

L140CY1 COMPRESSOR

TECHNICAL SPECIFICATION



HUANGSHI DONPER COMPRESSOR CO., LTD.

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1. Compressor Type

Compressor model	L140CY1
Rated voltage/frequency	220-240V~ 50Hz
Refrigerant	R600a
Application	Low back pressure (LBP)
Cooling method	Static
Start torque	Low starting torque (LST)
Control device	Capillary tube
Motor type	RSIR
Running capacitor	/
Starting capacitor	/

2. Performance Data

Displacement	Net Wt.	Oil Charge	Cooling Capacity(≥95%)							COP(≥95%)
			ASHRAE							ASHRAE
			-35	-30	-25	-23.3	-20	-15	-10	-23.3
cm ³	kg	ml	w	w	w	w	w	w	w	w/w
14.0	8.6±0.4	190±10	111	157	210	230	272	344	442	1.3

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

Testing condition:

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

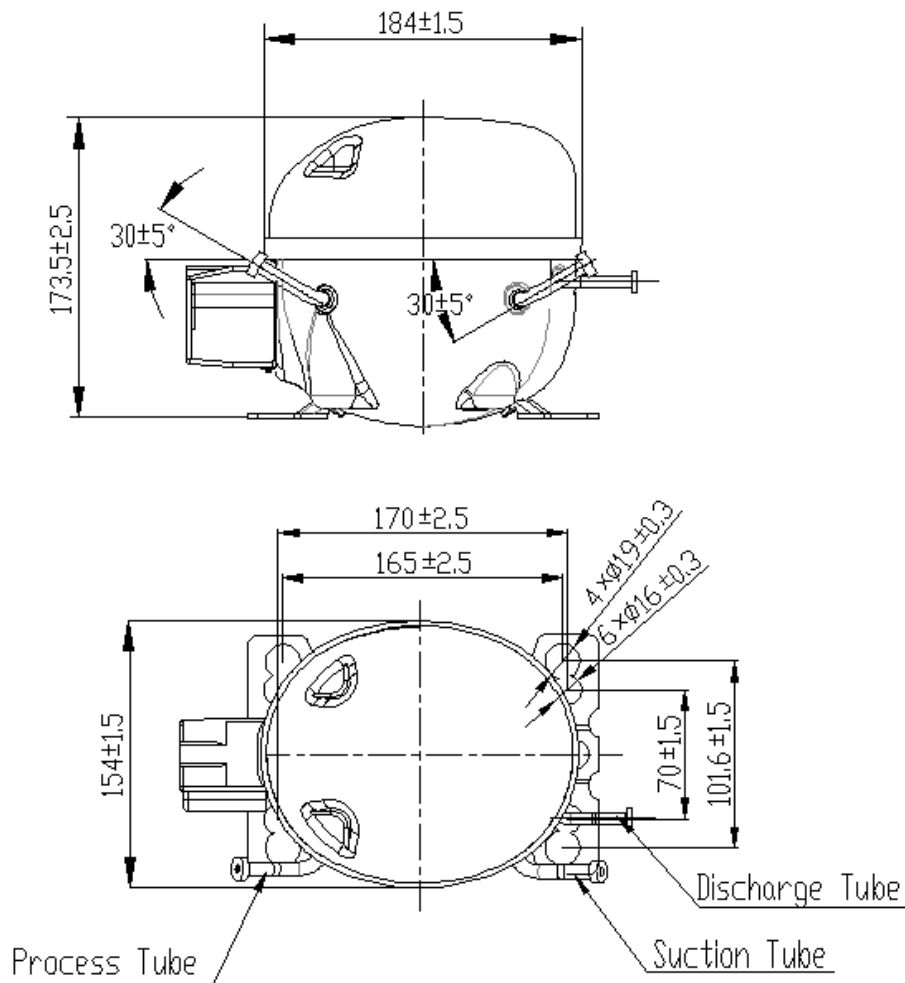
3. Running Condition

Ambient temp.	0~43°C
Evaporating temp.	-35~-15°C
Voltage range	187~254V
Max. condensing temp.	65°C
Max. winding temp.	130°C
Max. shell temp.	95°C
Max. discharge temp.	120°C
Start voltage	187V [0.3/0.3MPa(abs)]
Shell min. resistance to pressure	35bar

4. Compressor Mechanical Information

Oil type	Synthetic oil
Viscosity	7.4~9.0mm ² /s(40°C)
Oil charged	190±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	42dB(A)
Vibration	0.7m/s ²
Protecting gas	Dry com.air (Dew point-60°C)

