

# Shenzhen Rui Chi Electronics Co., Ltd.,

## KSD301 SERIES

KSD301 Bimetal thermostat is a large capacity bimetallic thermostat with a metal cap and feet for screw fixing. KSD301 thermostat is widely used for household electrical appliances such as water dispenser, water heater, electrical thermos, disinfectant cabinet, microwave oven, coffee boiler, coffee pot, rice cooker, air conditioner, laminator.

### Operation Principle

KSD301 snap action thermostat series is a small-size bimetal thermostat series with a metal cap, which belongs to thermal relays' family. The main principle is that one function of bimetal discs is snap action under the change of sensing temperature. The snap action of disc can push the action of the contacts through the inside structure, and then caused on or off of the circuit finally. The main characteristics are the fixation of working temperature, the reliable snap action, less flashover, longer working life and less radio interference.

### Technical Specifications

Electric Ratings: AC125/250V, 5A/7.5A/10A/15A/16A/25A

Open temperature: 25 ° C ~ 220 ° C (according to the customers' requirements)

Base material: resist heat resin base; Contact material Silver/Gold

Open temperature tolerance:  $\pm 2^{\circ}\text{C}$ ;  $\pm 3^{\circ}\text{C}$ ;  $\pm 5^{\circ}\text{C}$ ;  $\pm 10^{\circ}\text{C}$ ;  $\pm 15^{\circ}\text{C}$ .

On-off temperature tolerance: 5 to 150 ° C

Reset temperature tolerances:  $\pm 2^{\circ}\text{C}$ ;  $\pm 3^{\circ}\text{C}$ ;  $\pm 5^{\circ}\text{C}$ .

Temp. characteristics: Normal type:

OFF temperature higher than ON temperature. (Normal close)

K type: ON temperature higher than OFF temperature. (Normal open)

One-shot type: The thermostat switches on at room temperature and it won't be able to reset after switching off.

Electric Strength: No breakdown and flashover under AC 50Hz for one minute

Insulation Resistance: >100M  $\Omega$  (with a DC500V megger)

### Contacts Form: S.P.S.T. Division to five types:

- (1). Closes in room temperature. Opens at temperature rise, closes at temperature decreasing.
- (2). Closes in room temperature. Opens at temperature decreasing, closes at temperature rise.
- (3). Opens in room temperature. Closes at temperature rise, opens at temperature decreasing.
- (4). Opens in room temperature. Closes at temperature decreasing, opens at temperature rise.
- (5). Closes in room temperature. Opens when the temperature rise, closes at temperature decreasing

The action of close will be finished through manual reset.

Earthing Methods: by the connection of the metal cap of thermostat and the earth-connect metal part of appliance.

### Working temperature tolerance and working life:

Working temp	Open tolerance	Close tolerance	Max working temp	Working life
$\leq 100^{\circ}\text{C}$	$\pm 3^{\circ}\text{C}$	$\pm 5^{\circ}\text{C}$	$190^{\circ}\text{C}$	100,000 cycles
151-170 $^{\circ}\text{C}$	$\pm 4^{\circ}\text{C}$	$\pm 8^{\circ}\text{C}$	$210^{\circ}\text{C}$	30,000 cycles
171-210 $^{\circ}\text{C}$	$\pm 5^{\circ}\text{C}$	$\pm 10^{\circ}\text{C}$	$250^{\circ}\text{C}$	10,000 cycles

