



**4-way Cassette
Indoor Unit**

Part 1 General information

1. Model Names

1.1 Indoor units

Model name	Dimension (W×H×D) (mm)	Net/Gross weight (kg)	Power supply
Round-flow Cassette			
standard			
BCC36B13R	840×230×840	28/32	208~230V/1Ph/60Hz
BCC60B13R	840×285×840	31/35	208~230V/1Ph/60Hz

2. External Appearance

2.1 Indoor Units



3. Features

3.1 High quality coils

The coil is constructed of advanced inner grooved copper tube and aluminum fins.



3.2 Low operation sound level: Well-known stable and quiet running fan motor.

3.3 Well-known compressor, Sanyo & Hitachi.

3.4 Compact design: Smaller dimension and larger stuffing capacity.

3.5 Universal outdoor unit design.

Round-Way Cassette Type (Standard)

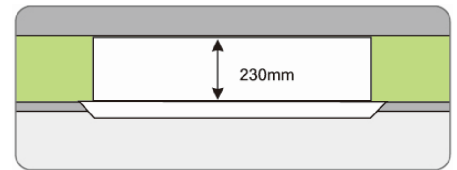
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1.Features

- 1. Brand-new panel design. Indoor unit use uniform panel, simple and convenient. Simple, fealty and voguish appearance suit for different requirements, it's mostly used for office, shopping center, restaurant, meeting room etc.

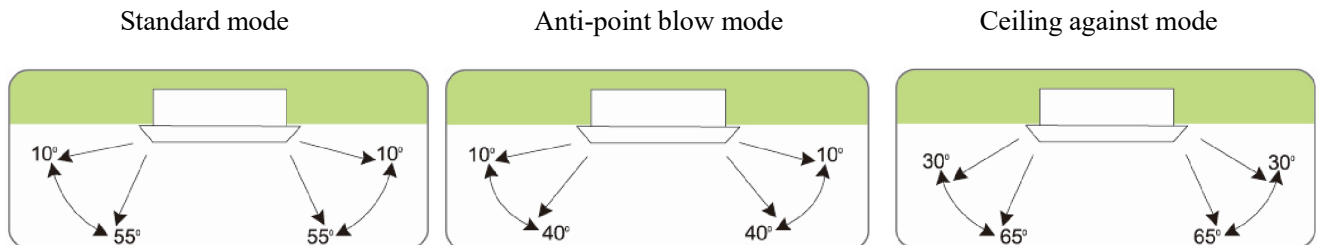


- 2. Ultra-thin body design, the min. height is only 230mm, save installation space.



- 3. Round way air flow, cool air can reach each corner of the room, providing a comfortable environment.

- 4.Intelligent auto-swing function, three modes for choice.



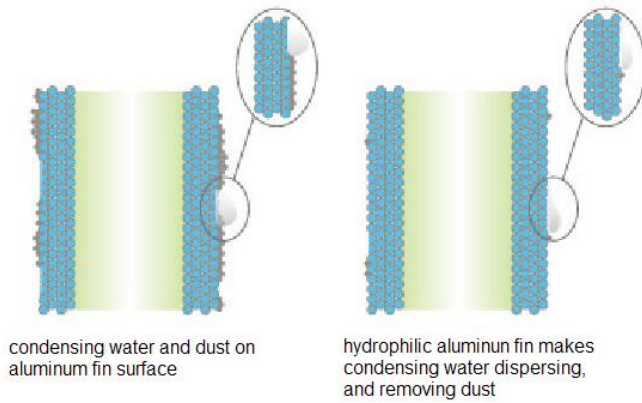
- 5. 3-speed fan motor, meet for different requirements.



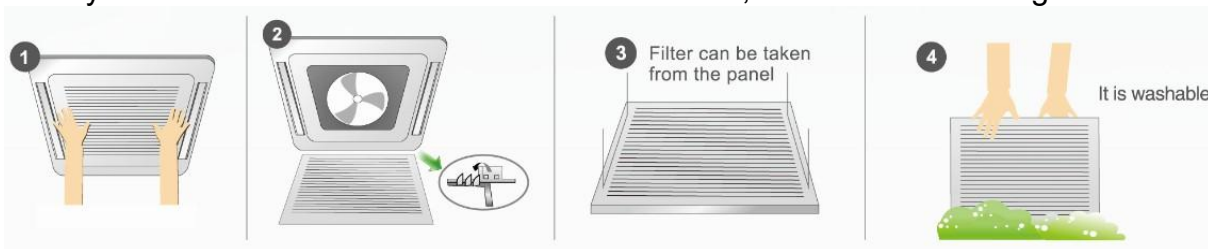
(6)New streamlined fan design.



