

JRS1

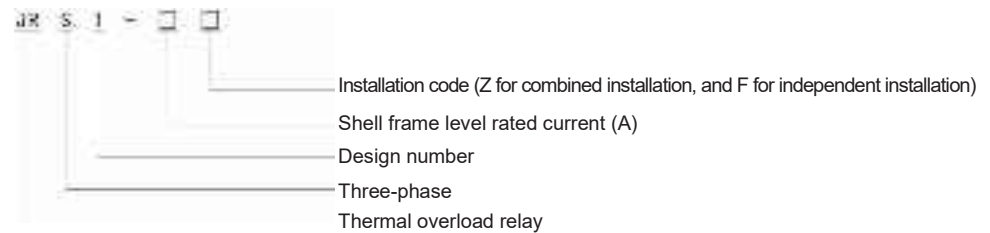
Series Thermal Overload Relay



I. Scope of Application

The JRS1 Series Thermal Overload Relay is mainly used in circuits with AC 50 Hz, rated working voltage up to 660 V and rated working current of 0.1—93 A, which is used to start and accelerate the motor to a normal speed, as well as for overload and phase failure protections of circuits and three-phase AC motors, and can form a starter with the adaptive AC contactor. Models of the same type: LR2, JR28. This product complies with GB 14048.4.

II. Model Description



III. Normal Operating Conditions

1. Ambient air temperature: -5°C — $+40^{\circ}\text{C}$. The average temperature within 24 hours shall not exceed $+35^{\circ}\text{C}$.
2. Altitude: Not higher than 2,000 m.
3. Atmospheric conditions: The relative atmospheric humidity at the installation site shall not exceed 50% at $+40^{\circ}\text{C}$. A higher relative humidity is allowed at a lower temperature, such as 90% humidity at 20°C . Special measures shall be taken for the occasional condensation due to temperature change.
4. Contamination grade: Grade 3.
5. Installation category: III.
6. Installation conditions: The inclination between the installation surface and the vertical plane shall not be more than $\pm 5^{\circ}$.
7. In addition to screws, the relay can also be installed with 35 mm standard guide rail.
8. Impact vibration: The relay shall be installed and used in a place free of significant shaking, shock and vibration.
9. Transportation and storage: The relay shall not be subjected to severe collision and vibration during the transportation, and shall not be attacked by rain and snow during the transportation and storage. The relay is suitable for transportation and storage at a temperature between -25°C and $+55^{\circ}\text{C}$, which can reach $+70^{\circ}\text{C}$ in a short time (within 24 h).

IV. Structural Features

1. Three-phase bimetal, with the tripping level of 10 A.
2. The structure of phase failure and temperature compensation is provided.
3. Combined installation can prevent fingers from getting an electric shock.
4. The setting current is continuously adjustable.
5. Automatic and manual reset can be selected, and the operation indication function is provided.
6. The normally-closed and normally-open auxiliary contacts are insulated and separated.
7. It is provided with a test button and a stop button.
8. Installation mode: Plug-in installation or independent installation with the contactor.

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V. Main Technical Parameters

1. Rated current grade and setting range of the thermal element

Product model	Rated insulation voltage U_i (V)	Adjusting range of setting current	Specification of fuse used	Contactor model	Cross-section area of connecting conductor mm^2
JRS1-25	660	0.1–0.16	4	H8C/CJX2-09–32	1
		0.16–0.25	4		
		0.25–0.40	4		
		0.40–0.63	4		
		0.63–1	4		
		1–1.6	4		
		1.6–2.5	6		
		2.5–4	10		
		4–6	16		
		5.5–8	20		
		7–10	20		
				9–13	25
		12–18	35	H8C/CJX2-18–32	2.5
		17–25	50	H8C/CJX2-25–32	4
JRS1-36	660	23–32	63	H8C/CJX2-32	6
		30–40	80		10
JRS1-93	660	23–32	63	H8C/CJX2-40–95	6
		30–40	80		10
		37–50	100	H8C/CJX2-50–95	10
		48–65	100		16
		55–70	125	H8C/CJX2-65–95	25
		63–80	125	H8C/CJX2-80–95	25
		80–93	160	H8C/CJX2-95	35

Note: The recommended fuse model for this thermal overload relay is RT16 or NT00.

