

深圳邦德瑞科技有限公司

SHEN ZHEN BANDARY TECHNOLOGY CO.,LTD

Shen Zhen Bandary Technology Co.,LTD

Add:Unit 925, 9/F, China South City Global Logistics Center, 1# Huanan Avenue,

Pinghu street, Longgang District, Shenzhen, Guangdong province, P.R, China

Tel :+86-755-2304 9300

Fax:+86-755-2923 2399

Website:www.bandarytech.com



COMPANY PROFILE



Established in 2010 and base in shenzhen. Bandary is a professional keyboard Design and Manufacturing manufacturer with more than 7000km2 plant in Dongguan Tangxia. Our product covers with Mechanical Keyboard, Touchpad Keyboard, Mini keyboard ect, to meet customers' unique requirements.

Our mission is to provide high quality and competitive price to meet customers' unique requirements.

Our operation have been accredited ISO9001:2015 and ISO 14000:2015, we ensure all the keyboards will be done 100% Visual inspection and function test before shipping. And All the keyboard which is made by Bandary will provided 18-month long warranty.

Bandary keeps with innovation "Happy striving for the enterprise, contribute to social progress" business philosophy focusing on intelligent manufacturing, our service concept is to continue to support customers to win more markets.

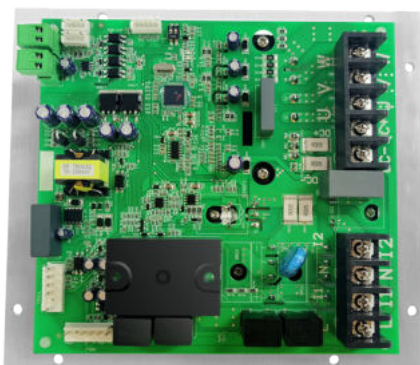
Welcome to visit Bandary!

COMPANY APTITUDE



Compressor driver module PCBA

5-6HP



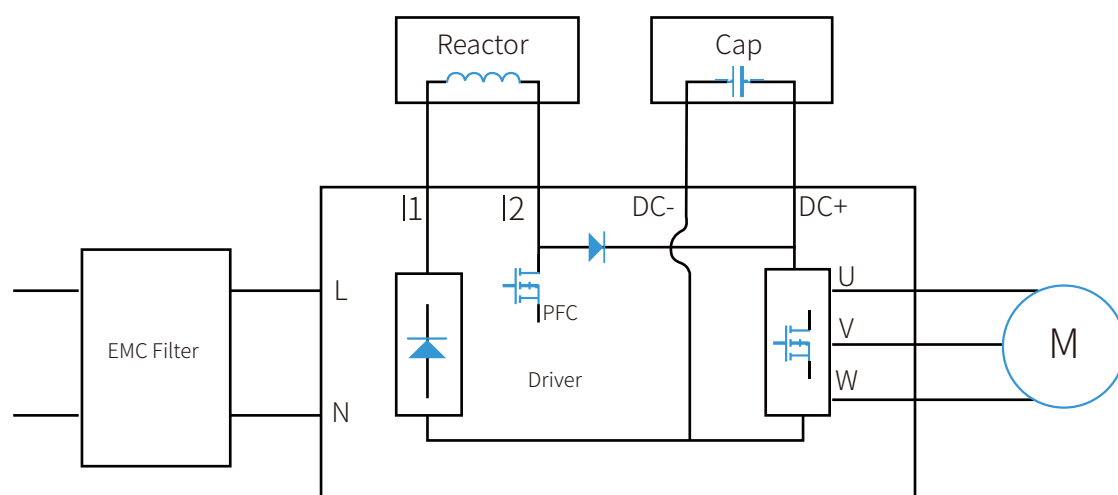
Introduction

BDR01A is designed for driving DC frequency inverter compressor. Bandary compressor driver module (BDR01A) integrates rectifier bridge, PFC, switching power supply, IPM module, DC fan drive circuit and communication circuit, with low harmonic and high efficiency.

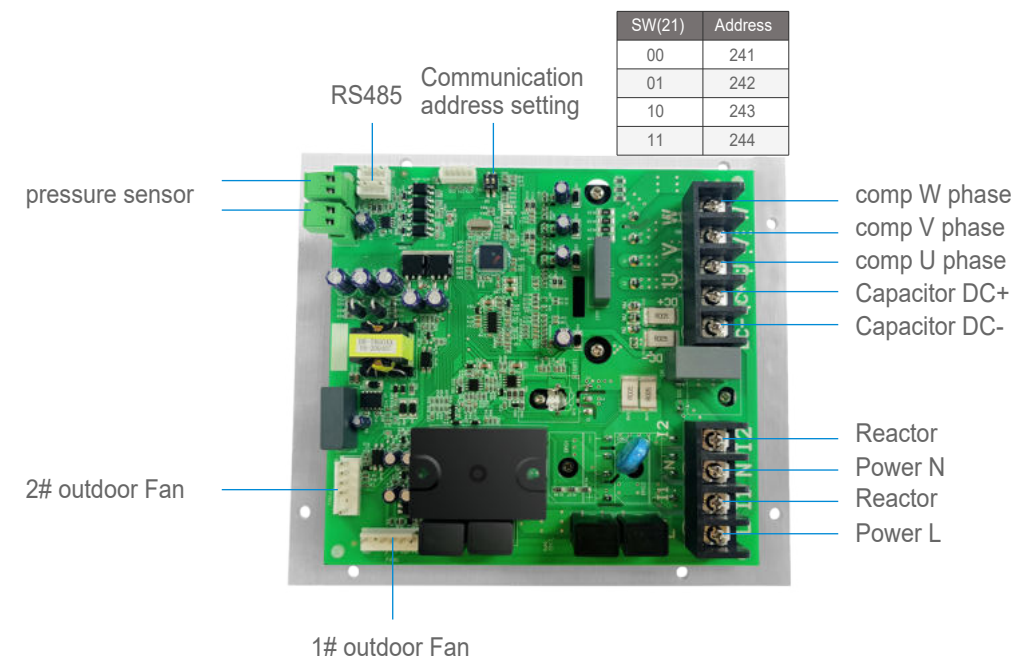
Advantages

Suitable for Multi-VRF system, mini VRF system, monobloc heat pump and split heat pump system and fresh air inverter system.

System diagram



Wiring diagram



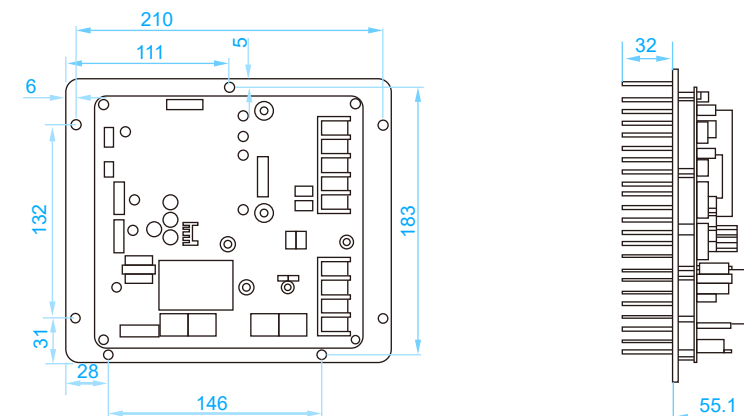
Technical data

Rated input voltage single phase	220Vac 50/60Hz
Working voltage range	175--265v
Input maximum current	35A
Input maximum power	7kW
Output mechanical frequency	15-120Hz
Control type	180 degree sinusoidal vector driving
Carrier frequency	5.0K Hz(adjustable according to compressor noise)
Communication interface	RS485
Communication protocol	Standard Modbus RTU Baud rate:2400bps
Operation temperature range	-35-80 DegC
Storage temperature range	-40-85 DegC
Cooling type	Forced air cooling for heat dissipation

▲ Features

BDR01A series (3-6KW)		
Item	Function	Description
1	180 degree sinusoidal vector driving	
2	Input max power is 5.0kw	
3	Input max current 20A	
4	Communication standard Modbus RS485 isolation design, baud rate 2400bps	
5	adjust rotational speed of compressor	
6	adjust the Compressor phase current	
7	adjust the IPM module temperature	
8	adjust the AC input voltage	
9	adjust the AC input current	
10	adjust Dc bus voltage	
11	adjust IGBT temperature	
12	adjust rotational speed of Fan 1	
13	adjust rotational speed of Fan 2	
14	indentify the type of outdoor unit	
15	outdoor unit frequency reduction protection	1>current overload protection
		2>comp phase current overload protection
		3>IPM/IGBT high temperature to reduce frequency protection
16	failure alarm	IPM fault alaram
		compressor stalling or phase loss alarm
		current sampling fault alarm
		IGBT temperature transmit fault alarm
		Ac overvoltage or undervoltage alarm
		15VDC undervoltage alarm
		IPM temperature transmit fault &high temp alaram
		compressor phase current overload alarm
		IGBT high temperature alarm
		Dc bus overvoltage &undervoltage alarm
		Ac input overcurrent alarm
		external swithes off alarm

▲ Dimension



▲ Application



▲ 5HP comp driver components list



5HP compressor driver board



filter & capacitor board



Reactor



pressure sensor

Compressor driver module PCBA

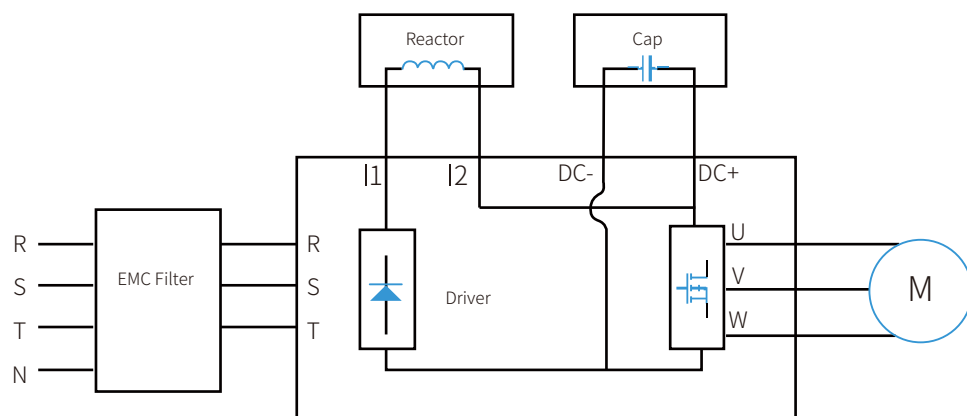
10-20HP



Introduction

BDR02A series is designed for driving DC frequency inverter compressor. Bandary compressor driver module (BDR02A) integrates switching power supply, PIM module, communication circuit with the advantages of low harmonic and high efficiency. Suitable for Multi-VRF system, Monobloc Heat Pump and Fresh Air inverter system.

