

L96CU1 COMPRESSOR

TECHNICAL SPECIFICATION



HUANGSHI DONPER COMPRESSOR CO., LTD.

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1、Compressor Type

Compressor model	L96CU1
Rated voltage/frequency	220-240V~50Hz
Refrigerant	R290
Application	Low back pressure (LBP)
Cooling method	Fan Cooling
Start torque	High starting torque (HST)
Control device	Capillary tube
Motor type	CSR
Starting capacitor	50μF
Running capacitor	6μF

2、Performance Data

Displacement	Net Wt.	Oil Charge	Cooling Capacity (≥95%)								COP (≥95%)	
			ASHRAE							CECO MAF	ASHRAE	CECO MAF
			-35	-30	-25	-23.3	-20	-15	-10	-25	-23.3	-25
cm ³	kg	ml	w	w	w	w	w	w	w	w	w/w	w/w
9.5	9.0±0.4	200±10	263	325	410	460	554	712	866	328	1.50	1.33

Note: These datas come from the test without a PTC relay

Testing condition:

Test conditions	LBP	
	ASHRAE	CECOMAF
Evaporating Temp.	-23.3℃	-25℃
Ambient Temp.	+32.2℃	+32℃
Condensing Temp.	+54.4℃	+55℃
Suction Temp.	+32.2℃	+32℃
Subcooling Temp.	+32.2℃	+55℃

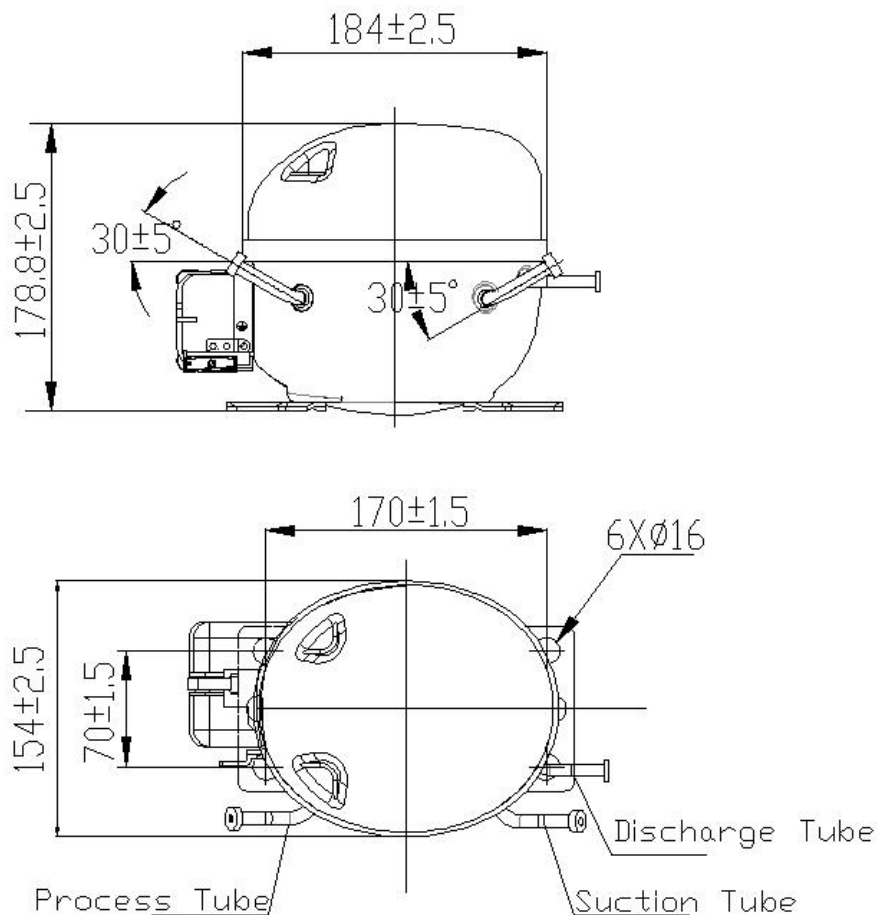
3、Running Condition

Ambient temp.	0~43℃
Evaporating temp.	-35~-15℃
Voltage range	187~254V
Max. condensing temp.	65℃
Max. winding temp.	130℃
Max. shell temp.	110℃
Max. discharge temp.	130℃
Start voltage	187V [0.8/0.8MPa(abs)]
Shell min. resistance to pressure	35bar