5. Compressor Shape

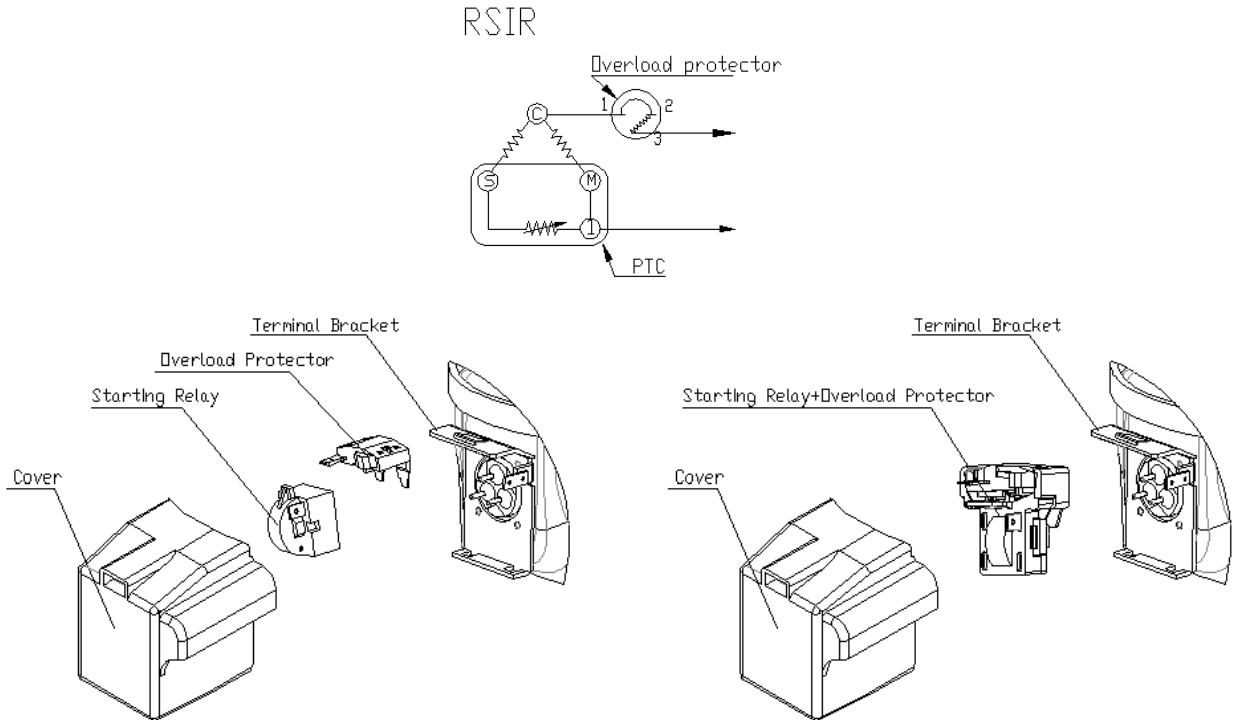


Caution:Suction tube and process tube can not be exchanged

Unmarked tolerance: ± 5mm

Unmarked Angle: ± 10°

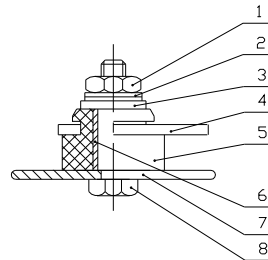
6. Wiring Diagram



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

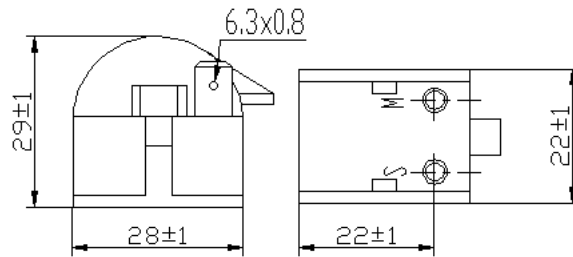
8.1 Starting relay

Model	QP2-15	
Supplier	Shunde Ronggui Electronic Circuit Measuring Equipment Co. Ltd	
Resistance	Ω	15 ± 20%
Run time	S	0.2 ~ 1.5
Reset time	S	≤ 100
Max working voltage	V	350
Max current	A	8

