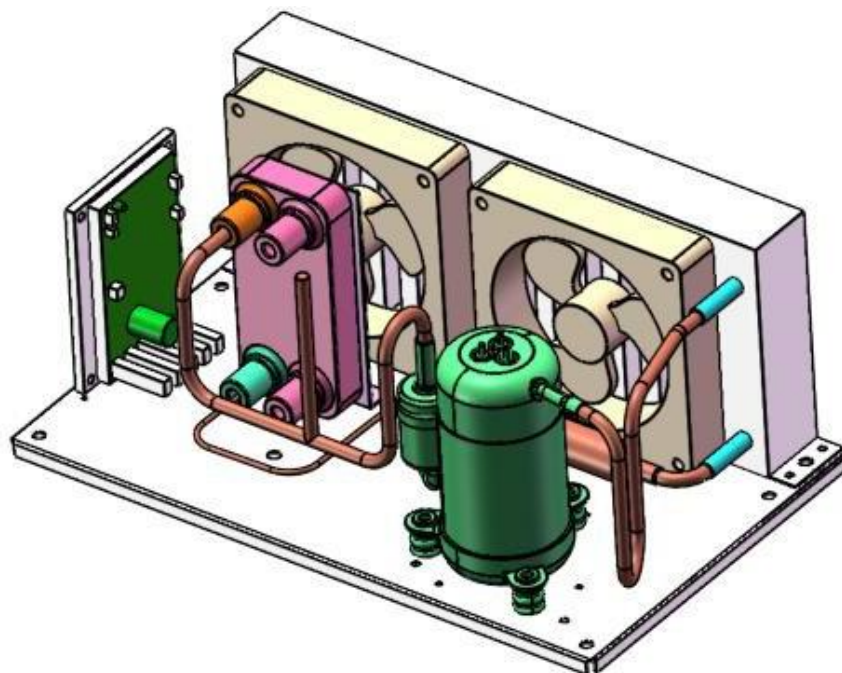




Specification

Compact Liquid Chiller Module

Model: DV2820E-P (24V)



1. Specification

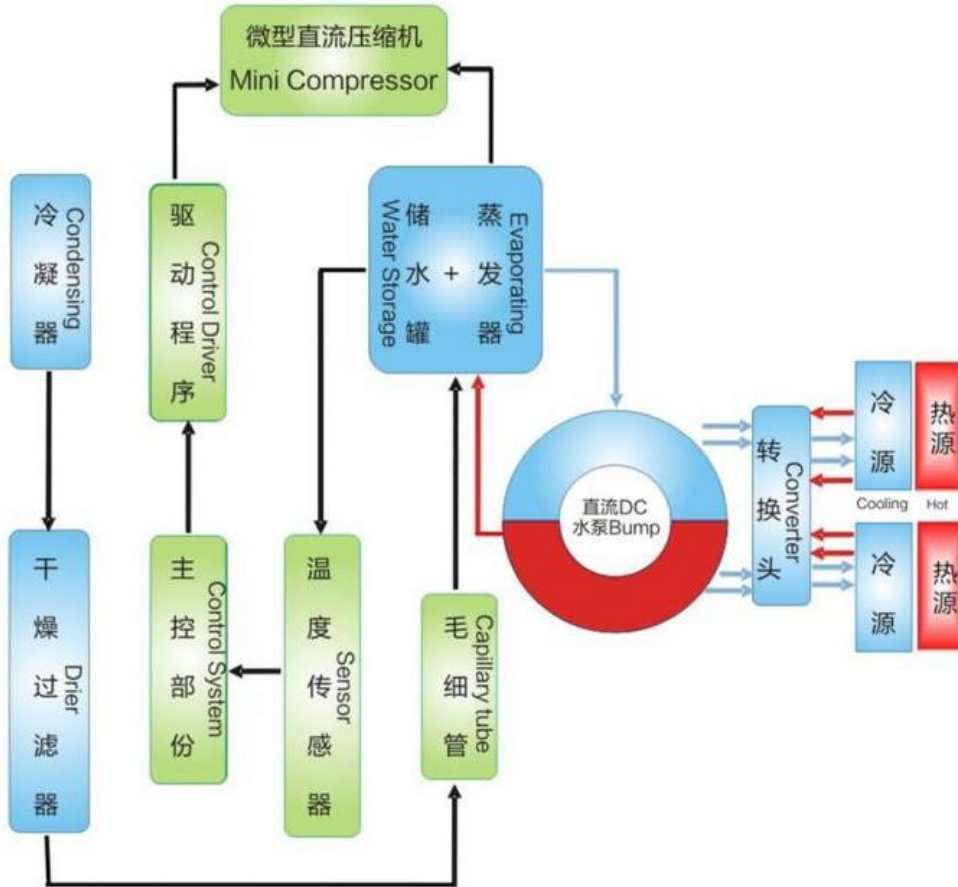
Product	Plate Liquid Chiller
Model Name	DV2820E-P-T
Compressor Model	QX2802VDL-T
Refrigerant	R290
Rated Voltage	24V
Voltage Range	24V
Work Current Range	1.0 ~ 8.3 A
Max Current	12 A
Cooling Capacity	100~700W
Capillary Tube	Φ2 * 0.8 m
Temperature Range	-16C ~ 30C degree
Unit Dimension	330x200x150mm / 13x7.9x5.9inch
Noise	40↓dB(A)
Vibration	≤0.65 m/s ²
N.W	4Kgs/9.59 lbs
Motor Speed	1,800 ~ 4,500rpm
Driver Board	Variable Frequency Controller

