Data Center Liquid Cooling

THINKING SENSOR

Coolant Distribution Unit

Server Racks

THINKING Website

Platinum Temperature Sensor

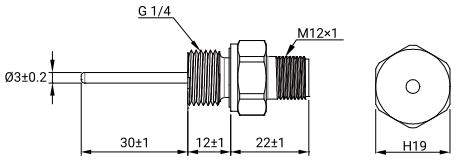
Feature

- High measurement accuracy
- Near-linear resistance–temperature characteristic for easy and reliable measurement
- Robust stainless steel or specified metal housing material
- Platinum element options from PT100 to PT1000
- Customizable sensor materials and thread sizes (BSPP/ NPT/ ISO Metric)
- Excellent sealing reliability and corrosion resistance, suitable for various applications

Application

Coolant distribution unit of data center, liquid cooling module of energy storage system, liquid-cooled megawatt charging station, HVAC, industrial automation system, and other accuracy-critical or harsh-environment applications

Coolant temperature detection

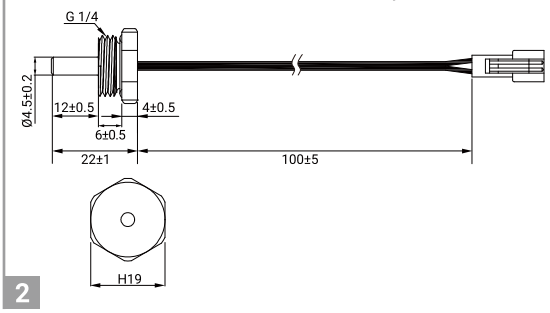


1

Feature | Stainless steel cap with G 1/4" male thread, and M12 connector (4-pin)

Operating Temperature Range | -40°C to +150°C
R Value | R0°C= 1000Ω (Class A)
Temperature Coefficient of Resistance | 3850 ppm/K
Response Time | Around 3 seconds (in water)
Insulation Test | DC 500V 100MΩ (Min)
Hi-Pot Test | AC 1000V 0.5mA (Max)
Moisture Resistance | Pass 85°C 85% RH x 1000 hours test

Coolant temperature detection

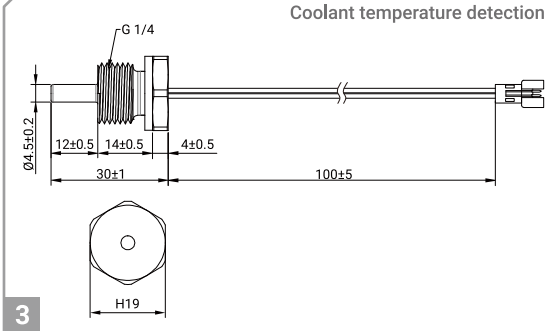


2

Feature | Stainless steel cap with G 1/4" male thread, lead wire, and connector

Operating Temperature Range | -40°C to +150°C
R Value | R0°C= 100Ω (Class A)
Temperature Coefficient of Resistance | 3850 ppm/K
Response Time | Around 4 seconds (in water)
Insulation Test | DC 500V 100MΩ (Min)
Hi-Pot Test | AC 1000V 0.5mA (Max)
Moisture Resistance | Pass 85°C 85% RH x 1000 hours test

Coolant temperature detection

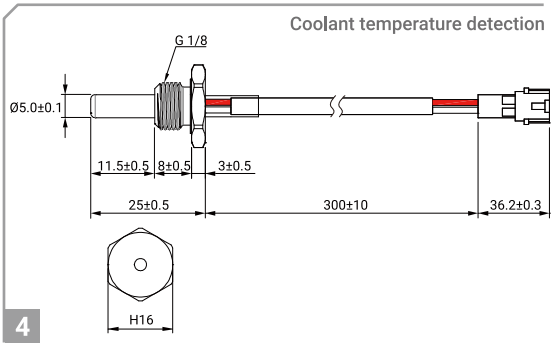


3

Feature | Stainless steel cap with G 1/4" male thread, lead wire, and connector

Operating Temperature Range | -40°C to +150°C
R Value | R0°C= 100Ω (Class A)
Temperature Coefficient of Resistance | 3850 ppm/K
Response Time | Around 4 seconds (in water)
Insulation Test | DC 500V 100MΩ (Min)
Hi-Pot Test | AC 1000V 0.5mA (Max)
Moisture Resistance | Pass 85°C 85% RH x 1000 hours test

