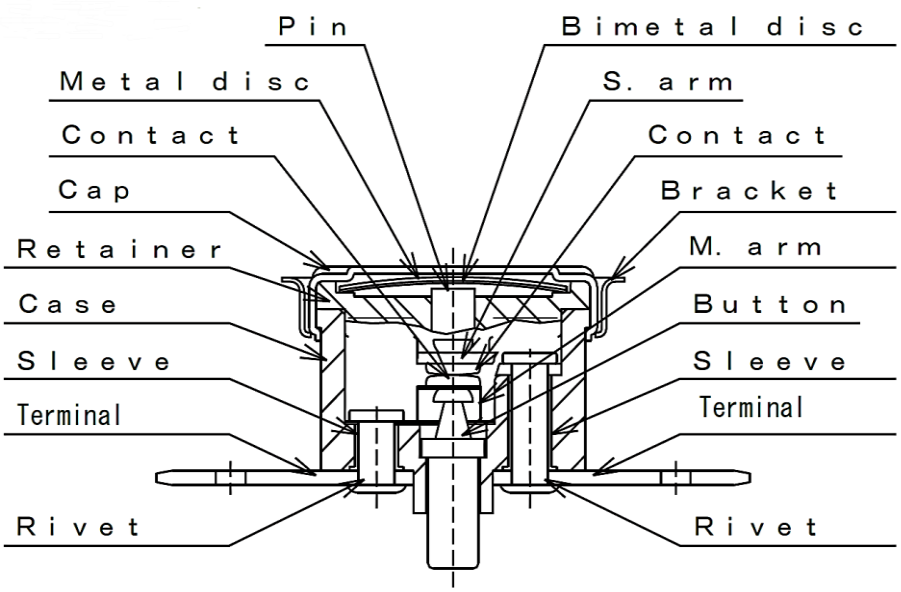
■ Description

KSD301 series snap-action bimetal thermostat is a kind of miniature hermetically sealed bimetal thermostat (1/2" disc). It is of single-pole single-throw structure and works under resistive load. KSD301 bimetal thermo- stat is in wide use in a great variety of compact type home appliances with automatic reset or manual reset to provide temperature control or temperature protection.

■ Features

- Rated Current: 5A/10A/16A (Resistive)
- Reset Type: Automatic/Manual
- Max OT: Resin:180° C/ Ceramic:220° C
- Resistance Between Terminals: Below 50m Ω
- Insulation Resistance: With a DC 500V megger, borne DC 500V, the tested value is over 10m Ω
- Class of Temperature Characteristics:
  Normal Type/Normal Close: OFF temperature higher than ON temperature
  K Type/Normal Open: ON temperature higher than OFF temperature
  One-shot type: The thermostat switches on at room temperature and it won't be able to reset after switching off
  Manual Reset
- Maximum Ambient Temp: ambient temperature
  Resin: 205° C (Long period) /235° C (Less than 15 min)
  Ceramic: 280° C (Long period) / 310° C (Less than 15 min)
- Certifications: UL/CQC/TUV

■ Structure Photograph



■ Applications

- Coffee maker
- Toaster
- Microwave oven
- Heating
- Portable refrigerator
- Water dispenser
- Electric pad
- Portable freezer

■ Code System

KSD301 -X /XXXX- X

Code for special requirement/Code of sub-series
Ex: "G" means KSD301-G Series and "V" means KSD301-V Series

Code for temperature spec type (letter plus number)
Blank: Temperature differential of 17°C (OFF higher than ON)
X*: Temperature differential <17°C (OFF higher than ON)
S*: Temperature differential >17°C (OFF higher than ON)
K*: Stands for the type which ON temp higher than OFF temp
R*: Stands for KSD301-R (manual reset type)

Terminal code: double figures are adopted to denote the terminal type

Code for cover: a single or double digit is adopted to denote the type of cover

Current rating in number

Code for temperature requirement in number; 1/10 of nominal operating temp

■ Installations

1. Method of earth: By means of the metal cup of thermostat connected in the earthing metal part.
2. The thermostat should work in environment with humidity not higher than 90%, free of caustic, flammable gas and conducting dust.
3. When the thermostat is used to sense the temperature of solid items, its cover should be clung to the heating part of such items. Meanwhile, heat-conducting silicon grease, or other heat media of similar nature, should be applied to the cover's surface.
4. If the thermostat is used to sense the temperature of liquids or steam, it is strongly recommended to adopt a version with stainless-steeled cup. Moreover, cautious measures should be taken to prevent liquids getting into/onto the thermo- stat's insulation parts.
5. The top of the cup must not be pressed to sink, so as to avoid adverse effect on the thermostat's temperature sensitivity or its other functions.
6. Liquids must be kept out of the thermostat's inner part! The base must avoid any force that could lead to crack; it should be kept clear and away from the pollution of electric substance to prevent insulation weakening that leads to short-circuited damages.
7. The terminals should be bent, or else, the reliability of electric connection will be influenced.