2. Auxiliary circuit parameters

Rated insulation voltage (V)	Conventional thermal current I_{th} (A)	Use category		Rated working voltage U_e (V)				Rated working current I_e (A)				Auxiliary contact type
				AC-15		DC-13		AC-15		DC-13		
500	6	AC-15	DC-13	380	220	220	110	0.95	1.64	0.15	0.3	1 NO + 1 NC contact separated electrically

3. Operation characteristics

Status	Serial number	Set current multiple	Operating time		Initial condition	Ambient air temperature ($^{\circ}\text{C}$)	
Load balance of each phase	1	1.05	> 2 h		Cold state starting	+20	
	2	1.20	< 2 h		Thermal state (starting after No.1 test)		
	3	1.50	Trip category	10A			< 2 min
				10	< 4 min		
4	7.2	10A	2s<TP≤10s	Cold state starting			
			10	4s<TP≤10s			
Load imbalance of each phase (phase failure)	5	1.0 for any two phases and 0.9 for the other phase	> 2 h		Cold state starting		
	6	1.15 for any two phases and 0 for the other phase	< 2 h		Thermal state (starting after No.5 test)		
Temperature compensation function	7	1.0	> 2 h		Cold state starting		+40
	8	1.20	< 2 h		Thermal state (starting after No.7 test)		
	9	1.05	> 2 h		Cold state starting		
	10	1.3	< 2 h		Thermal state (starting after No.9 test)	-5	

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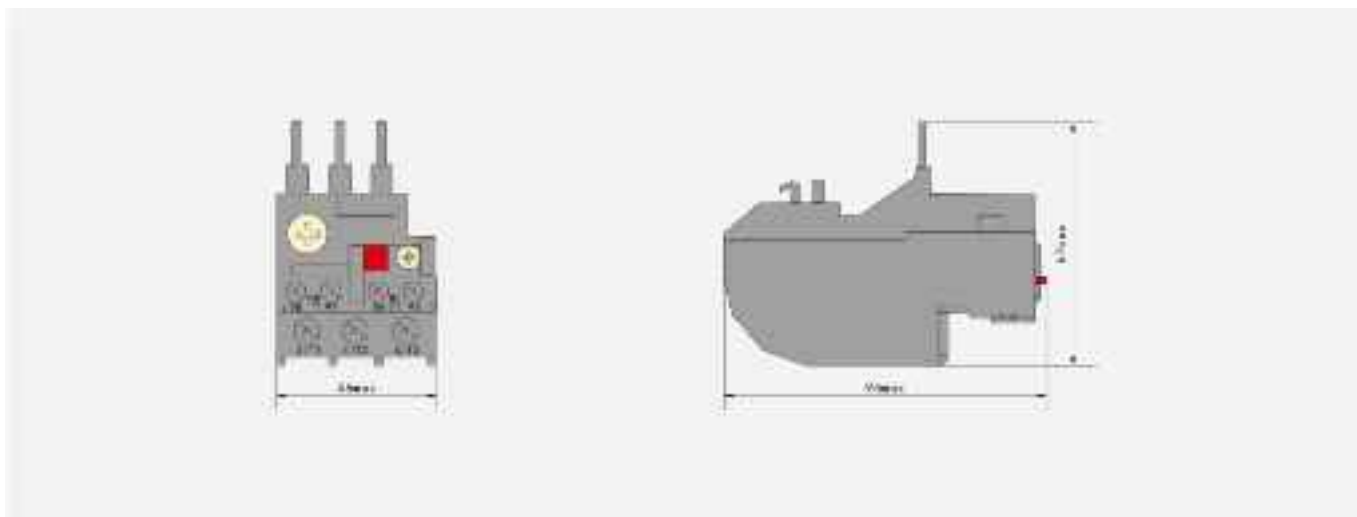
4. Accessories



Serial number	Name
1	JRS1-25 mounting base
2	JRS1-36 mounting base
3	JRS1-93 mounting base

