

S118CY1 COMPRESSOR

TECHNICAL SPECIFICATION



HUANGSHI DONPER COMPRESSOR CO., LTD.

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1. Compressor Type

Compressor model	S118CY1
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($\geq 95\%$)								COP($\geq 95\%$)	
			ASHRAE							CECOMAF	ASHRAE	CECOMAF
			-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
11.8	6.8±0.4	160±10	99	133	176	193	228	287	367	145	1.36	1.05

Note: These data 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

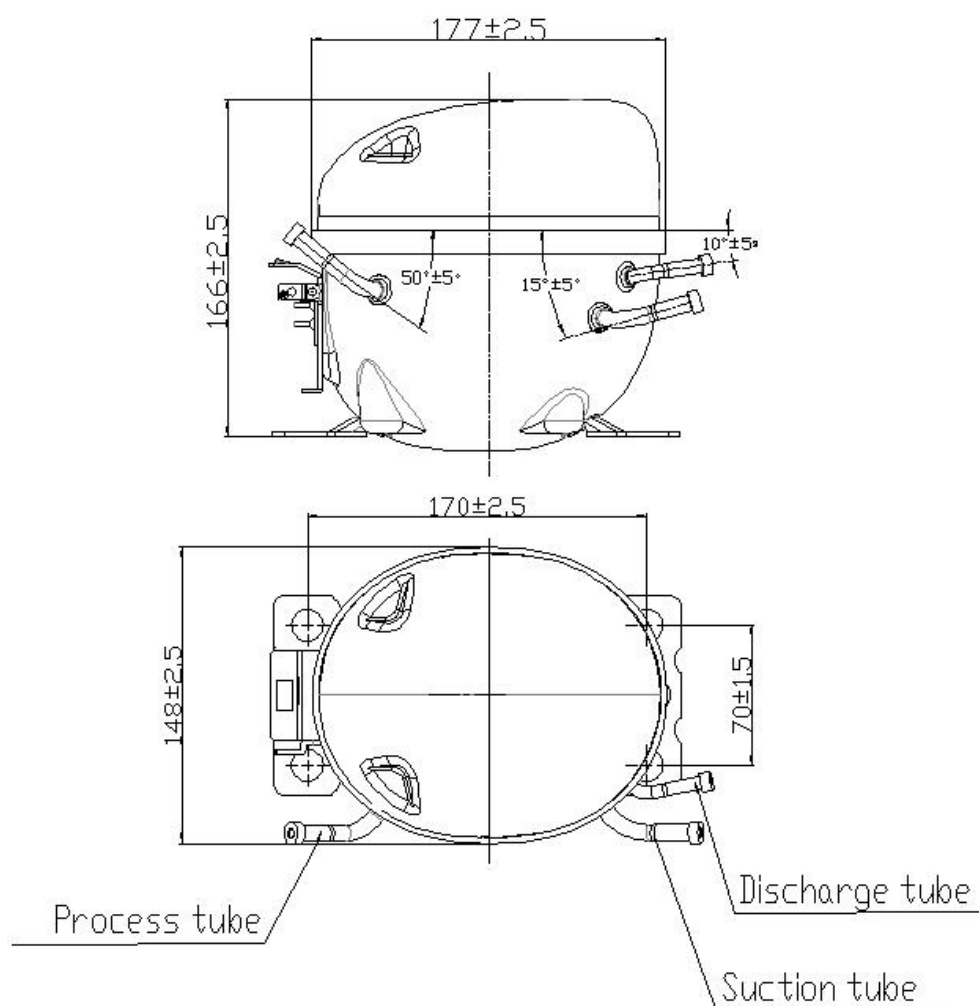
3. Running Condition

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	4.2~6.4mm ² /s(40°C)
Oil charged	160±10ml
Diameter of suction tube (I.D.)	Φ 6.5±0.1mm
Diameter of discharge tube(I.D.)	Φ 4.95±0.1mm
Diameter of process tube (I.D.)	Φ 6.5±0.1mm
Material of suction tube, process tube and discharge tube	Copper tube
Compressor noise	40dB(A)
Vibration	0.7m/s ²
Protecting gas	Dry com.air (Dew point-60°C)

