

Temperature Sensor Coffee and Beverage Appliances



THINKING SENSOR

Coffee and Beverage Appliances

Feature

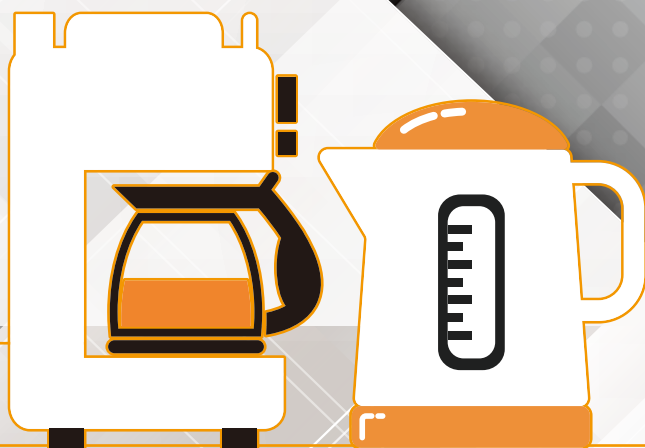
- ◆ THINKING sensor meets requirement of quick response time because it responds around 1 second.
- ◆ Sensor is highly temperature resistant.
- ◆ Screw-on type, metal case type, and plastic case type sensors are available, and the sensors are customizable.
- ◆ Various electrical characteristics are available for your choice.

Function

- ◆ For preventing beverage from being over-heating, temperature sensor is generally installed next to beverage heater to set temperature control points.
- ◆ Switch on/off of beverage warmer
- ◆ Liquid temperature detection controls temperature and produces more delicious beverage.
- ◆ The product is recommended for temperature control of any step of making beverage.

Application

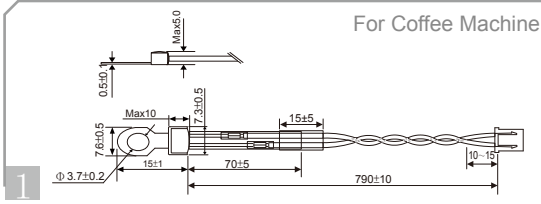
Coffee maker, milk warmer, electric water kettle, soy milk maker, hot water dispenser, beer maker, etc.



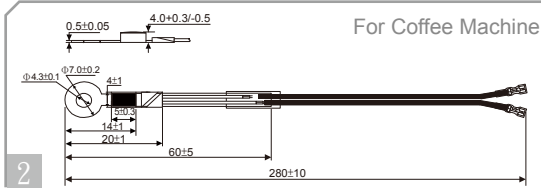
Screw-On Type

Feature: Structure of screw-on design is simple and can be installed easily, and the sensor can be installed on metallic surface for temperature detection.

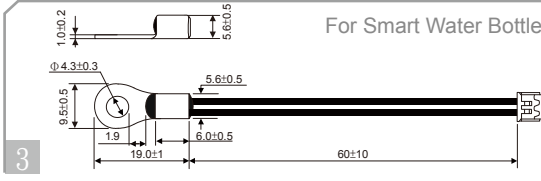
Application: The sensor is recommended for new type coffee maker or keeps beverage hot.



Component | Sensing top (terminal+NTC chip+epoxy)+tube+terminal+lead wire+terminal+housing
Moisture Resistance | 40°C 95% RH X 1000 hours
Operation Temperature | -20~+200°C
Insulation Test | DC 500V 100MΩ (Min)
R Value | R90°C=8.556KΩ±2% **B Value** | B100/200=4300K±3%
Thermal Time Constant | Around 3 seconds (heating board)
Hi-Pot Test | AC 1500V 10mA (Max)



Component | Sensing top (terminal+NTC chip+epoxy)+tube+terminal+lead wire+terminal+housing
Moisture Resistance | 40°C 95% RH X 1000 hours
Operation Temperature | -40~+200°C
Insulation Test | DC 500V 100MΩ (Min)
R Value | R100°C=3.3KΩ±2.5% **B Value** | B0/100=3970±2%
Thermal Time Constant | Around 10 seconds (heating board)
Hi-Pot Test | AC 1500V 10mA (Max)

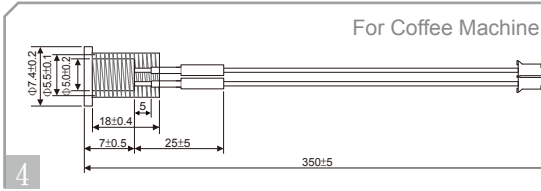


Component | Sensing top (terminal+NTC chip+epoxy)+lead wire+terminal+housing
Moisture Resistance | 40°C 95% RH X 1000 hours
Operation Temperature | -40~+105°C
Insulation Test | DC 500V 100MΩ (Min)
R Value | R25°C=10KΩ±1% **B Value** | B25/85=3975K±1%
Thermal Time Constant | Around 35 seconds (heating board)
Hi-Pot Test | AC 1500V 10mA (Max)