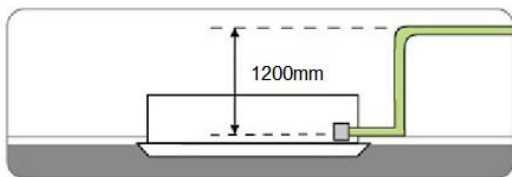
6. Energy saving and healthy, adopting hydrophilic aluminum fins increasing heat-exchange efficiency.



7. Easy and convenient installation and maintenance, washable filter design.



8. Built-in water pump, water head up to 1200mm (Compact type, 700mm).



9. Fire resistance design, the E-box with galvanized steel built-in body easy for maintenance.



10. Add 4 interfaces in body, can be connected with duct to another room. Fresh air makes air quality healthier and more comfortable.

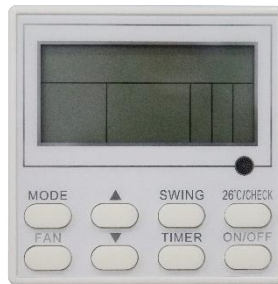


11. Multi protection and auto-restart function.

12. Standard for wireless controller; option for wired controller.



Standard



optional

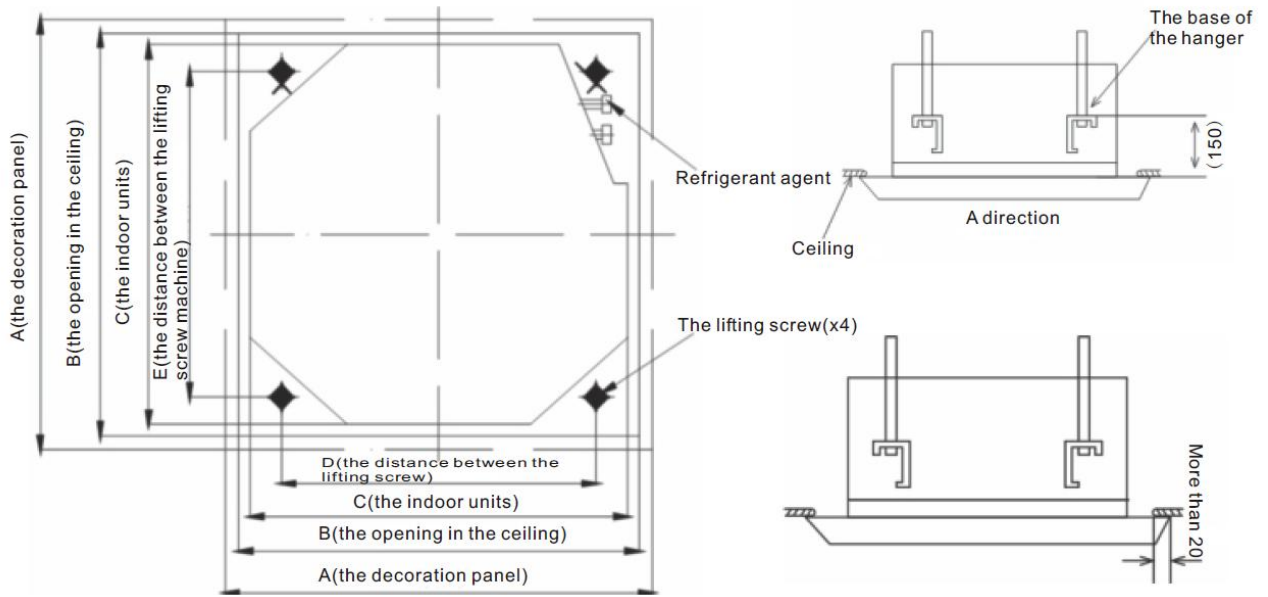


2. Specifications

Model			BCC36B13R	BCC60B13R
Code			821028900052	821030100026
Indoor power supply		V/Ph/Hz	208~230/1/60	208~230/1/60
Cooling	Capacity	Btu/h	36000	60000
		W	10548	17580
	Input	W	4125	6912
	Rated current	A	17.5	29.23
	Input(Indoor unit)	W	150	180
	Rated current(Indoor unit)	A	0.7	0.8
	EER	W/W	2.56	2.54
Indoor fan motor	Brand		Kaibang	Kaibang
	Model		YDK-45Q-8P2	YDK-80Q-8P2
	Input	W	102	160
	Capacitor	μF	2.5	4
	Speed(Hi/Me/Lo)	r/min	850/730/580	800/750/650
Indoor coil	Number of rows		2	2
	Tube pitch(a)xrow pitch(b)	mm	21×13.37	21×13.37
	Fin spacing	mm	1.45	1.45
	Fin type		Hydrophilic	Hydrophilic
	Tube outside dia. and type	mm	Φ7	Φ7
			inner grooved	inner grooved
Number of circuits		8	12	
Indoor air flow(High speed)		m ³ /h	1200	1900
Indoor noise level		dB(A)	45~52	51~57
Indoor unit	Dimension(W*D*H)	Body (mm)	840×840×230	840×840×285
		Panel (mm)	950×950×50	950×950×50
	Packing(W*D*H)	Body (mm)	920×920×310	920×920×375
		Panel (mm)	1030×1030×105	1030×1030×105
	Net/Gross weight	Body /Kg	28/32	31/35
		Panel /Kg	5.4/8.0	5.4/8.0
Max pressure		MPa	4.0	4.5
Refrigerant type			R410A	R410A
Refrigerant piping	Liquid side/Gas side	mm	Φ9.52/Φ19.05	Φ9.52/Φ19.05
Drainage pipe		mm	25	25
Standard controller				
Operation temp		°C	16~32	16~32
Ambient temp		°C	18~43	18~43
Application area		m ²	40-70	60~105
Stuffing Quantity(20'/40'/40'HQ)		set	65/130/150	65/130/150

