



Sensing Temperature the way you need!

NTC Thermistor Assemblies , RTD , Temperature Sensors ,
Cable Harnesses , Thermocouples



THERMOSEN

Temperature Sensors

✓ Reliability ✓ Consistency ✓ Affordability ✓ Compliances

Thermosen Technologies Pvt Ltd is an IATF certified company manufacturing a wide range of Temperature sensors with in-house capability of custom design & development of NTC Thermistor, RTD sensor assemblies Thermocouple sensors, Thermal switch assemblies, which include different type of temperature sensor assemblies. Also, Thermosen provides Wire Harness Solutions for Automotive, Home appliance, HVAC, Power Electronics, Industrial automation, medical and space.



Vision and Mission

Thermosen have a clear vision to become a global leader in Temperature sensing domain.

Our Mission is to build long term relationship with customer by pursuing business through innovation and advance Technology



Ashokan C E - Director



Thermosen Technologies Pvt Ltd.

199/1, 9th Ward, 7th Main GB Palya, Hongasandra,
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NTC Thermistors (non-insulated) TNT series



Technical Specifications:

Resistance: 1k, 2k, 2.25k, 3k, 4.7k, 5k, 10k, 12k, 15k, 20k, 30k, 47k, 50k, 95k, 100k, 150k, 200k with tolerance from ± 0.25 to 5%.

Beta Value: 3380-4500K with tolerance from ± 0.75 to 5%

Operating Temp Range: -40 to 125°C

Wire: Non-insulated Nickel-Plated Copper Insulated Leaded wire, from 0.2mm to 0.6mm

Response Time: upto 5 Seconds

(All Possible customization available)

Applications:

PCB for power Electronics

Small appliance in consumer Electronics

Industrial equipments

Automotive sector



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NTC Thermistors (insulated) TNBTE, TNAE-A series



Technical Specifications:

Resistance: 1k, 2k, 2.25k, 3k, 4.7k, 5k, 10k, 12k, 15k, 20k, 30k, 47k, 50k, 95k, 100k, 150k, 200k with tolerance from ± 0.25 to 5%.

Beta Value: 3380-4500K with tolerance from ± 1 to 5%

Operating Temp Range: -40 to 105°C, -40 to 125°C, -40 to 150°C

Wire: PVC, XLPE, Teflon insulated wire ranging from 20 to 30AWG.

Response Time: Upto 5 Seconds

(All Possible customization available)

Applications:

HVAC Applications

Power Electronics

Battery Temperature(BMS)

Heating /Cooling devices



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NTC LUG Assemblies

TAR, TANR, TANRD, TANRM, TANRH, TANRF, TANRAI,
TANRAK, TANRAI, TANRAT Series



Technical Specifications:

Resistance: 1k, 2k, 2.25k, 3k, 4.7k, 5k, 10k, 12k, 15k, 20k, 30k, 47k, 50k, 95k, 100k, 150k, 200k with tolerance from ± 1 to 5%.

Beta Value: 3380-4500K with tolerance from ± 1 to 5%

Operating Temp Range: -40 to 105°C, -40 to 125°C, -40 to 150°C, -40 to 250°C

Wire: PVC, XLPE, Teflon insulated, Braided, Non-braided wire ranging from 20 to 30AWG.

Response Time: Upto 5 Seconds
(All Possible customization available)

Applications:

Consumer Appliances
Battery temperature monitoring
Power Electronics
Automotive Harness



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NTC Moulded Sensor Assemblies:

TNAP Series



Technical Specifications:

Resistance: 1k, 2k, 2.25k, 3k, 4.7k, 5k, 10k, 12k, 15k, 20k, 30k, 47k, 50k, 95k, 100k, 150k, 200k with tolerance from ± 1 to 5%.

Beta Value: 3380-4500K with tolerance from ± 1 to 5%

Operating Temp Range: -40 to 150°C

Wire: PVC, XLPE, Teflon insulated wire ranging from 20 to 30AWG.