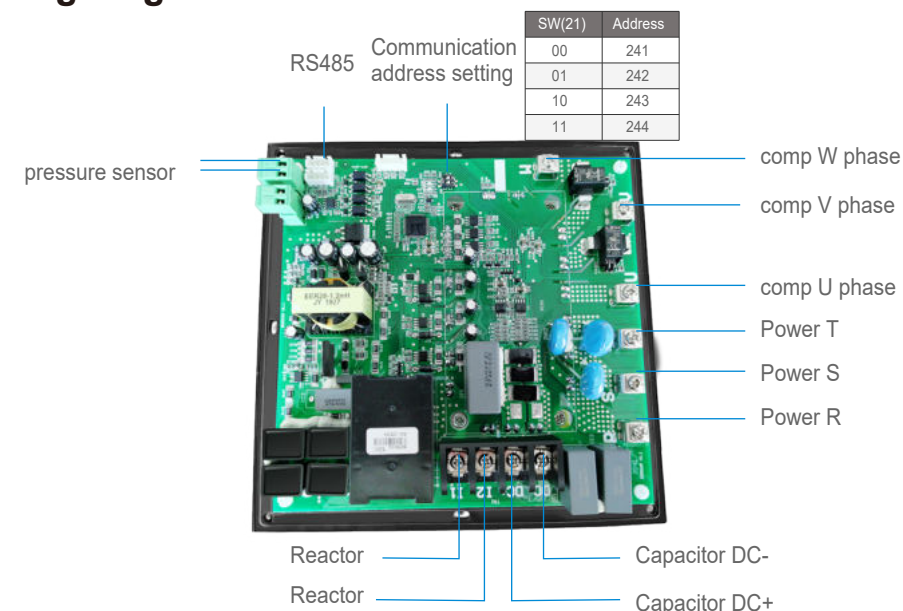
System diagram



Compressor driver module Types

type	Input current (A)	Output current (A)	IPM temperature	Compressor type
BDR02A	27	25	106℃	8~12HP
BDR02A1	40	45	106℃	16HP
BDR02A2	40	45	106℃	20HP

Wiring diagram



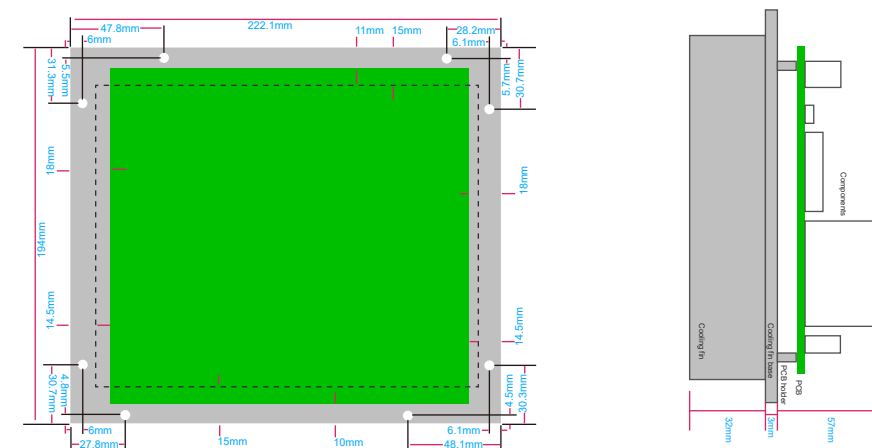
Technical data

Rated input voltage	Three phase 380 Vac 50/60Hz
Working voltage range	320-460v
Input maximum current	50A
Input maximum power	24kW
Output mechanical frequency	15-120Hz
Control type	180 degree sinusoidal vector driving
Carrier frequency	5.0K Hz(adjustable according to compressor noise)
Communication interface	RS485
Communication protocol	Standard Modbus RTU Baurd rate:2400bps
Operation temperature range	-35-80 DegC
Storage temperature range	-40-85 DegC
Cooling type	Forced air cooling for heat dissipation

▲ Features

BDR02A series(10-39KW)		
Item	Function	Description
1	180 sinusoidal DC inverter driver	
2	Input max power is 5.0kw	
3	Input max current 50A	
4	Communication standard Modbus RS485 isolation design, baud rate 2400bps	
5	adjust rotational speed of compressor	
6	adjust the Compressor phase current	
7	adjust the IPM module temperature	
8	adjust the AC input voltage	
9	adjust the AC input current	
10	adjust Dc bus voltage	
11	adjust IGBT temperature	
12	indentify the type of outdoor unit	
13	outdoor unit frequency reduction protection	1>current overload protection
		2>comp phase current overload protection
		3>IPM/IGBT high temperature to reduce frequency protection
16	failure alarm	IPM fault or high temperature alram
		IPM temperature transmit fault alram
		compressor stalling or phase loss alarm
		compressor phase current overload alarm
		current sampling fault alarm
		IGBT high temperature alarm
		IGBT temperature transmit fault alarm
		Dc bus overvoltage or undervoltage alarm
		Ac overvoltage or undervoltage alarm
		Ac input overcurrent alarm
		15VDC undervoltage alarm
		external swithes off alarm

▲ Dimension



▲ Application



▲ 10HP compressor driver components list



10HP compressor driver board



filter & capacitor board

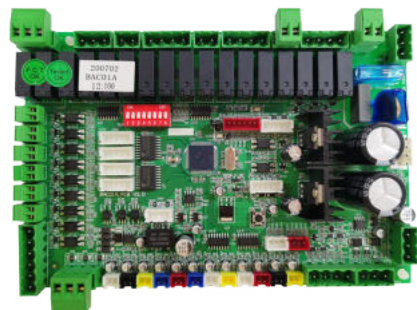


Reactor

pressure sensor

Outdoor unit

BAC01



Outdoor unit BAC01

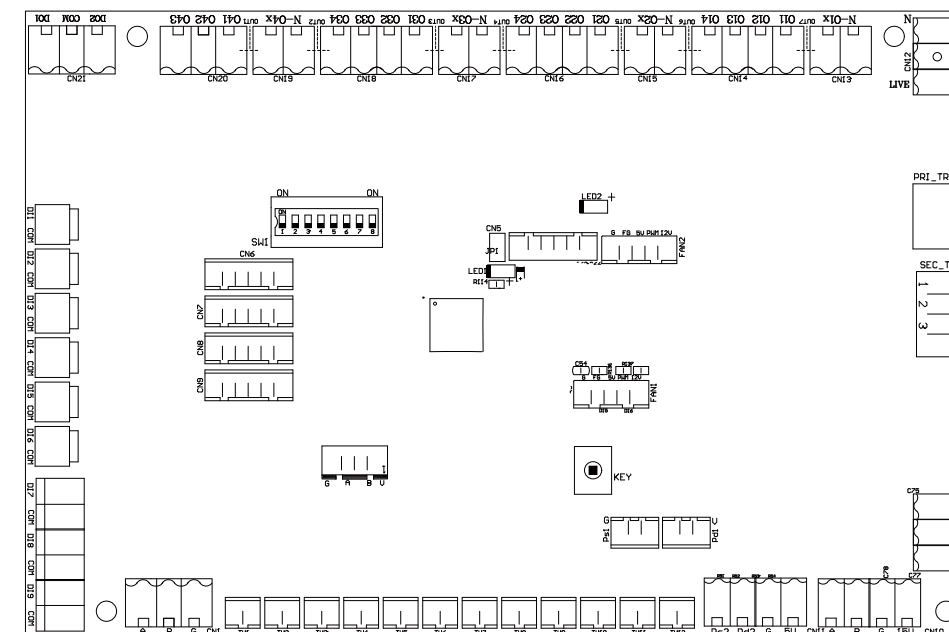
Bandary outdoor unit (BAC01) is available for single and dual compressor system, it adjusts the EEV, EVI opening value, rotational speed of compressor and DC fan according to energy demands, for comfortable temperature and

energy saving. Bandary outdoor unit must be used with the matching wired touch screen panel.

