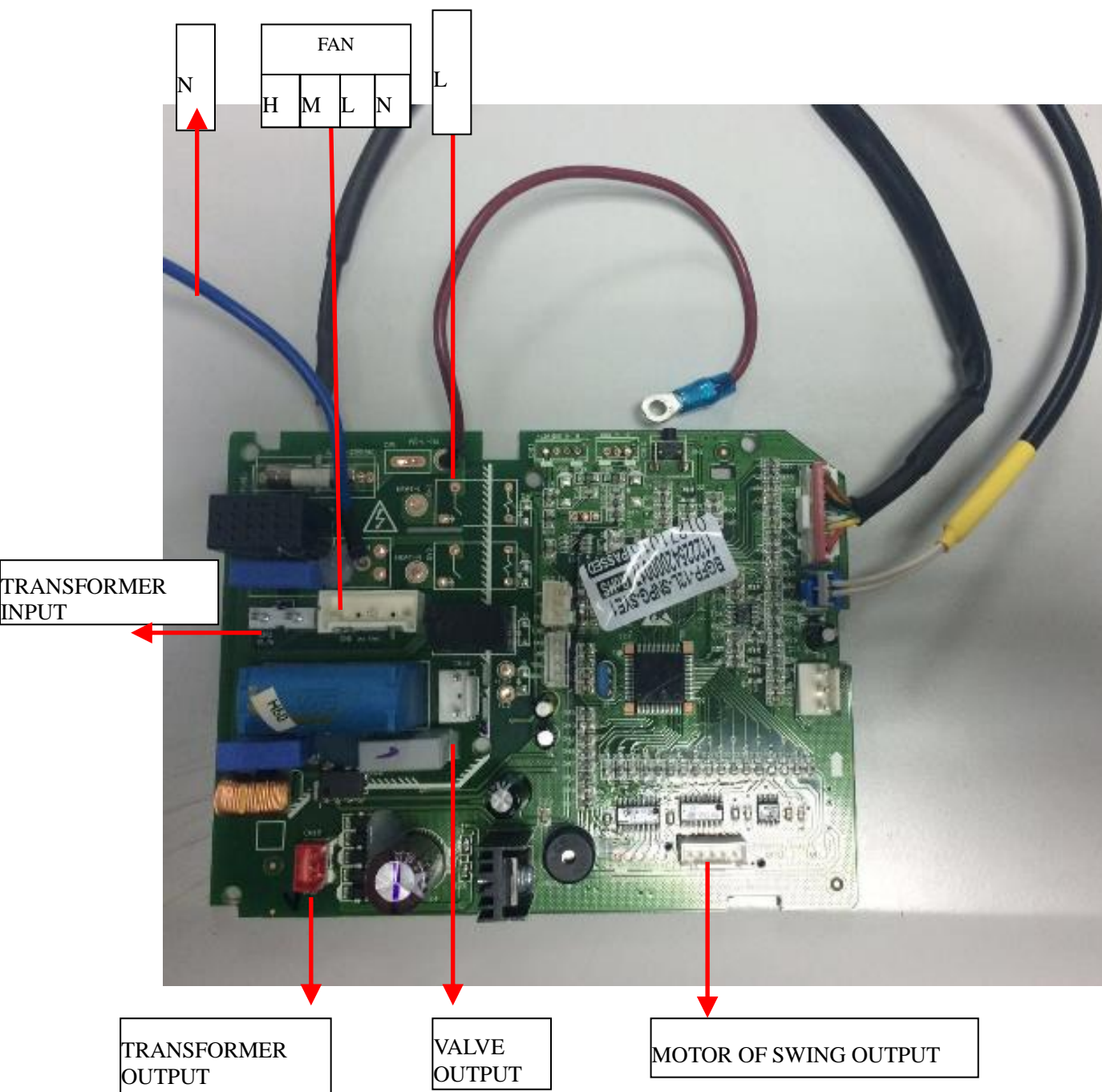
5. Electrical wiring and connection

2.5.1

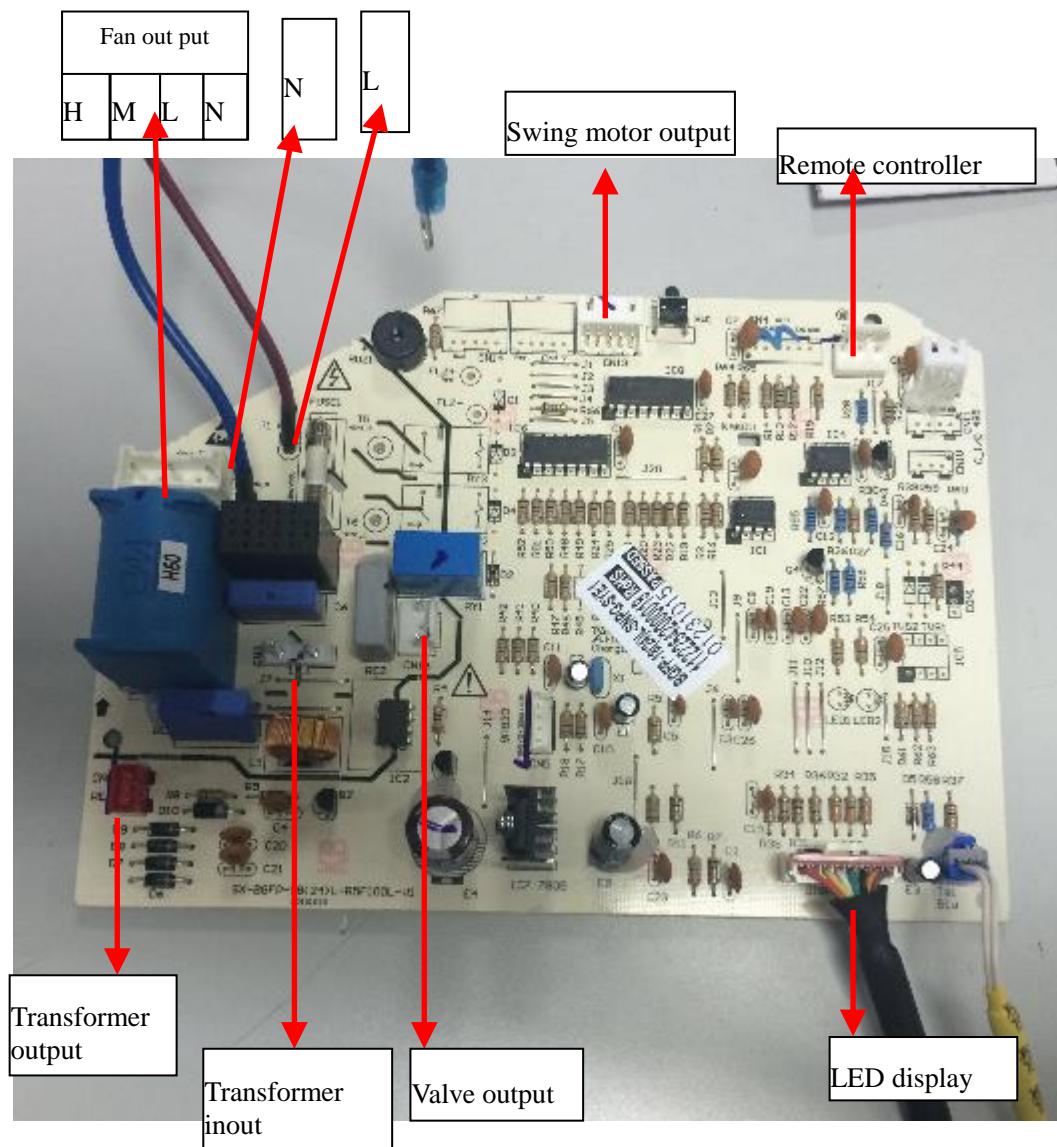


Control Board (PCB Board) Internal Wiring Diagram

Control Board 200-400cfm Controller Assembly Port/Socket Instruction



Control Board 500-800CFM Controller Assembly Port/Socket Instruction

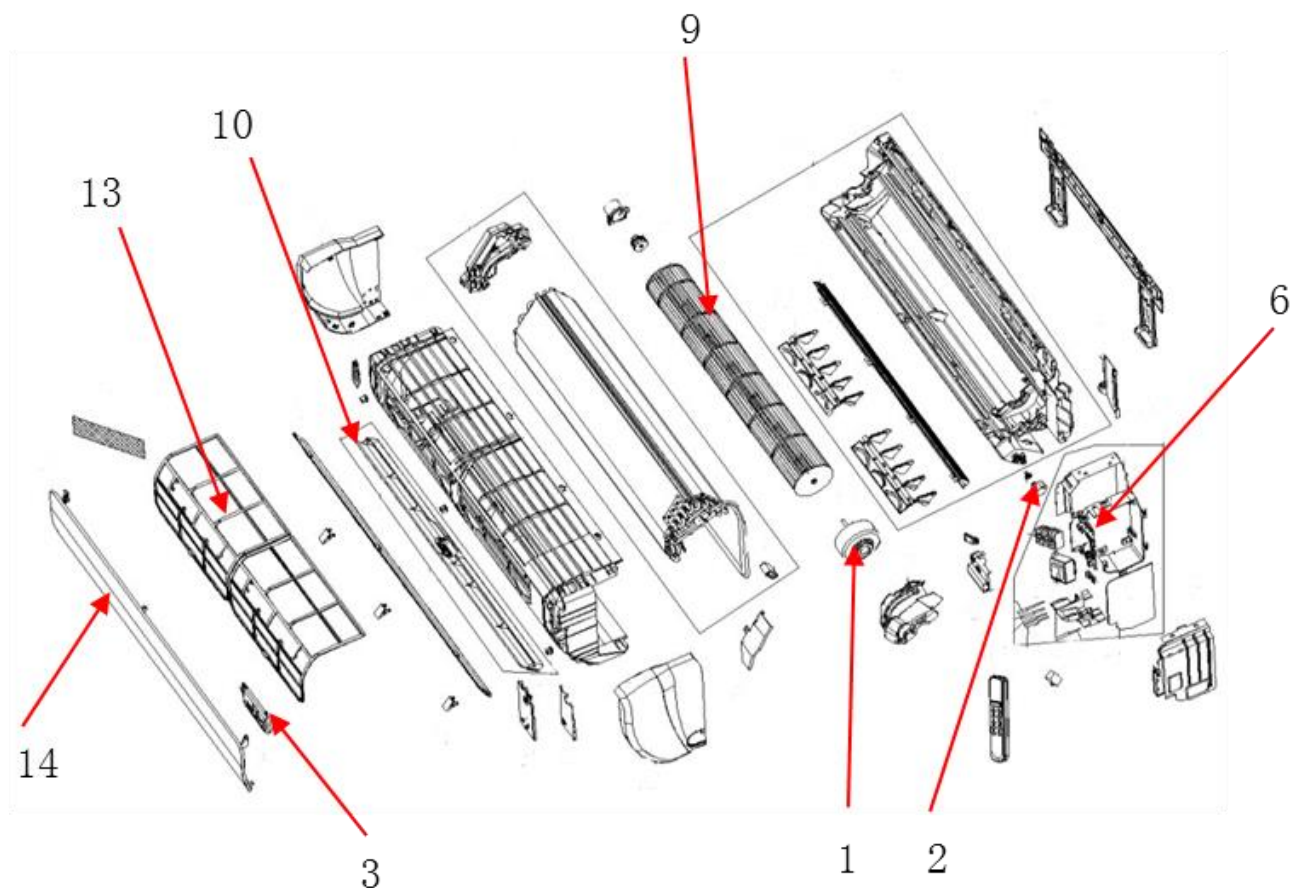


6. Installation

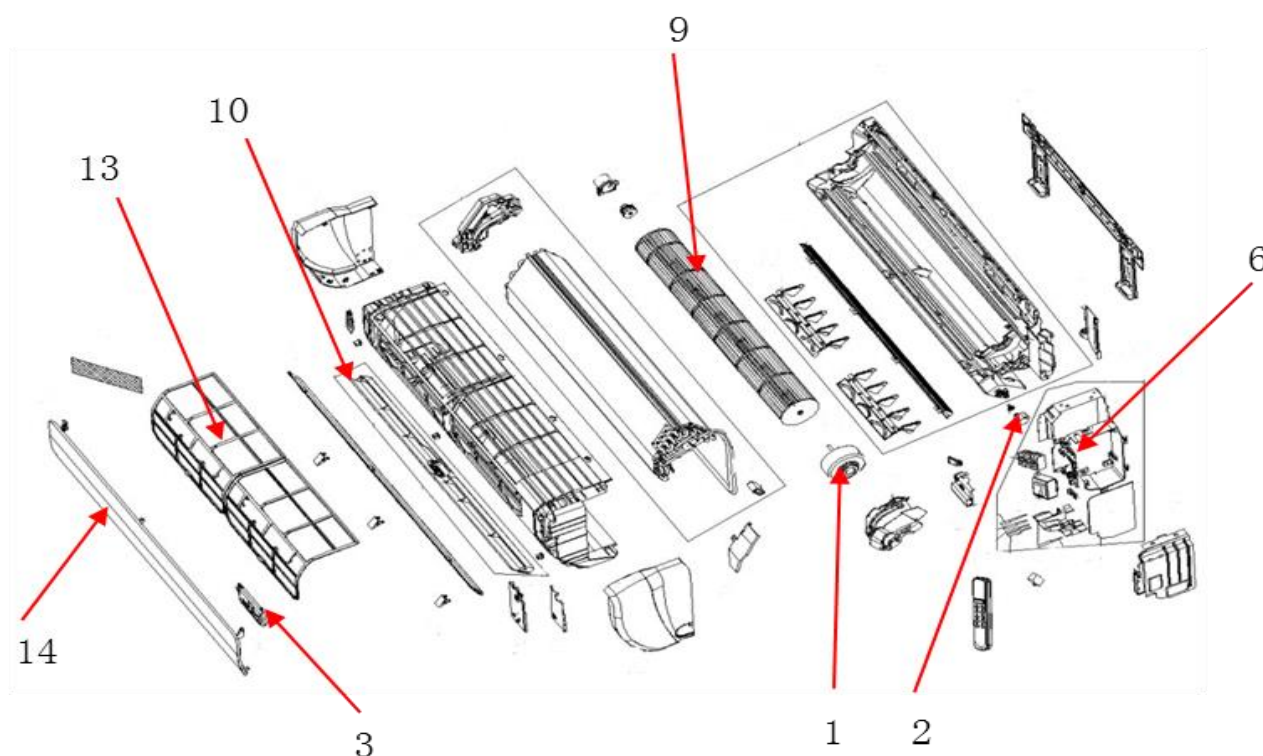
※ Please refer to the installation & operation manual

7. Explode view

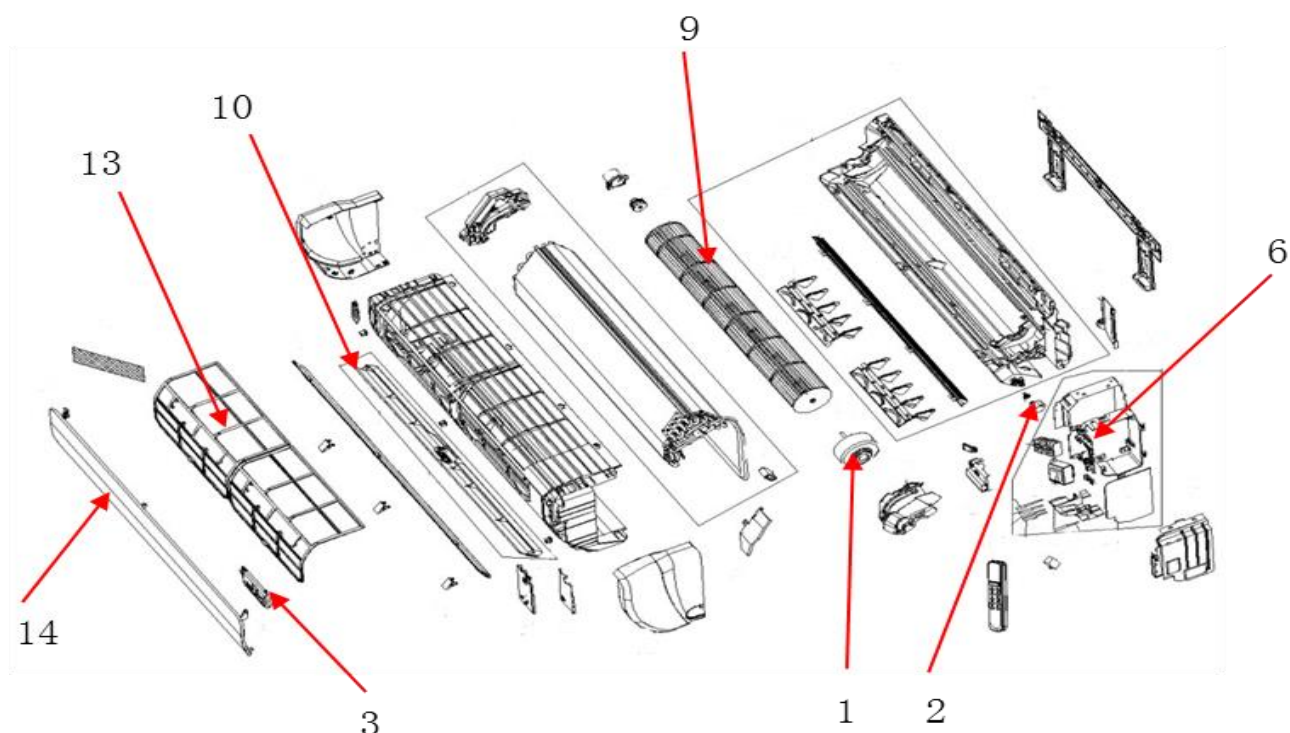
200CFM



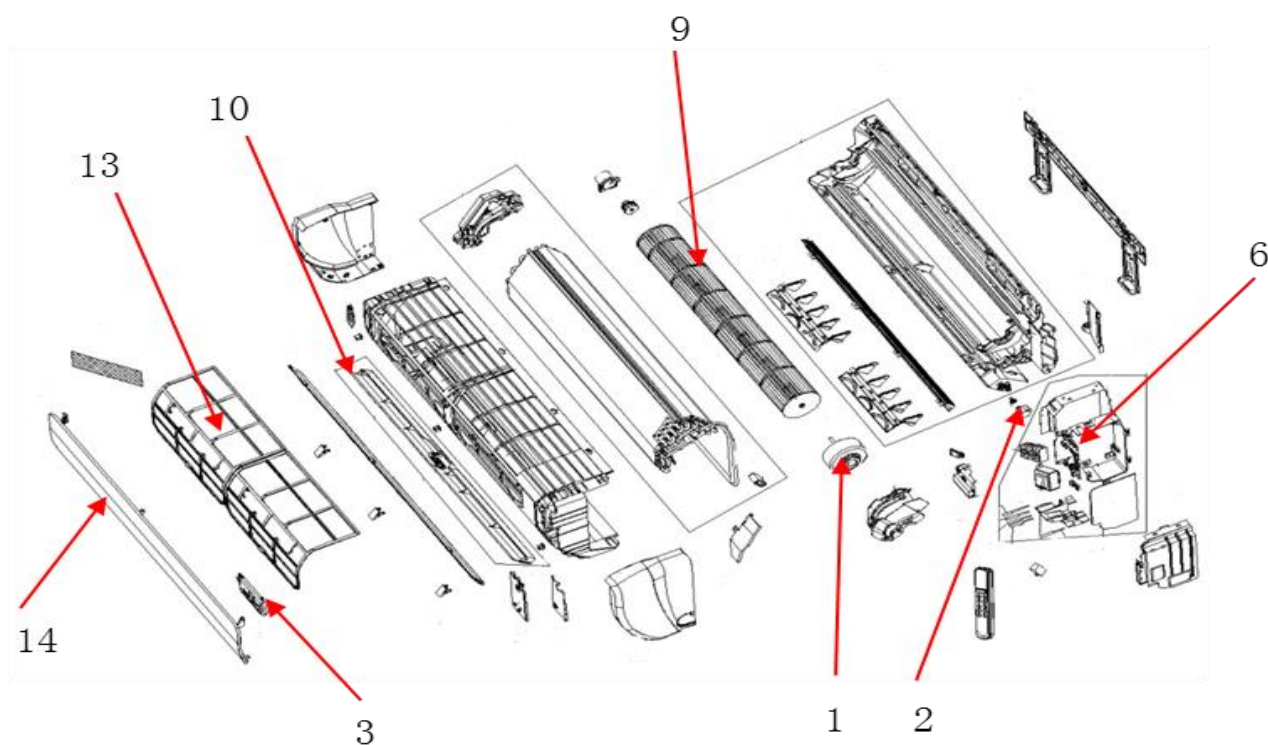
NO	(EN)	Code	Chinese Description	Qty
1	FAN MOTOR	11230003000151	内电机 YYK18-4B(1330) 220-240(300/) 1.5uF 中英	1
2	STEPPER MOTPR 1	11230002000058	R 步进电机 24BYJ48*350*XH-5 白 TR	1
