EuroSensors

Temperature sensors with connection head

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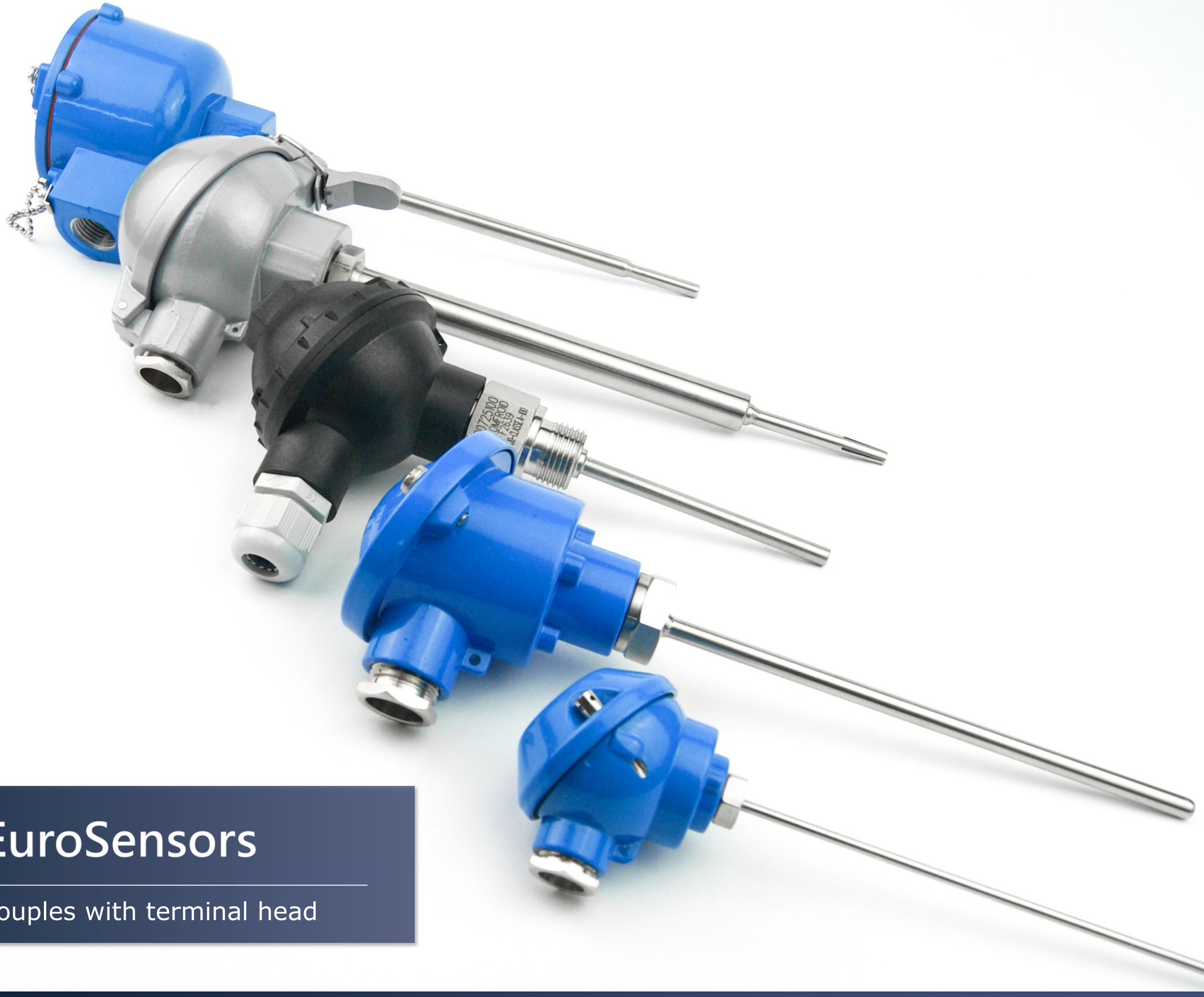

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Thermocouples with terminal head

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Thermocouples with terminal head - Technical information

Types of thermocouples

Thermocouples are adapted to specific applications depending on the temperature range to be measured, the accuracy required and the environment in which they will be used. They are differentiated by letters (Type K, J, N, T, etc.…) which correspond to the presence of materials that can measure a certain temperature range.

Type K NiCr-NiAl (NiCr-Ni)

Type J Fe-CuNi

Type N NiCrSi-NiSi

Type T Cu-Cuni

The most commonly used is the type K which is capable of measuring temperatures from - 40°C to + 1200°C. It is made from a chrome and an aluminum wire.

Thermocouple classes

Classes of thermocouples have certain tolerance values and temperature limits of validity. The most common classes are **class 1** and **class 2**.
With **class 1** you get more precise measurement values while **class 2** provides a wider tolerance values.

Types of terminal heads

Many alternative types of terminal head are available to meet the requirements of various applications. Variations exist in size, material, accommodation, resistance to media, resistance to fire or even explosion and in other parameters.
Common types are shown below but there are many special variants available to meet particular requirements.

What are terminal heads ?

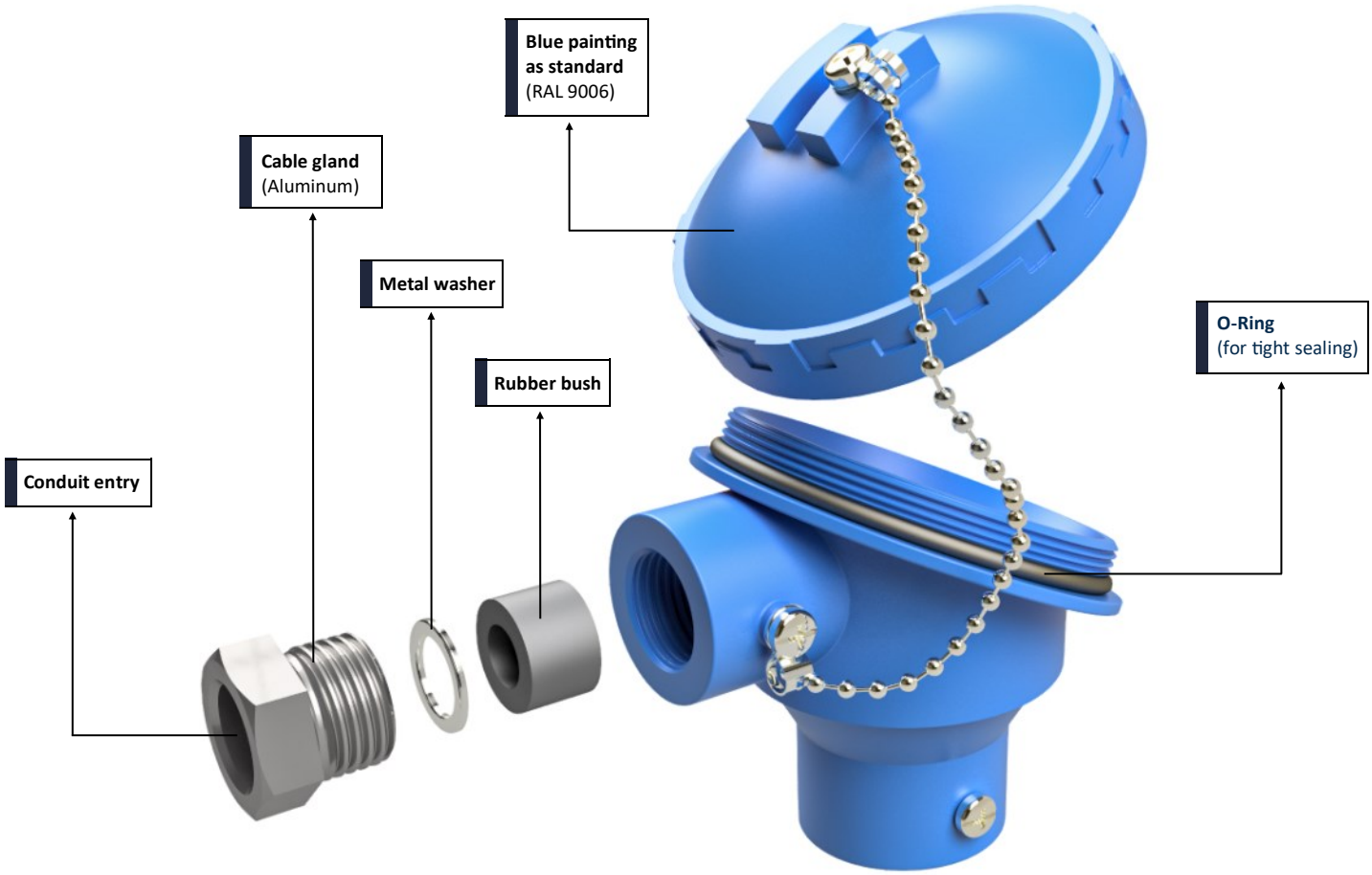
Terminal heads are a type of cold end termination which are common on industrial type temperature sensors. A temperature sensor will be encased in a ceramic or metal sheath which will be terminated at the cold end with a terminal head. Inside the head, terminal blocks or temperature transmitters are placed to carry the sensor signal to instrumentation.

These are protected from the external environment as terminal heads often provide good ingress protection (IP) and temperature protection. Most commonly terminal heads are made from aluminum but can be stainless steel, cast iron or plastic depending on the application. There are many standardized designs of head, the most common being KNE, ALA and BUZ.

Inside terminal head

Thermocouples with terminal head - Technical information

Terminal head component breakdown



What is a terminal block ?

Terminal block located in a “head” allow for the connection of extension wires. Various materials are used for screw or solder terminations including copper, plated brass and, for the best performance in the case of thermocouples, thermoelement alloys. The various head styles cater for a wide variety of probe diameters and cable entries.

Terminal blocks provide a secure and organized way to terminate multiple wires. The wires are inserted into a clamping mechanism that holds them in place, making it easier to manage and connect different wires within a circuit. Terminal blocks provide a convenient and secure way to connect thermocouple wires to the measuring instrument or control system when using thermocouples. Terminal blocks are available in 2, 3, 4, and 6 poles with center hole (spring loading).

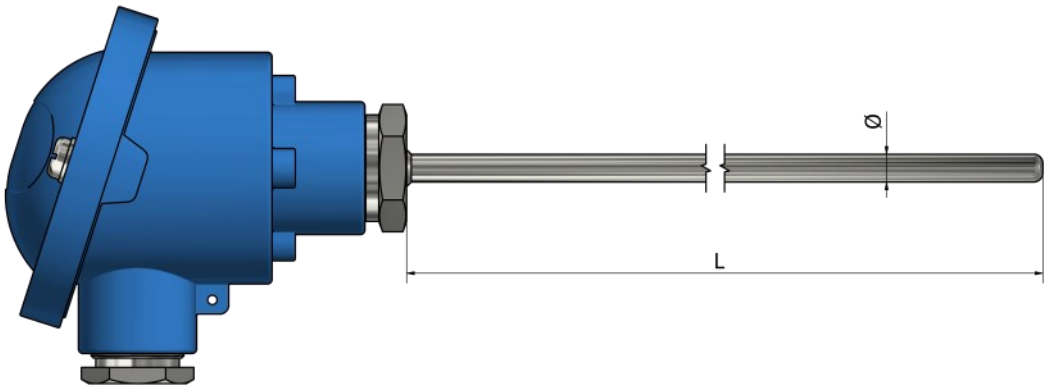
What is a temperature transmitter ?

A temperature transmitter is a device that converts the signal produced by a temperature sensor into a standard instrumentation signal representing a process variable temperature being measured and controlled. The most common transmitter instrumentation output signal is 4 to 20 mA. The signal from the temperature transmitter is sent to a controller that determines what action is required and generates an appropriate output signal.

Controllers are either a PLC or a DCS in process control today.

More on temperature transmitters and terminal blocks. See in the part ***“Accessories”.***

TH00 – Thermocouples with terminal head
Standard



*Tube material **Stainless steel 316L***

Ordering information

1. Thermocouple:
☐ Type K ☐ Type N ☐ Type J ☐ Type T ☐ Type E
☐ Type R ☐ Type S ☐ Type B ☐ Other:

2. Number of thermocouples: ☐ x 1 ☐ x 2

3. Class:
☐ Class 1 ☐ Class 2

4. Length L (mm):

5. Diameter Ø (mm):

6. Junction type:
☐ Ungrounded ☐ Grounded

7. Connection head: *(see the part "Accessories")*
☐ Type B ☐ Type DAN ☐ Type M ☐ Type N
☐ Type Ex ☐ Type NS ☐ Other:

8. Mounting:
☐ Wires ☐ Terminal block ☐ Transmitter (°C):
Specify temperature range

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

Quantity:

Note:

How to order?

Choose the desired characteristics of your sensor by marking the checkboxes and by filling up the text. You can provide sketches, images, personal notes, special requirements or any important data. For additional questions and assistance, feel free to contact us.

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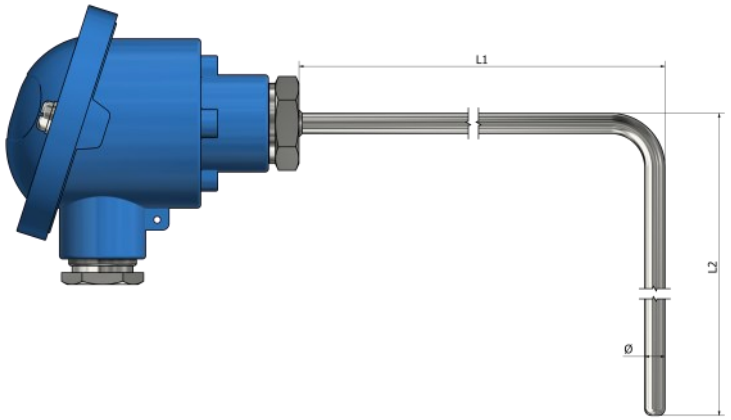
TH01 – Thermocouples with terminal head
Standard (90° bend)



*Tube material **Stainless steel 316L***

Ordering information

1. Thermocouple:

☐ Type K ☐ Type N ☐ Type J ☐ Type T ☐ Type E
☐ Type R ☐ Type S ☐ Type B ☐ Other:

2. Number of thermocouples: ☐ x 1 ☐ x 2

3. Class:

☐ Class 1 ☐ Class 2

4. Lengths L1 and L2 (mm):

L1 _____ L2 _____

5. Diameter Ø (mm):

6. Junction type:

☐ Ungrounded ☐ Grounded

7. Connection head: *(see the part "Accessories")*

☐ Type B ☐ Type DAN ☐ Type M ☐ Type N
☐ Type Ex ☐ Type NS ☐ Other:

8. Mounting:

☐ Wires ☐ Terminal block ☐ Transmitter (°C):
Specify temperature range

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

Quantity:

Note:

How to order?

Choose the desired characteristics of your sensor by marking the checkboxes and by filling up the text. You can provide sketches, images, personal notes, special requirements or any important data. For additional questions and assistance, feel free to contact us.

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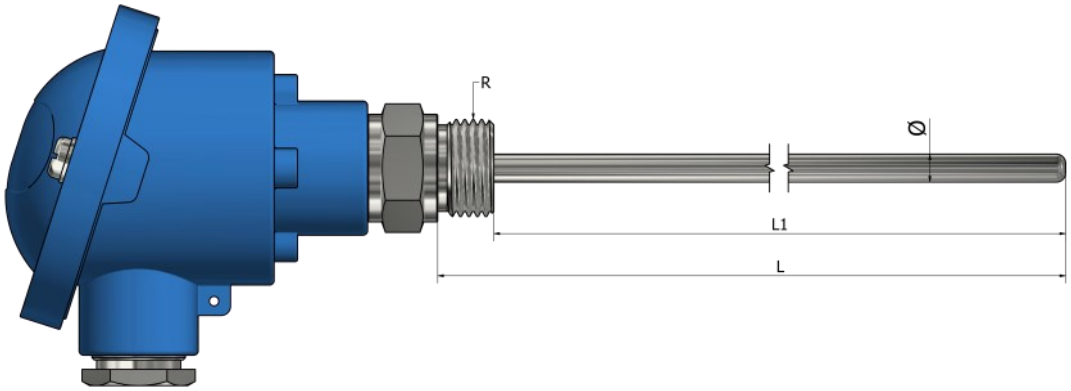
TH10 – Thermocouples with terminal head
Standard with fixed thread



Tube and thread material* ***Stainless steel 316L*

Ordering information

1. Thermocouple:
☐ Type K ☐ Type N ☐ Type J ☐ Type T ☐ Type E
☐ Type R ☐ Type S ☐ Type B ☐ Other:

2. Number of thermocouples: ☐ x 1 ☐ x 2

3. Class:
☐ Class 1 ☐ Class 2

4. Length L or L1 (mm):
L _____ L1 _____

5. Diameter Ø (mm):

6. Junction type:
☐ Ungrounded ☐ Grounded

7. Thread:
☐ 1/2" BSPP ☐ 1/4" BSPP ☐ 1/4" BSPT ☐ M10
☐ 1/2" NPT ☐ Other:

8. Connection head: *(see the part "Accessories")*
☐ Type B ☐ Type DAN ☐ Type M ☐ Type N
☐ Type Ex ☐ Type NS ☐ Other:

9. Mounting:
☐ Wires ☐ Terminal block ☐ Transmitter (°C):
Specify temperature range

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

Quantity:

Note:

How to order?

Choose the desired characteristics of your sensor by marking the checkboxes and by filling up the text. You can provide sketches, images, personal notes, special requirements or any important data. For additional questions and assistance, feel free to contact us.

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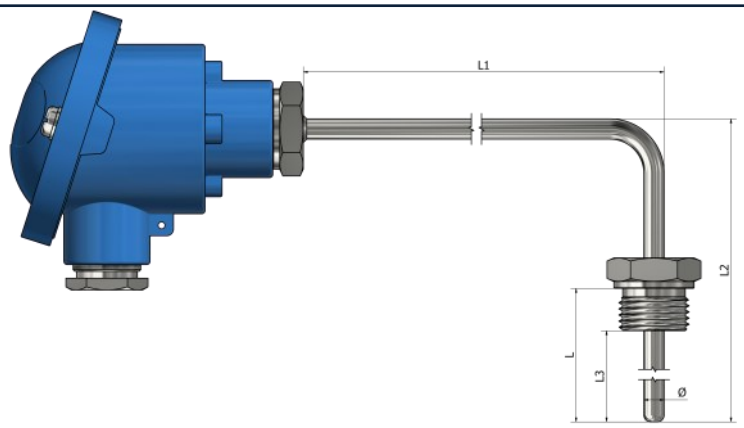
TH11 – Thermocouples with terminal head
Standard with fixed thread (90° bend) (type 1)



*Tube and thread material **Stainless steel 316L***

Ordering information

1. Thermocouple:
☐ Type K ☐ Type N ☐ Type J ☐ Type T ☐ Type E
☐ Type R ☐ Type S ☐ Type B ☐ Other:

2. Number of thermocouples: ☐ x 1 ☐ x 2

3. Class:
☐ Class 1 ☐ Class 2

4. Lengths L1 and L2 (mm):
L1 _____ L2 _____

5. Length L or L3 (mm):
L _____ L3 _____

6. Diameter Ø (mm):

7. Junction type:
☐ Ungrounded ☐ Grounded

8. Thread:
☐ 1/2'' BSPP ☐ 1/4'' BSPP ☐ 1/4'' BSPT ☐ M10
☐ 1/2'' NPT ☐ Other:

9. Connection head: *(see the part "Accessories")*
☐ Type B ☐ Type DAN ☐ Type M ☐ Type N
☐ Type Ex ☐ Type NS ☐ Other:

10. Mounting:
☐ Wires ☐ Terminal block ☐ Transmitter (°C):
Specify temperature range

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

Quantity:

Note:

How to order?

Choose the desired characteristics of your sensor by marking the checkboxes and by filling up the text. You can provide sketches, images, personal notes, special requirements or any important data. For additional questions and assistance, feel free to contact us.

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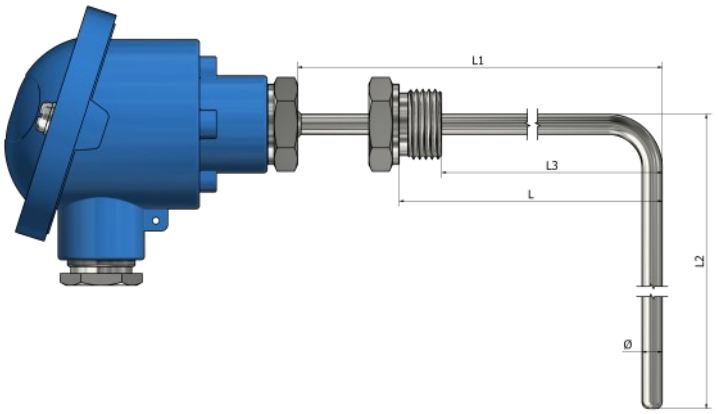
TH12 – Thermocouples with terminal head
Standard with fixed thread (90° bend) (type 2)



*Tube and thread material **Stainless steel 316L***

Ordering information

1. Thermocouple:
☐ Type K ☐ Type N ☐ Type J ☐ Type T ☐ Type E
☐ Type R ☐ Type S ☐ Type B ☐ Other:

2. Number of thermocouples: ☐ x 1 ☐ x 2

3. Class:
☐ Class 1 ☐ Class 2

4. Lengths L1 and L2 (mm):
L1 _____ L2 _____

5. Length L or L3 (mm):
L _____ L3 _____

6. Diameter Ø (mm):

7. Junction type:
☐ Ungrounded ☐ Grounded

8. Thread:
☐ 1/2'' BSPP ☐ 1/4'' BSPP ☐ 1/4'' BSPT ☐ M10
☐ 1/2'' NPT ☐ Other:

9. Connection head: *(see the part "Accessories")*
☐ Type B ☐ Type DAN ☐ Type M ☐ Type N
☐ Type Ex ☐ Type NS ☐ Other:

10. Mounting:
☐ Wires ☐ Terminal block ☐ Transmitter (°C):
Specify temperature range

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

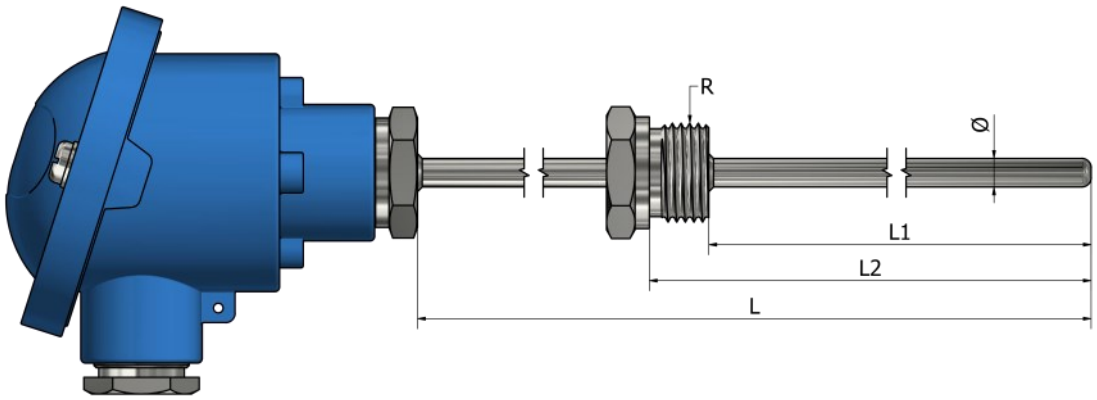
Quantity:

Note:

How to order?