VI. Outline and Installation Dimensions

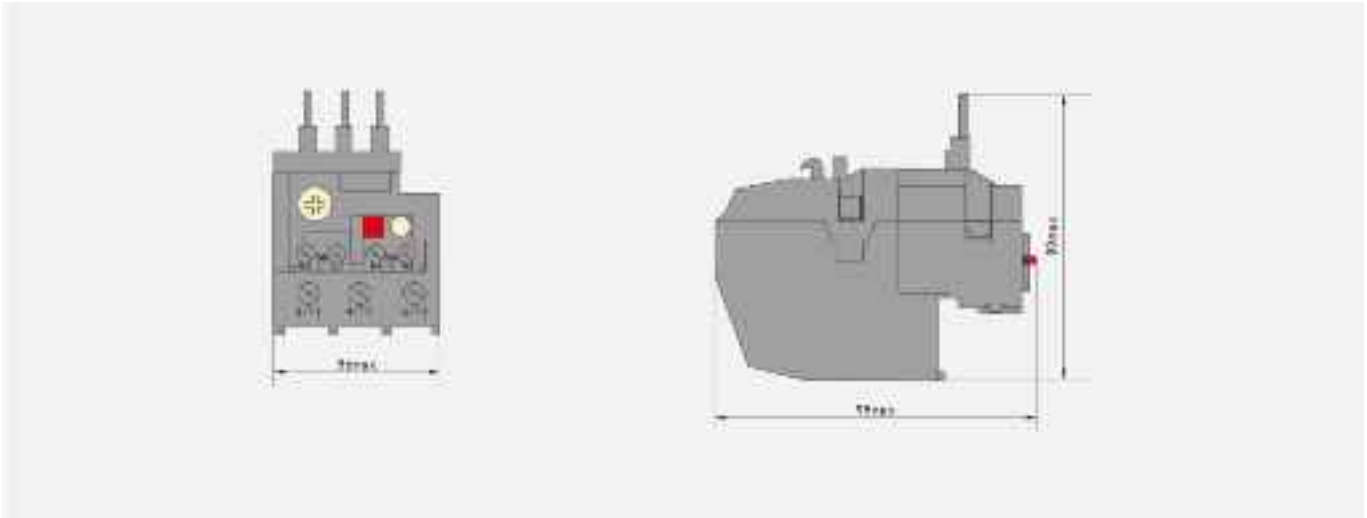
1. Outline and installation dimensions (mm) of JRS1-25/Z



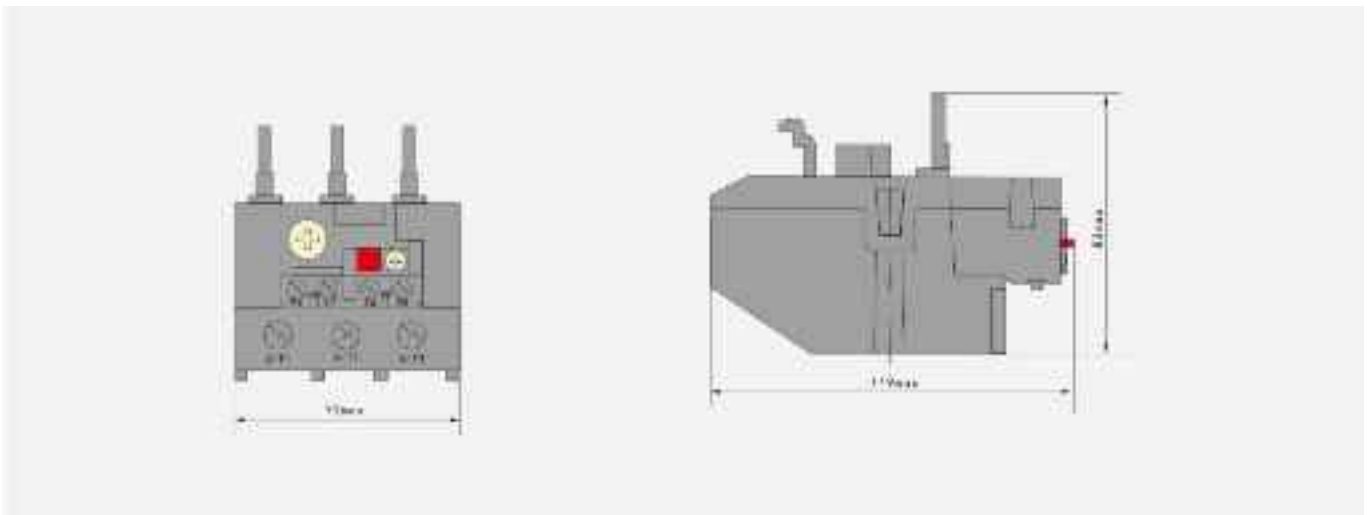
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2. Outline and installation dimensions (mm) of JR36-36/Z



3. Outline and installation dimensions (mm) of JRS1-93/Z



VII. Ordering Information

When ordering, the product name, model, setting current range and quantity must be indicated. The mounting base (if required) shall be specified separately.

Example of ordering: Thermal overload relay, JRS1-25, 7 – 10 A, 50 sets.

A

Primary power distribution

B

Secondary distribution

C

Terminal power distribution

D

Industrial control and protection

E

power device

F

Power management

G

High voltage components