

JRS4-d系列热过载继电器

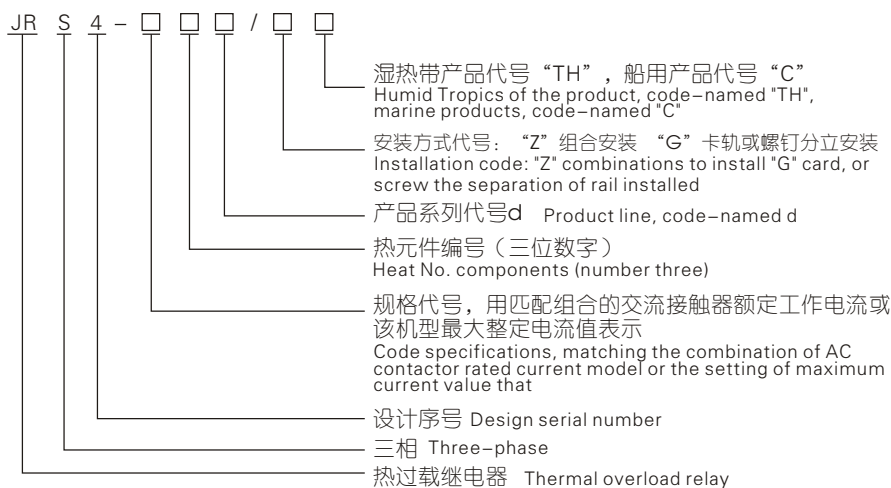
JRS4-d Range Thermal Overload Relay

一、用途 APPLICATION

JRS4-d系列热过载继电器用于交流50Hz（或60Hz），额定工作电压至660V的电路中，用作交流电动机的过载和断相保护。

JRS4-d range thermal overload relay is used in AC 50Hz (or 60Hz); rated voltage is up to 660V, for protecting AC motor against overload or phase-breaking.

二、型号及含义 TYPE AND MEANS



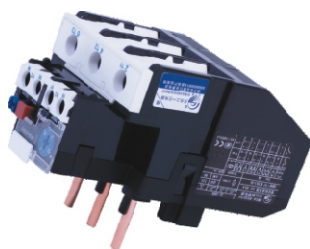
■ 结构形式 structure type

- △ 双金属片式；Bimetal type
- △ 三相；Three phase
- △ 脱扣等级“10”级；Trip grade: class 10
- △ 有整定电流调节装置；Setting current regulator devices
- △ 有周围空气温度补偿；With ambient temperature compensation
- △ 带断相保护；With phase-breaking protect
- △ 手动和自动复位；Hand operate and automatic reset
- △ 具有脱扣指示；With release showing
- △ 辅助触头为电气上分开的一常开和一常闭触头；
Auxiliary contacts are one normally open and one normally closed;
- △ 有常闭触头断开钮；With normally closed contact disconnect button
- △ 有机构检测钮。With device test button

■ 适用工作制 adapt work rule

- △ 八小时工作制；8h working rule
- △ 不间断工作制；ongoing work rule
- △ 继续周期工作制，操作频率≤12次/h
Intermittent work cycle rule, operation frequency≤12 time/h

■ 主要技术参数 main technical parameters



型号 type		JRS4-09d~25d	JRS4-32d	JRS4-40d~80d	JRS4-140d
参数parameters					
额定绝缘电压Ui(V) Rated insulation voltage		690			
周围空气温度(°C) Ambient temperature		-5~40			
海拔(m)elevation		≤2000			
大气条件 environment		周围空气温度为40°C时, 大气相对湿度不超过50%, 20°C时最大相对湿度不超过90% Relative humidity not exceeding 50% at the ambient temperature 40°C, humidity up to 90% at the ambient temperature 20°C			
符合的标准standard		IEC60947-4、GB14048、EN60947-4、UL508			
贮存环境 Storage environment		温度-25°C~+55°C, 相对湿度(25°C时)95% Temperature -25°C~+55°C, relative humid(at 25°C) is 95%			
污染等级 Pollution grade		3级			
外壳防护等级 Out frame protect grade		Ip10			
辅助电路可接通最小负载 Connect minimum load of attached circle		24V 10mA			
主回路接线端可接导线 Lead No. Of main circuit connect terminal	软线 soft wire (mm ²)	4	10	16	-
	硬线 hard wire (mm ²)	6	16	25	50
	根数 root	2	2	1	1

