

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(≥95%)							COP(≥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	
11.8	6.8±0.4	160±10	83	134	179	195	226	291	347	147	1.36	1.18

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

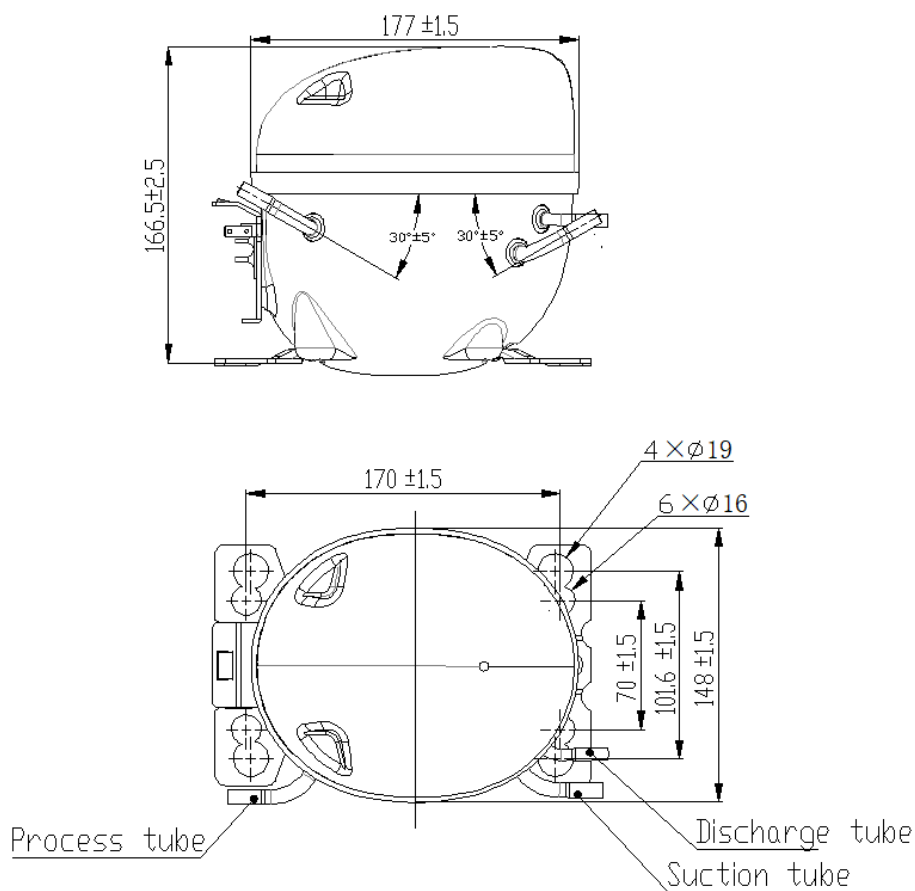
3. Running Condition

Ambient temp.	0~43°C
Evaporating temp.	-35~-15°C
Voltage range	187~254V
Max. condensing temp.	65°C
Max. winding temp.	120°C
Max. shell temp.	95°C
Max. discharge temp.	110°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 6.2 ± 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	41dB(A)
Vibration	0.7m/s ²
Protecting gas	Dry com.air (Dew point-60°C)