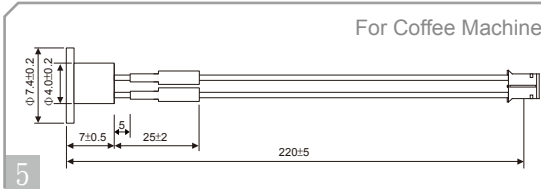
Metal Case Type

Feature: Material of metal case is the same as that of detected object for more accurate temperature detection, and the shortest response time is around 1 second. Sensor contacts beverage directly to detect temperature, and food grade metal is used for user's health.

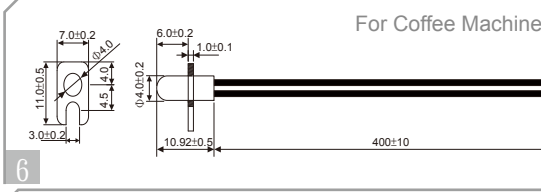
Application: The sensor is mostly adopted by coffee maker, soy milk maker, electric water heater, milk warmer, etc. In addition, the sensor is generally installed in either beverage warmer or hot water boiler, and it can be put into beverage for direct temperature detection.



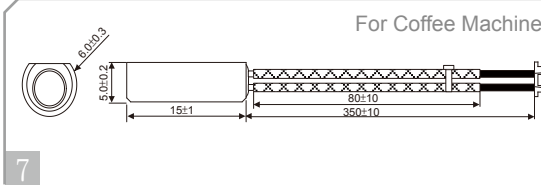
Component | Sensing top (NTC chip+aluminum cap)+spring+connector+tube+lead wire+terminal+housing
Moisture Resistance | 40°C 95% RH X 1000 hours
Operation Temperature | -30~+125°C
Insulation Test | DC 500V 100MΩ (Min)
R Value | R90°C=8.556KΩ±2% **B Value** | B100/200=4300K±3%
Thermal Time Constant | Around 5 seconds (heating board)
Hi-Pot Test | AC 1500V 10mA (Max)



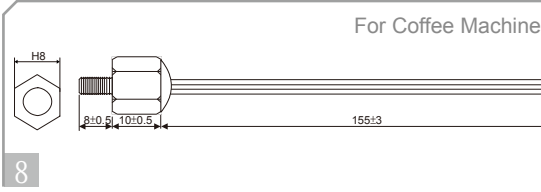
Component | Sensing top (NTC chip+aluminum cap)+connector+tube+lead wire+terminal+housing
Moisture Resistance | 40°C 95% RH X 1000 hours
Operation Temperature | -30~+125°C
Insulation Test | DC 500V 100MΩ (Min)
R Value | R90°C=8.556KΩ±2% **B Value** | B100/200=4300K±3%
Thermal Time Constant | Around 5 seconds (heating board)
Hi-Pot Test | AC 1500V 10mA (Max)



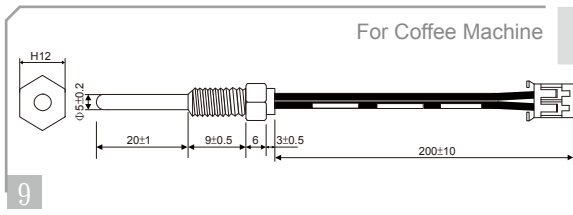
Component | Sensing top (NTC chip+stainless steel cap+holder)+lead wire
Moisture Resistance | 40°C 95% RH X 1000 hours
Operation Temperature | -40~+150°C
Insulation Test | DC 500V 100MΩ (Min)
R Value | R90°C=7.558KΩ±1% **B Value** | B25/50=4025 K±1%
Thermal Time Constant | Around 10 seconds (in water)
Hi-Pot Test | AC 1500V 10mA (Max)



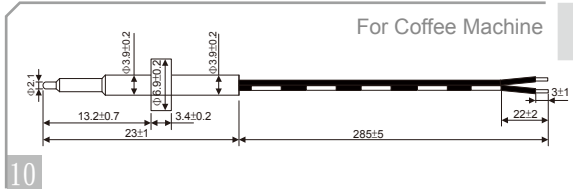
Component | Sensing top (NTC chip+aluminum cap)+lead wire+tube+tie+terminal+housing
Moisture Resistance | 40°C 95% RH X 1000 hours
Operation Temperature | -40~+300°C
Insulation Test | DC 500V 100MΩ (Min)
R Value | R150°C=3.161KΩ±3% **B Value** | B0/100=4537K±2%
Thermal Time Constant | Around 15 seconds (heating board)
Hi-Pot Test | AC 1500V 10mA (Max)