Application



BAC01 schematic diagram



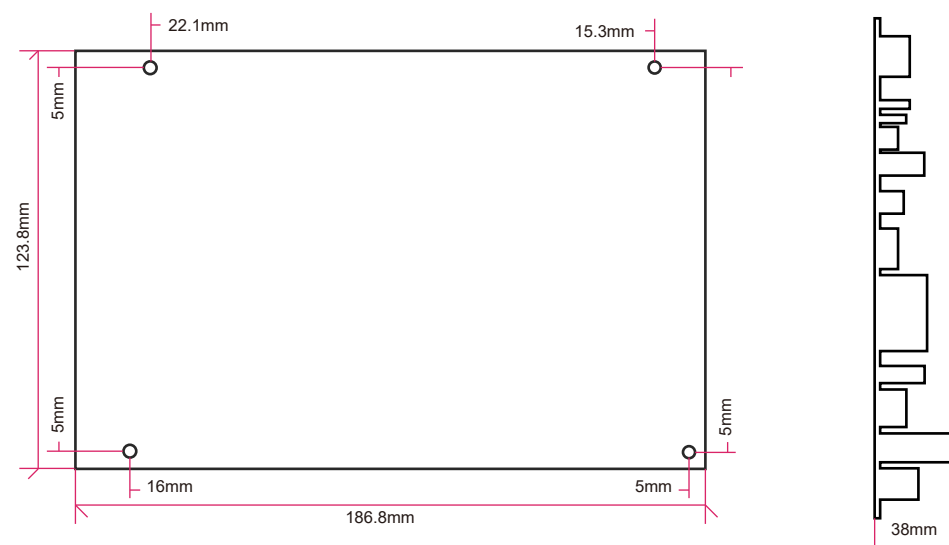
Technical data

Operating temperature and humidity range	-30 ~ 60 °C RH ≤ 90% RH (non condensed state)
Storage temperature and humidity range	-40 ~ 85 °C RH ≤ 95% RH (non condensed state)
Supply power input	380Vac 50/60Hz
Temperature control accuracy	0.5 °C
Device no load consumed power	≤ 15W
Communication	Standard RS485 isolation design, baud rate 2400.N.8.1
High -pressure detective	Yes
Program update terminal	yes
Temperature sensor detective	12way -temperature sensor detective
Remote control	yes

▲ Features

- Mode setting, EVI setting, capacity setting is set by Dip switches.
- Control rotation speed for inverter compressor and outdoor fan according to energy demands.
- Fan mute control, using dual dc motor control technology, automatically adjust the fan speed according to the load from 300rps to 1200rps automatic switch. Meet the performance and control the noise at the same time.
- EEV/EVI control
- Fault protection
- multiple anti-freezing protection
- PTC output control
- Remote control

▲ Installation dimension



Indoor unit ducted type

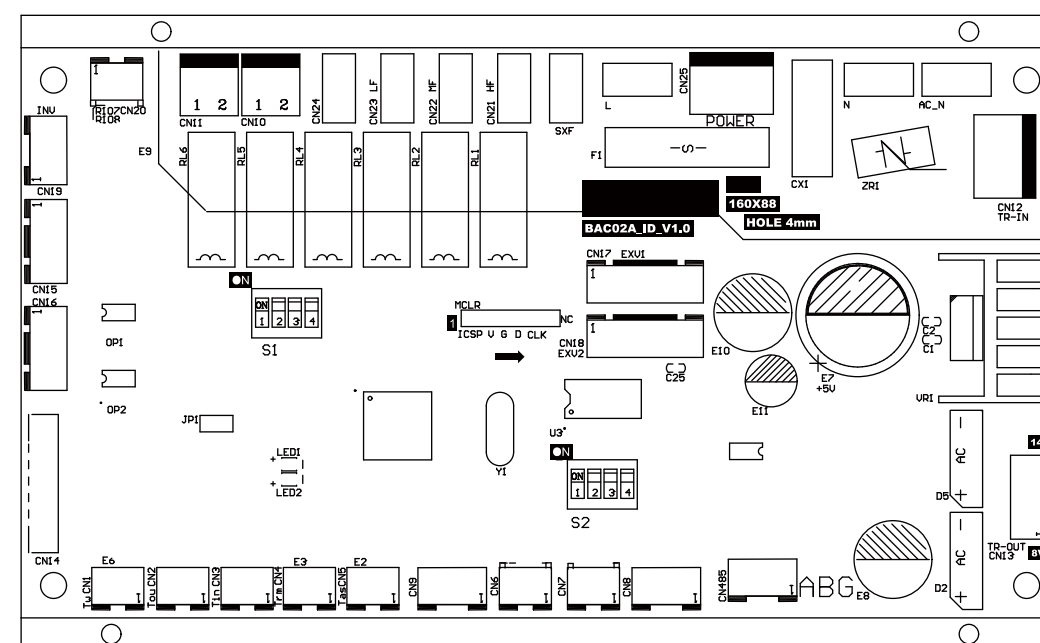
BAC02B



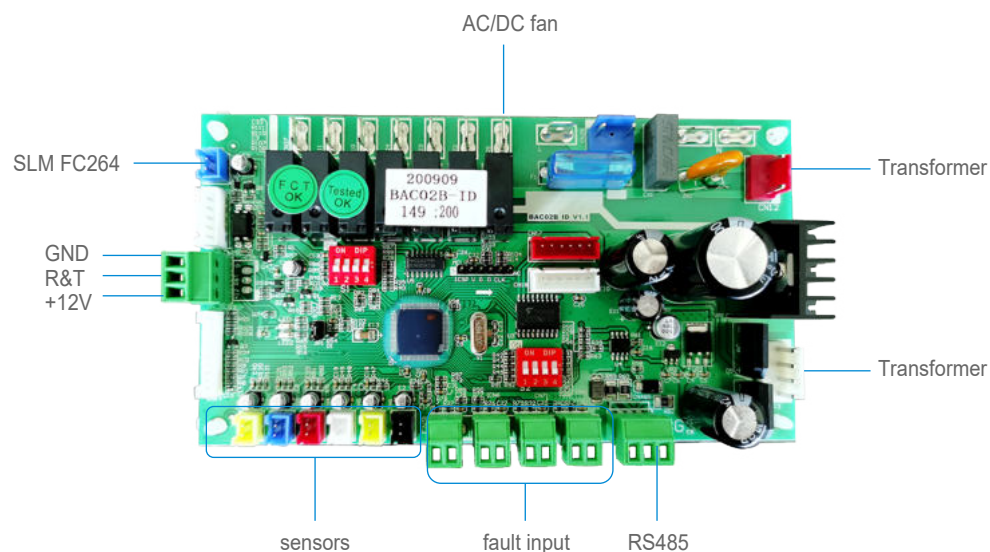
▲ Introduction

Indoor unit BAC02B is designed to communicate with outdoor unit BAC01, then transfer the user setting mode, setting temperature, room temperature to outdoor unit, and receive the running status from outdoor unit.

▲ Schematic diagram



▲ Port description



▲ Features:

1. Temperature sensor input
2. Adjustment 3-stage fan speed (optional)
3. Adjustment DC indoor fan rotation speed
4. Adjustment indoor pump output
5. Room card function (OCC sensor input)
6. External fault alarm
7. Communication with outdoor unit

▲ Sensor Input Data- BAC02B

Item	Port	Name	Value
1	TH1	Tr:return temperature sensor	10K
2	TH2	Tin:fan coil input sensor	10K
3	TH3	Tou:fan coil outlet sensor	10K
4	TH4-TH6	reservation	

▲ Input / Output ports Data- BAC02B

Item	Port	Description	Remark
1	CN485	RS485	Connect to outdoor unit
2	CN12	Transformer initial port	Connect to transformer
3	CN13	Transformer secondary port	Connect to transformer
4	CN15	SLM FC264	HMI
5	CN17	EEV port	Connect to EEV
6	CN19	AC/DC indoor fan port	Adjustment RPM of DC FAN
7	CN21	Hi fan speed output	
8	CN22	Medium fan speed output	
9	CN25	Power supply output	Connect to AC/DC fan
10	CN27	PUMP output	
11	L	L	Power input 220vac
12	N	N	Power input 220vac

▲ ON/OFF Input Data- BAC02B

Item	Port	Description	Remark
1	CN6	Room card function	OCC function
2	CN7	External fault input	NO-Fault NC-Normal
3	CN9	Water switch	Control water switch

System configuration

Constant speed compressor Air Source / chiller Heat pump system

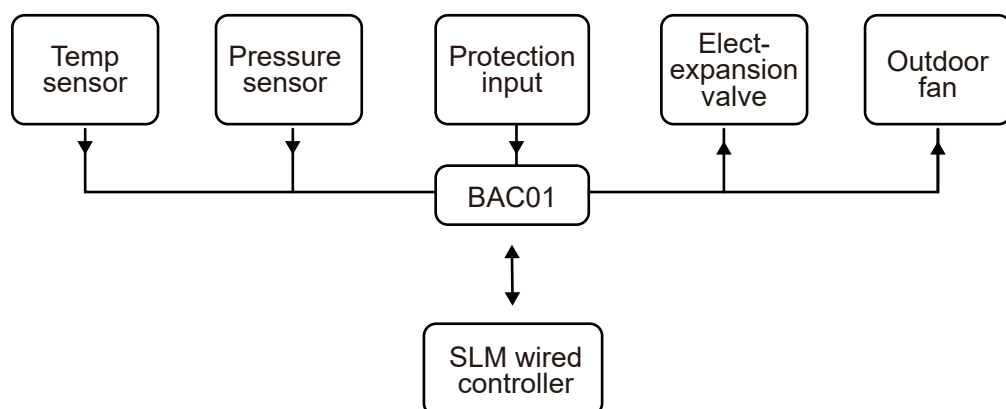
Established in 2010 and based in Shenzhen, China. Bandary is a Hi-tech enterprise with 3 R&D Centers in Shenzhen, Dongguan and Suzhou, over 20 years manufacturing and development experience in Home Appliances, DC Inverter Air Conditioning, Sensors, providing one stop solution from ideas to finished product.

we can provide one stop solution to meet customer various unique requirements for **fixed compressor air source and chiller type heat pump system.**

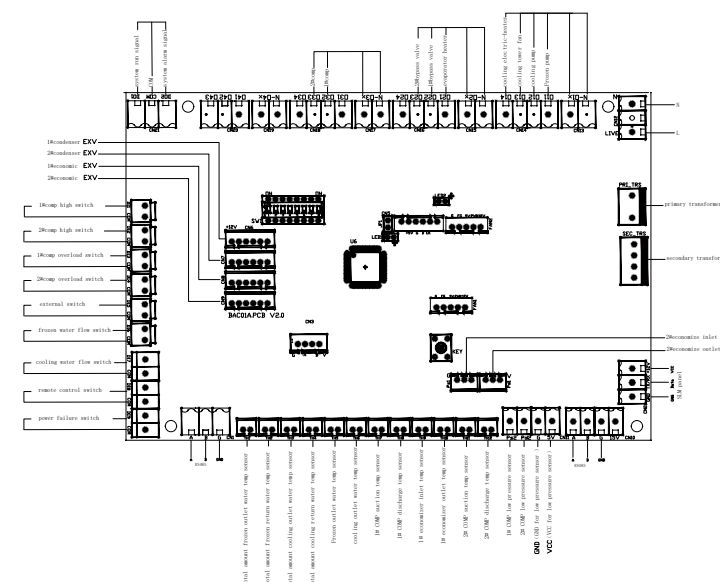
The product ranges as below

- Single compressor system
- Dual compressor system
- 4-compressor system (2-pair compressor in parallel)

