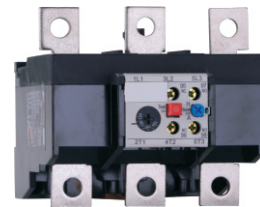
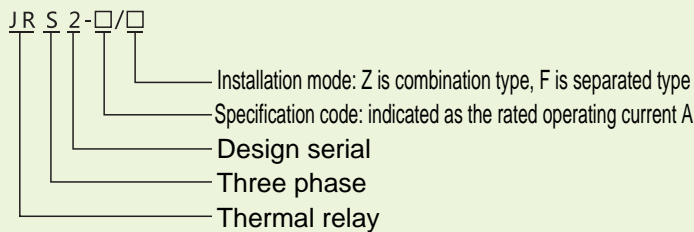


▶ Usage and its scope of application

JRS2 Series Thermal Relay is suitable for the power system of AC50Hz/60Hz, rated voltage U_e : 690V, current 0.1~630 (A) as the use of over-load and break-phase protection of AC motor or circuit. Thermal relay has the functions of break phase protection, temperature compensation, optional selection of manual reset and auto-reset, inspection of action flexibility, and manually break the NC contacts and NO contacts. This product conforms to: GB14048.4, IEC60947-4-1 etc. standards.



▶ Model and its implication



▶ Normal operating condition and installation condition

- 3.1 Ambient temperature: $-5^{\circ}\text{C}\sim+40^{\circ}\text{C}$, average value within 24h does not exceed $+35^{\circ}\text{C}$;
- 3.2 Height of altitude: does not exceed 2000m,
- 3.3 Atmosphere: when highest temperature is $+40^{\circ}\text{C}$, the relative humidity does not exceed 50%; it allowed the relatively high humidity when it is under the relatively low temperature, for example, it reaches 90% when $+20^{\circ}\text{C}$; It should take special measurements if there produced condensation that is due to the temperature variation.
- 3.4 Grade of pollution: 3
- 3.5 Installation category: III
- 3.6 Position of installation: the gradient between the installation side of relay and the vertical side is not more than $\pm 5^{\circ}$
- 3.7 Impact and vibration: product should be installed and used at the places of no obvious shake, impact and vibration.
- 3.8 Installation mode:
JRS2-12.5, 25, 32, 45, 80 has three kinds of installation mode: combination installation, screw installation, 35mm standard rail installation.
JRS2-63, 135, 150, 180, 400, 630 has two kinds of installation mode: screw installation, 35mm standard rail installation.
- 3.9 Protection grade: IP00

▶ Main technique parameter
4.1 Rated insulation voltage of thermal relay as well as suited AC contactor to see table 1
Table 1

Model	Suited contactor model for combination installation	Rated insulation voltage	Electrical life	Frequency of over-load protection
JRS2-12.5	CJX1-09、CJX1-12	660V	10000	10000
JRS2-25	CJX1-16、CJX1-22、CJX1-32			
JRS2-32	CJX1-32、CJX1-22			
JRS2-45	CJX1-32、CJX1-38			
JRS2-63	CJX1-09、12、16、22、32、38、48、63、75			
JRS2-80	CJX1-45、63、75			
JRS2-125	CJX1-85、110、140			
JRS2-150	CJX1-85、110、140、170			
JRS2-180	CJX1-85、110、140、170、205			
JRS2-400	CJX1-250,300,400			
JRS2-630	CJX1-500,630			

4.2 Setting current adjusting scope of thermal relay as well as the recommended SCPD model and specification to see table 2
Table 2

Model	Setting current adjustable scope A	Recommended SCPD model, specification	Conductor's cross section for main circuit mm		
JRS2-12.5、25、45、63	0.1~0.16	RDT16-00-2	1		
	0.16~0.25				
	0.25~.4				
JRS2-12.5	0.32~0.5	RDT16-00-4			
JRS2-12.5、25、45、63	0.5~0.63				
	0.63~1				
	0.8~1.25				
JRS2-12.5、25、45、63	1~1.6	RDT16-00-6			
	1.25~2				
	1.6~2.5				
	2~3.2				
JRS2-12.5、25、45、63	2.5~4	RDT16-00-10		1	
	3.2~5				
	JRS2-12.5、25、32、50、63、80		4~6.3		RDT16-00-16
	JRS2-12.5、25、45、63		5~8		RDT16-00-20
JRS2-12.5、25、32、45、63	6.3~10				
JRS2-12.5、25、45、63	8~12.5	RDT16-00-25	2.5		
JRS2-12.5	10~14.5	RDT16-00-32			
JRS2-25、32、45、63	10~16				
JRS2-80	11~17	RDT16-00-40			
JRS2-25、32、45、63、80	12.5~20				
JRS2-25、32、45、63、80	16~25	RDT16-00-50			4
JRS2-32、45、63、80	20~32	RDT16-00-63	6		
JRS2-32、45	25~36	RDT16-00-80	10		
JRS2-63、80	25~40				
JRS2-45	32~40				
JRS2-63	36~45	RDT16-00-100			
	32~45				
JRS2-80	32~50				