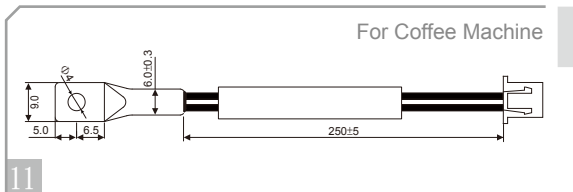
Component | Sensing top (NTC chip+brass screw cap)+lead wire+terminal+housing
Moisture Resistance | 40°C 95% RH X 1000 hours
Operation Temperature | -10~+200°C
Insulation Test | DC 500V 100MΩ (Min)
R Value | R100°C=6.183KΩ±2% **B Value** | B100/200=4300K±2%
Thermal Time Constant | Around 2 seconds (in water)
Hi-Pot Test | AC 1500V 10mA (Max)



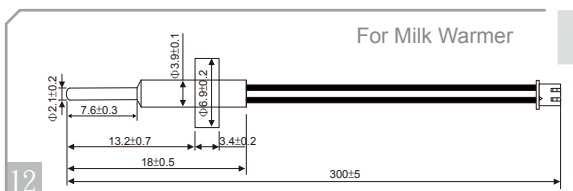
Component | Sensing top (NTC chip+stainless steel screw cap)
+lead wire+terminal+housing
Moisture Resistance | 40 °C 95% RH X 1000 hours
Operation Temperature | -20~+125°C
Insulation Test | DC 500V 100MΩ(Min)
R Value | R25°C=10KΩ±1% **B Value** | B25/85=3435K±1%
Thermal Time Constant | Around 15 seconds (in water)
Hi-Pot Test | AC 1500V 10mA (Max)



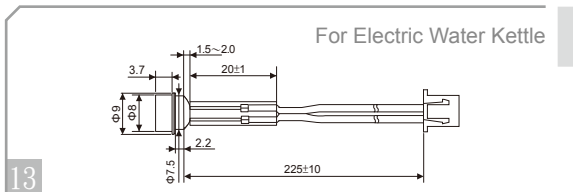
Component | Sensing top (NTC chip+316 stainless steel cap
+brass ring)+lead wire
Moisture Resistance | 40 °C 95% RH X 1000 hours
Operation Temperature | -40~+105°C
Insulation Test | DC 500V 100MΩ(Min)
R Value | R50°C=3.485KΩ±3% **B Value** | B25/50=3417K±1%
Thermal Time Constant | Around 1 second (in water)
Hi-Pot Test | AC 1500V 10mA(Max)



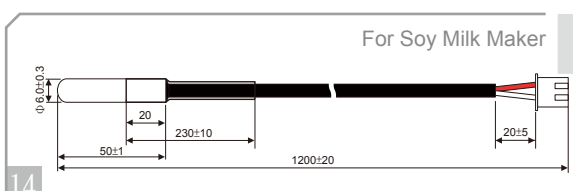
Component | Sensing top (NTC chip+ brass cap)+lead wire+terminal
+housing
Moisture Resistance | 40 °C 95% RH X 1000 hours
Operation Temperature | -40~+250°C
Insulation Test | DC 500V 100MΩ (Min)
R Value | R100°C=3.3KΩ±2.5% **B Value** | B0/100=3970K±2%
Thermal Time Constant | Around 15 seconds (heating board)
Hi-Pot Test | AC 1500V 10mA (Max)



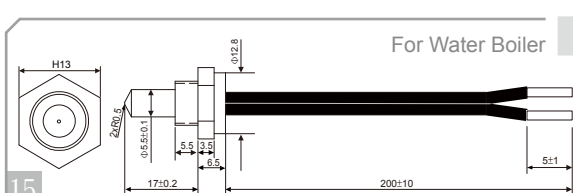
Component | Sensing top (NTC chip+stainless steel cap+brass ring)
+lead wire+terminal+housing
Moisture Resistance | 40 °C 95% RH X 1000 hours
Operation Temperature | -20~+200°C
Insulation Test | DC 500V 100MΩ (Min)
R Value | R120°C=3.532KΩ± 2% **B Value** | B100/200=4300K±1%
Thermal Time Constant | Around 2 seconds (in water)
Hi-Pot Test | AC 1500V 10mA (Max)