- Notes:**
- Nominal cooling capacities are based on the following conditions:
Indoor temp: 27°CDB, 19°CWB; Outdoor temp: 35°CDB; Equivalent ref. piping: 7.5m (horizontal)
 - Nominal heating capacities are based on the following conditions:
Indoor temp: 20°CDB; Outdoor temp: 7°CDB, 6°CWB; Equivalent ref. piping: 7.5m (horizontal)
 - Actual noise level may differ, depending on the room structure, etc, since these noise values are from an anechoic room.

3.Dimensions



Installation dimension unit: mm

Model (kBtu/h)	Dimensions(H)
For 18, 24 series	230
For 36, 48, 60 series	285

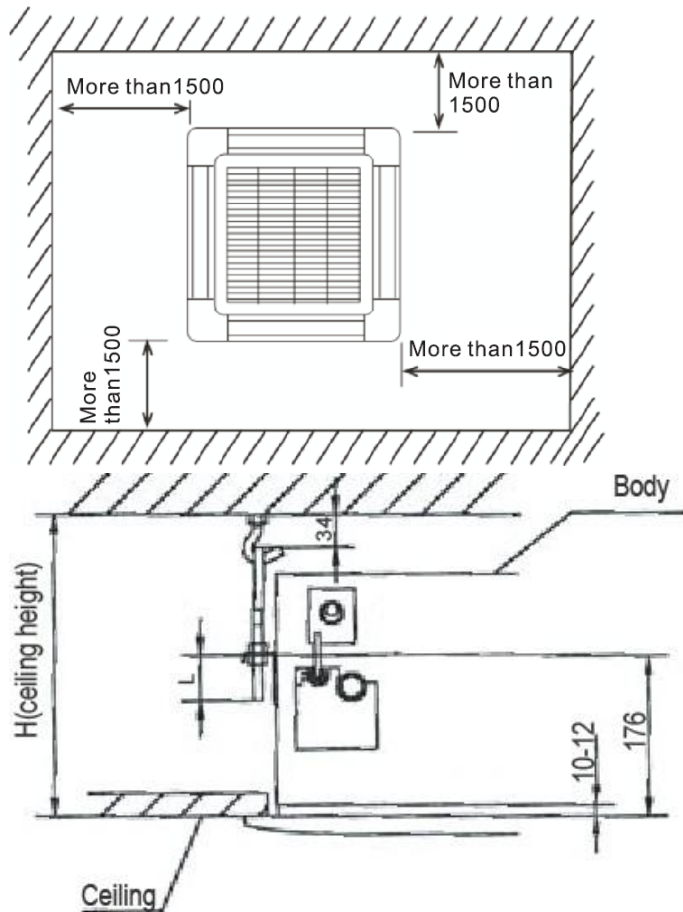
unit: mm

Model (kBtu/h)	Dimensions(H)				
	A	B	C	D	E
For 18, 24, 36, 48, 60 series	950	890*	840	680	780

