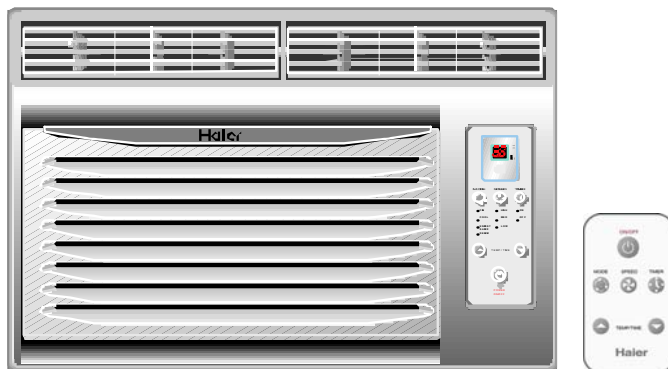


Haier

Domestic air conditioner

SERVICE MANUAL



Model
ESA3087

● Feature

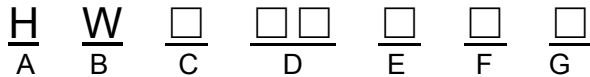
- Top Discharge Airflow Pattern
- Ultra-Quiet Operation
- Modern Family-look Design
- Safety Power Cord
- 3 Cool Settings, 3 Fan Settings
- Easy-to-install Mounting Kit
- Easy-Access Washable Filter
- Digital Time & Temperature Display
- 24 Hour on/off Timer

Content

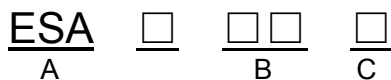
1. Product Code Illumination and Series introduction.....	3
2. Specifications.....	4
3. Safety and Precaution.....	5
4. Warning and Cautions.....	6
5. Installation and Accessory Parts.....	8
6. Parts and Functions.....	13
7. Abnormity Diagnose.....	15
8. System Flow Chart.....	17
9. Circuit Diagram.....	18
10. Wiring Diagram.....	20

1. Product Code Illumination and Series introduction

1). Model identification:



- A: Abbreviation of Haier
- B: Abbreviation of Window
- C: R - Remote Control
F - Mechanical Control
- D: Nominal cooling capacity (BTU/h) with the first two numbers based on one thousand unit
- E: The type of power supply
X - 115V / 60HZ
V – 230/208V / 60HZ
- F: Function code
C - Cooling only
H - Heating pump or Electric heater
- G: Design code



- A: Abbreviation of Energy Star
- B: Nominal cooling capacity (BTU/h) with the first two numbers based on one thousand unit
- C: Design code

Examples:

HWRO8XC7

It represents remote control window air conditioner. Cooling capacity is 8000BTU/h and the power supply is 115V /60Hz.

2). Standard situation/conditions

No.	Operating condition	Indoor air state		outdoor air state	
		D.B. °C	W.B. °C	D.B. °C	W.B. °C
1	Nominal cooling	26.7	19.4	35	23.9
2	Nominal heating	/	/	/	/
3	Nominal electrical Heating	/	/	/	/

2. Specification

Item		Unit	ESA3087
Cooling capacity		BTU/h	7800
Heating capacity		BTU/h	/
Power supply			1PH/115V/60HZ
Cooling	Power input	W	720
	Running current	A	6.7
	EER	BTU/(h·W)	10.8
Heating	Power input	W	/
	Running current	A	/
	COP	BTU/(h·W)	/
Sound Level	Indoor side	dB(A)	52
	Outdoor side	dB(A)	62
Net dimensions	Height	inches	12 7/16
	Width	inches	18 1/2
	Depth	inches	15 1/2
Packaging dimensions	Height	inches	15
	Width	inches	20 1/2
	Depth	inches	17 3/4
Weight	Net	lbs	50
	Gross	lbs	55
Compressor	Type		Rotary
	Model	/	2R11S3R126A
	Running cap. For comp.	μF/V	35/250
Pressure	Hi-Pressure	Psig	380
	Low-Pressure	Psig	170
Refrigerant	Model	R22 or R410A	R22
	Charge	OZ	18.3
Fan	Type	Indoor unit	/
		Outdoor unit	/
	Fan Speed	Indoor unit	r/min
Air volume		CFM	210
Moisture removal		Pints/hr	2.5


3. Safety and Precaution

WARNING: Following these basic precautions will reduce the risk of




fire, electrical shock, injury or death when using your air conditioner.

1) Air conditioner must be connected to proper electrical outlet with the correct electrical supply. (See table)


 2) Proper grounding must be ensured to reduce the risk of shock and fire.

DO NOT CUT OR REMOVE THE GROUNDING PRONG.

If you do not have a three-prong electric receptacle outlet in the wall, have a certified electrician install the proper receptacle. The wall receptacle **MUST** be properly grounded.

 3) **DO not use if power cord is frayed or damage. Also avoid using if there are cracks or abrasion damage along the length, plug or connector.**

 4) **DO NOT USE AN ADAPTER OR AN EXTENSION CORD.**

 5) When installing your air conditioner in a window, make sure the window is strong enough to hold the weight of the air conditioner. You also want to secure and correctly install your air conditioner properly to prevent it from falling. Extra brackets or support may be required depending on your window.

6) Do not block airflow inside or outside the air conditioner with blinds, drapes, protective covers, shrubs or bushes.

7) Be careful of sharp edges on the front and rear fins of the unit that could cut and cause serious injury.

8) Be careful when lifting the air conditioner to install or remove the unit. Always use two or more people for this.

9) Always unplug the air conditioner before servicing it or moving it.

4. Warning and Cautions

WARNINGS: Following the safety messages is very important.



These messages can save you from being injured or killed. Warning symbols alert you to be careful and means Danger. Always follow instructions to be safe and reduce chances of injury or death. Warning and Danger signs will precede safety messages.

Electrical Safety

Grounding: This room air conditioner must be grounded. Grounding reduces the risk



of electric shock by providing an escape wire for the electric current. The power cord has a grounding wire with a grounding plug. Plug it into an outlet that is properly installed and grounded.