■ 动作特征 action feature

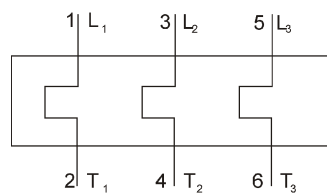
动作特征 action feature	序号 No.	整定电流倍数 Setting current multiples		动作时间 Action time	起始条件 Start condition	周围空气温度 (°C) Ambient temperature
		任意二相 Arbitrary two phase	另一相 Other phase			
各相负载不平衡时 Imbalance load of phases	1	1.00	0.90	>2h	冷态 Cold station	20±5
	2	1.15	0	<2h	接序1试验后 After test No.1	
各相负载平衡时 balance load of phases	1	1.05		>2h	冷态 Cold station	20±5
	2	1.20		<2h	接序1试验后 After test No.1	
	3	1.50		<4min	接序1试验后 After test No.1	
	4	7.20		4s<Tp≤10s	冷态 Cold station	
温度补偿性能 Temperature compensation capacity	1	1.00		>2h	冷态 Cold station	40±2
	2	1.20		<2h	接序1试验后 After test No.1	
	3	1.05		>2h	冷态 Cold station	-5±2
	4	1.30		<2h	接序3试验后 After test No.3	

■ 整定电流调节范围及编号 setting current regulator area and serious No.

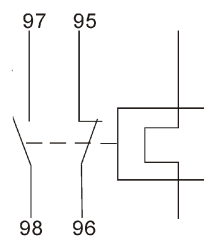
型号 type	电压调节范围RC(A) Voltage regulator area	控制功率 (AC-3) Control power (KW)					可插接的接触器 Connection contactor	断路保护用熔断器(A) Fuse for breaking protect	
		220V	380V	415V	440V	660V		aM	gG
JRS4-09301d	0.1~0.16						GSC1-09-25	0.25	2
JRS4-09302d	0.16~0.25						GSC1-09-25	0.5	2
JRS4-09303d	0.25~0.40						GSC1-09-25	1	2
JRS4-09304d	0.40~0.63					0.37	GSC1-09-25	1	2
JRS4-09305d	0.63~1					0.55	GSC1-09-25	2	4
JRS4-09306d	1~1.6		0.37		0.55	0.75 1.1	GSC1-09-25	2	4
JRS4-09307d	1.6~2.5	0.37	0.55 0.75	1.1	0.75 1.1	1.5	GSC1-09-25	4	6
JRS4-09308d	2.5~4	0.55 0.75	1.1 1.5	1.5	1.5	2.2 3	GSC1-09-25	6	10
JRS4-09310d	4~6	1.1	2.2	2.2	2.2	4	GSC1-09-25	8	16
JRS4-09312d	5.5~8	1.5	3	3 3.7	3 3.7	5.5	GSC1-09-25	12	20
JRS4-09314d	7~10	2.2	4	4	4	7.5	GSC1-09-25	12	20
JRS4-12316d	9~13	3	5.5	5.5	5.5	10	GSC1-09-25	16	25
JRS4-18321d	12~18	4	7.5	9	9	15	GSC1-09-25	20	35
JRS4-25322d	17~25	5.5	11	11	11	18.5	GSC1-09-25	25	50
JRS4-32353d	23~32	7.5	15	15	15	22	GSC1-32	40	63
JRS4-32355d	28~36	10	18.5	22	22	30	GSC1-32	40	80
JRS4-40353d	23~32	7.5	15	15	15	22	GSC1-40~80	40	63
JRS4-40355d	30~40	10	18.5	22	22	30	GSC1-40~80	40	80
JRS4-50357d	37~50	11	22	25	25	37	GSC1-40~80	63	100
JRS4-65359d	48~65	15	25	30	30	45	GSC1-40~80	63	100
JRS4-65361d	55~70	18.5	30	37	37	55	GSC1-40~80	80	125
JRS4-80363d	63~80	22	37	55	45	75	GSC1-40~80	80	125
JRS4-140365d	80~104	30	45	75	55	75	GSC1-115~170	125	200
JRS4-140367d	95~120	30	55	75	75	90	GSC1-115~170	125	224
JRS4-140369d	110~140	37	63	75	75	110	GSC1-115~170	160	250