4. Service Space

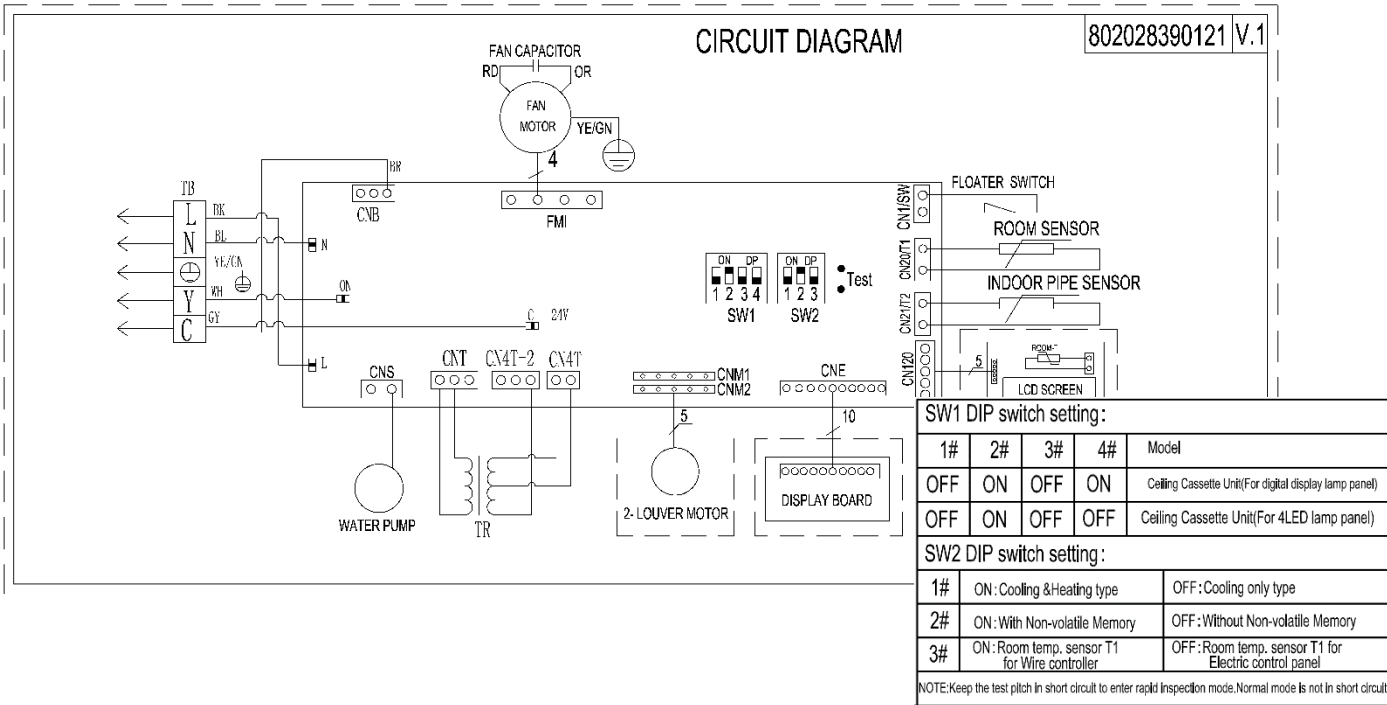
The indoor unit should be installed in a location that meets the following requirements:

- 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 pipe and drainpipe could be extracted out easily.
- There is no direct radiation from heaters.

