

# **S36CZ** COMPRESSOR

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## TECHNICAL SPECIFICATION



**DONPER**

HUANGSHI DONPER ELECTRICAL APPLIANCE CO. , LTD.

2009. 2

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## 1. Compressor Type

Compressor model	S36CZ
Rated voltage/frequency	220-240V~50Hz
Refrigerant	R134a
Application	L. B. P -M. B. P
Cooling method	Static
Start torque	Low starting torque (LST)
Control device	Capillary tube
Starting Capacitor	75uF
Motor type	CSIR

## 2. Performance Date

Displacement	Power	Net Wt.	Oil Charge	Cooling Capacity×95%									COP×93%	
				ASHRAE								CECOMAF	ASHRAE	CECOMAF
				-35	-30	-25	-23.3	-20	-15	-10	-5	-25	-23.3	-25
cm <sup>3</sup>	HP	kg	ml	w	w	w	w	w	w	w	w	w	w/w	w/w
3.6	1/8	6.5	205	35	53	75	90	104	139	180	242	66	1.02	0.79

These datas come from the test without a PTC relay

### Testing condition:

Test conditions	L.B.P	
	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

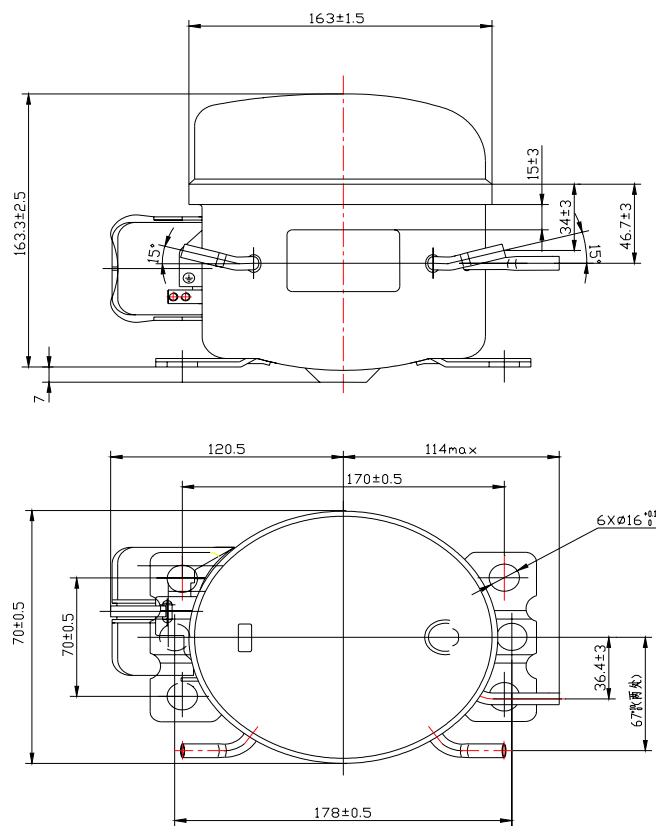
Ambient temp.	0~43℃
Evaporating temp.	-35~-15℃
Voltage range	187~264V
Max. condensing temp.	65℃
Max. winding temp.	130℃
Max. shell temp.	95℃
Max. discharge temp.	120℃
Start voltage	187V [5/5bar(abs)]
Shell min. resistance to pressure	35bar

**\* Compressor is assembled in the substitutional refrigerating system, running for 5 minutes at the ambient temperature 43°C, making the sucking and the exhausting balance, where absolute pressure is 4.5Bar, and guaranteeing starting.**