Choose the desired characteristics of your sensor by marking the checkboxes and by filling up the text. You can provide sketches, images, personal notes, special requirements or any important data. For additional questions and assistance, feel free to contact us.

TH13 – Thermocouples with terminal head
Standard with fixed thread (offset)



Tube and thread material* ***Stainless steel 316L*

Ordering information

1. Thermocouple:
☐ Type K ☐ Type N ☐ Type J ☐ Type T ☐ Type E
☐ Type R ☐ Type S ☐ Type B ☐ Other:

2. Number of thermocouples: ☐ x 1 ☐ x 2

3. Class:
☐ Class 1 ☐ Class 2

4. Lengths L and L1 or L2 (mm):
L _____ L1 _____ L2 _____

5. Diameter Ø (mm):

6. Junction type:
☐ Ungrounded ☐ Grounded

7. Thread:
☐ 1/2'' BSPP ☐ 1/4'' BSPP ☐ 1/4'' BSPT ☐ M10
☐ 1/2'' NPT ☐ Other:

8. Connection head: *(see the part "Accessories")*
☐ Type B ☐ Type DAN ☐ Type M ☐ Type N
☐ Type Ex ☐ Type NS ☐ Other:

9. Mounting:
☐ Wires ☐ Terminal block ☐ Transmitter (°C):
Specify temperature range

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

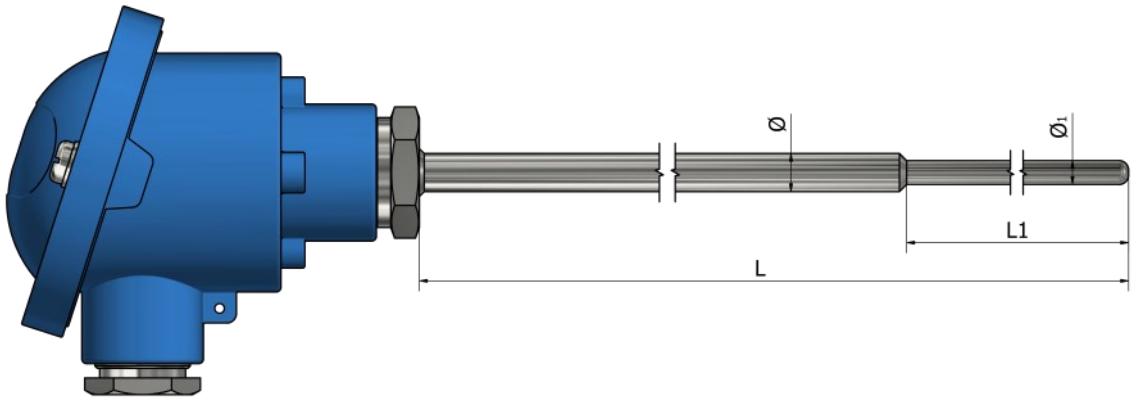
Quantity:

Note:

How to order?

Choose the desired characteristics of your sensor by marking the checkboxes and by filling up the text. You can provide sketches, images, personal notes, special requirements or any important data. For additional questions and assistance, feel free to contact us.

TH20 – Thermocouples with terminal head
Reduced tip



*Tube material **Stainless steel 316L***

Ordering information

1. Thermocouple:
☐ Type K ☐ Type N ☐ Type J ☐ Type T ☐ Type E
☐ Type R ☐ Type S ☐ Type B ☐ Other:

2. Number of thermocouples: ☐ x 1 ☐ x 2

3. Class:
☐ Class 1 ☐ Class 2

4. Dimensions L and Ø (mm):
L _____ Ø _____

5. Dimensions L1 and Ø1 (mm):
L1 _____ Ø1 _____

6. Junction type:
☐ Ungrounded ☐ Grounded

7. Connection head: *(see the part "Accessories")*
☐ Type B ☐ Type DAN ☐ Type M ☐ Type N
☐ Type Ex ☐ Type NS ☐ Other:

8. Mounting:
☐ Wires ☐ Terminal block ☐ Transmitter (°C):
Specify temperature range

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

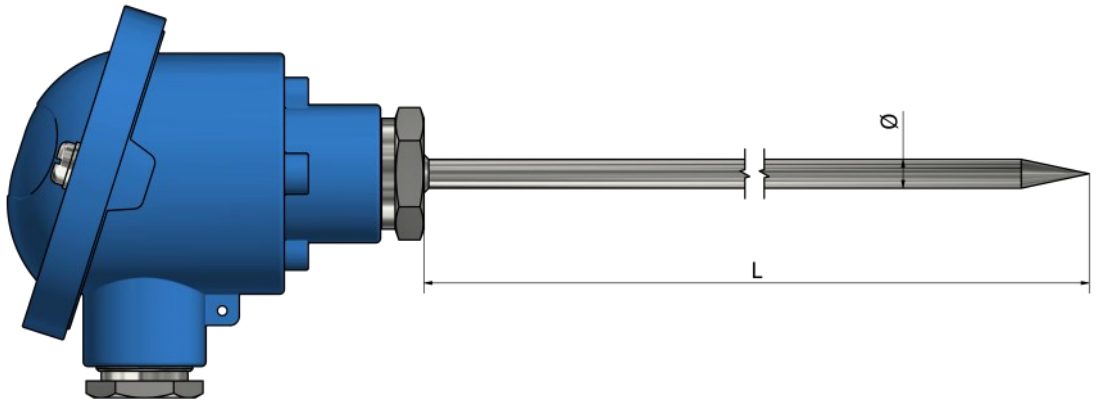
Quantity:

Note:

How to order?

Choose the desired characteristics of your sensor by marking the checkboxes and by filling up the text. You can provide sketches, images, personal notes, special requirements or any important data. For additional questions and assistance, feel free to contact us.

TH21 – Thermocouples with terminal head
Pointed tip



*Tube material **Stainless steel 316L***

Ordering information

1. Thermocouple:
☐ Type K ☐ Type N ☐ Type J ☐ Type T ☐ Type E
☐ Type R ☐ Type S ☐ Type B ☐ Other:

2. Number of thermocouples: ☐ x 1 ☐ x 2

3. Class:
☐ Class 1 ☐ Class 2

4. Length L (mm):

5. Diameter Ø (mm):

6. Junction type:
☐ Ungrounded ☐ Grounded

7. Connection head: *(see the part "Accessories")*
☐ Type B ☐ Type DAN ☐ Type M ☐ Type N
☐ Type Ex ☐ Type NS ☐ Other:

8. Mounting:
☐ Wires ☐ Terminal block ☐ Transmitter (°C):
Specify temperature range

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

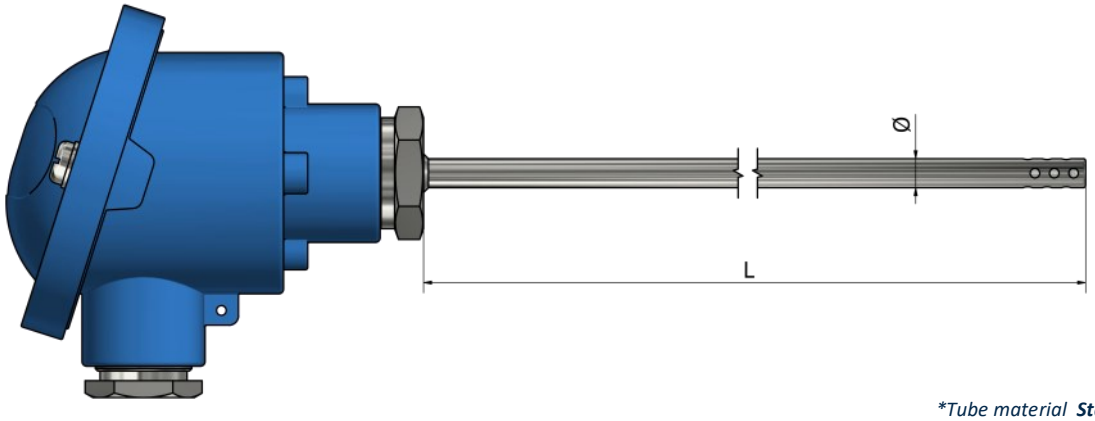
Quantity:

Note:

How to order?

Choose the desired characteristics of your sensor by marking the checkboxes and by filling up the text. You can provide sketches, images, personal notes, special requirements or any important data. For additional questions and assistance, feel free to contact us.

TH22 – Thermocouples with terminal head
Open air



*Tube material **Stainless steel 316L***

Ordering information

1. Thermocouple:
☐ Type K ☐ Type N ☐ Type J ☐ Type T ☐ Type E
☐ Type R ☐ Type S ☐ Type B ☐ Other:

2. Number of thermocouples: ☐ x 1 ☐ x 2

3. Class:
☐ Class 1 ☐ Class 2

4. Length L (mm):

5. Diameter Ø (mm):

6. Junction type: Ungrounded

7. Connection head: *(see the part "Accessories")*
☐ Type B ☐ Type DAN ☐ Type M ☐ Type N
☐ Type Ex ☐ Type NS ☐ Other:

8. Mounting:
☐ Wires ☐ Terminal block ☐ Transmitter (°C):
Specify temperature range

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

Quantity:

Note:

How to order?

Choose the desired characteristics of your sensor by marking the checkboxes and by filling up the text. You can provide sketches, images, personal notes, special requirements or any important data. For additional questions and assistance, feel free to contact us.

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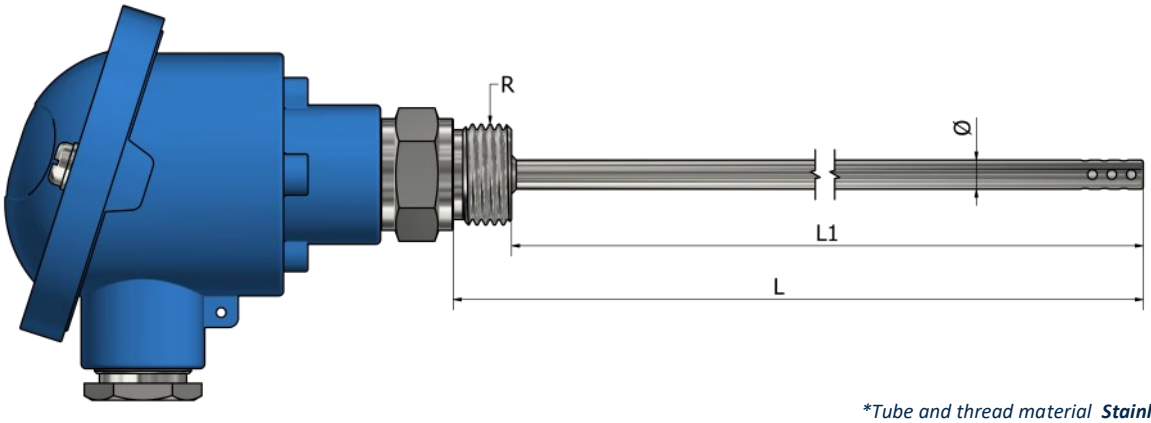
TH23 – Thermocouples with terminal head
Open air with fixed thread



Tube and thread material* ***Stainless steel 316L*

Ordering information

1. Thermocouple:
☐ Type K ☐ Type N ☐ Type J ☐ Type T ☐ Type E
☐ Type R ☐ Type S ☐ Type B ☐ Other:

2. Number of thermocouples: ☐ x 1 ☐ x 2

3. Class:
☐ Class 1 ☐ Class 2

4. Length L or L1 (mm):
L _____ L1 _____

5. Diameter Ø (mm):

6. Junction type: Ungrounded

7. Thread:
☐ 1/2'' BSPP ☐ 1/4'' BSPP ☐ 1/4'' BSPT ☐ M10
☐ 1/2'' NPT ☐ Other:

8. Connection head: *(see the part "Accessories")*
☐ Type B ☐ Type DAN ☐ Type M ☐ Type N
☐ Type Ex ☐ Type NS ☐ Other:

9. Mounting:
☐ Wires ☐ Terminal block ☐ Transmitter (°C):
Specify temperature range

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

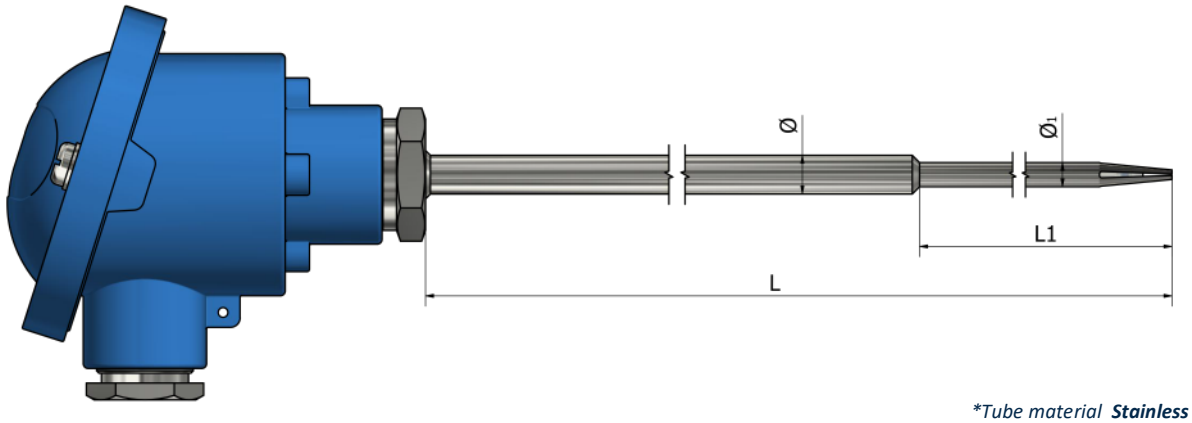
Quantity:

Note:

How to order?

Choose the desired characteristics of your sensor by marking the checkboxes and by filling up the text. You can provide sketches, images, personal notes, special requirements or any important data. For additional questions and assistance, feel free to contact us.

TH24 – Thermocouples with terminal head
Open air with reduced tip



*Tube material **Stainless steel 316L***

Ordering information

1. Thermocouple:
☐ Type K ☐ Type N ☐ Type J ☐ Type T ☐ Type E
☐ Type R ☐ Type S ☐ Type B ☐ Other:

2. Number of thermocouples: ☐ x 1 ☐ x 2

3. Class:
☐ Class 1 ☐ Class 2

4. Dimensions L and Ø (mm):
L _____ Ø _____

5. Dimensions L1 and Ø1 (mm):
L1 _____ Ø1 _____

6. Junction type: Ungrounded

7. Connection head: *(see the part "Accessories")*
☐ Type B ☐ Type DAN ☐ Type M ☐ Type N
☐ Type Ex ☐ Type NS ☐ Other:

8. Mounting:
☐ Wires ☐ Terminal block ☐ Transmitter (°C):
Specify temperature range

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

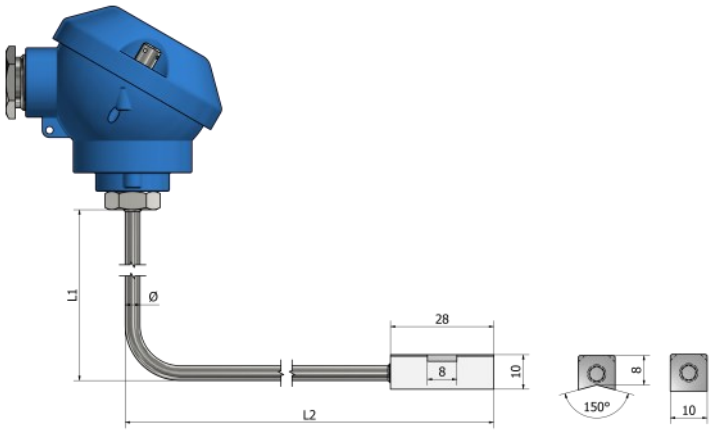
Quantity:

Note:

How to order?

Choose the desired characteristics of your sensor by marking the checkboxes and by filling up the text. You can provide sketches, images, personal notes, special requirements or any important data. For additional questions and assistance, feel free to contact us.

TH25 – Thermocouples with terminal head
Contact block (surface mount)



*Tube material **Stainless steel 316L***

Ordering information

1. Thermocouple:
☐ Type K ☐ Type N ☐ Type J ☐ Type T ☐ Type E
☐ Type R ☐ Type S ☐ Type B ☐ Other:

2. Number of thermocouples: ☐ x 1 ☐ x 2

3. Class:
☐ Class 1 ☐ Class 2

4. Lengths L1 and L2 (mm):
L1 _____ L2 _____

5. Diameter Ø (mm):

6. Junction type:
☐ Ungrounded ☐ Grounded

7. Connection head: *(see the part "Accessories")*
☐ Type B ☐ Type DAN ☐ Type M ☐ Type N
☐ Type Ex ☐ Type NS ☐ Other:

8. Mounting:
☐ Wires ☐ Terminal block ☐ Transmitter (°C):
Specify temperature range

9. Contact block material:
☐ Brass ☐ Aluminum ☐ Other:

10. Contact block shape:


☐ V-shape


☐ Flat

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

Quantity:

Note:

How to order?

Choose the desired characteristics of your sensor by marking the checkboxes and by filling up the text. You can provide sketches, images, personal notes, special requirements or any important data. For additional questions and assistance, feel free to contact us.

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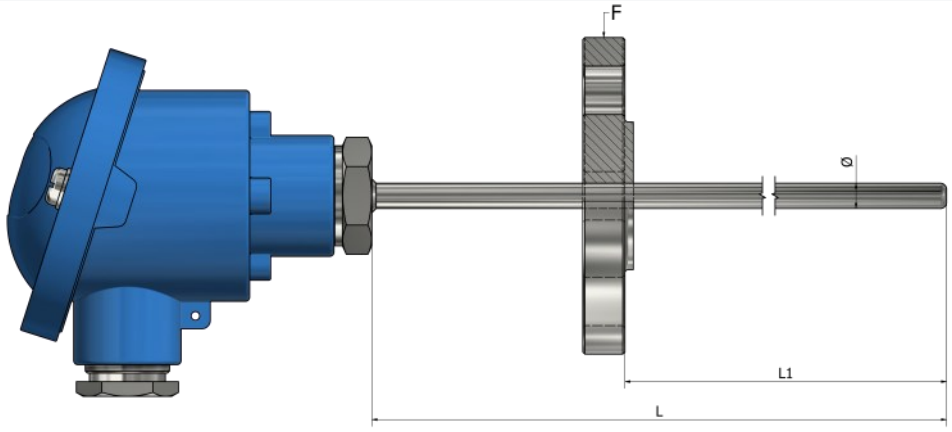
TH30 – Thermocouples with terminal head
Flange sanitary mounting



*Tube material **Stainless steel 316L***

Ordering information

1. Thermocouple:
☐ Type K ☐ Type N ☐ Type J ☐ Type T ☐ Type E
☐ Type R ☐ Type S ☐ Type B ☐ Other:

2. Number of thermocouples: ☐ x 1 ☐ x 2

3. Class:
☐ Class 1 ☐ Class 2

4. Dimensions L and L1 (mm):
L _____ L1 _____

5. Diameter Ø (mm):

6. Junction type:
☐ Ungrounded ☐ Grounded

7. Connection head: *(see the part "Accessories")*
☐ Type B ☐ Type DAN ☐ Type M ☐ Type N
☐ Type Ex ☐ Type NS ☐ Other:

8. Mounting:
☐ Wires ☐ Terminal block ☐ Transmitter (°C):
Specify temperature range

9. Flange sanitary mounting:
☐ DIN2527 (DN10 – PN6) ☐ Other:

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

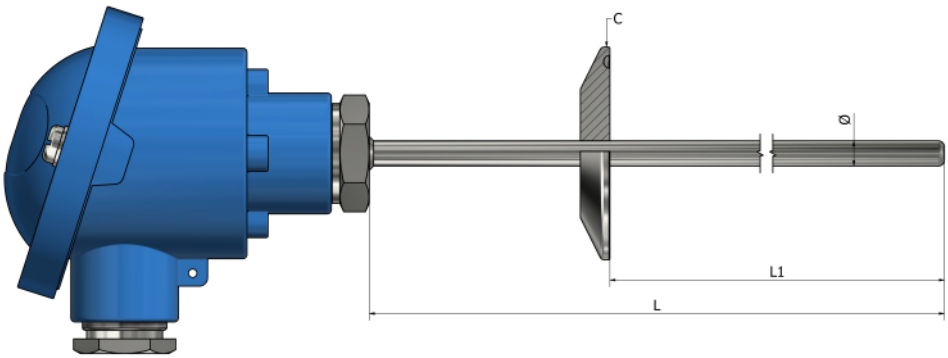
Quantity:

Note:

How to order?

Choose the desired characteristics of your sensor by marking the checkboxes and by filling up the text. You can provide sketches, images, personal notes, special requirements or any important data. For additional questions and assistance, feel free to contact us.

TH31 – Thermocouples with terminal head
Tri-clamp sanitary mounting



*Tube material **Stainless steel 316L***

Ordering information

1. Thermocouple:
☐ Type K ☐ Type N ☐ Type J ☐ Type T ☐ Type E
☐ Type R ☐ Type S ☐ Type B ☐ Other:

2. Number of thermocouples: ☐ x 1 ☐ x 2

3. Class:
☐ Class 1 ☐ Class 2

4. Dimensions L and L1 (mm):
L _____ L1 _____

5. Diameter Ø (mm):

6. Junction type:
☐ Ungrounded ☐ Grounded

7. Connection head: *(see the part "Accessories")*
☐ Type B ☐ Type DAN ☐ Type M ☐ Type N
☐ Type Ex ☐ Type NS ☐ Other:

8. Mounting:
☐ Wires ☐ Terminal block ☐ Transmitter (°C):
Specify temperature range

9. Tri-clamp sanitary mounting:
☐ DIN32676 / ISO 2852 (DN25) ☐ Other:

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

Quantity:

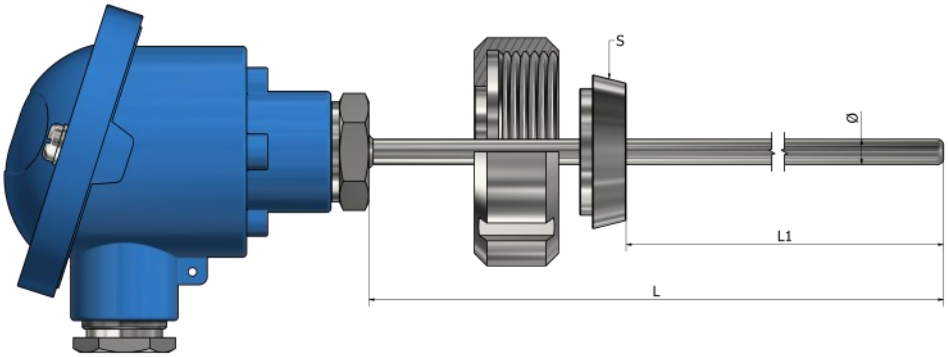
Note:

How to order?

Choose the desired characteristics of your sensor by marking the checkboxes and by filling up the text. You can provide sketches, images, personal notes, special requirements or any important data. For additional questions and assistance, feel free to contact us.