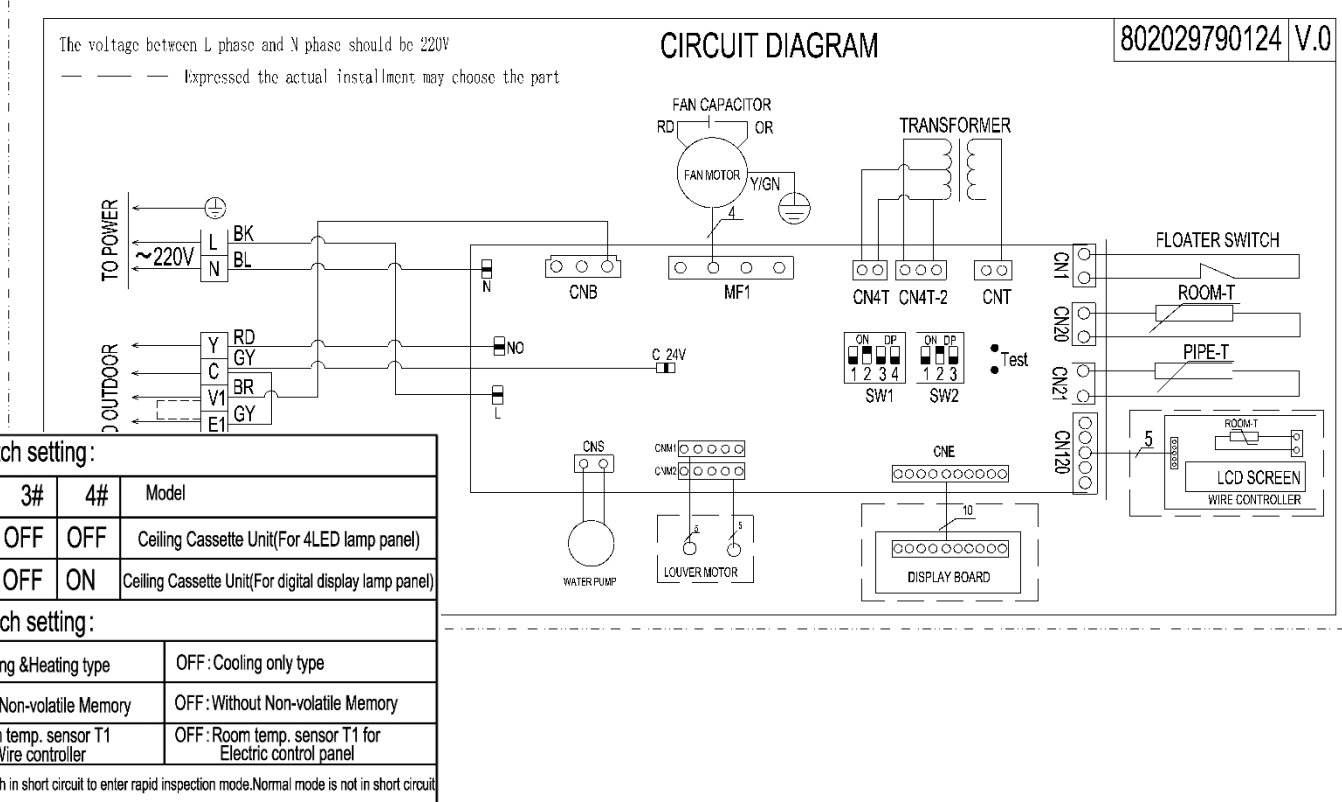


5. Wiring Diagrams

BCC36B13R



BCC60B13R



6. Electric Characteristics

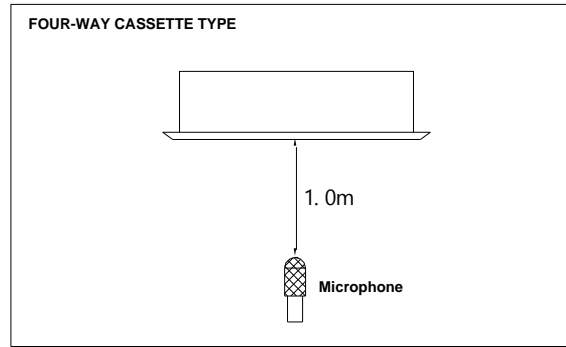
Model	Indoor Unit			
	Hz	Voltage	Min.	Max.
BCC36B13R	60	208-230V	187V	244V
BCC60B13R	60	208-230V	187V	244V

Remark:

MCA : Min. Current Amps. (A)

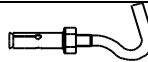







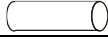




MFA: Max. Fuse Amps. (A)

7. Sound Levels



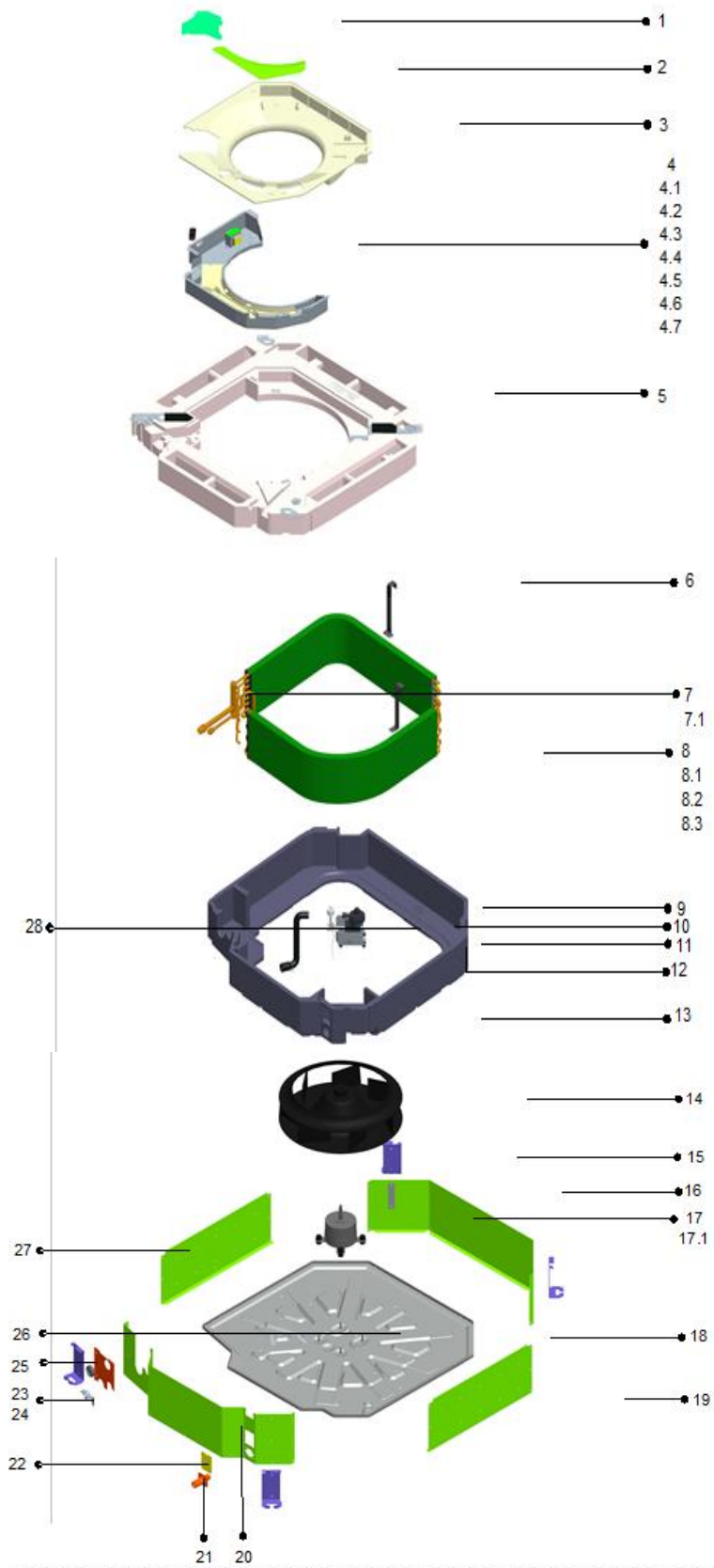
Model	Noise level dB(A)		
	H	M	L
BCC36B13R	52	48	45
BCC60B13R	57	54	51