3	DISPLAY BOARD	11222014000513	R 显示灯板组件 07LA 方形 (全透黑膜全白电源 ECO 三个八*7*450) 单灯	1
4	FAN CAPACITOR 1	/	/	
5	FAN CAPACITOR 2	/	/	
6	MAIN CONTROLLER	11222549000022	R 主控制器壁挂风盘(09-12)K-E1(SY)	1
7	FAN POWER PCB	/	/	
8	TRANSFORMER	/	/	
9	FAN WHEEL	11220513000068	R 贯流风叶组件 R35G/BpL 直Φ92*647 通透蓝 AS+玻纤(31 片)	1
10	SWINGING GUIDE	11320005000387	R35G/L 导风门(馨雅白)ROHS	1
11	VORTEX 1	/	/	
12	VORTEX 2	/	/	
13	AIR FILTER	11220508000143	R35G/L 过滤网组件(PP 高密网 PP12*12B16、象牙白)ROHS	2
14	PANEL	11320003003341	R32G/LH 面板(ABS 馨雅白)R 无商标	1
15	Temp. sensor group	/	/	
16	TEMP. SENSOR 1(white)	/	/	
17	TEMP. SENSOR 2(yellow)	/	/	
18	TEMP. SENSOR 3(blue)	/	/	
19	TEMP. SENSOR 4(green)	/	/	
20	DRAIN PUMB	/	/	
21	FLOART SWITCH	/	/	
22	EXV BODY	/	/	
23	EXV coil	/	/	



