

L83CZ1 COMPRESSOR

TECHNICAL SPECIFICATION



HUANGSHI DONPER COMPRESSOR CO., LTD.

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1、Compressor Type

Compressor model	L83CZ1
Rated voltage/frequency	220-240V~50Hz
Refrigerant	R134a
Application	Low back pressure (LBP)
Cooling method	Fan Cooling
Start torque	Low starting torque (LST)
Control device	Capillary tube
Motor type	RSIR
Starting capacitor	/
Running capacitor	/

2、Performance Data

Displacement	Net Wt.	Oil Charge	Cooling Capacity($\geq 95\%$)								COP($\geq 95\%$)	
			ASHRAE							CECO MAF	ASH RAE	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
8.3	9.0±0.4	200±10	115	159	213	235	280	358	451	180	1.30	0.97

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℃

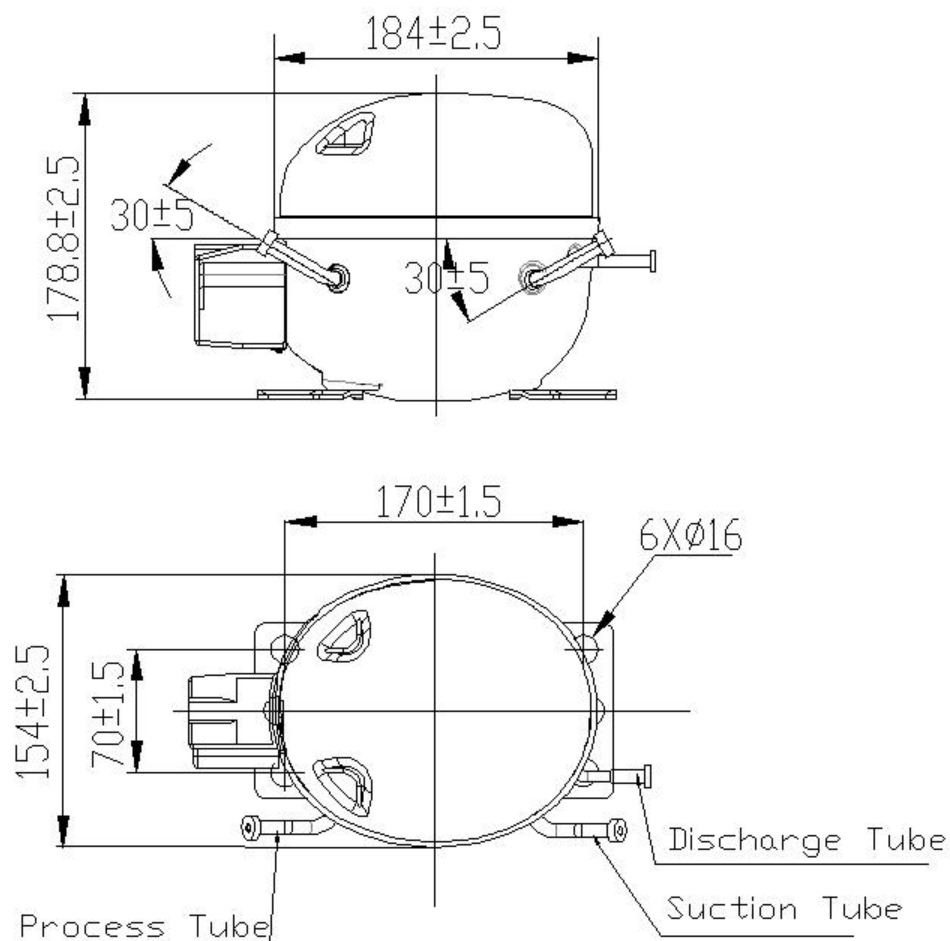
3、Running Condition

Ambient temp.	0~43℃
Evaporating temp.	-35~-15℃
Voltage range	187~254V
Max. condensing temp.	65℃
Max. winding temp.	130℃
Max. shell temp.	95℃
Max. discharge temp.	120℃
Start voltage	187V [0.5/0.5MPa(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	≤43dB(A)
Vibration	≤0.7m/s ²
Protecting gas	-0.06~-0.02MPa