Continued table 2

Model	Setting current adjustable scope A	Recommended SCPD model, specification	Conductor's cross section for main circuit mm ²
JRS2-63, 80	40~57	RDT16-00-125	16
	50~63		
JRS2-135,150,180	55~80	RDT16-1-160	25
JRS2-80	57~70		
JRS2-80	63~80	RDT16-1-160	35
	77~88		
JRS2-135,150,180	63~90	RDT16-1-200	50
JRS2-400	80~110	RDT16-1-250	
	80~125		
JRS2-135,150,180	90~120	RDT16-2-315	95
JRS2-150, 180	110~135		
JRS2-400	120~150	RDT16-2-400	70
JRS2-180	125~200	RDT16-2-315	95
	135~160	RDT16-2-400	120
JRS2-400	160~250	RDT16-3-500	185
	200~320	RDT16-3-630	240
	250~400	RDT16-4-800	2×150
JRS2-630	320~500	RDT16-4-1000	2×185
	400~630		

4.3 Action scope of the thermal relay when its each pole electrified to see table 3

Table 3

No.	Multiple of setting current	Action time t _p			Predict results	Initial status	Ambient temperature
1	1.05	> 2h			No action	Cool status	20±5°C
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 < T _p ≤ 10s	Action	Cool status	
			10	4s < T _p ≤ 10s	Action		

Releasing grade: JRS2-12.5, JRS2-25, JRS2-32, JRS2-45, JRS2-63 is 10A grade, JRS2-80, JRS2-135, JRS2-150, JRS2-180, JRS2-400, JRS2-630 is 10 grade.

4.4 Action scope of thermal relay when two poles electrified to see table 4

Table 4

No.	Multiple of setting current		Action time	Initial status	Ambient temperature C
	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)	

4.5 Basic parameter of auxiliary circuit to see table 5

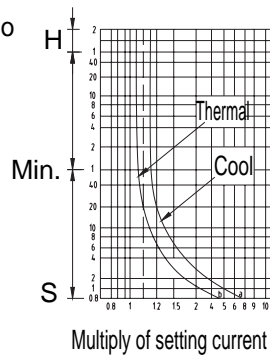
Table 5

Rated insulation voltage U_i (V)	380		
Setting thermal current I_{th} (A)	6		
Usage category	AC-15	AC-13	
Rated operating voltage U_e (V)	220	380	220
Rated operating current I_e (A)	1.9	1.1	0.2
Suited fuse (RDT16 type) specification A	6		

4.6 Releasing grade of thermal relay:

JRS2-12.5, 25, 32, 45, 63, 80, 135, 150, 180, 400, 630 is 10A grade

Its action scope classic curve to see map 2

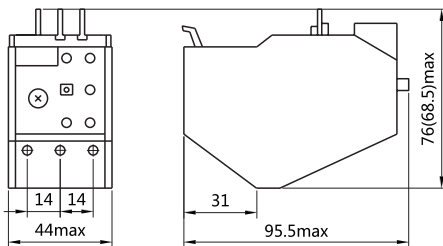


- A. Three phase balance, unbalance, started by cooling status
- B. Three phase balance, break phase, started by thermal status