5. Compressor Shape

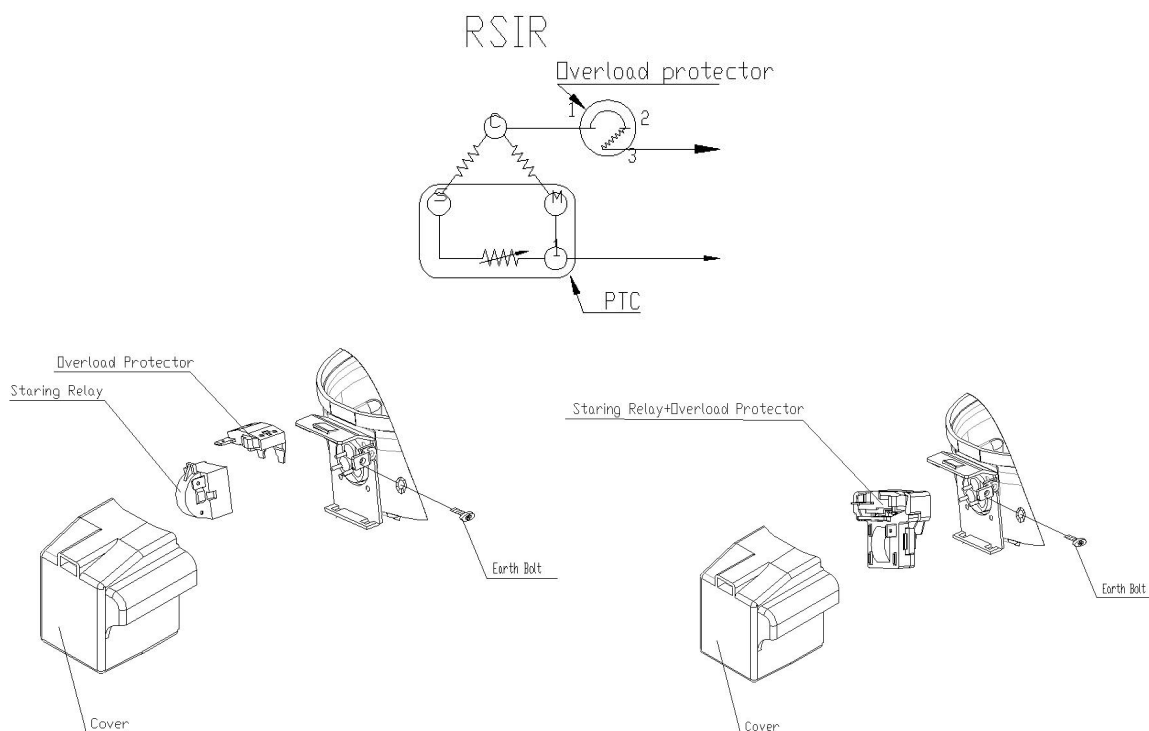


Caution: Suction tube and process tube can not be exchanged

Unmarked tolerance: ± 5mm

Unmarked Angle: ± 10°

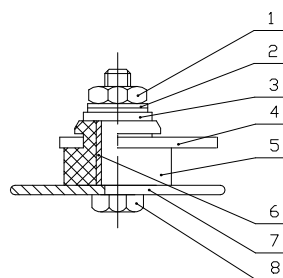
6. Wiring Diagram



Note: Each of the starting relay, the overload protector, the cover and the earth bolt is 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