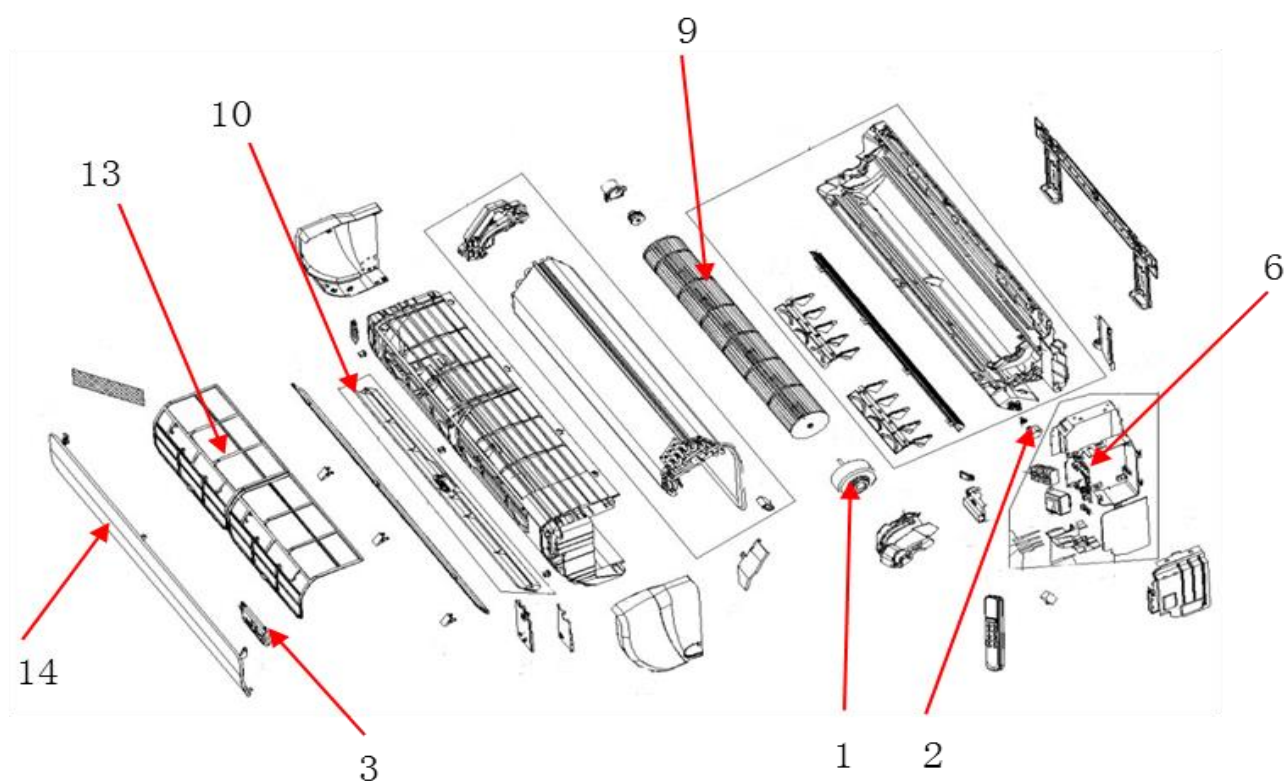
NO	(EN)	Code	Chinese Description	Qty
1	FAN MOTOR	11230003000151	内电机 YYK18-4B(1330) 220-240(300/) 1.5uF 中英	1
2	STEPPER MOTPR 1	11230002000058	R 步进电机 24BYJ48*350*XH-5 白 TR	1
3	DISPLAY BOARD	11222014000513	R 显示灯板组件 07LA 方形 (全透黑膜全白电源 ECO 三个八*7*450) 单灯	1
4	FAN CAPACITOR 1	/	/	
5	FAN CAPACITOR 2	/	/	
6	MAIN CONTROLLER	11222549000022	R 主控制器壁挂风盘(09-12)K-E1(SY)	1
7	FAN POWER PCB	/	/	
8	TRANSFORMER	/	/	
9	FAN WHEEL	11220513000068	R 贯流风叶组件 R35G/BpL 直Φ92*647 通透蓝 AS+玻纤 (31 片)	1
10	SWINGING GUIDE	11320005000387	R35G/L 导风门(馨雅白)ROHS	1
11	VORTEX 1	/	/	
12	VORTEX 2	/	/	
13	AIR FILTER	11220508000143	R35G/L 过滤网组件(PP 高密网 PP12*12B16、象牙白)ROHS	2
14	PANEL	11320003003341	R32G/LH 面板(ABS 馨雅白)R 无商标	1
15	Temp. sensor group	/	/	
16	TEMP. SENSOR 1(white)	/	/	
17	TEMP. SENSOR 2(yellow)	/	/	
18	TEMP. SENSOR 3(blue)	/	/	
19	TEMP. SENSOR 4(green)	/	/	
20	DRAIN PUMB	/	/	
21	FLOART SWITCH	/	/	
22	EXV BODY	/	/	
23	EXV coil	/	/	



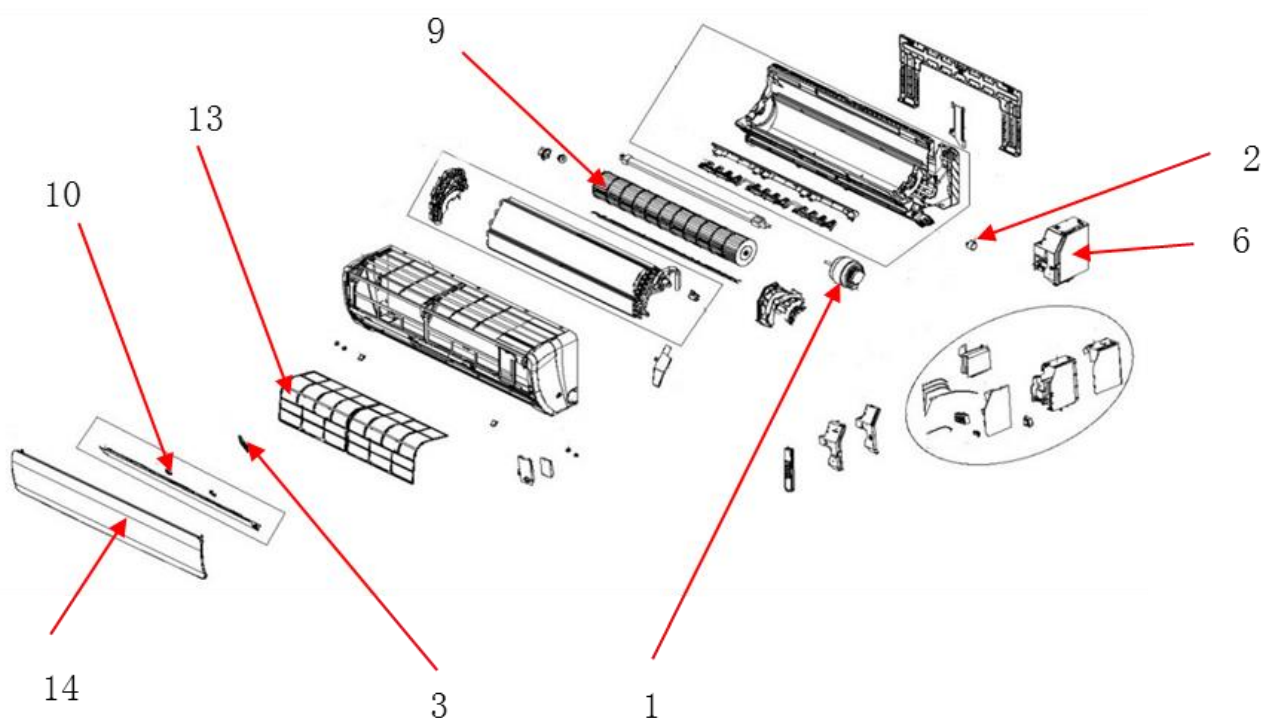
NO	(EN)	Code	Chinese Description	Qty
1	FAN MOTOR	11230003000151	内电机 YYK18-4B(1330) 220-240(300/) 1.5uF 中英	1
2	STEPPER MOTPR 1	11230002000058	R 步进电机 24BYJ48*350*XH-5 白 TR	1
3	DISPLAY BOARD	11222014000513	R 显示灯板组件 07LA 方形 (全透黑膜全白电源 ECO 三个八*7*450) 单灯	1
4	FAN CAPACITOR 1	/	/	
5	FAN CAPACITOR 2	/	/	
6	MAIN CONTROLLER	11222549000022	R 主控制器壁挂风盘(09-12)K-E1(SY)	1
7	FAN POWER PCB	/	/	
8	TRANSFORMER	/	/	
9	FAN WHEEL	11220513000068	R 贯流风叶组件 R35G/BpL 直Φ92*647 通透蓝 AS+玻纤 (31 片)	1
10	SWINGING GUIDE	11320005000387	R35G/L 导风门(馨雅白)ROHS	1
11	VORTEX 1	/	/	
12	VORTEX 2	/	/	
13	AIR FILTER	11220508000143	R35G/L 过滤网组件(PP 高密网 PP12*12B16、象牙白)ROHS	2
14	PANEL	11320003003341	R32G/LH 面板(ABS 馨雅白)R 无商标	1
15	Temp. sensor group	/	/	
16	TEMP. SENSOR 1(white)	/	/	
17	TEMP. SENSOR 2(yellow)	/	/	
18	TEMP. SENSOR 3(blue)	/	/	
19	TEMP. SENSOR 4(green)	/	/	
20	DRAIN PUMB	/	/	
21	FLOART SWITCH	/	/	
22	EXV BODY	/	/	
23	EXV coil	/	/	



NO	(EN)	Code	Chinese Description	Qty
1	FAN MOTOR	11230003000145	内电机 YYK30-4 220-240V/50 (VH5) 3uF TR	1
2	STEPPER MOTPR 1	11230002000071	R 步进电机 28BYJ48*200*XH-5 白 TR	1
3	DISPLAY BOARD	11222014000649	R 显示灯板组件 07LA 方形 (黑膜全透全白仅双八*7*460) 一体化 JB	1
4	FAN CAPACITOR 1	/	/	
5	FAN CAPACITOR 2	/	/	
6	MAIN CONTROLLER	11222549000023	R 主控制器壁挂风盘 (18-24) K-E1 (SY)	1
7	FAN POWER PCB	/	/	
8	TRANSFORMER	/	/	
9	FAN WHEEL	11220513000068	R 贯流风叶组件 R35G/BpL 直Φ92*647 通透蓝 AS+玻纤 (31 片)	1
10	SWINGING GUIDE	11320005000388	R50G/L 导风门 (ABS 馨雅白) ROHS (六棱)	1
11	VORTEX 1	/	/	
12	VORTEX 2	/	/	
13	AIR FILTER	11220508000144	R50G/L 过滤网组件 (象牙白耐候 PP+白色高密网 PP12*12B16) ROHS	2
14	PANEL	11320003003298	R50G/LH 面板 (ABS 馨雅白) R 无商标	1
15	Temp. sensor group	/	/	
16	TEMP. SENSOR 1(white)	/	/	
17	TEMP. SENSOR 2(yellow)	/	/	
18	TEMP. SENSOR 3(blue)	/	/	
19	TEMP. SENSOR 4(green)	/	/	
20	DRAIN PUMB	/	/	
21	FLOART SWITCH	/	/	
22	EXV BODY	/	/	
23	EXV coil	/	/	



NO	(EN)	Code	Chinese Description	Qty
1	FAN MOTOR	11230003000145	内电机 YYK30-4 220-240V/50 (VH5) 3uF TR	1
2	STEPPER MOTPR 1	11230002000071	R 步进电机 28BYJ48*200*XH-5 白 TR	1
3	DISPLAY BOARD	11222014000649	R 显示灯板组件 07LA 方形 (黑膜全透全白仅双八*7*460) 一体化 JB	1
4	FAN CAPACITOR 1	/	/	
5	FAN CAPACITOR 2	/	/	
6	MAIN CONTROLLER	11222549000023	R 主控制器壁挂风盘(18-24)K-E1 (SY)	1
7	FAN POWER PCB	/	/	
8	TRANSFORMER	/	/	
9	FAN WHEEL	11220513000058	R 贯流风叶组件 R50G/L 直Φ106*715 通透蓝 AS+玻纤	1
10	SWINGING GUIDE	11320005000388	R50G/L 导风门 (ABS 馨雅白) ROHS (六棱)	1
11	VORTEX 1	/	/	
12	VORTEX 2	/	/	
13	AIR FILTER	11220508000144	R50G/L 过滤网组件 (象牙白耐候 PP+白色高密网 PP12*12B16) ROHS	2
14	PANEL	11320003003298	R50G/LH 面板 (ABS 馨雅白) R 无商标	1
15	Temp. sensor group	/	/	
16	TEMP. SENSOR 1 (white)	/	/	
17	TEMP. SENSOR 2 (yellow)	/	/	
18	TEMP. SENSOR 3 (blue)	/	/	
19	TEMP. SENSOR 4 (green)	/	/	
20	DRAIN PUMB	/	/	
21	FLOAT SWITCH	/	/	
22	EXV BODY	/	/	
23	EXV coil	/	/	



NO	(EN)	Code	Chinese Description	Qty
1	FAN MOTOR	11230003000136	内电机 YYK50-4 220-240V/50 (VH5) 3uF TR	1
2	STEPPER MOTPR 1	11230002000071	R 步进电机 28BYJ48*200*XH-5 白 TR	1
3	DISPLAY BOARD	11222014000649	R 显示灯板组件 07LA 方形 (黑膜全透全白仅双八*7*460) 一体化 JB	1
4	FAN CAPACITOR 1	/	/	
5	FAN CAPACITOR 2	/	/	
6	MAIN CONTROLLER	11222549000023	R 主控制器壁挂风盘(18-24)K-E1 (SY)	1
7	FAN POWER PCB	/	/	
8	TRANSFORMER	/	/	
9	FAN WHEEL	11220513000059	R 贯流风叶组件 R70G/L 直Φ107.9*839 通透蓝 AS+玻纤	1
10	SWINGING GUIDE	11320005000384	R70G/L 导风门(馨雅白)ROHS (六棱)	1
11	VORTEX 1	/	/	
12	VORTEX 2	/	/	
13	AIR FILTER	11220508000145	R70G/L 过滤网组件(象牙白耐候 PP+白色高密网 PP12*12B16)ROHS	2
14	PANEL	11320003003220	R70G/LH 面板 (ABS 馨雅白)R 无商标	1
15	Temp. sensor group	/	/	
16	TEMP. SENSOR 1(white)	/	/	
17	TEMP. SENSOR 2(yellow)	/	/	
18	TEMP. SENSOR 3(blue)	/	/	
19	TEMP. SENSOR 4(green)	/	/	
20	DRAIN PUMB	/	/	
21	FLOART SWITCH	/	/	
22	EXV BODY	/	/	
23	EXV coil	/	/	