EuroSensors

TH32 – Thermocouples with terminal head
Disc DIN 11851 (screw-on) sanitary mounting



*Tube material **Stainless steel 316L***

Ordering information

1. Thermocouple:
☐ Type K ☐ Type N ☐ Type J ☐ Type T ☐ Type E
☐ Type R ☐ Type S ☐ Type B ☐ Other:

2. Number of thermocouples: ☐ x 1 ☐ x 2

3. Class:
☐ Class 1 ☐ Class 2

4. Dimensions L and L1 (mm):
L _____ L1 _____

5. Diameter Ø (mm):

6. Junction type:
☐ Ungrounded ☐ Grounded

7. Connection head: *(see the part "Accessories")*
☐ Type B ☐ Type DAN ☐ Type M ☐ Type N
☐ Type Ex ☐ Type NS ☐ Other:

8. Mounting:
☐ Wires ☐ Terminal block ☐ Transmitter (°C):
Specify temperature range

9. Disc DIN 11851 sanitary mounting:
☐ DIN 11851 (DN20) ☐ Other:

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

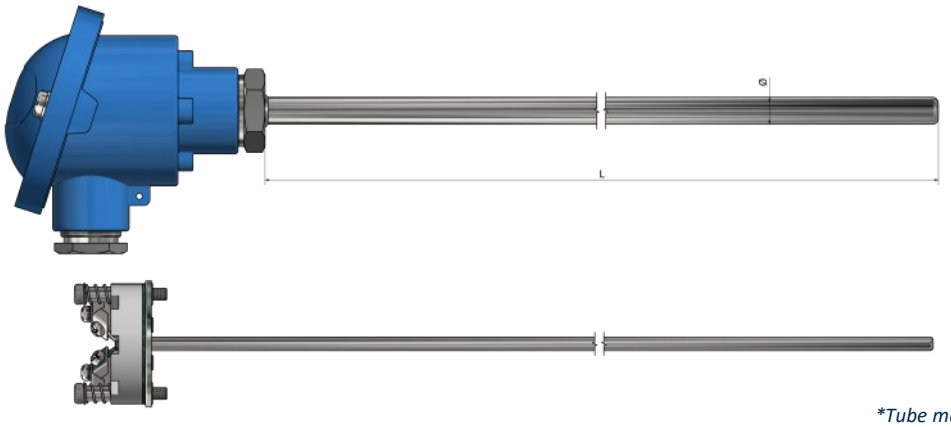
Quantity:

Note:

How to order?

Choose the desired characteristics of your sensor by marking the checkboxes and by filling up the text. You can provide sketches, images, personal notes, special requirements or any important data. For additional questions and assistance, feel free to contact us.

TH40 – Thermocouples with terminal head
Exchangeable insert



*Tube material **Stainless steel 316L***

Ordering information

1. Thermocouple:

☐ Type K ☐ Type N ☐ Type J ☐ Type T ☐ Type E
☐ Type R ☐ Type S ☐ Type B ☐ Other:

2. Number of thermocouples: ☐ x 1 ☐ x 2

3. Class:

☐ Class 1 ☐ Class 2

4. Length L (mm):

5. Diameter Ø (mm):

6. Junction type:

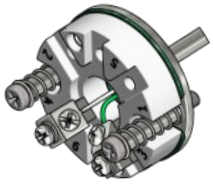
☐ Ungrounded ☐ Grounded

7. Connection head: *(see the part "Accessories")*

☐ Type B ☐ Type DAN ☐ Type M ☐ Type N
☐ Type Ex ☐ Type NS ☐ Other:

8. Type of exchangeable insert:

☐ Wires



☐ Terminal block

☐ Transmitter (°C):
T _____
Specify temperature range

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

Quantity:

Note:

How to order?

Choose the desired characteristics of your sensor by marking the checkboxes and by filling up the text. You can provide sketches, images, personal notes, special requirements or any important data. For additional questions and assistance, feel free to contact us.

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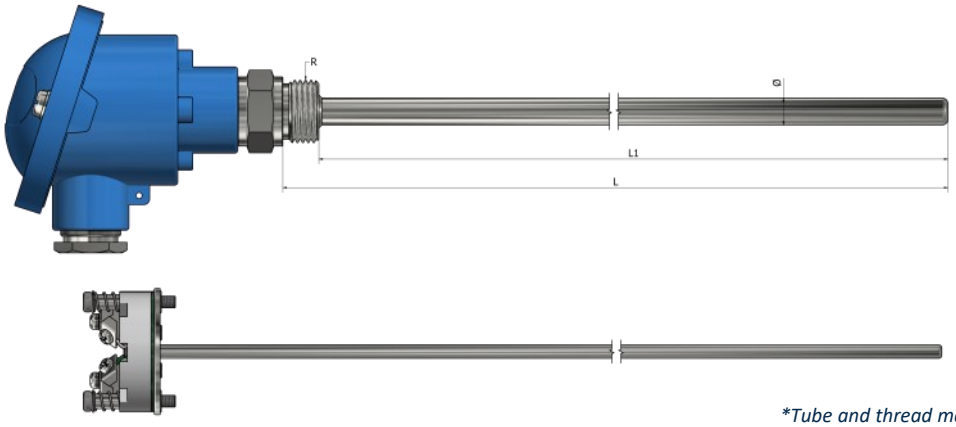
TH41 – Thermocouples with terminal head
Exchangeable insert with fixed thread



Tube and thread material* ***Stainless steel 316L*

Ordering information

1. Thermocouple:

☐ Type K ☐ Type N ☐ Type J ☐ Type T ☐ Type E
☐ Type R ☐ Type S ☐ Type B ☐ Other:

2. Number of thermocouples: ☐ x 1 ☐ x 2

3. Class:

☐ Class 1 ☐ Class 2

4. Length L or L1 (mm):

L _____ L1 _____

5. Diameter Ø (mm):

6. Junction type:

☐ Ungrounded ☐ Grounded

7. Thread:

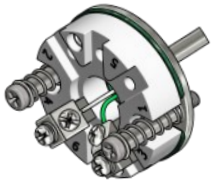
☐ 1/2'' BSPP ☐ 1/4'' BSPP ☐ 1/4'' BSPT ☐ M10
☐ 1/2'' NPT ☐ Other:

8. Connection head: *(see the part "Accessories")*

☐ Type B ☐ Type DAN ☐ Type M ☐ Type N
☐ Type Ex ☐ Type NS ☐ Other:

9. Type of exchangeable insert:


☐ Wires


☐ Terminal block


☐ Transmitter (°C):
T _____
Specify temperature range

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

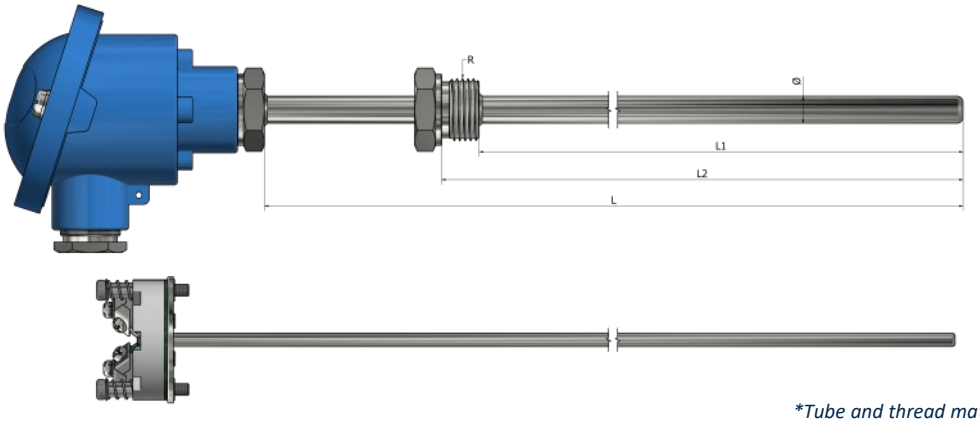
Quantity:

Note:

How to order?

Choose the desired characteristics of your sensor by marking the checkboxes and by filling up the text. You can provide sketches, images, personal notes, special requirements or any important data. For additional questions and assistance, feel free to contact us.

TH42 – Thermocouples with terminal head
Exchangeable insert with fixed thread (offset)



Tube and thread material* ***Stainless steel 316L*

Ordering information

1. Thermocouple:

☐ Type K ☐ Type N ☐ Type J ☐ Type T ☐ Type E
☐ Type R ☐ Type S ☐ Type B ☐ Other:

2. Number of thermocouples: ☐ x 1 ☐ x 2

3. Class:

☐ Class 1 ☐ Class 2

4. Lengths L, L1, L2 (mm):

L _____ L1 _____ L2 _____

5. Diameter Ø (mm):

6. Junction type:

☐ Ungrounded ☐ Grounded

7. Thread:

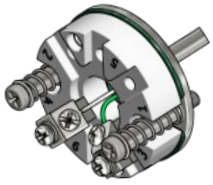
☐ 1/2" BSPP ☐ 1/4" BSPP ☐ 1/4" BSPT ☐ M10
☐ 1/2" NPT ☐ Other:

8. Connection head: *(see the part "Accessories")*

☐ Type B ☐ Type DAN ☐ Type M ☐ Type N
☐ Type Ex ☐ Type NS ☐ Other:

9. Type of exchangeable insert:

☐ Wires



☐ Terminal block

☐ Transmitter (°C):
T _____
Specify temperature range

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

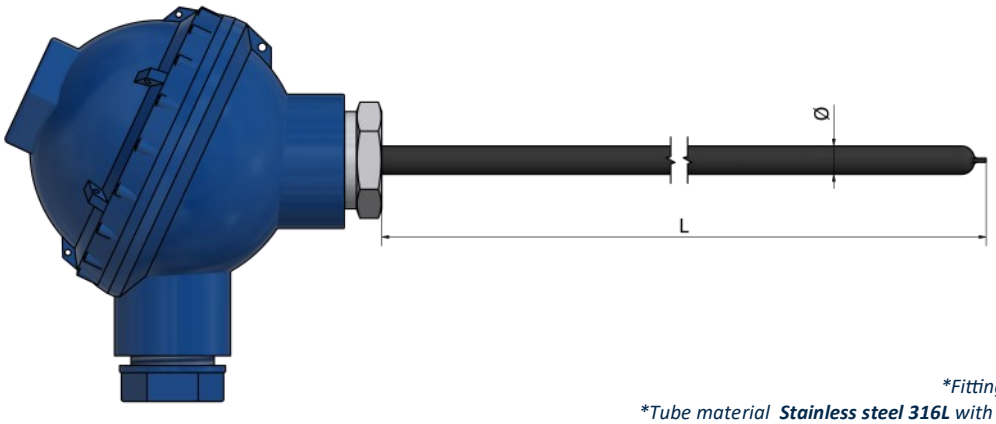
Quantity:

Note:

How to order?

Choose the desired characteristics of your sensor by marking the checkboxes and by filling up the text. You can provide sketches, images, personal notes, special requirements or any important data. For additional questions and assistance, feel free to contact us.

TH50 – Thermocouples with terminal head
For aggressive environments



Fitting material* ***PTFE* *(260°C)*
Tube material* ***Stainless steel 316L* *with* ***PTFE*** *protection (260°C)*

Ordering information

1. Thermocouple:
☐ Type K ☐ Type N ☐ Type J ☐ Type T ☐ Type E
☐ Type R ☐ Type S ☐ Type B ☐ Other:

2. Number of thermocouples: ☐ x 1 ☐ x 2

3. Class:
☐ Class 1 ☐ Class 2

4. Length L (mm):

5. Diameter Ø (mm):

6. Junction type:
☐ Ungrounded ☐ Grounded

7. Connection head: *(see the part "Accessories")*
☐ Type B ☐ Type DAN ☐ Type M ☐ Type N
☐ Type Ex ☐ Type NS ☐ Other:

8. Mounting:
☐ Wires ☐ Terminal block ☐ Transmitter (°C):
Specify temperature range

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

Quantity:

Note:

How to order?

Choose the desired characteristics of your sensor by marking the checkboxes and by filling up the text. You can provide sketches, images, personal notes, special requirements or any important data. For additional questions and assistance, feel free to contact us.

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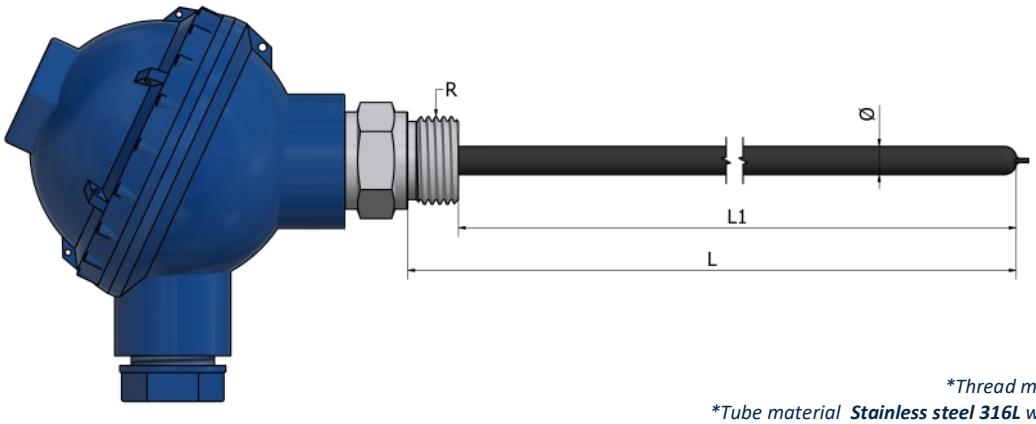
TH51 – Thermocouples with terminal head
For aggressive environments with fixed thread



Thread material **PTFE (260°C)*
Tube material **Stainless steel 316L with **PTFE** protection*

Ordering information

1. Thermocouple:
☐ Type K ☐ Type N ☐ Type J ☐ Type T ☐ Type E
☐ Type R ☐ Type S ☐ Type B ☐ Other:

2. Number of thermocouples: ☐ x 1 ☐ x 2

3. Class:
☐ Class 1 ☐ Class 2

4. Length L or L1 (mm):
L _____ L1 _____

5. Diameter Ø (mm):

6. Junction type:
☐ Ungrounded ☐ Grounded

7. Thread:
☐ 1/2'' BSPP ☐ 1/4'' BSPP ☐ 1/4'' BSPT ☐ M10
☐ 1/2'' NPT ☐ Other:

8. Connection head: *(see the part "Accessories")*
☐ Type B ☐ Type DAN ☐ Type M ☐ Type N
☐ Type Ex ☐ Type NS ☐ Other:

9. Mounting:
☐ Wires ☐ Terminal block ☐ Transmitter (°C):
Specify temperature range

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

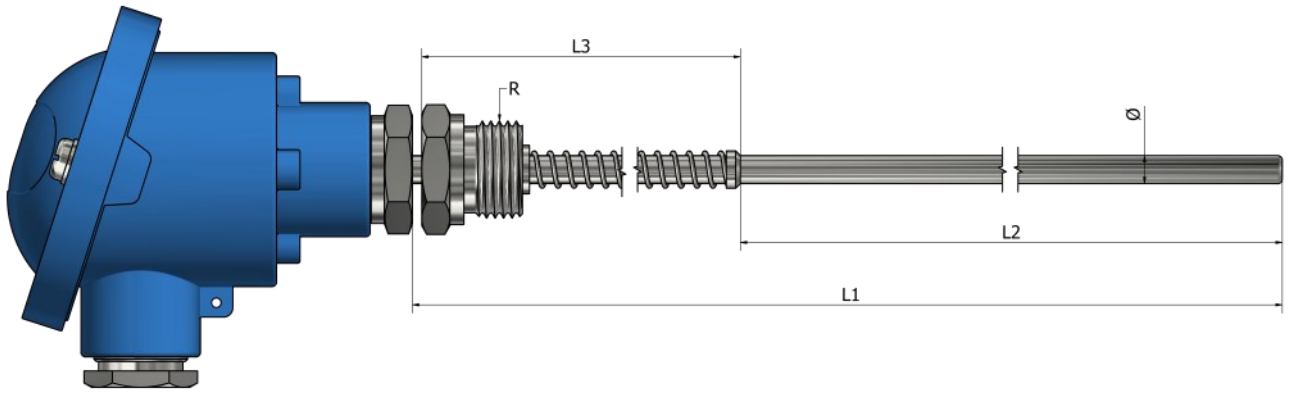
Quantity:

Note:

How to order?

Choose the desired characteristics of your sensor by marking the checkboxes and by filling up the text. You can provide sketches, images, personal notes, special requirements or any important data. For additional questions and assistance, feel free to contact us.

TH60 – Thermocouples with terminal head
Spring loaded



Tube and thread material* ***Stainless steel 316L*

Ordering information

1. Thermocouple:
☐ Type K ☐ Type N ☐ Type J ☐ Type T ☐ Type E
☐ Type R ☐ Type S ☐ Type B ☐ Other:

2. Number of thermocouples: ☐ x 1 ☐ x 2

3. Class:
☐ Class 1 ☐ Class 2

4. Lengths L1, L2, L3 (mm):
L1 _____ L2 _____ L3 _____

5. Diameter Ø (mm):

6. Junction type:
☐ Ungrounded ☐ Grounded

7. Thread:
☐ 1/2'' BSPP ☐ 1/4'' BSPP ☐ 1/4'' BSPT ☐ M10
☐ 1/2'' NPT ☐ Other:

8. Connection head: *(see the part "Accessories")*
☐ Type B ☐ Type DAN ☐ Type M ☐ Type N
☐ Type Ex ☐ Type NS ☐ Other:

9. Mounting:
☐ Wires ☐ Terminal block ☐ Transmitter (°C):
Specify temperature range

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

Quantity:

Note:

How to order?

Choose the desired characteristics of your sensor by marking the checkboxes and by filling up the text. You can provide sketches, images, personal notes, special requirements or any important data. For additional questions and assistance, feel free to contact us.

TI00 – Thermocouples with terminal head
Disc plate insert

*Tube material **Stainless steel 316L***

Ordering information

1. Thermocouple:
☐ Type K ☐ Type N ☐ Type J ☐ Type T ☐ Type E
☐ Type R ☐ Type S ☐ Type B ☐ Other:

2. Number of thermocouples: ☐ x 1 ☐ x 2

3. Class:
☐ Class 1 ☐ Class 2

4. Sheath length L (mm):

5. Diameter Ø (mm):

6. Junction type:
☐ Ungrounded ☐ Grounded

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

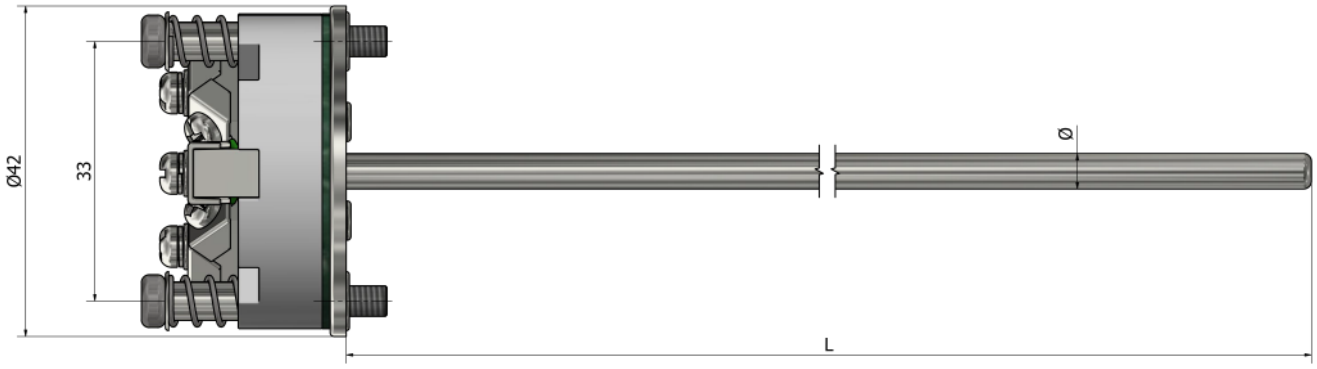
Quantity:

Note:

How to order?

Choose the desired characteristics of your sensor by marking the checkboxes and by filling up the text. You can provide sketches, images, personal notes, special requirements or any important data. For additional questions and assistance, feel free to contact us.

TI01 – Thermocouples with terminal head
Insert with terminal block (spring loaded)



*Tube material **Stainless steel 316L***

Ordering information

1. Thermocouple:
☐ Type K ☐ Type N ☐ Type J ☐ Type T ☐ Type E
☐ Type R ☐ Type S ☐ Type B ☐ Other:

2. Number of thermocouples: ☐ x 1 ☐ x 2

3. Class:
☐ Class 1 ☐ Class 2

4. Sheath length L (mm):

5. Diameter Ø (mm):

6. Junction type:
☐ Ungrounded ☐ Grounded

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

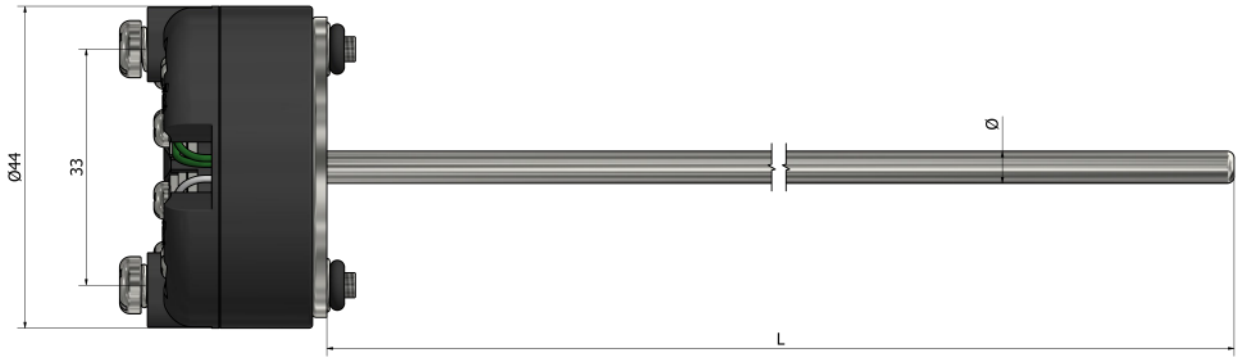
Quantity:

Note:

How to order?

Choose the desired characteristics of your sensor by marking the checkboxes and by filling up the text. You can provide sketches, images, personal notes, special requirements or any important data. For additional questions and assistance, feel free to contact us.