Response Time: 5-20 Seconds
(All Possible customization available)

Applications:

Refrigeration Appliances
Cold Storage
Cooling Devices



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NTC Metal Housing Assemblies

TNAM, TANMC Series



Technical Specifications:

Resistance: 1k, 2k, 2.25k, 3k, 4.7k, 5k, 10k, 12k, 15k, 20k, 30k, 47k, 50k, 95k, 100k, 150k, 200k with tolerance from ± 1 to 5%.

Beta Value: 3380-4500K with tolerance from ± 1 to 5%

Operating Temp Range: -40 to 105°C, -40 to 125°C, -40 to 150°C

Wire: PVC, XLPE, Teflon insulated wire ranging from 20 to 30AWG.

Response Time: Upto 5 Seconds

(All Possible customization available)

Applications:

Automotive Sector
Power Electronics
BMS
Motor Windings
HVAC
Boiler Appliances



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NTC Radial Glass Thermistor Assemblies:

TNAS Series



Technical Specifications:

Resistance: 3.359K, 5K, 49K with tolerance from ± 1 to 5%

Beta Value: 3497, 4000K with tolerance from ± 1 to 5%

Operating Temp Range: -30 to 200°C

Wire: 0.3mm dumet wire with Teflon Sleeve

Response Time: Upto 5 Seconds

(All Possible customization available)

Applications:

BMS
Motor Winding
Boiler Appliances
HVAC Applications



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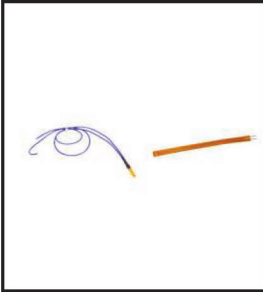


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NTC Film Thermistor Assemblies: TNA-F Series



Technical Specifications:

Resistance: 10K with tolerance 1%

Beta Value: 3435K with Tolerance 1%

Operating Temp Range: -30 to 120°C

Wire: 22 AWG UL1569 Wire

Response Time: Upto 5 Seconds

(All Possible customization available)

Applications:

BMS

Motor Winding

Boiler Appliances

HVAC Applications



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NTC Special Housing Assemblies: TNAC/TNAS Series



Technical Specifications:

Resistance: 1k, 2k, 2.25k, 3k, 4.7k, 5k, 10k, 12k, 15k, 20k, 30k, 47k, 50k, 95k, 100k, 150k, 200k with tolerance from ± 1 to 5%. with tolerance from ± 1 to 5%

Beta Value : 3380-4500K with tolerance from ± 1 to 5%

Operating Temp Range: -40 to 105°C, -40 to 125°C, -40 to 150°C, -40 to 200°C

Wire: PVC, PFA, XLPE, Teflon insulated wire ranging from 20 to 30AWG.

Response Time: 5-20 seconds.

(All Possible customization available)

Applications:

Temperature sensing in Batteries

Induction Cooktops

Washing Machines

Industrial Appliances



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IC Sensor Assembly: TDA-M Series



Technical Specifications:

Operating Temp Range: :-55 to 125°C

Wire: PVC, XLPE, Teflon insulated wire ranging from 20AWG to 30 AWG.

(All Possible customization available)

Applications:

IOT

Thermostatic Controls

Industrial Appliances



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RTD Sensor assemblies: TRAM Series



Technical Specifications:

Resistance: 100 and 1000 Ohm with tolerance from ± 1 to 10%

Temperature Coefficient: 3850 ppm/K

Grade: Class A/Class B

Operating Temp Range: -40 to 300°C

Wire: PVC, XLPE, Teflon insulated wire ranging from 20 to 30AWG.