Coolant temperature detection



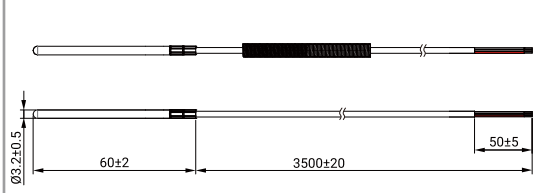
4

Feature | Stainless steel cap with G 1/8" male thread, cable, and connector

Operating Temperature Range | -40°C to +150°C
R Value | R0°C = 1000Ω (Class A)
Temperature Coefficient of Resistance | 3850 ppm/K
Response Time | Around 4 seconds (in water)
Insulation Test | DC 500V 100MΩ (Min)
Hi-Pot Test | AC 1000V 0.5mA (Max)
Moisture Resistance | Pass 85°C 85% RH x 1000 hours test

Dimensions in mm

Air or coolant temperature detection



5

Feature | Stainless steel tube with cable

Operating Temperature Range | -40°C to +150°C
R Value | R0°C= 1000Ω (Class B)
Temperature Coefficient of Resistance | 3850 ppm/K
Response Time | Around 3 seconds (in water)
Insulation Test | DC 500V 100MΩ (Min)
Hi-Pot Test | AC 1000V 0.5mA (Max)
Moisture Resistance | Pass 85°C 85% RH x 1000 hours test

Platinum Temperature Transmitter

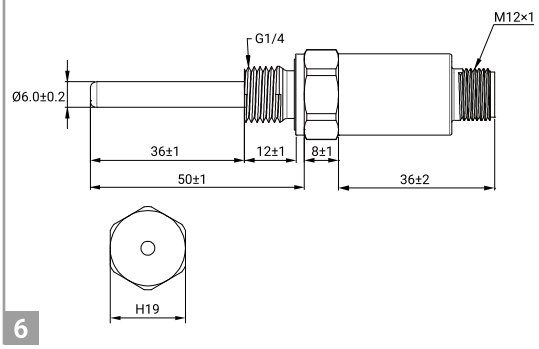
Feature

- High measurement accuracy
- Near-linear resistance–temperature characteristic for easy and reliable measurement
- Various standardized output signals (e.g., 4–20 mA, 0–10 V) for seamless system integration
- Platinum element options from PT100 to PT1000
- Robust stainless steel or specified metal housing material
- Customizable sensor materials and thread sizes (BSPP/ NPT/ ISO Metric)
- Excellent sealing reliability and corrosion resistance, suitable for various applications

Application

Coolant distribution unit of data center, liquid cooling module of energy storage system, liquid-cooled megawatt charging station, HVAC, industrial automation system, and other accuracy-critical or harsh-environment applications

Coolant temperature detection

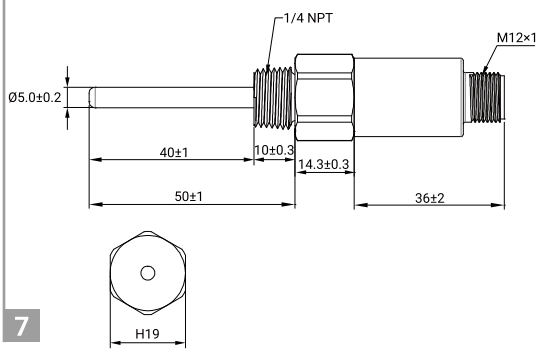


6

Feature | Stainless steel housing with G 1/4” male thread, and M12 connector (4-pin)

Operating Temperature Range | -40°C to +150°C
R Value | R0°C= 100Ω (Class A)
Temperature Coefficient of Resistance | 3850 ppm/K
Response Time | Around 6 seconds (in water)
Output Signal | 4 mA to 20 mA
Insulation Test | DC 500V 100MΩ (Min)
Hi-Pot Test | AC 1500V 5 mA (Max)
Moisture Resistance | Pass 85°C 85% RH x 1000 hours test

Coolant temperature detection



7

Feature | Stainless steel housing with 1/4” NPT male thread, and M12 connector (4-pin)

Operating Temperature Range | -40°C to +150°C
R Value | R0°C= 100Ω (Class A)
Temperature Coefficient of Resistance | 3850 ppm/K
Response Time | Around 4 seconds (in water)
Output Signal | 4 mA to 20 mA
Insulation Test | DC 500V 100MΩ (Min)
Hi-Pot Test | AC 1500V 0.5mA (Max)
Moisture Resistance | Pass 85°C 85% RH x 1000 hours test

Dimensions in mm