



Customized solution
with the best selection in sensor part

NTC/PTC Thermistor | Temperature sensor | Humidity sensor | Thermal fuse

Sentrion Corporation

www.sentrion.co.kr



Sentrion Corporation

Aiming the world best sensor supplier in the market,
Sentrion is growing rapidly.

Sentrion Corporation is an exporter and manufacturer for electronic components in Korea. Sentrion is offering the complete sensor part of mainly temperature and humidity sensing solutions as well as the related components to the customers in the world.

Many years experiences in marketing and manufacturing have allowed us to serve the optimized solutions that exactly meet the customer requirements.

Sentrion is supplying NTC/PTC thermistors, humidity sensors, thermal fuses and the related components into the key market areas in field of automotive, home appliance, mobile phone, HVAC and domestic appliance.

We believe that the need for exact temperature and humidity sensing will continue to grow especially in this field.

We are positioning ourselves to take advantage of these market dynamics and leading solutions to customers, backed up by high quality products and best-in-class services.

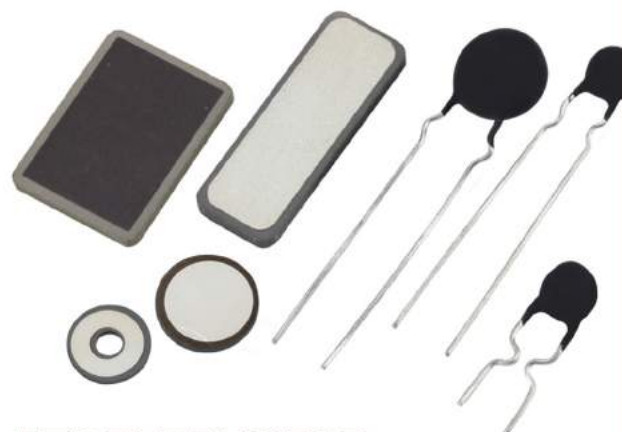
Constant marketing and production development mean that we are continually improving our performance across a wide range of products.





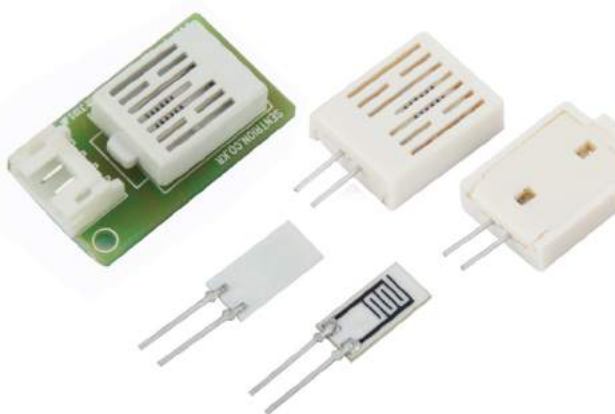
NTC THERMISTOR

Excellent temperature measurement and control accuracy
Wide range of resistance & B-value with high accuracy
Suitable for a variety of applications



PTC THERMISTOR

Reliable protection for over current and over temperature
Self-limiting heating element
Available for various shapes and sizes



HUMIDITY SENSOR

Cost efficiency and convenient measurement for humidity
Employing high polymer resistive sensor
Compact size and light-weight



THERMAL FUSE

Most reliable solution on protection against overheating
Cutting off electrical power by one shot operation
Compact size and low resistance



TEMPERATURE SENSOR FOR AUTOMOTIVE

Offering customization for all of temperature sensing needs
The best selection on housing, connector and cable assembly
Various technical solutions in field of automotive



TEMPERATURE SENSOR FOR HOME APPLIANCE

Offering customization for all of temperature sensing needs
The best selection on housing, connector and cable assembly
Various technical solutions in field of home appliances

NTC Thermistor

Epoxy coated Thermistor

Feature

- Excellent endurance against thermal shock
- Wide range of resistance & B-value with high accuracy
- Epoxy coating for hermeticity from environment
- Available for custom size and wire configuration