WARNING: Improper use of the grounding plug can result in a risk of electric shock.



Call a qualified electrician if you don't understand the grounding instructions or if you are not sure if the air conditioner is properly grounded. If the wall outlet is not grounded, please contact an electrician to have it replaced with a properly grounded outlet.

Do not, under any circumstances, cut or remove the third (ground) prong from the power cord.

Adapter Plug: We strongly advise against using an adapter plug.

Important:

Test power plug before each use:

1. Press "reset" button.
2. Press "test" button .Unit should trip.
3. Press "reset" button again for use.

DO NOT USE if above test fails.

If this device trips, the cause of the malfunction must be corrected before further use of the device.

Tips

- This air conditioner is designed for use in a double hung window.
- While installing unit be sure to tilt air conditioner 5 degrees outward to have the water drip outside the house.
- Install the unit on the north side, as that is normally the shaded side. This will enhance the operation of your unit.
- ⚠ ● The window has to be strong for installation. Extra brackets and/or support may be required depending on your window. (Brackets and supports not included in all models.)
- ⚠ ● Measure the window before installing. If the window is too big for the unit you may require professional installation. A Use the correct electric voltage and proper ampere for the unit to run effectively.
- ⚠ ● Only let a certified electrician modify your electrical outlet.
- Use a dedicated line for the operation of your air conditioner to avoid the possibility of an electrical surge.









Energy Saving Guide

- When installing your air conditioner, make sure to seal all areas where there is a possibility of air leakage.
- The airflow should not be blocked, either inside by curtains, drapes or furniture, or outside by shrubs or bushes.
- Do not needlessly use electrical light or other appliances that produce heat.
- Keep the blinds and drapes drawn on all other windows.
- While cooking, use an exhaust fan in the kitchen to remove the excess heat.
- Always use the correct BTU size air conditioner to cool the room to attain optimum efficiency.

5. Installation and Accessory Parts

Check the following before you install your air conditioner:

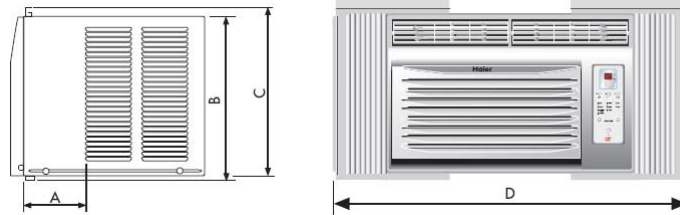
- 1) The unit is free of all obstructions inside and outside the room e.g. drapes, curtains, Furniture, plants, shrubs, bushes, trees, other structures like building, garage etc. Air conditioner must have clear unobstructed airflow through the condenser to remove the heat.
- 2) The window is strong enough to hold the weight of the air conditioner. Extra brackets or supports may be needed depending on your windows. Brackets or Supports not provided in all models.
- 3) The window sill and track are strong enough to hold the weight of the air conditioner.
- 4) The wall is strong enough to hold the unit. Extra brackets or supports may be needed depending on the wall. (Brackets or Supports not provided in all models).
- 5) There is adequate and proper power supply near the air conditioner.

-  6) DO NOT use adapter plugs.
-  7) DO NOT use extension cords.
-  8) Do NOT cut or remove the ground prong.
-  9) DO NOT modify the plug or the electrical wall outlet in any way. If plug does not fit the electrical outlet have a certified electrician do the necessary change.
-  10) NOT connect electrical power to the unit before installation.
-  11) DO NOT use if power cord is worn out, frayed or damaged. Avoid using if there are cracks or abrasion damage along the length, plug or connection.
-  12) DO NOT install into any existing cabinet or sleeve which does not have side and top air vents.
-  13) Be careful of exposed sharp edges of the cabinet and sharp coils (fins) on the back of the unit that could cut and cause serious injury.

Installing Unit into A Window

Window Opening Requirements

The air conditioner is designed to fit into double or single hung sash type windows. Each of the units comes with an installation kit that provides adjustable mounting louvers to fill the gaps between the sides of the unit and the window frame. The chart below reflects the dimensions of the units with and without installation kits. Measure your window opening width and compare it to the chart below to ensure that it meets the minimum and maximum window width requirements.



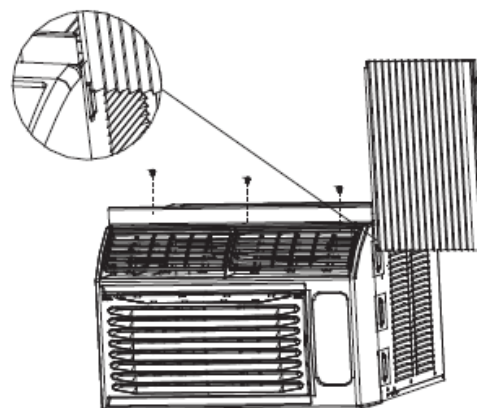
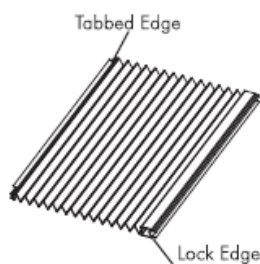
Dimension \ Model	ESA3087
A (inch)	5 3/25
B (inch)	12 3/5
C (inch)	13 3/8
D (inch) Max	42 5/16
D (inch) Min	30 1/8
Case High	18 21/32
Case Width	16 9/16
Case Depth	12 1/4

1 ASSEMBLE CURTAINS/TOP RAIL

Install top rail with 3 short screws 13/32".

Place tabbed side of curtain in track on side of air conditioner cabinet, and slide down the track until the curtain is even on top and bottom.