	Tmax. Of various OT						
	OT≤50	OT:51~100	OT:101~145	OT:146~160	OT:161~190	OT:191~230	OT:231~280
KSD301 KSD301-V KSD301-R	**100(L)**	**140(L)**	**185(L)**	**205(L)**		—	—
KSD301-G KSD301-R-G	**100(L)**	**185(L)**	**205(L)**		**245(L)**	**280(L)**	**320(L)**
KSD301-G4 For coffer maker)	—	—	**220(L) (≥111□)**		—	—	—

L: Long period S: Less than 15 min

Range of OT.	Min. Diff.			
	Working current ≤4A	Working current 4.1~8A	Working current 8.1~12A	Working current >12A
≤100°C	6°C	8°C	10°C	12°C
101~145°C	10°C	12°C	14°C	17°C
146~160°C	13°C	15°C	17°C	20°C
161~180°C	16°C	18°C	20°C	25°C
181~200°C	20°C	22°C	25°C	30°C
201~230°C	25°C	27°C	30°C	35°C
>230°C	30°C	32°C	35°C	40°C

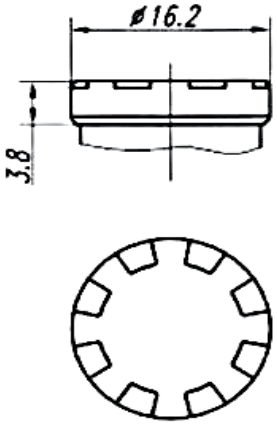
Tolerance of OFF Temperature

Range of OT	Common Diff.	Limit of tolerance	
		Auto-reset	Manual reset
≤100°C	±3.0°C	±2.0°C	±2.5°C
101~145°C	±3.5°C	±2.5°C	±3.0°C
146~160°C	±4.0°C	±3.0°C	±3.5°C
161~180°C	±4.5°C	±3.5°C	±4.0°C
181~200°C	±5.0°C	±4.0°C	±4.5°C
201~230°C	±5.5°C	±4.5°C	±5.0°C
>230°C	±6.0°C	±5.0°C	±5.5°C

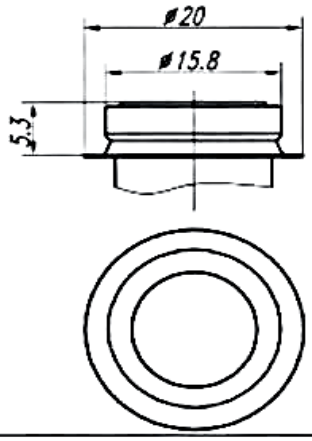
Range of Diff.	Range of OFF temp.	Common tolerance	Limit of the tolerance
≤7.5°C	≤100°C	±4°C	±3°C
7.6~15°C	≤100°C	±4.5°C	±3.5°C
	101~145°C	±5°C	±4°C
	146~160°C	±6°C	±5°C
15.1~30°C	≤100°C	±5°C	±4°C
	101~145°C	±6°C	±5°C
	146~160°C	±7°C	±6°C
	161~190°C	±9°C	±8°C
	191~230°C	±11°C	±10°C
30.1~45°C	≤100°C	±6.5°C	±5.5°C
	101~145°C	±7.5°C	±6.5°C
	146~160°C	±8.5°C	±7.5°C
	161~190°C	±10.5°C	±9.5°C
	191~230°C	±12.5°C	±11.5°C
45.1~60°C	≤100°C	±8°C	±7°C
	101~145°C	±9°C	±8°C
	146~160°C	±10°C	±9°C
	161~190°C	±12°C	±11°C
	191~230°C	±14°C	±13°C
60.1~75°C	≤100°C	±9.5°C	±8.5°C
	101~145°C	±10.5°C	±9.5°C
	146~160°C	±11.5°C	±10.5°C
	161~190°C	±12°C	±11°C
	191~230°C	±14°C	±13°C
75.1~90°C	≤100°C	±11°C	±10°C
	101~145°C	±12°C	±11°C
	146~160°C	±13°C	±12°C
	161~190°C	±15°C	±14°C
	191~230°C	±17°C	±16°C
90.1~105°C	≤100°C	±12.5°C	±11.5°C
	101~145°C	±13.5°C	±12.5°C