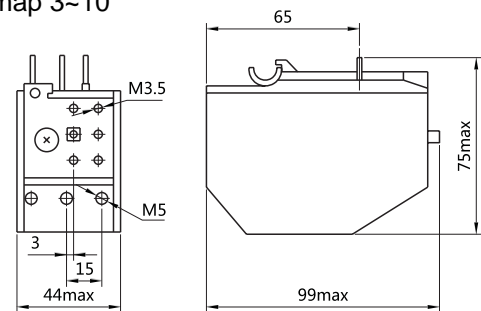
Map 2 Action scope curve

▶ External and installation dimension

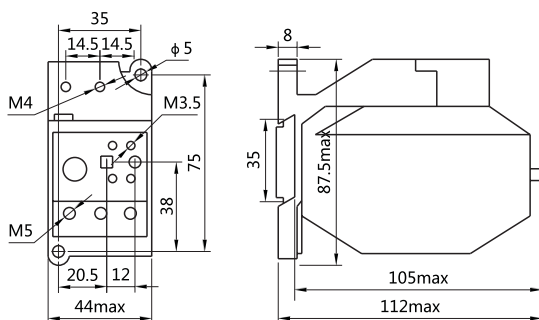
5.1 External and installation dimension of thermal to see map 3~10



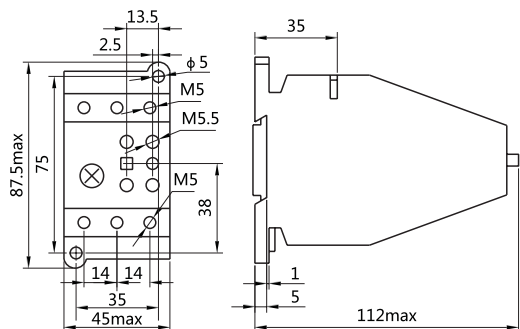
Map 3 External and installation dimension of JRS2-12.5/Z, JRS2-25/Z



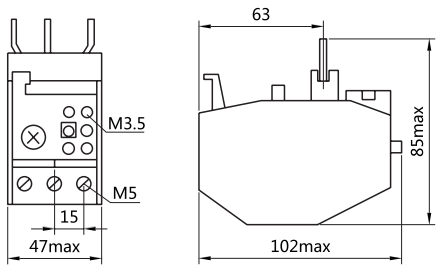
Map 4 External and installation dimension of JRS2-32/Z



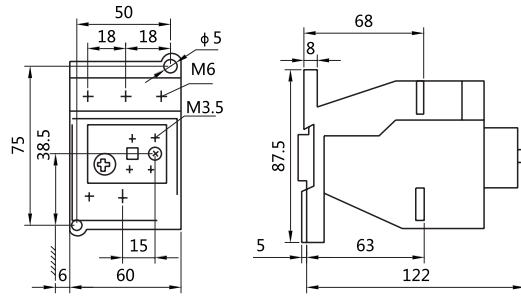
Map 5 External and installation dimension of JRS2-12.5/F, JRS2-25/F, JRS2-32/F



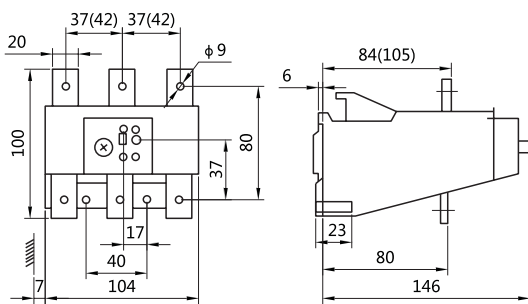
Map 6 External and installation dimension of JRS2-63



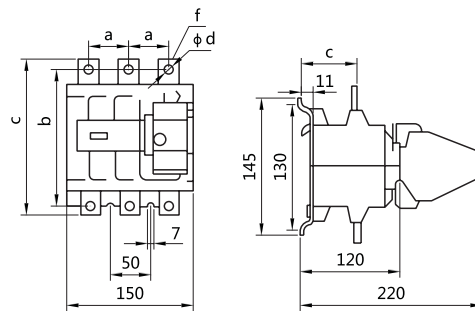
Map 7 External and installation dimension of JRS2-45/Z



Map 8 External and installation dimension of JRS2-80/Z



Map 9 External and installation dimension of JRS2-135, 150 180/F



Map 10 External and installation dimension of JRS2-400, 630

5.2 Installation dimension of JRS2-400, 630 to see table 6

Table 6

Model	a	b	c	d	f
Setting current of 80~200A for JRS2-400	46	140	69	9	20×3
Setting current of 160~400A for JRS2-400	50	146	70	11	25×4
Setting current of 320~630A for JRS2-600	52	156	71	11	30×3

► **Ordering notice**

It must be noted: product model, specification, scope of setting current and ordering quantity
 For example: JRS2-12.5/Z, 1~1.6A, 100pcs