Part 3 Product selection

1. Precautions of product selection

a. At given airflow and temperature of a fan coil unit, when water supply changes, so does the cooling capacity. Based on statistics of the performance of some products, when water supply temperature is 7°C at 80% water supply, the cooling capacity is about 92% of the original level, indicating slow effect of the water supply change to cooling capacity.

b. At given temperature difference between water supply and water return of a fan coil, the cooling capacity decreases with as the water supply temperature increases. According to statistics, if water supply temperature is increased by 1°C , the cooling capacity will decrease by about 10%, the higher the water temperature is, the greater decrease the cooling capacity will suffer, with lowered humidity capacity.

c. At given water supply condition, when the airflow of a fan coil changes, so do its cooling capacity and enthalpy difference of air treatment, which usually increases as cooling capacity decreases, without much change in power consumption of unit cooling capacity.

d. When the temperature difference between inlet and outlet water of a fan coil increases, the water flow will decrease, so will the heat transfer coefficient of the heat exchange coil. The heat transferring temperature will also change, as a result, the cooling capacity of a fan coil increases as the temperature difference between supply and return water increases. According to statistics, when water supply temperature is at 7°C , and the temperature difference between supply and return water has increased from 5°C to 7°C , the cooling capacity may decrease about 17%.

The water supply, water supply temperature, temperature difference between supply and return water, water flow and inlet air temperature and humidity interact with one another, with the performance of the fan coil changed by the variation of any one of them.

e. When a fan coil runs at standard condition, the final point of air treatment depends on the enthalpy difference of air treatment and the cooling capacity is related to the humidity load of the room, in that the greater the heat-humidity ratio, the smaller the cooling capacity is, as shown in Figure 1. So, the air treatment enthalpy difference of the fan coil can be determined by heat-humidity ratio curve, final point parameters of air treatment and air parameters, and then the cooling capacity of the fan coil can be calculated based on the air treatment enthalpy of the room at different heat-humidity ratio...

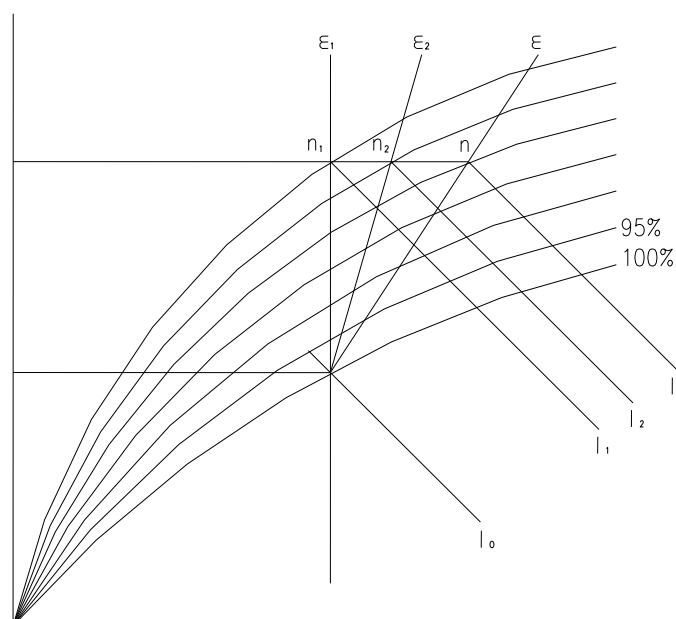


Table1 Air treatment temperature process of a fan coil

2. Methods of product selection

Enthalpy difference correction

Make corrections based on the ratio between the enthalpy difference during actual operation and that at standard condition, and calculate the actual cooling capacity of the fan coil, then select the correct fan coil based on actual cooling capacity.

$$Q' = QH \cdot (\Delta I_m / \Delta I_H) = mQH$$

where: Q' — Actual cooling capacity of a fan coil (W) .

QH — Rated cooling capacity at of a fan coil at standard condition (W) .

ΔI_m — Actual air treatment enthalpy difference of a fan coil (W/kg)

ΔI_H — Air treatment enthalpy difference of a fan coil at standard condition (W/kg)

m — Correction coefficient

Airflow based type selection

Select a fan coil based on the air conditioning flow calculated by the cooling load of air conditioning and the actual air treatment enthalpy difference of the fan coil.

$$G = Q / \Delta I_m \cdot (W)$$


Where: G — Air conditioning flow kg/h

Besides, when the water supply temperature, temperature difference of supply and return water, water supply and inlet air temperature are different than those of the standard condition, further correction is required based on the information.

Part 4 Controller


1. General information

Remote controller

Remote controller

Standard

2. Remote controller

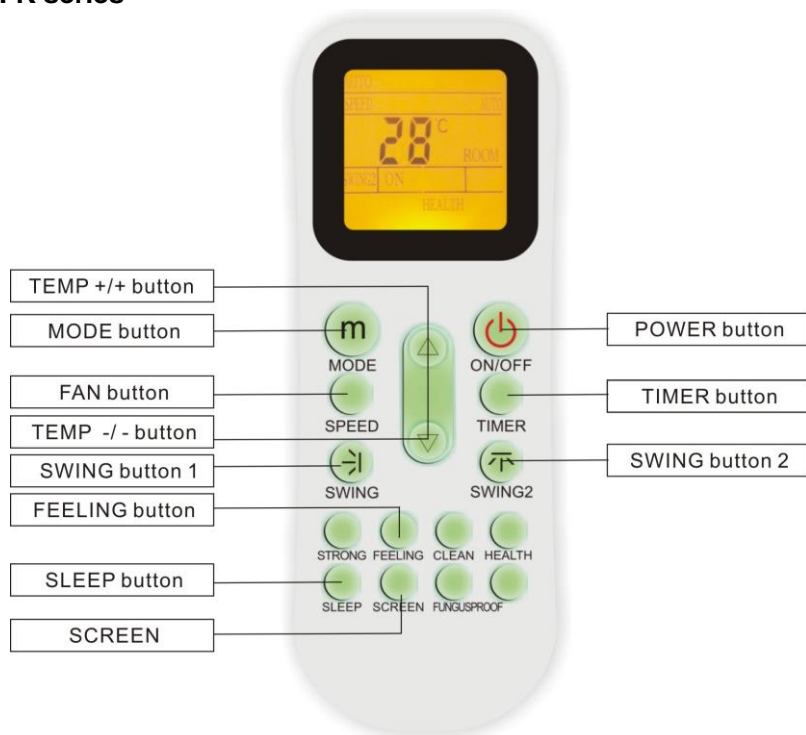
4.2.1 Basic condition of remote controller

Name	Figure	Basic Condition for operation
Remote controller		1. Power source Use 2 pcs No 7 batteries, working voltage: 2.0V-5.0V; 2. Signal frequency: infrared frequency 38kHz; 3. Remote distance: max working distance is 7m.
		Key operation introduction: Temperature setting range 16°C-32°C;


4.2.2 Function

4.2.2.1 Key Description

Remote controller: K series



POWER button: Switch the unit ON/OFF.

MODE button: Select mode, push the button one time, then the operation modes will change in turn as Auto-Cooling-Dehumidify-Heating 

TEMP + button and TEMP - button: Temperature adjustment range: 16~32

FAN button: Change the fan speed will change in turn as: Low-Medium-High-Auto

SWING button 1: Press this button for the first time when operation, it will start the up and down swing function. Push the button for the second time, cancel the swing function.

SWING button 2: Press this button for the first time when operation, it will start the right and left swing function. Push the button for the second time, cancel the swing function.

Feeling button: Press this button for setting the feeling function. The LCD shows the actual room

temperature when the function set and it shows the setting temperature when the function cancelled. The function is invalid when the appliance at the fan mode.

TIMER/CLOCK button:

Clock Setting: Normally display the clock set currently (display 12:00 for the first electrifying or resetting). When press the button for 5 seconds, the time display zone will flicker, then press **【+】** and **【-】** button and to adjust hour that uses 12-hour clock including "A.M." and "P.M." time; Press the button again to complete the setting.

Timer setting: Press the button to set TIMER ON/OFF, press the button then "ON" will flicker on the display screen. then press **【+】** and **【-】** button and to adjust hour that uses 12-hour clock including "A.M." and "P.M." time; Press the button again to complete the setting. The "OFF" setting is the same methods.

Remark: When setting functions such as mode, temperature, air port and air velocity, display screen displays all presetting parameters and remains constant; after reaching presetting time, air conditioner will automatically start as per presetting state.

After setting timing ON and OFF function, pressing button of **【Timer/Clock】** can cancel timing setting.

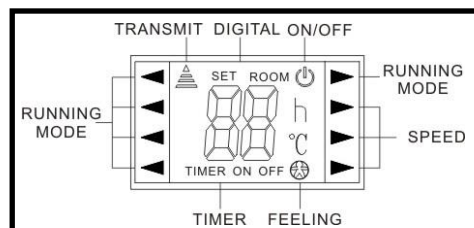
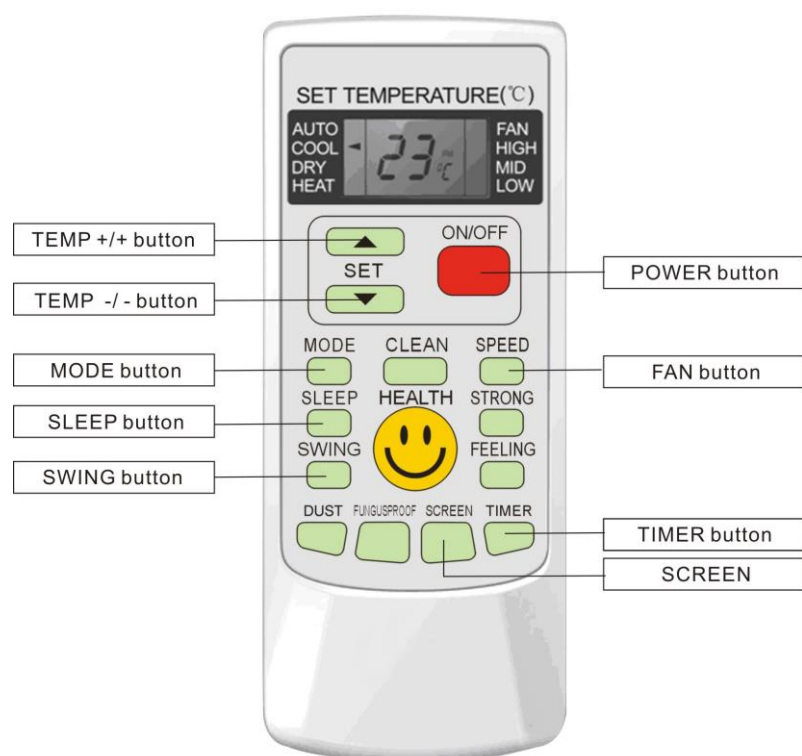
SLEEP button:

1. Press the button to the sleeping indicator light of indoor unit flashes on;
2. After the setting of sleeping mode, the cooling operation enables the set temperature to increase 1°C after 1 hour and another 1°C automatically after 1 hour.
3. After the setting of sleeping mode, the heating operation enables the set temperature to drop 2°C after 1 hour and another 2°C automatically after 1 hour.
4. The air condition runs in sleeping mode for 7 hours and stops automatically.

Remark: Press the mode or ON/OFF button, the remote controller clears sleeping mode away.

SCREEN button: Press the button to let the LCD display working or not by pressing the button.

Remote controller:H seriesLCD display instruction



NOTE:

ON/OFF display:

when the remote controller is on the state, the LCD will be display or not.

Digital display:

Under the state of normal working, it displays setting temperature. While the feeling function is start, it will display room temperature, and under the state of timer mode, it will display setting timer.