■ Type and Dimension of Cover and Terminals

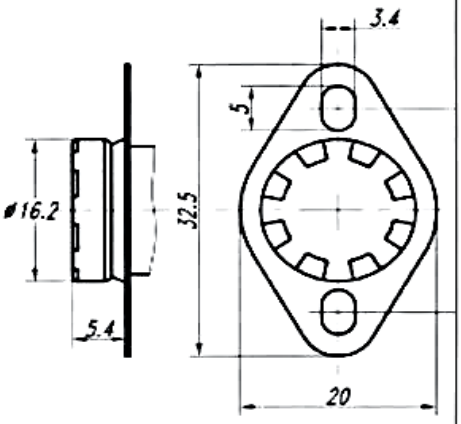
B. Aluminum



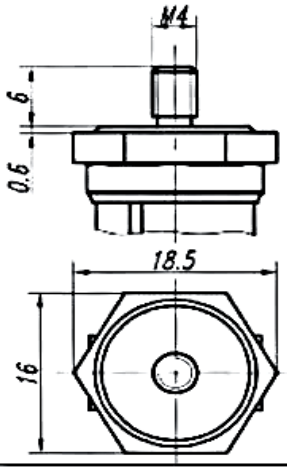
C. Stainless steel



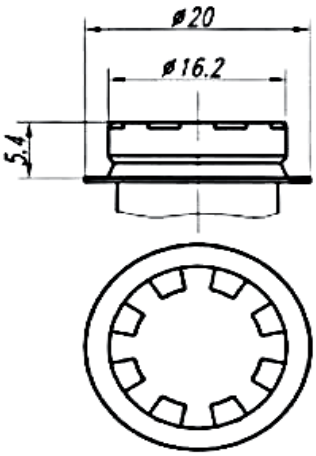
D. Aluminum



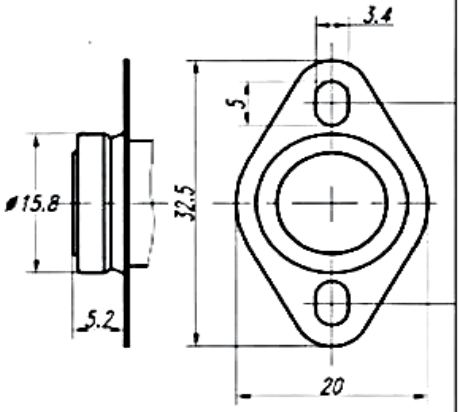
L*.
Brass or Aluminum



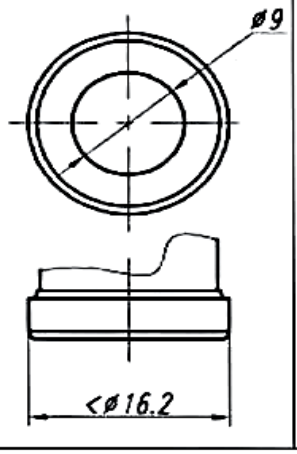
F. Aluminum



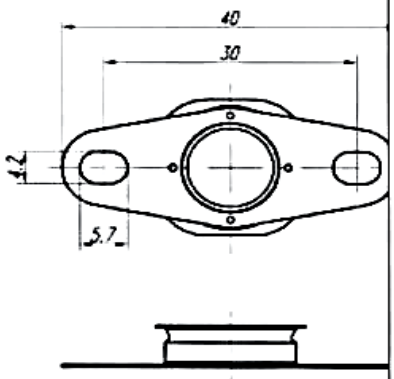
H. Stainless steel



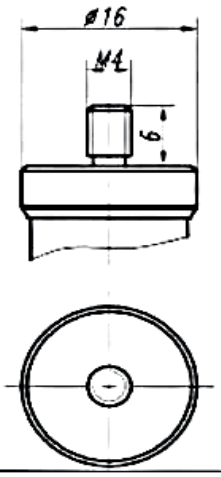
V.

