Usage and its scope of application

JRS8 series (T series thermal relay) bimetal type thermal over-load relay is suitable for the power system of AC50Hz or 60Hz, rated operating voltage Ue: 660V, current 0.1~500A, as the use of over-load and break phase protection for AC motor. Thermal relay with the functions of break phase, temperature compensation, action indication, auto and manual reset, and stop, etc.
This product confirms to: GB14048.4, IEC60947-4-1 etc. standards.

Model and its implication

JR S 8-□/□

- Installation mode: Z for Combination type, F for separated type
- Code for specification (to be indicated as rated current)
- Design serial No.
- Three phase type
- Thermal Over-load Relay

Normal operating condition and installation condition

3.1 Ambient temperature: -5℃~+40℃, average value within 24h does not exceed +35℃
3.2 Altitude: does not exceed 2000m
3.3 Atmosphere condition: relatively humidity does not exceed 50% when at the highest temperature of +40℃; It allowed relatively high humidity when it is at relatively low temperature, average lowest temperature of the most wet month does not exceed +25℃, and the average maximum humidity of this month does not exceed 90%, and should be considered the condensation produced on the product due to the temperature variation.
3.4 It should be at the no explosion danger medium, and the medium without the gas that cannot corrode the metal and damage the insulation as well as the places that without conductive dust.
3.5 Grade of pollution: 3
3.6 Installation category: III
3.7 Installation position: installed at the normal position, the gradient between the installation side and the vertical side does not exceed ±5°, and without obvious vibration and impact.
3.8 Protection grade: IP 00
3.9 Installation mode
a) Combination mode
Put the conduct rod directly plug-in install at the terminal of relevant AC contactor, the combination mode is the basic type of installation for this series thermal relay.
b) Separated mode
To make the thermal relay be installed at relevant installation board first, and then to install the installation board by screw or make the installation board directly insert on the installation rail.

Main technique parameter

4.1 Rated current of thermal relay, setting current scope of thermal parts and suited AC contactor model to see table 1

Table 1

Model	JRS8-16	JRS8-25	JRS8-45	JRS8-85	JRS8-105	JRS8-170	JRS8-250	JRS8-370
	16	25	45	85	105	170	250	370
Setting current scope of thermal parts (A)	0.11~0.16 0.14~0.21	0.10~0.16 0.16~0.25	0.28~0.40 0.35~0.52	6~10	27~42	90~130	100~160	100~160
	0.19~0.29 0.27~0.40	0.25~0.40 0.40~0.63	0.45~0.63 0.55~0.83	8~14	36~52	110~160	160~250	160~250
	0.35~0.52 0.42~0.63	0.63~1 1~1.40	0.7~1 0.86~1.3	12~20	45~63	140~200	250~400	250~400
	0.55~0.83 0.7~1.0	1.3~1.8 1.7~2.4	1.1~1.6 1.4~2.1	17~29	57~82			310~500
	0.9~1.30 1.1~1.5	2.2~3.1 2.8~4	1.8~2.5 2.2~3.3	25~40	70~105			
	1.3~1.80 1.5~2.1	3.5~5 4.5~6.5	2.8~4 3.5~5.2	35~55	80~115			
	1.7~2.4 2.1~3.0	6~8.5 7.5~11	4.5~6.3 5.5~8.3	45~70				
	2.7~4 3.4~4.5	10~14 13~19	7~10 8.6~13	60~110				
	4~6 5.2~7.5	18~25 24~32	11~16 14~21					
	6.3~9 7.5~11		18~27 25~35					
	9~13 12~17.6		30~45					
Combined type suited AC contactor model	CJX8-9		CJX8-25	CJX8-65	CJX8-37	CJX8-65	CJX8-250	CJX8-370
	CJX8-12	CJX8-25	CJX8-30	CJX8-85	CJX8-45	CJX8-85		CJX8-460
	CJX8-16	CJX8-30	CJX8-37		CJX8-65	CJX8-105		
		CJX8-37	CJX8-45		CJX8-85	CJX8-170		
						CJX8-105		
						CJX8-170		

4.2 Action scope when the two poles of thermal relay electrified to see table 2

Table 2

No.	Multiply of setting current		Action time	Initial status	Ambient temperature ℃
	Any two phases	Another phase			
1	1.0	0.9	> 2h	Cool status	20±5
2	1.15	0	< 2h	Thermal status (after serial No.1)	

