Usage and its scope of appliance

RDC6 series bimetal type thermal over-load relay is suitable for the circuit of AC50Hz/60Hz, rated operating voltage Ue: 380V, rated impact voltage Uimp (kV): 8, rated current 0.10~93A, as the use of over-load, break phase and protection for the circuit and motor.

Thermal relay with the functions and characteristics of break phase protection temperature compensation, setting current adjusting, optional selection of auto-reset and manual reset, action indication signal, insulation separation of NO, NC auxiliary contacts, small installation section, and various installation mode.

Thermal relay is designed, manufactured and inspected according to GB14048.4

Model and its implication

RDR 6-□/□

- Code for installation mode (Z for combination mode, F for separated mode)
- Rated operating current (A)
- Design serial No.
- Thermal Relay
- Enterprise code

Normal operating condition and installation condition

3.1 Ambient temperature: -5℃~+40℃, and the average value within 24h does not exceed +35℃；

3.2 Altitude of the installation place does not exceed 2000m;

3.3 Atmosphere condition

3.3.1 Humidity

The relative humidity does not exceed 50% when it is at +40℃, it allowed relatively high humidity at the relatively low temperature, for example, the relative humidity reaches 90% when +20℃, and it should take special measurements when there produced the condensation on the product due to the temperature variation.

3.3.2 Grade of pollution: 3

3.4 Installation condition

3.4.1 Installation category: III

3.4.2 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.

3.5 Protection grade: IP 20

Main technique parameter

4.1 Rated operating current, setting current adjusting scope, suited AC contact model and recommended fuse mode for the thermal relay to see table 1

Table 1

No.	Model	Rated current A	Setting current adjusting scope A	Suited contactor model	Recommended fuse model	Cross section of conductor mm2
1	RDR6-25	25	0.1~0.16	RDC6-09~32	RDT16-00-2	1
2			0.16~0.25			
3			0.25~0.4			
4			0.4~0.63			
5			0.63~1			
6			1~1.6		RDT16-00-4	
7			1.25~2			
8			1.6~2.5		RDT16-00-6	
9	RDR6-25	25	2.5~4	RDC6-09~32	RDT16-00-10	1
10			4~6		RDT16-00-16	
11			5.5~8			
12			7~10		RDT16-00-20	1.5
13			9~13	RDC6-12~32	RDT16-00-25	2.5
14			12~18		RDT16-00-40	
15			17~25	RDC6-25和RDC6-32	RDT16-00-50	4
16	RDR6-36	36	23~32		RDT16-00-63	6
17			28~36	RDC6-32	RDT16-00-80	10
18	RDR6-93	93	23~32	RDC6-40~95	RDT16-00-63	6
19			30~40		RDT16-00-80	10
20			37~50	RDC6-50~95	RDT16-00-100	
21			48~65	RDC6-65~95	RDT16-00-125	16
22			55~70		RDT16-1-160	25
23			63~80	RDC6-80和RDC6-95		
24			80~93	RDC6-95	RDT16-1-200	35

4.2 Auxiliary circuit's rated insulation voltage Ui 380V, rated frequency 50, 60Hz; Usage category, rated operating voltage, rated operating current and rated thermal current to see table 2

Table 2

Usage category	AC-15		DC-13
Rated operating voltage V	220	380	220
Rated operating current A	1.64	0.95	0.15
Setting thermal current A	6		

4.3 Action characteristics of thermal relay when it is at load balance of each phase confirms to table 3

Table 3

No.	Multiple of setting current	Action time			Initial status	Ambient temperature℃
1	1.05	>2h			Cool status	20±5
2	1.20	≤2h			Thermal status (after serial No.1)	
3	1.50	Grade of releasing	10A	<2min	Thermal status (after serial No.1)	
			10	<4min		
4	7.2		10A	2s<Tp≤10s	Cool status	
			10	4s<Tp≤10s		

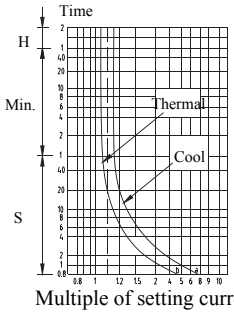
Releasing grade: RDR6-25, RDR6-36 is 10A grade, RDR6-93 is 10 grade.

4.4 Action characteristics of thermal relay when it is at load unbalance of each phase confirms to table 4

Table 4

No.	Multiple of setting current		Action time	Initial status	Ambient temperature℃
	Any two phases	Another phase			
1	1.00	0.90	> 2h	Cool status	20±5
2	1.15	0	≤2h	Thermal status (after serial No.1)	

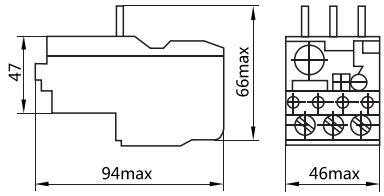
4.5 Time-current characteristics curve of thermal relay to see map 2



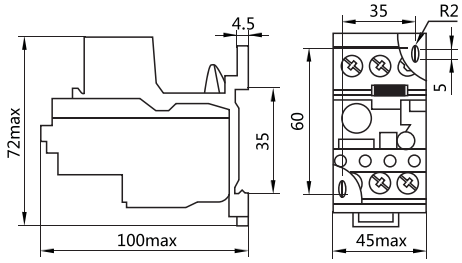
A. Three phase balance, unbalance, starting by cool status;
B. Three phase balance, break phase, starting by thermal status

Map 2 Action scope curve

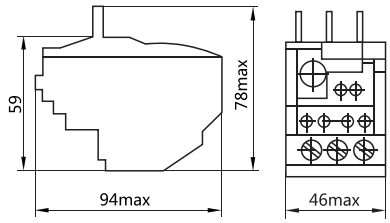
4.6 External and installation dimension of thermal relay to see map 3~8



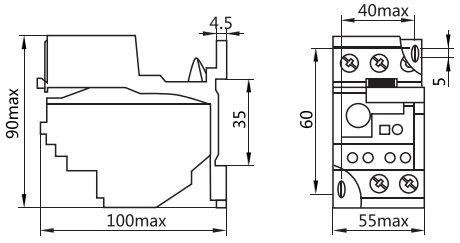
Map 3 External and installation dimension for RDR6-25/Z



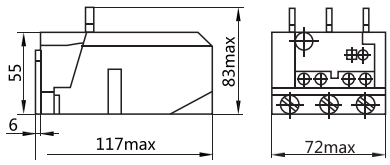
Map 4 External and installation dimension for RDR6-25/F



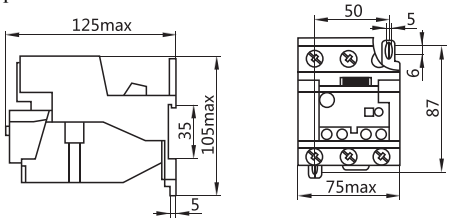
Map 5 External and installation dimension for RDR6-36/Z



Map 6 External and installation dimension for RDR6-36/F



Map 7 External and installation dimension for RDR6-93/Z



Map 8 External and installation dimension for RDR6-93/F

Ordering Notice

It should be noted: model, specification, setting current scope and required quantity

For example, RDR6-25/Z, 0.63~1A, 100 pcs