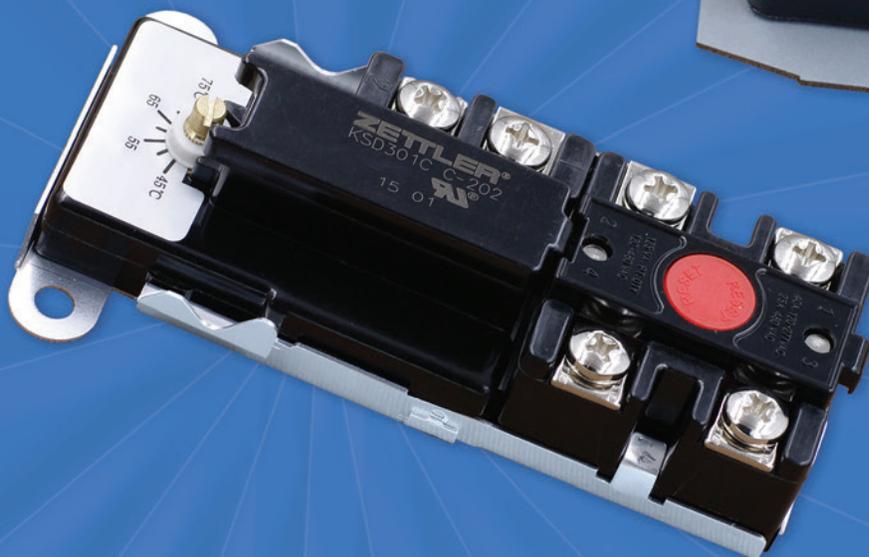
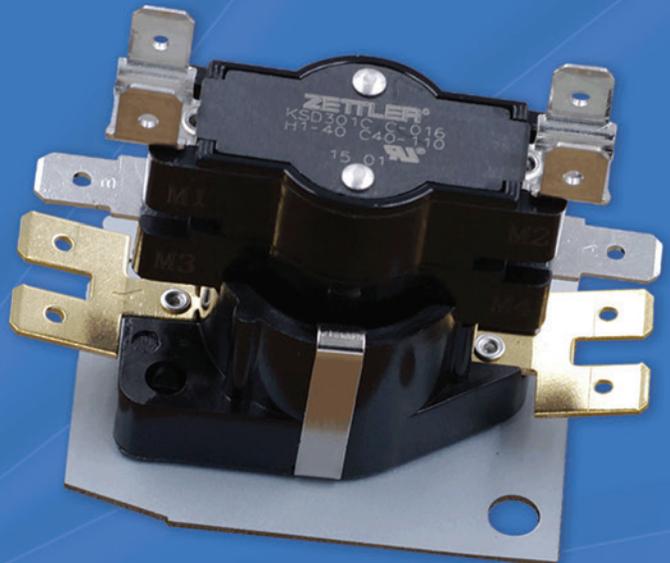
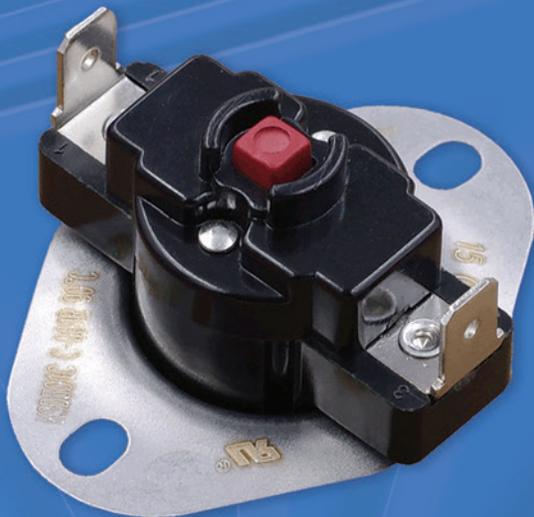


THERMOSTATS and TEMPERATURE CONTROLS



ZETTLER CONTROLS, INC

COMPANY INTRODUCTION

Through traditional craftsmanship and engineering excellence, the Zettler name has symbolized quality and reliability in relays for over 100 years in demanding applications such as telecommunication systems, computer peripherals, office automation equipment, home appliances, security systems, test and measurement devices and industrial controls.

Zettler Controls, Inc brings that same commitment to the HVAC/R market with an offering of relays, transformers, fan center controls, heat sequencers, thermistors, and bi-metal thermostats. This group of products is used by the HVAC/R industry in both residential and commercial applications.

We welcome application challenges, stock over one million units, deliver quick turnaround and understand demanding service requirements. Our unique combination of 100% quality testing, first-class sales and technical support, cost-effective product design and outstanding product availability offer a highly dependable and responsive resource for fulfilling all your HVAC/R needs.



ZETTLER Controls, Inc.

www.zettlercontrols.com

75 Columbia • Aliso Viejo, CA 92656 • Phone: (949) 360-5840 • Fax:(949) 360-5839 • E-Mail: sales@zettlercontrols.com

ZETTLER

CONTENT



KSD301A 1/2" (12.7mm) Series Snap-Action Temperature Controls _____ P3



KSD301B Series Temperature Controls _____ P12



KSD301C 3/4" (19mm) Series Temperature Controls _____ P17



KSD301C Heat Sequencers - Time Delay _____ P23



KSD301C Series Temperature Sensing Controls _____ P26

Catalog Revision A

This catalog features our most popular thermostats and temperature controls. This is a small sampling of the many configurations and variations that we offer. We welcome the opportunity to discuss any requirements that you may have. **Please send your inquiries to: sales@zettlercontrols.com**



KSD301A 1/2" (12.7mm) Series Snap-Action Temperature Controls

Similar to TOD Series 36T

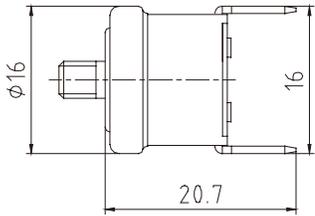
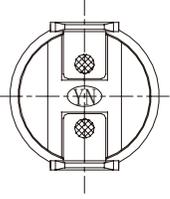
Specifications

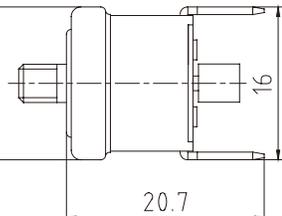
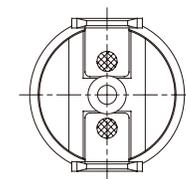
1. Electrical Ratings: AC120V 5A, 10A, 16A, AC250V 10A, 16A, 20A
2. OFF Temperature Range
 - a. Ceramic: -0°C ~ 250°C (-32F~ 482°F)
 - b. Bakelite: -30°C ~ 150°C (-22F~ 287°F)
3. Tolerance: Min ± 2°C Standard ± 5°C
4. A variety of terminal, switch case and mounting configurations are available for maximum design flexibility
5. NOTE: Please contact us to discuss specific custom requirements

Applications:

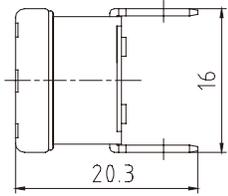
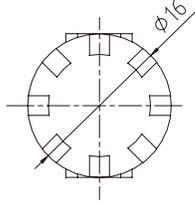
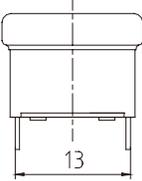
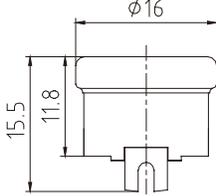
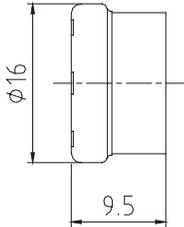
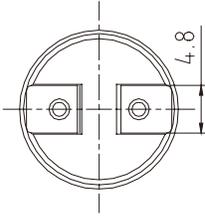
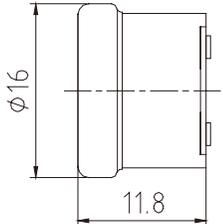
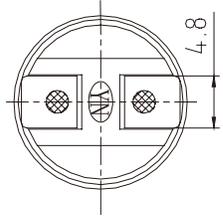
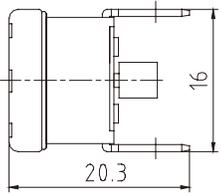
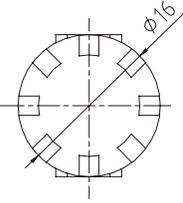
Boiler, Water Heater, Vacuum Cleaner, Copier, Electric Stove, Oven, Dryer, Refrigerator, Dish Washer, Air-Conditioning etc.

Approvals: UL CQC TUV VDE CUL CE

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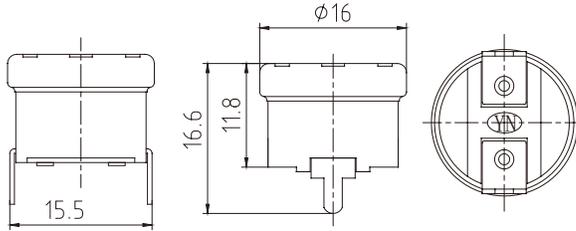
 <p style="text-align: right;">A013R</p>		 <p>Material: Bakelite Ceramic</p>
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 <p>A113</p>		 <p>Material: Bakelite Ceramic PPS</p>
 <p>A113B</p>		 <p>Material: Bakelite Ceramic PPS</p>
 <p>A113E</p>		 <p>Material: Bakelite</p>
 <p>A113F</p>		 <p>Material: Bakelite Ceramic PPS</p>
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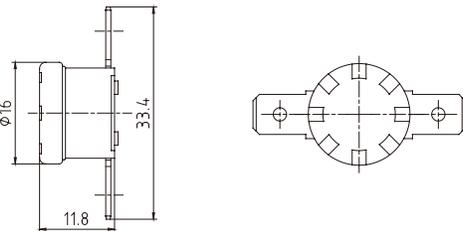
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Ceramic
PPS



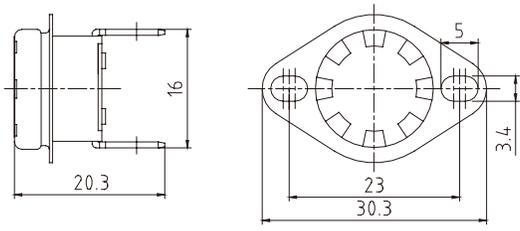
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Ceramic
PPS



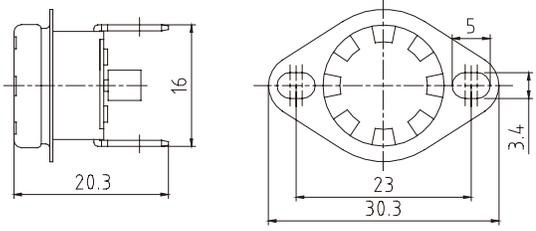
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PPS