2. Other Parameters

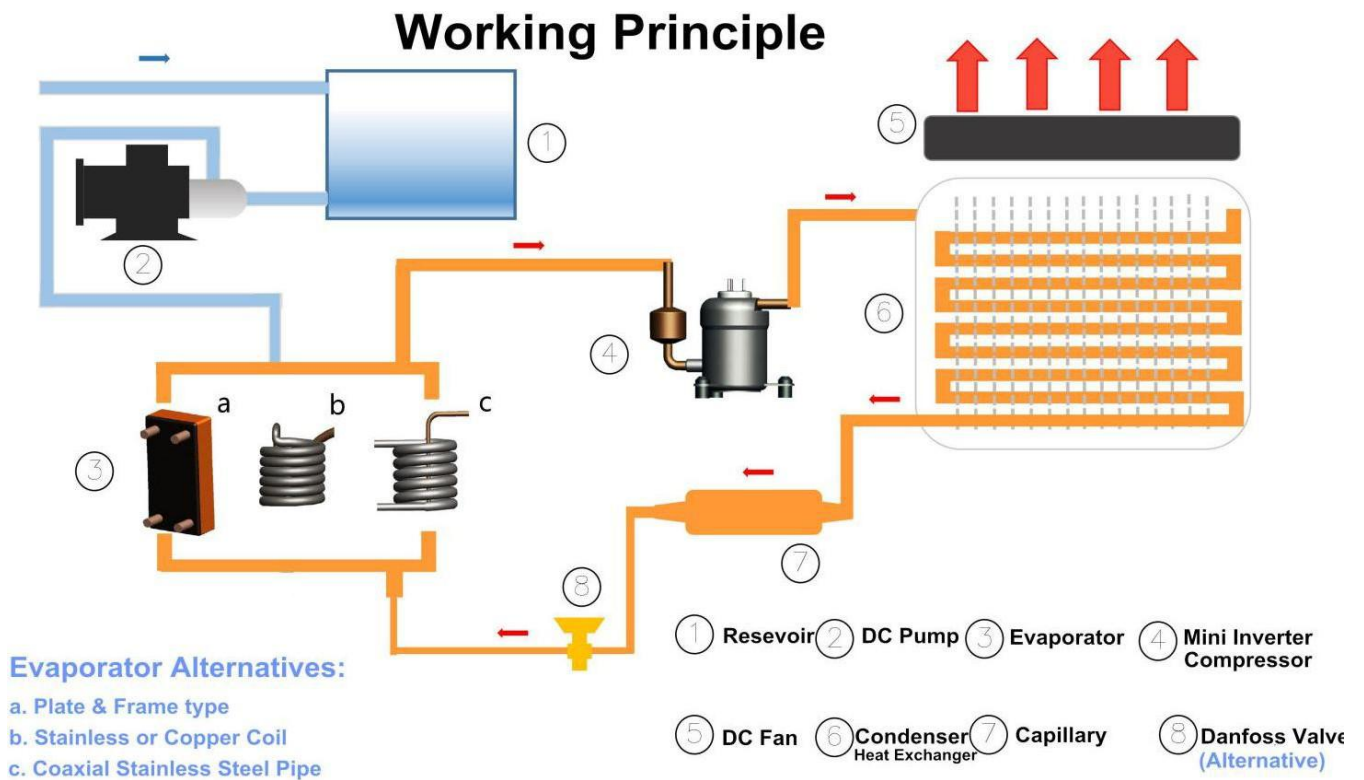
Item	Standard	Overload	Note
Compression Ratio	<6	<8	Compressor will be overloaded protection when temp reaches 105° degree
Discharge Temp	84° degree	105° degree	
Start-up Pressure	Only when system's high-low pressure under balance can operate compressor (Compressor has this built-in setting)		
Max Tilt Angle	15° Degree		
Oil Type & Amount	Type: RL68H Amount: 50 ml		
Compressor Protection	Controller Automatic Protection		
Motor Data	BLDC Motor		