■ 热继电器主、辅电路接线图

Thermal relay main、attached circle wiring picture

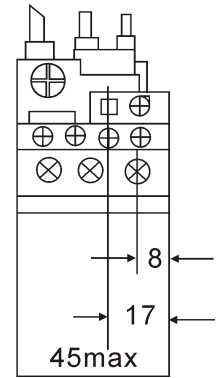
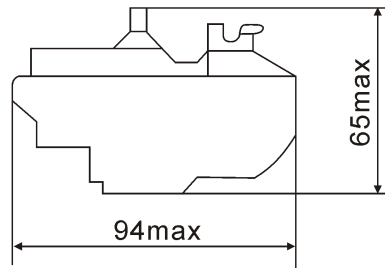


主电路
Main cycle

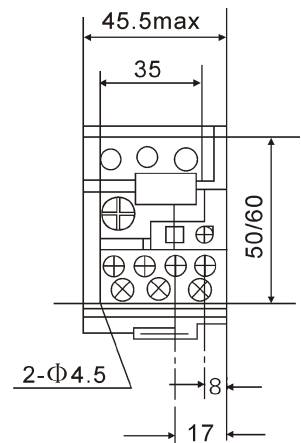
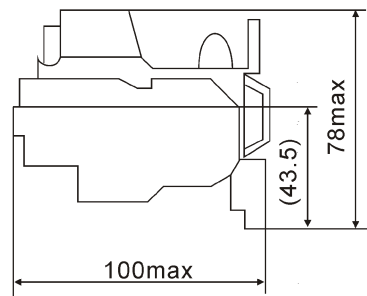


辅助电路
attached circle

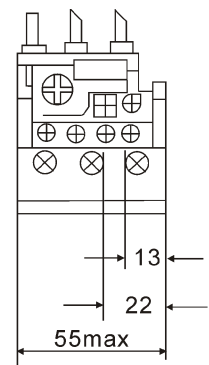
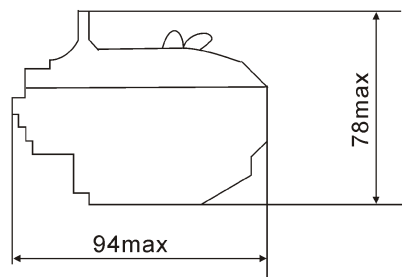
- 外形与安装尺寸 outline and installation dimensions
- JRS4-09d、12d、18d、25d外形与安装尺寸
outline and installation dimensions
- △ 组合安装 (Z) arrangement installation



- △ 卡轨安装或螺钉分立安装 (G)
Discrete installation by rail track or screw



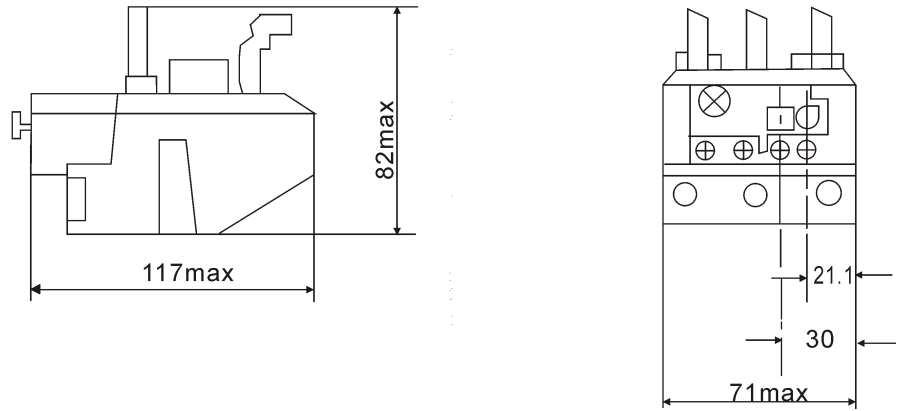
- JRS4-32d外形与安装尺寸
Outline and installation dimensions
- △ 组合安装 (Z) arrangement installation