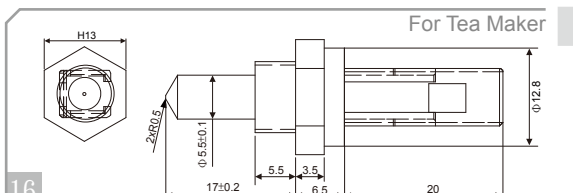
Component | Sensing top (NTC chip+Kovar cap+Kovar ring+glass ring)
+lead wire+terminal+housing
Moisture Resistance | 40 °C 95% RH X 1000 hours
Operation Temperature | -20~+200°C
Insulation Test | DC 500V 100MΩ(Min)
R Value | R100°C=3.3KΩ±2.5% **B Value** | B0/100=3970K±2.0%
Thermal Time Constant | Around 5 seconds (heating board)
Hi-Pot Test | AC 1500V 10mA (Max)



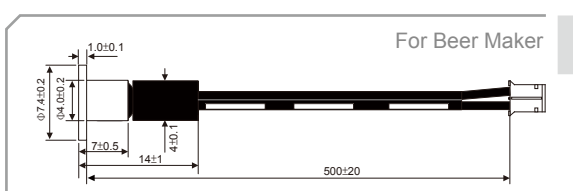
Component | Sensing top (NTC chip+stainless steel cap)+lead wire
+tube+terminal+housing
Moisture Resistance | 40 °C 95% RH X 1000 hours
Operation Temperature | -30~+125°C
Insulation Test | DC 500V 100MΩ(Min)
R Value | R25°C=10KΩ±1% **B Value** | B25/85=3435K±1%
Thermal Time Constant | Around 10 seconds (in water)
Hi-Pot Test | AC 1500V 10mA (Max)



Component | Sensing top (NTC chip+nickel plated brass cap)+lead wire
Moisture Resistance | 40 °C 95% RH X 1000 hours
Operation Temperature | -40~+125°C
Insulation Test | DC 500V 100MΩ (Min)
R Value | R25°C=10KΩ±1% **B Value** | B25/85=3435K±1%
Thermal Time Constant | Around 3 seconds (in water)
Hi-Pot Test | AC 1500V 10mA (Max)



Component | Sensing top (NTC chip+nickel plated brass cap)+connector
Moisture Resistance | 40 °C 95% RH X 1000 hours
Operation Temperature | -40~+125°C
Insulation Test | DC 500V 100MΩ(Min)
R Value | R25°C=10KΩ±1% **B Value** | B25/85=3435K±1%
Thermal Time Constant | Around 3 seconds (in water)
Hi-Pot Test | AC 1500V 10mA(Max)



Component | Sensing top (NTC chip+aluminum cap)+plastic housing
+lead wire+terminal+housing
Moisture Resistance | 40 °C 95% RH X 1000 hours
Operation Temperature | -30~+125°C
Insulation Test | DC 500V 100MΩ (Min)
R Value | R25°C=10KΩ±1% **B Value** | B25/85=3975K±1%
Thermal Time Constant | Around 3 seconds (heating board)
Hi-Pot Test | AC 1500V 10mA(Max)



1. Temperature sensor is customizable in accordance with customer's needs, and THINKING provides consulting services for sensor design.

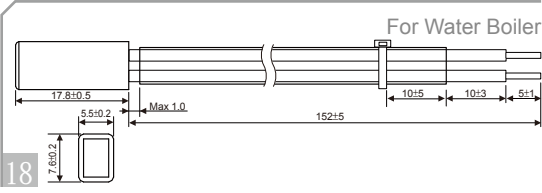
2. All specifications are subject to change.

3. Please contact your sales representative if you have any questions.

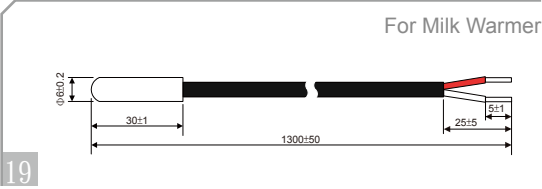
Plastic Case Type

Feature: Sensing top is customizable and mass-produced, and plastic material has better corrosion resistance.

Application: The sensor detects temperature to keep beverage warm or heat juice and milk up.



