

# **TECHNICAL SERVICE MANUAL**

— **Dehumidifier Series**

GREE ELECTRIC APPLIANCES, INC. OF ZHUHAI

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# Introduction

In this technical service manual, you will find rich references to Dehumidifier Series products, including photos, technical specifications, explosive views, spare parts lists and circuit diagrams. Service people and engineers of Gree's customers and distributors would find it a very handy source of technical information of our products.

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## 2. CF0.5M/A、CF0.7M/A、CF0.8M/A type

### 2.1 Summary



Fig. 2-1

#### MODEL

CF0.5M/A  
CF0.7M/A  
CF0.8M/A

#### NOTE

CE  
1Ph 230V 50Hz  
R134a

## Dehumidifier

### 2.2 Technical specifications

Table 2-1

Model		CF0.5M/A	CF0.7M/A	CF0.8M/A
Power supply		1Ph 230V 50Hz		
Dehumidifying Capacity (L/day)		12	16	20
Rated input (W)		250	420	530
Rated current (A)		1.1	1.9	2.4
Air flow (M <sup>3</sup> /h)		150	150	150
Motor	Fan speed (rpm)	900/740		
	Output power (W)	6		
	Working capacitor (uF)	1.5		
Fan type/piece		Axial fan-1		
Diameter -length		160-58		
Evaporator		Aluminum fin-copper tube		
Row-fin distance (mm)		7-1.8	8-1.8	8-1.8
Working area (m <sup>2</sup> )		0.053		
Condenser		Aluminum fin-copper tube		
Row-fin distance (mm)		7-1.8	8-1.8	8-1.8
Working area (m <sup>2</sup> )		0.053		
Compressor model		Reciprocating		
Compressor		AE1340YZ	AE1360YZ	AE1370YZ
Power (W)		230	297	350
Protect equipment		4TM232PFB	4TM424PFB	4TM435PFB
Starting method		PTC		
Working current (A)		1.55	1.9	2.1
Working temp.		Exhaust temperature $\leq 115^{\circ}\text{C}$		
Throttling method		Capillary		
Fuse(A)		3.15		
Noise (dB(A))		45	47	48
dimension	Width (mm)	302		
	Height (mm)	594		
	Depth (mm)	285		
Net weight (kg)		17.5	18	18.5
Refrigerant		R134a		
Refrigerant charge(g)		200	230	260

The technical data are subject to change without notice .Please refer to the nameplate of the unit.

### 2.3 Outlines and dimensions



Fig. 2-2



Fig. 2-3



Fig. 2-4



Fig. 2-5

## Dehumidifier

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## 2.4 Explosive view and spare parts list