3. Refrigeration Schematic Diagram

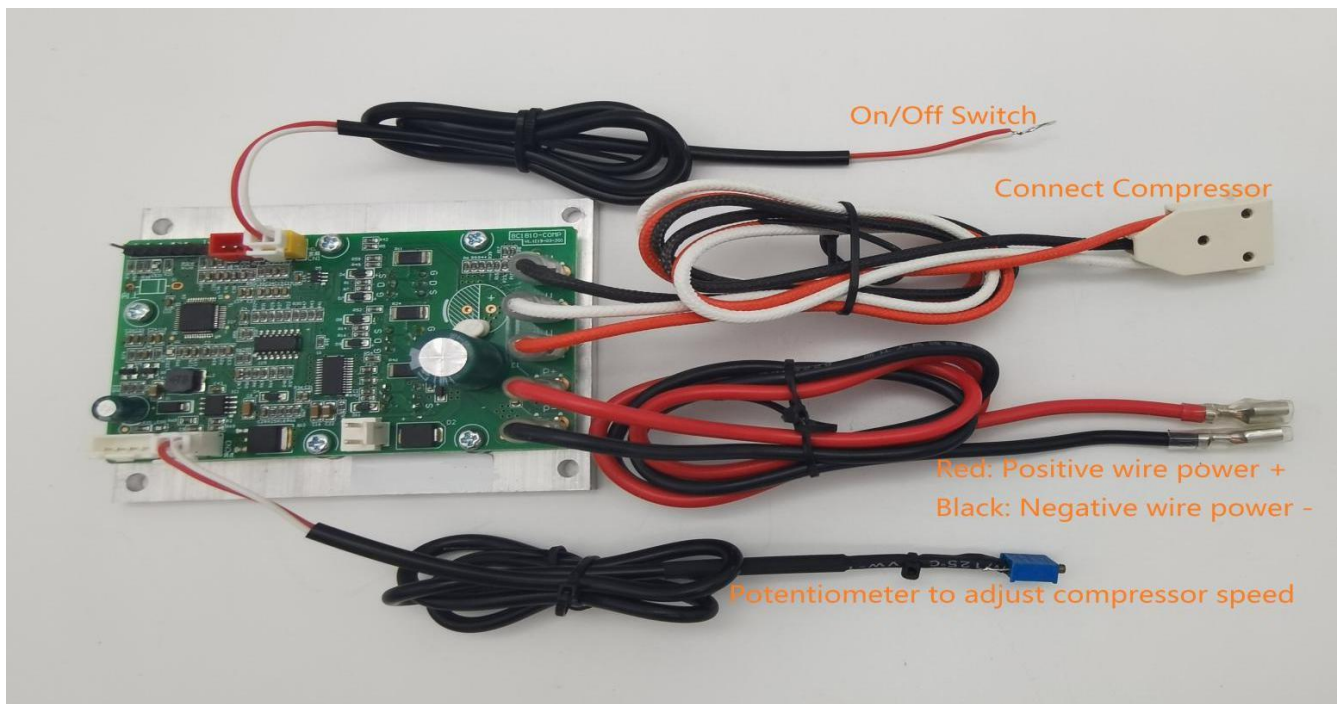
The diagram are just for reference only. We're able to customize according to users' demand for whole system optimization.