8. Starting relay and overload protector

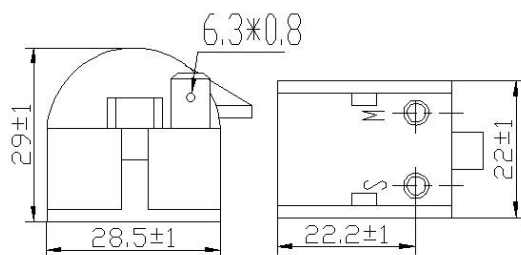
8.1 Starting relay

Model	8EA19C1-02	JPQII-15	QP2-15
Supplier	Changshu Tianyin Electromechanical Co. Ltd.	Lanxi City Yueqiang Electric Co.Ltd.	Shunde Ronggui Electronic Circuit Measuring Equipment Co. Ltd.
Resistance of Starting relay Ω	15 \pm 20%		
Runtime S	0.2~1.5		
Resettime S	\leq 100		
Max working voltage V	350		
Maxcurrent A	8		

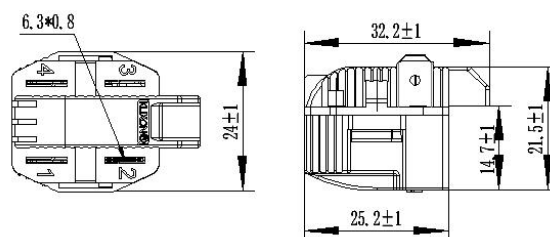
Assembly force \leq 100N Disassembly force \geq 25N

Flammability: Anti-flammability

JPQII-15 or QP2-15



8EA19C1-02



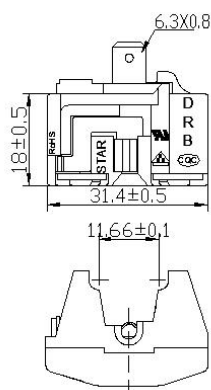
8.2 Overload protector

Model	DRB22T69A2	BT62-140	TB62-140
Supplier	Hangzhou Star shuaier Electric Appliance Co.,Ltd.	Lanxi City Yueqiang Electric Co.Ltd.	Shunde Ronggui Electronic Circuit Measuring Equipment Co. Ltd.
Max.T.C Amp.(25°C) A	6.2		
Trip time S	5~15		
Reset time S	20~150		
Open temp. $\pm 5^{\circ}\text{C}$	140		
Close temp. $\pm 9^{\circ}\text{C}$	69		

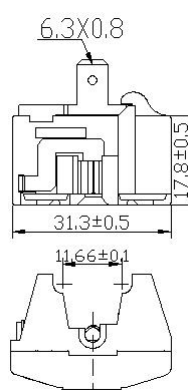
Assembly force \leq 80N Disassembly force \geq 12.5N

Flammability: Anti-flammability

DRB22T69A2



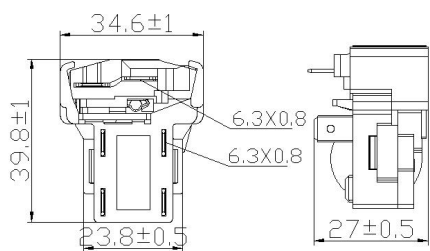
BT62-140 or TB62-140



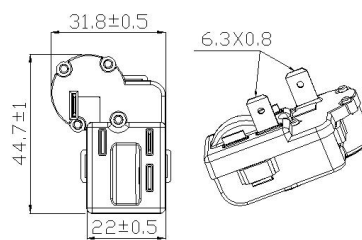
8.3 Combo starting relay and overload protector