TI02 – Thermocouples with terminal head
Insert with transmitter block (spring loaded)



*Tube material **Stainless steel 316L***

Ordering information

1. Thermocouple:
☐ Type K ☐ Type N ☐ Type J ☐ Type T ☐ Type E
☐ Type R ☐ Type S ☐ Type B ☐ Other:

2. Number of thermocouples: ☐ x 1 ☐ x 2

3. Class:
☐ Class 1 ☐ Class 2

4. Sheath length L (mm):

5. Diameter Ø (mm):

6. Junction type:
☐ Ungrounded ☐ Grounded

7. Transmitter (°C):
Specify temperature range

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

Quantity:

Note:

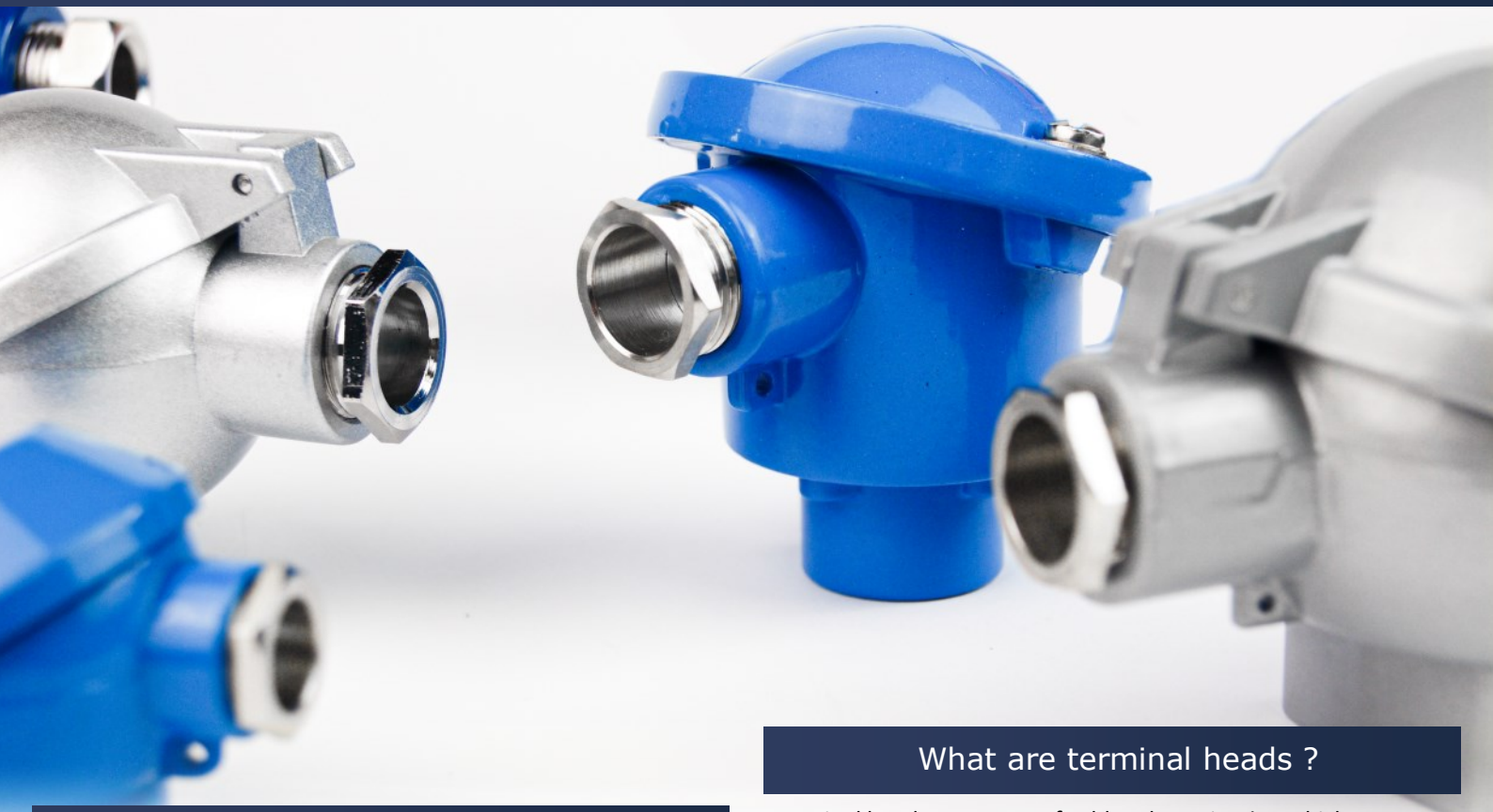
How to order?

Choose the desired characteristics of your sensor by marking the checkboxes and by filling up the text. You can provide sketches, images, personal notes, special requirements or any important data. For additional questions and assistance, feel free to contact us.

EuroSensors

RTDs with terminal head

RTDs with terminal head - Technical information



What is an RTD sensor ?

An RTD (Resistance Temperature Detector) is a type of sensor used to measure temperature.
RTDs are used for accurate, stable and reliable temperature measurements in generally high temperature ranges.

How does an RTD work ?

An RTD is a sensor that measures temperature using the variation of the electrical resistance of a conductive material. RTDs are usually made from platinum, gold or nickel. The operating principle of RTDs is based on Ohm's law of electrical resistance, which establishes a relationship between the electrical resistance of a conductor and its temperature.

According to this law, the electrical resistance of a conductor generally increases when its temperature increases.

Types of terminal heads

Many alternative types of terminal head are available to meet the requirements of various applications. Variations exist in size, material, accommodation, resistance to media, resistance to fire or even explosion and in other parameters.
Common types are shown below but there are many special variants available to meet particular requirements.

What are terminal heads ?

Terminal heads are a type of cold end termination which are common on industrial type temperature sensors. A temperature sensor will be encased in a ceramic or metal sheath which will be terminated at the cold end with a terminal head. Inside the head, terminal blocks or temperature transmitters are placed to carry the sensor signal to instrumentation.

These are protected from the external environment as terminal heads often provide good ingress protection (IP) and temperature protection. Most commonly terminal heads are made from aluminum but can be stainless steel, cast iron or plastic depending on the application. There are many standardized designs of head, the most common being KNE, ALA and BUZ.

Inside terminal head

RTDs with terminal head - Technical information

RTDs advantages

RTDs have several advantages over other types of temperature sensors:

High precision

RTDs have high temperature sensitivity, typically in the range of 0.1 to 0.2% per °C, allowing for accurate temperature measurement.

Long term stability

RTDs have long-term stability and longer life than thermistors, making them more reliable for long-term applications.

Wide operating temperature range

RTDs can operate in a temperature range of -200 to +850°C, making them suitable for many industrial applications.

Low ohmic resistance

RTDs have a low ohmic resistance compared to thermistors, which makes them easier to use with electronic circuits.

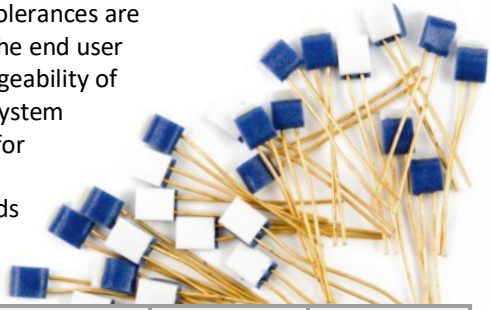
What is a PT probe ?

A PT (Platinum Resistance Thermometer) is a type of temperature sensor that uses a temperature deflection resistor (RTD) to measure temperature. It is based on the principle that the electrical resistance of a conductive material increases when its temperature increases.

Pt-s classes

Tolerances of Pt-s sensors can be tailored to customer specifics and thus manufactured to different tolerances. The higher the tolerance the smaller the margin of error relative to lower tolerances.

A system where these tolerances are classified is helpful for the end user and helps the interchangeability of these sensors. The IEC system is seen as the standard for the industry although there are other standards and other tolerance classes.



IEC Standard	DIN4370	Temperature Range ºC	Tolerance Ω at 0ºC	Tolerance ºC
W0.03	1/10 DIN	-100 to 350	100±0.012 Ω	±0.03 °C
/	1/5 DIN	-100 to 350	100±0.024 Ω	±0.06 °C
W0.1	1/3 DIN	-100 to 350	100±0.04 Ω	±0.10 °C
W0.15	Class A	-100 to 450	100±0.06 Ω	±0.15 °C
W0.3	Class B	-196 to 660	100±0.12 Ω	±0.30 °C

Understanding the naming of Pt100, PT500 and PT1000 sensors

First of all, "Pt" is the chemical symbol for platinum because platinum is the basic material for making the measuring element. The naming conventions of P100, PT500, and PT1000 sensors are closely tied to the nominal resistance values they exhibit at 0°C. P100 sensor has a nominal resistance of 100 Ω at 0°C, Pt500 sensor has a nominal resistance of 500 Ω at 0°C and Pt1000 sensor has a nominal resistance of 1000 Ω at 0°C. Understanding the meaning behind these designations allows us to discern their specific characteristics and applications.

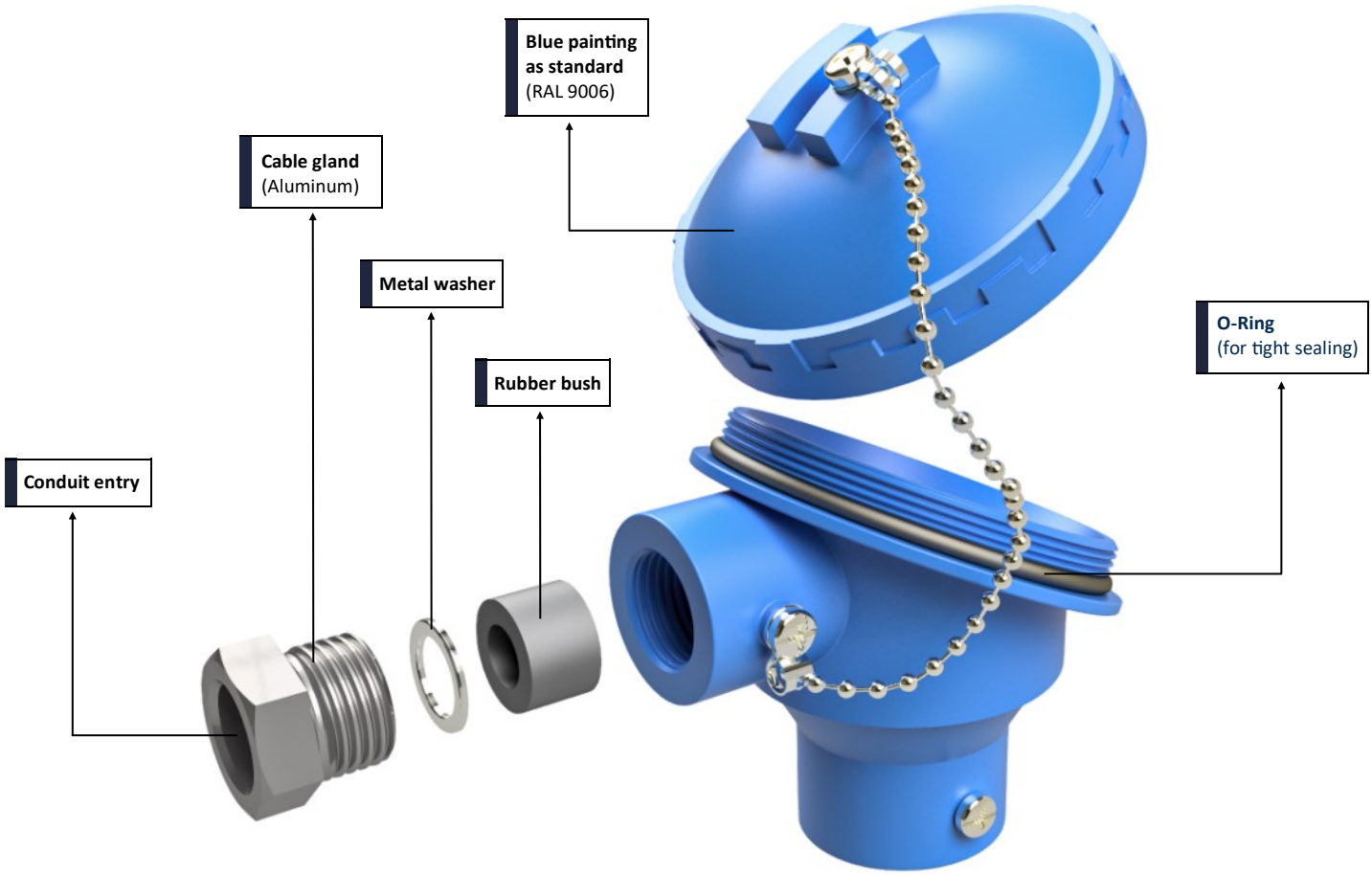
Whether you require a standard PT100 sensor or a higher resistance variant like PT500 or PT1000, these RTD sensors provide reliable and accurate temperature measurements in a wide range of industries and applications.

Pt-s wiring configurations

The cable has certain resistance which adds to the RTD resistance. Thus, the total resistance is the sum of the RTD resistance and the lead wire resistance. This causes more voltage drop across the RTD measurement system and as a result causes inaccuracy in measurement. This is the reason why we use 2 wire, 3 wire, and 4 wire RTD configurations.

RTDs with terminal head - Technical information

Terminal head component breakdown



What is a terminal block ?

Terminal block located in a “head” allow for the connection of extension wires. Various materials are used for screw or solder terminations including copper, plated brass and, for the best performance in the case of thermocouples, thermoelement alloys. The various head styles cater for a wide variety of probe diameters and cable entries.

Terminal blocks provide a secure and organized way to terminate multiple wires. The wires are inserted into a clamping mechanism that holds them in place, making it easier to manage and connect different wires within a circuit. Terminal blocks provide a convenient and secure way to connect thermocouple wires to the measuring instrument or control system when using thermocouples. Terminal blocks are available in 2, 3, 4, and 6 poles with center hole (spring loading).

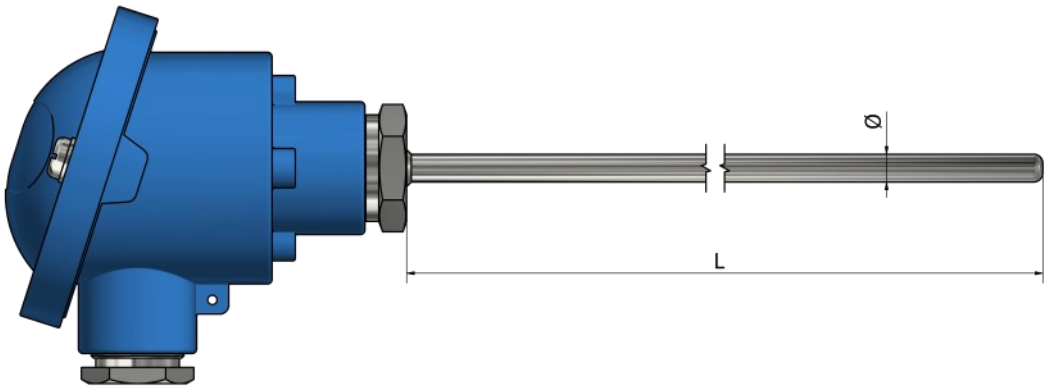
What is a temperature transmitter ?

A temperature transmitter is a device that converts the signal produced by a temperature sensor into a standard instrumentation signal representing a process variable temperature being measured and controlled. The most common transmitter instrumentation output signal is 4 to 20 mA. The signal from the temperature transmitter is sent to a controller that determines what action is required and generates an appropriate output signal.

Controllers are either a PLC or a DCS in process control today.

More on temperature transmitters and terminal blocks. See in the part ***“Accessories”.***

PH00 – RTDs with terminal head
Standard



*Tube material **Stainless steel 316L***

Ordering information

1. Element type:

☐ Pt 100 ☐ Pt 500 ☐ Pt 1000

☐ Other:

2. Element class:

☐ A ☐ B ☐ Other:

3. Number of sensor elements: ☐ x 1 ☐ x 2

4. Wiring configuration: *(number of wires per element)*

☐ 2 ☐ 3 ☐ 4

5. Length L (mm):

6. Diameter Ø (mm):

7. Connection head: *(see the part "Accessories")*

☐ Type B ☐ Type DAN ☐ Type M ☐ Type N

☐ Type Ex ☐ Type NS ☐ Other:

8. Mounting:

☐ Wires ☐ Terminal block ☐ Transmitter (°C):
Specify temperature range

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

Quantity:

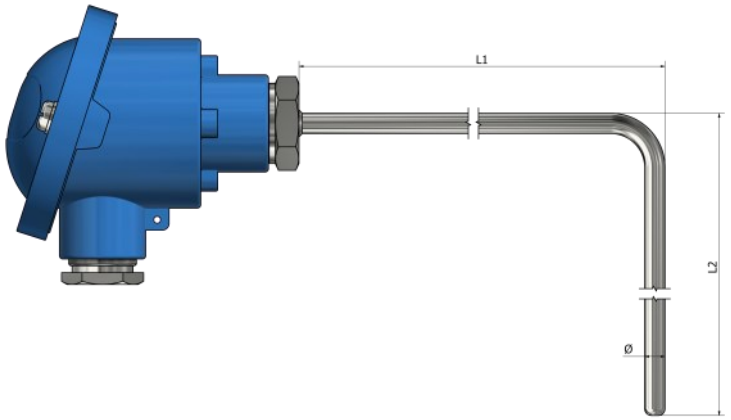
Note:

How to order?

Choose the desired characteristics of your sensor by marking the checkboxes and by filling up the text. You can provide sketches, images, personal notes, special requirements or any important data. For additional questions and assistance, feel free to contact us.

EuroSensors

PH01 – RTDs with terminal head
Standard (90° bend)



*Tube material **Stainless steel 316L***

Ordering information

1. Element type:

☐ Pt 100 ☐ Pt 500 ☐ Pt 1000

☐ Other:

2. Element class:

☐ A ☐ B ☐ Other:

3. Number of sensor elements: ☐ x 1 ☐ x 2

4. Wiring configuration: *(number of wires per element)*

☐ 2 ☐ 3 ☐ 4

5. Lengths L1 and L2 (mm):

L1 _____ L2 _____

6. Diameter Ø (mm):

7. Connection head: *(see the part "Accessories")*

☐ Type B ☐ Type DAN ☐ Type M ☐ Type N

☐ Type Ex ☐ Type NS ☐ Other:

8. Mounting:

☐ Wires ☐ Terminal block ☐ Transmitter (°C):
Specify temperature range

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

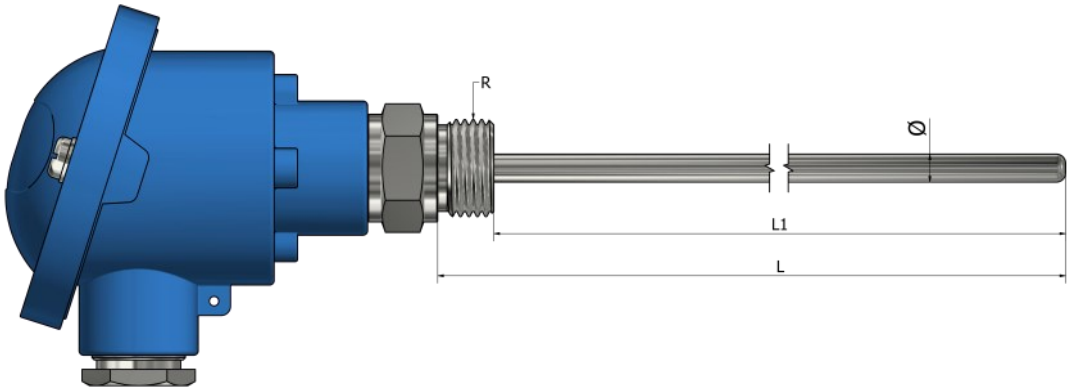
Quantity:

Note:

How to order?

Choose the desired characteristics of your sensor by marking the checkboxes and by filling up the text. You can provide sketches, images, personal notes, special requirements or any important data. For additional questions and assistance, feel free to contact us.

PH10 – RTDs with terminal head
Standard with fixed thread



Tube and thread material* ***Stainless steel 316L*

Ordering information

1. Element type:
☐ Pt 100 ☐ Pt 500 ☐ Pt 1000
☐ Other:

2. Element class:
☐ A ☐ B ☐ Other:

3. Number of sensor elements: ☐ x 1 ☐ x 2

4. Wiring configuration: *(number of wires per element)*
☐ 2 ☐ 3 ☐ 4

5. Length L or L1 (mm):
L _____ L1 _____

6. Diameter Ø (mm):

7. Thread:
☐ 1/2'' BSPP ☐ 1/4'' BSPP ☐ 1/4'' BSPT ☐ M10
☐ 1/2'' NPT ☐ Other:

8. Connection head: *(see the part "Accessories")*
☐ Type B ☐ Type DAN ☐ Type M ☐ Type N
☐ Type Ex ☐ Type NS ☐ Other:

9. Mounting:
☐ Wires ☐ Terminal block ☐ Transmitter (°C):
Specify temperature range

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

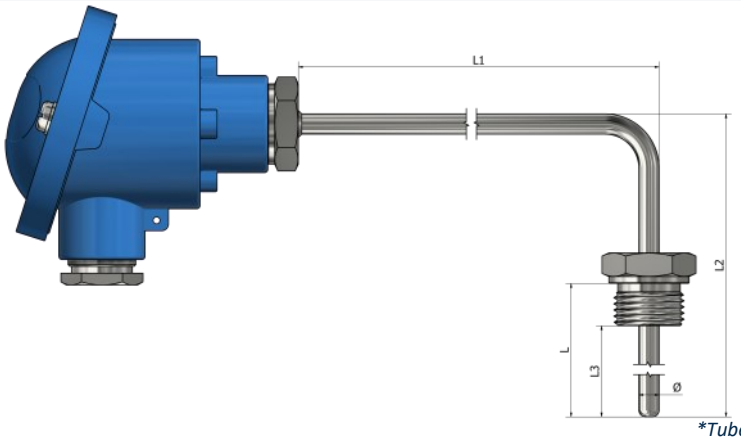
Quantity:

Note:

How to order?

Choose the desired characteristics of your sensor by marking the checkboxes and by filling up the text. You can provide sketches, images, personal notes, special requirements or any important data. For additional questions and assistance, feel free to contact us.

PH11 – RTDs with terminal head
Standard with fixed thread (90° bend) (type 1)



*Tube and thread material **Stainless steel 316L***

Ordering information

1. Element type:
☐ Pt 100 ☐ Pt 500 ☐ Pt 1000
☐ Other:

2. Element class:
☐ A ☐ B ☐ Other:

3. Number of sensor elements: ☐ x 1 ☐ x 2

4. Wiring configuration: *(number of wires per element)*
☐ 2 ☐ 3 ☐ 4

5. Lengths L1 and L2 (mm):
L1 _____ L2 _____

6. Length L or L3 (mm):
L _____ L3 _____

7. Diameter Ø (mm):

8. Thread:
☐ 1/2'' BSPP ☐ 1/4'' BSPP ☐ 1/4'' BSPT ☐ M10
☐ 1/2'' NPT ☐ Other:

9. Connection head: *(see the part "Accessories")*
☐ Type B ☐ Type DAN ☐ Type M ☐ Type N
☐ Type Ex ☐ Type NS ☐ Other:

10. Mounting:
☐ Wires ☐ Terminal block ☐ Transmitter (°C):
Specify temperature range

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

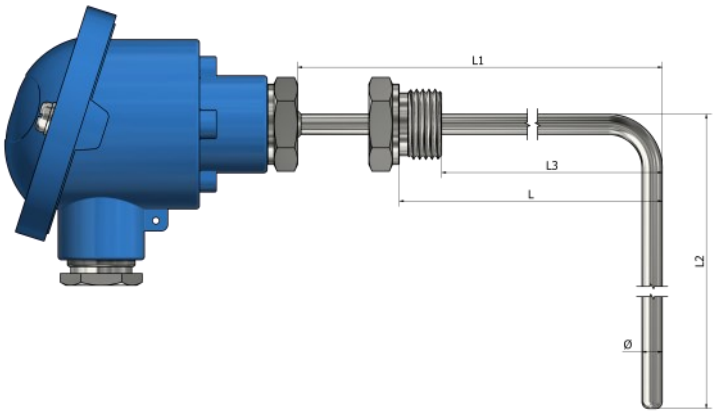
Quantity:

Note:

How to order?