5、 Compressor Shape

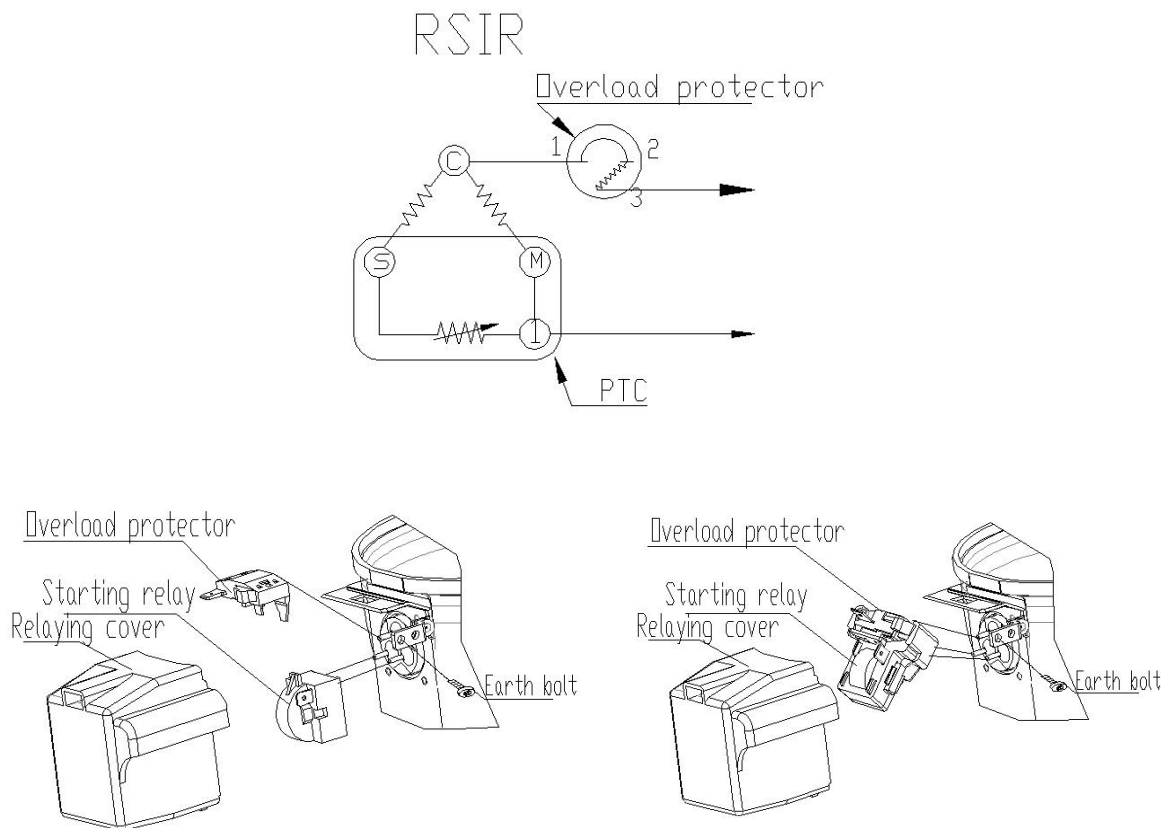


Caution: Suction tube and process tube can not exchange.

Unmarked tolerance: ±5mm

Unmarked Angle: ±10°

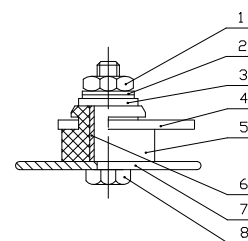
6、 Wiring Diagram



Note: Each of the starting relay、the overload protector and the cover 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.

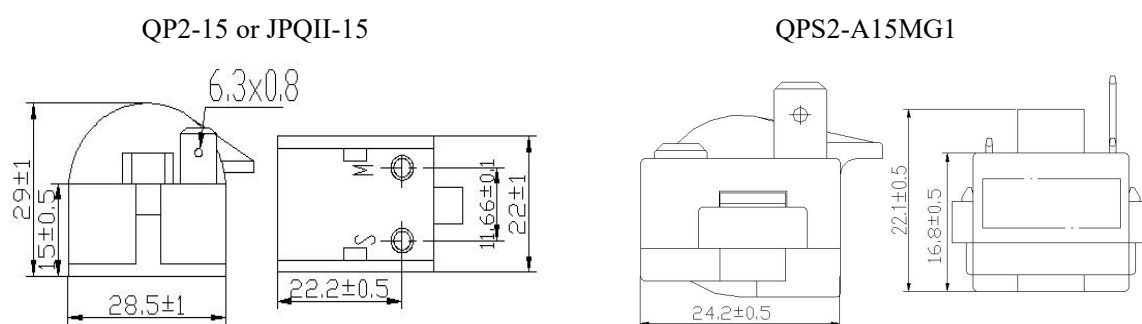
8、 Starting Relay and Overload Protector

8.1 Starting relay

Model	QPS2-A15MG1	QP2-15	JPQII-15
Supplier	Hangzhou Star shuaier Electric Appliance Co.,Ltd.	Foshan Shunde Ronggui Electric Circuit Mersurement Equipment Co., Ltd.	Lanxi Yueqiang Electric Co.,Ltd.
Resistance Ω	$15 \pm 20\%$		
Run time S	0.2~1.5		
Rese time S	≤ 100		
Max working voltage V	350		
Max current A	8		