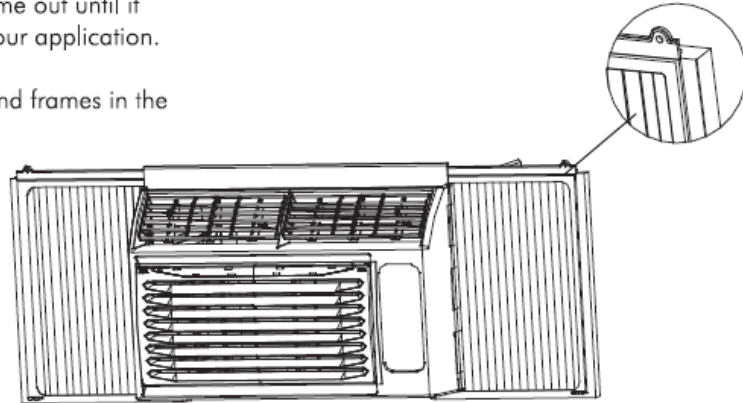
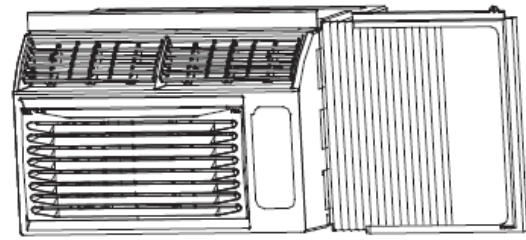
Caution: Never expose plastic front or grille to extreme temperatures.



2 ASSEMBLE LEFT FRAME / RIGHT FRAME

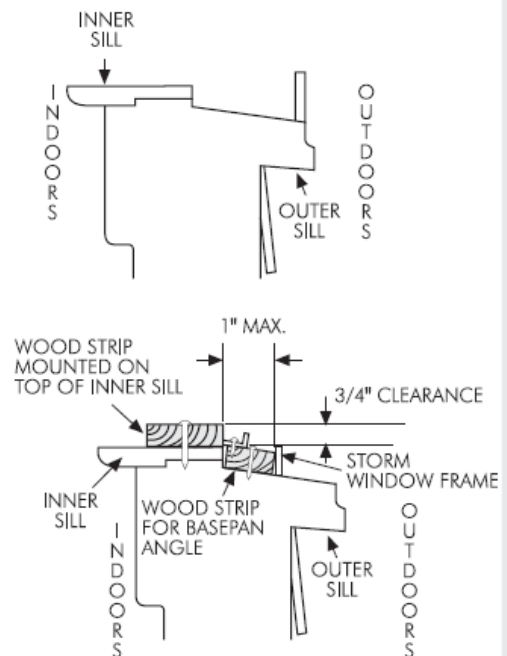
Slide the left frame onto the air conditioner cabinet using the tracks on the top and bottom of the unit. Slide the frame as close to the air conditioner as possible so that the curtain locks into place. Gently pull the frame out until it is the correct length for your application.

* Install the right curtains and frames in the same way



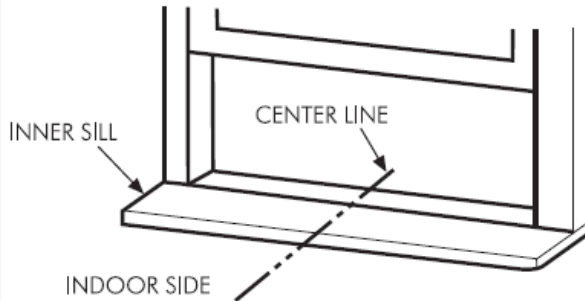
3 PREPARE WINDOW FOR INSTALLATION

1. This unit is designed for installation in standard double hung windows with actual opening widths of 25" to 36" . The upper and lower sash must open sufficiently to allow a clear vertical opening of 14" from the bottom of the sash to the window stool.
2. If storm window presents interference, fasten a 2" wide wood strip (not included) (OUTER SILL) to the inner window sill across the full width of the sill. The wood strip should be thick enough to raise the height of the window sill so that the unit can be installed without interference by the storm window frame (STORM WINDOW FRAME) or wood strip (OUTDOORS) to help condensation to drain properly to the outside.
3. Install a second wood strip (approximately 6" long by 3/2" wide and same thickness as first strip) in the center of the outer sill flush against the back off the inner sill. This will raise basepan angle .
4. If the distance between STORM WINDOW FRAME and WOOD STRIP MOUNTED ON TOP OF INNER SILL is more than 1", two of wood strips are not necessary.



4 LOCATING UNIT IN WINDOW

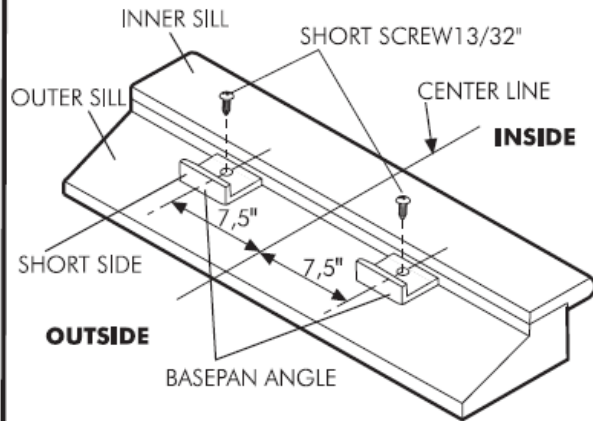
Open the window and mark center line on the center of the inner sill.



5 ATTACH BASEPAN ANGLE

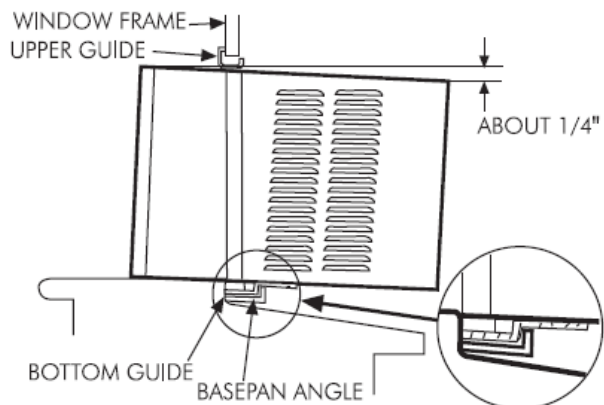
Install the basepan angle behind the inner windowsill, with the short side of basepan angle as shown. Use the 2 short screws 13/32" provided.

The basepan angle helps to hold unit securely in place. Be sure to place basepan angle edge flush against back of inner sill.