NOTE:Fan speed operation

When the air volume is greater, the noise will be higher, The wind temperature will rise when cooling mode, and drop when heating mode; Please select the appropriate F speed, in order to achieve the more comfortable rest environment.

POWER button: Switch the unit ON/OFF.

MODE button: Select mode, push the button one time, then the operation modes will change in turn as Auto-Cooling-Dehumidify-Heating → → →

TEMP + button and TEMP - button: Temperature adjustment range: 16~32,
Timing adjustment range: (0.5-24)h.

FAN button: Change the fan speed will change in turn as: Low-Medium-High-Auto

SWING button: Press this button for the first time when operation, it will start the swing function. Push the button for the second time, cancel the swing function. (The function is available matched with the concerned unit)

TIMER button: Press the button to set TIMER ON/OFF.

SLEEP button:

Press the button to the sleeping indicator light of indoor unit flashes on; the air conditioner will be automatically turned into low speed operation with no changes on the display of remote control, and the sleeping function will be activated.

1. After the setting of sleeping mode, the cooling operation enables the set temperature to increase 1°C after 1 hour and another 1°C automatically after 1 hour.
2. After the setting of sleeping mode, the heating operation enables the set temperature to drop 2°C after 1 hour and another 2°C automatically after 1 hour.
3. The air condition runs in sleeping mode for 7 hours and stops automatically.

Remark: Press the mode or ON/OFF button, the remote controller clears sleeping mode away.

"I-FEELING" button

1. Pressing this button, "⊗" will be displayed on the screen of the remote control, the temperature sensing will be activated with the temperature of the zone where the body is located displayed in the temperature display area, realizing the effect of "temperature changing with the body movement".

2. Pressing this button again will deactivate the temperature sensing function, with preset temperature displayed in the temperature display area.

SCREEN button: Press the button to let the LCD display working or not by pressing the button.

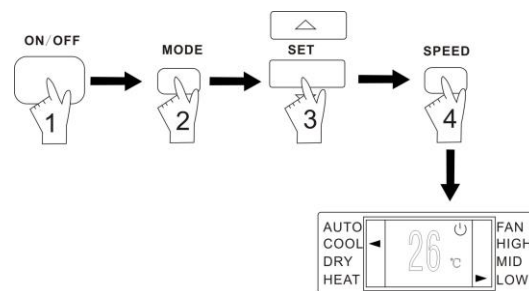
4.2.2.2 Operation instructions

Automatic operation

1. Start the air conditioner by depressing the ON/OFF button.
 2. Depress the MODE button to select AUTO mode;
 3. Depress air speed button to select between “Auto→Low speed→Middle speed→High speed”;
 4. Stop the air conditioner by depressing the ON/OFF button again.
- Note: Setting temperature is not possible under AUTO mode and there will be no temperature display.

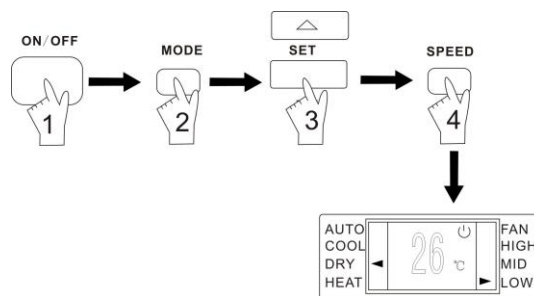
Cooling operation

1. Start the air conditioner by depressing the ON/OFF button.
2. Depress the MODE button to select COOLING mode;
3. Depress the SET button to adjust the temperature setting, with the range of (16~32)°C and increment of 1°C;
4. Depress air speed button to select between “Auto→Low speed→Middle speed→High speed”;
5. Stop the air conditioner by depressing the ON/OFF button again.



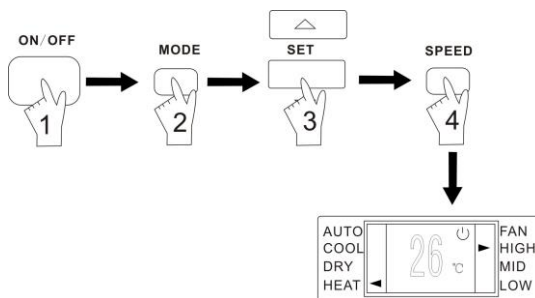
Dehumidifying operation

1. Start the air conditioner by depressing the ON/OFF button.
2. Depress the MODE button to select DEHUMIDIFYING mode;
3. Depress the SET button to adjust the temperature setting, with the range of (16-32)°C and increment of 1°C;
4. Depress air speed button to select between “Auto→Low speed→Middle speed→High speed”;
5. Stop the air conditioner by depressing the ON/OFF button again.



Heating operation

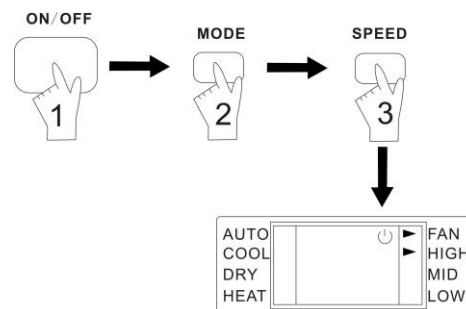
1. Start the air conditioner by depressing the ON/OFF button.
2. Depress the MODE button to select HEATING mode;
3. Depress the SET button to adjust the temperature setting, with the range of (16-32)°C and increment of 1°C;
4. Depress air speed button to select between “Auto→Low speed→Middle speed→High speed”;
5. Stop the air conditioner by depressing the ON/OFF button again.



Ventilation operation

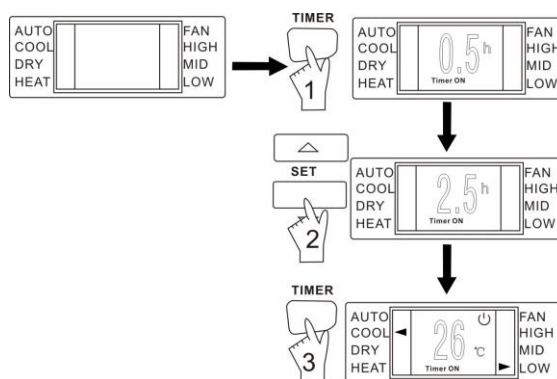
- 1.Start the air conditioner by depressing the ON/OFF button;
- 2.Depress the MODE button to select VENTILATION mode;
- 3.Depress air speed button to select between “Auto→Low speed→Middle speed→High speed”;
- 4.Stop the air conditioner by depressing the ON/OFF button again.

Note: Setting temperature is not possible under VENTILATION mode and there will be no temperature display.



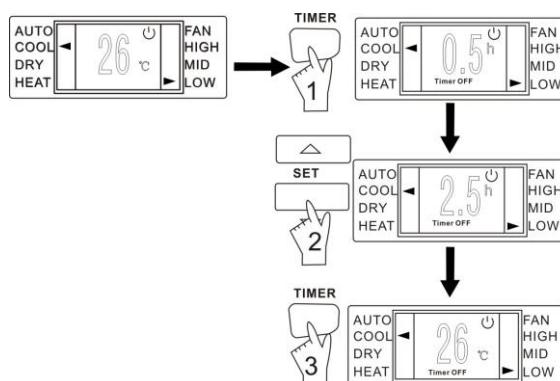
Timer ON operation

- ①With the air conditioner and remote control off, press the timing button, the display screen of the remote control will display “Timer ON”, with the time and time range displayed in the number zone:(0.5-24)hours;
- ②Depress set button to adjust the time by 0.5 hour per depressing before 10 hours and 1 hour per depressing afterward, to the desired time;
- ③Depress the timing button again to set the function of “Timer ON”.
- ④ Depress other function buttons to set the operation condition after the starting of the air conditioner (including mode, temperature, air damper, air speed, etc.), the display screen will display and hold all your settings until the set time is reached , then the air conditioner will start and run under preset conditions.



Timer OFF operation

- ①With the air conditioner and remote control on, press the timing button, the display screen of the remote control will display “Timer OFF”, with the time and time range displayed in the number zone: (0.5-24)hours;
- ②Depress set button to adjust the time by 0.5 hour per depressing before 10 hours and 1 hour per depressing afterward, to the desired time;
- ③Depress the timing button again to set the function of “Timer OFF”.




5.2.2.3Cancellation of the timing function

With the air conditioner under timing mode, depressing timing button or ON/OFF button will cancel the timing mode.

Part 5 Trouble shooting

1. Electrical system main components

Appellation	Figuration and inner configuration	Instruction
PCB		<p>Function: Via program to control the relay, make every components on/off according to temperature and pressure variety, so to realize automatic control</p>

2. Main functions of the unit

2.1 Automatic operation

When AUTO mode is selected on the remote control, the air conditioner will automatically select between cooling, dehumidifying and heating modes based on indoor temperature and then operate under the selected mode;

1.If $TA \geq 27^{\circ}\text{C}$, the cooling mode will be activated with the air conditioner operating at set airflow and set temperature of 24°C under cooling mode;

2. $20^{\circ}\text{C} < TA < 27^{\circ}\text{C}$, the dehumidifying mode will be activated with the air conditioner operating at set airflow and set temperature of 24°C under dehumidifying mode;

3.If $TA \leq 20^{\circ}\text{C}$, the heating mode will be activated with the air conditioner operating at set airflow and set temperature of 24°C under heating mode (a cool-only unit will operate under feeding mode);

4.There are timing, sleeping, power fail memory, temperature sensing (reserved) functions under this mode;

5.The mode, once selected, will not change as the indoor temperature varies, however, by turning off and then on the unit or switching the mode, the operation mode can be reselected.

2.2 Cooling operation

The temperature setting is determined by the remote control with temperature controlled in the range

of 16°C - 32°C. The temperature setting can be adjusted using the “TEMPERATURE+” and “TEMPERATURE-” buttons. Depressing “Speed Selection” button allows selecting between “AUTO”, “High Speed”, “Middle Speed” and “Low Speed” modes. Under this mode, the heating electrical valve will be always closed, with other actions as follows:

1. When $TA - TS \geq 1^\circ\text{C}$, the cooling valve will open and the indoor fan will operate at set speed;
2. When $TA = TS$, the previous status will remain;
3. When $TA - TS \leq -1^\circ\text{C}$, the cooling valve will close and the indoor fan will operate at low speed;
4. When $TA - TS \leq -2^\circ\text{C}$, the indoor fan will close.

The low speed operation of the indoor fan will be activated 40 seconds after 5 minutes, if $TA - TS \leq -2^\circ\text{C}$ the indoor fan will remain stopped for 5 minutes before reactivate low speed operation for 40 seconds; otherwise, the related cooling operation will be controlled according to indoor temperature (TA) and set temperature (TS).

5. Automatic air speed control:

When $TA - TS \geq 1^\circ\text{C}$, the cooling electric valve will open and the fan will operate at high speed;

When $TA = TS$, the indoor fan will operate at middle speed;

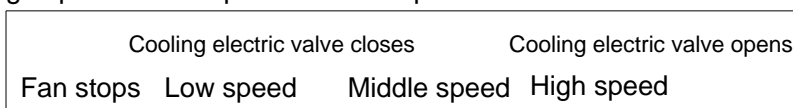
When $TA - TS \leq -1^\circ\text{C}$, the cooling electric valve will open and the fan will operate at low speed;

When $TA - TS \leq -2^\circ\text{C}$, the indoor fan will close. The logic control map is as shown in the figure.