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

Flammability: Anti-flammability

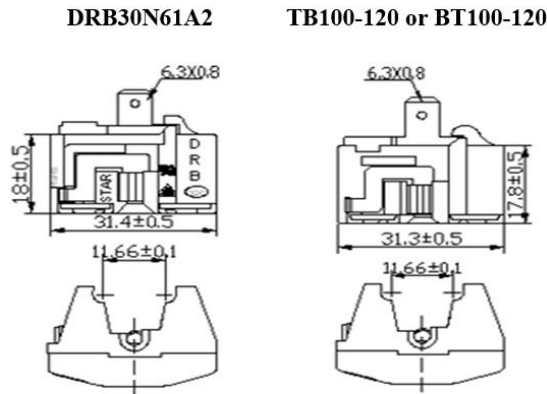


8.2 Overload protector

Model	DRB30N61A2	TB100-120	BT100-120
Supplier	Hangzhou Star shuaier Electric Appliance Co.,Ltd.	Foshan Shunde Ronggui Electric Circuit Mersurement Equipment Co., Ltd.	Lanxi City Yueqiang Electric Co.,Ltd.
Max.T.Camp.(25°C) A	10.5		
Trip time S	5~15		
Reset time S	25~150		
Open temp. $\pm 5^\circ\text{C}$	125		
Close temp. $\pm 9^\circ\text{C}$	61		

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

Flammability: Anti-flammability



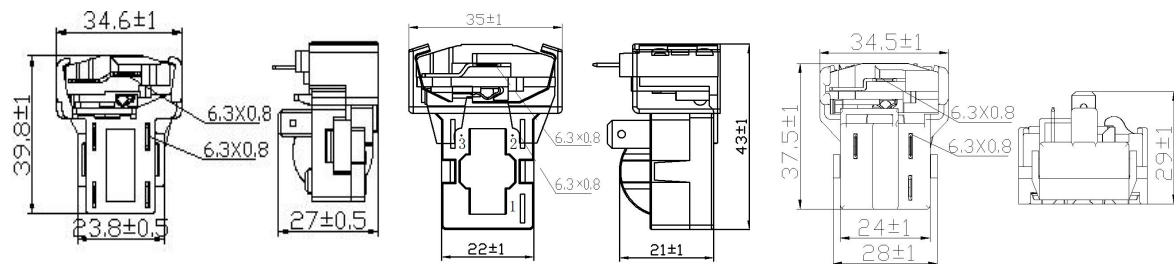
8.3 Combo starting relay and overload protector

Model		QPS2-B15MG1+ DRB30N61A2	QP2-15 ZH +TB100-120	JPQII-15 BK +BT100-120
Supplier		Hangzhou Star shuaier Electric Appliance Co.,Ltd.	Foshan Shunde Ronggui Electric Circuit Mersurement Equipment Co., Ltd.	Lanxi City Yueqiang Electric Co.,Ltd.
Starting relay	Resistance Ω	15±20%		
	Run time S	0.2~1.5		
	Reset time S	≤100		
	Max working voltage V	350		
	Max current A	8		
Overload protector	Max.T.C Amp.(25°C) A	10.5		
	Trip time S	5~15		
	Reset time S	25~150		
	Open temp. ±5°C	125		
	Close temp. ±9°C	61		

Assembly force ≤150N Disassembly force ≥37.5N

Flammability: Anti-flammability

QPS2-B15MG1+DRB30N61A2 QP2-15 ZH+TB100-120 JPQII-15 BK+BT100-120



9、 Delivery State

No.	Name	Model	Quantity	Code
1	Compressor	L83CZ1	1 pcs	
2	Rubber plug	Φ6.4	1 pcs	
		Φ8.2	2 pcs	
3	Rubber grommet	H model	4 pcs	
4	Starting relay	QP2-15	1 pcs	Foshan Shunde Ronggui Electric Circuit Mersurement Equipment Co., Ltd.
		QPS2-A15MG1		Hangzhou Star shuaier Electric Appliance Co.,Ltd
		JPQII-15		Lanxi Yueqiang Electric Co.,Ltd.
5	Overload protector	DRB30N61A2	1 pcs	Foshan Shunde Ronggui Electric Circuit Mersurement Equipment Co., Ltd ;
		TB100-120		Hangzhou Star shuaier Electric Appliance Co.,Ltd
		BT100-120		Lanxi Yueqiang Electric Co.,Ltd.
6	Starting relay and Overload protector	QPS2-B15MG1+ DRB30N61A2	1 pcs	Hangzhou Star shuaier Electric Appliance Co.,Ltd
		QP2-15 ZH +TB100-120		Foshan Shunde Ronggui Electric Circuit Mersurement Equipment Co., Ltd ;
		JPQII-15 BK +BT100-120		Lanxi Yueqiang Electric Co.,Ltd.
7	Relaying cover	A1	1 pcs	
8	Anchor bolt assembly	M6×30	4 pcs	
9	Nut	M6	4 pcs	
10	Sleeve	Φ 10×17	4 pcs	
11	Earth bolt	QET.1-24C	1 pcs	

Notes:1. Except for the Rubber plug , 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.

10、 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.

11、 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 R134a 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	R134a
Max. condensing pressure	1.59MPa
Peak	2.0MPa

- (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)、R134a systems require a filter with drying agent whith suitable for R134a refrigerant
- (15)、The vacuum pump and the charging system must only be dedicated to R134a.
- (16)、The refrigeration system should minimize the content of chlorion and moisture, and must be free of paraffin and silicon oil.
- (17)、The organic substance non-compatable with R134a cannot be used in the refrigeration system.