Assembly force $\leq 100\text{N}$ Disassembly force $\geq 12.5\text{N}$

Flammability: Anti-flammability

QP2-15

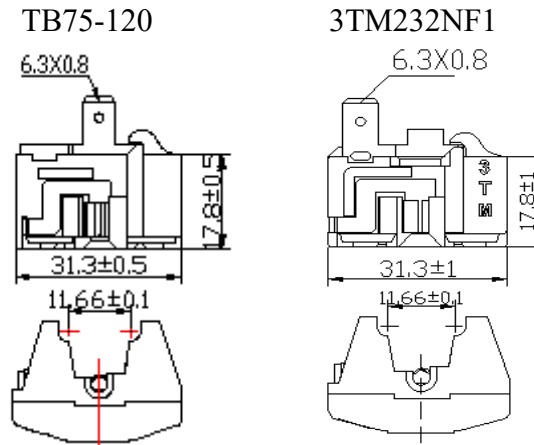


8.2 Overload protector

Model	TB75-120	3TM232NF1
Supplier	Shunde Ronggui Electronic Circuit Measuring Equipment Co. Ltd	Sensata Technologies (Baoying) Co., Ltd.
Max.T.C Amp.(25°C) A	7.5	
Trip time S	5~15	
Reset time S	20~150	
Open temp. $\pm 5^\circ\text{C}$	120	
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 Starting relay+Overload protector

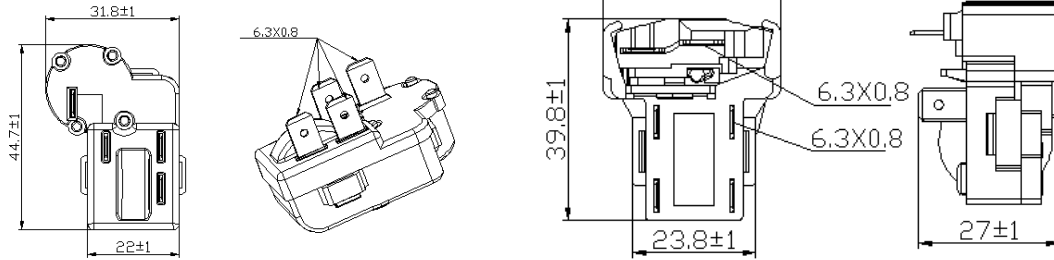
Model	ZHB75-120P15	QPS2-B15MG1+DRB26N61A2
Supplier	Changshu Tianyin Electromechanical Co.,Ltd.	Hangzhou Star shuaier Electric Appliance Co., Ltd
Resistance Ω	$15 \pm 20\%$	
Run time S	0.2~1.5	
Reset time S	≤ 100	
Max working voltage V	350	
Max current A	8	
Max.T.C Amp.(25°C) A	7.5	

Trip time	S	5~15	
Reset time	S	20~150	
Open temp.	±5°C	125	120
Close temp.	±9°C	57	61

Assembly force ≤ 150N Disassembly force ≥ 37.5N

Flammability: Anti-flammability
ZHB75-120P15

QPS2-B15MG1+DRB26N61A2



9. Delivery State

No.	Name	Model	Quantity	CODE
1	Compressor	L140CY1	1pcs	
2	Rubber plug	Φ6.4	1pcs	
3		Φ8.2	2pcs	
4	Rubber grommet	QET-03U	4pcs	
5	Starting relay	QP2-15	1pcs	
6	Overload protector	TB75-120	1pcs	
		3TM232NF1		
7	Starting relay+Overload protector	ZHB75-120P15	(1pcs)	
		QPS2-B15MG1+DRB26N61A2		
8	Relaying cover	A1	1pcs	
8	Sleeve	Φ11.1×17	4pcs	
9	Anchor bolt assembly	M6*30	4pcs	
10	Nut	M6	4pcs	

Notes:1.All electrical parts and equipment assembly are supplied separately, not installed on the compressor, except the one noted “Installed”

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 551±24

Net Weight	Kg	516±24
Volume	m ³	0.89
Dimension: length×width×height	cm	103×89×97
Main components	Wooden supporter、upper wooden 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 R600a 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	R600a
Max. condensing pressure	0.87MPa
Peak	0.98MPa

- (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 stocking period must be less than 6 months after the date of production. If longer, you have to check whether the filled gas is sufficient. Replenishment must be done if necessary.

- (13)、 It's necessary to keep the compressor without rubber plug as short time as possible (max time 10 min).
- (14)、 R600a systems require a filter with drying agent which suitable for R600a refrigerant
- (15)、 The vacuum pump and the charging system must only be dedicated to R600a.
- (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 R600a cannot be used in the refrigeration system.