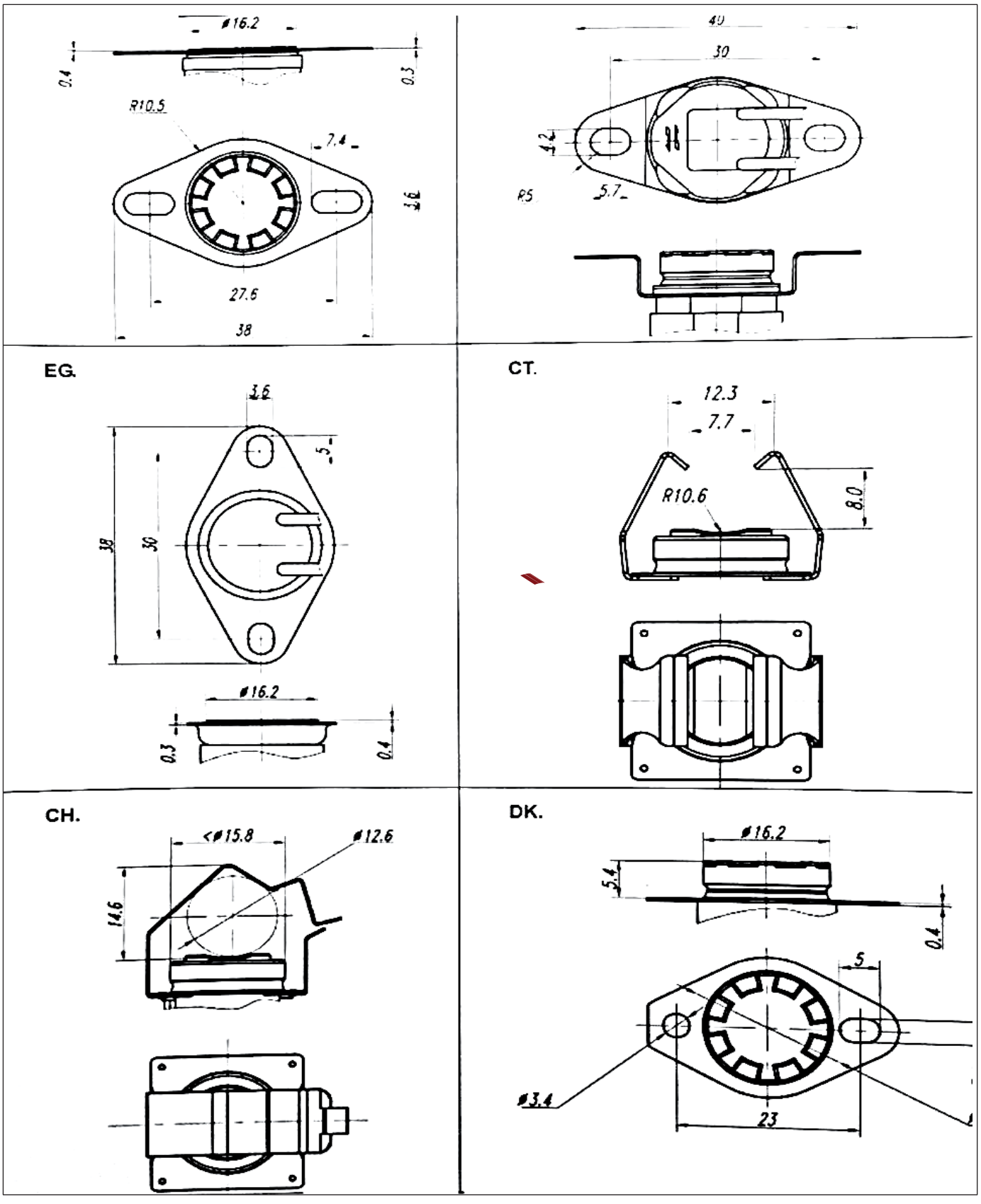


CP.



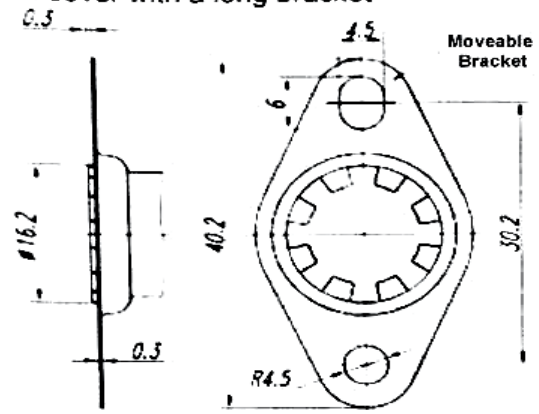
LE.