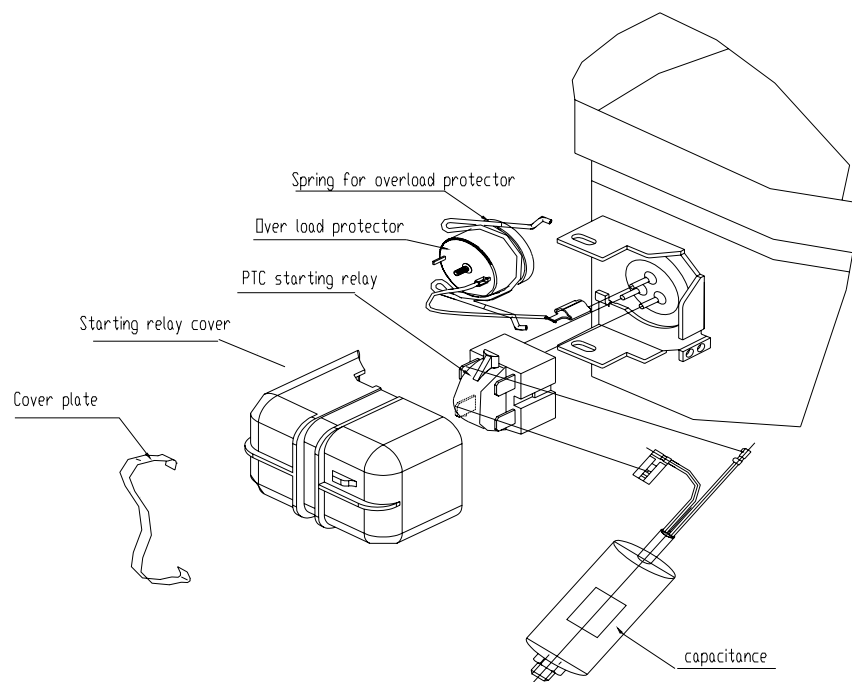
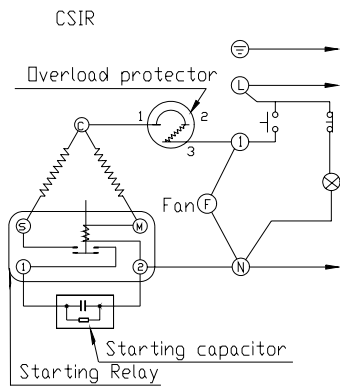
#### 4. Compressor Mechanical Information

Oil type	POE ester
Viscosity	22 cst (40°C)
Oil charged	205ml
Min. oil volume in compressor	200ml
Diameter of suction tube (I.D.)	$\Phi 6.1_{-0.05}^{+0.10}$ mm
Diameter of discharge tube (I.D.)	$\Phi 4.9_{-0.05}^{+0.10}$ mm
Diameter of process tube (I.D.)	$\Phi 6.1_{-0.05}^{+0.10}$ mm
Material of suction tube, process tube and discharge tube	copper tube
Compressor noise	42dB(A)
Vibration	0.7m/s <sup>2</sup>
Protecting gas	Dry com. air 0.8~1.0bar (Dew point-60°C)

#### 5. Compressor Shape



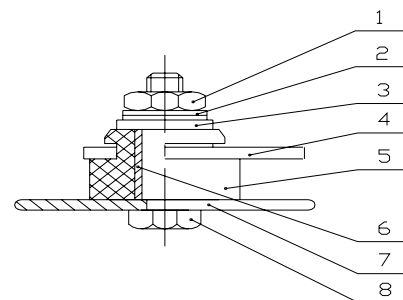
## 6. Wiring Diagram



Note: Each of the starting relay (QP<sub>2</sub>-15B), the overload protector (B54-120), the spring tap, the cover and the earth bolt is separately provided by our company.