5. Compressor Shape

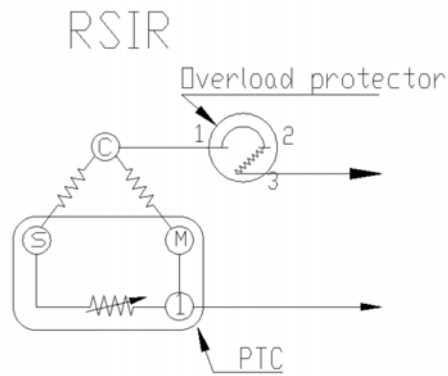


Caution: Suction tube and process tube can not be exchanged

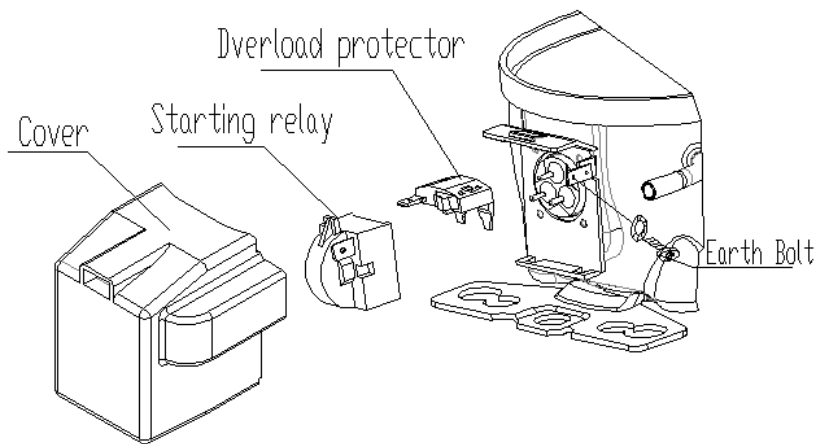
Unmarked tolerance: ± 5mm

Unmarked Angle: ± 10°

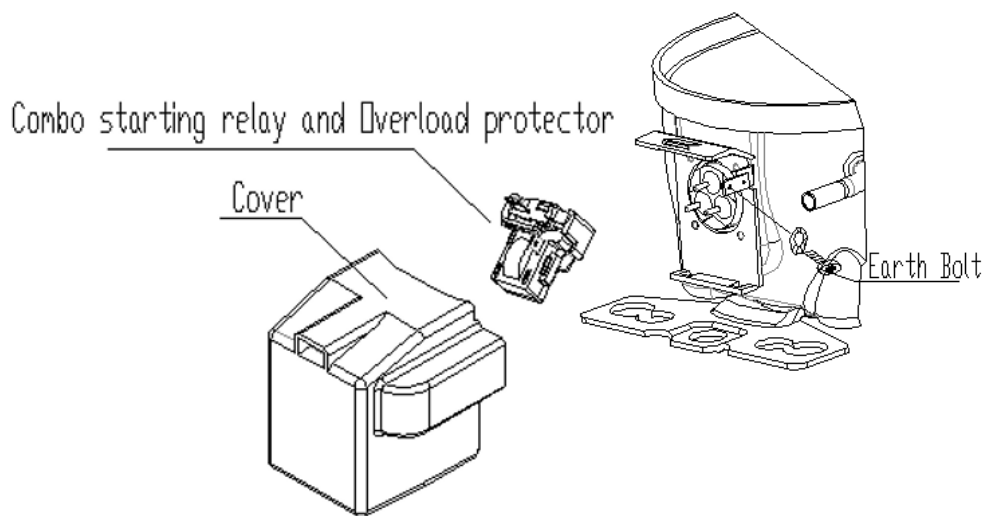
6. Wiring Diagram



Separated type



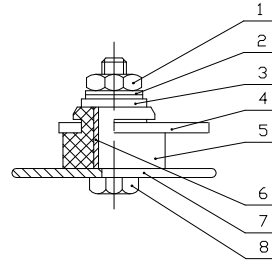
Combo type



Note: Each of the starting relay, the overload protector, 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

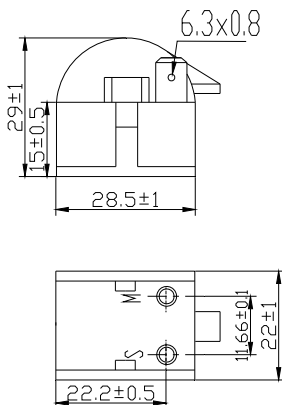
8.1 Starting relay

Model	JPQII-15	8EA19C1-02	QP2-15
Supplier	Lanxi City Yueqiang Electric Co.,Ltd.	Sensata Technologies (Baoying) Co., Ltd.	Shunde Ronggui Electronic Circuit Measuring Equipment Co. Ltd.
Resistance Ω	15		
Run time S	0.2~1.5		
Reset time S	≤ 100		
Max working voltage V	350		
Max current A	8		