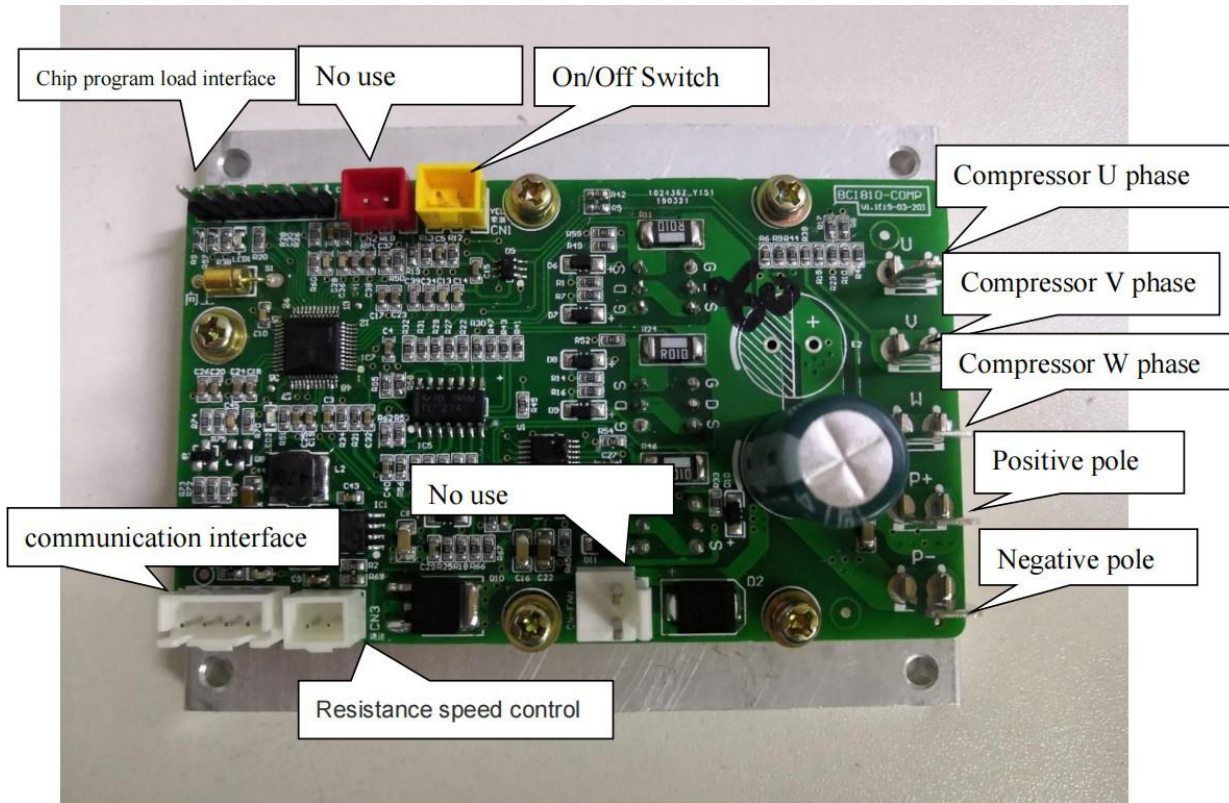
4. Working Principle



5. Controller Wiring Diagram



6. Driver Board Interface Specification

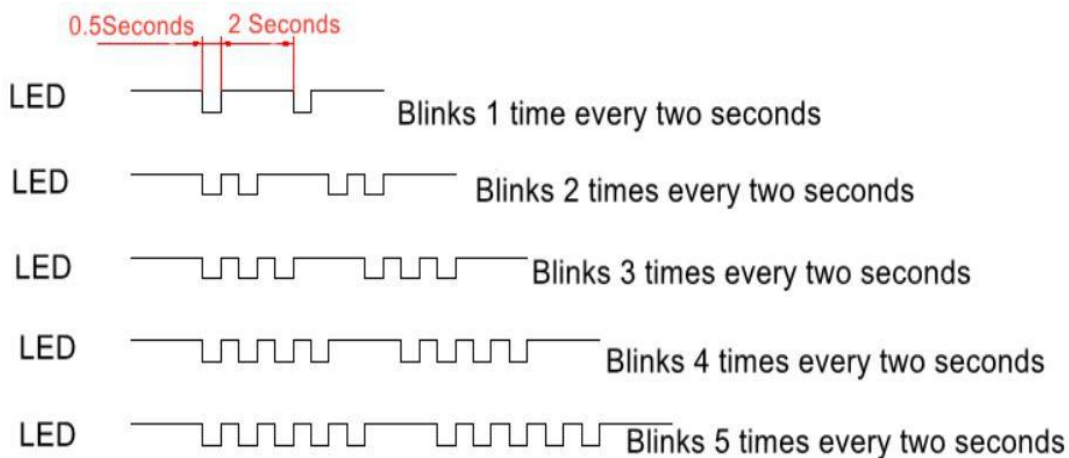


1. UART Communication: Used for compressor communication circuit board and operation circuit board communication.
2. Chip program load interface: Chip simulation and program curing.
3. Positive pole: Connect to the positive pole of the power supply.
4. Negative pole: Connect to the negative pole of the power supply.
5. Compressor U phase、Compressor V phase、Compressor W phase: Connect compressor U V W phase.

7. Other Attentions

1. Please check evaporator & condenser installation properly, when compressor is failed or poor refrigerating. Make sure the system is complete vacuum and no water inside. Refrigerant oil lacking also leads to poor refrigerating capacity.
2. Notice, Refrigerant oil will be released when we are charging refrigerant gas. Make sure the compressor has enough refrigerant oil (50ml). Or compressor motor will face possible jammed or stuck due to oil lockage.
3. Drive Board

LED1: Flicker define



Blink 1time: Compressor stall or Compressor blockage

Blink 2 times: Lack-phase

Blink 3 times: Over current ($\geq 24A$)

Blink 4 times: Low Voltage or Over Voltage

Blink 5 times: MOS over-temperature protection

LED2: Compressor operation flashes at 1 second frequency.

8. External Dimension

(330x200x150mm / 13x7.9x5.9inch)