Choose the desired characteristics of your sensor by marking the checkboxes and by filling up the text. You can provide sketches, images, personal notes, special requirements or any important data. For additional questions and assistance, feel free to contact us.

PH12 – RTDs with terminal head
Standard with fixed thread (90° bend) (type 2)



*Tube and thread material **Stainless steel 316L***

Ordering information

1. Element type:
☐ Pt 100 ☐ Pt 500 ☐ Pt 1000
☐ Other:

2. Element class:
☐ A ☐ B ☐ Other:

3. Number of sensor elements: ☐ x 1 ☐ x 2

4. Wiring configuration: *(number of wires per element)*
☐ 2 ☐ 3 ☐ 4

5. Lengths L1 and L2 (mm):
L1 _____ L2 _____

6. Length L or L3 (mm):
L _____ L3 _____

7. Diameter Ø (mm):

8. Thread:
☐ 1/2'' BSPP ☐ 1/4'' BSPP ☐ 1/4'' BSPT ☐ M10
☐ 1/2'' NPT ☐ Other:

9. Connection head: *(see the part "Accessories")*
☐ Type B ☐ Type DAN ☐ Type M ☐ Type N
☐ Type Ex ☐ Type NS ☐ Other:

10. Mounting:
☐ Wires ☐ Terminal block ☐ Transmitter (°C):
Specify temperature range

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

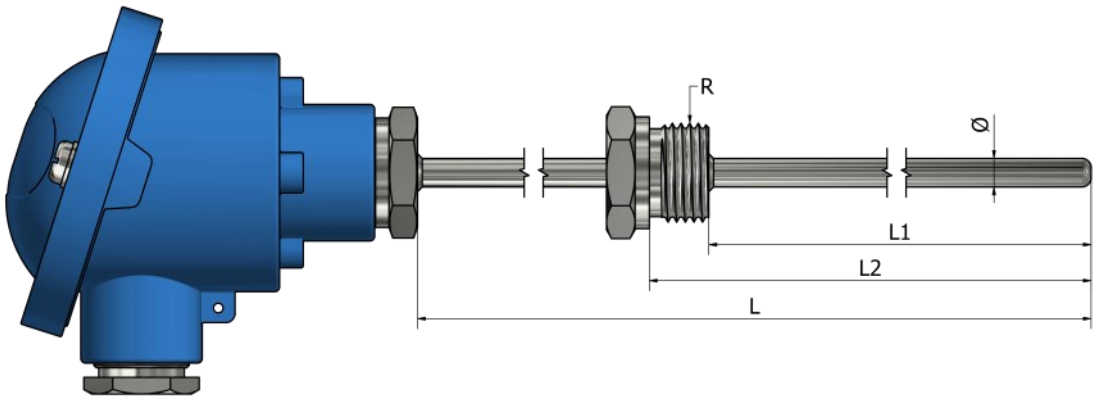
Quantity:

Note:

How to order?

Choose the desired characteristics of your sensor by marking the checkboxes and by filling up the text. You can provide sketches, images, personal notes, special requirements or any important data. For additional questions and assistance, feel free to contact us.

PH13 – RTDs with terminal head
Standard with fixed thread (offset)



Tube and thread material* ***Stainless steel 316L*

Ordering information

1. Element type:
☐ Pt 100 ☐ Pt 500 ☐ Pt 1000
☐ Other:

2. Element class:
☐ A ☐ B ☐ Other:

3. Number of sensor elements: ☐ x 1 ☐ x 2

4. Wiring configuration: *(number of wires per element)*
☐ 2 ☐ 3 ☐ 4

5. Lengths L and L1 or L2 (mm):
L _____ L1 _____ L2 _____

6. Diameter Ø (mm):

7. Thread:
☐ 1/2'' BSPP ☐ 1/4'' BSPP ☐ 1/4'' BSPT ☐ M10
☐ 1/2'' NPT ☐ Other:

8. Connection head: *(see the part "Accessories")*
☐ Type B ☐ Type DAN ☐ Type M ☐ Type N
☐ Type Ex ☐ Type NS ☐ Other:

9. Mounting:
☐ Wires ☐ Terminal block ☐ Transmitter (°C):
Specify temperature range

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

Quantity:

Note:

How to order?

Choose the desired characteristics of your sensor by marking the checkboxes and by filling up the text. You can provide sketches, images, personal notes, special requirements or any important data. For additional questions and assistance, feel free to contact us.

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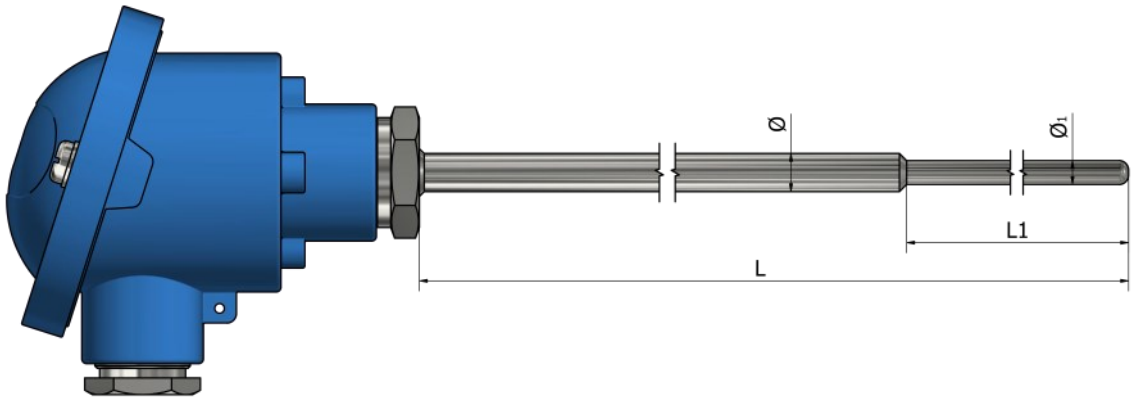
PH20 – RTDs with terminal head
Reduced tip



*Tube material **Stainless steel 316L***

Ordering information

1. Element type:

☐ Pt 100 ☐ Pt 500 ☐ Pt 1000

☐ Other:

2. Element class:

☐ A ☐ B ☐ Other:

3. Number of sensor elements: ☐ x 1 ☐ x 2

4. Wiring configuration: *(number of wires per element)*

☐ 2 ☐ 3 ☐ 4

5. Dimensions L and Ø (mm):

L _____ Ø _____

6. Dimensions L1 and Ø1 (mm):

L1 _____ Ø1 _____

7. Connection head: *(see the part "Accessories")*

☐ Type B ☐ Type DAN ☐ Type M ☐ Type N

☐ Type Ex ☐ Type NS ☐ Other:

8. Mounting:

☐ Wires ☐ Terminal block ☐ Transmitter (°C):
Specify temperature range

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

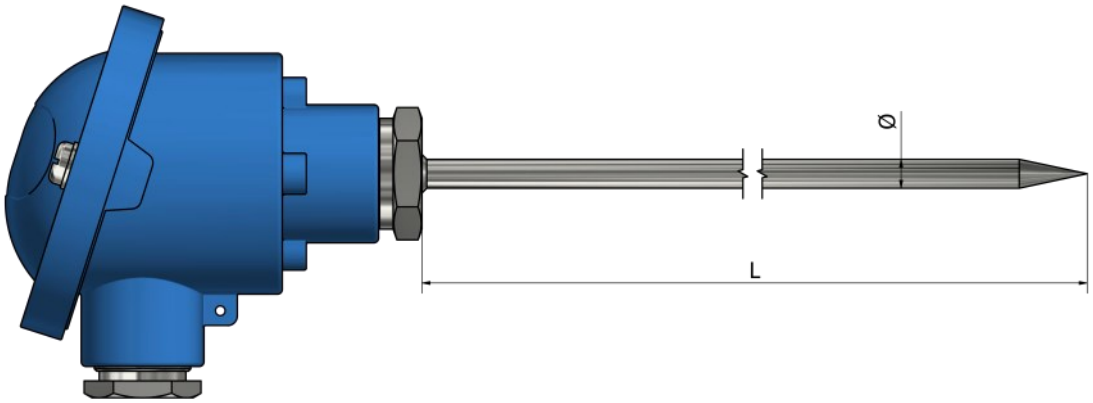
Quantity:

Note:

How to order?

Choose the desired characteristics of your sensor by marking the checkboxes and by filling up the text. You can provide sketches, images, personal notes, special requirements or any important data. For additional questions and assistance, feel free to contact us.

PH21 – RTDs with terminal head
Pointed tip



*Tube material **Stainless steel 316L***

Ordering information

1. Element type:

☐ Pt 100 ☐ Pt 500 ☐ Pt 1000

☐ Other:

2. Element class:

☐ A ☐ B ☐ Other:

3. Number of sensor elements: ☐ x 1 ☐ x 2

4. Wiring configuration: *(number of wires per element)*

☐ 2 ☐ 3 ☐ 4

5. Length L (mm):

6. Diameter Ø (mm):

7. Connection head: *(see the part "Accessories")*

☐ Type B ☐ Type DAN ☐ Type M ☐ Type N

☐ Type Ex ☐ Type NS ☐ Other:

8. Mounting:

☐ Wires ☐ Terminal block ☐ Transmitter (°C):
Specify temperature range

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

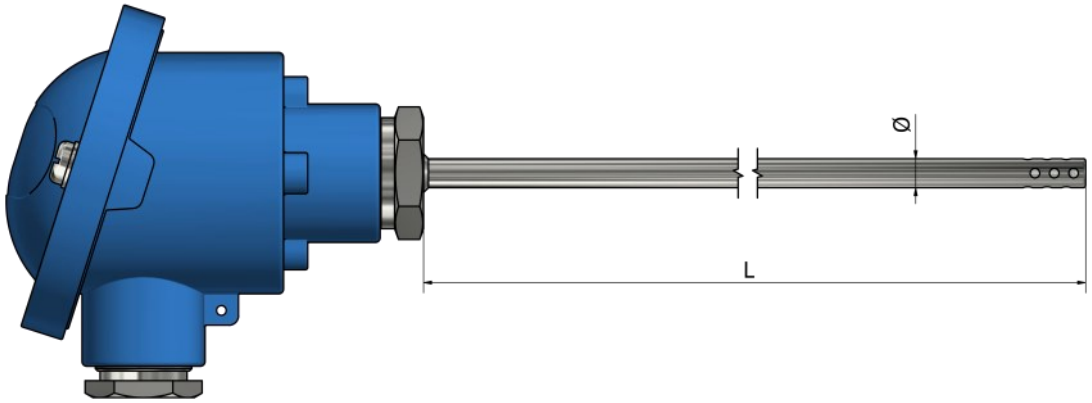
Quantity:

Note:

How to order?

Choose the desired characteristics of your sensor by marking the checkboxes and by filling up the text. You can provide sketches, images, personal notes, special requirements or any important data. For additional questions and assistance, feel free to contact us.

PH22 – RTDs with terminal head
Open air



*Tube material **Stainless steel 316L***

Ordering information

1. Element type:

☐ Pt 100 ☐ Pt 500 ☐ Pt 1000

☐ Other:

2. Element class:

☐ A ☐ B ☐ Other:

3. Number of sensor elements: ☐ x 1 ☐ x 2

4. Wiring configuration: *(number of wires per element)*

☐ 2 ☐ 3 ☐ 4

5. Length L (mm):

6. Diameter Ø (mm):

7. Connection head: *(see the part "Accessories")*

☐ Type B ☐ Type DAN ☐ Type M ☐ Type N

☐ Type Ex ☐ Type NS ☐ Other:

8. Mounting:

☐ Wires ☐ Terminal block ☐ Transmitter (°C):
Specify temperature range

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

Quantity:

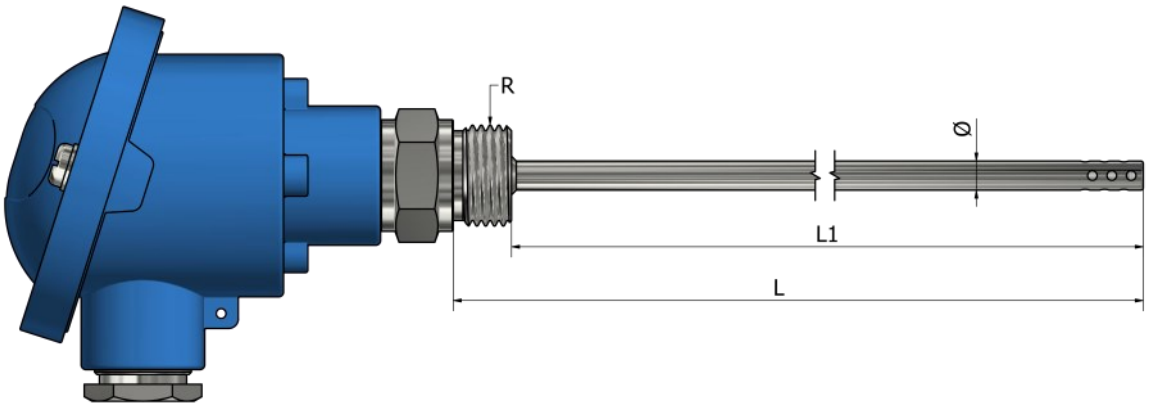
Note:

How to order?

Choose the desired characteristics of your sensor by marking the checkboxes and by filling up the text. You can provide sketches, images, personal notes, special requirements or any important data. For additional questions and assistance, feel free to contact us.

EuroSensors

PH23 – RTDs with terminal head
Open air with fixed thread



Tube and thread material* ***Stainless steel 316L*

Ordering information

1. Element type:

☐ Pt 100 ☐ Pt 500 ☐ Pt 1000

☐ Other:

2. Element class:

☐ A ☐ B ☐ Other:

3. Number of sensor elements: ☐ x 1 ☐ x 2

4. Wiring configuration: *(number of wires per element)*

☐ 2 ☐ 3 ☐ 4

5. Length L or L1 (mm):

L _____ L1 _____

6. Diameter Ø (mm):

7. Thread:

☐ 1/2" BSPP ☐ 1/4" BSPP ☐ 1/4" BSPT ☐ M10

☐ 1/2" NPT ☐ Other:

8. Connection head: *(see the part "Accessories")*

☐ Type B ☐ Type DAN ☐ Type M ☐ Type N

☐ Type Ex ☐ Type NS ☐ Other:

9. Mounting:

☐ Wires ☐ Terminal block ☐ Transmitter (°C):
Specify temperature range

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

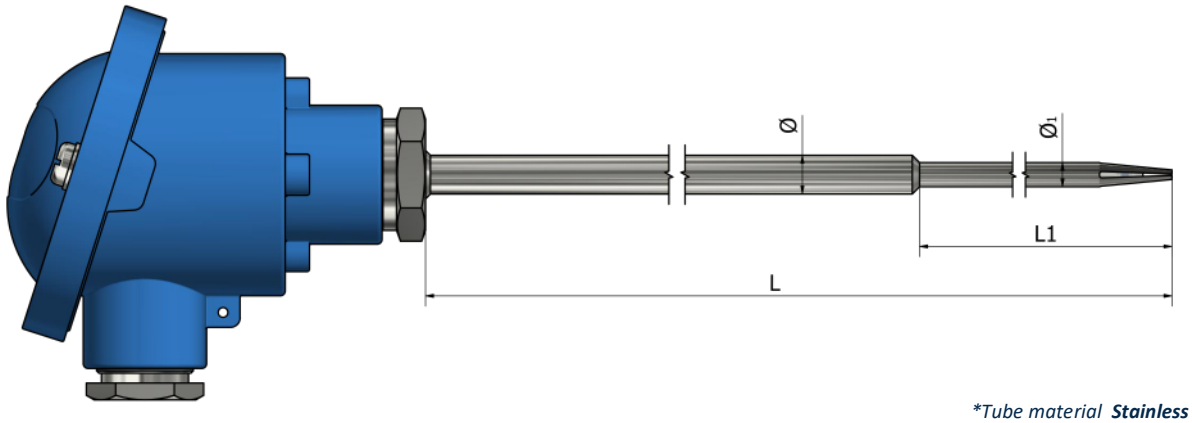
Quantity:

Note:

How to order?

Choose the desired characteristics of your sensor by marking the checkboxes and by filling up the text. You can provide sketches, images, personal notes, special requirements or any important data. For additional questions and assistance, feel free to contact us.

PH24 – RTDs with terminal head
Open air with reduced tip



*Tube material **Stainless steel 316L***

Ordering information

1. Element type:

☐ Pt 100 ☐ Pt 500 ☐ Pt 1000

☐ Other:

2. Element class:

☐ A ☐ B ☐ Other:

3. Number of sensor elements: ☐ x 1 ☐ x 2

4. Wiring configuration: *(number of wires per element)*

☐ 2 ☐ 3 ☐ 4

5. Dimensions L and Ø (mm):

L _____ Ø _____

6. Dimensions L1 and Ø1 (mm):

L1 _____ Ø1 _____

7. Connection head: *(see the part "Accessories")*

☐ Type B ☐ Type DAN ☐ Type M ☐ Type N

☐ Type Ex ☐ Type NS ☐ Other:

8. Mounting:

☐ Wires ☐ Terminal block ☐ Transmitter (°C):
Specify temperature range

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

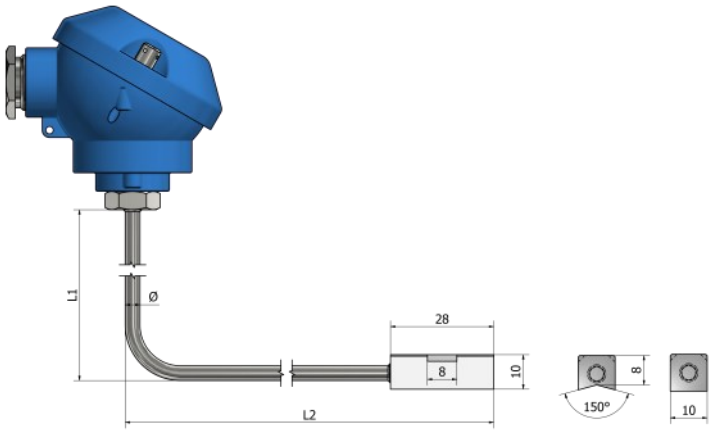
Quantity:

Note:

How to order?

Choose the desired characteristics of your sensor by marking the checkboxes and by filling up the text. You can provide sketches, images, personal notes, special requirements or any important data. For additional questions and assistance, feel free to contact us.

PH25 – RTDs with terminal head
Contact block (surface mount)



*Tube material **Stainless steel 316L***

Ordering information

1. Element type:
☐ Pt 100 ☐ Pt 500 ☐ Pt 1000
☐ Other:

2. Element class:
☐ A ☐ B ☐ Other:

3. Number of sensor elements: ☐ x 1 ☐ x 2

4. Wiring configuration: *(number of wires per element)*
☐ 2 ☐ 3 ☐ 4

5. Lengths L1 and L2 (mm):
L1 _____ L2 _____

6. Diameter Ø (mm):

7. Connection head: *(see the part "Accessories")*
☐ Type B ☐ Type DAN ☐ Type M ☐ Type N
☐ Type Ex ☐ Type NS ☐ Other:

8. Mounting:
☐ Wires ☐ Terminal block ☐ Transmitter (°C):
Specify temperature range

9. Contact block material:
☐ Brass ☐ Aluminum ☐ Other:

10. Contact block shape:

☐ V-shape

☐ Flat

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

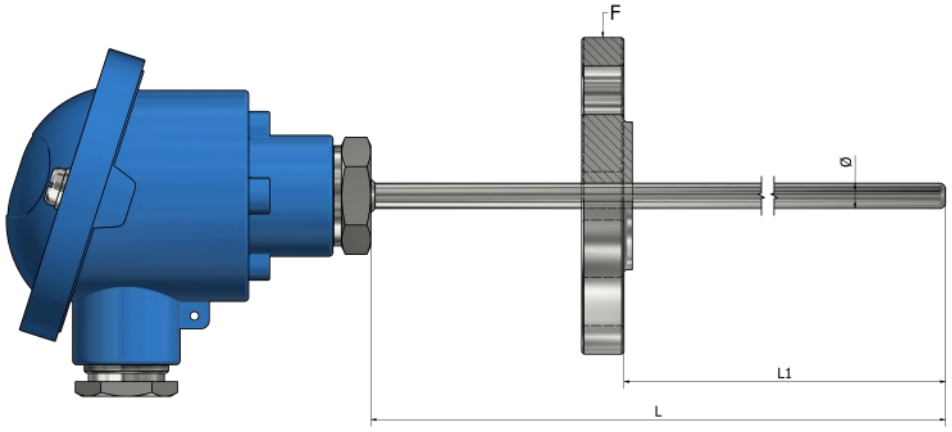
Quantity:

Note:

How to order?

Choose the desired characteristics of your sensor by marking the checkboxes and by filling up the text. You can provide sketches, images, personal notes, special requirements or any important data. For additional questions and assistance, feel free to contact us.

PH30 – RTDs with terminal head
Flange sanitary mounting



*Tube material **Stainless steel 316L***

Ordering information

1. Element type:

☐ Pt 100 ☐ Pt 500 ☐ Pt 1000

☐ Other:

2. Element class:

☐ A ☐ B ☐ Other:

3. Number of sensor elements: ☐ x 1 ☐ x 2

4. Wiring configuration: *(number of wires per element)*

☐ 2 ☐ 3 ☐ 4

5. Dimensions L and L1 (mm):

L _____ L1 _____

6. Diameter Ø (mm):

7. Connection head: *(see the part "Accessories")*

☐ Type B ☐ Type DAN ☐ Type M ☐ Type N

☐ Type Ex ☐ Type NS ☐ Other:

8. Mounting:

☐ Wires ☐ Terminal block ☐ Transmitter (°C):
Specify temperature range

9. Flange sanitary mounting:

☐ DIN2527 (DN10 – PN6) ☐ Other:

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

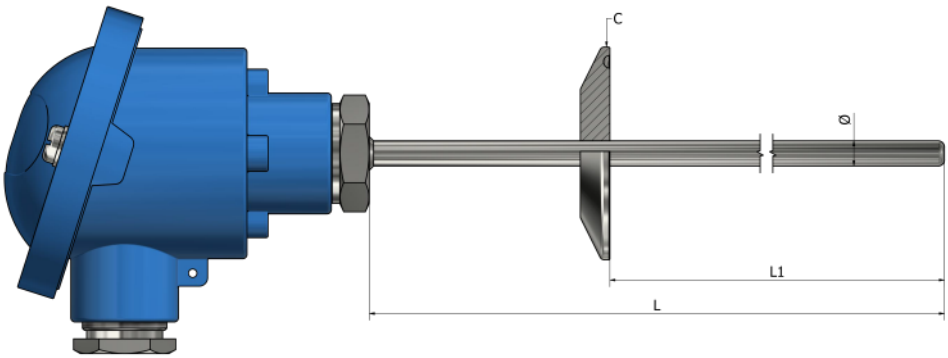
Quantity:

Note:

How to order?

Choose the desired characteristics of your sensor by marking the checkboxes and by filling up the text. You can provide sketches, images, personal notes, special requirements or any important data. For additional questions and assistance, feel free to contact us.