8. Accessories

	Name	Shape	Quantity
Installation Fittings	1. Expansible hook		4
	2. Installation hook		4
	3. Installation paper board		1
	4. Bolt M5		4
Tubing & Fittings	5. Connecting pipe group		1
	6. Binding tape		1
	7. Soundproof/insulation sheath		2
Drainpipe Fittings	8. Out-let pipe sheath		1
	10. Tightening band		5
Protect Pipe Fittings	13. Wall conduit		1
	14. Wall conduit cover		1
Remote controller	15. Remote controller		1
	16. Mounting screw(ST2.9×10-C-H)		2
	17. Alkaline dry batteries (AM4)		2

9. Exploded View

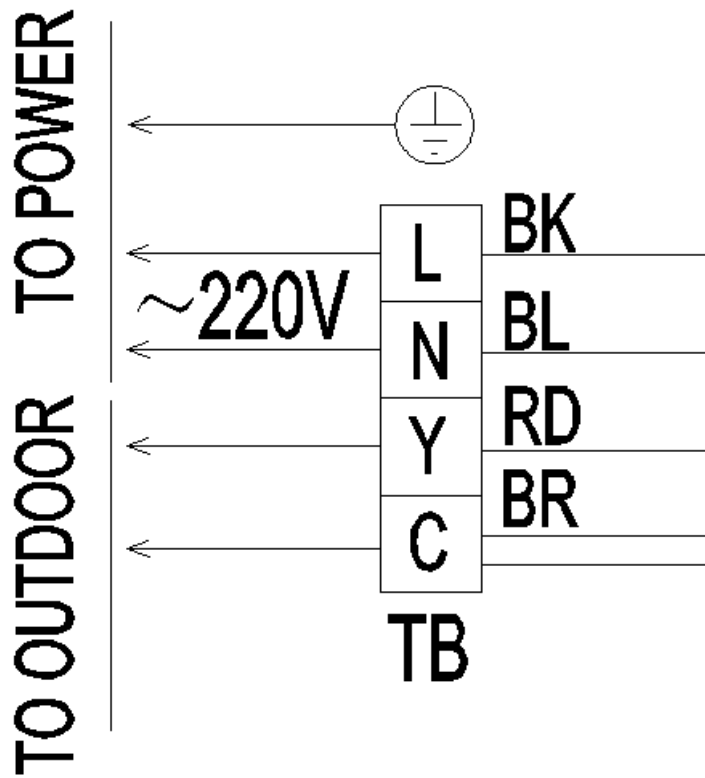
BCC36B13R / BCC60B13R



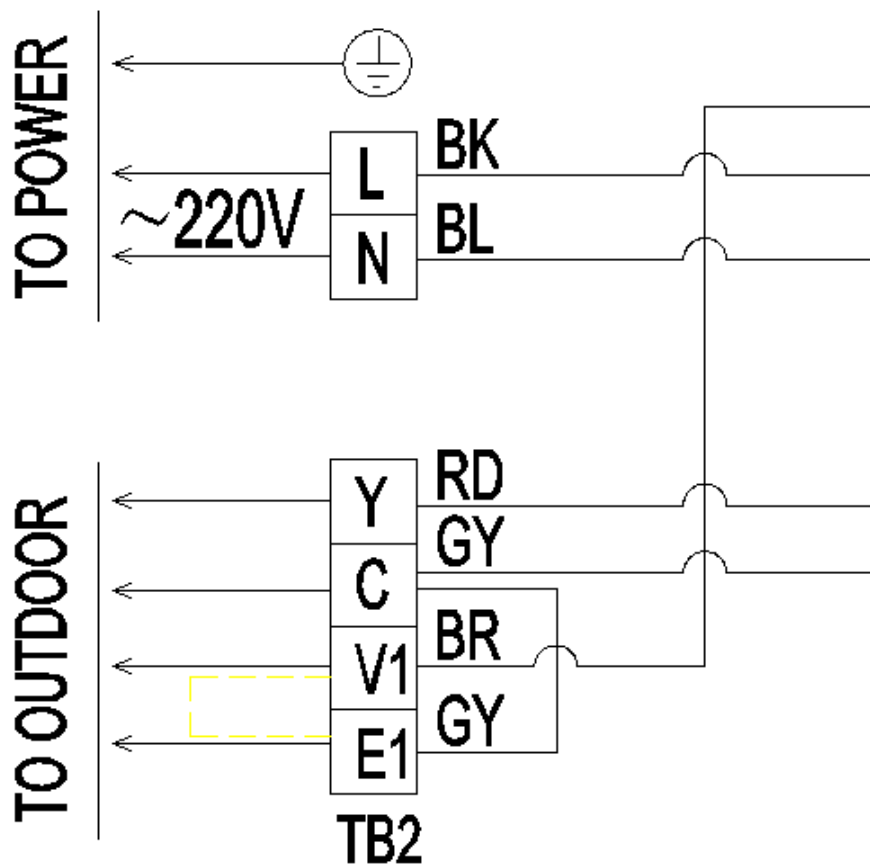
No.	Part Name	Quantity	No.	Part Name	Quantity
1	Warning panel	1	8.3.4	Installation tube for probe	1
2	Circuit diagram panel	1	9	Water pump	1
3	Small wind inlet guide	1	10	Liquid-level sensor	1
4	E-parts components	1	11	Water pump fan motor holder	1
4.1	E-parts box welding assy	1	12	Underlay for water pump support	3
4.2	No.3 groove clamp	1	13	Upper foam	1
4.3	(ROHS)Transformer	1	14	Centrifugal fan	1
4.4	Fan motor capacitor	1	15	Hanger	4
4.5	Terminal (DJ-75W-3PA)	1	16	Rear brattice	1
4.6	Terminal (DJ-75W-5PA)	1	17	Fan motor for indoor unit (YDK-55T-6)	1
4.7	Electric control board for indoor unit	1	17.1	Fan motor foot underlay	1
4.8	E-parts box	1	18	Chassis assy	1
5	Water pan assy	1	19	Right clapboard	1
6	Auxiliary fixing board for evaporator	2	20	Front brattice	1
7	Main fixing board assy	1	21	Discharge pipe joint	1
7.1	Main fixing board for evaporator	1	22	Side maintenance board for water pump	1
8	Evaporator components	1	23	Lower clamp	1
8.1	Rubber insulating pipe	1	24	Upper clamp	1
8.2	Insulating pipe	1	25	Valve panel	1
8.3	Welding parts for evaporator	1	26	Wire board	2
8.3.1	Collecting pipe assy for evaporator	1	27	Left clapboard	1
8.3.2	Distributing pipe assy for evaporator	1	28	Water outlet pipe	1
8.3.3	Evaporator	1			

10. Field Wiring

BCC36B13R



BCC60B13R



11. Troubleshooting

Fault Code Table

4LED Faults	Digital display	Failure description
Timer light flashing	E2	Ambient temperature sensor (T1) failure
Running light flashing	E3	Evaporator pipe temperature sensor (T2) failure
Defrost light flashing	E5	Condenser pipe temperature sensor (T3) failure
Warning light flashing	F5	Water fullfilled protection
Running light, defrost light flashing	E1	Indoor unit and wire controller communication failure
Running light, timer light flashing	P6	Indoor unit EEPROM failure
Defrost light, timer light flashing	F0	Indoor fan stall protection
Defrost light, warning light flashing	F2	Outdoor protection
	F7	outdoor unit over-current protection
Timer light, warning light flashing	E0	Indoor unit and outdoor unit communication failure
Running light, defrost light, timer light flashing	F3	High pressure protection
Defrost light, timer light, warning light flashing	F4	Low pressure protection
Running light, timer light, warning light flashing	F8	Outdoor unit exhaust temperature over-high protection
Running light, defrost light, timer light, warning light flashing	F9	Three-phase electricity phase sequence failure
Note: the flashing frequency for all above indication lights is 1HZ.		