4、Compressor Mechanical Information

Oil type	POE
Viscosity	28.8~35.2mm ² /s(40℃)
Oil charged	200±10ml
Diameter of suction tube (I.D.)	Φ 6.2±0.1mm
Diameter of discharge tube(I.D.)	Φ 4.9±0.1mm
Diameter of process tube (I.D.)	Φ 6.2±0.1mm
Material of suction tube, process tube and discharge tube	copper tube
Compressor noise	≤48.0dB(A)
Vibration	≤1.2m/s ²
Protecting gas	-0.06~-0.02MPa

5、Compressor Shape

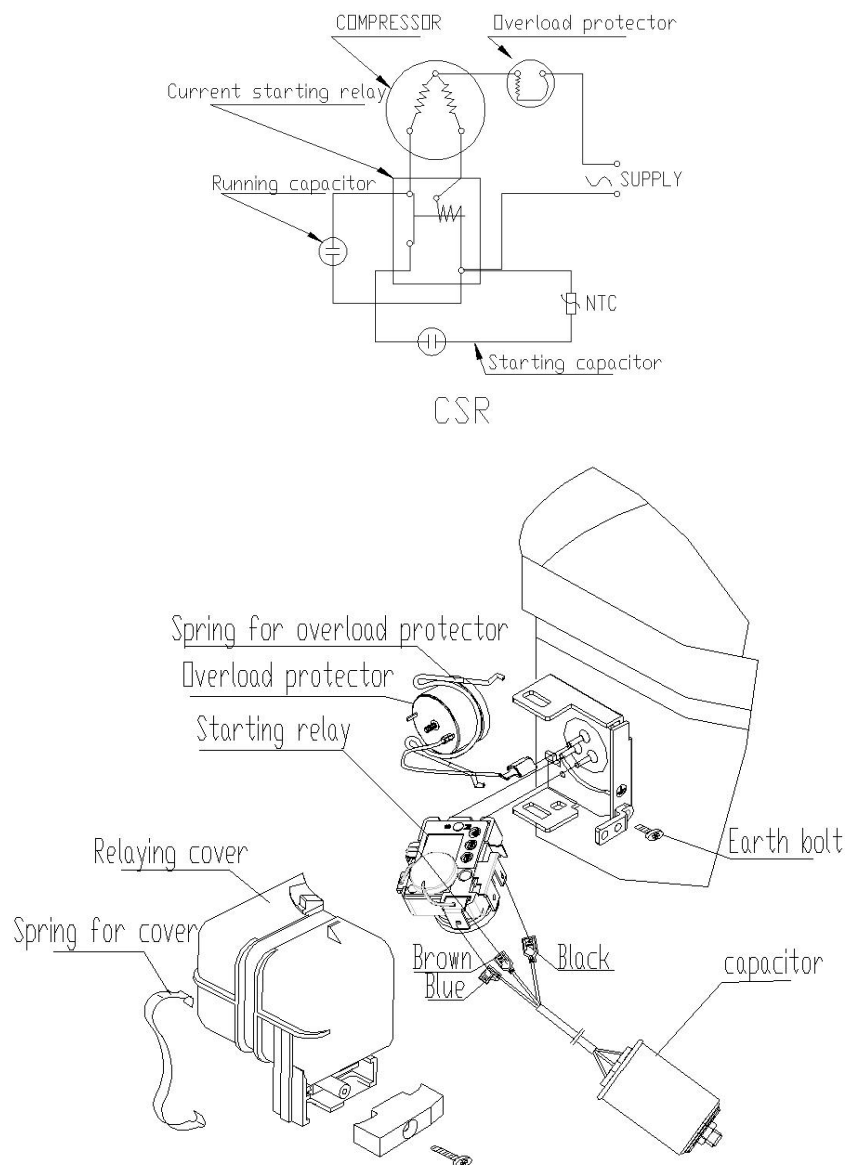


Caution: Suction tube and process tube can not exchange.