### Min temperature differential:

Working temp	Common diff	Advised min diff	Limit min diff
$\leq 100^{\circ}\text{C}$	$17^{\circ}\text{C}$	$11^{\circ}\text{C}$	$8^{\circ}\text{C}$
101-130 $^{\circ}\text{C}$	$17^{\circ}\text{C}$	$14^{\circ}\text{C}$	$11^{\circ}\text{C}$
130-135 $^{\circ}\text{C}$	$17^{\circ}\text{C}$	$17^{\circ}\text{C}$	$14^{\circ}\text{C}$
155-175 $^{\circ}\text{C}$	$25^{\circ}\text{C}$	$20^{\circ}\text{C}$	$17^{\circ}\text{C}$
176-190 $^{\circ}\text{C}$	$25^{\circ}\text{C}$	$30^{\circ}\text{C}$	$25^{\circ}\text{C}$
$> 190^{\circ}\text{C}$	$25^{\circ}\text{C}$	$35^{\circ}\text{C}$	$30^{\circ}\text{C}$

Note: the above temperature differential is the differential between open temperature value and closed temperature value. In addition, we can manufacture thermostats up to the special requirement of characteristics and dimension from our clients.

Selling specifications (can according to the customers' requirements)

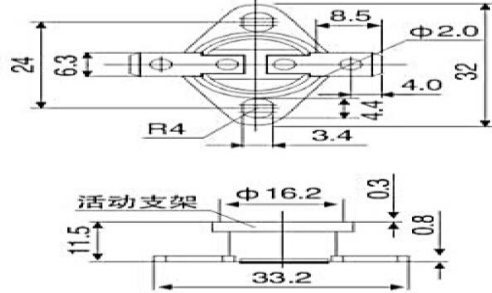
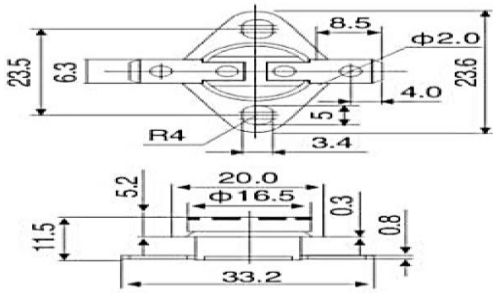
Reset method	action temp	action temp tolerance	reset temp	Test the temperature rise and fall speed
	(°C)	(°C)	(°C)	(°C/min)
Automatic reset	25	±5	10 ± 15	5-10
Automatic reset	30	±5	15 ± 15	5-10
Automatic reset	35	±5	20 ± 15	5-10
Automatic reset	40	±5	25 ± 15	5-10
Automatic reset	45	±5	30 ± 15	5-10
Automatic reset	50	±5	35 ± 15	5-10
Automatic reset	55	±5	40 ± 15	5-10
Automatic reset	60	±5	45 ± 15	5-10
Automatic reset	65	±5	50 ± 15	5-10
Automatic reset	70	±5	55 ± 05	5-10
Automatic reset	75	±5	60 ± 15	5-10
Automatic reset	80	±5	65 ± 15	5-10
Automatic reset	85	±5	70 ± 15	5-10
Automatic reset	90	±5	75 ± 15	5-10
Automatic reset	95	±5	80 ± 15	5-10
Automatic reset	100	±5	85 ± 15	5-10
Automatic reset	105	±5	90 ± 15	5-10
Automatic reset	110	±5	95 ± 15	5-10
Automatic reset	115	±5	100 ± 15	5-10
Automatic reset	120	±5	105 ± 15	5-10
Automatic reset	125	±5	110 ± 15	5-10
Automatic reset	130	±5	115 ± 15	5-10
Automatic reset	135	±5	120 ± 15	5-10
Automatic reset	140	±5	125 ± 15	5-10
Automatic reset	150	±5	135 ± 15	5-10
Automatic reset	160	±5	145 ± 15	5-10
Automatic reset	170	±5	155 ± 15	5-10
Automatic reset	180	±5	165 ± 15	5-10
Automatic reset	190	±5	175 ± 15	5-10
Automatic reset	200	±5	185 ± 15	5-10
Automatic reset	210	±5	195 ± 15	5-10
Automatic reset	220	±5	200 ± 15	5-10
Automatic reset	230	±5	210 ± 15	5-10
Automatic reset	240	±5	220 ± 15	5-10
Automatic reset	250	±5	230 ± 15	5-10
Automatic reset	260	±5	240 ± 15	5-10
Automatic reset	270	±5	250 ± 15	5-10
Automatic reset	280	±5	260 ± 15	5-10
Automatic reset	290	±5	270 ± 15	5-10
Automatic reset	300	±5	280 ± 15	5-10
Automatic reset	310	±5	290 ± 15	5-10
Automatic reset	320	±5	300 ± 15	5-10
Automatic reset	330	±5	310 ± 15	5-10
Automatic reset	340	±5	320 ± 15	5-10
Automatic reset	350	±5	330 ± 15	5-10
Automatic reset	360	±5	340 ± 15	5-10