PH31 – RTDs with terminal head
Tri-clamp sanitary mounting



*Tube material **Stainless steel 316L***

Ordering information

1. Element type:
☐ Pt 100 ☐ Pt 500 ☐ Pt 1000
☐ Other:

2. Element class:
☐ A ☐ B ☐ Other:

3. Number of sensor elements: ☐ x 1 ☐ x 2

4. Wiring configuration: *(number of wires per element)*
☐ 2 ☐ 3 ☐ 4

5. Dimensions L and L1 (mm):
L _____ L1 _____

6. Diameter Ø (mm):

7. Connection head: *(see the part "Accessories")*
☐ Type B ☐ Type DAN ☐ Type M ☐ Type N
☐ Type Ex ☐ Type NS ☐ Other:

8. Mounting:
☐ Wires ☐ Terminal block ☐ Transmitter (°C):
Specify temperature range

9. Tri-clamp sanitary mounting:
☐ DIN32676 / ISO 2852 (DN25) ☐ Other:

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

Quantity:

Note:

How to order?

Choose the desired characteristics of your sensor by marking the checkboxes and by filling up the text. You can provide sketches, images, personal notes, special requirements or any important data. For additional questions and assistance, feel free to contact us.

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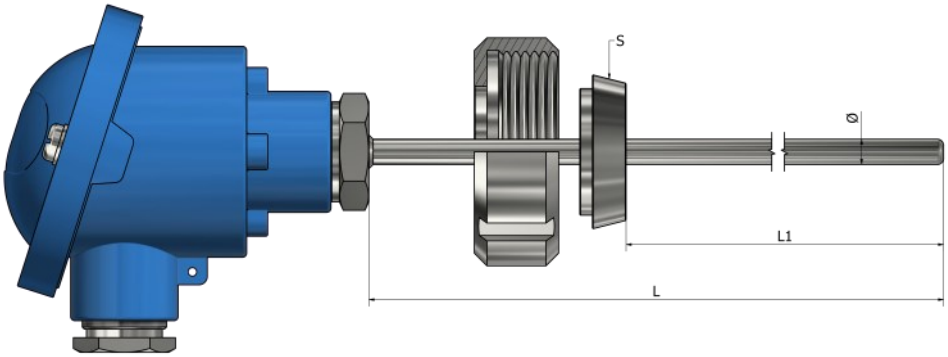
PH32 – RTDs with terminal head
Disc DIN11851 (screw-on) sanitary mounting



*Tube material **Stainless steel 316L***

Ordering information

1. Element type:
☐ Pt 100 ☐ Pt 500 ☐ Pt 1000
☐ Other:

2. Element class:
☐ A ☐ B ☐ Other:

3. Number of sensor elements: ☐ x 1 ☐ x 2

4. Wiring configuration: *(number of wires per element)*
☐ 2 ☐ 3 ☐ 4

5. Dimensions L and L1 (mm):
L _____ L1 _____

6. Diameter Ø (mm):

7. Connection head: *(see the part "Accessories")*
☐ Type B ☐ Type DAN ☐ Type M ☐ Type N
☐ Type Ex ☐ Type NS ☐ Other:

8. Mounting:
☐ Wires ☐ Terminal block ☐ Transmitter (°C):
Specify temperature range

9. Disc DIN 11851 sanitary mounting:
☐ DIN 11851 (DN20) ☐ Other:

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

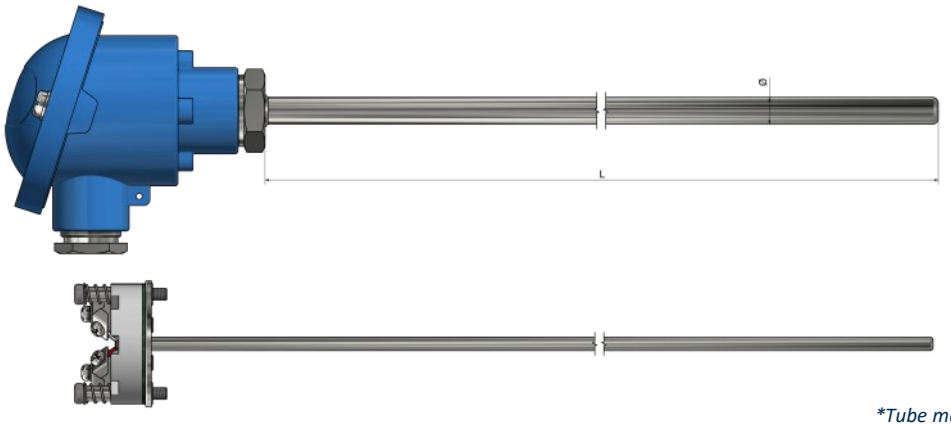
Quantity:

Note:

How to order?

Choose the desired characteristics of your sensor by marking the checkboxes and by filling up the text. You can provide sketches, images, personal notes, special requirements or any important data. For additional questions and assistance, feel free to contact us.

PH40 – RTDs with terminal head
Exchangeable insert



*Tube material **Stainless steel 316L***

Ordering information

1. Element type:

☐ Pt 100 ☐ Pt 500 ☐ Pt 1000

☐ Other:

2. Element class:

☐ A ☐ B ☐ Other:

3. Number of sensor elements: ☐ x 1 ☐ x 2

4. Wiring configuration: *(number of wires per element)*

☐ 2 ☐ 3 ☐ 4

5. Length L (mm):

6. Diameter Ø (mm):

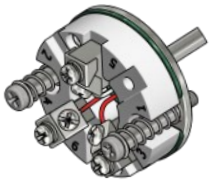
7. Connection head: *(see the part "Accessories")*

☐ Type B ☐ Type DAN ☐ Type M ☐ Type N

☐ Type Ex ☐ Type NS ☐ Other:

8. Type of exchangeable insert:

☐ Wires



☐ Terminal block

☐ Transmitter (°C):

T _____
Specify temperature range

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

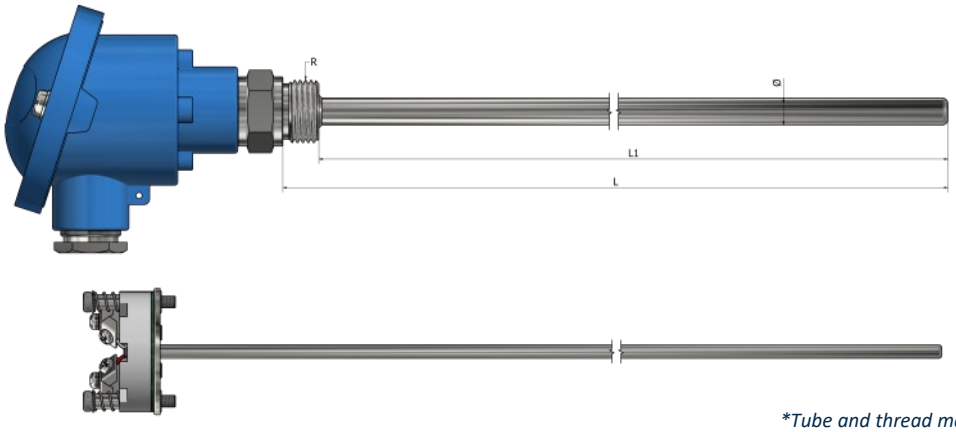
Quantity:

Note:

How to order?

Choose the desired characteristics of your sensor by marking the checkboxes and by filling up the text. You can provide sketches, images, personal notes, special requirements or any important data. For additional questions and assistance, feel free to contact us.

PH41 – RTDs with terminal head
Exchangeable insert with fixed thread



*Tube and thread material **Stainless steel 316L***

Ordering information

1. Element type:

☐ Pt 100 ☐ Pt 500 ☐ Pt 1000

☐ Other:

2. Element class:

☐ A ☐ B ☐ Other:

3. Number of sensor elements: ☐ x 1 ☐ x 2

4. Wiring configuration: *(number of wires per element)*

☐ 2 ☐ 3 ☐ 4

5. Length L or L1 (mm):

L _____ L1 _____

6. Diameter Ø (mm):

7. Connection head: *(see the part "Accessories")*

☐ Type B ☐ Type DAN ☐ Type M ☐ Type N

☐ Type Ex ☐ Type NS ☐ Other:

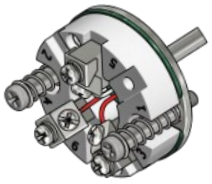
8. Thread:

☐ 1/2'' BSPP ☐ 1/4'' BSPP ☐ 1/4'' BSPT ☐ M10

☐ 1/2'' NPT ☐ Other:

9. Type of exchangeable insert:

☐ Wires



☐ Terminal block

☐ Transmitter (°C):

T _____
Specify temperature range

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

Quantity:

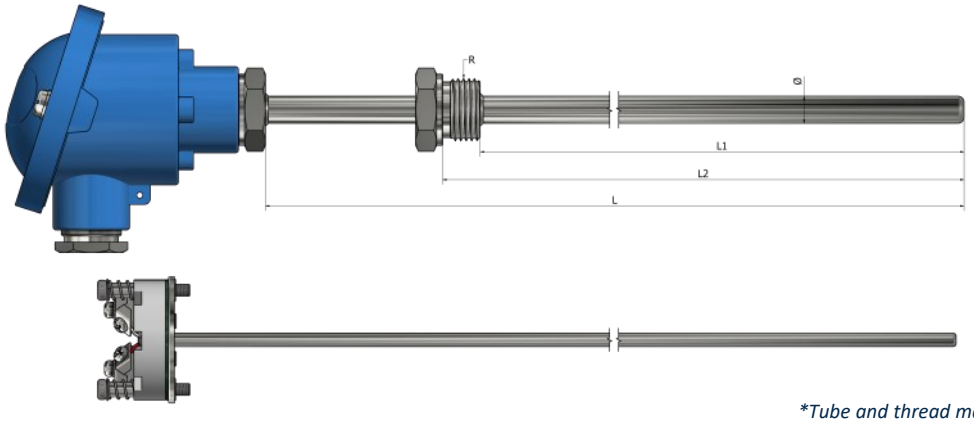
Note:

How to order?

Choose the desired characteristics of your sensor by marking the checkboxes and by filling up the text. You can provide sketches, images, personal notes, special requirements or any important data. For additional questions and assistance, feel free to contact us.

EuroSensors

PH42 – RTDs with terminal head
Exchangeable insert with fixed thread (offset)



*Tube and thread material **Stainless steel 316L***

Ordering information

1. Element type:

☐ Pt 100 ☐ Pt 500 ☐ Pt 1000

☐ Other:

2. Element class:

☐ A ☐ B ☐ Other:

3. Number of sensor elements: ☐ x 1 ☐ x 2

4. Wiring configuration: *(number of wires per element)*

☐ 2 ☐ 3 ☐ 4

5. Lengths L and L1 or L2 (mm):

L _____ L1 _____ L2 _____

6. Diameter Ø (mm):

7. Connection head: *(see the part "Accessories")*

☐ Type B ☐ Type DAN ☐ Type M ☐ Type N

☐ Type Ex ☐ Type NS ☐ Other:

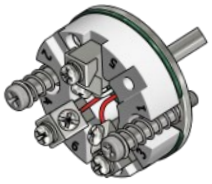
8. Thread:

☐ 1/2'' BSPP ☐ 1/4'' BSPP ☐ 1/4'' BSPT ☐ M10

☐ 1/2'' NPT ☐ Other:

9. Type of exchangeable insert:

☐ Wires



☐ Terminal block

☐ Transmitter (°C):

T _____
Specify temperature range

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

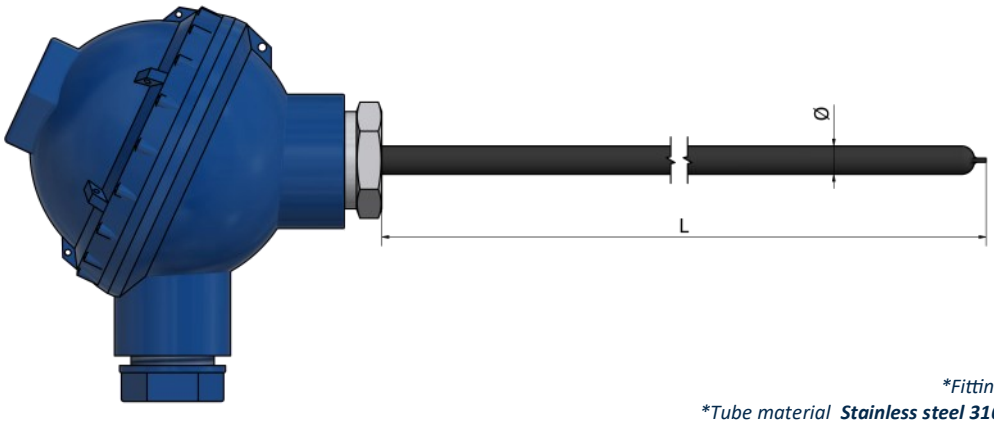
Quantity:

Note:

How to order?

Choose the desired characteristics of your sensor by marking the checkboxes and by filling up the text. You can provide sketches, images, personal notes, special requirements or any important data. For additional questions and assistance, feel free to contact us.

PH50 – RTDs with terminal head
For aggressive environments



Fitting material **PTFE (260°C)*
Tube material **Stainless steel 316L with **PTFE** protection*

Ordering information

1. Element type:
☐ Pt 100 ☐ Pt 500 ☐ Pt 1000
☐ Other:

2. Element class:
☐ A ☐ B ☐ Other:

3. Number of sensor elements: ☐ x 1 ☐ x 2

4. Wiring configuration: *(number of wires per element)*
☐ 2 ☐ 3 ☐ 4

5. Length L (mm):

6. Diameter Ø (mm):

7. Connection head: *(see the part "Accessories")*
☐ Type B ☐ Type DAN ☐ Type M ☐ Type N
☐ Type Ex ☐ Type NS ☐ Other:

8. Mounting:
☐ Wires ☐ Terminal block ☐ Transmitter (°C):
Specify temperature range

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

Quantity:

Note:

How to order?

Choose the desired characteristics of your sensor by marking the checkboxes and by filling up the text. You can provide sketches, images, personal notes, special requirements or any important data. For additional questions and assistance, feel free to contact us.

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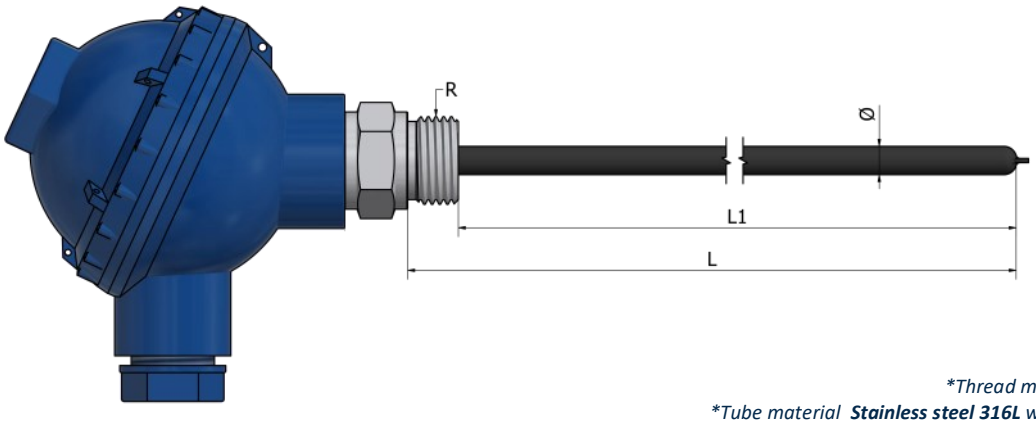
PH51 – RTDs with terminal head
For aggressive environments with fixed thread



Thread material **PTFE (260°C)*
Tube material **Stainless steel 316L with **PTFE** protection*

Ordering information

1. Element type:
☐ Pt 100 ☐ Pt 500 ☐ Pt 1000
☐ Other:

2. Element class:
☐ A ☐ B ☐ Other:

3. Number of sensor elements: ☐ x 1 ☐ x 2

4. Wiring configuration: *(number of wires per element)*
☐ 2 ☐ 3 ☐ 4

5. Length L or L1 (mm):
L _____ L1 _____

6. Diameter Ø (mm):

7. Thread:
☐ 1/2" BSPP ☐ 1/4" BSPP ☐ 1/4" BSPT ☐ M10
☐ 1/2" NPT ☐ Other:

8. Connection head: *(see the part "Accessories")*
☐ Type B ☐ Type DAN ☐ Type M ☐ Type N
☐ Type Ex ☐ Type NS ☐ Other:

9. Mounting:
☐ Wires ☐ Terminal block ☐ Transmitter (°C):
Specify temperature range

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

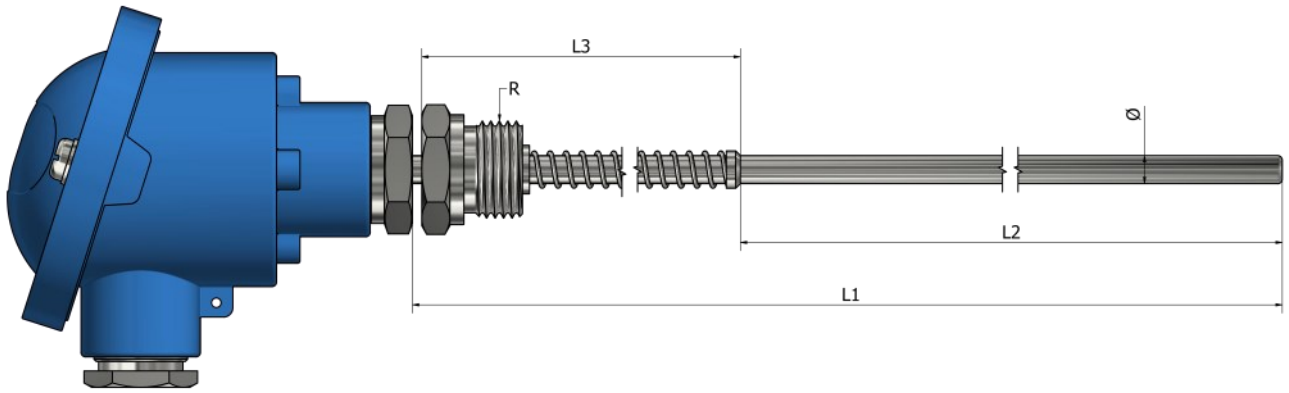
Quantity:

Note:

How to order?

Choose the desired characteristics of your sensor by marking the checkboxes and by filling up the text. You can provide sketches, images, personal notes, special requirements or any important data. For additional questions and assistance, feel free to contact us.

PH60 – RTDs with terminal head
Spring loaded



Tube and thread material* ***Stainless steel 316L*

Ordering information

1. Element type:
☐ Pt 100 ☐ Pt 500 ☐ Pt 1000
☐ Other:

2. Element class:
☐ A ☐ B ☐ Other:

3. Number of sensor elements: ☐ x 1 ☐ x 2

4. Wiring configuration: *(number of wires per element)*
☐ 2 ☐ 3 ☐ 4

5. Lengths L1, L2, L3 (mm):
L1 _____ L2 _____ L3 _____

6. Diameter Ø (mm):

7. Thread:
☐ 1/2'' BSPP ☐ 1/4'' BSPP ☐ 1/4'' BSPT ☐ M10
☐ 1/2'' NPT ☐ Other:

8. Connection head: *(see the part "Accessories")*
☐ Type B ☐ Type DAN ☐ Type M ☐ Type N
☐ Type Ex ☐ Type NS ☐ Other:

9. Mounting:
☐ Wires ☐ Terminal block ☐ Transmitter (°C):
Specify temperature range

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

Quantity:

Note:

How to order?

Choose the desired characteristics of your sensor by marking the checkboxes and by filling up the text. You can provide sketches, images, personal notes, special requirements or any important data. For additional questions and assistance, feel free to contact us.

PI00 – RTDs with terminal head
Disc plate insert

*Tube material **Stainless steel 316L***

Ordering information

1. Element type:

☐ Pt 100 ☐ Pt 500 ☐ Pt 1000

☐ Other:

2. Element class:

☐ A ☐ B ☐ Other:

3. Number of sensor elements: ☐ x 1 ☐ x 2

4. Wiring configuration: *(number of wires per element)*

☐ 2 ☐ 3 ☐ 4

5. Sheath length L (mm):

6. Diameter Ø (mm):

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

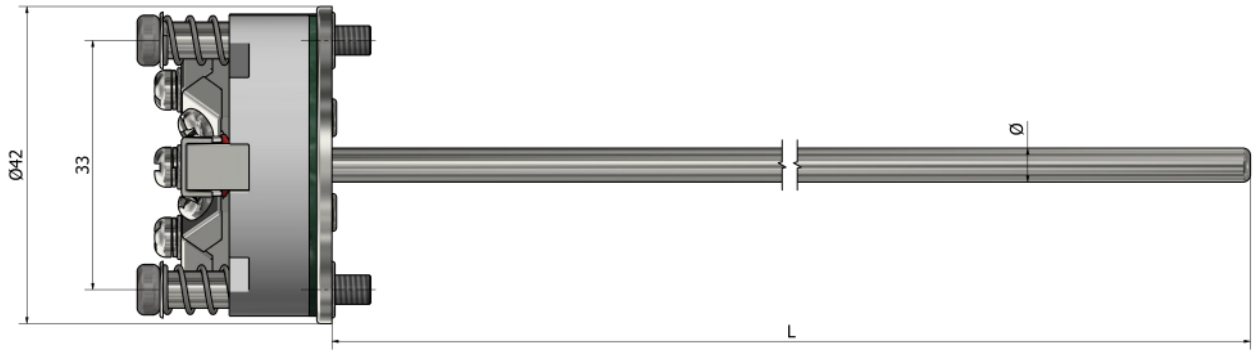
Quantity:

Note:

How to order?

Choose the desired characteristics of your sensor by marking the checkboxes and by filling up the text. You can provide sketches, images, personal notes, special requirements or any important data. For additional questions and assistance, feel free to contact us.

PI01 – RTDs with terminal head
Insert with terminal block (spring loaded)



*Tube material **Stainless steel 316L***

Ordering information

1. Element type:

☐ Pt 100 ☐ Pt 500 ☐ Pt 1000

☐ Other:

2. Element class:

☐ A ☐ B ☐ Other:

3. Number of sensor elements: ☐ x 1 ☐ x 2

4. Wiring configuration: *(number of wires per element)*

☐ 2 ☐ 3 ☐ 4

5. Sheath length L (mm):

6. Diameter Ø (mm):

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

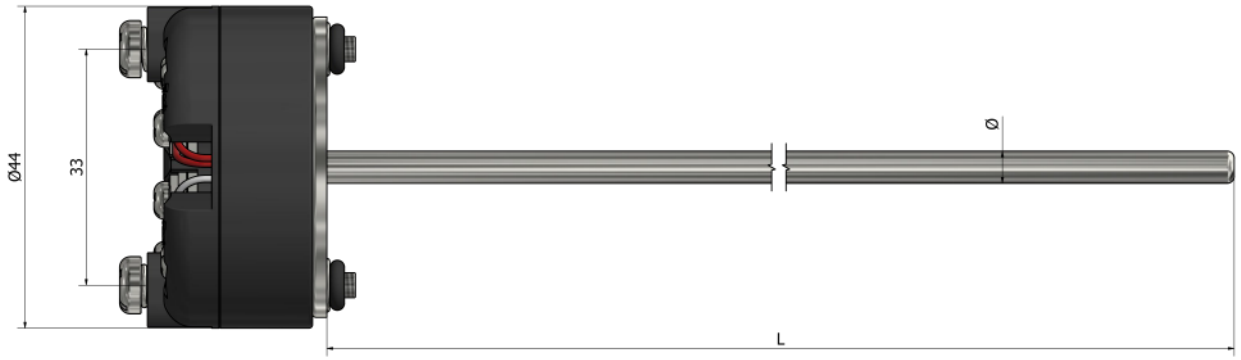
Quantity:

Note:

How to order?