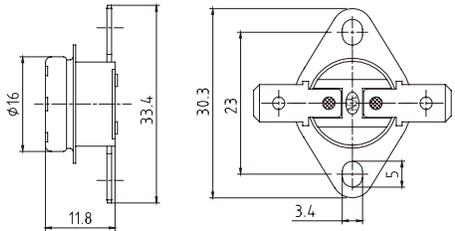
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Ceramic



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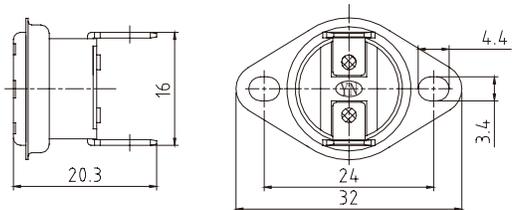


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Ceramic
PPS





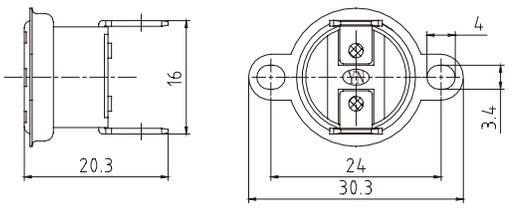
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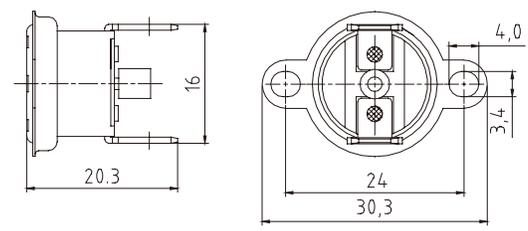
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PPS



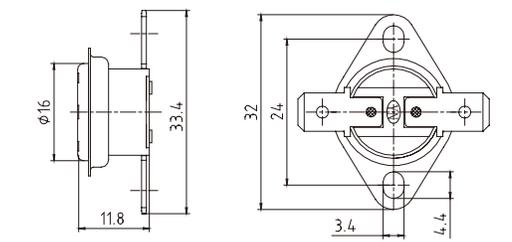
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Ceramic



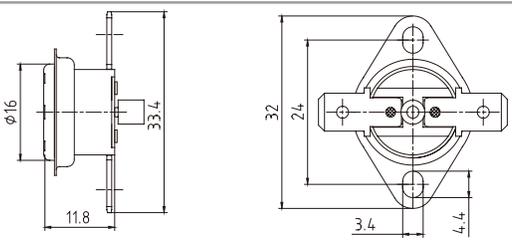
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Ceramic
PPS



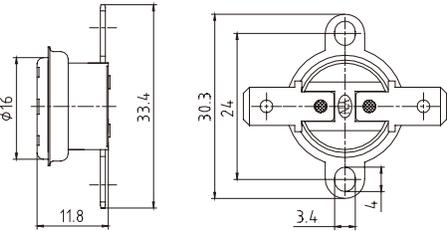
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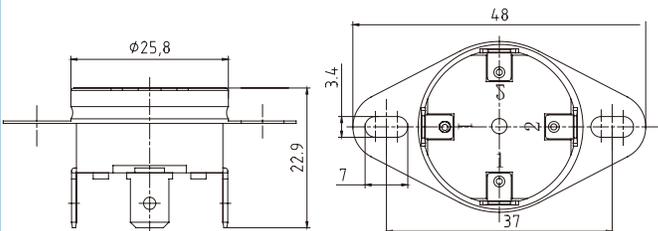
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Ceramic
PPS



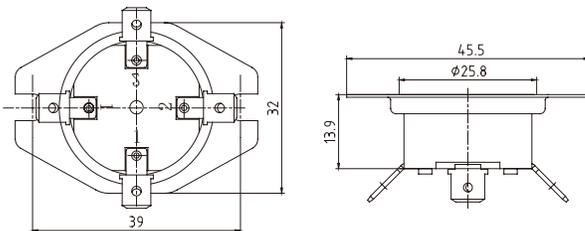
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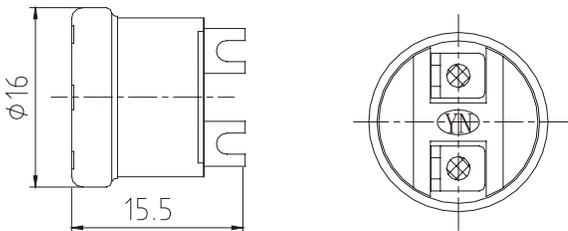
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Material:
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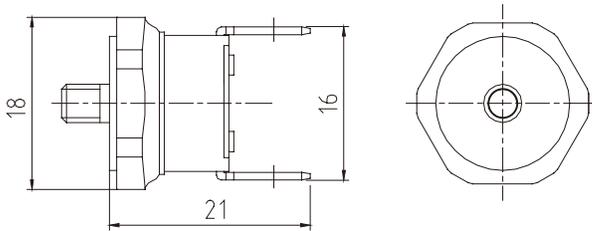
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Material:
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Ceramic
PPS



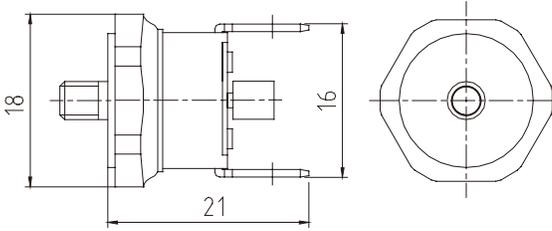
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Ceramic
PPS



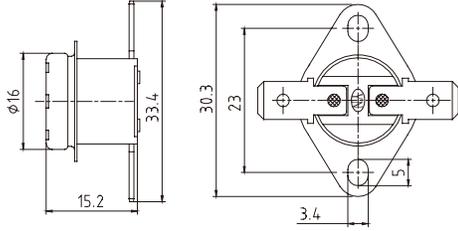




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Ceramic
PPS

A813R

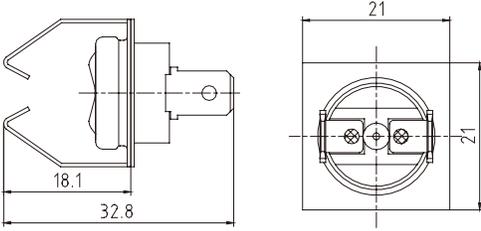




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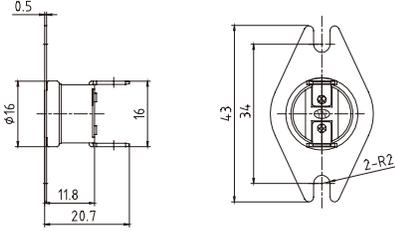




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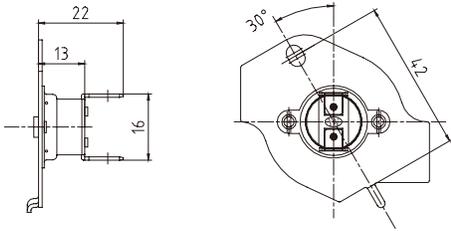




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Ceramic
PPS

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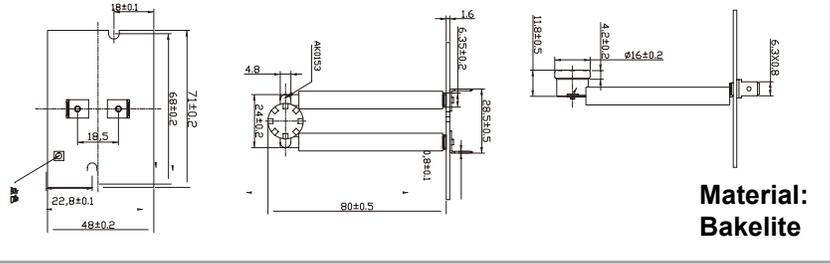


Material:
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Ceramic

A2-007C



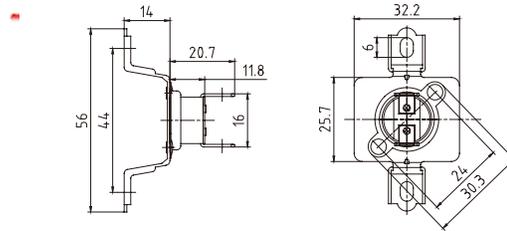
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A2-027



Material:
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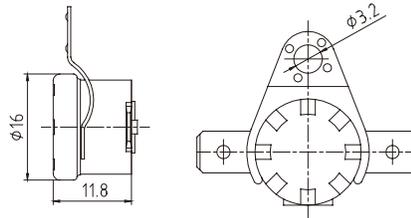
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Material:
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Ceramic



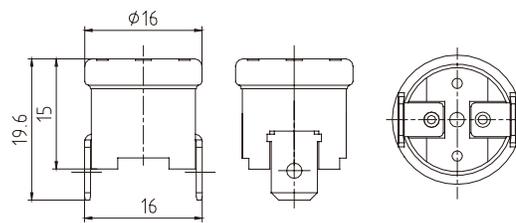
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Material:
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Ceramic
PPS



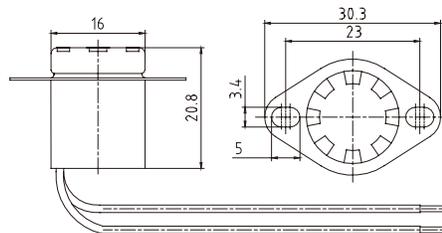
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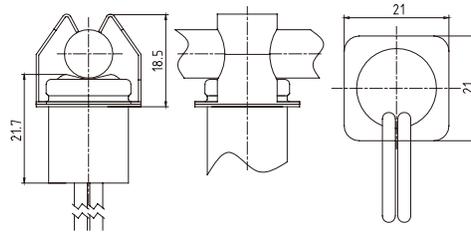
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Ceramic
PPS