E0: Indoor unit and outdoor unit communication failure

Solution:

- (1) Check the communication cable between indoor unit and outdoor unit, if it is short connection or broken;
- (2) Check the communication cable is connected corrected or not, if not, correct it;
- (3) If the cable and connection are both correct, check the connected lines from communication terminal to main board are corrected or not, if not, correct it
- (4) If all the above steps are done, still not solve change the indoor or outdoor main board

E1: Outdoor unit failure

Check the detail of failure at the outdoor unit.

E2: Indoor ambient temp. sensor fault (T1 sensor)

Solution:

- (1) Check the T1 sensor connection loosen or not, inset it firmly, if not solve, go to next step;
- (2) Take out the sensor, measure the resistance of the sensor, it is about $5K\Omega$ at $25^{\circ}C$, if not, replace it; if resistance normally, change the indoor main board.

E3: Indoor evaporator pipe temperature sensor (T2) failure

Solution:

- (1) Check the T2 sensor connection loosen or not, inset it firmly, if not solve, go to next step;
- (2) Take out the sensor, measure the resistance of the sensor, it is about $5K\Omega$ at $25^{\circ}C$, if not, replace it; if resistance normally, change the indoor main board

E5: Condenser pipe temperature sensor (T3) failure

Solution:

- (1) Check the T3 sensor connection loosen or not, inset it firmly, if not solve, go to next step;
- (2) Take out the sensor, measure the resistance of the sensor, it is about $5K\Omega$ at $25^{\circ}C$, if not, replace it; if resistance normally, change the main board

F2: Outdoor unit protection

Solution:

Follow the F3/F4/F8/F9.

F3: High pressure protection

Solution:

- (1) If the unit does not have high pressure switch, change the outdoor main board; if it has, go to next step
- (2) Take out the high-pressure switch, measure its resistance, it is about 0Ω , if not, replace it; otherwise go to next step;
- (3) Short connect the high-pressure switch port on the outdoor board, if it still shows P1, replace the outdoor main board; otherwise go to next step;
- (4) Connect the pressure gauge to test the high pressure, if it is real too high, may be cause by too much refrigerant or other gas getting inside the system

F4: Low pressure protection

Solution:

- (1) If the unit does not have low pressure switch, change the outdoor main board; if it has, go to next step
- (2) Take out the low-pressure switch, measure its resistance, confirm whether it is about 0Ω , if not, replace it; otherwise go to next step;
- (3) Short connect the low-pressure switch port on the outdoor board, if it still shows P2, replace the outdoor main board; otherwise go to next step;
- (4) Connect the pressure gauge to test the low pressure, if it is real too low, may be cause by lack of refrigerant or leakage in the refrigerant system

F5: Water fulfilled protection (Alarm of condensing water overflow)

Solution:

- (1) If the unit does not have water drainage pump:
 - a) Check the water level switch short connect or not, if not, short connect it, if it still not solves, change the main board

(2)If the unit has water drainage pump:

- a) Check the water level switch if it is connected well, inset it firmly; then check the switch is blocked or not, if it is blocked, replace it, otherwise go to next step
- b) Check the connection between pump and main board if it is 220-240V, if it is, change the water pump; if not, change the indoor main board

F7:Outdoor overcurrent protection

Solution:

- (1)Check the dial-switches is setting corrected or not according to the wiring diagram, if not, set it corrected; if corrected, go to next step
- (2)Check the condenser whether it is in good ventilation, if not, remove the blockage; otherwise go to the next step.
- (3)Measure the current with multimeter, and check the current via the unit check data also, compare these two data, if they are quite different, change the outdoor main board;
- (4)If all above steps done normally, it may be caused damaged compressor or refrigerant system blocked or dirty or other gas get inside the system

F8: Outdoor unit exhaust temperature over-high protection

Solution:

- (1)Check the T5 sensor connection loosen or not, inset it firmly, if not solve, go to next step;
- (2)Take out the exhaust sensor (T5) from main board, measure its resistance, it is about 50K Ω at 25 $^{\circ}$ C, if not, change the sensor; if it is, go to next step
- (3)Remove the sensor from the compressor, if it still not solves, change the main board
- (4)If all above steps done normally, it may be caused lack of refrigerant or damaged compressor or refrigerant system blocked or dirty or other gas get inside the system.

F9: Three-phase electricity power phase sequence failure

Solution:

- (1)Check the 3-phase power connection lines are connected well or not
- (2)Using the meter to measure the voltage (L1&N, L2&N, L3&N), all of them should be 220V, if not, correct the power supply, otherwise go to nest step;
- (3)If the power supply is corrected, change the main board

P6: EEPROM failure

Change the indoor mainboard