Response Time: 8 Seconds

(All Possible customization available)

Applications:

Automotive Sector

Power Electronics

BMS

Motor Windings

Consumer Electronics



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TRADING PRODUCTS

Thermosen also offers products to meet the kitting requirement including:

- **RTD Transmitters** (PT100/PT1000) with 4-20mA or Voltage output. Also available with USB Interface
- **Humidity sensor** SS probe and PCB Module
- **Slot RTD**: Simplex/Duplex/Triplex with custom dimensions using Platinum/ Copper wire wound. Available from PT50 to PT1000
- **DISC NTC**: Temperature compensating NTC, a cost effective solution to protect electronic boards from over current. Available in standards 5D15, 5D25, 10D9, 10D15, 20D9 and more
- **Sensors**: Applications demanding measurement & control using sensor/transducer for Level, Pressure, Proximity, Speed, Temperature etc with Resistive/ capacitive or IR working principle.

Applications:

- IOT
- Automotive Sector
- Industrial Appliances
- Power Electronics



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WIRE HARNESSING SOLUTIONS

Thermosen offers custom cable and wire harness solutions, designed to organize multi-wire systems in application for Consumer Electronics, Automotive, Instrumentation and Industrial automation. From design to production, we have the right resources, experience, compliance, and capacity to serve high volume with precision in shorter lead-time.

Cable and wiring harnesses can be customized in limitless style and material options, including:

- Cables: PVC, PTFE, FR, Shielded, Ribbon, power & data cables
- Connectors: wire to wire, wire to board including multi pin connector and terminals
- Cable ties, Heat-shrink tubes, Variety of Sleeve & Lacing, Custom color Tag/Labels/Barcoding
- Insulation materials of all kinds, Custom shielding, Polypropylene, nylon, and paper filler
- Wide range of molded components, Lugs, clips, custom components.



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Interested in a Custom Cable Assembly Solution?

Contact our team of experts to learn more about our broad range of custom capabilities.

Speak To An Expert +91-80-4110 6383



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THERMOCOUPLES

Thermocouples are essential temperature sensors used across various industries and applications to measure temperature accurately and reliably.

It can be customized with various color codes and the shape can be modified as per the application demand. The

applications include Packaging industries, Battery application, Automation, 3D-Printing, Locomotives and Medical applications

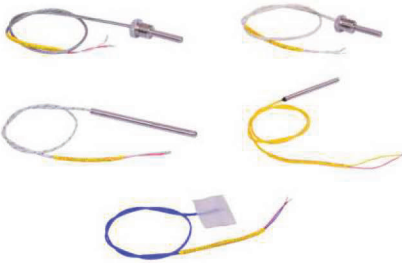


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THERMOCOUPLE COLOUR CODES:

Thermocouple Extension Type	ANSI	BS	DIN	NFC	JIS	IEC
JX Iron + Constantan [®] -						
KX Chromel [®] + Alumel [®] -						
TX Copper + Constantan [®] -						
EX Chromel [®] + Constantan [®] -						
NX Nirosil [®] + Niail [®] -						
SX Copper + Alloy II -						

TC Type	ANSI Std	BS Std	DIN Std	JIS Std	IEC Std
J Type	White (+ve) Red (-ve)	Yellow (+ve) Blue (-ve)	Red (+ve) Blue (-ve)	Red (+ve) White (-ve)	Black (+ve) White (-ve)
K Type	Yellow (+ve) Red (-ve)	Brown (+ve) Blue (-ve)	Red (+ve) Green (-ve)	Red (+ve) White (-ve)	Green (+ve) White (-ve)



Technical Data

Housing Types	Probe type, Washer Type, Rotating bolt type, Bend type, Lug type.
Diameter Tolerance	±0.1mm (Customizable).
Extension Cable length	100mm (Customizable).
Sheath material	SS304, SS316 (500°C rated).
Junction	Grounded / UN-Grounded.



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PRODUCTION FLOOR

Automated process for sleeve/
Wire cutting stripping, using
programmable machines to
minimize human intervention.

LINE PRODUCTION

With capacity of 60000 sensors
everyday; production line run in
2 shifts to handle sudden spike
in adherence to the defined
processes.



Reliability Testing

To ensure quality performance
of the products, Reliability tests
are conducted on periodic basis
for continual improvement.



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