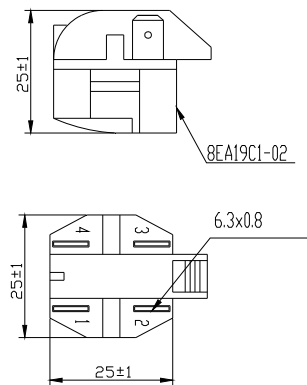
Assembly force $\leq 100N$ Disassembly force $\geq 25N$

Flammability: Anti-flammability

QP2-15/ JPQ II -15



8EA19C1-02



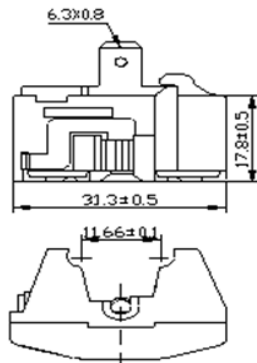
8.2 Overload protector

Model	DRB22T69A2	BT62-140	TB62-140	3TM205TH1
Supplier	Hangzhou Starshuaier Electric Appliance Co.,Ltd.	Lanxi City Yueqiang Electric Co.,Ltd	Shunde Ronggui Electronic Circuit Measuring Equipment Co. Ltd.	Sensata Technologies (Baoying) Co., Ltd.
Max.T.C Amp.(25°C)	A	6.2		
Trip time	S	5~15		
Reset time	S	30~150		
Open temp.	±5°C	140		
Close temp.	±9°C	69		

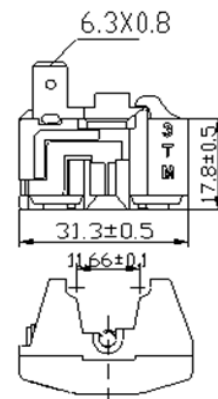
Assembly force ≤ 80N Disassembly force ≥ 12.5N

Flammability: Anti-flammability

DRB22T69A2/TB62-140/BT62-140



3TM205TH1



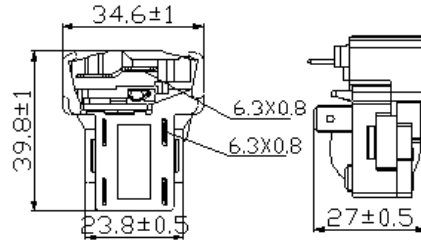
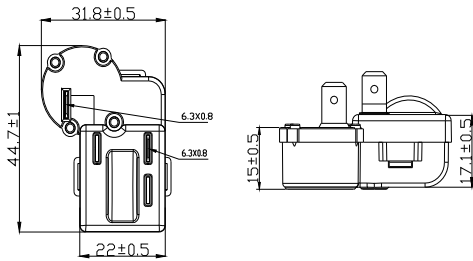
8.3 Combo starting relay and overload protector

Model	ZHB62-140P15	8EA19C 1-02+3T M205TH1	QPS2-B 15MG1+ DRB22T69A2	QP2-15 ZH+ TB62-140	JPQ II -15 BK +BT62-140
Supplier	Changshu Tianyin Electromechanical Co. Ltd.	Sensata Technologies (Baoying) Co., Ltd.	Hangzhou Starshuaier Electric Appliance Co.,Ltd	Shunde Ronggui Electronic Circuit Measuring 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
Protector	Max.T.C Amp.(25°C)	A	6.2
	Trip time	S	5~15
	Reset time	S	30~150
	Open temp.	±5°C	140
	Close temp.	±9°C	69