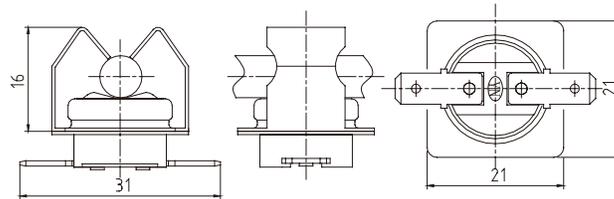
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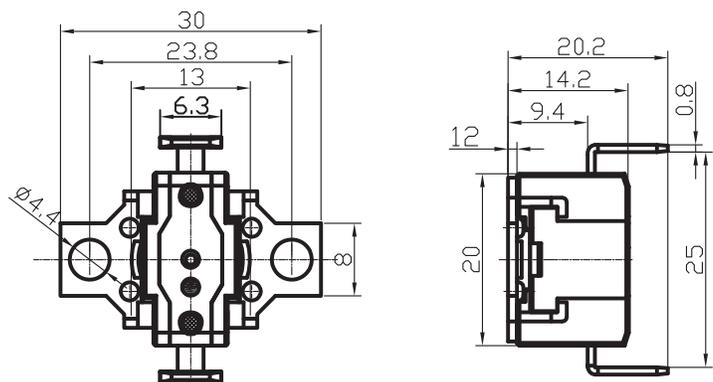
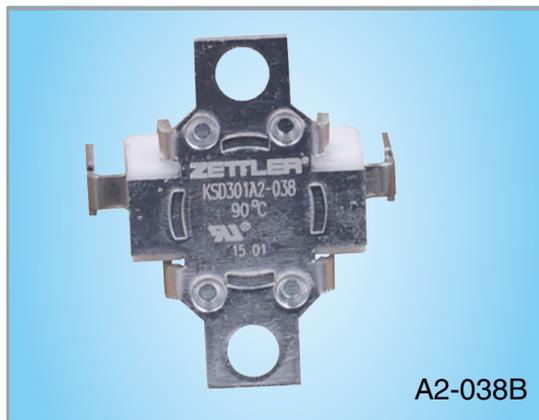
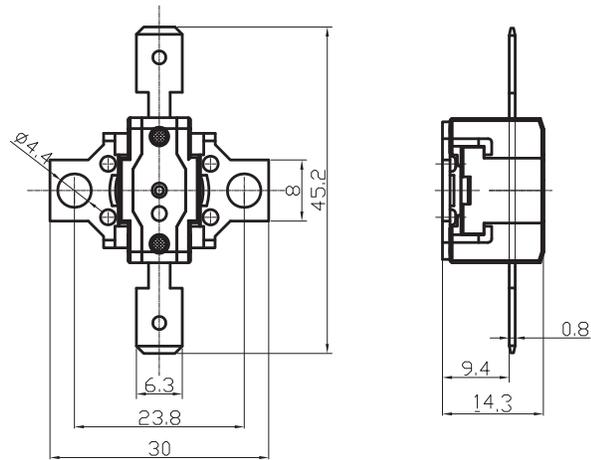
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PPS



Material:
Bakelite
PPS

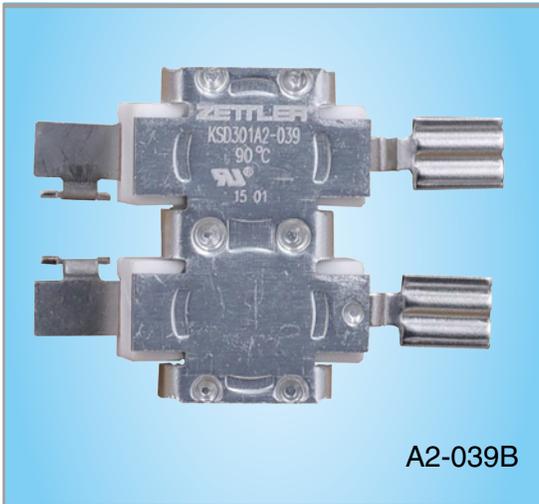
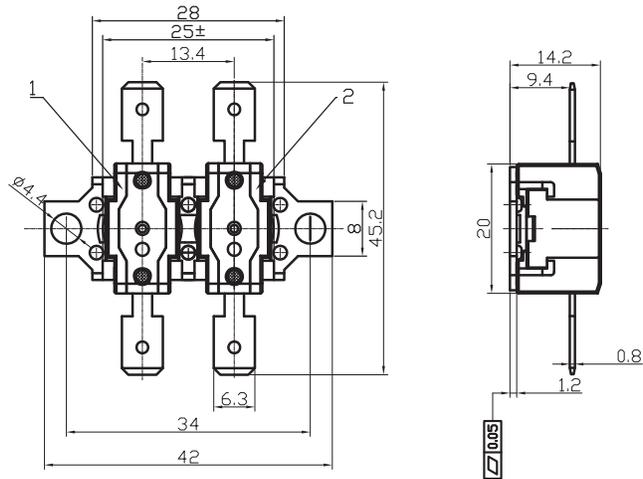


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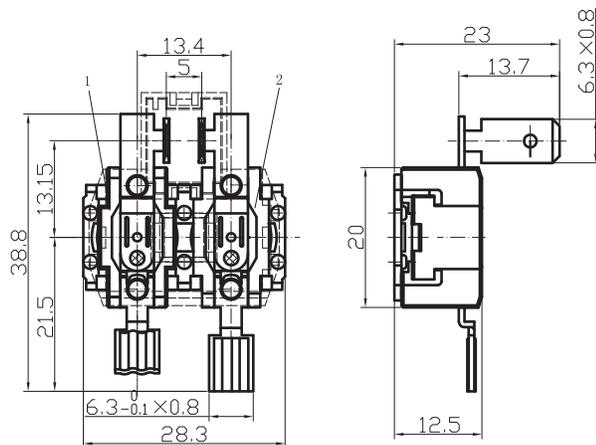




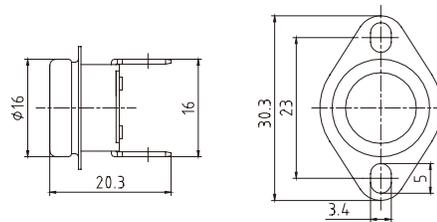
A2-039A



A2-039B



A2-613



Material:
Bakelite
Ceramic
PPS

KSD301B Series Temperature Controls

Specifications

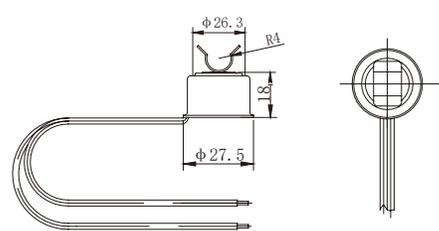
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2. OFF Temperature Range -30°C ~ 105°C (-22°F~ 221°F)
3. Diff Temp: Min 5°C ; Standard 15~25°C
4. Tolerance: Min ± 3°C Standard ± 5°C
5. A variety of terminal, switch case and mounting configurations are available for maximum design flexibility
6. NOTE: Please contact us to discuss specific custom requirements

Applications:

Refrigerator, Air-Conditioning, Ice maker, Freezer, etc.

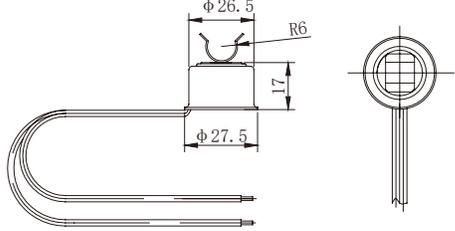
Approvals: UL CQC TUV VDE CUL CE





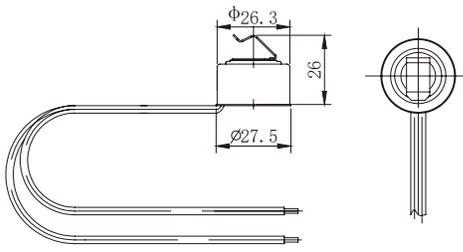
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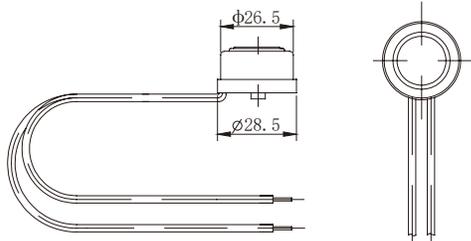
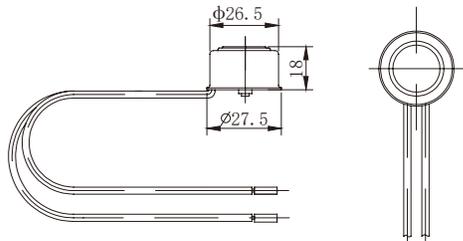
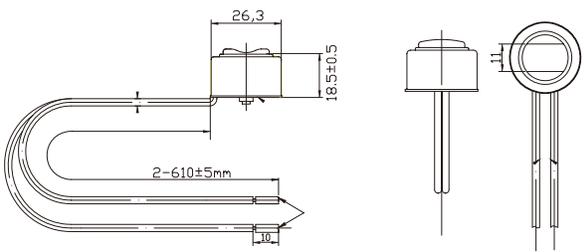
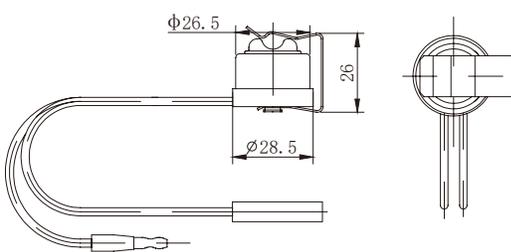
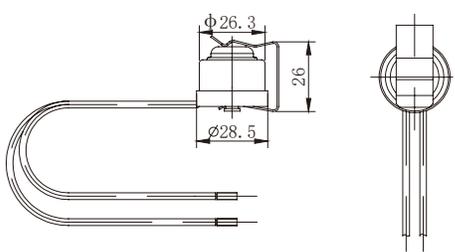