■ JRS4-40d、50d、65d、80d外形与安装尺寸

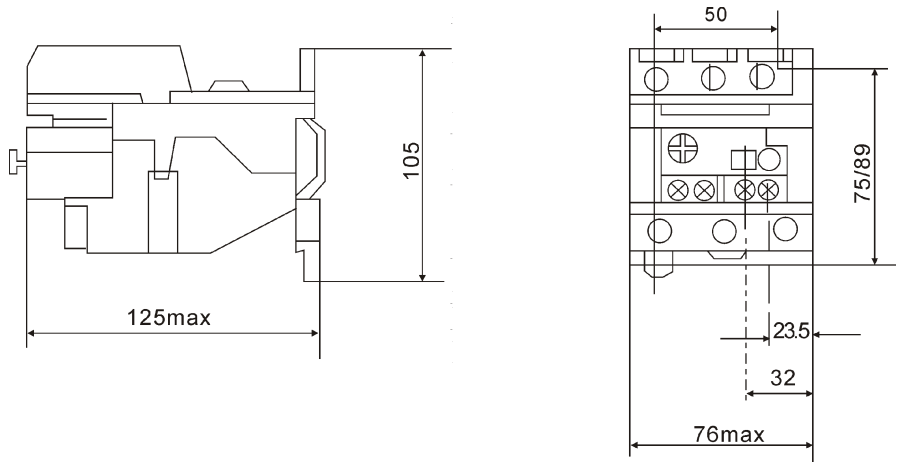
Outline and installation dimensions

△ 组合安装 (Z) arrangement installation



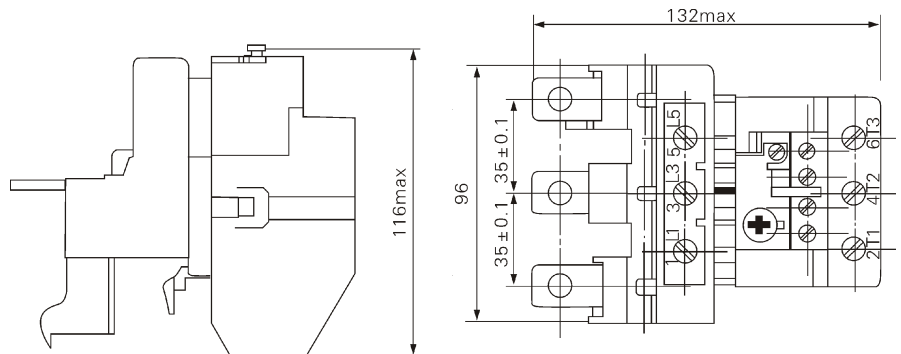
△ 卡轨安装或螺钉分立安装 (G)

Discrete installation by rail track or screw



■ JRS4-140d外形与安装尺寸 outline and installation dimensions

△ 组合安装 (仅此一种) arrangement installation



■ 安装方式 installation way

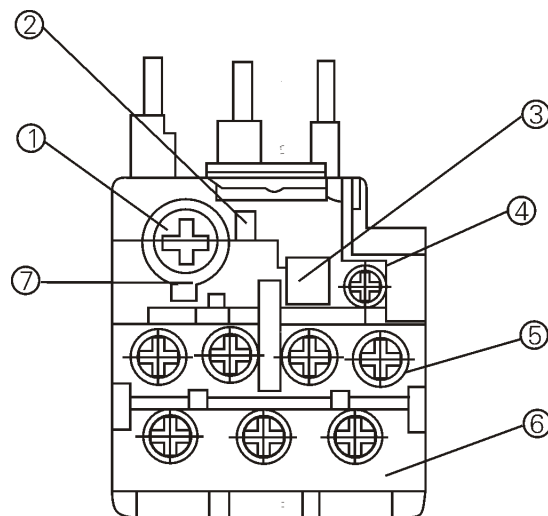
- △ 组合式: JRS4-d系列热过载继电器插装在GSC1系列接触器上;
Arrangement: JRS4-d range thermal overload relay plug on GSC1 range contactor
- △ 分立式: 用螺钉或者35mm标准卡轨安装。
Discrete: installation by screw or standard 35mm rail track.

■ 独立安装座 independent installation block

继电器型号 relay type	JRS4-09301d-25322d	JRS4-40353d-80363d
独立安装座代号 independent installation block code	JRS4-09/25d安装座 installation block	JRS4-40/80d安装座 installation block
独立安装状态 independent installation statement	螺钉或卡轨 Screw or rail track	螺钉或卡轨 Screw or rail track

■ 使用说明 using introduction

- △ ①整定电流调节钮 setting current construct button
- △ ②脱扣指示 release shower
- △ ③常闭触头断开钮 normally closed contact breaking button
- △ ④复位按钮 A: 自动复位 M: 手动复位
Reset button A: automatic reset M: hand operate reset
- △ ⑤95、96、97、98为辅助触头接线端子, 95、96为常闭触头, 97、98为常开触头
95、96、97、98 is auxiliary contact connect terminal, 95、96 is normally closed contact, 97、98 is normally open contact.
- △ ⑥主回路接线端子号 main cycle connect terminal code
- △ ⑦测试按钮 test button