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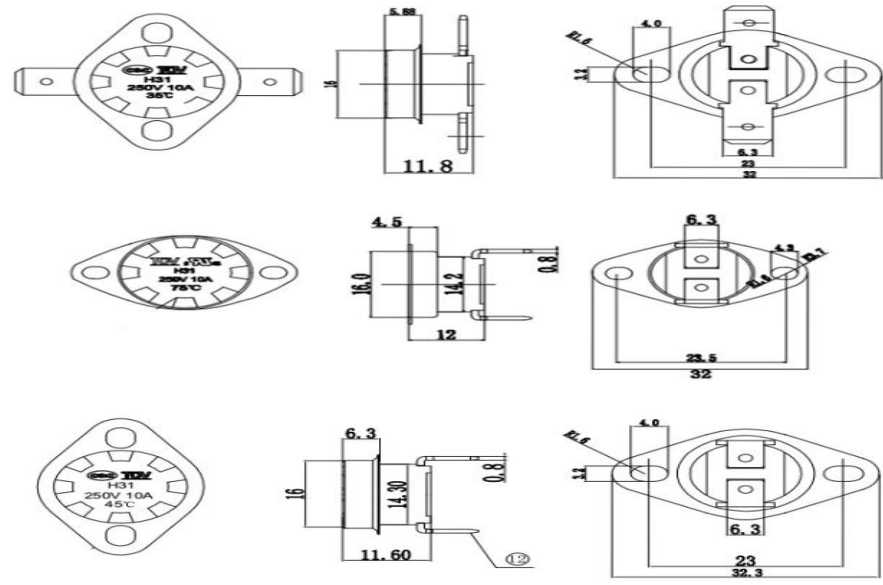
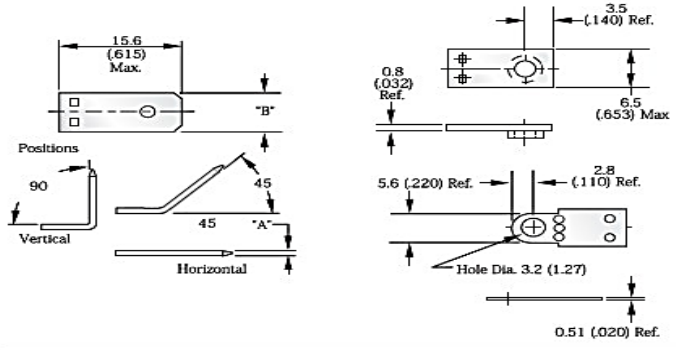
## Terminal options