Choose the desired characteristics of your sensor by marking the checkboxes and by filling up the text. You can provide sketches, images, personal notes, special requirements or any important data. For additional questions and assistance, feel free to contact us.

PI02 – RTDs with terminal head
Insert with transmitter block (spring loaded)



*Tube material **Stainless steel 316L***

Ordering information

1. Element type:

☐ Pt 100 ☐ Pt 500 ☐ Pt 1000

☐ Other:

2. Element class:

☐ A ☐ B ☐ Other:

3. Number of sensor elements: ☐ x 1 ☐ x 2

4. Wiring configuration: *(number of wires per element)*

☐ 2 ☐ 3 ☐ 4

5. Sheath length L (mm):

6. Diameter Ø (mm):

7. Transmitter (°C):
Specify temperature range

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

Quantity:

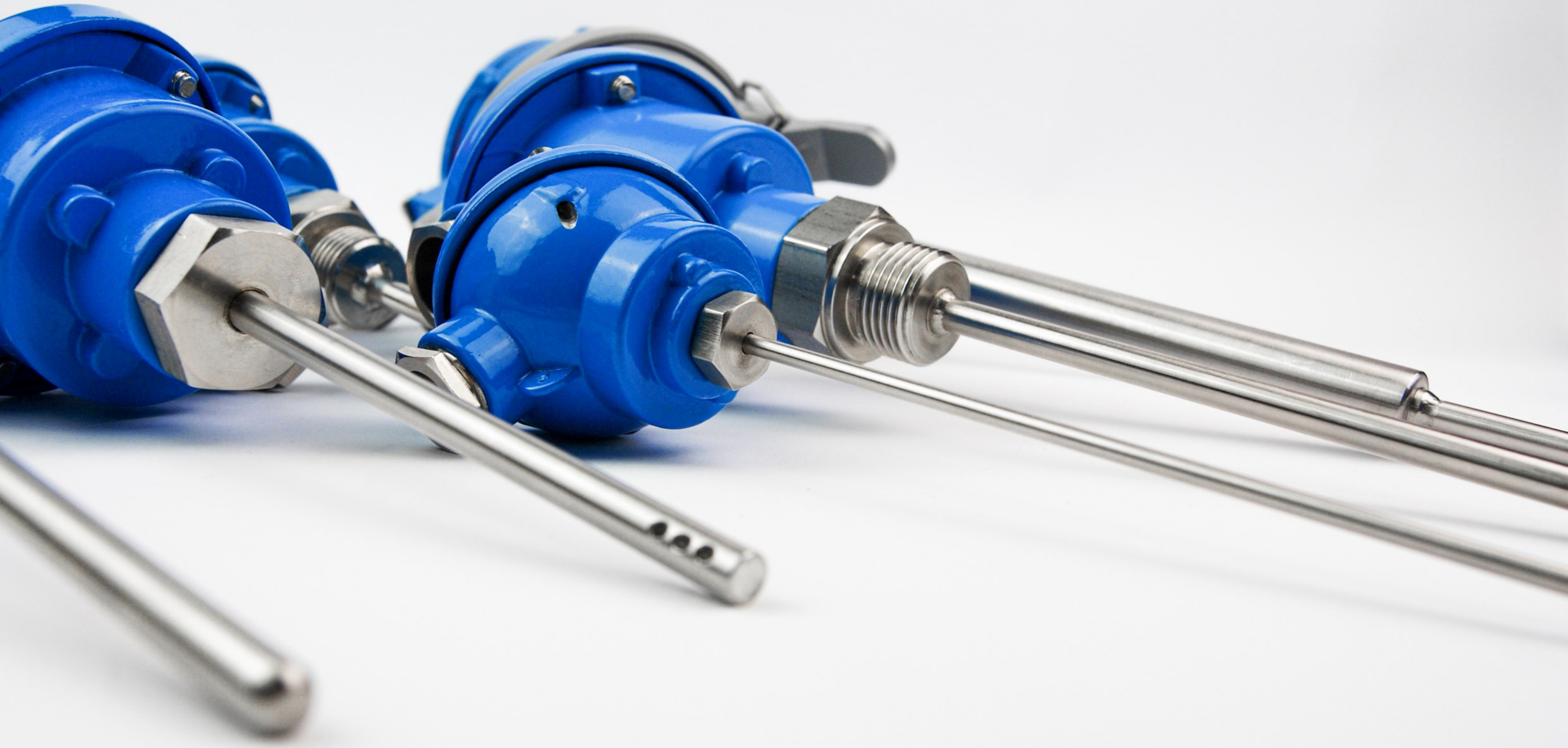
Note:

How to order?

Choose the desired characteristics of your sensor by marking the checkboxes and by filling up the text. You can provide sketches, images, personal notes, special requirements or any important data. For additional questions and assistance, feel free to contact us.

EuroSensors

Thermistors with terminal head



Thermistors with terminal head - Technical information

What is an RTD sensor ?

An RTD (Resistance Temperature Detector) is a type of sensor used to measure temperature.
RTDs are used for accurate, stable and reliable temperature measurements in generally high temperature ranges.

How does an RTD work ?

An RTD is a sensor that measures temperature using the variation of the electrical resistance of a conductive material. RTDs are usually made from platinum, gold or nickel. The operating principle of RTDs is based on Ohm's law of electrical resistance, which establishes a relationship between the electrical resistance of a conductor and its temperature.

According to this law, the electrical resistance of a conductor generally increases when its temperature increases.

Types of terminal heads

Many alternative types of terminal head are available to meet the requirements of various applications. Variations exist in size, material, accommodation, resistance to media, resistance to fire or even explosion and in other parameters.
Common types are shown below but there are many special variants available to meet particular requirements.

What are terminal heads ?

Terminal heads are a type of cold end termination which are common on industrial type temperature sensors. A temperature sensor will be encased in a ceramic or metal sheath which will be terminated at the cold end with a terminal head. Inside the head, terminal blocks or temperature transmitters are placed to carry the sensor signal to instrumentation.

These are protected from the external environment as terminal heads often provide good ingress protection (IP) and temperature protection. Most commonly terminal heads are made from aluminum but can be stainless steel, cast iron or plastic depending on the application. There are many standardized designs of head, the most common being KNE, ALA and BUZ.

Inside terminal head

EuroSensors

Thermistors with terminal head - Technical information

RTDs advantages

RTDs have several advantages over other types of temperature sensors:

High precision

RTDs have high temperature sensitivity, typically in the range of 0.1 to 0.2% per °C, allowing for accurate temperature measurement.

Long term stability

RTDs have long-term stability and longer life than thermistors, making them more reliable for long-term applications.

Wide operating temperature range

RTDs can operate in a temperature range of -200 to +850°C, making them suitable for many industrial applications.

Low ohmic resistance

RTDs have a low ohmic resistance compared to thermistors, which makes them easier to use with electronic circuits.

What is a thermistor ?

A thermistor is an electrical component that changes its resistance according to temperature. It consists of a conductive material that is wrapped in an insulating material. As the temperature increases, the resistance of the conductive material decreases (NTC), or increases (PTC), which can be detected and measured.

What are the two types of thermistor ?

NTC (*Negative Temperature Coefficient*) are made of a conductive material based on transition metals and are used to measure temperatures up to 300 °C.

PTC (*Positive Temperature Coefficient*) are made of a conductive material based on polymer or ceramic and are used to measure temperatures up to 200 °C.

What is the difference between an NTC and a PTC ?

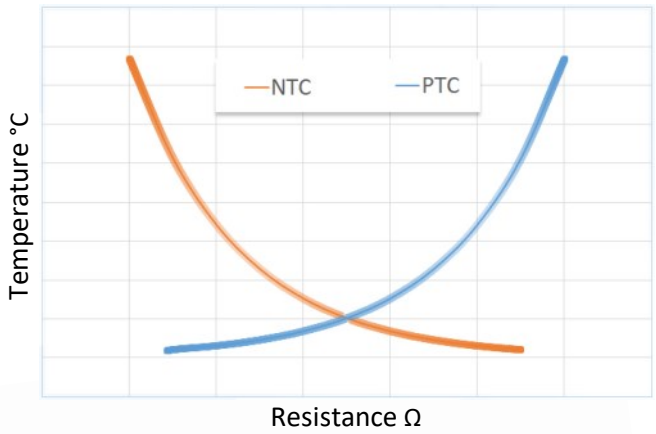
NTCs and PTCs are both thermistors, i.e. temperature sensors that change resistance depending on the temperature.
However, there is a major difference between these two types of thermistors:

NTC thermistors

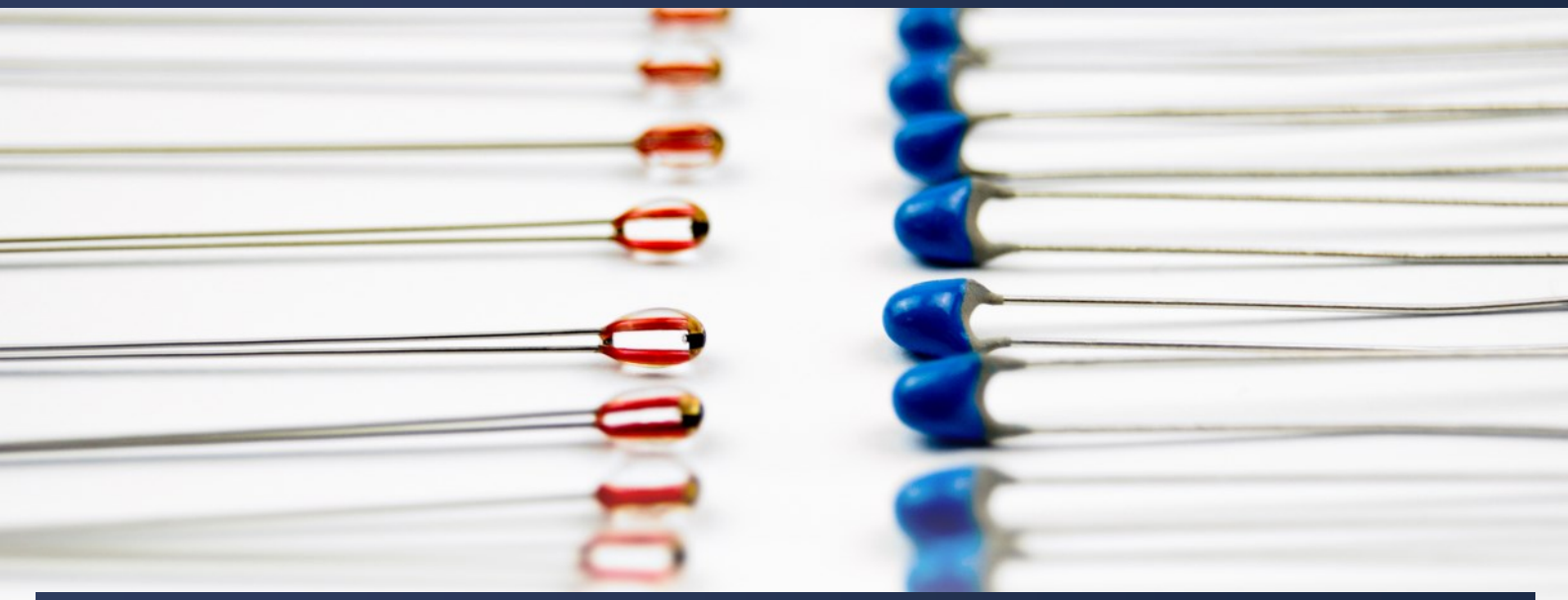
NTCs have a resistance that decreases as the temperature increases. They are commonly used in thermostats and temperature control devices to measure room temperature.

PTC thermistors

PTCs have a resistance that increases as the temperature rises. They are commonly used in thermostatic fuses and overcurrent protection devices to shut off power in the event of overheating.



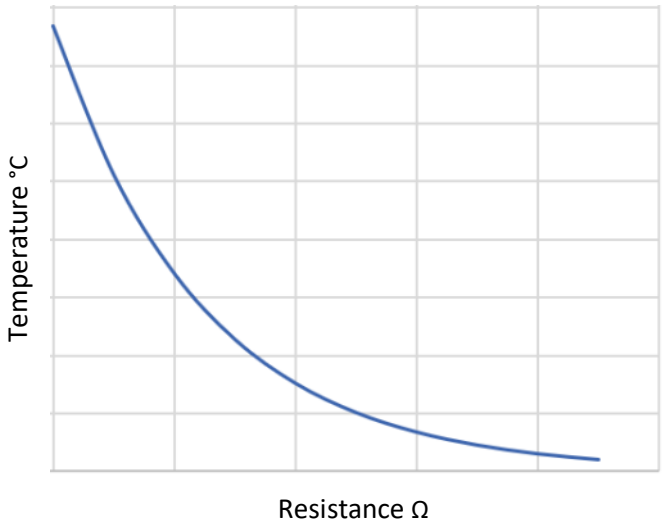
Thermistors with terminal head - Technical information



The β beta value

A thermistor's "β" value, or beta value, is an indication of the shape of the curve representing the relationship between resistance and temperature of an NTC thermistor.

Calculating the beta value is a vital step in the component selection process as it gives the characteristic at a given temperature vs the resistance for a specific application.



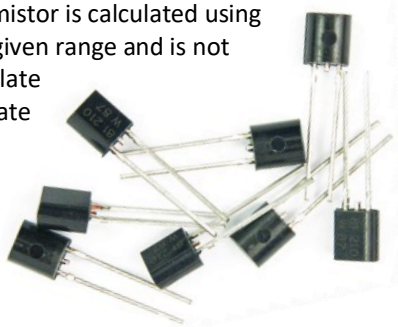
NTC thermistors are non-linear resistors that alter their resistance characteristics with temperature. Simply put, as temperature increases the thermistor's resistance decreases.

The manner in which the resistance of a thermistor decreases is related to a constant known in the thermistor industry as beta (β). Beta is measured in degrees Kelvin (K) and is computed based on the formulation given below.

Where:
Rt1 = Resistance at Temperature 1
Rt2 = Resistance at Temperature 2
T1 = Temperature 1 (K)
T2= Temperature 2 in (K)

$$\beta = \frac{\ln(\frac{R_{T1}}{R_{T2}})}{(\frac{1}{T_1} - \frac{1}{T_2})}$$

The beta value of an NTC Thermistor is calculated using only two temperatures over a given range and is not the most accurate way to calculate the R vs. T curve. A more accurate method is to use the Steinhart and Hart method, which uses three temperatures over a given range.

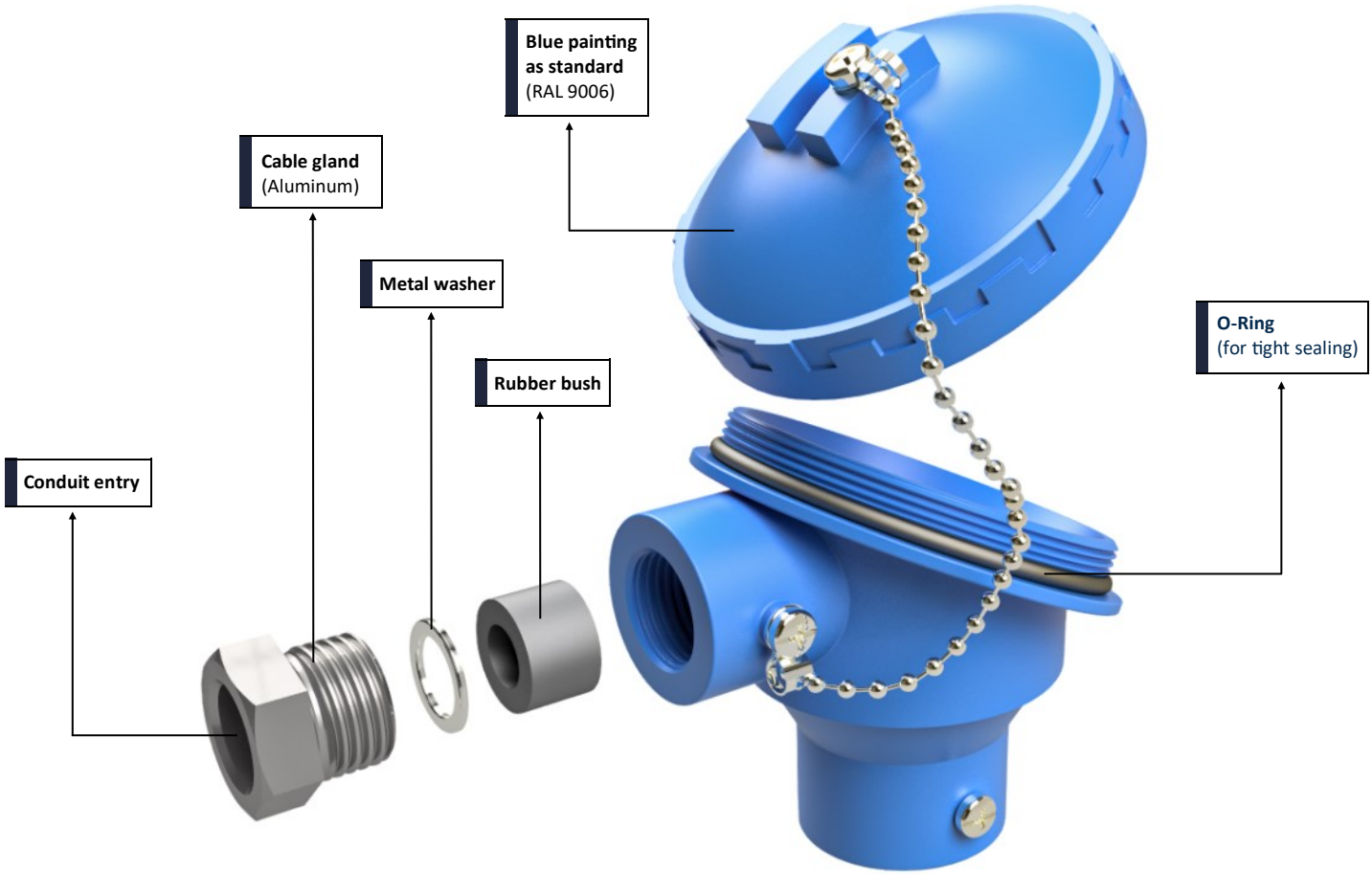


Types of thermistors

Type	Resistance	Beta value	Temperature
PTC KTY81/121	990Ω at 25°C	/	T° (-55/+150°C)
NTC	3,3kΩ at 100°C	β=3970	T° (-40/+200°C)
NTC	10kΩ at 25°C	β=3977	T° (-40/+125°C)
NTC	10kΩ at 25°C	β=3435	T° (-40/+150°C)
NTC	20kΩ at 25°C	β=4260	T° (-40/+125°C)

Thermistors with terminal head - Technical information

Terminal head component breakdown



What is a terminal block ?

Terminal block located in a “head” allow for the connection of extension wires. Various materials are used for screw or solder terminations including copper, plated brass and, for the best performance in the case of thermocouples, thermoelement alloys. The various head styles cater for a wide variety of probe diameters and cable entries.

Terminal blocks provide a secure and organized way to terminate multiple wires. The wires are inserted into a clamping mechanism that holds them in place, making it easier to manage and connect different wires within a circuit. Terminal blocks provide a convenient and secure way to connect thermocouple wires to the measuring instrument or control system when using thermocouples. Terminal blocks are available in 2, 3, 4, and 6 poles with center hole (spring loading).

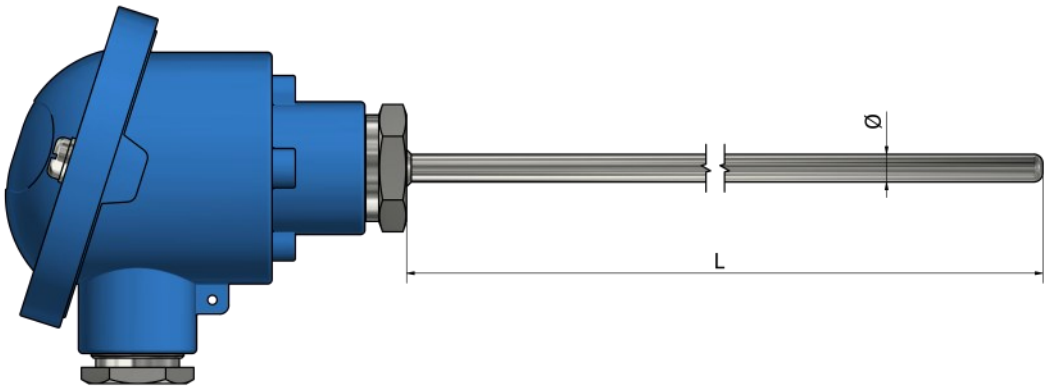
What is a temperature transmitter ?

A Temperature transmitter is a device that converts the signal produced by a temperature sensor into a standard instrumentation signal representing a process variable temperature being measured and controlled. The most common transmitter instrumentation output signal is 4 to 20 mA. The signal from the temperature transmitter is sent to a Controller that determines what action is required and generates an appropriate output signal.

Controllers are either a PLC or a DCS in process control today.

More on temperature transmitters and terminal blocks. See in the part ***“Accessories”.***

HH00 – Thermistors with terminal head
Standard



*Tube material **Stainless steel 316L***

Ordering information

1. Element type:

- ☐ PTC KTY 81/110 (-40°C / +150°C)
- ☐ PTC KTY 81/121 (-40°C / +150°C)
- ☐ NTC 10kΩ at 25°C ß3977 (-40°C / +125°C)
- ☐ NTC 20kΩ at 25°C ß4260 (-40°C / +125°C)
- ☐ NTC 3,3kΩ at 100°C ß3970 (-40°C / +200°C)
- ☐ Other:

(NTC / PTC , T° (min / max) , ß value, tolerance)

2. Wiring configuration: *(number of wires)*

☐ 2 ☐ Other:

3. Length L (mm):

4. Diameter Ø (mm):

5. Connection head: *(see the part "Accessories")*

☐ Type B ☐ Type DAN ☐ Type M ☐ Type N
☐ Type Ex ☐ Type NS ☐ Other:

6. Mounting:

☐ Wires ☐ Terminal block ☐ Transmitter (°C):
Specify temperature range

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

Quantity:

Note:

How to order?

Choose the desired characteristics of your sensor by marking the checkboxes and by filling up the text. You can provide sketches, images, personal notes, special requirements or any important data. For additional questions and assistance, feel free to contact us.