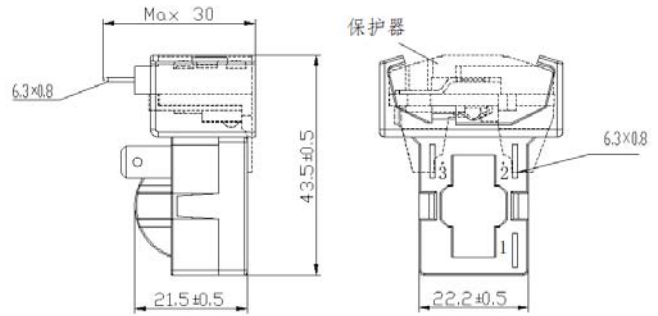
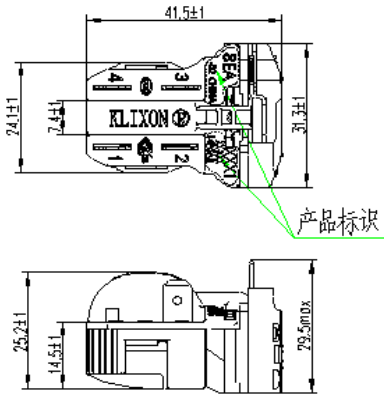
ZHB62-140P15

QPS2-B15MG1+DRB22T69A2

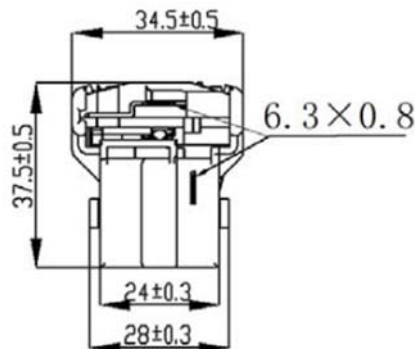


8EA19C1-02+3TM205TH1

QP2-15 ZH+TB62-140



JPQ II-15 BK +BT62-140



9. Delivery State

No.	Name	Model	Quantity	CODE
1	Compressor	S118CY1	1pcs	
2	Rubber plug	Φ6.4	1pcs	
3		Φ8.2	2pcs	
4	Rubber grommet	U model	4pcs	
5	Starting relay	JPQII-15	1pcs	Lanxi City Yueqiang Electric Co., Ltd.
		8EA19C1-02		Sensata Technologies (Baoying) Co., Ltd.
		QP2-15		Shunde Ronggui Electronic Circuit MeasuringEquipment Co.,Ltd.
6	Overload protector	DRB22T69A2	1pcs	Changshu Tianyin Electromechanical Co., Ltd.
		BT62-140		Sensata Technologies (Baoying) Co., Ltd.
		3TM205TH1		Sensata Technologies (Baoying) Co., Ltd.
		TB62-140		Shunde Ronggui Electronic Circuit MeasuringEquipment Co., Ltd.
8	Starting relay and Overload protector	ZHB62-140P15	1pcs	Changshu Tianyin ElectromechanicalCo., Ltd.
		QPS2-B15MG1 +DRB22T69A2		Hangzhou Star shuaier Electric Appliance Co., Ltd
		JPQ II -15 BK +BT62-140		Lanxi City Yueqiang Electric Co., Ltd
		8EA19C1-02+ 3TM205TH1		Sensata Technologies (Baoying) Co., Ltd.
		QP2-15 ZH+ TB62-140		Shunde Ronggui Electronic Circuit MeasuringEquipment Co., Ltd.
9	Relaying cover	A1	1pcs	
10	Earth bolt	QET.1-24C	1pcs	
11	Anchor bolt assembly	M6×30	4pcs	
12	Sleeve	QET-04	4pcs	
13	Nut	QET-27	4pcs	
14	Hexagon bolt(screw)	QD05ZB-03B	4pcs	

Notes:1.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	60pcs/box
Transportation	By sea
Storage	Max. 2 layers
Cross Weight	Kg 443±24
Net Weight	Kg 408±24
Volume	m ³ 0.85
Dimension: length×width×height	cm 103×89×93
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.