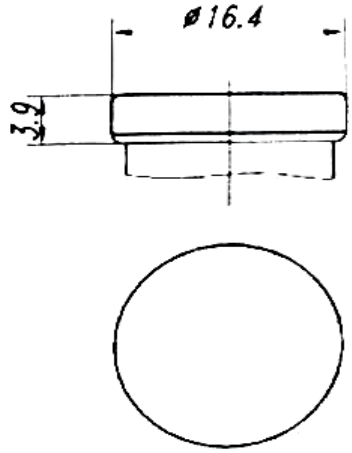

ø16.2
0.4
0.3
R10.5
7.4
3.6
27.6
38
40
30
4.2
R5
5.7
EG.
3.6
5
38
30
ø16.2
0.3
0.4
CT.
12.3
7.7
R10.6
8.0
CH.
<ø15.8
ø12.6
14.6
DK.
ø16.2
5.4
0.4
5
ø3.4
23

BF.

Al. cover with a long bracket

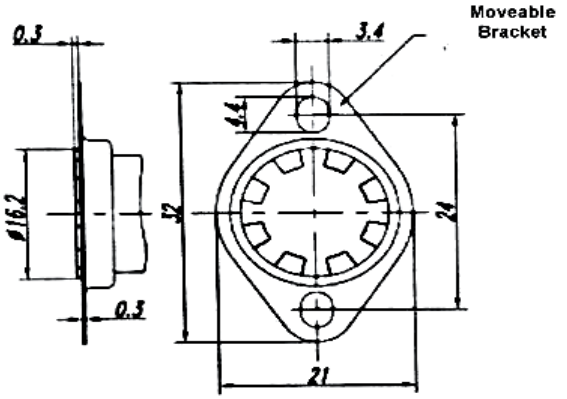


M. Al. cover



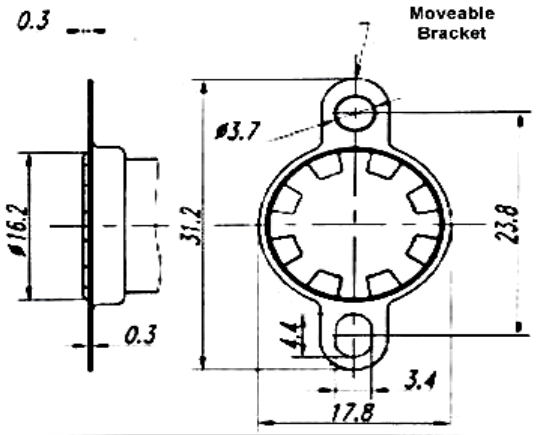
BL.

Al. cover with a bracket



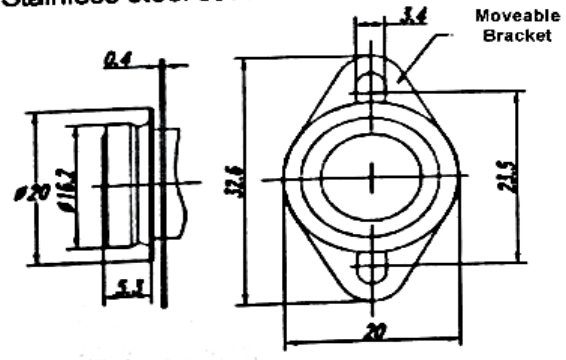
BT.

Al. cover with a small bracket



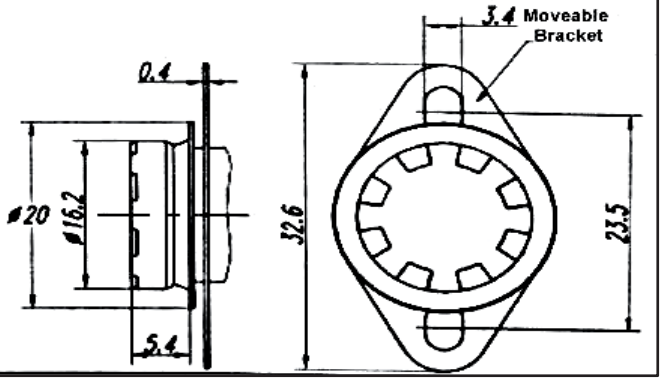
CE.

Stainless steel cover with a bracket



GE.

Al. cover with a bracket



1) Safety model number differs from the order number, part number, and shape number as per respective OEM/ODM factories.

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