System chart



System wiring diagram



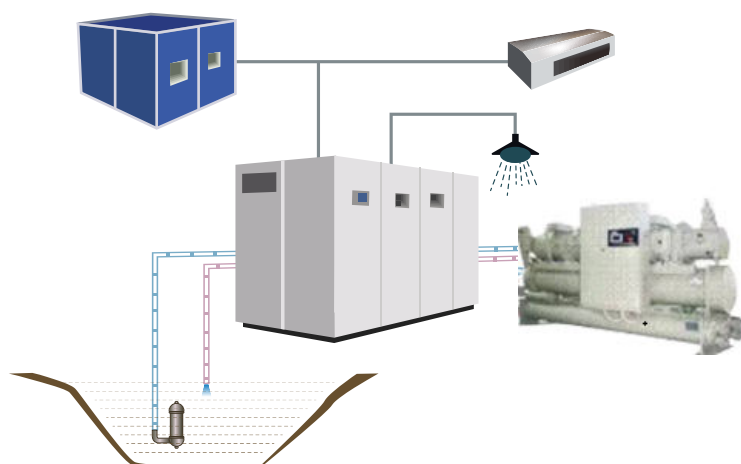
Technical data sheet

Measuring range	-20~99℃ RH≤90% (non condensed)
Controlling range	-20~99℃ RH≤90% (non condensed)
Supply power input	220VAC 50Hz/60Hz
Temperature control accuracy	±0.5℃
EXV/EVI port	4-way
Relay output	17-way
Temperature sensor	12pcs (10pcs normal sensor +2pc high temperature sensor)
Pressure sensor	1*high pressure sensor +1*low pressure sensor
Fault input	9
External alarm input	1
Compressor port	Single / Dual-compressor configuration
Mounting size	188*124*57cm
Senor type	NTC sensor 3950k and 3470k
Power consumption	<10w

▲ Features

Power failure Memory function	External fault input (Fire alarm)
Mode: Heating /cooling or cooling only	Remote control
EEV control (including EVI EEV)	Timer On/OFF
Single or dual compressor control	Water flow shortage protection
High pressure protection	Modbus / wifi communication
Fan overload protection	Manual control for each ODU

▲ System Application



▲ Scene application



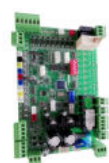
Villa

Hotel

Apartment

Shopping mall

▲ Product list



outdoor unit



SLM touch panel



transformer



sensors

Dc inverter compressor system

Shenzhen Bandary R&D team has devoted to air conditioner DC inverter Technology Research and development for more than 20-year. we can provide one stop solution to cover various range system requirements. Our product range as below

1.Home application DC inverter system

-3HP system

-4HP system

2.Commerical chiller system

-5HP-10HP single compressor system

-12HP-24HP Dual-compressor system

-Modular system (Max .16 outdoor unit in parallel)

3.Commercial Refrigerated system

-Mini VRF system (One outdoor, up to 12 indoor units)

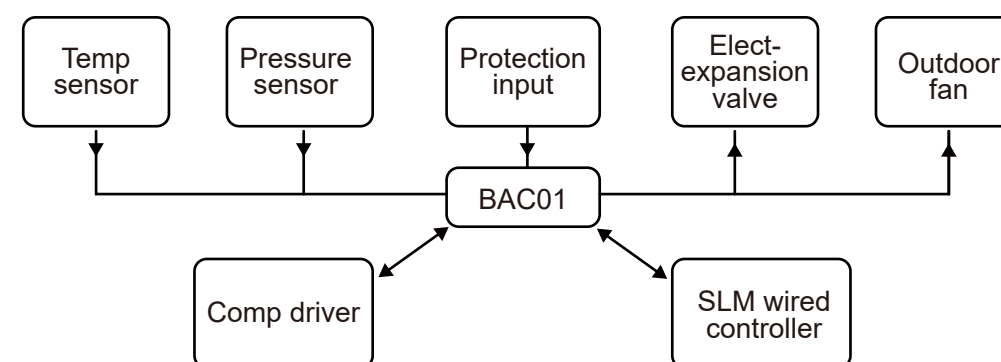
-Large VRF system (Max 4 outdoor units with 2 compressors, up to 64 indoor units)

4.Fresh air system

We are not only provide solution and customized unique design service to customer, but also, participate in the whole system structure assessment ,and provide more optimizing plan to customer for reference, to make the system more reliable, efficiency and energy saving, assist customer to win more market .

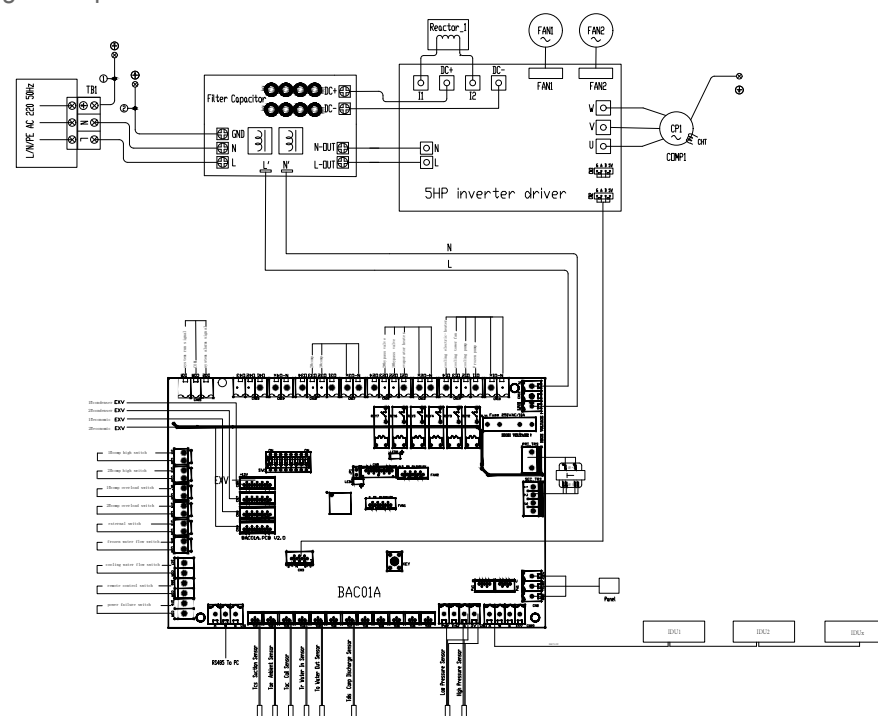
Ground source heat pump system

▲ System Structure diagram

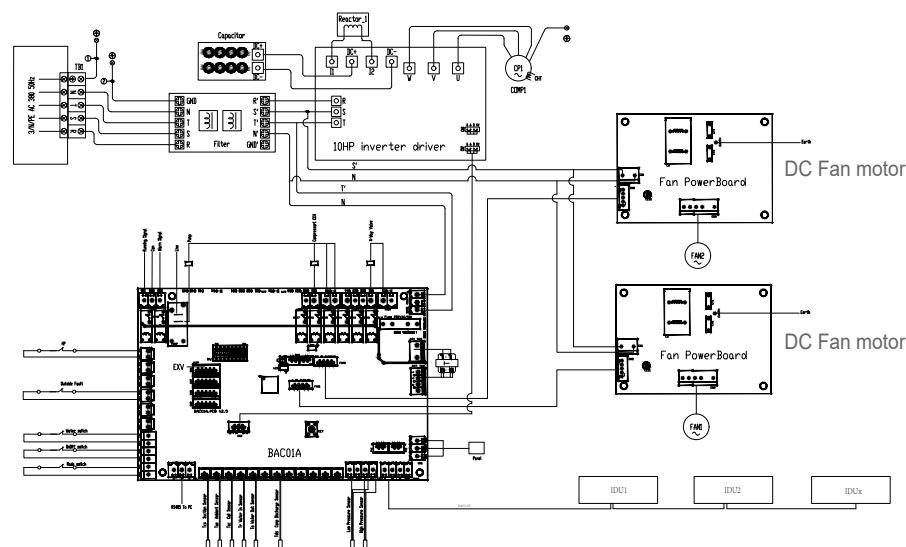


▲ System Wiring diagram

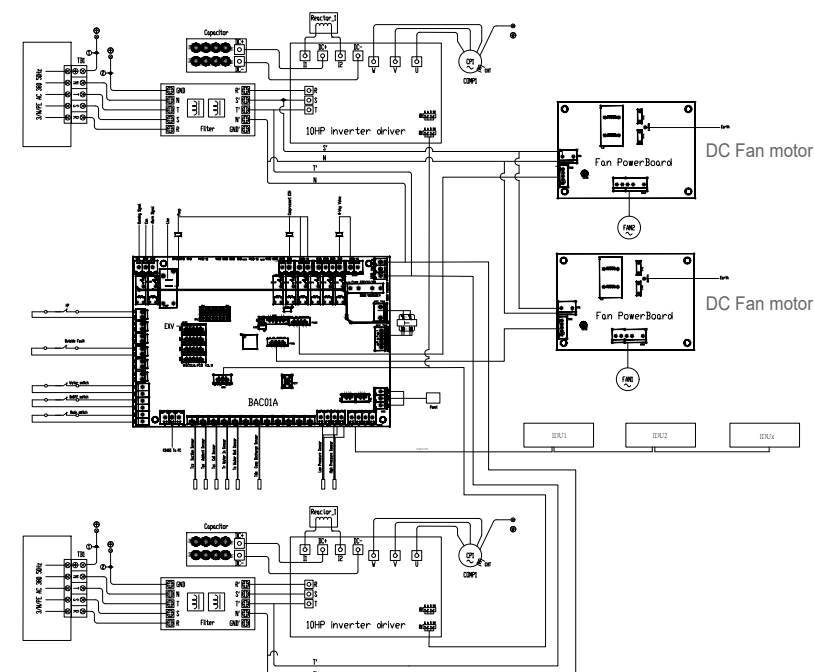
Single compressor-5HP



Single compressor-10HP



10HP dual-compressor-20HP-40HP



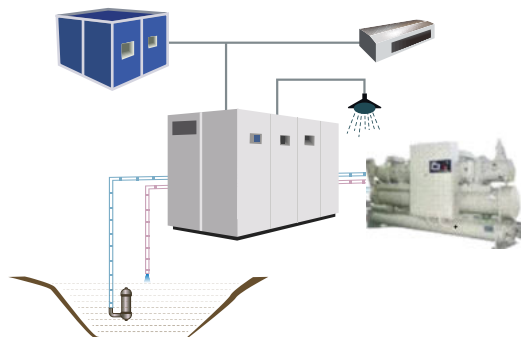
▲ Technical data sheet

Measuring range	-20~99 C RH≤90% (non condensed)
Controlling range	-20~99 C RH≤90% (non condensed)
Supply power input	220VAC 50Hz/60Hz
Temperature control accuracy	±0.5 C
EXV/EVI port	4-way
Relay output	17-way
Temperature sensor	6pcs (5pcs normal sensor +1pc high temperature sensor)
Pressure sensor	1*high pressure sensor +1*low pressure sensor
Fault input	9
External alarm input	1
Compressor port	Single / Dual-compressor configuration
Mounting size	188*124*57cm
Senor type	NTC sensor 3950k and 3470k
Power consumption	<10w