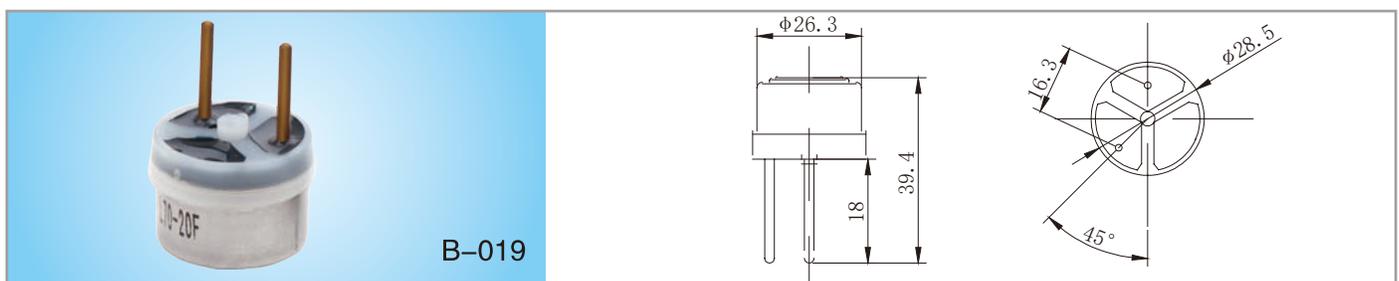
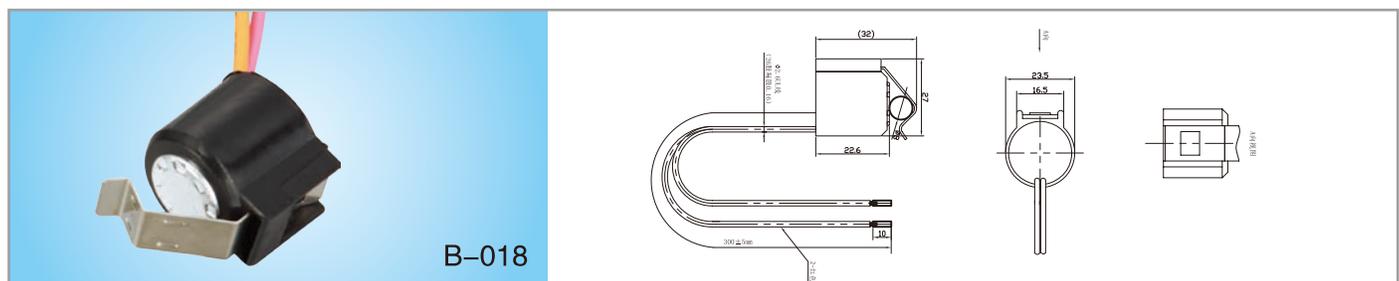
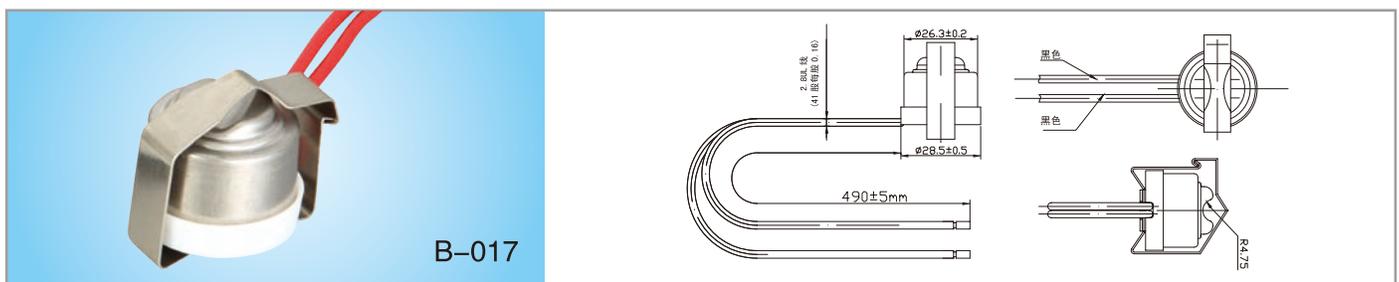
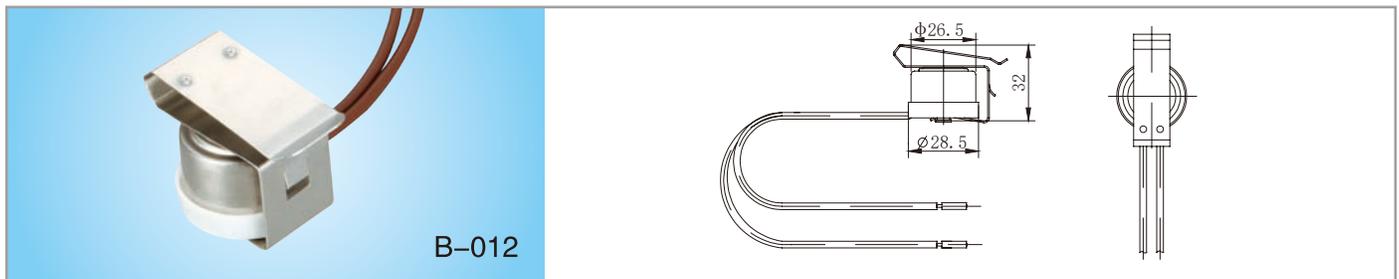
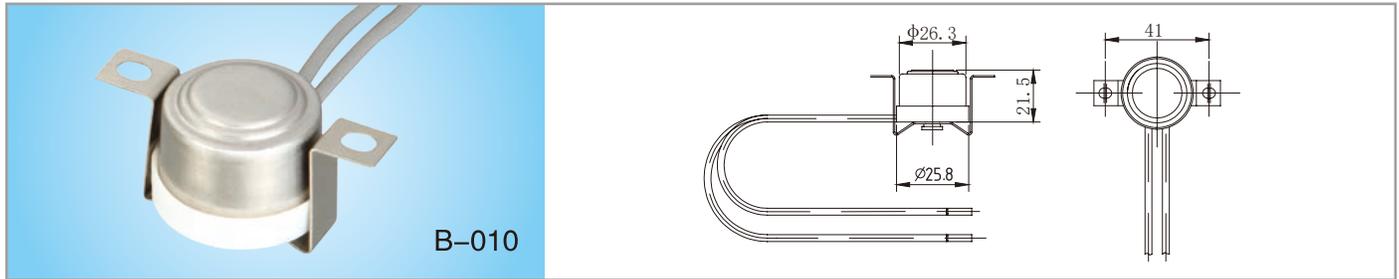
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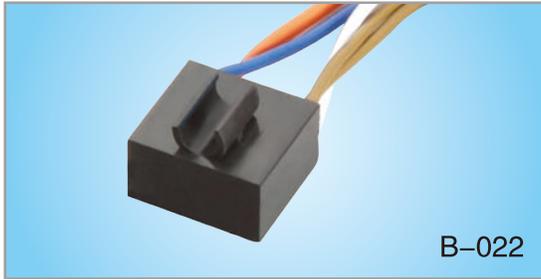




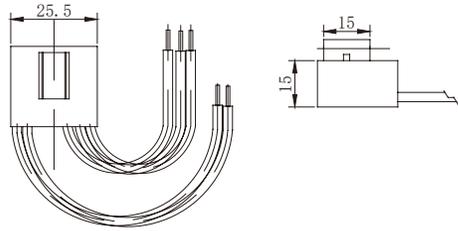
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 <p>B-008</p>	

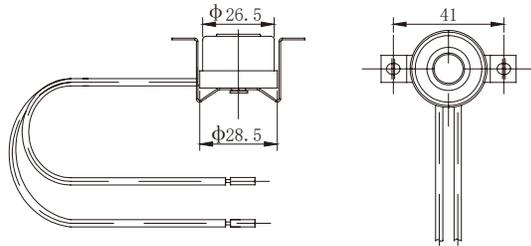




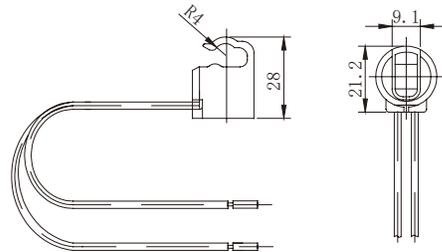
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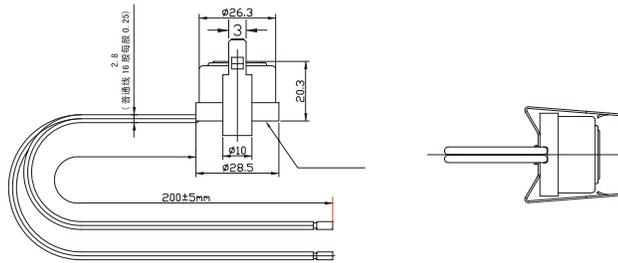
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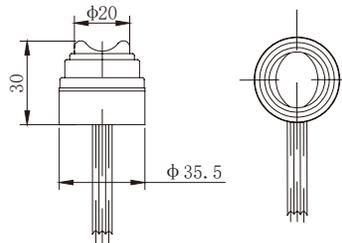
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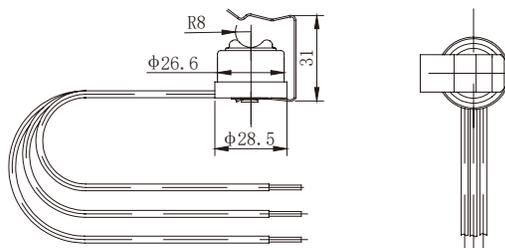
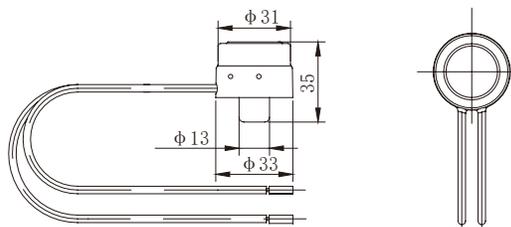
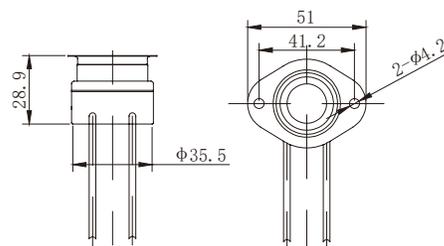
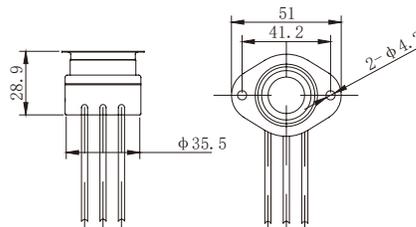


B-025



B-301





KSD301C 3/4" (19mm) Series Temperature Controls

Specifications

1. Electrical Ratings: AC125V 5A 15A, AC250V 5A 10A 16A
2. OFF Temperature Range:
3. Bakelite: Automatic -30°C ~ 150°C; 30°C ~ 150°C
4. Tolerance: Automatic: Min ± 3°C Standard ± 5°C, Manual: Min ± 4°C Standard ± 5°C
5. A variety of mounting flanges are available to meet the insulation requirements.

Similar to TOD Series 60T

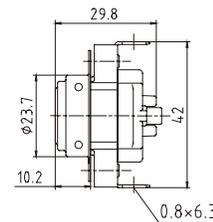
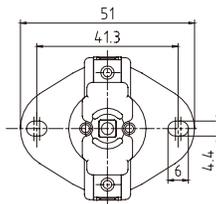
Applications:

Air Conditioners, heating and ventilating equipment, vending machines, dryers, unit heaters, tabletop appliances, etc.