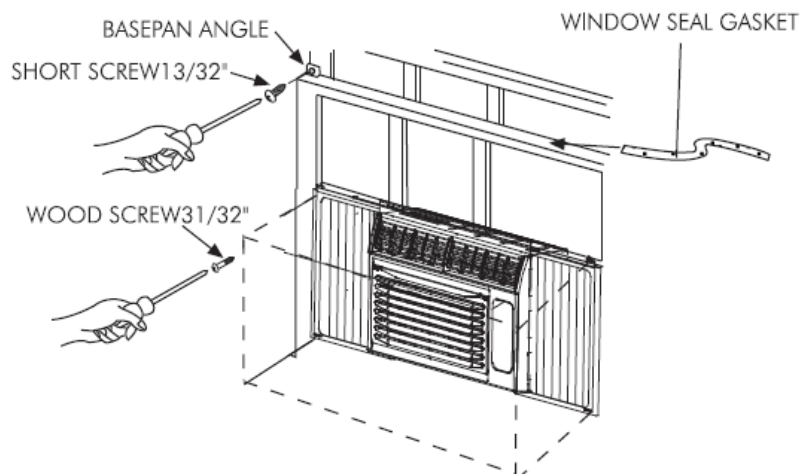
6 INSTALL THE AIR CONDITIONER IN THE WINDOW

Carefully lift the air conditioner and slide it into the open window. Make sure the bottom guide of the air conditioner drops into the notches of the basepan angle. While steadying the air conditioner, carefully bring the window sash down behind the upper guide of the air conditioner.

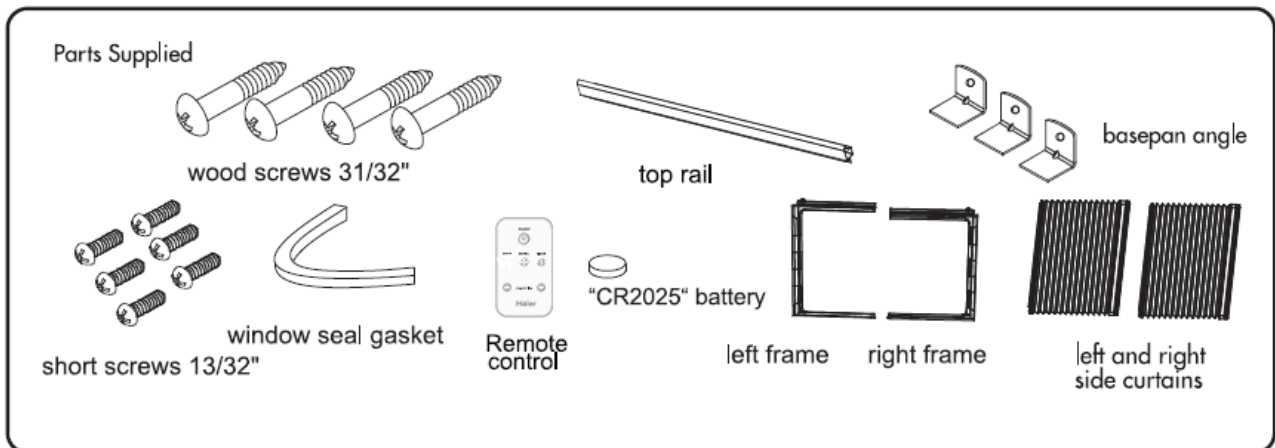


7 INSTALL THE SEAL GASKET AND SASH LOCK

Extend the side curtains to fill the window opening using 4 wood screws 31/32" to secure them. Cut the seal gasket to the window width. Stuff the sash seal between the glass and the window to prevent air and insects from getting into the room. Fasten the basepan angle, using a short screw 13/32".



Parts

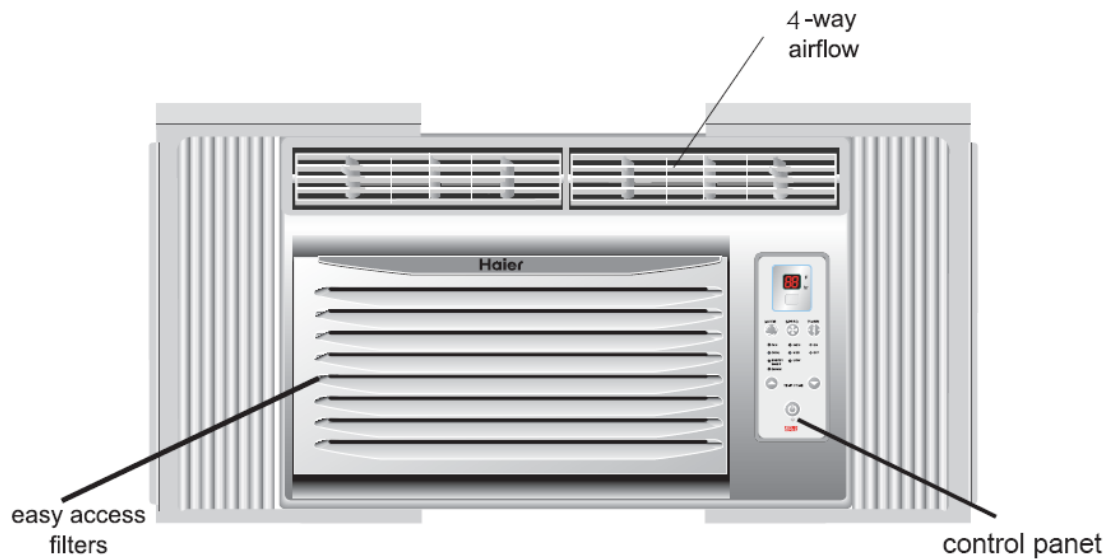


Tools

You will need to have the following tools to help you in the installation of your air conditioner.

- Scissors
- Phillips Screwdriver
- Standard Screwdriver
- Pliers
- Wrench
- Drill and Drill Bits
- Tape Measure
- Gloves
- Level
- Sockets

6. Parts and Functions



1. Thermostat

This allows you to adjust the temperature of the air--the lower the setting, the cooler the air temperature. With this you can set the temperature to your desired comfort level. You can set the temperature between 61°F and 86° F.