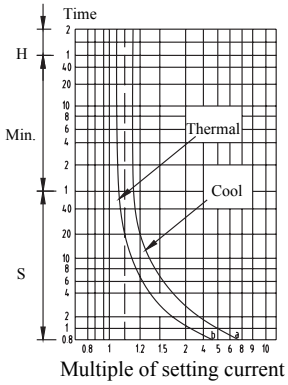
4.3 Action scope when three poles of thermal relay electrified to see table 3

Table 3

No.	Multiply of setting current	Action time tp			Predict results	Initial status	Ambient temperature ℃
1	1.05	> 2h			No action	Cool status	20±5℃
2	1.20	≤2h			Action	Thermal status (after serial No.1)	
3	1.5	Releasing grade	10A	≤2min	Action		
			10	≤4min	Action		
4	7.5	Releasing grade	10A	2s < Tp≤10s	Action	Cool status	
			10	4s < Tp≤10s	Action		

Product releasing grade: JRS8-16, 25, 45 is 10A grade; JRS8-85, 105, 170, 250, 370 is 10 grade.

4.4 Action scope curve to see map 1



A. Three phase balance, unbalance, starting by cool status;
B. Three phase balance, break phase, starting by thermal status

Map 1 Action scope curve

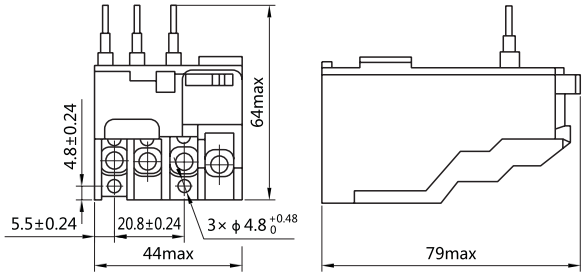
4.5 Types and basic parameter for the auxiliary contacts of thermal relay to see table 4

Table 4

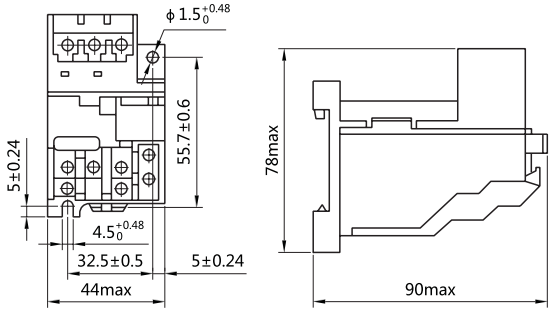
Model	JRS8-16	JRS8-25	JRS8-45		JRS8-85	JRS8-105、170 JRS8-205、370	
Code for auxiliary contacts	95~96 97~98	95~96 97~98	95~96	97~98	95~96	95~96	97~98
Rated insulation voltage				380V			
Setting thermal current Ith	10A	10A	10A	6A	10A	10A	6A
AC-15：220V	3A	3A	3A	1.7A	3A	3A	1.7A
AC-15：380V	2A	2A	2A	1.3A	2A	2A	1.3A
DC-13：220V	0.15A	0.15A	0.15A	0.15A	0.15A	0.15A	0.15A
Type of auxiliary contacts	1NO+1NC	1NO+1NC	1NO+1NC		1NC	1NO+1NC	

External and installation dimension

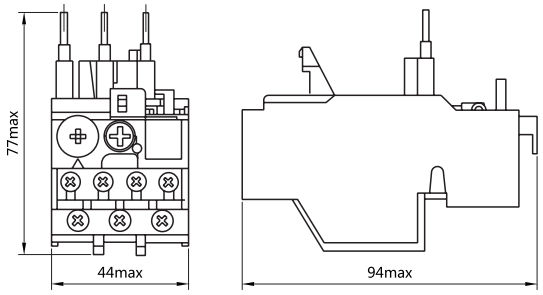
External and installation dimension of thermal relay to see map 2~12



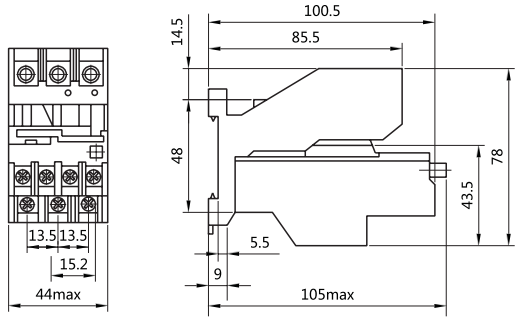
Map 2 External and installation dimension for JRS8-16/Z