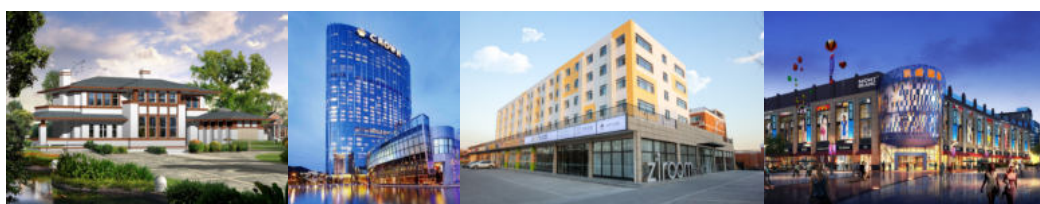
▲ Features

Power failure Memory function	External fault input (Fire alarm)
Mode: Heating /cooling or cooling only	Remote control
EEV control (including EVI EEV)	Timer On/OFF
Single or dual compressor control	Water flow shortage protection
High pressure protection	Modbus protocol
Fan overload protection	Manual control for each ODU

▲ Application



▲ Scene application



Villa

Hotel

Apartment

Shopping mall

▲ Product list



Compressor driver



outdoor unit



SLM touch panel



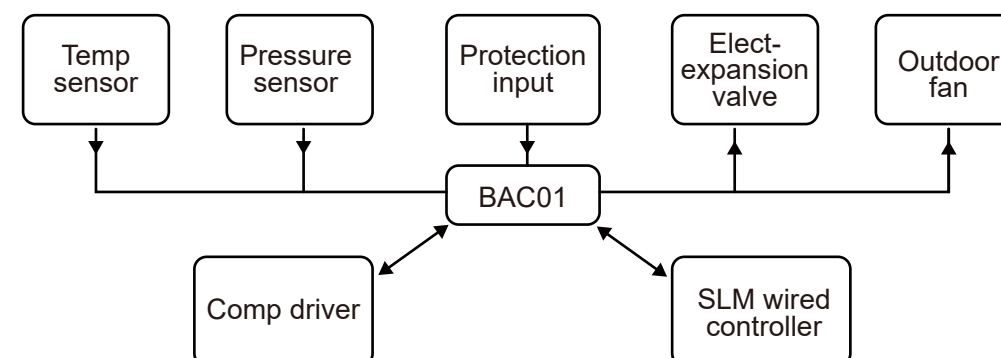
transformer



sensors

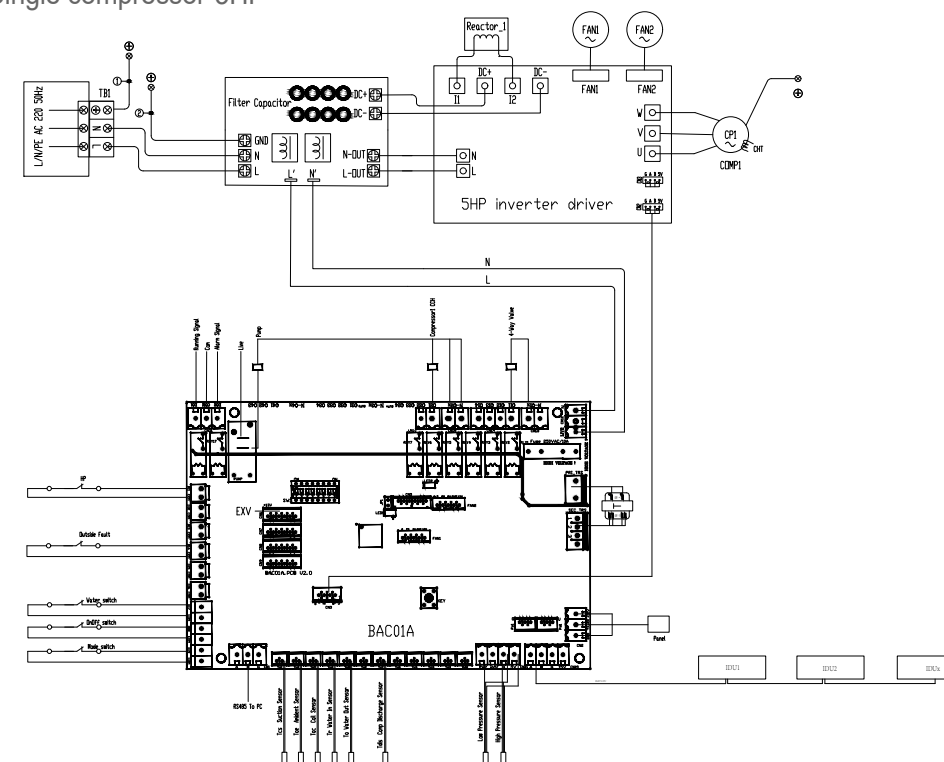
Air source / Chiller heat pump system

▲ System Structure chart

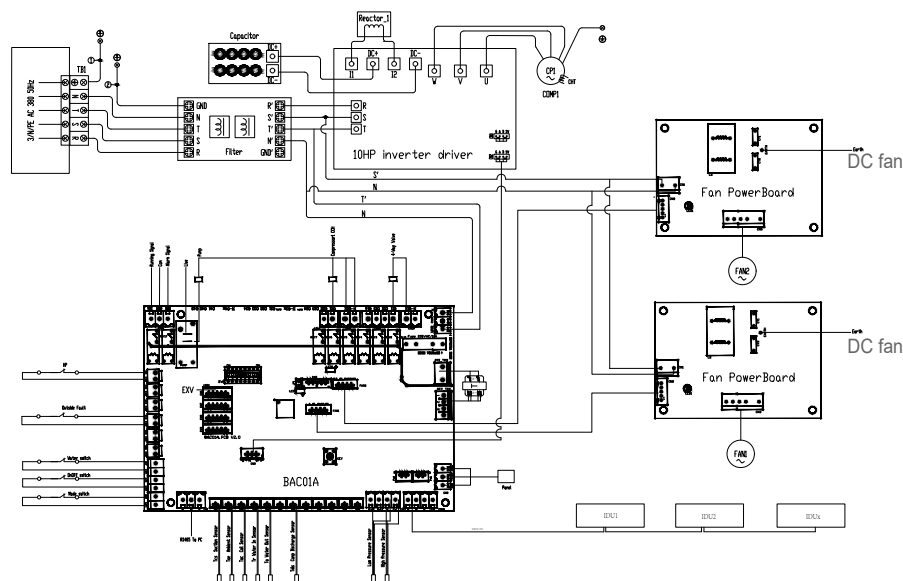


▲ System Wiring diagram

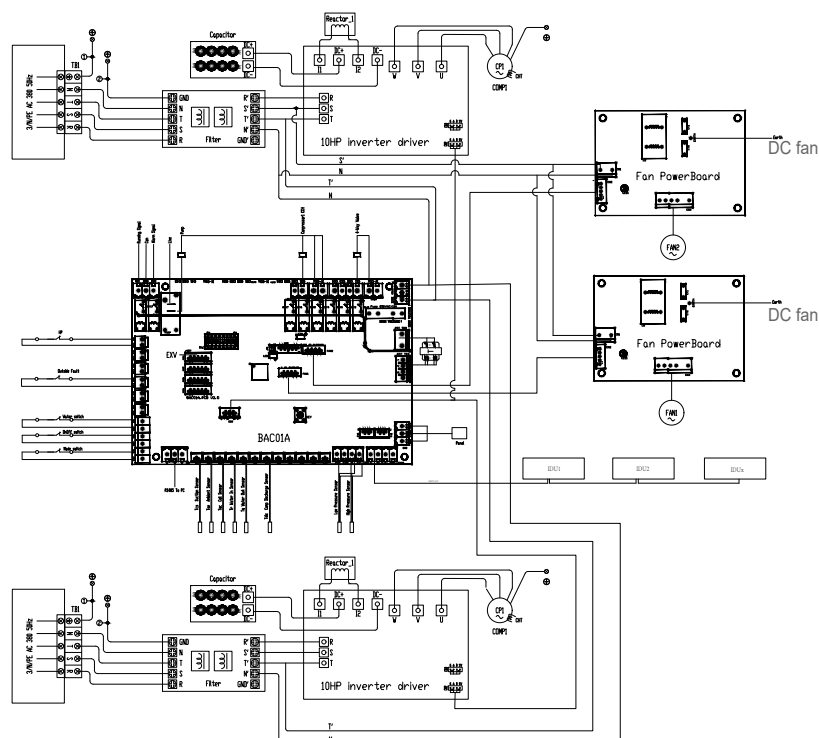
Single compressor-5HP



Single compressor-10HP



10HP Dual-compressor-20HP-40HP



Technical data sheet

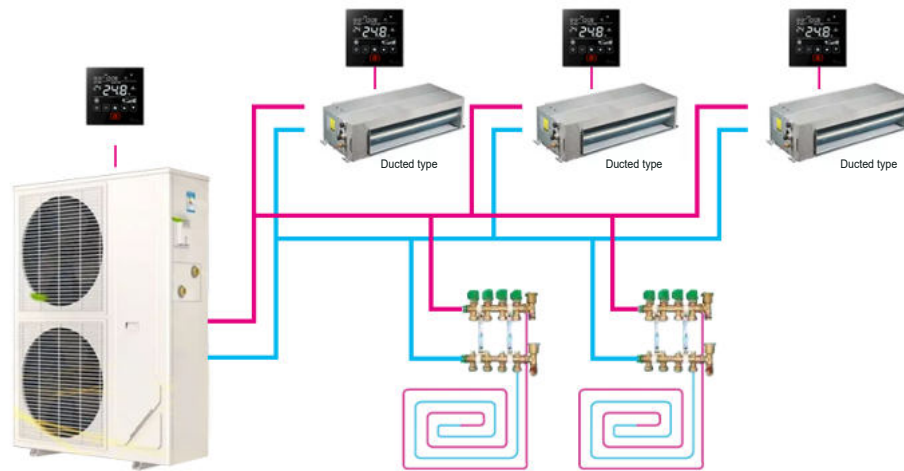
Measuring range	-20~99℃ RH≤90% (non condensed)
Controlling range	-20~99℃ RH≤90% (non condensed)
Supply power input	220VAC 50Hz/60Hz
Temperature control accuracy	±0.5℃
EXV/EVI port	4-way
Relay output	17-way
Temperature sensor	6pcs (5pcs normal sensor +1pc high temperature sensor)
Pressure sensor	1*high pressure sensor +1*low pressure sensor
Fault input	9
External alarm input	1
Compressor port	Single / Dual-compressor configuration
Mounting size	188*124*57cm
Senor type	NTC sensor 3950k and 3470k
Power consumption	<10w

Features

- 1.Compressor and EXV control technology enables the stable control system to operate near the target setting temperature and superheat/supercool.
- 2.Fan mute control, using dual dc motor control technology, automatically adjust the fan speed according to the load from 300rps to 1200rps.
- 3.The unique pressure control + water temperature control mode controls the water temperature to fluctuate within 0.5℃.
- 4.Performance reliability, multiple anti-freezing protection, preventing the water-side heat exchanger from being damaged by freezing.
- 5.Unique defrosting and anti-freezing protection technology with low water temperature and intelligent defrosting technology can solve the hidden danger of incomplete defrosting in low temperature and high humidity areas
- 6.Mode Heating /cooling or cooling only
- 7.External fault input (Fire alarm)
- 8.Remote control
- 9.Timer On/OFF
- 10.Water flow shortage protection
- 11.Modbus protocol
- 12.EVI EXV control

