

# Smart Toilet



## THINKING SENSOR

Smart Toilet Applications



### Feature

- ◆ Highly water resistant
- ◆ Products with different response times are available, and the shortest response time is within 0.5 second.
- ◆ Various electrical characteristics are available for your choice.

### Function

- ◆ Temperature detection of water inlet and outlet of smart toilet
- ◆ Temperature detection of smart toilet seat
- ◆ Wind temperature detection of smart toilet

### Application

Smart toilet

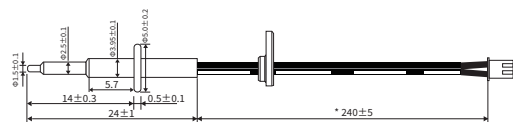


**Metal Case Type**

**Feature:** Material of metal case is the same as that of detected object for moisture resistance, more accurate temperature detection, and shorter response time. Stainless steel offers better stability of the product and usually directly contacts hot water.

**Application:** The product is generally used for temperature detection of not only water inlet and outlet but also wind.

For Temperature Detection of Smart Toilet's Water Outlet



1

**Component** | Sensing top (NTC chip+stainless steel cap)+lead wire+terminal+housing+holder

**Moisture Resistance** | 40°C 95% RH X 1000 hours

**Operation Temperature** | -40~+105°C

**Insulation Test** | DC 500V 100MΩ (Min)

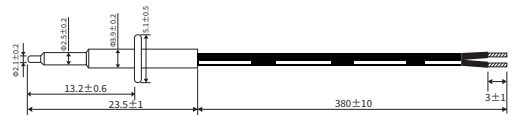
**R Value** | R37°C=29.46KΩ±3%     **B Value** | B25/50=3948K±1.5%

**Thermal Time Constant** | Around 0.5 second (in water)

**Hi-Pot Test** | AC 1500V 10mA (Max)

**Maximum Rated Power** | 2.5mW (25°C)

For Temperature Detection of Smart Toilet's Water Inlet



2

**Component** | Sensing top (NTC chip+stainless steel cap)+lead wire

**Moisture Resistance** | 40°C 95% RH X 1000 hours

**Operation Temperature** | -30~+105°C

**Insulation Test** | DC 500V 100MΩ (Min)

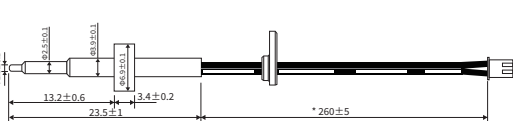
**R Value** | R37°C=29.46KΩ±3%     **B Value** | B25/50=3948K±1.5%

**Thermal Time Constant** | Around 0.8 second (in water)

**Hi-Pot Test** | AC 1800V 10mA (Max)

**Maximum Rated Power** | 4mW (25°C)

For Wind Temperature Detection of Smart Toilet



3

**Component** | Sensing top (NTC chip+stainless steel cap+brass ring)+lead wire+terminal+housing+holder

**Moisture Resistance** | 40°C 95% RH X 1000 hours

**Operation Temperature** | -40~+105°C

**Insulation Test** | DC 500V 100MΩ (Min)

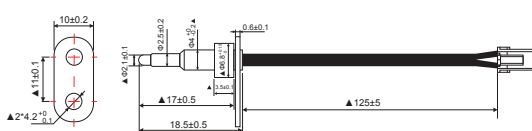
**R Value** | R37°C=29.46KΩ±3%     **B Value** | B25/50=3948K±1.5%