Unmarked tolerance: ±5mm

Unmarked Angle: ±10°

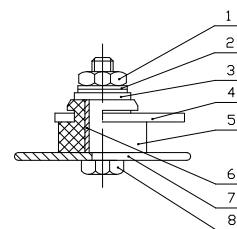
6、Wiring Diagram



Note: Each of the starting relay、the overload protector、the capacitor、the spring、the cover and the earth bolt is separately provided by our company.

7、Fixing of mounting bracket and cabinet base

- 1、Hexagon nut
- 2、Spring washer
- 3、Flat washer
- 4、Compressor mounting bracket
- 5、Rubber grommet
- 6、Sleeve
- 7、Cabinet base
- 8、Screw



Note: Equipment assembly is all provided by our company. Above is just for reference, details can refer to delivery state.

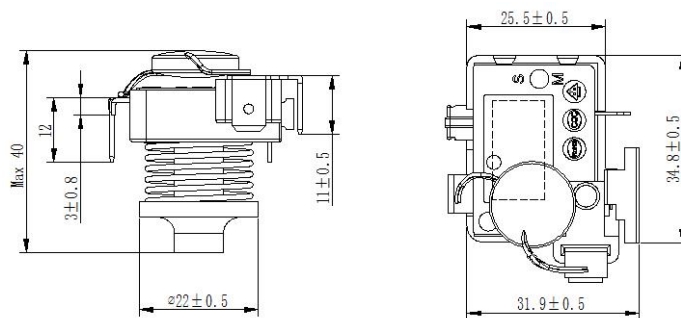
8、Starting relay and Overload protector

8.1 Starting relay

Model	QL2-4.95	QL2-4.95	MTRP 3880
Supplier	Changshu Tianyin Electromechanical Co.,Ltd.	Hangzhou Star shuaier Electric Appliance Co.,Ltd.	Elsing (Suzhou) Electrical Controls Co.,Ltd.
Max current	A	4.95	
Min current	A	4.15	

Assembly force $\leq 100\text{N}$ Disassembly force $\geq 25\text{N}$

Flammability: Anti-flammability

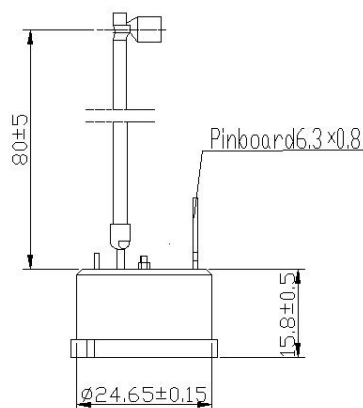


8.2 Overload protector

Model	B92-135	B92-135	T 0630
Supplier	Changshu Tianyin Electromechanical Co.,Ltd.	Hangzhou Star shuaier Electric Appliance Co.,Ltd.	Elsing (Suzhou) Electrical Controls Co.,Ltd.
Max.T.C Amp.(25°C) A	9.2		
Trip time	S	6~16	
Reset time	S	20~150	
Open temp.	$\pm 5^{\circ}\text{C}$	135	
Close temp.	$\pm 9^{\circ}\text{C}$	61	

Assembly force $\leq 80\text{N}$ Disassembly force $\geq 12.5\text{N}$

Flammability: Anti-flammability



9、Capacitor

Type		Starting capacitor	Running capacitor
Model	μF	50	6
Rated voltage	V.AC	330	450
Supplier	Ningguo Yuhua Electrical Products Co.,Ltd.		
	SHANGHAI HAOYE ELECTRONIC CO.,LTD		
	Anhui Feida Electrical Technology Co., Ltd.		
	Anhui Tongfeng Electronics CO.,LTD		