Application

Air conditioner + floor heating



Air conditioner + floor heating + hot water



Product list



Compressor driver

outdoor unit

SLM touch panel

transformer

sensors

Scene application



School

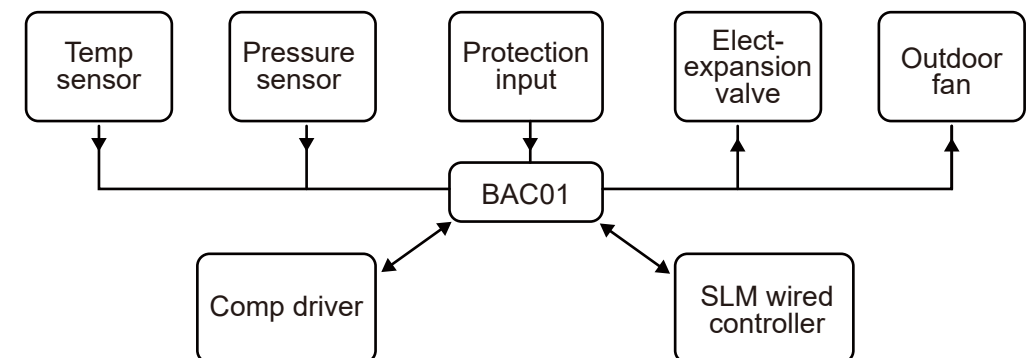
Hotel

Metro station

Shopmall

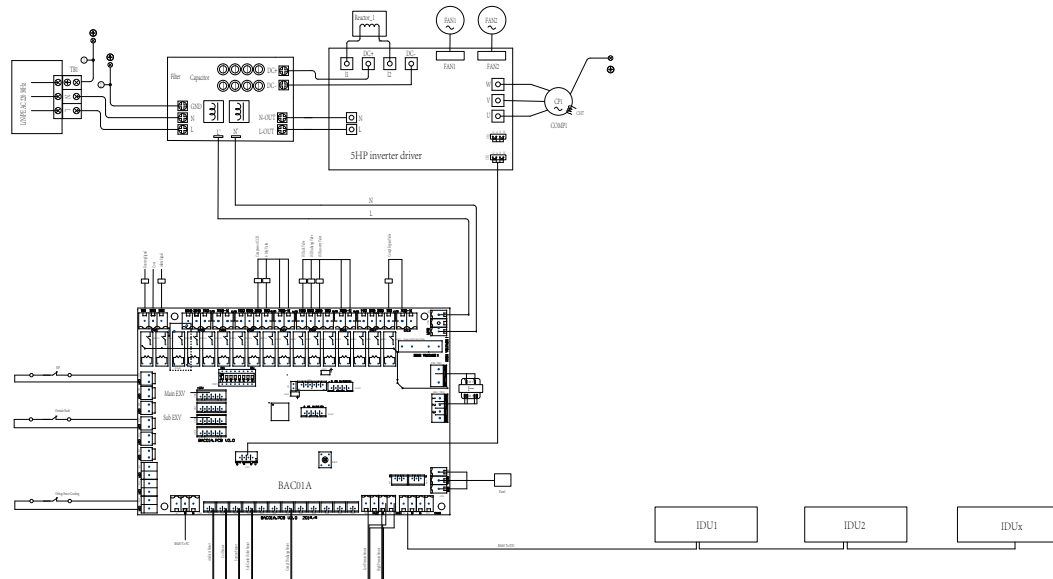
Air Handling VRF system

System diagram

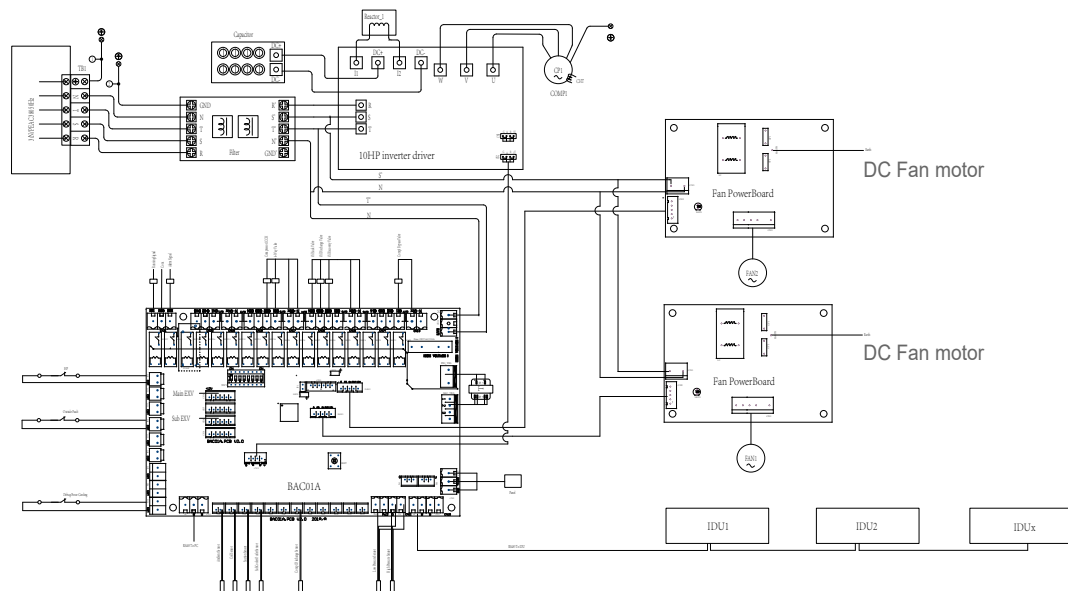


▲ Wiring diagram

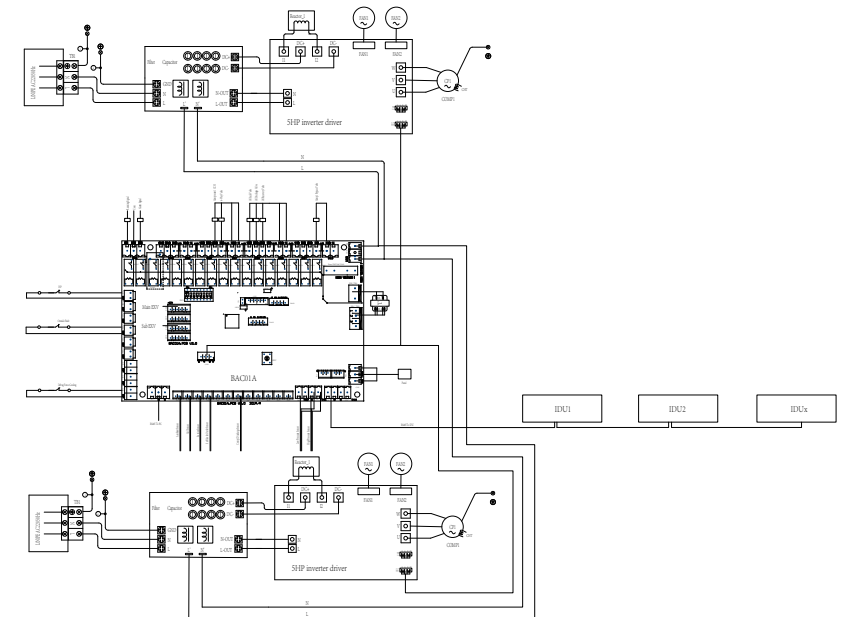
Single compressor-5HP



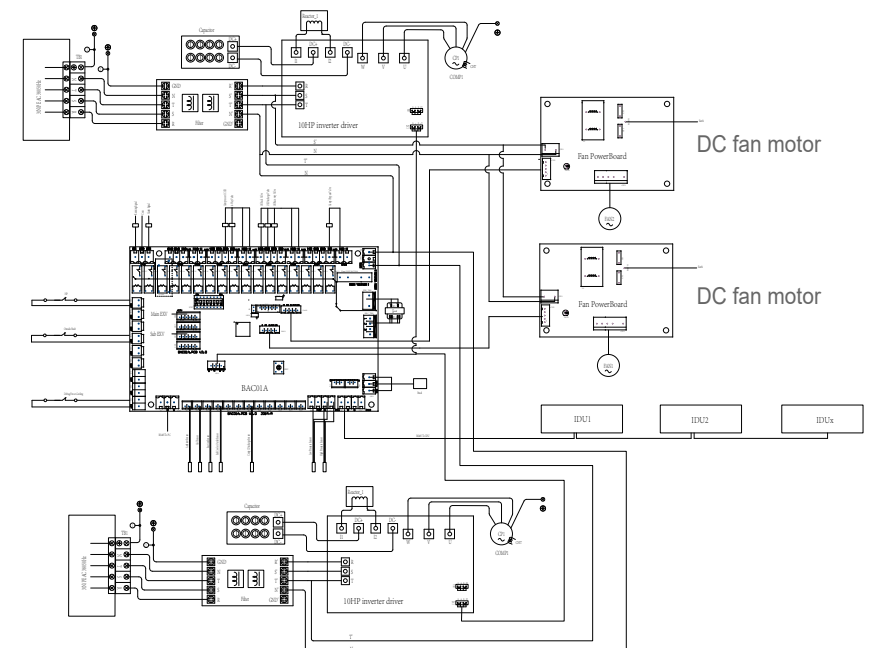
Single compressor-10HP



5HP Dual-compressor-10HP-12HP



10HP Dual-compressor-20HP-40HP



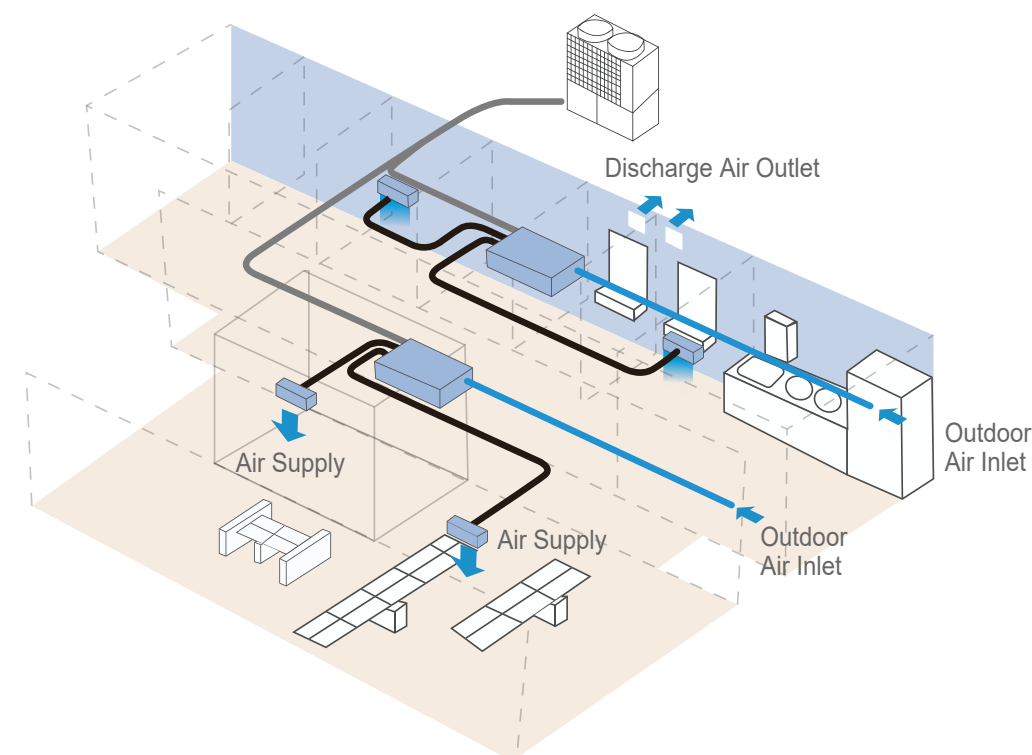
▲ Technical data sheet

Measuring range	-20~99℃ RH≤90% (non condensed)
Controlling range	-20~99℃ RH≤90% (non condensed)
Supply power input	220VAC 50Hz/60Hz
Temperature control accuracy	±0.5℃