2. Fan Speed

With this you can control the fan speed as well as the A/C (cooling) speed. You have 3 levels of A/C Speed to set at your desired level. LO will circulate air at the lowest velocity, MED at medium velocity and HIGH will circulate at the maximum, velocity. You have 3 levels of Fan Speed to set at your desired comfort level: HIGH, MED and LOW.

3. Function

Your air conditioner has 4 Functions.

a) COOL

Here the air conditioner will operate the compressor and the desired fan speed set to give you cold air for your comfort.

b) FAN

You can run the fan without the AC function on cooler days. The fan can be set to run at 3 speeds as desired.

c) DEHUMIDIFY

This enables your air conditioner to operate as a dehumidifier as well. It will remove the excess moisture from the air to keep your room at a comfortable, dry stage. You can use this feature alone in case you do not wish to use the air conditioner.

d) ENERGY SAVER

When this feature is "On" , the fan will shut off three minutes after the compressor cycles off. This will reduce energy consumption and noise. When the compressor turns back on, the fan will turn on at the same time. In the "Off" position, the fan will not shut off

when the compressor cycles off.

4. Timer

Your air conditioner can be set to go on or off at your desire. This can be programmed up to 24 hours in advance.

5. 4-Way Air Flow

The air directional louvers let you control the direction of the airflow to the desired direction. The airflow can be directed up-down-right side-left side.

6. Window Install Kit

This kit enables you to install the air conditioner in a double hung window. Extra brackets or support may be needed, depending on your window.

7. Remote Control

This fully functional wireless remote allows you to operate your air conditioner from a distance. You need not get up to change the settings or the functions, or to turn the unit on or off.

8. LED Display Electronic Control Panel.

The 4-function LED displays Room Temperature, Temperature Setting, Timer Setting and Time Remaining to Stop/Start the unit. Electronic Control Panel lets you set the temperature to the exact temperature you desire.

9. Electrostatic Filter (not all models)

Being constructed of high efficiency purifying substance, active carbon fabric, electrostatic fabric, electrostatic active carbon net and other materials, this air conditioner purifies the air effectively. Its wavy structure increases the capability to filter dust and smoke effectively.

Due to the retention of active carbon, it has a high purifying speed capable of strong airflow.

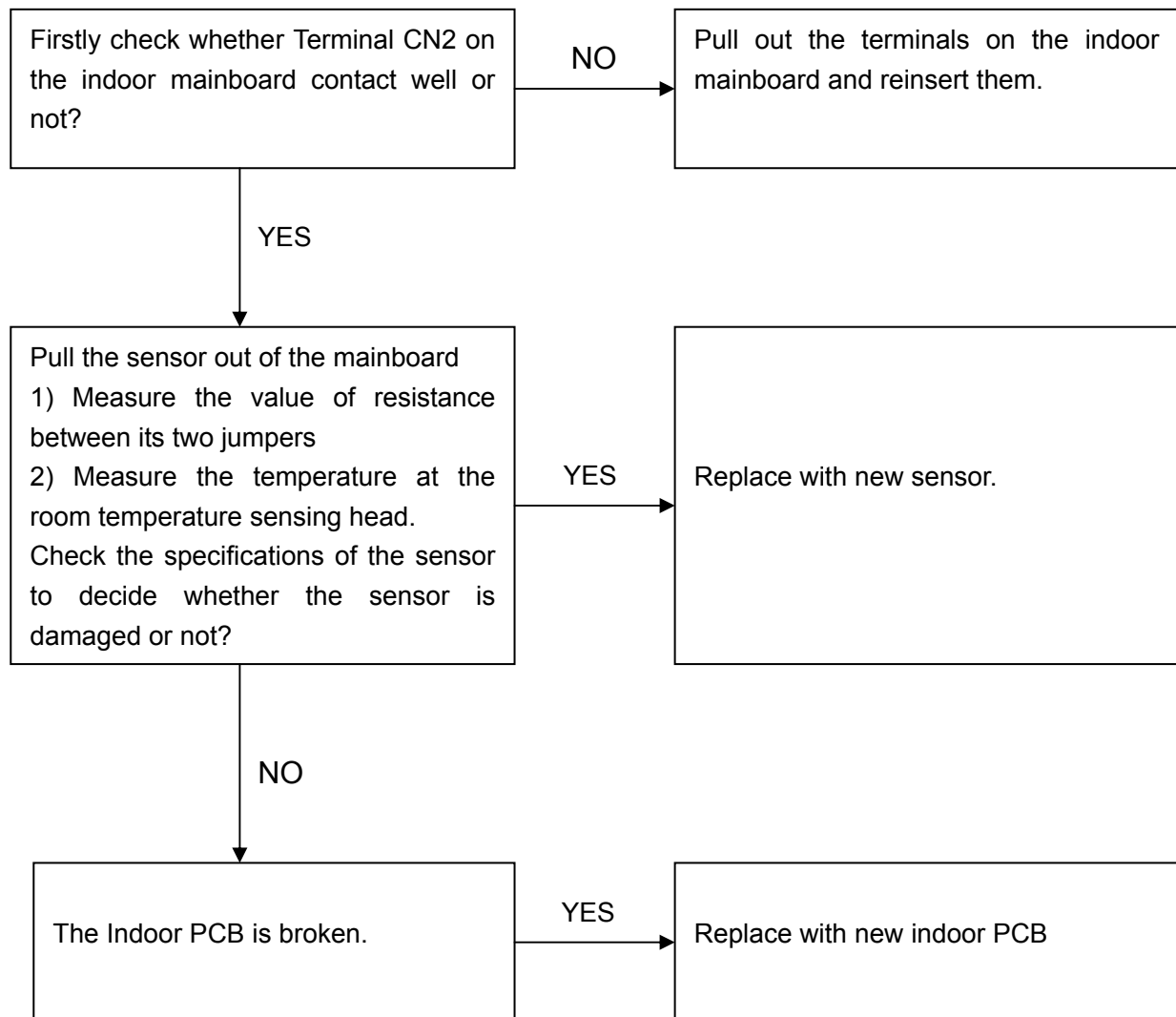
10. How The Unit Drains

On humid days with the air conditioner in use, moisture may collect on the pan or the bottom of the air conditioner. If the unit is positioned properly, the moisture will gather towards the back of the unit. This will not affect the operation of the unit and the moisture will evaporate in time. Occasionally the moisture will flow over the back of the pan, but this will not affect the operation of the unit. Never drill holes in the pan under any circumstance.