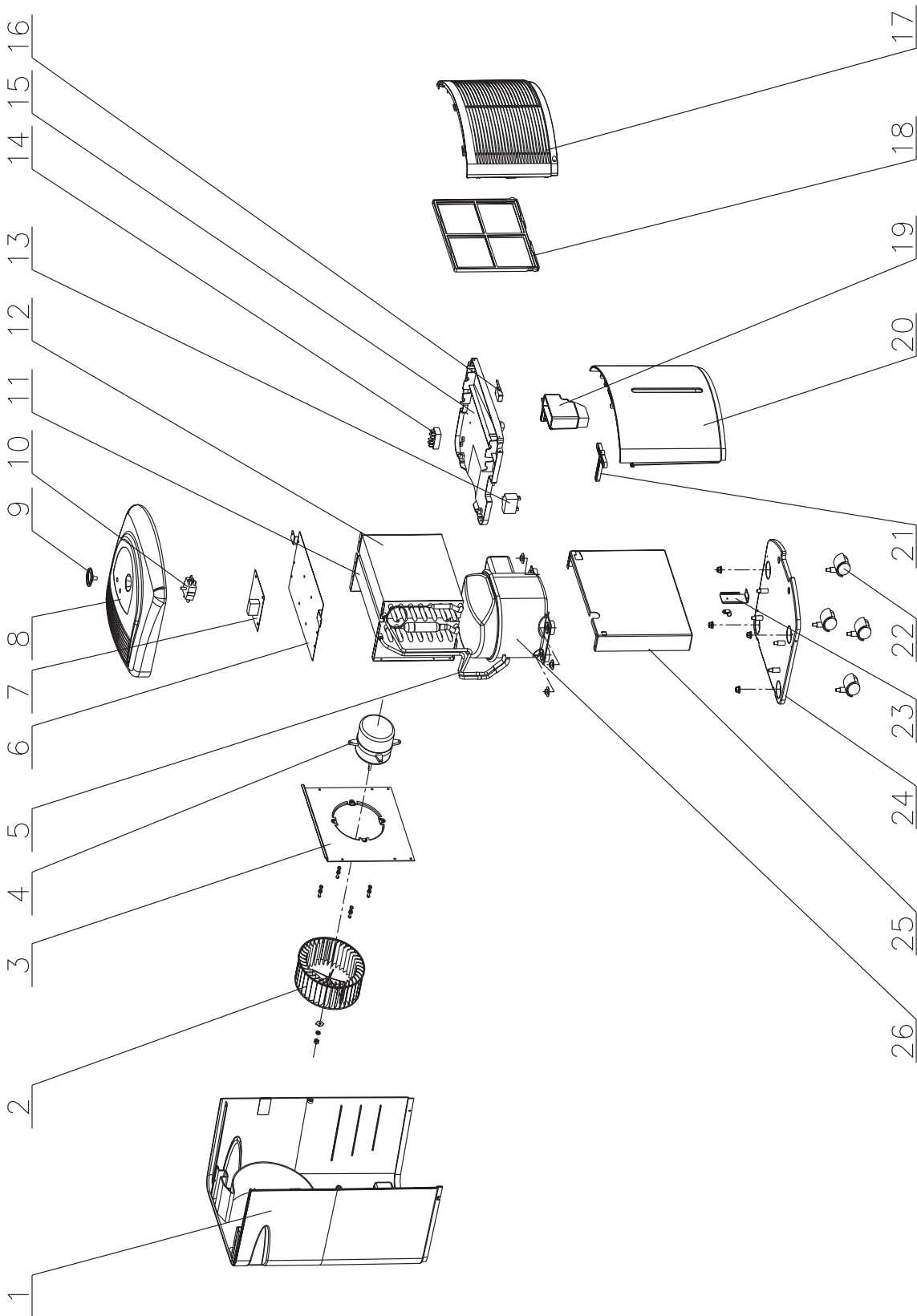


Fig. 2-6



## Dehumidifier

Table 2-2

No.	Description		Part No.			Qty
			CF0.5M/A	CF0.7M/A	CF0.8M/A	
1	Rear case	后壳	22206512	22206512	22206512	1
2	Fan	风叶	10516508	10516508	10516508	1
3	Board for installing motor	电机安装板	01336503	01336503	01336503	1
4	Fan motor CF6C	风扇电机 CF6C	15016502	15016502	15016502	1
5	Pipeline	管路系统	06106503	06106502	06106501	1
6	Board for installing controller	控制器安装板	01336502	01336502	01336502	1
7	PCB1901	控制器 1901	30021009	30021009	30021009	1
8	Top cover	顶盖	22246506	22246506	22246506	1
9	Knob II	旋钮 II	45036502	45036502	45036502	1
10	main switch	主令开关	45016505	45016505	45016505	1
11	Condenser assy	冷凝器组件	01106507	01106506	01106506	1
12	Evaporator assy	蒸发器组件	01006507	01006506	01006506	1
13	Capacitor CBB61(2uF/450VAC)	电容CBB61(2uF/450VAC)	33010025	33010025	33010025	1
14	Terminal board 2-8	接线板 2-8	42011103	42011103	42011103	1
15	Water tray	接水盘	20186506	20186506	20186506	1
16	Switch for water level	液位开关	45016506	45016506	45016506	1
17	Front plate	面板	20006506	20006506	20006506	1
18	Filter	过滤网	11126506	11126506	11126506	1
19	Buoy	浮标	26116510	26116510	26116510	1
20	Water box	水箱	20186509	20186509	20186509	1
21	Handle	提手	26236501	26236501	26236501	1
22	Truckle	脚轮	24236553	24236553	24236553	4
23	Strip for fixing power cord	电源线固定条	01726505	01726505	01726505	1
24	Meter base	底盘	01216502	01216502	01216502	1
25	Isolation sheet	隔板	01236501	01236501	01236501	1
26	Compressor and fittings	压缩机及其配件 AE1340YZ	00100153	/	/	1
		压缩机及其配件 AE1360YZ	/	00100154	/	1
		压缩机及其配件 AE1370YZ	/	/	00100152	1

The data are subject to change without notice.