10、 Delivery State

No.	Name	Model	Quantity	Code
1	Compressor	L96CU1	1 pcs	
2	Rubber plug	$\Phi 6.4$	1 pcs	
		$\Phi 8.2$	2 pcs	
3	Rubber grommet	H model	4 pcs	
4	Starting relay	QL2-4.95	1 pcs	Changshu Tianyin Electromechanical Co.,Ltd.
				Hangzhou Star shuaier Electric Appliance Co.,Ltd.
		MTRP 3880		Elsing (Suzhou) Electrical Controls Co.,Ltd.
5	Overload protector	B92-135	1 pcs	Changshu Tianyin Electromechanical Co.,Ltd.
				Hangzhou Star shuaier Electric Appliance Co.,Ltd.
		T 0630		Elsing (Suzhou) Electrical Controls Co.,Ltd.
6	Capacitor	50+6 μF	1 pcs	
7	Relaying cover	S2	1 pcs	
8	Spring for cover	QS08-05H	1 pcs	
9	Anchor bolt assembly	M6 \times 30	4 pcs	
10	Nut	M6	4 pcs	
11	Sleeve	$\Phi 10 \times 17$	4 pcs	
12	Earth bolt	QET.1-24C	1 pcs	
13	Spring for overload protector	QS08-06A	1 pcs	

Notes:1. 1. Except for the Rubber plug and the Spring for overload protector,other electrical parts and equipment assembly are supplied separately, not installed on the compressor.

2.All electrical parts and equipment assembly according to ‘Delivery state’are all provided by our company.

11、Package、Storage and Transportation

Package type	unrecyclable
Quantity	60pcs/box
Transportation	By sea
Storage	Max. 2 layers
Cross Weight Kg	575±24
Net Weight Kg	540±24
Volume m ³	0.90
Dimension: length×width×height cm	103×89×98
Main components	Plywood supporter、upper Plywood cover、foam divider、plastic sheet、cardboard cover、rain-proof cover、wrapping
Movement	Keep the compressor in normal or vertical position
Trans. test requirement	No allowable compressor's damage and performance loss.

12、Technical Items

- (1)、Don't take off the rubber plugs before using and installing compressor to prevent dust and moisture.
- (2)、Don't turn down or incline the compressor during storage, transportation or installation and avoid vibration and shock.
- (3)、The compressor must be kept horizontally during running, the inclination angle must be less than 5°.
- (4)、A special polyester oil is charged in the R290 compressor and the charging volume has been optimized by DONPER. Don't pour out or add any refrigerant oil.
- (5)、The interval of compressor operation must be more than 4 minutes in order to obtain a pressure balance in the systems.
- (6)、Don't start or run in the case of vacuum or charge high voltage in the compressor. The compressor cannot be used to vacuumize the refrigeration system.
- (7)、The design of refrigeration system must be suitable to insure the oil could flow back to compressor.
- (8)、The maximum ambient temperature of the compressor operation is 43°C. When continuously operating under the maximum ambient temperature 43°C, the condensing pressure and the peak pressure should not exceed as showing in the following table.

Refrigerant	R290
Max. condensing pressure	2.01MPa
Peak	2.44 MPa

- (9)、Widen the evaporating Temp. range of the compressor should be approved by DONPER.
- (10)、Compressor should be stored in a dry place.
- (11)、Compressor accessories (eg: starting relay, overload protector etc.) are put in the accessories box instead of fixing on the compressor.
- (12)、The inventory period of the compressor after leaving the factory should not exceed 6 months. If it exceeds 6 months, please check if the protective gas inside the compressor is under negative pressure.
- (13)、It's necessary to keep the compressor without rubber plug as short time as possible (max time 10 min).
- (14)、R290 systems require a filter with drying agent which suitable for R290 refrigerant
- (15)、The vacuum pump and the charging system must only be dedicated to R290.
- (16)、The refrigeration system should minimize the content of chlorine and moisture, and must be free of paraffin and silicon oil.
- (17)、The organic substance non-compatible with R290 cannot be used in the refrigeration system.