7. Abnormity Diagnose

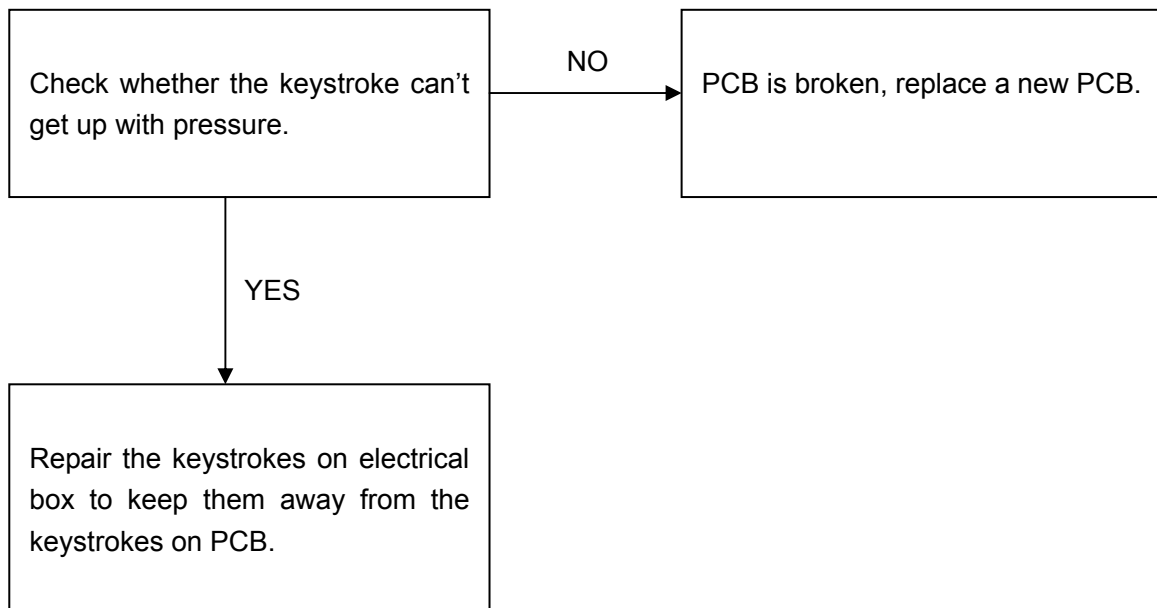
1. Sensor Diagnose:

2 seconds after the sensors open circuit or short circuit, the unit will turn off automatically and the LED will show E0 until the sensors resume.