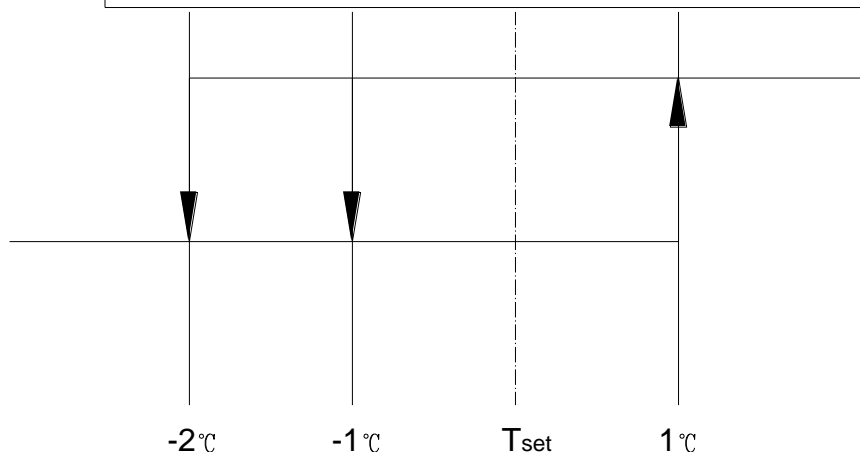
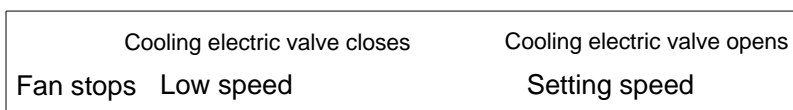
The low speed operation of the indoor fan will be activated 40 seconds after 5 minutes, if $TA - TS \leq -2^\circ\text{C}$ is still satisfied, the indoor fan will remain stopped for 5 minutes before reactivate low speed operation for 40 seconds; otherwise, the related cooling operation will be controlled according to indoor temperature (TA) and set temperature (TS).

There is a 2 minutes delay from high speed to low speed to avoid speed fluctuation.

Auto fan speed



Setting fan speed



6. When cooling is forced open, the cooling valve and indoor fan will open with the electric heater remain off. The logic control map is as shown in the following figure.

Cooling electric valve	ON			OFF
Motor of indoor unit	ON			OFF
Electric heater	OFF			OFF

7. When cooling is forced **off**, the cooling electric valve and indoor fan will close immediately. The logic control map is as shown in the following figure.

Cooling electric valve	ON			OFF
Motor of indoor unit	ON			OFF
Electric heater	OFF			OFF

8. There are timing, sleeping, power fail memory, temperature sensing (reserved) functions under this mode;

2.3 Dehumidifying operation

1. Under dehumidifying mode, the water drainage pump will always open, with temperature controlled in the range of 16°C - 32°C and other actions as follows:

- (1) When $TA \geq TS + 2^{\circ}\text{C}$, the cooling electric valve will open and the indoor fan will operate at set speed;
- (2) When $TS \leq TA < TS + 2^{\circ}\text{C}$, the cooling valve will open and the indoor fan will be turned on for 10 minutes and off for 6 minutes and run at low air speed;
- (3) When $TA < TS$, the cooling electric valve will close and the indoor fan will stop operating 10 seconds after the valve is closed

The low speed operation of the indoor fan will be activated 40 seconds after 5 minutes, if $TA - TS \leq -2^{\circ}\text{C}$ the indoor fan will remain stopped for 5 minutes before reactivate low speed operation for 40 seconds; otherwise, the related cooling operation will be controlled according to indoor temperature (TA) and set temperature (TS) .

2. Automatic air speed control:

- When $TA - TS \geq 2^{\circ}\text{C}$, the cooling electric valve will open and the fan will operate at high speed;
- When $TS \leq TA < TS + 2^{\circ}\text{C}$, the indoor fan will be turned on for 10 minutes and off for 6 minutes and run at low air speed;
- When $TA < TS$, the cooling electric valve will close and the indoor fan will stop operating 10 seconds after the valve is closed.

The low speed operation of the indoor fan will be activated 40 seconds after 5 minutes, if $TA - TS \leq -2^{\circ}\text{C}$ the indoor fan will remain stopped for 5 minutes before reactivate low speed operation for 40 seconds; otherwise, the related cooling operation will be controlled according to indoor temperature (TA) and set temperature (TS) .

3. When the unit is forced off by depressing the override button, the cooling electric valve and the indoor fan will close simultaneously.

4. There are timing, sleeping, power fail memory, temperature sensing (reserved) functions under this

mode.

2.4 Ventilation operation

Under ventilation mode, the indoor fan will operate at set speed and high, middle and low speed can be set using the remote control. There are timing and power fail memory functions in this mode.

2.5 Heating operation

The temperature setting is determined by the remote control with temperature controlled in the range of 16°C-32°C. The temperature setting can be adjusted using the "TEMPERATURE+" and "TEMPERATURE-" buttons. Depressing "Speed Selection" button allows selecting between "AUTO", "High Speed", "Middle Speed" and "Low Speed" modes; other actions are as follows:

2.5.1. When $TA-TS \leq -2^{\circ}\text{C}$, the cooling electric valve will open and the indoor fan will operate at set speed, with the auxiliary electric heater turned on;

2.5.2. When $TA-TS \leq -1^{\circ}\text{C}$, the cooling electric valve will open and the indoor fan will operate at set speed, with auxiliary electric heater turned on when using single electric heater;

2.5.3. When $TA=TS$, the cooling electric valve will remain previous status, with auxiliary electric heater turned off;

2.5.4. When $TA-TS \geq 1^{\circ}\text{C}$, the cooling electric valve will close and the indoor fan will operate at low speed, with auxiliary electric heater turned off when using single electric heater;

2.5.5. When $TA-TS \geq 2^{\circ}\text{C}$, the indoor fan will be turned off 30 seconds after the cooling electric valve is closed.

The low speed operation of the indoor fan will be activated 40 seconds after 5 minutes, if $TA-TS \geq 2^{\circ}\text{C}$ the indoor fan will remain stopped for 5 minutes before reactivate low speed operation for 40 seconds; otherwise, the related heating operation will be controlled according to indoor temperature (TA) and set temperature (TS).

2.5.6 Automatic air speed control:

When $TA-TS \leq -2^{\circ}\text{C}$, the auxiliary electric heater will be turned on;

When $TA-TS \leq -1^{\circ}\text{C}$, the cooling electric valve will open and the indoor fan will operate at high speed, with electric heater turned on when using single electric heater;

When $TA=TS$, the indoor fan will operate at middle speed, with the auxiliary electric heater turned off;

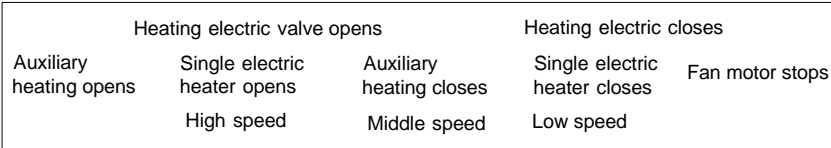
When $TA-TS \geq 1^{\circ}\text{C}$, the cooling electric valve will close and the indoor fan will operate at low speed, with electric heater turned off when using single electric heater;

When $TA-TS \geq 2^{\circ}\text{C}$, the indoor fan will be turned off. The logic control map is as shown in Figure 5.

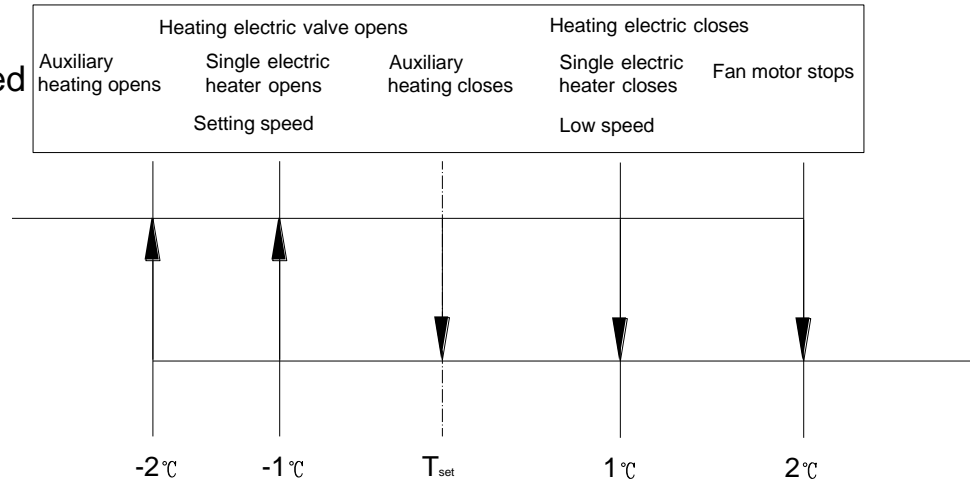
The low speed operation of the indoor fan will be activated 40 seconds after 5 minutes, if $TA-TS \geq 2^{\circ}\text{C}$ is satisfied, the indoor fan will remain stopped for 5 minutes before reactivate low speed operation for 40 seconds; otherwise, the related heating operation will be controlled according to indoor temperature (TA) and set temperature (TS).

There is a 2 minutes delay from high speed to low speed to avoid speed fluctuation.

Auto fan speed

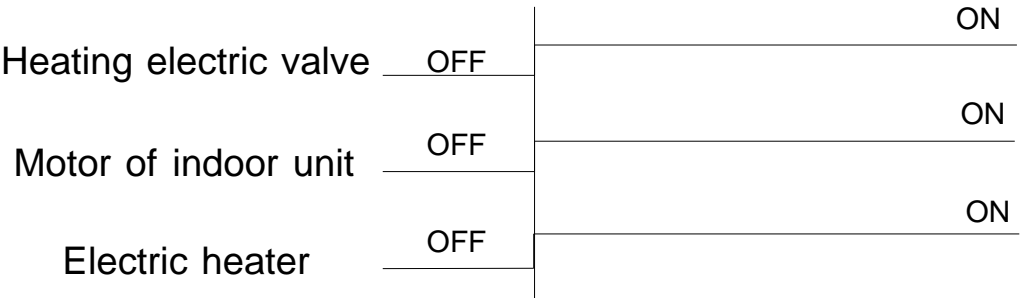


Setting fan speed



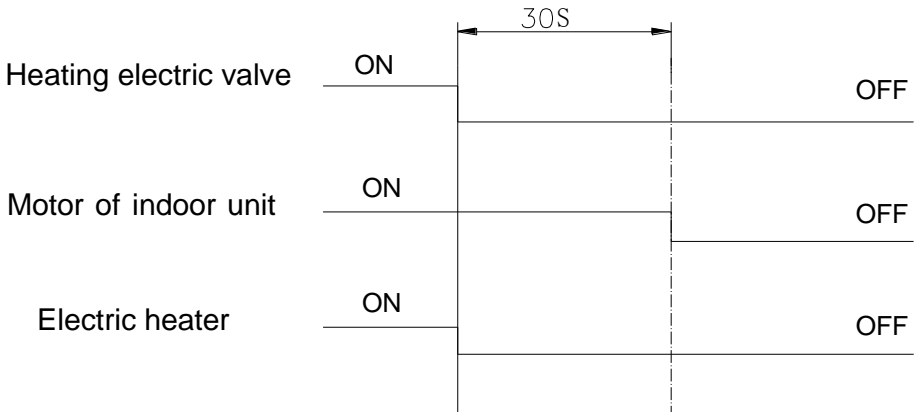
(Figure5)

2.5.7 When the unit is turned on under heating mode, the cooling valve and indoor fan will open with the electric heating performed by the control unit. The logic control map is as shown in Figure 6.



(Figure6)

2.5.8 When the unit is turned off under heating mode, the cooling valve and indoor fan will close with the indoor fan switched to low speed operation and then turned off 30 seconds after the electric heating is turned off. The logic control map is as shown in the Figure 7.



(Figure7)

2.5.9 There are timing, sleeping, power fail memory, temperature sensing (reserved) functions under this mode

5.2.6 Swing control

The stepping speed switch behavior is 4ms/step, and normal swing speed is 16ms/step;

The full open degree is 120°;

The swing angle range in cooling mode is 40°;

The swing angle range in heating mode is 45°;

During cooling swing, the initial position is backswing 20° after full open, and the ending position is the same as full open position;

During heating swing, the initial position is backswing 10° after full open, and the ending position is backswing 55° after full open;

2.7 Timing

The longest timed duration is 24h with the increment being 0.5h when the duration is within 10h and 1h when the duration is 10 h or above. As for single timing method, mode change will not cancel the timing function. After the timing is set, the timing indicator will light.

Timed OFF

Timed OFF is only possible when the air conditioner is in operation. The timing range is 0.5-24h and the unit will be automatically turned off after the time is up.

Timed ON

Timed ON is only possible when the air conditioner is off. The timing range is 0.5-24h and the unit will be automatically turned on after the time is up.