Approvals: UL CQC TUV VDE CUL



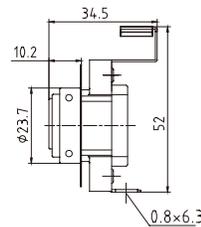
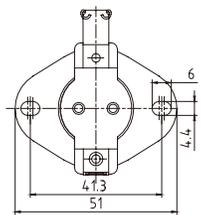
C-001R



Material:
a. Bakelite
Load:
250V / 25A
Switch Action:
SPST



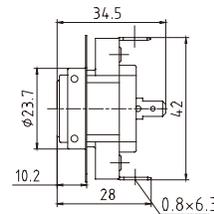
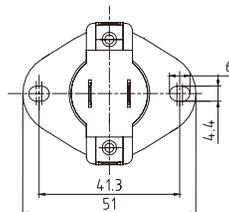
C-002



Material:
a. Bakelite
Load:
250V / 25A 600V / 15A
Switch Action:
SPST

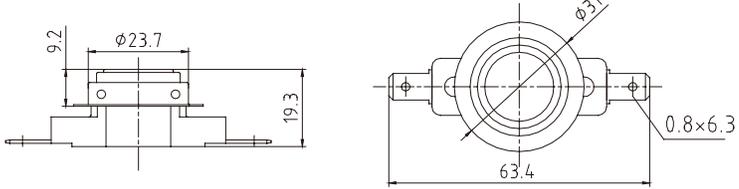
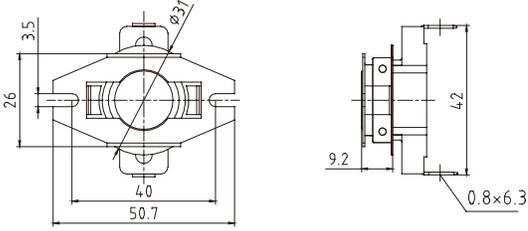
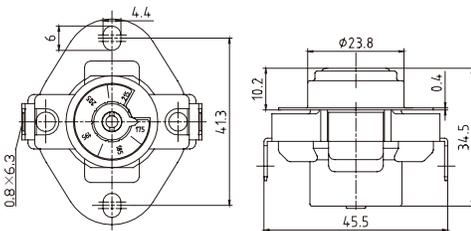
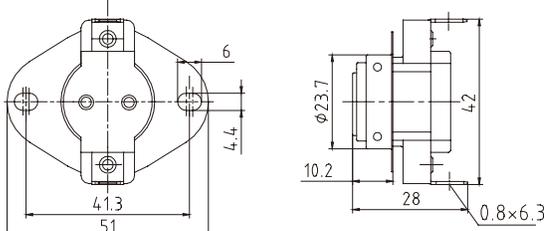
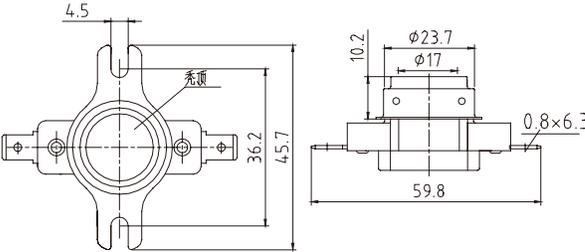


C-003



Material:
a. Bakelite
Load:
250V / 25A 600V / 15A
Switch Action:
SPST

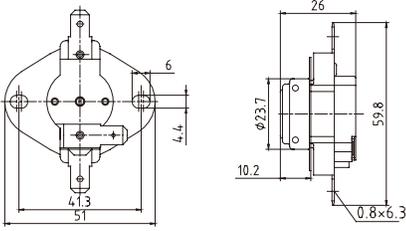


 <p>C-004</p>	 <p>Material: a. Bakelite Load: 250V / 25A 600V / 15A Switch Action: SPST</p>
 <p>C-004A</p>	 <p>Material: a. Bakelite Load: 250V / 25A Switch Action: SPST</p>
 <p>C-005</p>	 <p>Material: a. Bakelite Load: 250V / 25A Switch Action: SPST</p>
 <p>C-007</p>	 <p>Material: a. Bakelite Load: 250V / 25A 600V / 15A Switch Action: SPST</p>
 <p>C-007S</p>	 <p>Material: a. Bakelite Load: 250V / 25A 600V / 15A Switch Action: SPST</p>





C-008



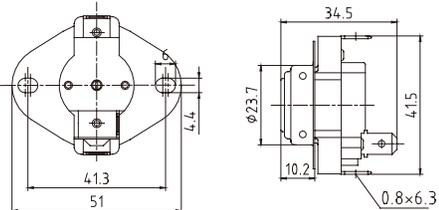
Material:
a. Bakelite

Load:
250V / 25A 600V / 15A

Switch Action:
SPDT



C-008B**C-008C**



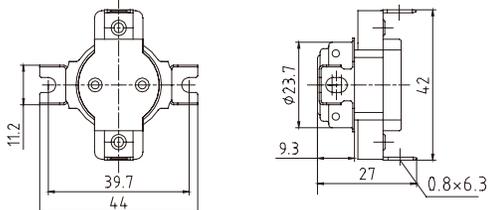
Material:
a. Bakelite

Load:
250V / 25A 600V / 15A

Switch Action:
SPDT



C-009**C-009B**



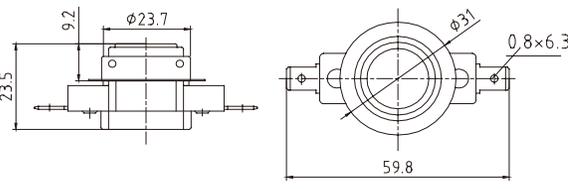
Material:
a. Bakelite

Load:
250V / 25A 600V / 15A

Switch Action:
SPST



C-011



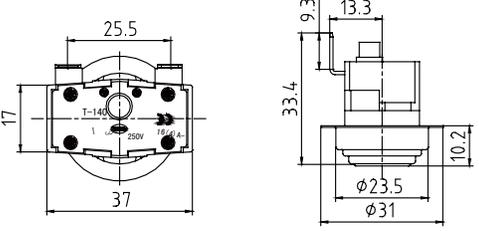
Material:
a. Bakelite, b. Ceramic

Load:
250V / 25A 600V / 15A

Switch Action:
SPST



C-013R**C-013**



Material:
a. Bakelite

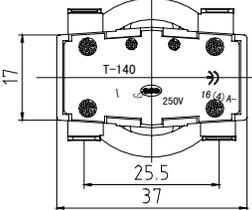
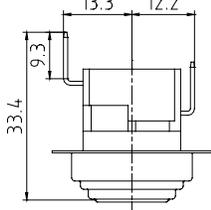
Load:
250V / 25A

Switch Action:
SPST





C-014(4Pin)

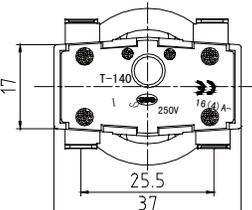
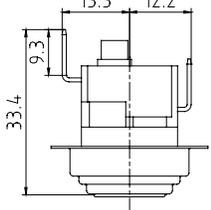
Material:
a. Bakelite

Load:
250V / 16A

Switch Action:
SPST DPST



C-014R(4Pin)

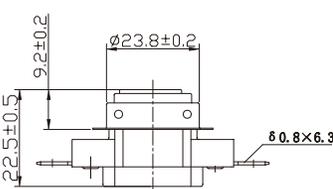
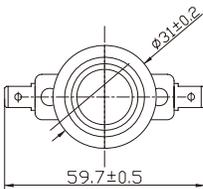
Material:
a. Bakelite

Load:
250V / 16A

Switch Action:
SPST DPST



C-017

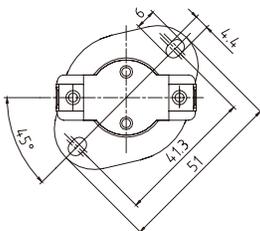
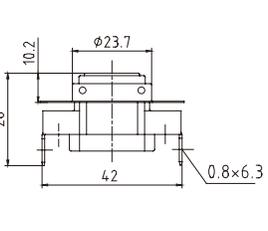
Material:
a. Bakelite b. Ceramic

Load:
250V / 25A 600V / 15A

Switch Action:
SPST



C-018

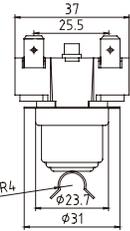
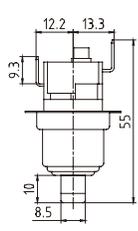
Material:
a. Bakelite b. Ceramic

Load:
250V / 25A 600V / 15A

Switch Action:
SPST



C-021R

Material:
a. Bakelite

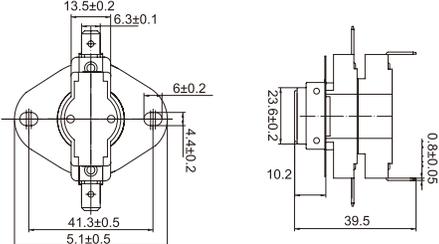
Load:
250V / 16A

Switch Action:
SPST DPST





C-022



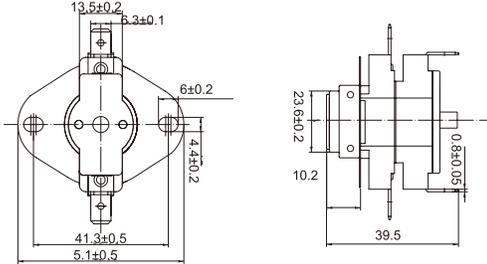
Material:
a. Bakelite

Load:
250V / 25A

Switch Action:
DPST 2SPST



C-022R



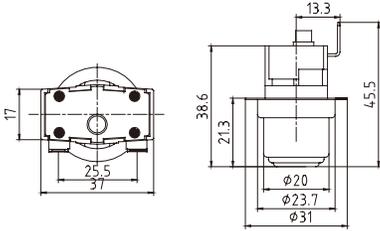
Material:
a. Bakelite

Load:
250V / 25A

Switch Action:
DPST 2SPST



C-023R



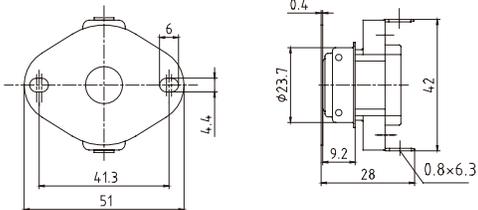
Material:
a. Bakelite

Load:
250V / 16A

Switch Action:
SPST



C-025



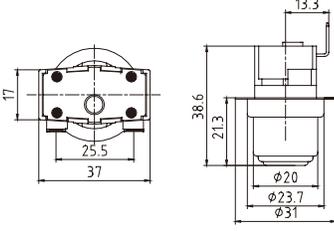
Material:
a. Bakelite b. Ceramic

Load:
250V / 25A 600V / 15A

Switch Action:
SPST



C-027

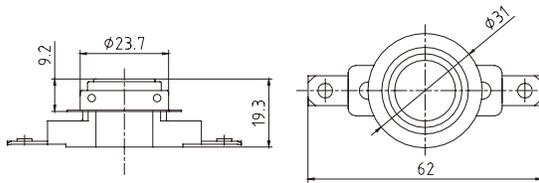


Material:
a. Bakelite

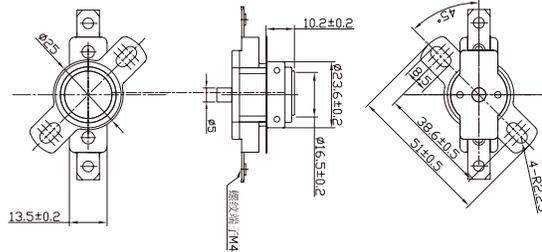
Load:
250V / 16A

Switch Action:
SPST

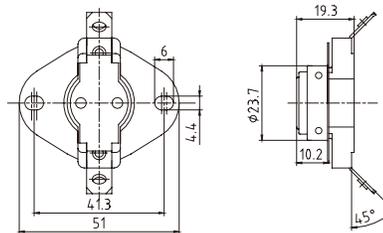
Terminal:
Nickell plated Brass



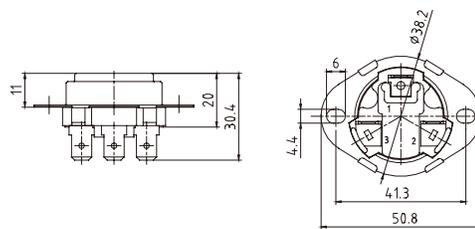
Material:
a. Bakelite
Load:
250V / 45A
Switch Action:
SPST