# Dehumidifier

## 2.5 Circuit diagram

This circuit diagrams are subject to change without notice.  
Please refer to the ones stuck on the machines.

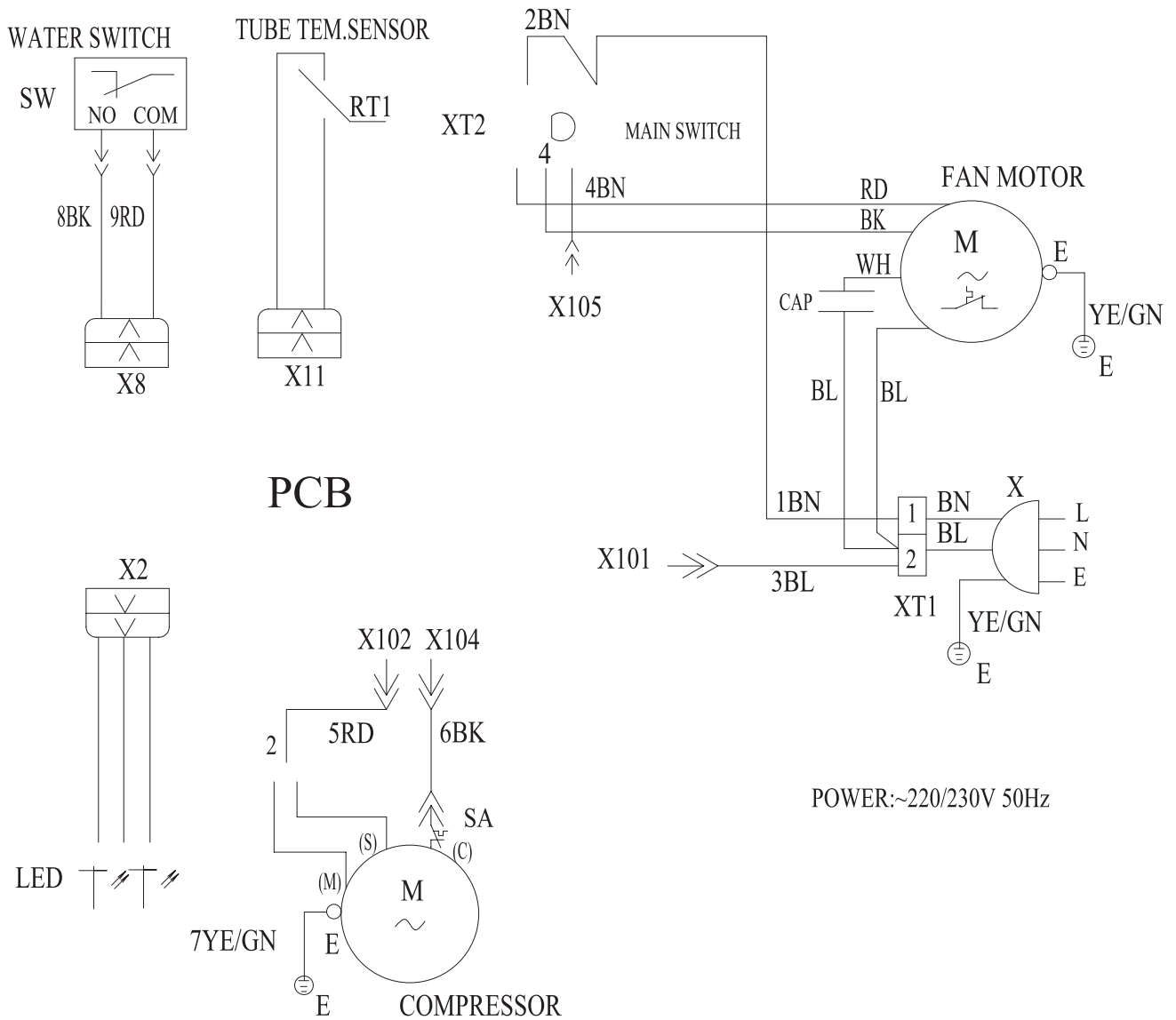


Fig. 2-7

### 2.6 PCB function manual

#### A. Main control function: Dehumidify

#### B. Aim of the control

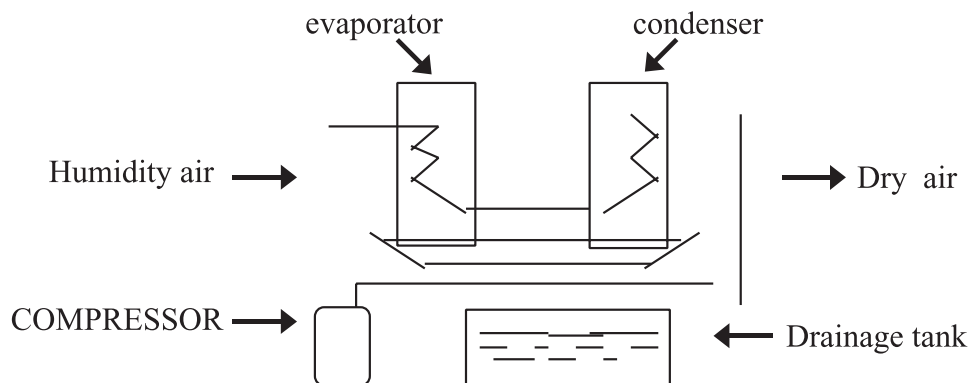
1. Fan motor:(include low speed and high speed)
2. Compressor
3. Full lamp
4. Power lamp

#### C. The input parameter of the PCB

1. Temperature of the environment: T Ring(Detect only before the starting of the compressor)
2. Temperature of the tube of the Evaporator :T Tube(the same tube temperature sense as T Ring)
3. Liquid switch: S Liquid
4. Quick detect switch
5. Work mode of the main switch

D. Work voltage      230V                      Frequency      50Hz

#### E. Systematic diagram of the dehumidifying cycle



#### F. The way of the control in each mode

This unit have only one Main Switch, including OFF,LOW and HIGH three sites.

When the unit is connected with power, the power lamp light.

1. OFF: turning the control switch to “OFF”, the unit will stop running.
2. Low: Turn the control switch to “Low”, compressor will start if only the condition permits, and the fan motor will run at low speed.
3. High: Turn the control switch to “High”, compressor will start if only the condition permits, and the fan motor will run at high speed.