三、船用热继电器 MARINE THERMAL RELAY

- △ 周围空气温度：-5℃ ~ +40℃； Ambient temperature: -5℃ ~ +40℃;
- △ 大气条件：可有凝露、盐雾、油雾、霉菌、海上潮湿空气等存在；
Air condition: be able to bear the influence of moisture in the air、 salt fog、 oil fog、 mould、 humid air on the sea;
- △ 倾斜、摇摆：各方向不超过22.5°；
Tilt and vibration: all direction should low than 22.5° ；
- △ 振动：频率为2~13.2Hz，振幅为±1mm，频率13.2~80Hz，加速度为±7m/s²；
Vibration: frequency 2~13.2Hz, amplitude ±1mm, frequency 13.2~80Hz, acceleration ±7m/s²;
- △ 电源电压和频率变化：稳态电压变化为额定值的+6%~-10%，稳态频率变化为额定值的±5%；
Power voltage and frequency changes: steady-state voltage area is +6% ~ -10% of rated voltage, steady-state frequency change area is ±5% of rated frequency;
- △ 安装面与垂直面斜度不大于5°，应按正常位置安装。
The inclined angle between the mounting surface and vertical surface no more than 5°，located on the place of non-sensible compact and vibration

四、使用注意事项 USING NOTICE

- 热继电器出厂时已经调试合格，用户使用时不得随意打开盖板调动动作机构，使用时注意下列几点：
Thermal relay is qualified before out of the factory, users may not open the cover to mobilize action device, and should follow below points:
- △ 热继电器的正常工作位置应是躯壳上的盖板向上，处于水平位置；
Thermal relay normal work location is the cover of body upward, in the level position.
- △ 选用热继电器时应注意被保护电动机的型号、容量、工作场合、起动及负载情况，然后选择与被保护电动机额定电流值相适应的热继电器，并应调整电流调节装置，使热继电器的整定电流值与被保护的电动机的额定电流值相适应；
Select thermal relay: should attention factors motor's type、 capacity、 work condition, start-up and load, then select compatible thermal relays with protected motor according rated current, and should adjust current-conditioning for making compatible to setting current value of thermal relay and rated current value of motor.
- △ 热继电器出厂时复位按钮均调整在手动复位位置；
Reset button should on manual reset position when thermal relay out of factory;
- △ 热继电器与接触器组合安装时，螺钉要拧紧，否则会影响热继电器的动作特性，或者在受振动时可能脱落。
When combine thermal relay and contactor, should make the screws tighten, otherwise it may affect characteristics of the relay, or may be subject to vibration off.
- JRS4-140d机型由热继电器本体和接线座两部分组成,不仅可以和GSC1-115-

170接触器组合安装,还可与GSC1-80-95接触器组合安装,也可以独安装,配套选项型时请按以下组合方式选择订货:

JRS4-140d combined by thermal relay body and wiring blocks, not only can installation combined with GSC1-115-170 contactor, but also with GSC1-80-95 contactor, or installation independently, before order, please following below ways to operate matching type:

- △ 与GSC1-115-170接触器配套时,需要“热继电器本体+接线座”;
Combine with GSC1-115-170 contactor, need thermal relay body and plug block;
- △ 与GSC1-80~95接触器或该机型的接触器配套时,只需“热继电器本体”;
Combine with GSC1-80~95 contactor or the contactor of this type, only need thermal relay body.
- △ 需要独立安装或与CJX4-F系列接触器(只能用独立安装方式连接)配套时,需要“热继电器本体+JRS4-40/80d独立安装座.”
Combine with CJX4-F range contactor (only can connect by independent way) or installation independently, needs thermal relay body and JRS4-40/80d independently installation plug

五、订货须知 ORDER NOTICE

- △ 订货时必须说明热继电器的产品型号、安装方式、电流调整范围和订货数量。湿热带型产品注明“TH”，船用产品注明“C”。
Need remark thermal relay's type、installation way、current adjust area and order volume. Humid hot tropic product remark “TH”，marine product remark “C”；
例：JRS4-09305D/c10台 Example: JRS4-09305d/c10sets
例：JRS4-09~25d安装座，10台。
Example: JRS4-09~25d installation block, 10 sets
- △ 分立安装座需要单独订货时，必须指明分立安装座的名称、型号和订货数量。
Discrete installation block need separate ordered, must specify discrete installation block's name, type and order volume.