## 7. Fixing Of Mounting Bracket And Cabinet Base

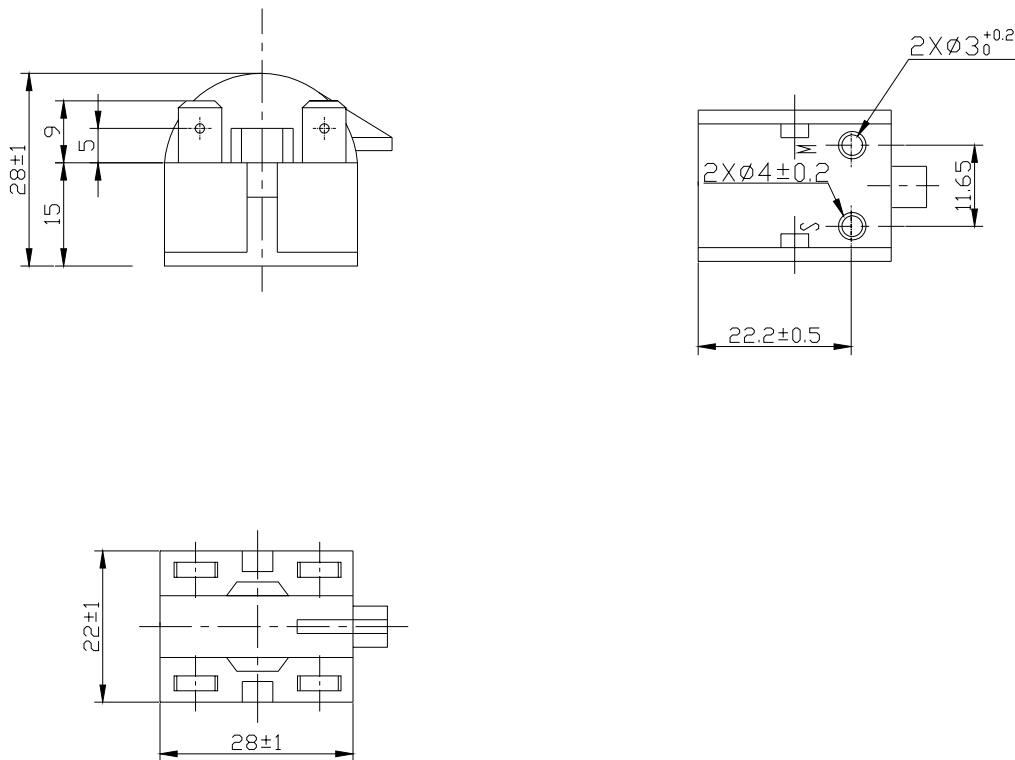
- 1、 Hexagon nut
- 2、 Spring washer
- 3、 Flat washer
- 4、 Compressor mounting bracket
- 5、 Rubber grommet
- 6、 Sleeve
- 7、 Cabinet base
- 8、 Screw



Note: Four grommets and four sleeves are all provided by our company.

## 8、 Starter

Compressor model		S36CZ
Starter	Type	QP <sub>2</sub> -15B
	Resistance (normal temperature) Ω	15 <sup>+3</sup> <sub>-4</sub>
	Trip time S	0.4~1.5
	Reset time S	≤100
	Rating voltage V	350
	Max. current A	8