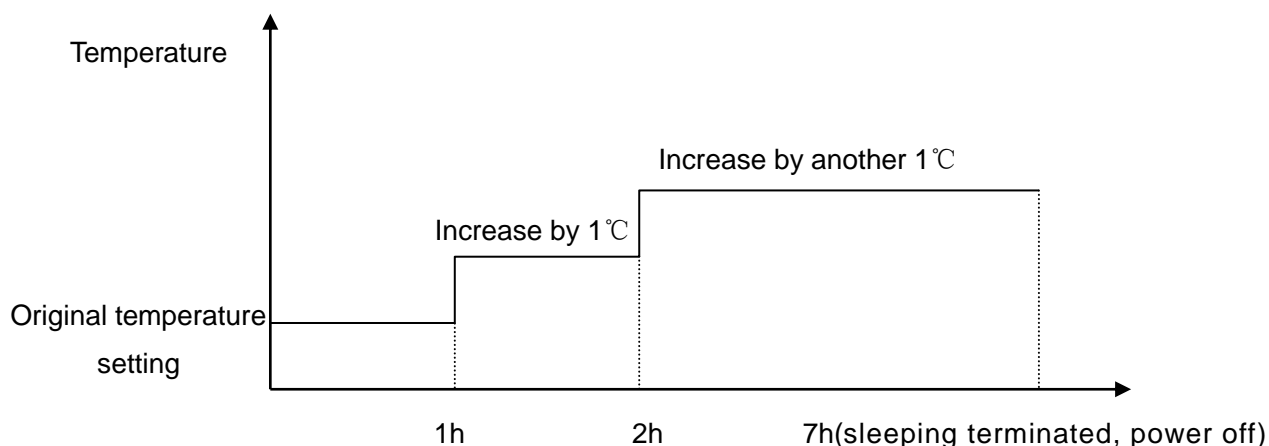
When the unit is turned ON/OFF after the timing is set, the original timing and sleeping functions will be automatically canceled.

2.8 Sleeping

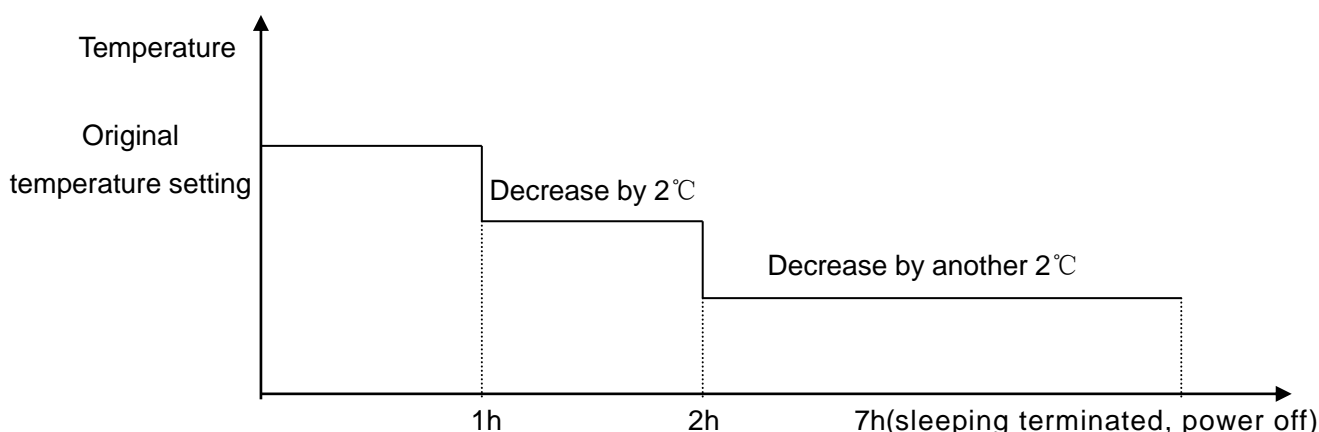
The sleeping function is effective under AUTO, cooling, dehumidifying, heating modes. After the sleeping function is activated, the indoor fan will operate at low air speed and the sleeping indicator will light;

After the sleeping mode is activated by depressing "sleeping" button, the temperature setting will automatically increase by 1°C after 1h under cooling mode, or automatically decrease by 2°C after 1h under heating mode. After another 1h, the temperature will increase by another 1°C under cooling mode or decrease by another 2°C under heating mode. The unit will be turned off after sleeping for 7h. After sleeping is activated, the mode switching will be effective but after that the sleeping function will be canceled; if the "Temperature+" is depressed, the air conditioner will operate at "new temperature setting + correction temperature". In sleeping status, when "Sleeping" button or mode selection button is depressed, or the unit is turned off, the sleeping will be canceled and the sleeping operation will be terminated.

Sleeping under cooling mode:



Sleeping under heating mode:



3. Poor efficiency explanation

During the process of using air conditioner, some phenomenon seems to be malfunction but actually not. Thus when cooling effect does not achieve to your expectation, the following factors have to be ruled out

Phenomenon	Causing explanation
Power voltage is too low, causing AC uneasy to start and shut down after starting, or fuse be burned out etc.	It is not malfunction, need to find out the causing, if the causing is the electricity net voltage is too low, user should load a power manostat to keep voltage between 220V-380V for AC normally running
Select high wind speed but indoor temperature still at high side, air flow from the air outlet is too weak.	It is because air filter is too dirty or blocked making cooling capacity fail to be brought by air flow, causing cooling capacity inadequate. Take out filter and wash, the problem will be solved.
Select high wind speed, the vibration and sound of unit are severe.	Fan runs at high speed, severe vibration and sound of unit is normal phenomenon
Improper installation will lead to indoor temperature uneven or bad cooling effect.	It is necessary to adjust AC installation position

4. Electric components malfunction inspection

No	Component name	Inspection methods
1	Control board	1. Check if any connection part of PCB loosen or drop off, printed tinsel and components have any burn, fade, breaking off or aging phenomenon, all joints exist short circuit phenomenon etc. 2. Test the circuit board system in the term of voltage, pulse on, resistance variation, by using testing meter. 3. Judge the output and input is normal or not according to electric principle diagram
2	Capacitor	1. No expansion phenomenon apparently 2. Measure capacitor by using capacitor phase of multi-meter(if the multi-meter has no capacitor phase, use ohm phase, contact the two terminal of meter to two feet of capacitor, and quickly switch positive pole and negative pole and reconnect, the resistance should display from nil to infinite quickly. The resistance can't change is always nil or infinite).
3	Motor	1. No burning trace apparently 2. Using multi-meter ohm phase, there is correct resistance value among windings (single phase compressor refers to specification, three phase compressor resistance approximately equal), resistance of winding should be infinite.

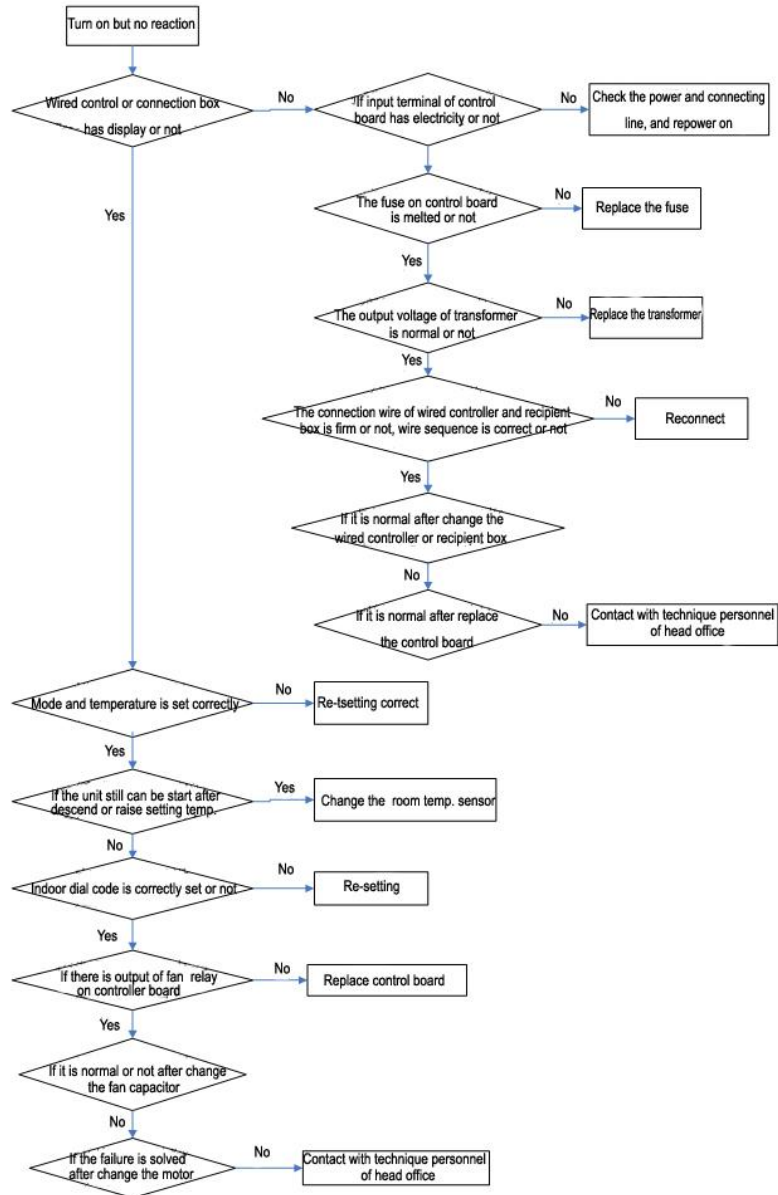
5. Failure code

When the air conditioner is faulty, the timing light of the controller's light panel will display relevant trouble codes according to various troubles.

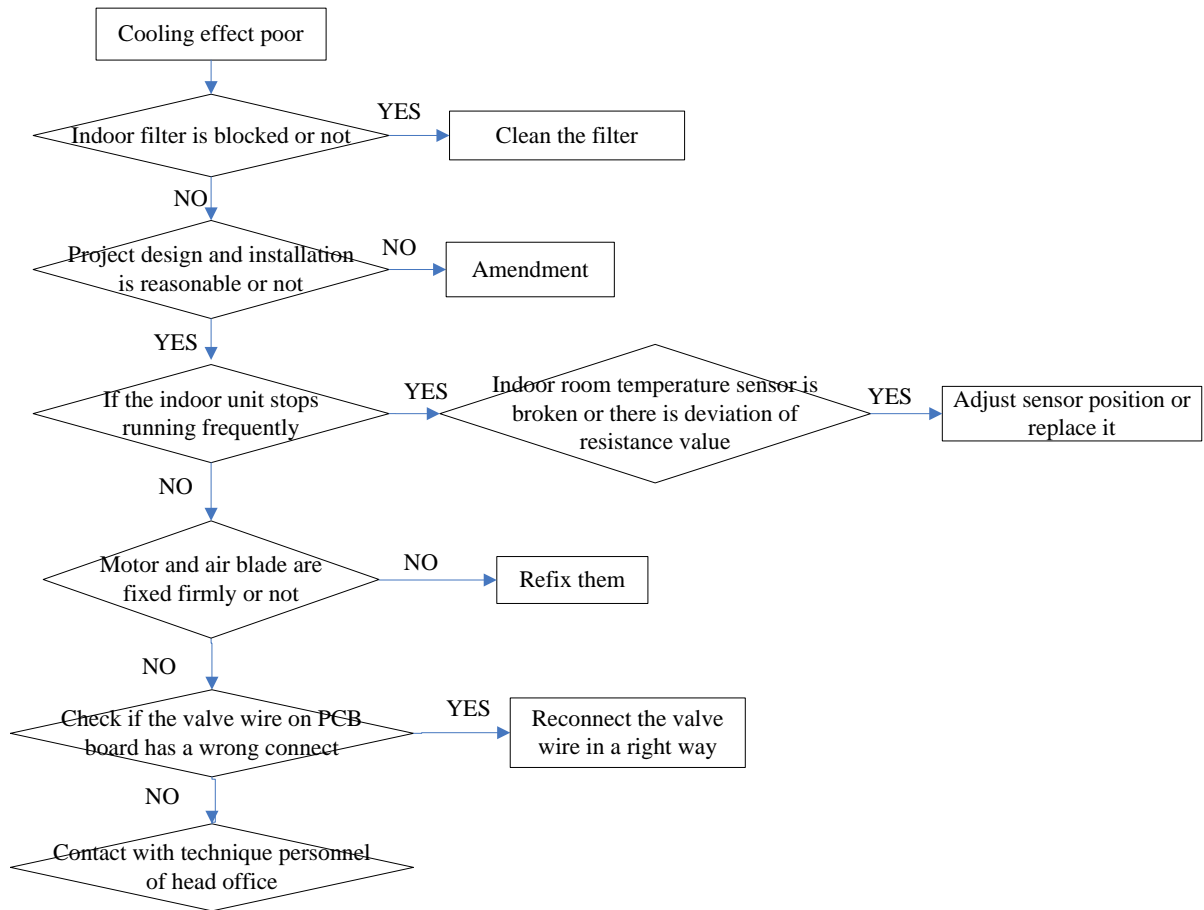
Failure cause	Display method 2	Display priority	Phenomenon
Environment temperature sensor fault	E1	1	Stop
FAN CODE	F4	2	Stop