Technical range

- Operating temperature range : $-40^{\circ}\text{C} \sim 120^{\circ}\text{C}$
- Thermal time constant : Max.12 sec(in still air)
- Thermal dissipation constant : $2.0\text{mW}/^{\circ}\text{C}$ (in still air)
- Resistance value at 25°C : $100\Omega \sim 1,000\text{K}\Omega$



Chip in glass type Thermistor

Feature

- Kind of glass-encapsulated temperature sensor
- High quality and high precision thermistor
- Glass size : $\varnothing 2.2, \varnothing 1.8, \varnothing 1.3, \varnothing 1.1\text{mm}$ standard size
- Available Nickel plated dumet wire with various lengths

Technical range

- Operating temperature range : $-50^{\circ}\text{C} \sim 300^{\circ}\text{C}$
- Thermal time constant : 2.5 sec $\sim$ 15.0 sec (in still air)
- Thermal dissipation constant : $0.5\text{mW}/^{\circ}\text{C} \sim 1.5\text{mW}/^{\circ}\text{C}$ (in still air)
- Insulation resistance : Min $50\text{M}\Omega$ (500Vdc), Min $25\text{M}\Omega$ (50Vdc)



Diode(Axial) type Thermistor

Feature

- Axial lead glass-sealed temperature sensor
- Excellent heat response time
- Excellent stability at high temp. and humidity condition
- DO35 package standard size

Technical range

- Operating temperature range : $-50^{\circ}\text{C} \sim 250^{\circ}\text{C}$
- Thermal time constant : Max. 12 sec (in still air)
- Thermal dissipation constant : $2.0\text{mW}/^{\circ}\text{C}$ (in still air)
- Resistance value at 25°C : $2\text{K}\Omega \sim 1.388\text{M}\Omega$



Insulated wire type Thermistor

Feature

- PVC, PFA or Enamel insulated sliver plated nickel wire
- Epoxy resin encapsulation on NTC element
- Fast thermal response & High measuring accuracy
- Excellent long-term stability

Technical range

- Operating temperature range : $-50^{\circ}\text{C} \sim 150^{\circ}\text{C}$
- Thermal time constant : 10 sec $\sim$ 15 sec (in still air)
- Thermal dissipation constant : $1.9\text{mW}/^{\circ}\text{C} \sim 3.0\text{mW}/^{\circ}\text{C}$ (in still air)
- Insulation resistance : Min $100\text{M}\Omega$ (500Vdc)



SMD type NTC Thermistor

Feature

- High solderability and stability
- Excellent in cost performance and compact sizes
- Suitable for both flow soldering and reflow soldering
- Available for Tape and reel packaging for automatic placement

Technical range

- Operating temperature range : $-40^{\circ}\text{C} \sim 125^{\circ}\text{C}$
- Variety of Size(mm) : 0603, 1005, 1608, 2012
- Resistance value at 25°C : $22\Omega \sim 1\text{M}\Omega$
- Tolerances : $\pm 1\%$, $\pm 2\%$, $\pm 3\%$, $\pm 5\%$, Special



Application of NTC Thermistor

- Home appliances : Refrigerator, Washing machine, etc.
- Automotive : In-car sensor, Water sensor, Evaporator sensor, etc.
- Small appliances : Coffee machine, Weather station, etc.
- Industrial Instrumentation, Medical & Chemical Industry

PTC Thermistor

PTC Thermistor for Over current protection & Temperature sensor

Feature

- Radial-leaded for easy PCB mounting
- Fast response time for rapid protection and temperature sensing
- Available with straight type or outside / inside kinked type of lead wire
- RoHS-compliant

Technical range

- Temperature Range(T_c) : $60^{\circ}\text{C} \sim 120^{\circ}\text{C}$
- Element diameter : $\varnothing 2.0 \sim \varnothing 20.0$
- Resistance at 25°C : $5\Omega \sim 3,500\Omega$
- Operating on DC or AC voltages



PTC Thermistor for Heating element

Feature

- Sharply providing the designated electrical heat
- Stable and long life time
- Available in a variety of shape : Ring, Disk, Bar type
- Self-regulating surface temperature at AC or DC voltages