Model		ZHB62-140 P15	QPS2-B15 MG1+DRB 22T69A2	8EA19C1-02 +3TM205TH 1	JPQII-15 BK +BT62-140	QP2-15 ZH+TB62-1 40
Supplier		ChangshuTi anyinElectr omechanica lCo.,Ltd.	Hangzhou star shuaier Electric Appliance Co.Ltd.	Sensata Technologies (Baoying) Co., Ltd.	Lanxi City Yueqiang Electric Co.Ltd.	Shunde Ronggui Electronic Circuit Measuring Equipment Co. Ltd.
Resistance of Starting relay		Ω	15±20%			
Runtime		S	0.2~1.5			
Resetime		S	≤100			
Max working voltage		V	350			
Maxcurrent		A	8			
Protector	Max.T.C Amp.(25°C)	A	6.2			
	Trip time	S	5~15			
	Reset time	S	20~150			
	Open temp.	±5°C	140			
	Close temp.	±9°C	69			

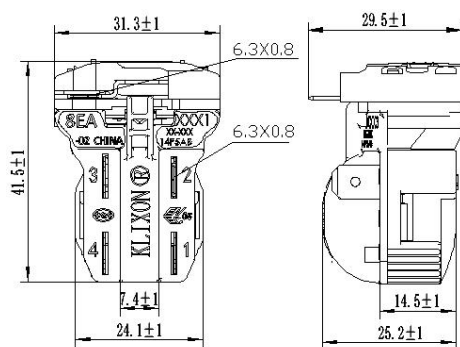
QPS2-B15MG1+DRB22T69A2



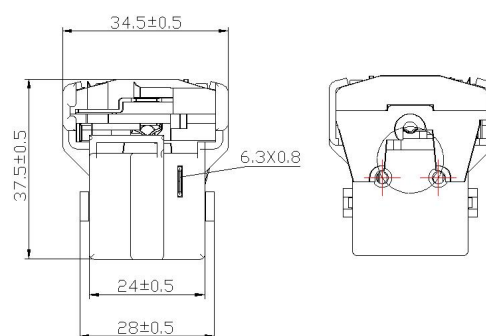
ZHB62-140P15



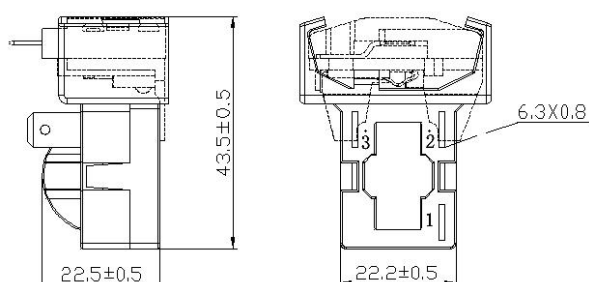
8EA19C1-02+3TM205TH1



JPQ II -15 BK +BT62-140



QP2-15 ZH+TB62-140



9. Delivery State

No.	Name	Model	Quantity	CODE
1	Compressor	S118CY1	1pcs	
2	Rubber plug	Φ6.4	1pcs	installed
3		Φ8.2	2pcs	installed
4	Rubber grommet	H Model	4pcs	
5	Starting relay	8EA19C1-02	1pcs	
		JPQII-15		
		QP2-15		
6	Overload protector	DRB22T69A2	1pcs	
		BT62-140		
		TB62-140		
(7)	Starting relay and Overload protector	ZHB62-140P15	1pcs	
		QPS2-B15MG1+DRB22T69A2		
		8EA19C1-02+3TM205TH1		
		JPQ II -15 BK +BT62-140		
		QP2-15 ZH+TB62-140		
8	Earth bolt	QET.1-24C	1pcs	
9	Relaying cover	A1N	1pcs	
10	Sleeve	Φ 10×17	4pcs	
11	Anchor bolt assembly	M6×30	4pcs	
12	Nut	M6	4pcs	

Notes:1.Except for special remakes ,All 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	100pcs/box
Transportation	By sea
Storage	Max. 2 layers
Cross Weight Kg	715±40
Net Weight Kg	680±40
Volume m ³	1.11
Dimension: length×width×height cm	112×89×111
Main components	Wooden supporter、upper wooden cover、foam divider、plastic sheet、cardboard 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
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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.