**Thermal Time Constant** | Around 2 seconds (in water)

**Hi-Pot Test** | AC 600V 0.5mA (Max)

**Maximum Rated Power** | 4mW (25°C)

For Temperature Detection of Smart Toilet's Water Inlet



4

**Component** | Sensing top (NTC chip+stainless steel cap+brass ring+holder)+lead wire+terminal+housing

**Moisture Resistance** | 40°C 95% RH X 1000 hours

**Operation Temperature** | -30~+105°C

**Insulation Test** | DC 1000V 100MΩ (Min)

**R Value** | R25°C=50KΩ±1%     **B Value** | B25/50=3950K±1%

**Thermal Time Constant** | Around 0.8 second (in water)

**Hi-Pot Test** | AC 1800V 1mA (Max)

**Maximum Rated Power** | 4mW (25°C)

For Wind Temperature Detection of Smart Toilet



5

**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** | -30~+105°C

**Insulation Test** | DC 500V 100MΩ (Min)

**R Value** | R40°C=26.06KΩ±3%     **B Value** | B25/50=3948K±1%

**Thermal Time Constant** | Around 2 seconds (in water)

**Hi-Pot Test** | AC 600V 0.5mA (Max)

**Maximum Rated Power** | 4mW (25°C)



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

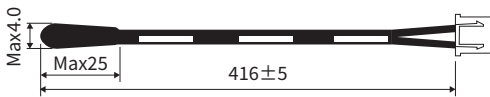
2. All specifications are subject to change.

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

## Epoxy Coating Type

**Feature:** Epoxy coated sensing top is a simple design, and it responds fast.  
**Application:** The product is generally installed in dry environment, including temperature detection of toilet seat.

For Temperature Detection of Smart Toilet Seat



6

**Component** | Sensing top (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 50MΩ (Min)

**R Value** |  $R_{37^{\circ}\text{C}}=29.46\text{K}\Omega\pm 1\%$       **B Value** |  $B_{25/50}=3948\text{K}\pm 1\%$

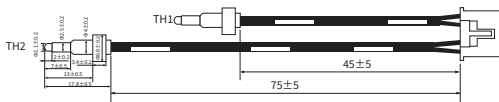
**Thermal Time Constant** | Around 10 seconds (in water)

## Multiple Sensor Structure

**Feature:** Sensor is with various sensing tops and electrical characteristics for circuit design and assembly.

**Application:** In accordance with customer's needs

For Wind Temperature Detection of Smart Toilet



7

**Component** | Sensing top (NTC chip+stainless steel cap+brass ring, NTC chip+stainless steel cap+brass ring)+lead wire +terminal+housing