#### G. Protect function

1. Work range: set  $T1=4^{\circ}\text{C}$ ,  $T2=35^{\circ}\text{C}$ , when  $T\text{ Ring} \leq T1-1^{\circ}\text{C}$  or  $T\text{ Ring} \geq T2+1^{\circ}\text{C}$ , compressor don't start in order to protect the units from working in bad environment, and fan motor maintain running state.

## Dehumidifier

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2. 3 minutes protect : After you stop running, put through power supply to renew start, fan motor startup, compressor automatically delay 3 minutes to startup.
3. Water full protection: when water is full in water tank, Full Lamp light, compressor will stop, and fan motor maintain running state.
4. Anti-freezing function : If the compressor has run for 10 minutes, and detect T Tube $\leq$ -5°C for continuous 3 minutes, compressor will stop, and Fan motor maintain running state.
5. Tube Temperature Sensor Protect : When detect T Tube $\leq$ -20°C or T Tube $\geq$ 80°C, system run into OFF mode, only the power lamp light.

### H. Quick detect function

When S quick detector is in short circuit, running one second will consider as one minute. But in anti-freezing mode, the quick detector will work in this way : after compressor's starting for 20 seconds, if checked tube temperature $<$ -5°C, anti freezing starts work, compressor stop and fan motor maintain running state. The compressor will not start until detected tube temperature $>$ 4°C. This function only use for test, in usual time S quick detector should break.