EXV/EVI port	4-way
Relay output	17-way
Temperature sensor	6pcs (5pcs normal sensor +1pc high temperature sensor)
Pressure sensor	1*high pressure sensor +1*low pressure sensor
Fault input	9
External alarm input	1
Compressor port	Single / Dual-compressor configuration
Mounting size	188*124*57cm
Senor type	NTC sensor 3950k and 3470k
Power consumption	<10w

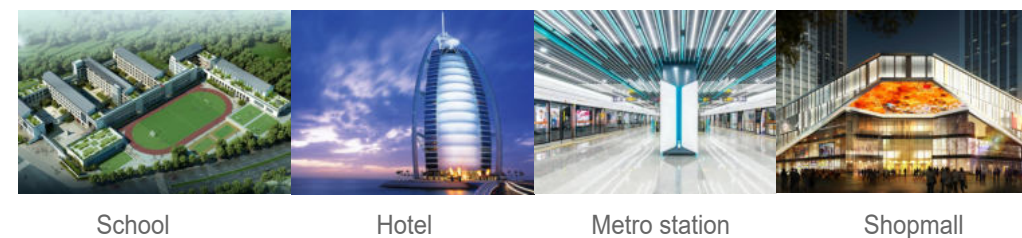
▲ Features

- 1.Compressor speed adjustment
- 2.Main EXV control
- 3.EVI EXV control
- 4.Oil management
- 5.BLDC fan speed adjust
- 6.Defrost
- 7.High & Low pressure control
- 8.Modbus/WIFI communication
- 9.Remote control
- 10.Detective room temperature, bring outside fresh air in and filtered through layers of filters, and then fresh air is transported to the room, and the dirty indoor air is discharged to the outside, to meet the needs of indoor fresh air ventilation.