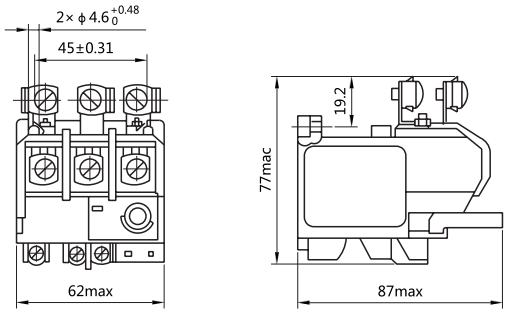
Map 3 External and installation dimension for JRS8-16/F



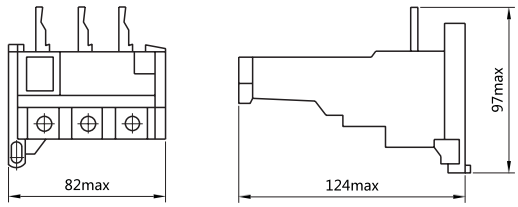
Map 4 External and installation dimension for JRS8-25/Z



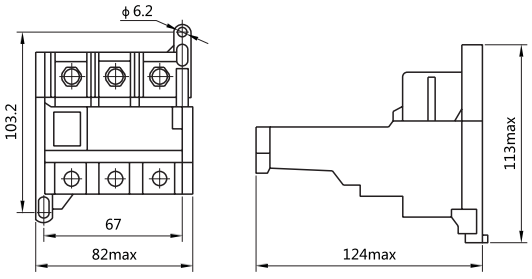
Map 5 External and installation dimension for JRS8-25/F



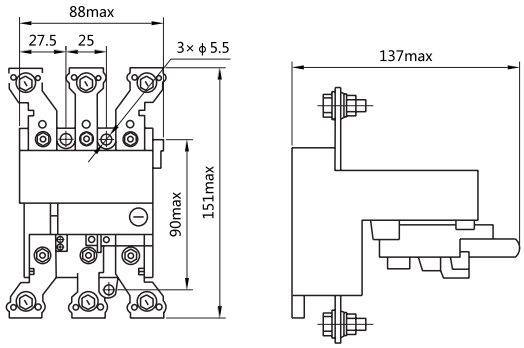
Map 6 External and installation dimension for JRS8-45/Z



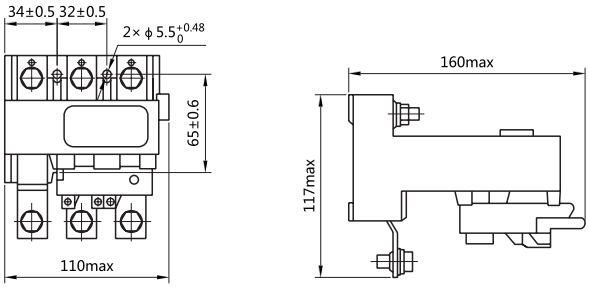
Map 7 External and installation dimension for JRS8-45/F



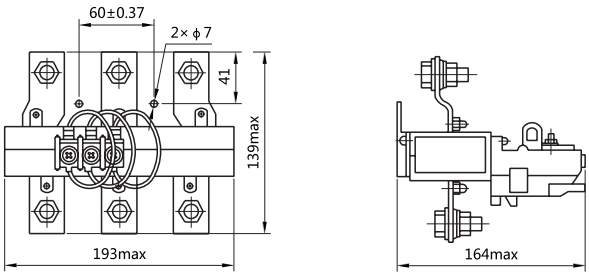
Map 8 External and installation dimension for JRS8-85/Z



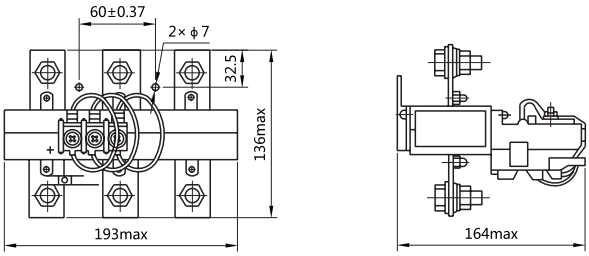
Map 9 External and installation dimension for JRS8-85/F



Map 10 External and installation dimension for JRS8-170



Map 11 External and installation dimension for JRS8-250



Map 12 External and installation dimension for JRS8-370

Ordering Notice

It required to be noted: Product model, specification, setting current scope and required quantity
For example: JRS8-45, 0.35~0.52, 200 pcs