Material:
a. Bakelite
Load:
250V / 45A
Switch Action:
SPST



Material:
a. Bakelite
Load:
250V / 45A
Switch Action:
SPST



Material:
a. Bakelite
Load:
250V / 25A
Switch Action:
SPST

KSD301C Heat Sequencers - Time Delays

Features

Controls the delayed operation of heating elements or fans in electric furnaces and heat pumps

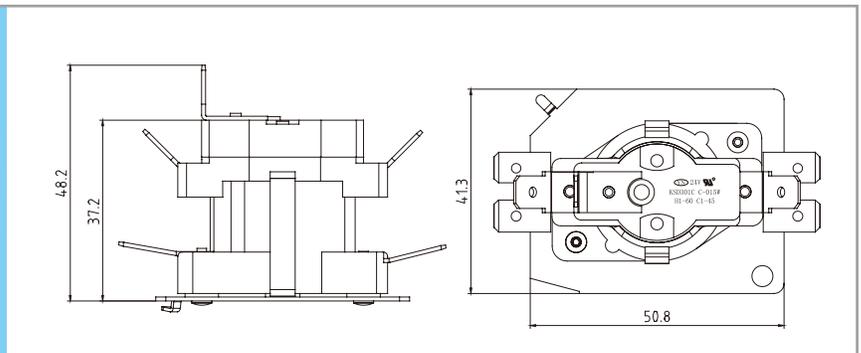
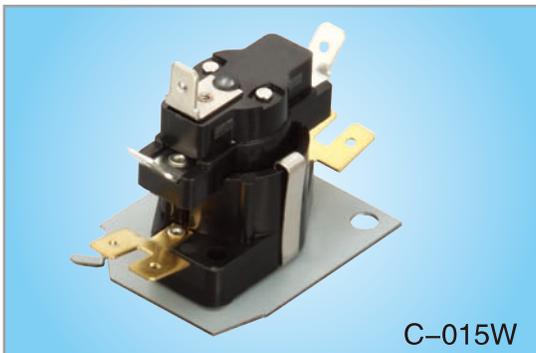
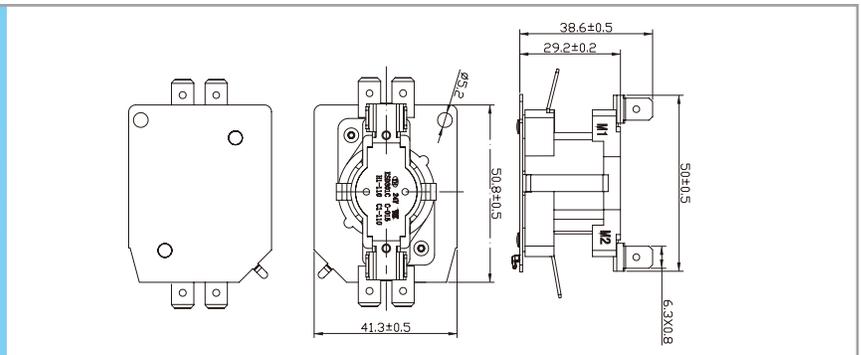
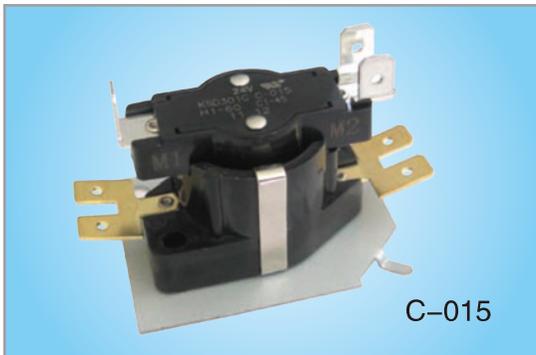
Combines a solid-state positive temperature coefficient (PTC) heater, Option of single, double, or three independent timing contacts.

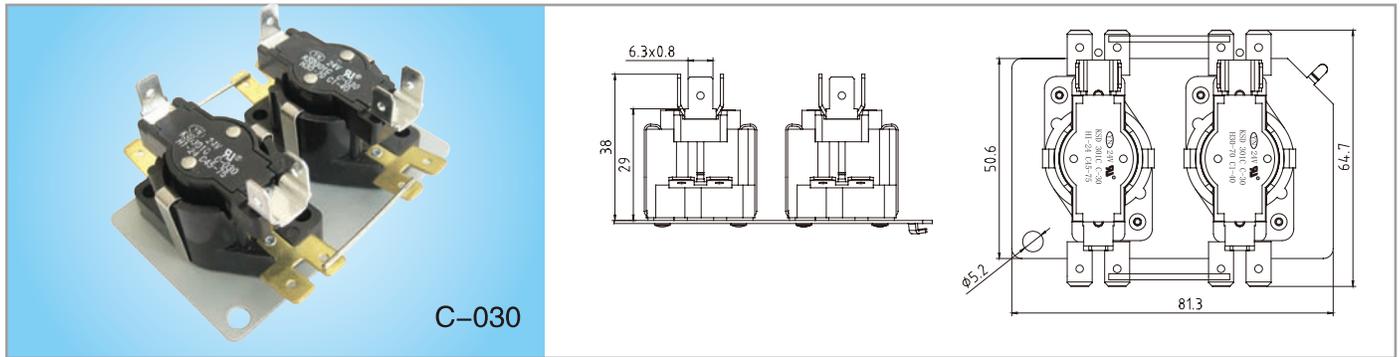
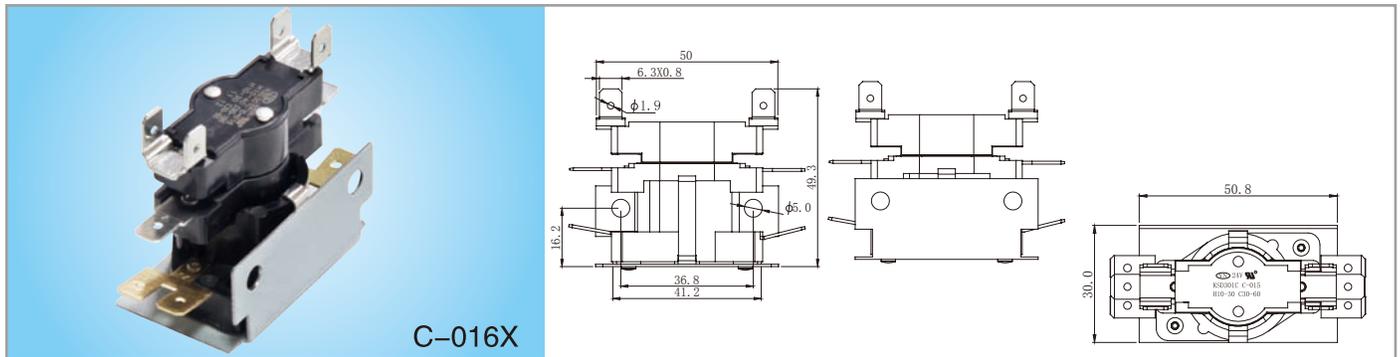
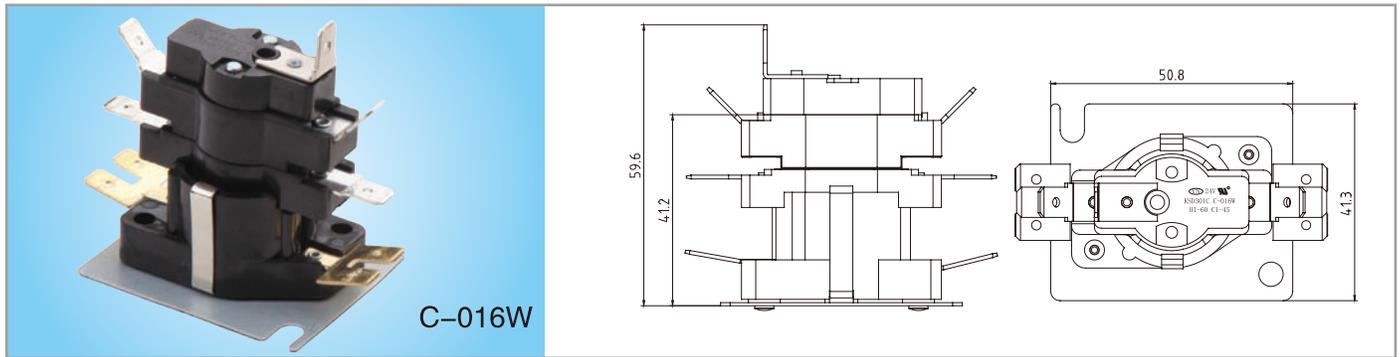
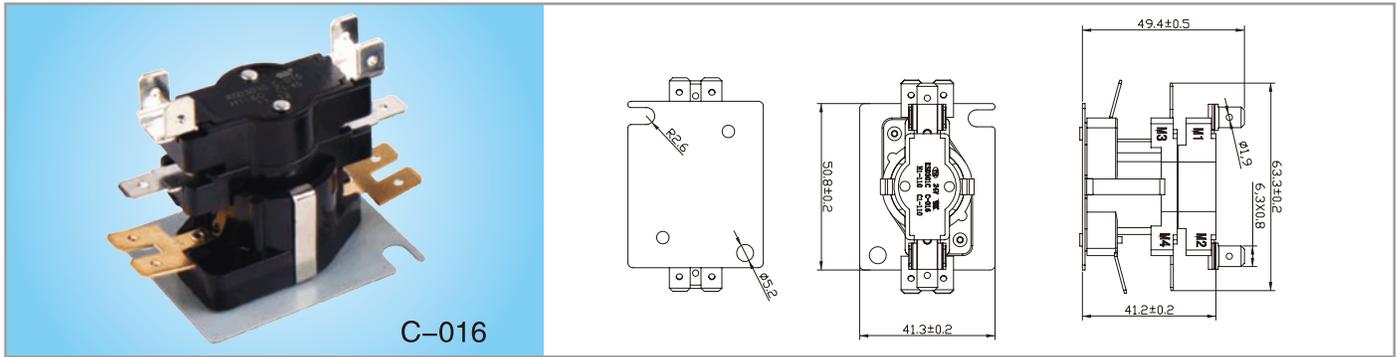
UL and CUL approval