▲ Application



▲ Scene application

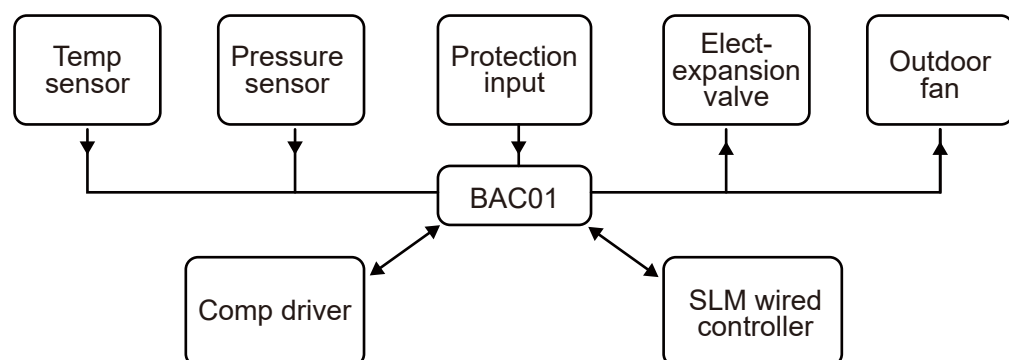


▲ Product list



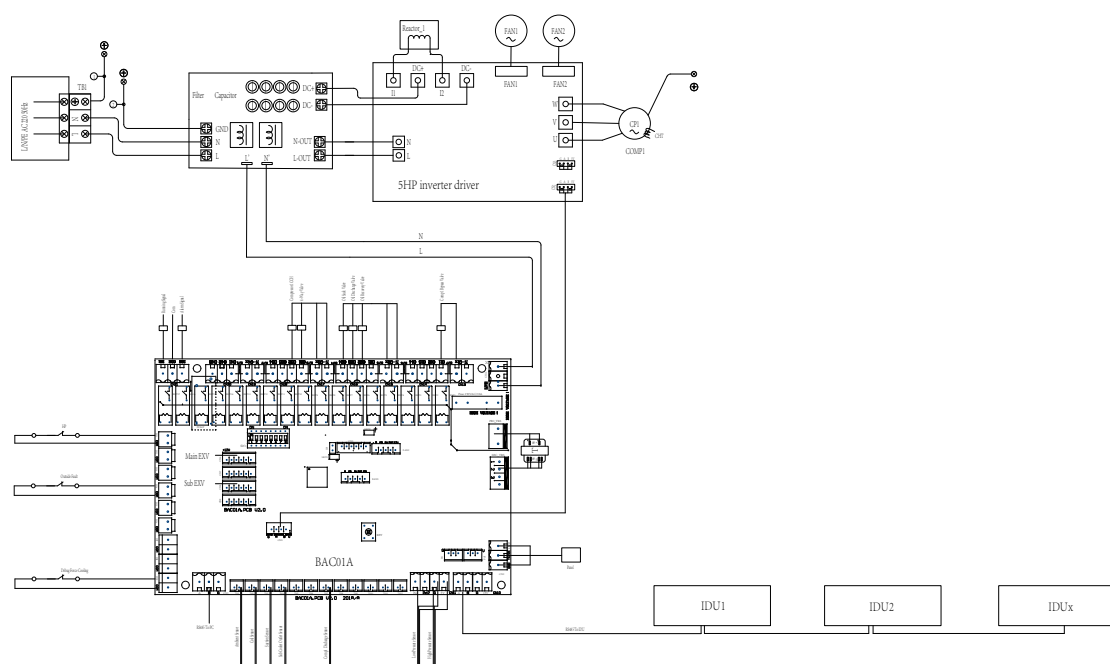
Refrigerant VRF system

System structure diagram

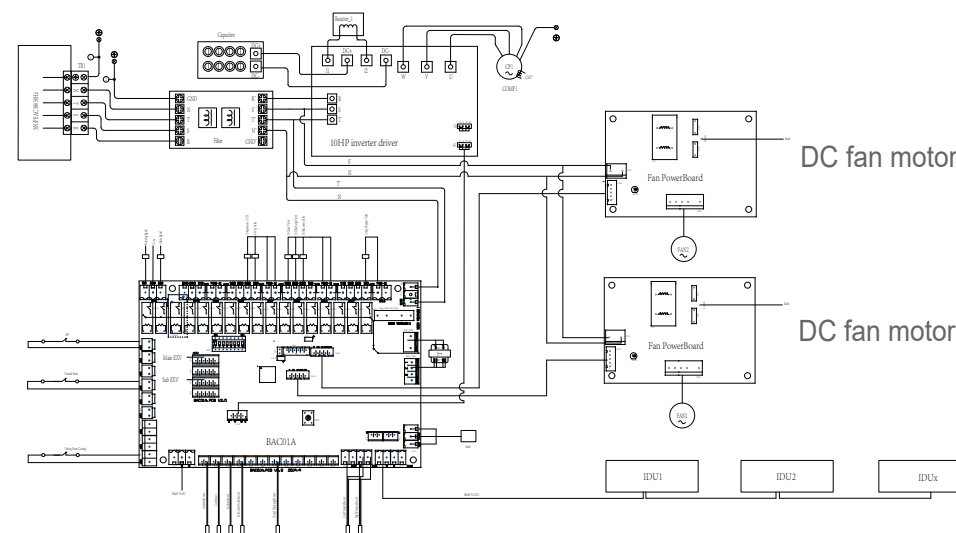


System wiring diagram

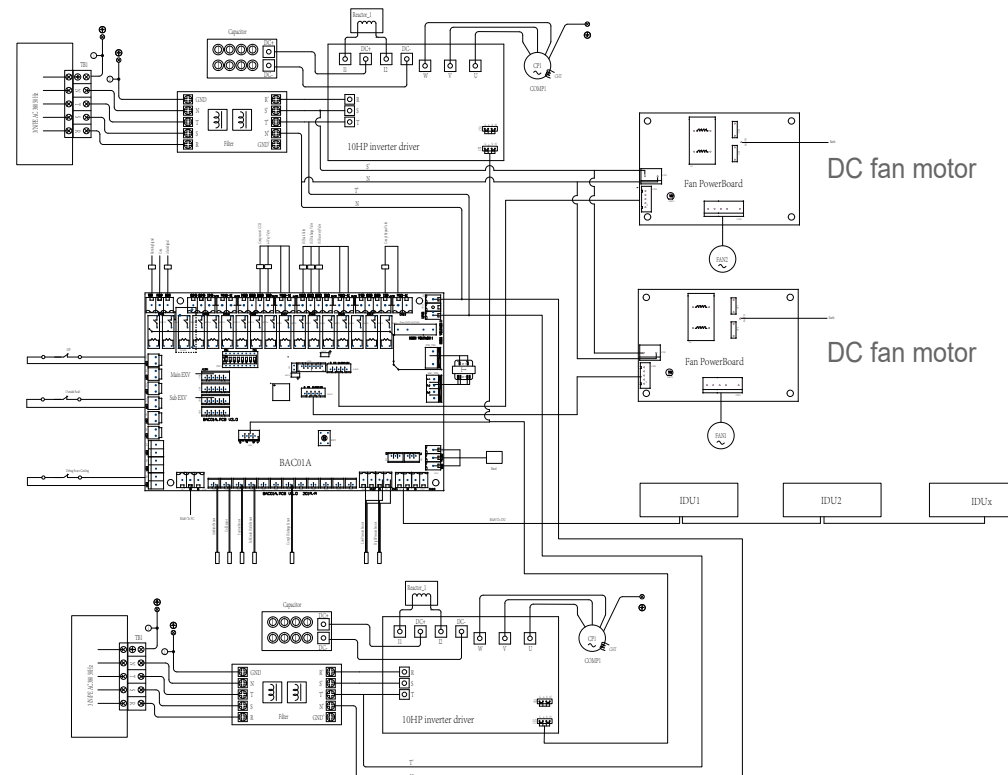
Single compressor-5HP



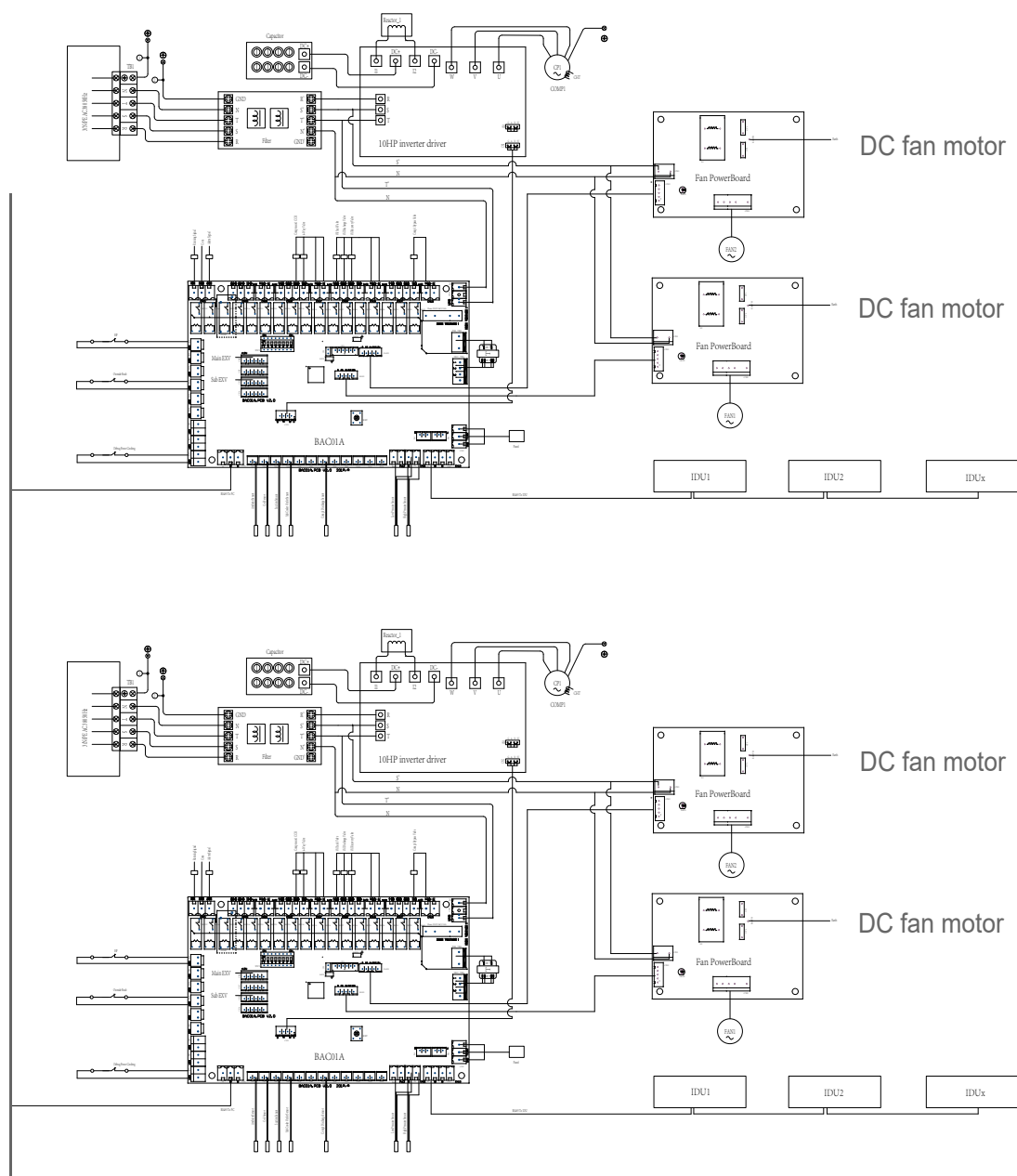
Single compressor-10HP



10HP Dual-compressor-20HP-40HP



Multi-VRF system 40-96HP



Technical data sheet

Measuring range	-20~99℃ RH≤90% (non condensed)
Controlling range	-20~99℃ RH≤90% (non condensed)
Supply power input	220VAC 50Hz/60Hz
Temperature control accuracy	±0.5℃
EXV/EVI port	4-way
Relay output	17-way
Temperature sensor	6pcs (5pcs normal sensor +1pc high temperature sensor)
Pressure sensor	1*high pressure sensor +1*low pressure sensor
Fault input	9
External alarm input	1
Compressor port	Single / Dual-compressor configuration
Mounting size	188*124*57cm
Senor type	NTC sensor 3950k and 3470k
Power consumption	<10w

Features

- Compressor speed adjustment
- Main EXV control
- EVI EXV control
- Oil management
- BLDC fan speed adjust
- Defrost
- High & Low pressure control
- Modbus/WIFI communication
- Remote control

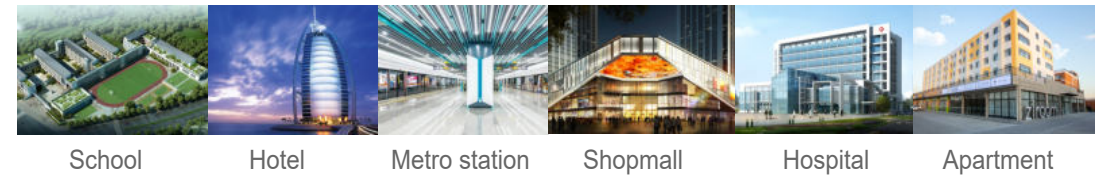
▲ Product list



Compressor driver outdoor unit Indoor unit SLM touch panel transformer sensors

▲ Application

▲ Scene application



School Hotel Metro station Shopmall Hospital Apartment