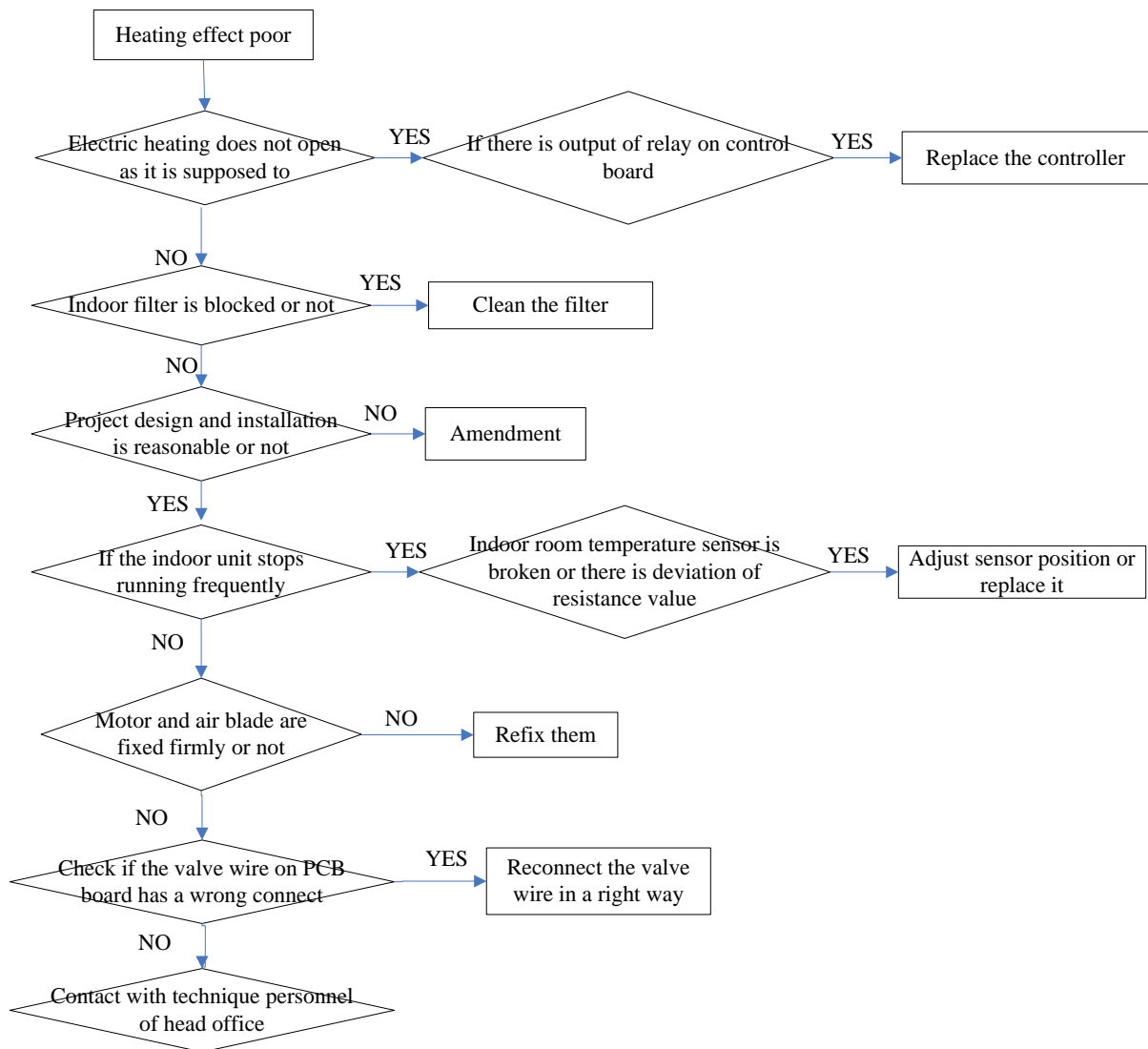
6. Failure analysis

No action after Power-on

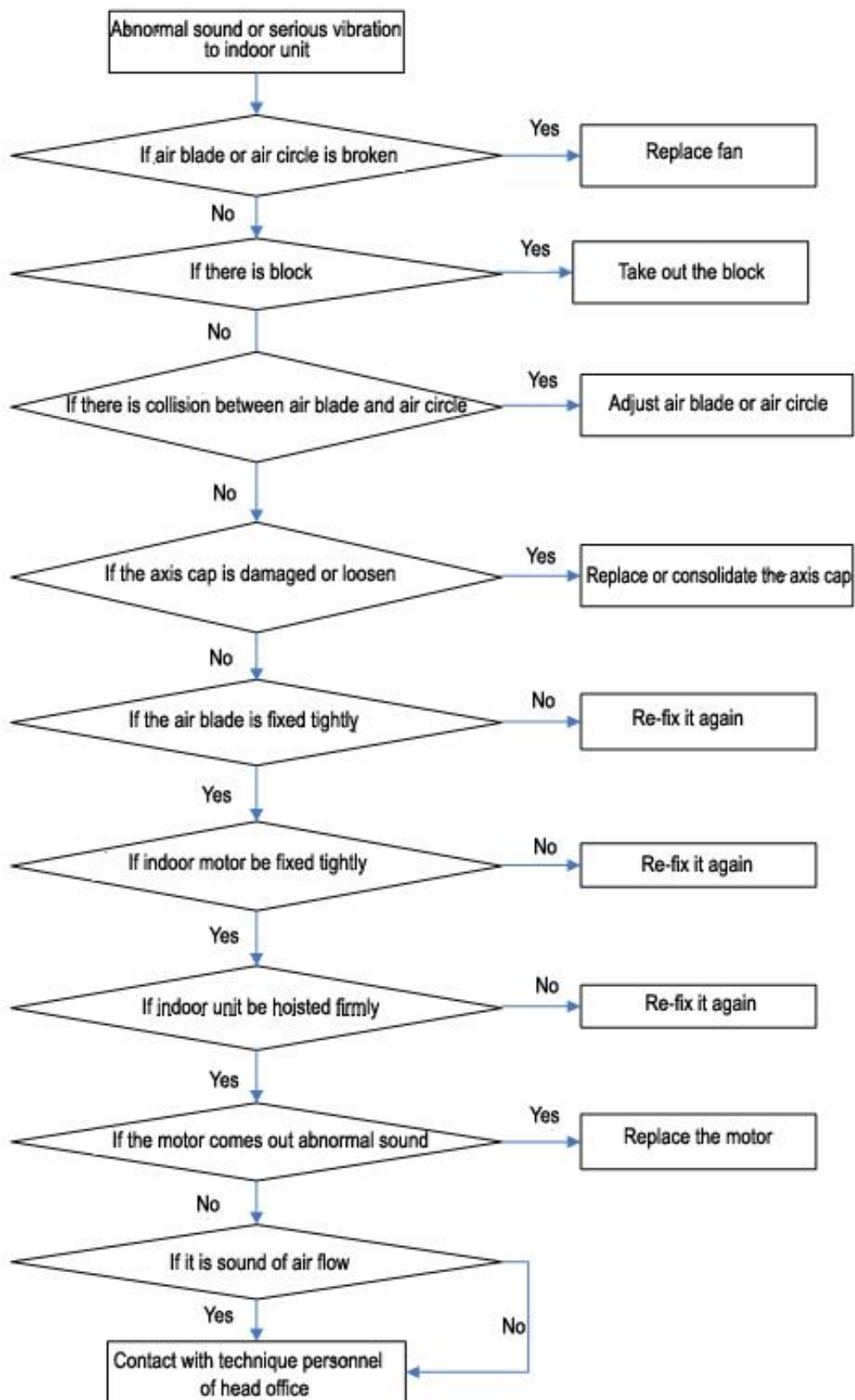


Poor Performance during Unit Operation

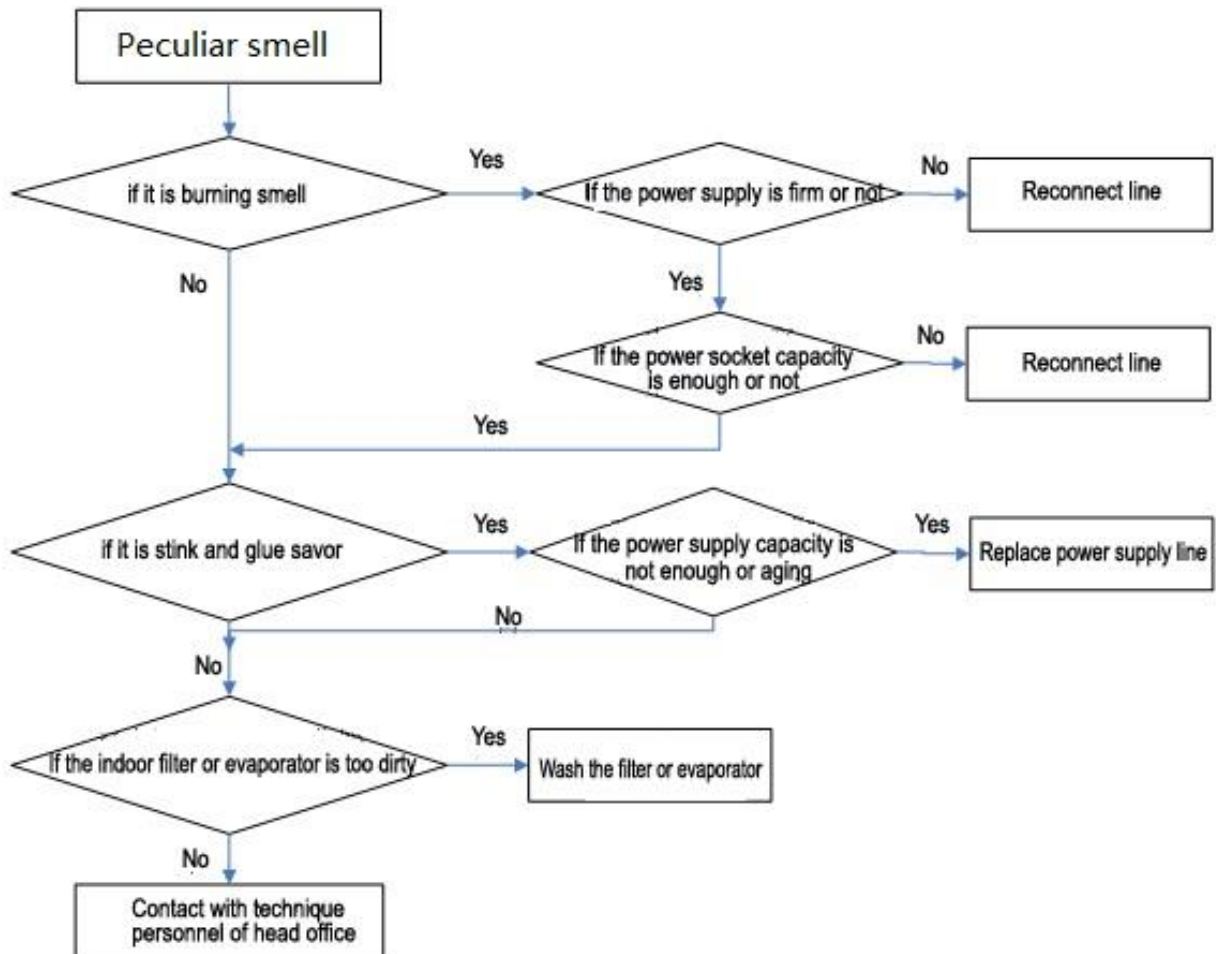




Abnormal Sound or Much Vibration of Unit



Peculiar Smell of Unit



Water Leakage of Unit