Hot Model			
10A	16A	10/16A Cera	20A
KSD301 25°C 10A NC	KSD301 70°C 16A NC	KSD301 150°C 10A NC cera	KSD301 50°C 20A NC
KSD301 30°C 10A NC	KSD301 75°C 16A NC	KSD301 160°C 10A NC cera	KSD301 55°C 20A NC
KSD301 35°C 10A NC	KSD301 80°C 16A NC	KSD301 170°C 10A NC cera	KSD301 60°C 20A NC
KSD301 40°C 10A NC	KSD301 85°C 16A NC	KSD301 180°C 10A NC cera	KSD301 65°C 20A NC
KSD301 45°C 10A NC	KSD301 90°C 16A NC	KSD301 190°C 10A NC cera	KSD301 70°C 20A NC
KSD301 50°C 10A NC	KSD301 95°C 16A NC	KSD301 200°C 10A NC cera	KSD301 75°C 20A NC
KSD301 55°C 10A NC	KSD301 100°C 16A NC	KSD301 220°C 10A NC cera	KSD301 85°C 20A NC
KSD301 60°C 10A NC	KSD301 110°C 16A NC	KSD301 230°C 10A NC cera	KSD301 80°C 20A NC
KSD301 65°C 10A NC	KSD301 125°C 16A NC	KSD301 240°C 10A NC cera	KSD301 90°C 20A NC
KSD301 70°C 10A NC	KSD301 65°C 16A NC	KSD301 250°C 10A NC cera	KSD301 95°C 20A NC
KSD301 75°C 10A NC	KSD301 50°C 16A NC	KSD301 260°C 10A NC cera	KSD301 100°C 20A NC
KSD301 85°C 10A NC	KSD301 55°C 16A NC	KSD301 270°C 10A NC cera	KSD301 105°C 20A NC
KSD301 80°C 10A NC	KSD301 60°C 16A NC	KSD301 280°C 10A NC cera	KSD301 100°C 20A NC
KSD301 90°C 10A NC	KSD301 105°C 16A NC	KSD301 290°C 10A NC cera	KSD301 110°C 20A NC
KSD301 95°C 10A NC	KSD301 120°C 16A NC	KSD301 300°C 10A NC cera	KSD301 115°C 20A NC
KSD301 100°C 10A NC	KSD301 130°C 16A NC	KSD301 150°C 16A NC cera	KSD301 120°C 20A NC
KSD301 105°C 10A NC	KSD301 135°C 16A NC	KSD301 160°C 16A NC cera	KSD301 125°C 20A NC
KSD301 100°C 10A NC	KSD301 150°C 16A NC	KSD301 170°C 16A NC cera	KSD301 130°C 20A NC
KSD301 110°C 10A NC	KSD301 140°C 16A NC	KSD301 180°C 16A NC cera	KSD301 140°C 20A NC
KSD301 115°C 10A NC		KSD301 190°C 16A NC cera	KSD301 145°C 20A NC
KSD301 120°C 10A NC		KSD301 200°C 16A NC cera	KSD301 135°C 20A NC
KSD301 125°C 10A NC		KSD301 220°C 16A NC cera	KSD301 150°C 20A NC
KSD301 130°C 10A NC		KSD301 230°C 16A NC cera	KSD301 155°C 20A NC
KSD301 140°C 10A NC		KSD301 240°C 16A NC cera	KSD301 160°C 20A NC
KSD301 145°C 10A NC		KSD301 250°C 16A NC cera	KSD301 165°C 20A NC
KSD301 135°C 10A NC			KSD301 170°C 20A NC
KSD301 150°C 10A NC			KSD301 175°C 20A NC
KSD301 155°C 10A NC			KSD301 180°C 20A NC
KSD301 160°C 10A NC			KSD301 190°C 20A NC
KSD301 165°C 10A NC			KSD301 200°C 20A NC
KSD301 170°C 10A NC			KSD301 220°C 20A NC
KSD301 175°C 10A NC			KSD301 230°C 20A NC
KSD301 180°C 10A NC			KSD301 240°C 20A NC
KSD301 190°C 10A NC			KSD301 250°C 20A NC
KSD301 200°C 10A NC			KSD301 260°C 20A NC
			KSD301 270°C 20A NC
			KSD301 280°C 20A NC
			KSD301 290°C 20A NC
			KSD301 300°C 20A NC

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Thickness(A)	Width(B)
0.8(.031)	6.3(.250)
0.8(.031)	4.8(.187)
0.5(.020)	4.8(.187)



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