Technical range

- Operating temperature range : $-40^{\circ}\text{C} \sim 200^{\circ}\text{C}$
- Surface Temperature Range(T_s) : $60^{\circ}\text{C} \sim 300^{\circ}\text{C}$
- Resistance at 25°C : $1\Omega \sim 4,750\Omega$
- Supplying PTC per resistance with max. 5 group

Application of PTC Thermistor

- Home appliances : Washing machine, Microwave oven, etc.
- Over temperature protection for power supplies, lighting application
- Automotives : Diesel fuel heater, Air pre-heater, EV main heater
- Aroma heater, Mosquito killer, Hot melt glue gun

Humidity Sensor

Element & Case type Resistive humidity Sensor

Feature

- Employing high polymer resistive sensor
- Compact size and light-weight
- Highly cost effective model
- Available for the sensor with plastic case

Technical range

- Rated voltage : AC 1.0Vrms(1KHz)
- Operating Temperature Range : $0^{\circ}\text{C} \sim 60^{\circ}\text{C}$
- Operating Humidity : 20%RH ~ 95%RH
- Output : 23K Ω or 31K Ω (at 25°C , 60%RH)
- Output Accuracy : $\pm 3\%$ RH (at $25^{\circ}\text{C}/60\%$ RH)



Module type Resistive humidity Sensor

Feature

- Excellent endurance against humidity
- High durability & water resistance
- Highly cost effective model
- Applicable for equipment related humidity sensing

Technical range

- Rated voltage : DC 5V $\pm$ 5%
- Operating Temperature Range : $0^{\circ}\text{C} \sim 60^{\circ}\text{C}$
- Operating Humidity : 20%RH ~ 95%RH
- Humidity transmitting : 20%RH ~ 95%RH
- Output Accuracy : $\pm 3\%$ RH (at 25°C)



Application of Humidity sensor

- Used in relative humidity measurement, control and display
- Hygrometer, Recorder, Transmitter
- Air-conditioner, Humidifier, Dehumidifier, Air purifier
- Weather station, Thermal Clock

Thermal Fuse

SW-1 Series

Feature

- Metallic case, axial type and spring action type
- Compact, high current capacity, sensitive to ambient temperature
- Single operation for over-temperature protection
- Certificates : UL, C-UL, VDE, TUV, CCC, PSE

Technical range

- Rated voltage : AC250V / AC150V
- Rated current : 10A / 15A
- Interrupting current : 15A at AC250V
- Reference temp. range : 72°C ~ 240°C



SW-2 Series

Feature

- Low melting alloy, axial and surface tension type
- Cost-effective, compact, sensitive to ambient temperature
- Single operation for over-temperature protection
- Certificates : UL, C-UL, TUV, CCC

Technical range

- Rated voltage : AC250V
- Rated current : 2A
- Interrupting current : 3A at AC250V
- Reference temp. range : 102°C ~ 150°C



SW-3 Series

Feature

- Thermally stable insulation type with organic material
- Metallic case, axial type and spring action type
- Single operation for over-temperature protection
- Certificates : UL, C-UL, VDE, CCC

Technical range

- Rated voltage : AC250V / AC240V
- Rated current : 20A / 21A
- Interrupting current : 31.5A at AC250V
- Reference temp. range : 72°C ~ 240°C



Application of Thermal protector

- Electric home appliances : Refrigerator, Washing machine
- Heating devices : Boiler, Hot water appliance, Coffee machine
- Cook appliances : Grill, Induction cooker, Gas stove, Fryer
- Beauty appliances : Hair dryer, Hair straightener

Thermal Fuse Assembly



Temperature Sensor Assembly

Automotives

		
Water sensor	Incar sensor	Incar sensor
		
Evaporator sensor	Incar sensor	Air-mix sensor

Home Appliances

			
Boiler	Boiler	Coffee machine	Microwave
			
Meat Probe	Electric oven	Electric oven	Electric oven(PT)
			
Refrigerator	Ind. Refrigerator	Air-conditioner	Air-conditioner

Others

	
Humidity probe	TPE sensor



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