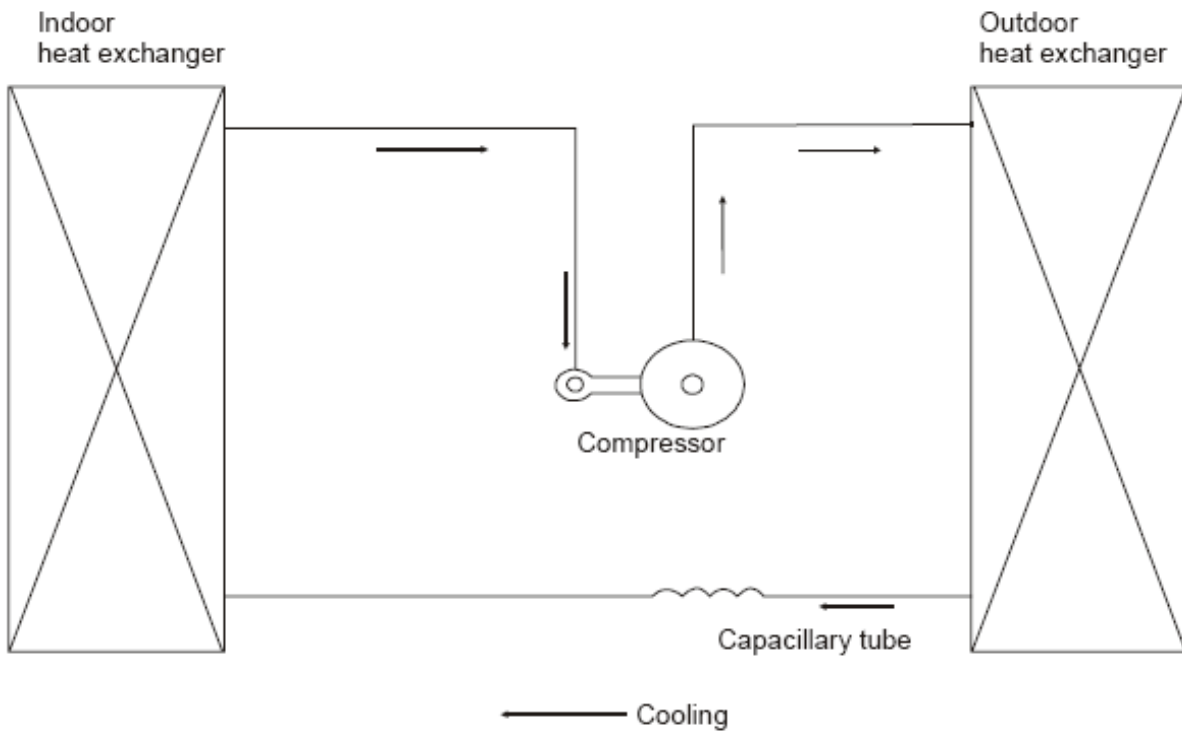


2. Keystroke circuit error diagnose:

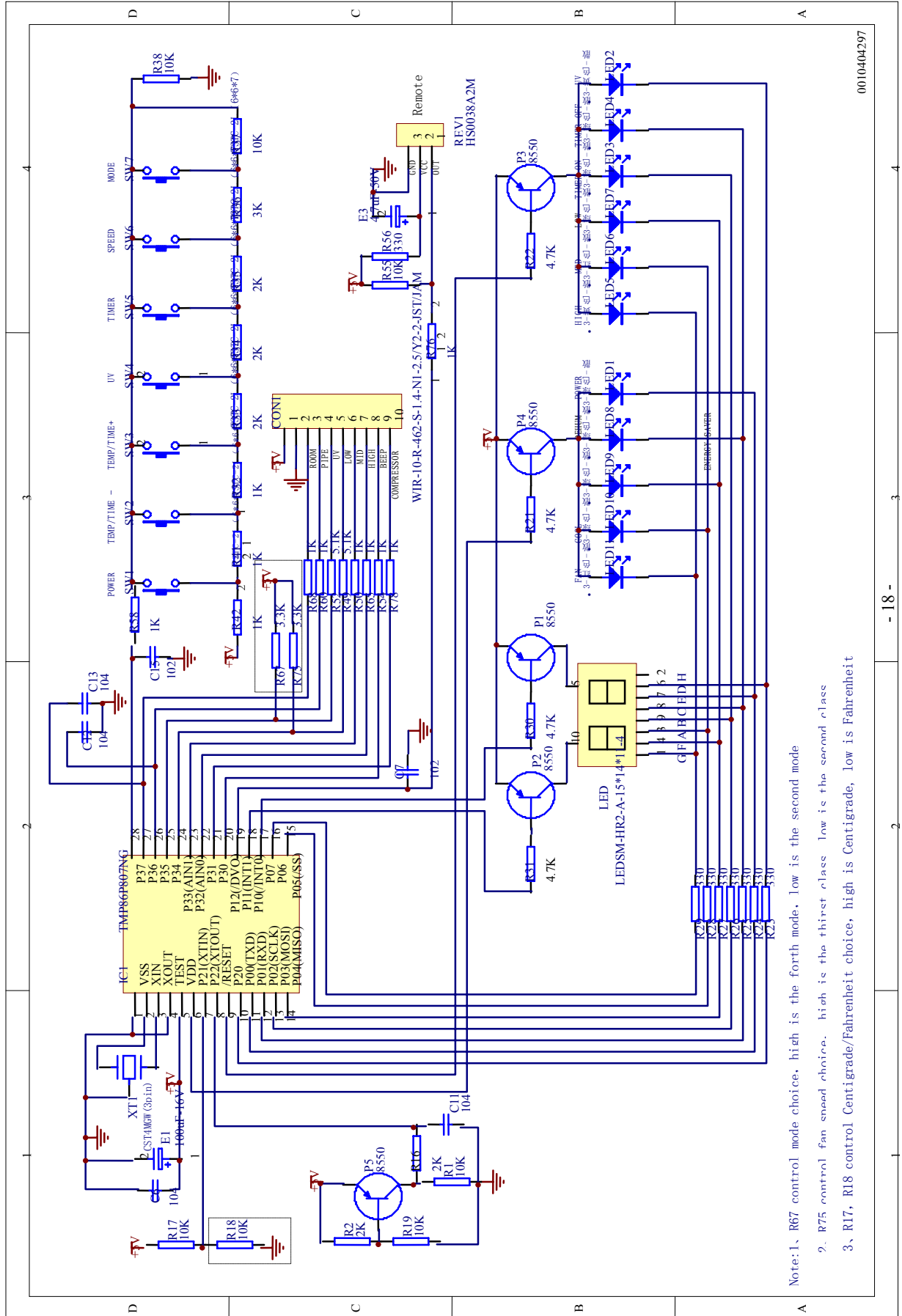
When power on for the first time, the PCB will check the keystroke circuit, if the sampling value is different with the theory value, the LED will show E1, which means failed keystroke circuit. The keyboard is locked and so invalid, but the remote control is working normally.