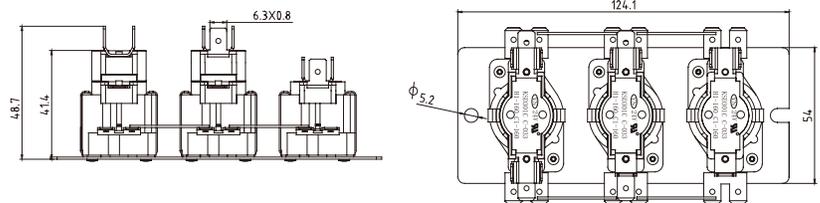
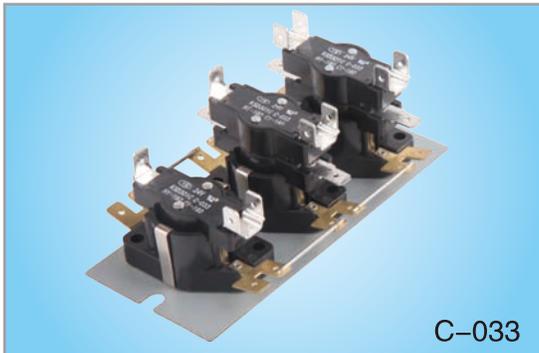
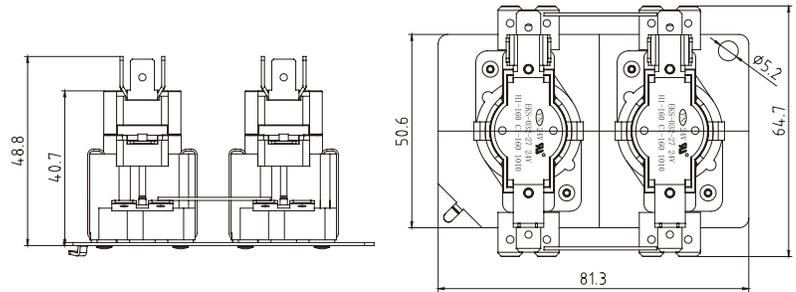
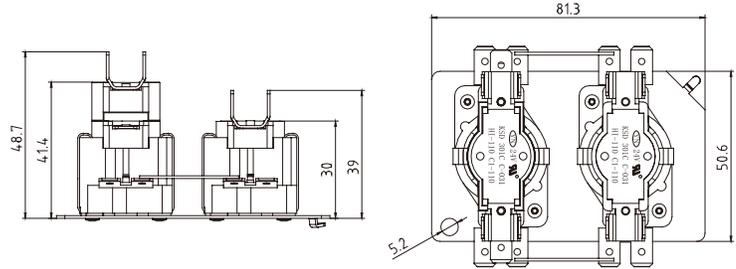
Applications

Electric Furnaces, Heat Pumps, Gas Furnaces, etc.

Approvals: UL CUL







KSD301C Series Temperature Sensing Controls

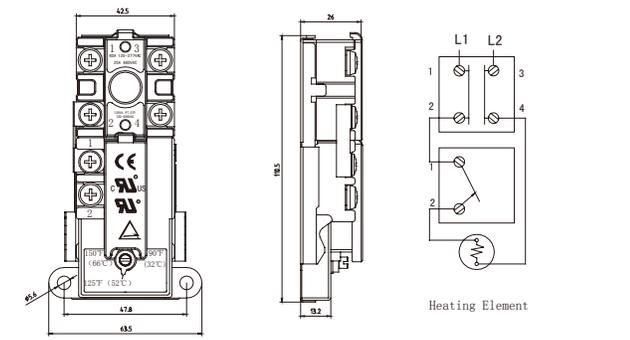
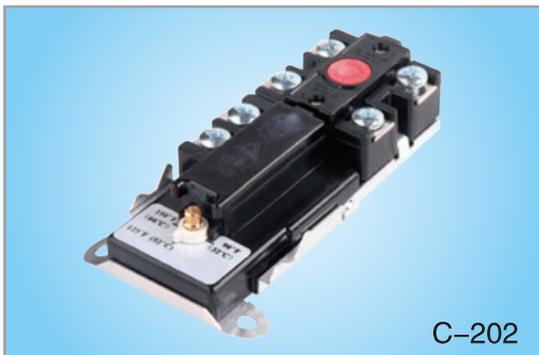
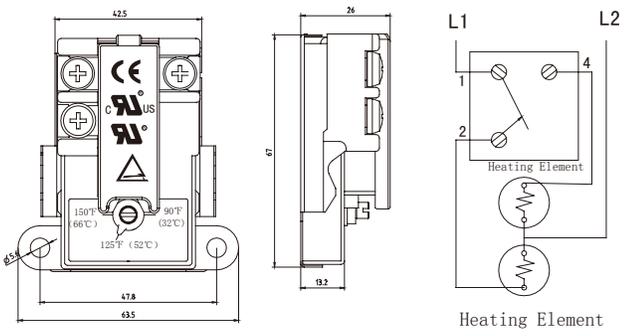
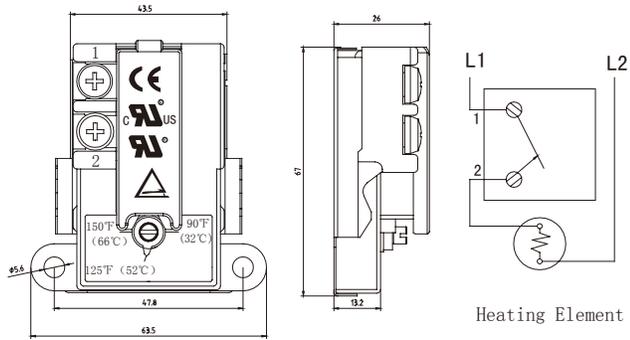
UNIVERSAL REPLACEMENTS FOR ELECTRIC WATER HEATER THERMOSTATS

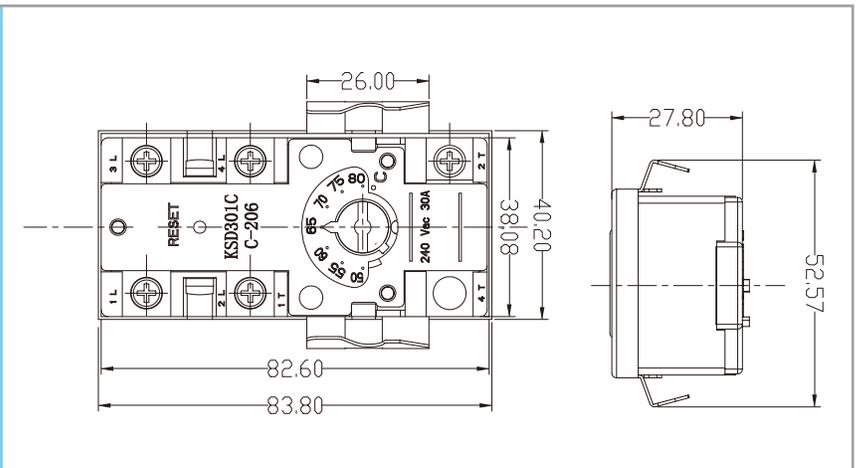
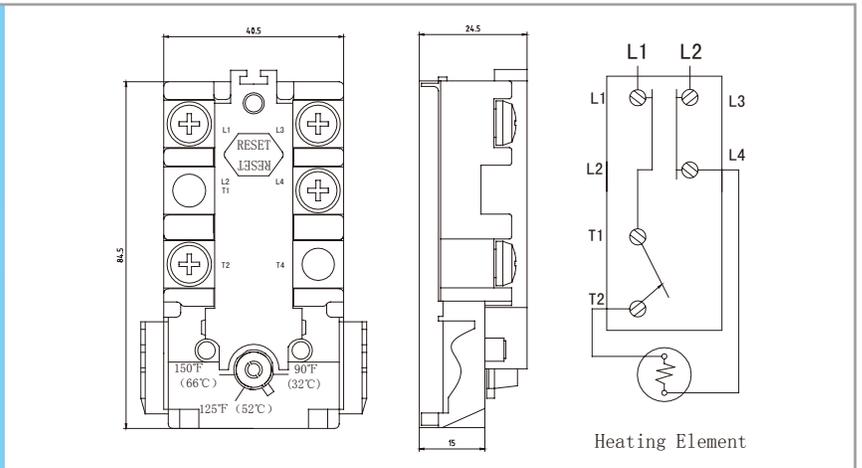
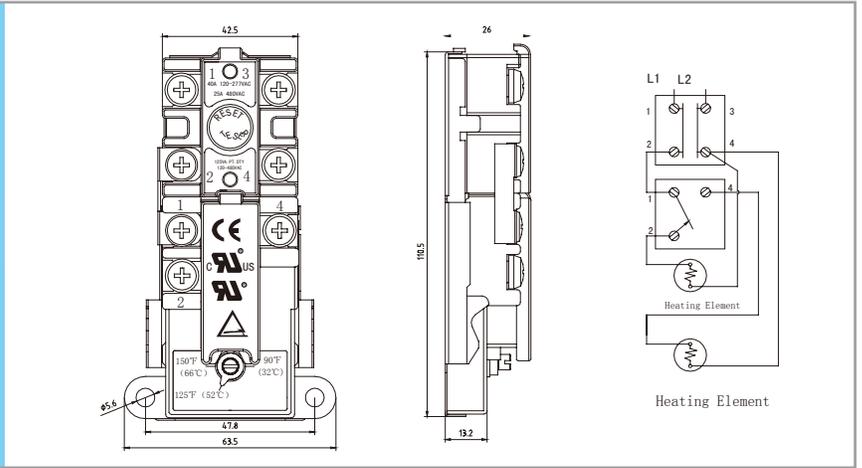
Panel Mount Temperature Sensing Controls