**Moisture Resistance** | 40°C 95% RH X 1000 hours

**Operation Temperature** | -40~+105°C

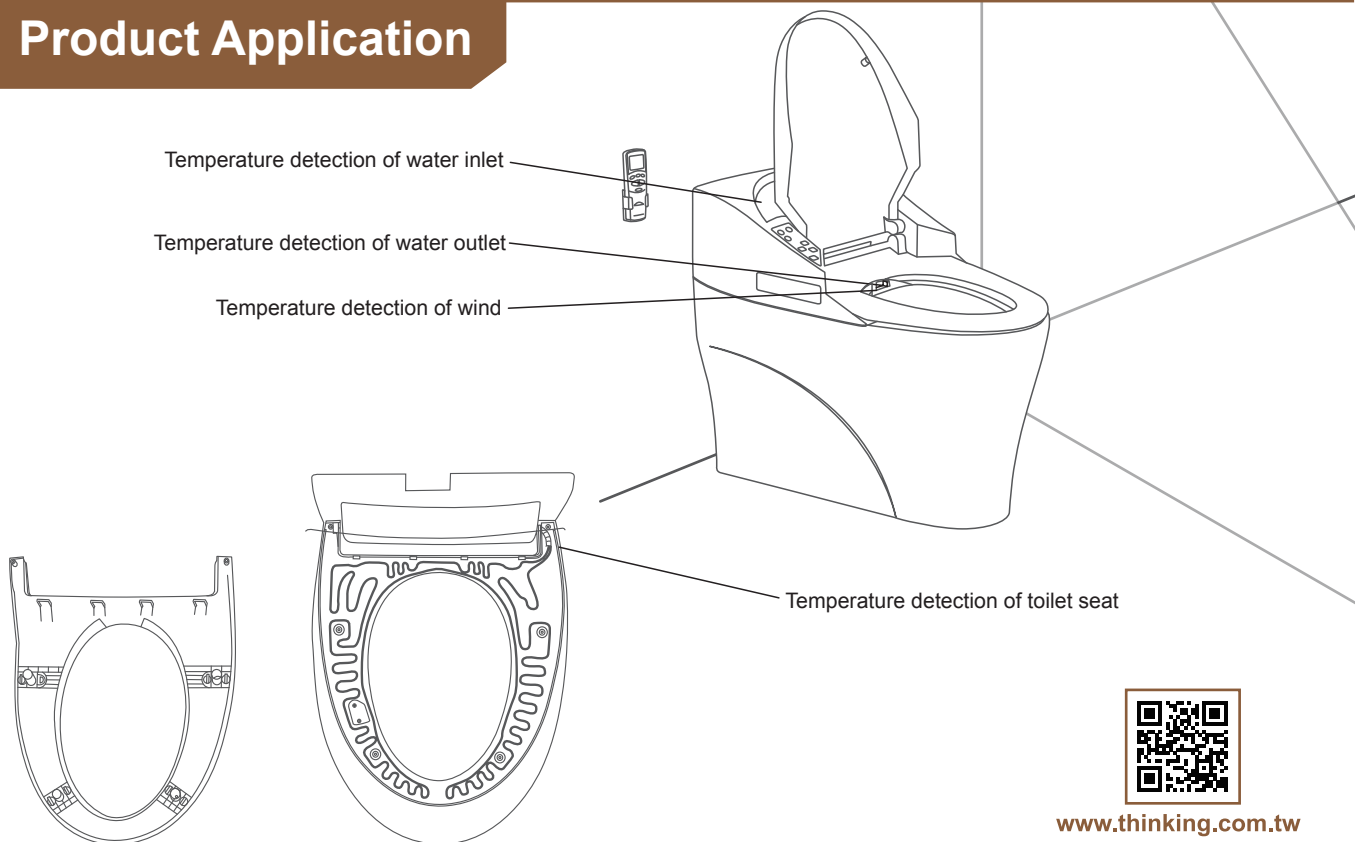
**Insulation Test** | DC 500V 100MΩ (Min)

**R Value** |  $R_{25}=10\text{K}\Omega\pm 1\%$       **B Value** |  $B_{25/50}=3950\text{K}\pm 1\%$

**Thermal Time Constant** | Around 2 seconds (in water)

**Hi-Pot Test** | AC 1800V 5mA (Max)

## Product Application



[www.thinking.com.tw](http://www.thinking.com.tw)

**HEADQUARTER** 12F, No.93, Dashun 1st Rd., Zuoying Dist., Kaohsiung, Taiwan 81357 / Tel: 886-7-5577660

**TAIPEI, TAIWAN** 3F, No.25, Lane 70, Wugong 2nd Rd., Xinzhuang Dist., New Taipei City, Taiwan 24888 / Tel: 886-2-22990652

**JIANGSU, CHINA** No.6, Longmen Rd., Wujin High & New-Tech Industrial Development Zone, Changzhou, Jiangsu, China 213161 / Tel: 86-519-86578999

**GUANGDONG, CHINA** No.45, East Rd., Sha-Tao Dist., Chang-An Town, Dongguan City, Guangdong, China 523863 / Tel: 86-769-85542016

**BEIJING, CHINA** Room 2707, Building 1, No. 88, Jian Guo Road, Chaoyang Dist., Beijing City, China 100025 / Tel: 86-010-85898940

**QINGDAO, CHINA** No.696, Hefei Rd., Shibei Dist., Qingdao City, China 266035 / Tel: 86-138-08993369/86-186-69738999

**HUBEI, CHINA** California Sunshine Community, Guanggu Rd, Donghu New Technical Development Zone, Wuhan City, Hubei, China / Tel: 86-189-95621889 / 86-134-76148723