8. System Flow Chart

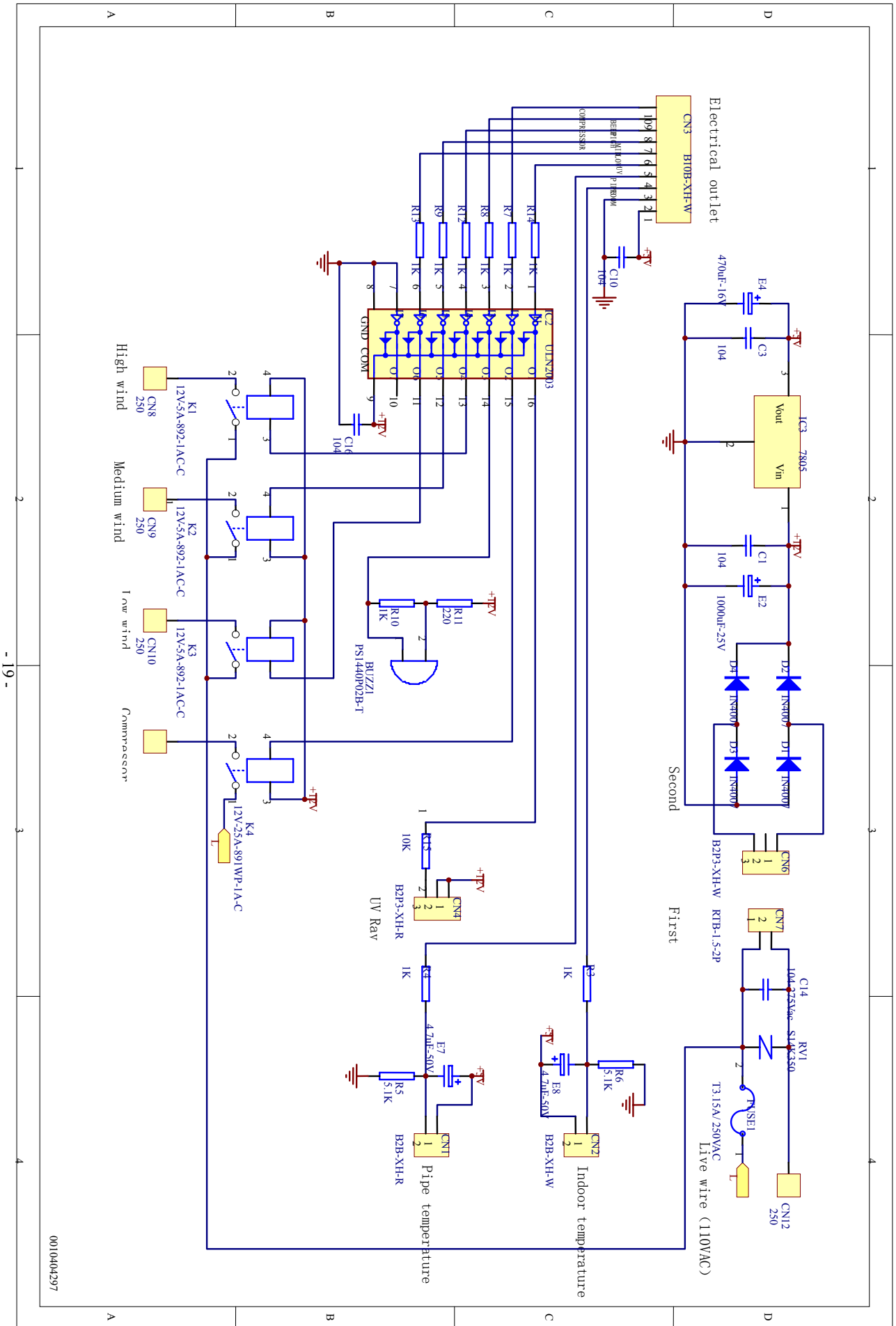


9. Circuit Diagram

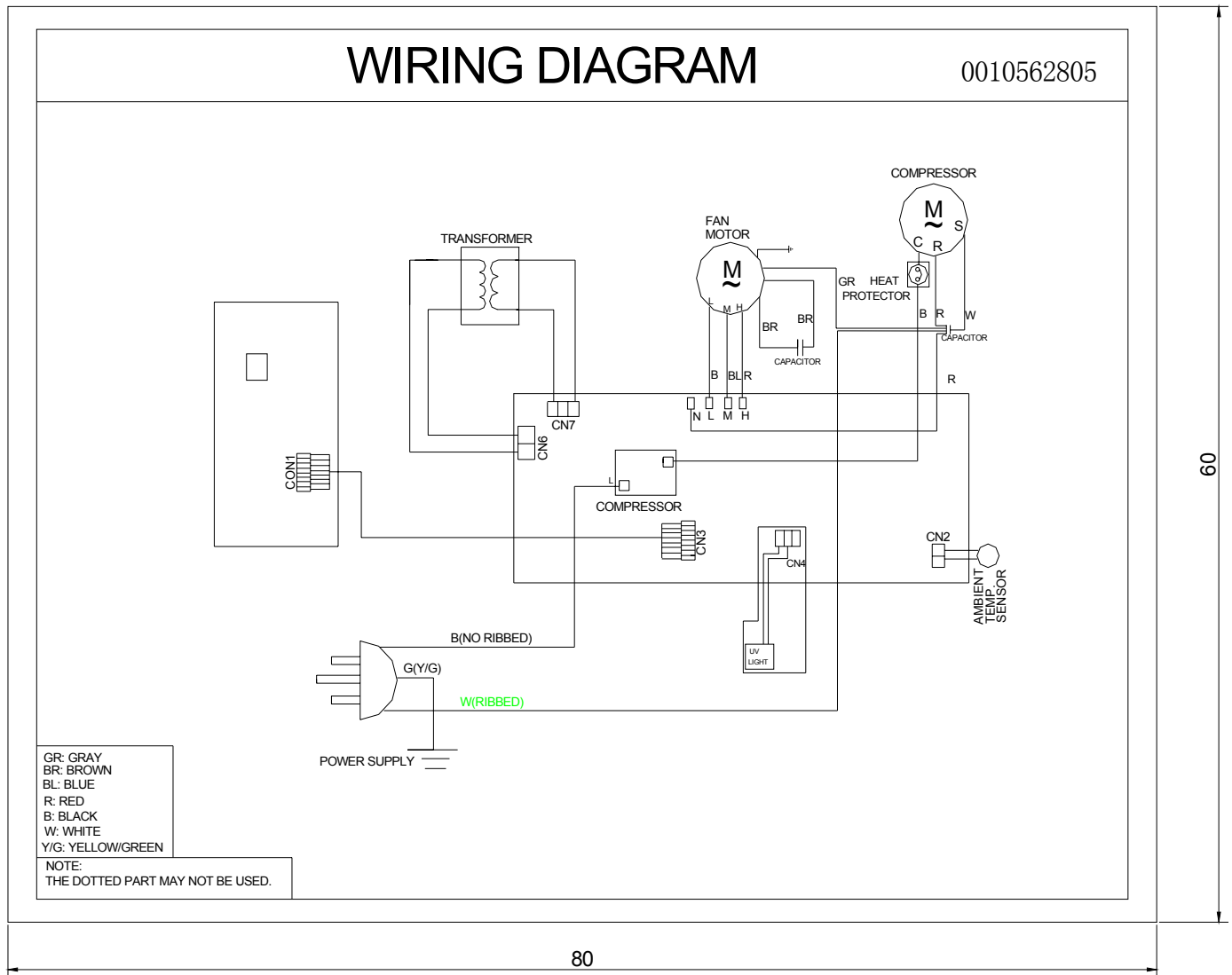


- Note:1. R67 control mode choice, high is the fourth mode, low is the second mode
- 2. R75 control fan speed choice, high is the third class, low is the second class
- 3. R17, R18 control Centigrade/Fahrenheit choice, high is Centigrade, low is Fahrenheit

0010404297



10. Wiring diagram



Sincere Forever

Haier Group