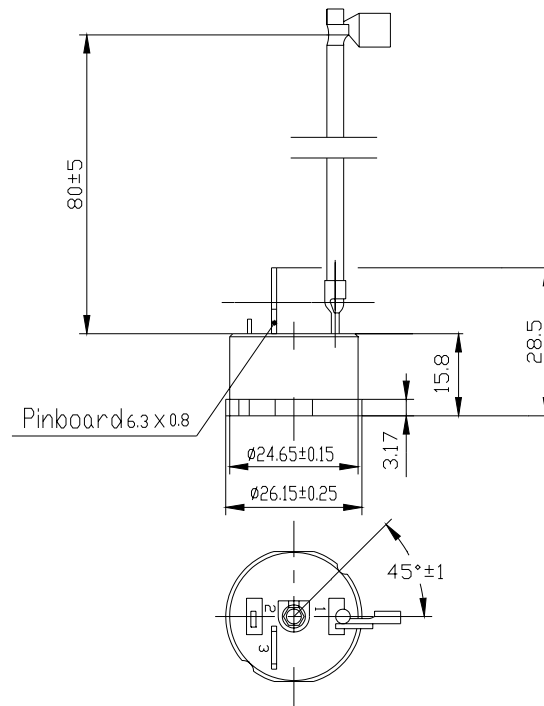


## 9、 Overload protector

Compressor model		S36CZ
Prote-ctor	Type	B54-120
	Max.T.C Amp.(25℃) A	5.4
	Trip time S	7.5~14
	Reset time S	40~150
	Open temp. ±5℃	120
	Close temp. ±9℃	61
	Min. T.C. Amp. (90℃) A	1.3

Assembly force ≤75N、 Disassembly force ≥9N

Flammability: UL94V-0



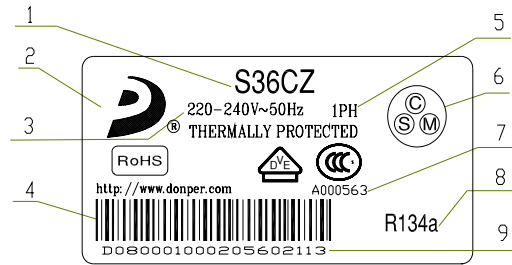
## 10、 Delivery State

No.	Name	Model	Quantity	CODE
1.	<b>Compressor</b>	<b>S36CZ</b>	<b>1 pcs</b>	<b>QS09Z</b>
2.	<i>MOUNTING ACCESSORIES</i>			
2.1.	<b>Rubber grommet</b>	<b>A model</b>	<b>4 pcs</b>	<b>QET-03B</b>
2.2.	<b>Sleeve</b>	<b>Φ10</b>	<b>4 pcs</b>	<b>QET-04</b>
2.3.	<b>Hexagon bolt(screw)</b>		<b>4 pcs</b>	<b>GB M6×28</b>
2.4.	<b>Flat washer</b>		<b>4 pcs</b>	<b>GB φ 17</b>
2.5.	<b>Nut</b>		<b>4 pcs</b>	<b>GB M6</b>
2.6.	<b>Spring washer</b>		<b>4 pcs</b>	<b>GB φ 6</b>
3.	<i>ELECTRICAL ACCESSORIES</i>			
3.1.	Starting relay	<b>QP2-15B</b>	<b>1 pcs</b>	
	Overload protector	<b>B54-120</b>	<b>1 pcs</b>	
3.2.	Grounding wire	<b>130mm</b>	<b>1 pcs</b>	<b>QS08Y-04</b>
3.3.	Starting relay cover		<b>1 pcs</b>	<b>S1</b>
3.4.	Spring cover holder		<b>1 pcs</b>	
3.5.	Grounding screw		<b>1 pcs</b>	
3.6.	Spring for overload protector		<b>1 pcs</b>	<b>On the compressor</b>
3.7.	Starting Capacitor	75uF	<b>1 pcs</b>	

Notes: All electrical parts and equipment assembly are supplied separately, not installed on the compressor.

## 11. Compressor Nameplate Identification

1. Compressor model
2. DONPER enrolled brand
3. Rated voltage and frequency
4. Compressor bar code
5. Single phase
6. Power supply connection mark
7. Certificate serial number of CCC
8. Refrigerant
9. Product serial number



## 12. Package、Storage and Transportation

Package type	unreusable
Quantity	120pcs/box
Transportation	By truck or train
Storage	Max. 2 layers
Cross Weight	Kg 820
Net Weight	Kg 780
Volume	m <sup>3</sup> 1.14
Dimension: length×width×height (cm)	109×89×118
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.

## 13. 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

**To keep the compressor stably running ,the running temperature of Max. winding can't beyond 130°C.**

(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)、 R134a systems require a filter with drying agent which 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-compatible with R134a cannot be used in the refrigeration system.