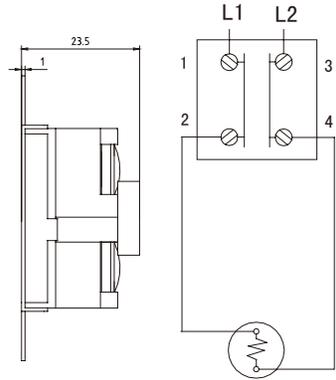
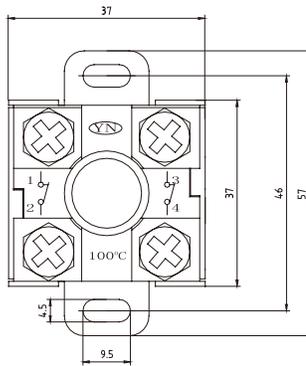
Features

1. High Electrical capacity
2. Snap-Action cont
3. Long life-proven reliability
4. Adjustable control or manual reset sty

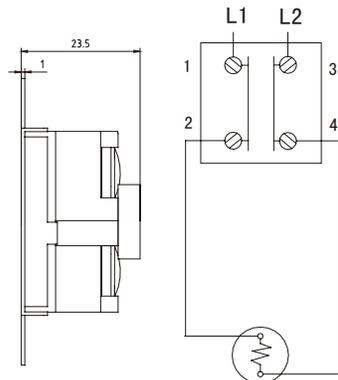
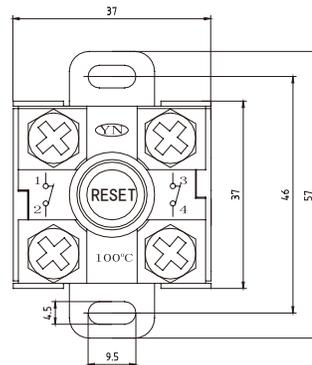
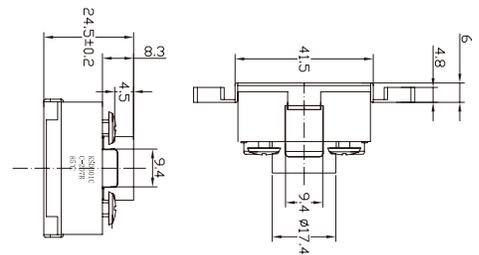
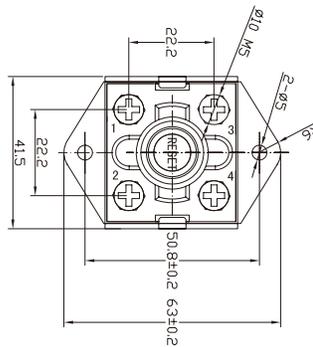
Approval: UL TUV CUL CE







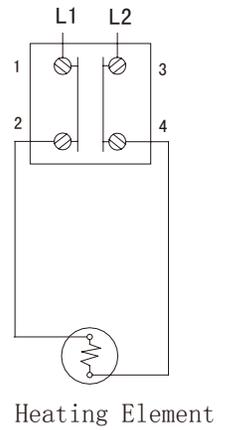
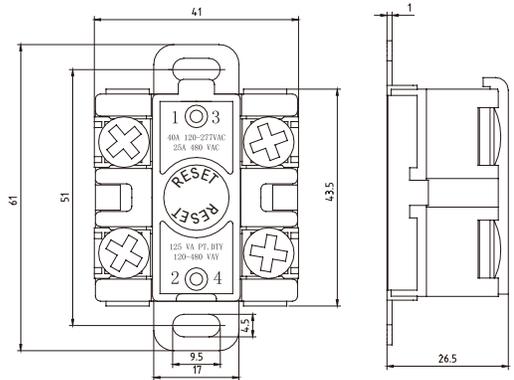
Heating Element



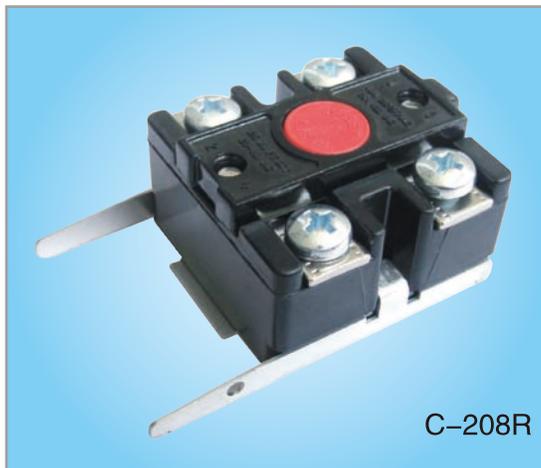
Heating Element



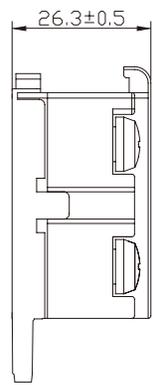
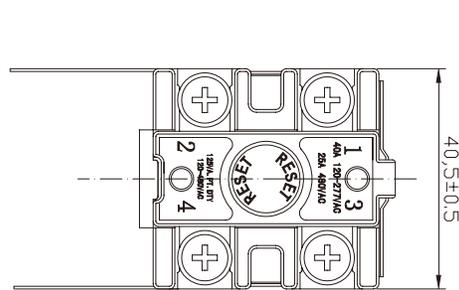
C-208



Heating Element



C-208R



ZETTLER GROUP



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Aliso Viejo, CA 92656
TEL: 949-360-5840
FAX: 949-360-5839
E-Mail: sales@zettlercontrols.com
WEB: www.zettlercontrols.com



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Fax: +86 574 88005132
WEB: www.zettlercontrolscn.com



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Other Zettler Group Companies:

AMERICAN ZETTLER, INC - Relays www.azettler.com
ZETTLER MAGNETICS - Transformers www.zettlermagnetics.com
AZ DISPLAYS - LCD'S www.azdisplays.com

THERMOSTAT CAPABILITIES

CORPORATE OVERVIEW



Through traditional craftsmanship and engineering excellence, the Zettler name has symbolized quality and reliability in relays for over 100 years in demanding applications such as telecommunications systems, computer peripherals, office automation equipment, home appliances, security systems, test and measurement devices, and industrial controls.

Zettler Controls brings that same commitment to the HVAC/R and appliance markets with an offering of relays, thermostats, transformers, contactors, heat sequencers, temperature sensors, and fan centers. This group of products is used by the HVAC/R and appliance industries in both residential and commercial applications.

We welcome application challenges, stock over one million units, deliver quick turnaround, and excel at meeting the service level our customers require. Our unique combination of 100% quality testing, first-class sales and technical support, cost-effective product design, and outstanding product availability offer a highly dependable and responsive resource for fulfilling your component needs.

You can count on Zettler Controls, Inc.

Series: KSD301A

- Features:**
- SPST
 - Specs: Max 16A at 120/250/277VAC
 - Min. Diff. Temperature: 8°C
 - Temperature Range: 0 to 250°C Max
 - Automatic reset (180°C Max) & Manual rest (180°C Max)
 - One-shot (250°C Max)
 - Tolerances: Standard $\leq 180^\circ\text{C} \pm 5^\circ\text{C}$
 $\geq 180^\circ\text{C} \pm 7.5^\circ\text{C} / \geq 220^\circ\text{C} \pm 10^\circ\text{C}$

Applications: Appliances & HVAC/R
Comparison: Similar to TOD series 36T
Safety Approvals: UL, TUV, VDE

1/2" (12.7mm) SNAP ACTION THERMOSTATS



Series: KSD301A2

- Features:**
- SPST
 - Specs: Max 16A at 120/240/277VAC
 - Min. Diff. Temperature: 8°C
 - Temperature Range: 0 to 230°C Max
 - Automatic reset (180°C Max) & Manual rest
 - One-shot (230°C Max)
 - Tolerances: Standard $\leq 180^\circ\text{C} \pm 5^\circ\text{C}$
 $\geq 180^\circ\text{C} \pm 7.5^\circ\text{C} / \geq 220^\circ\text{C} \pm 10^\circ\text{C}$

Applications: Appliances
Comparison: Similar to INTERCONTROL series
Safety Approvals: UL, TUV

SNAP ACTION THERMOSTATS



Series: KSD301C C-015

- Features:**
- SPST, SPDT, & DPST
 - Solid State PTC: 24/120/240VAC
 - Time: per customer requirements
 - Specs: ON 1-110sec. & OFF, 1-170sec.
 - Positive Temperature Coefficient (PTC) heater

Applications: HVAC/R
Comparison: Similar to TOD series 12/14/15S
Safety Approvals: UL

HEAT SEQUENCERS



Series: KSD301C

- Features:**
- SPST, SPDT & DPST
 - Specs: 15/25A at 120/250/277/400/600VAC
 - Min. Diff. Temperature: 8°C
 - Temperature Range: 0 to 150°C Max
 - Automatic reset & Manual reset
 - One-shot
 - Tolerances: Standard $\pm 5^\circ\text{C}$

Applications: Appliances & HVAC/R
Comparison: Similar to TOD series 60T
Safety Approvals: UL, TUV

3/4" (19mm) HIGH CURRENT THERMOSTATS



DEFROST THERMOSTATS



Series: KSD301B

- Features:**
- SPST
 - Specs: 5 /10/25A at 120/240/277VAC
 - Min. Diff. Temperature: 8°C T emp
 - Range: 0 to 105°C Max
 - Automatic reset & Manual reset
 - Tolerances: Standard $\pm 5^\circ\text{C}$

Applications: Appliances & HVAC/R
Comparison: Similar to TOD series 37T
Safety Approvals: UL

Series: KSD301C C-200

- Features:**
- SPST, SPDT, & DPST
 - Specs: Max 40A at 120/125/240/250VAC
 - Min. Diff. Temperature: 3~9°C & 9~14°C (Max 40°C)
 - Temperature Range: Adjustable per customer request
 - Automatic reset & Manual reset
 - Tolerances: Standard $\pm 5^\circ\text{C}$

Applications: Appliances (Water heaters)
Comparison: Similar to TOD series 59/66T/89T
Safety Approvals: UL, TUV

WATER HEATER THERMOSTATS



PTC POWER-OFF RESET THERMOSTATS



Series: KSD301A PTC

- Features:**
- SPST
 - Specs: 16A at 125/250VAC
 - Min. Diff. Temperature: 8°C
 - Temperature Range: 0 to 250°C Max
 - Automatic reset
 - Tolerances: Standard $\pm 5^\circ\text{C}$
 - Rating: 100,000 cycles

Applications: HVAC/R (Heaters)
Comparison: Similar to MICROTTECH series PTC
Safety Approvals: UL