Component | Sensing top (NTC chip+plastic cap)+lead wire+tube+tie
Moisture Resistance | 40°C 95% RH X 1000 hours
Operation Temperature | -40~+150°C
Insulation Test | DC 500V 100MΩ (Min)
R Value | R25°C=10KΩ±1% **B Value** | B0/50=3450K ±1%
Thermal Time Constant | Around 20 seconds (in water)
Hi-Pot Test | AC 1500V 10mA (Max)

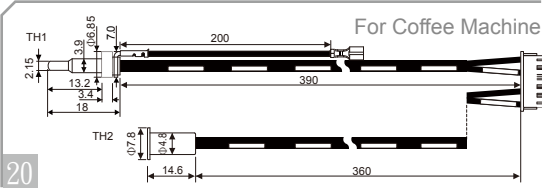


Component | Sensing top (NTC chip+plastic cap)+cable wire
Moisture Resistance | 40°C 95% RH X 1000 hours
Operation Temperature | 0~+105°C
Insulation Test | DC 500V 100MΩ (Min)
R Value | R25°C=100KΩ±5% **B Value** | B25/85=4190K±5%
Thermal Time Constant | Around 20 seconds (in water)
Hi-Pot Test | AC 1500V 10mA (Max)

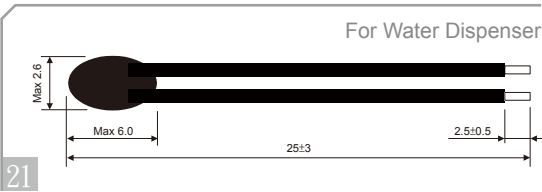
Other Structures

Feature: Various materials and structures are available for different needs of applications.

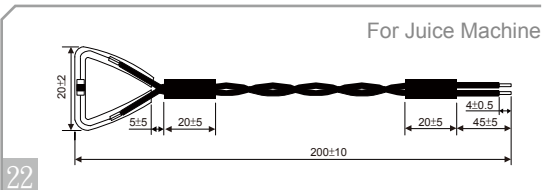
Application: Temperature detection of water dispenser and juice machine (no direct contact of liquid), and multiple-sensor structure is recommended for detecting different water temperatures of coffee maker or other liquid .



Component | Sensing top (NTC chip+316 stainless steel cap+brass ring+terminal, NTC chip+aluminum cap)+lead wire+terminal+housing
Moisture Resistance | 40°C 95% RH X 1000 hours
Operation Temperature | -40~+150°C
Insulation Test | DC 500V 100MΩ (Min)
R Value | R100°C=3.3KΩ±2.5% **B Value** | B25/100=3988K±1.5%
Thermal Time Constant | TH1: 2 seconds (in water) TH2: 3 seconds (heating board)
Hi-Pot Test | AC 1500V 10mA (Max)

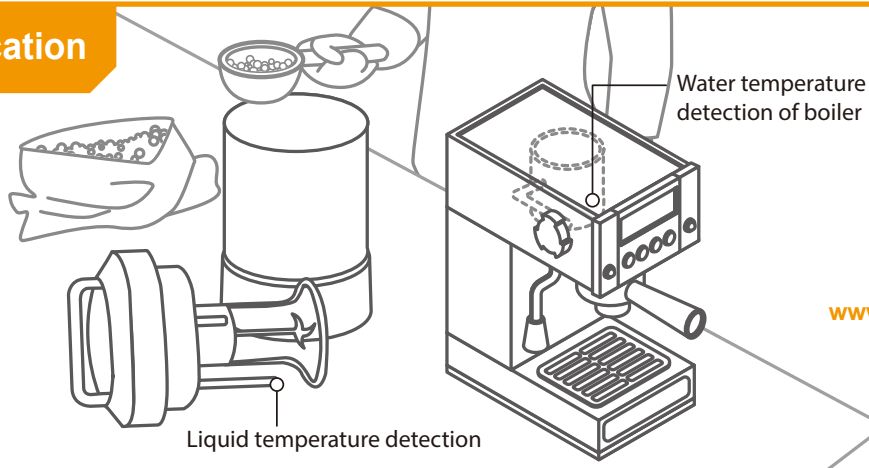


Component | Sensing top (NTC chip+epoxy)+lead wire
Moisture Resistance | 40°C 95% RH X 1000 hours
Operation Temperature | -10~+105°C
Insulation Test | DC 500V 100MΩ (Min)
R Value | R25°C=10KΩ±1% **B Value** | B25/85=3435K±1%
Thermal Time Constant | Around 5 seconds (in water)



Component | Sensing top (NTC chip+terminal+tube)+lead wire+tube
Moisture Resistance | 40°C 95% RH X 1000 hours
Operation Temperature | -10~+200°C
Insulation Test | DC 500V 100MΩ (Min)
R Value | R200°C=0.55KΩ±2.5% **B Value** | B100/200=4300K±3%
Thermal Time Constant | Around 15 seconds (in air)
Hi-Pot Test | AC 1500V 10mA (Max)

Product Application



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