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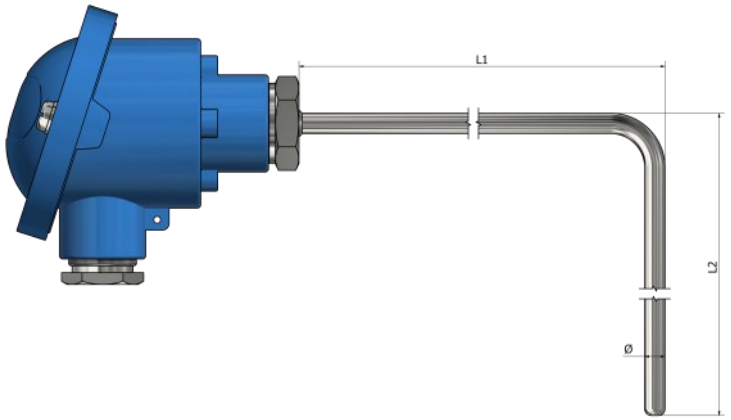
HH01 – Thermistors with terminal head
Standard (90° bend)



*Tube material **Stainless steel 316L***

Ordering information

1. Element type:

- ☐ PTC KTY 81/110 (-40°C / +150°C)
- ☐ PTC KTY 81/121 (-40°C / +150°C)
- ☐ NTC 10kΩ at 25°C ß3977 (-40°C / +125°C)
- ☐ NTC 20kΩ at 25°C ß4260 (-40°C / +125°C)
- ☐ NTC 3,3kΩ at 100°C ß3970 (-40°C / +200°C)
- ☐ Other:

(NTC / PTC , T° (min / max) , ß value, tolerance)

2. Wiring configuration: *(number of wires)*

☐ 2 ☐ Other:

3. Lengths L1 and L2 (mm):

L1 _____ L2 _____

4. Diameter Ø (mm):

5. Connection head: *(see the part "Accessories")*

☐ Type B ☐ Type DAN ☐ Type M ☐ Type N

☐ Type Ex ☐ Type NS ☐ Other:

6. Mounting:

☐ Wires ☐ Terminal block ☐ Transmitter (°C):
Specify temperature range

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

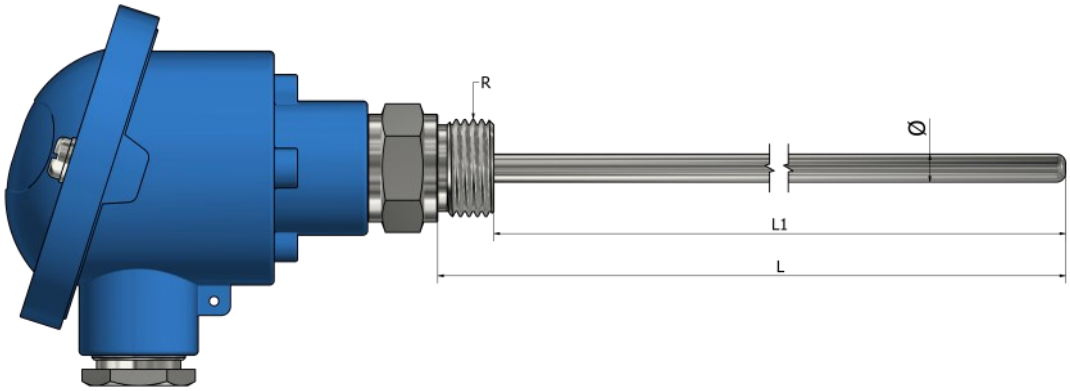
Quantity:

Note:

How to order?

Choose the desired characteristics of your sensor by marking the checkboxes and by filling up the text. You can provide sketches, images, personal notes, special requirements or any important data. For additional questions and assistance, feel free to contact us.

HH10 – Thermistors with terminal head
Standard with fixed thread



Tube and thread material* ***Stainless steel 316L*

Ordering information

1. Element type:

- ☐ PTC KTY 81/110 (-40°C / +150°C)
- ☐ PTC KTY 81/121 (-40°C / +150°C)
- ☐ NTC 10kΩ at 25°C ß3977 (-40°C / +125°C)
- ☐ NTC 20kΩ at 25°C ß4260 (-40°C / +125°C)
- ☐ NTC 3,3kΩ at 100°C ß3970 (-40°C / +200°C)
- ☐ Other:

(NTC / PTC , T° (min / max) , ß value, tolerance)

2. Wiring configuration: *(number of wires)*

☐ 2 ☐ Other:

3. Length L or L1 (mm):

L _____ L1 _____

4. Diameter Ø (mm):

5. Thread:

☐ 1/2'' BSPP ☐ 1/4'' BSPP ☐ 1/4'' BSPT ☐ M10

☐ 1/2'' NPT ☐ Other:

6. Connection head: *(see the part "Accessories")*

☐ Type B ☐ Type DAN ☐ Type M ☐ Type N

☐ Type Ex ☐ Type NS ☐ Other:

7. Mounting:

☐ Wires ☐ Terminal block ☐ Transmitter (°C):
Specify temperature range

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

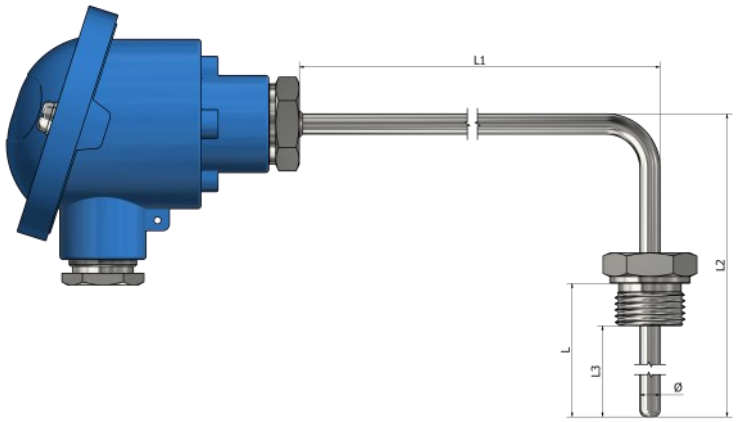
Quantity:

Note:

How to order?

Choose the desired characteristics of your sensor by marking the checkboxes and by filling up the text. You can provide sketches, images, personal notes, special requirements or any important data. For additional questions and assistance, feel free to contact us.

HH11 – Thermistors with terminal head
Standard with fixed thread (90° bend) (type 1)



*Tube and thread material **Stainless steel 316L***

Ordering information

1. Element type:

- ☐ PTC KTY 81/110 (-40°C / +150°C)
- ☐ PTC KTY 81/121 (-40°C / +150°C)
- ☐ NTC 10kΩ at 25°C ß3977 (-40°C / +125°C)
- ☐ NTC 20kΩ at 25°C ß4260 (-40°C / +125°C)
- ☐ NTC 3,3kΩ at 100°C ß3970 (-40°C / +200°C)
- ☐ Other:

(NTC / PTC , T° (min / max) , ß value, tolerance)

2. Wiring configuration: *(number of wires)*

☐ 2 ☐ Other:

3. Lengths L1 and L2 (mm):

L1 _____ L2 _____

4. Length L or L3 (mm):

L _____ L3 _____

5. Diameter Ø (mm):

6. Thread:

☐ 1/2'' BSPP ☐ 1/4'' BSPP ☐ 1/4'' BSPT ☐ M10

☐ 1/2'' NPT ☐ Other:

7. Connection head: *(see the part "Accessories")*

☐ Type B ☐ Type DAN ☐ Type M ☐ Type N

☐ Type Ex ☐ Type NS ☐ Other:

8. Mounting:

☐ Wires ☐ Terminal block ☐ Transmitter (°C):
Specify temperature range

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

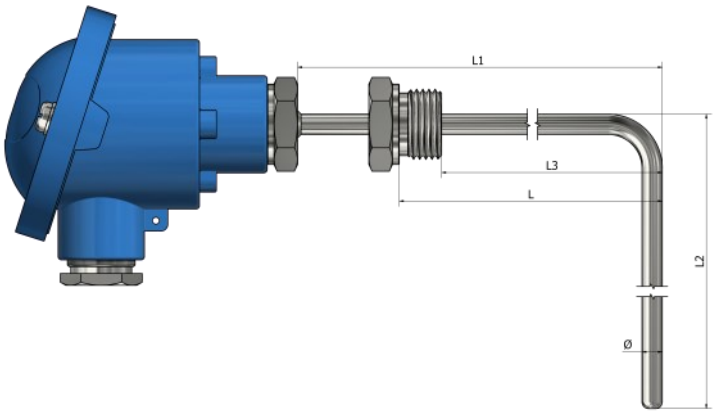
Quantity:

Note:

How to order?

Choose the desired characteristics of your sensor by marking the checkboxes and by filling up the text. You can provide sketches, images, personal notes, special requirements or any important data. For additional questions and assistance, feel free to contact us.

HH12 – Thermistors with terminal head
Standard with fixed thread (90° bend) (type 2)



*Tube and thread material **Stainless steel 316L***

Ordering information

1. Element type:

- ☐ PTC KTY 81/110 (-40°C / +150°C)
- ☐ PTC KTY 81/121 (-40°C / +150°C)
- ☐ NTC 10kΩ at 25°C ß3977 (-40°C / +125°C)
- ☐ NTC 20kΩ at 25°C ß4260 (-40°C / +125°C)
- ☐ NTC 3,3kΩ at 100°C ß3970 (-40°C / +200°C)
- ☐ Other:

(NTC / PTC , T° (min / max) , ß value, tolerance)

2. Wiring configuration: *(number of wires)*

☐ 2 ☐ Other:

3. Lengths L1 and L2 (mm):

L1 _____ L2 _____

4. Length L or L3 (mm):

L _____ L3 _____

5. Diameter Ø (mm):

6. Thread:

☐ 1/2'' BSPP ☐ 1/4'' BSPP ☐ 1/4'' BSPT ☐ M10

☐ 1/2'' NPT ☐ Other:

7. Connection head: *(see the part "Accessories")*

☐ Type B ☐ Type DAN ☐ Type M ☐ Type N

☐ Type Ex ☐ Type NS ☐ Other:

8. Mounting:

☐ Wires ☐ Terminal block ☐ Transmitter (°C):
Specify temperature range

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

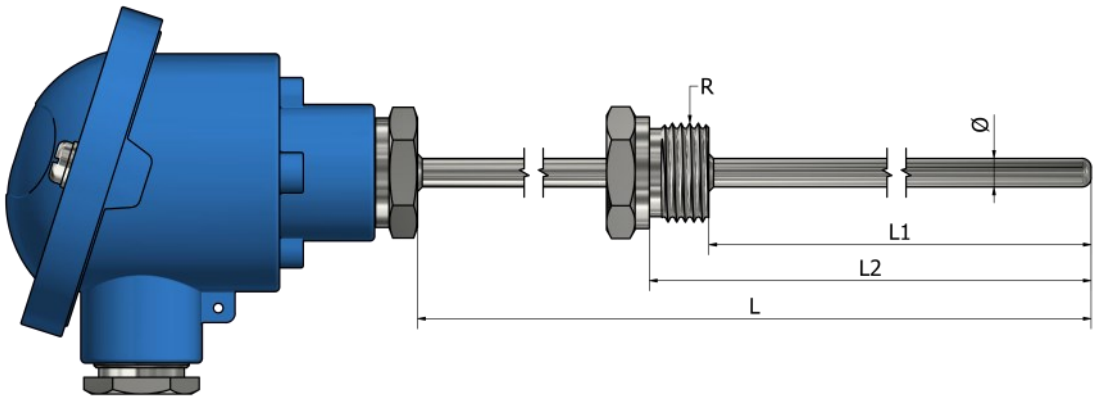
Quantity:

Note:

How to order?

Choose the desired characteristics of your sensor by marking the checkboxes and by filling up the text. You can provide sketches, images, personal notes, special requirements or any important data. For additional questions and assistance, feel free to contact us.

HH13 – Thermistors with terminal head
Standard with fixed thread (offset)



Tube and thread material* ***Stainless steel 316L*

Ordering information

1. Element type:

- ☐ PTC KTY 81/110 (-40°C / +150°C)
- ☐ PTC KTY 81/121 (-40°C / +150°C)
- ☐ NTC 10kΩ at 25°C ß3977 (-40°C / +125°C)
- ☐ NTC 20kΩ at 25°C ß4260 (-40°C / +125°C)
- ☐ NTC 3,3kΩ at 100°C ß3970 (-40°C / +200°C)
- ☐ Other:

(NTC / PTC , T° (min / max) , ß value, tolerance)

2. Wiring configuration: *(number of wires)*

☐ 2 ☐ Other:

3. Lengths L and L1 or L2 (mm):

L _____ L1 _____ L2 _____

4. Diameter Ø (mm):

5. Thread:

☐ 1/2'' BSPP ☐ 1/4'' BSPP ☐ 1/4'' BSPT ☐ M10

☐ 1/2'' NPT ☐ Other:

6. Connection head: *(see the part "Accessories")*

☐ Type B ☐ Type DAN ☐ Type M ☐ Type N

☐ Type Ex ☐ Type NS ☐ Other:

7. Mounting:

☐ Wires ☐ Terminal block ☐ Transmitter (°C):
Specify temperature range

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

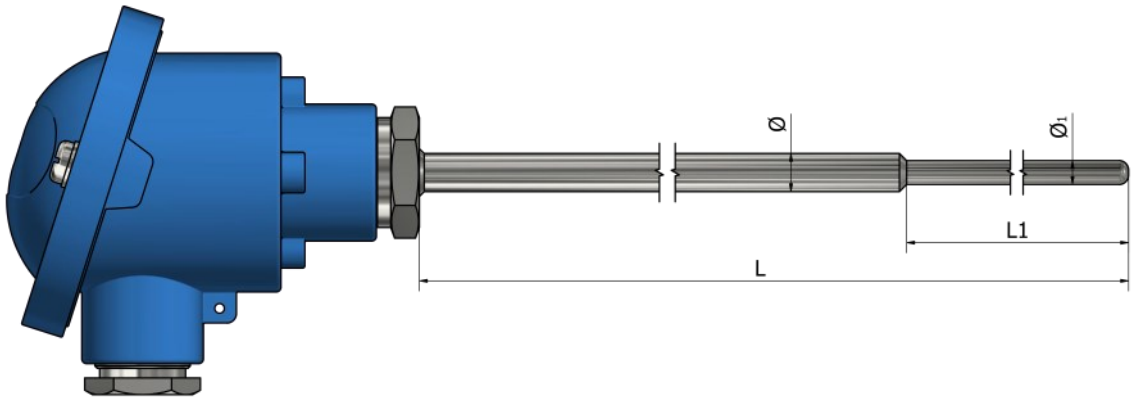
Quantity:

Note:

How to order?

Choose the desired characteristics of your sensor by marking the checkboxes and by filling up the text. You can provide sketches, images, personal notes, special requirements or any important data. For additional questions and assistance, feel free to contact us.

HH20 – Thermistors with terminal head
Reduced tip



*Tube material **Stainless steel 316L***

Ordering information

1. Element type:

- ☐ PTC KTY 81/110 (-40°C / +150°C)
- ☐ PTC KTY 81/121 (-40°C / +150°C)
- ☐ NTC 10kΩ at 25°C ß3977 (-40°C / +125°C)
- ☐ NTC 20kΩ at 25°C ß4260 (-40°C / +125°C)
- ☐ NTC 3,3kΩ at 100°C ß3970 (-40°C / +200°C)
- ☐ Other:

(NTC / PTC , T° (min / max) , ß value, tolerance)

2. Wiring configuration: *(number of wires)*

☐ 2 ☐ Other:

3. Dimensions L and Ø (mm):

L _____ Ø _____

4. Dimensions L1 and Ø1 (mm):

L1 _____ Ø1 _____

5. Connection head: *(see the part "Accessories")*

☐ Type B ☐ Type DAN ☐ Type M ☐ Type N
☐ Type Ex ☐ Type NS ☐ Other:

6. Mounting:

☐ Wires ☐ Terminal block ☐ Transmitter (°C):
Specify temperature range

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

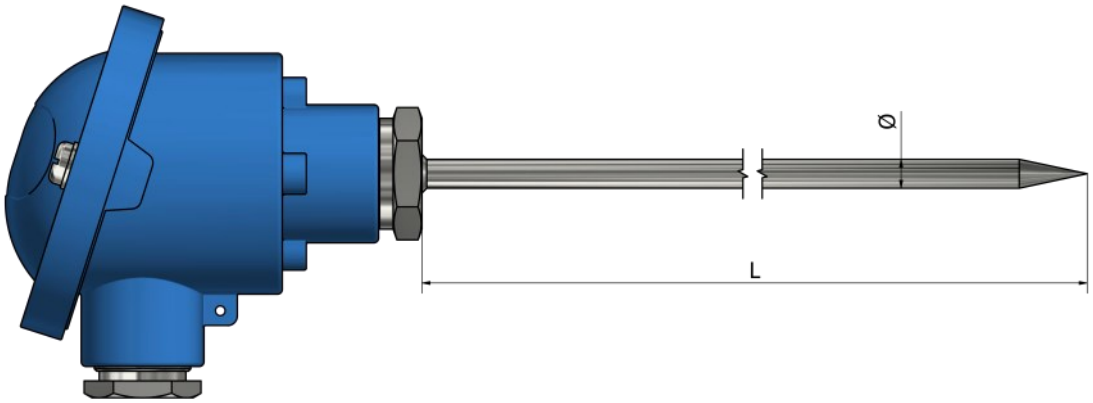
Quantity:

Note:

How to order?

Choose the desired characteristics of your sensor by marking the checkboxes and by filling up the text. You can provide sketches, images, personal notes, special requirements or any important data. For additional questions and assistance, feel free to contact us.

HH21 – Thermistors with terminal head
Pointed tip



*Tube material **Stainless steel 316L***

Ordering information

1. Element type:

- ☐ PTC KTY 81/110 (-40°C / +150°C)
- ☐ PTC KTY 81/121 (-40°C / +150°C)
- ☐ NTC 10kΩ at 25°C ß3977 (-40°C / +125°C)
- ☐ NTC 20kΩ at 25°C ß4260 (-40°C / +125°C)
- ☐ NTC 3,3kΩ at 100°C ß3970 (-40°C / +200°C)
- ☐ Other:

(NTC / PTC , T° (min / max) , ß value, tolerance)

2. Wiring configuration: *(number of wires)*

☐ 2 ☐ Other:

3. Length L (mm):

4. Diameter Ø (mm):

5. Connection head: *(see the part "Accessories")*

☐ Type B ☐ Type DAN ☐ Type M ☐ Type N
☐ Type Ex ☐ Type NS ☐ Other:

6. Mounting:

☐ Wires ☐ Terminal block ☐ Transmitter (°C):
Specify temperature range

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

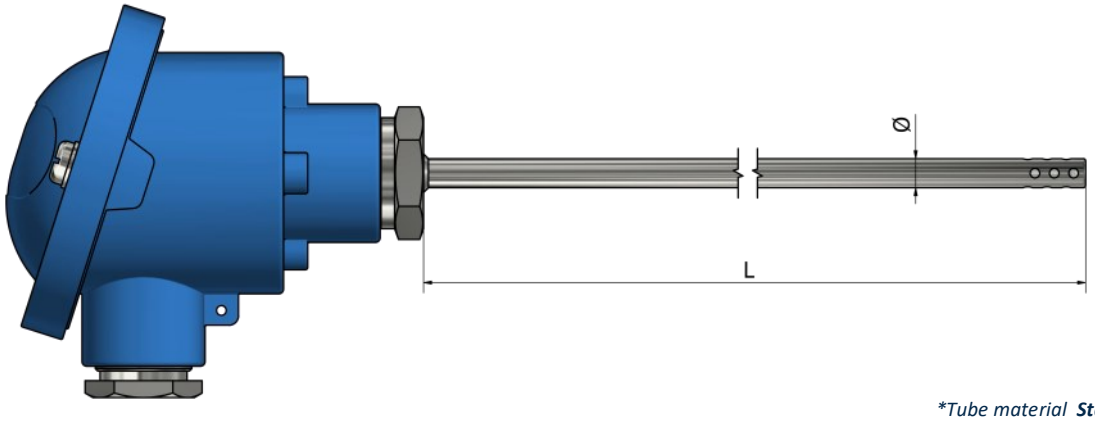
Quantity:

Note:

How to order?

Choose the desired characteristics of your sensor by marking the checkboxes and by filling up the text. You can provide sketches, images, personal notes, special requirements or any important data. For additional questions and assistance, feel free to contact us.

HH22 – Thermistors with terminal head
Open air



*Tube material **Stainless steel 316L***

Ordering information

1. Element type:

- ☐ PTC KTY 81/110 (-40°C / +150°C)
- ☐ PTC KTY 81/121 (-40°C / +150°C)
- ☐ NTC 10kΩ at 25°C ß3977 (-40°C / +125°C)
- ☐ NTC 20kΩ at 25°C ß4260 (-40°C / +125°C)
- ☐ NTC 3,3kΩ at 100°C ß3970 (-40°C / +200°C)
- ☐ Other:

(NTC / PTC , T° (min / max) , ß value, tolerance)

2. Wiring configuration: *(number of wires)*

☐ 2 ☐ Other:

3. Length L (mm):

4. Diameter Ø (mm):

5. Connection head: *(see the part "Accessories")*

☐ Type B ☐ Type DAN ☐ Type M ☐ Type N
☐ Type Ex ☐ Type NS ☐ Other:

6. Mounting:

☐ Wires ☐ Terminal block ☐ Transmitter (°C):
Specify temperature range

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

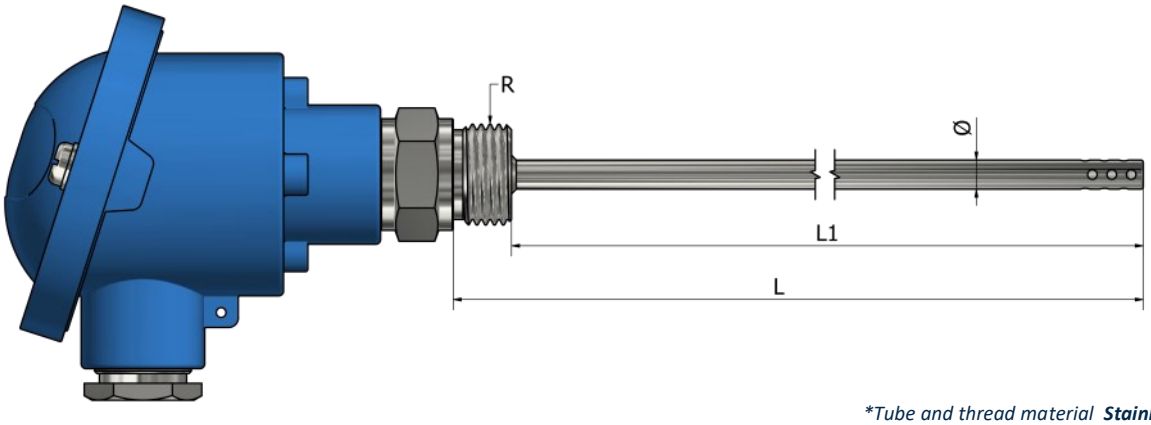
Quantity:

Note:

How to order?

Choose the desired characteristics of your sensor by marking the checkboxes and by filling up the text. You can provide sketches, images, personal notes, special requirements or any important data. For additional questions and assistance, feel free to contact us.

HH23 – Thermistors with terminal head
Open air with fixed thread



*Tube and thread material **Stainless steel 316L***

Ordering information

1. Element type:

- ☐ PTC KTY 81/110 (-40°C / +150°C)
- ☐ PTC KTY 81/121 (-40°C / +150°C)
- ☐ NTC 10kΩ at 25°C ß3977 (-40°C / +125°C)
- ☐ NTC 20kΩ at 25°C ß4260 (-40°C / +125°C)
- ☐ NTC 3,3kΩ at 100°C ß3970 (-40°C / +200°C)
- ☐ Other:

(NTC / PTC , T° (min / max) , ß value, tolerance)

2. Wiring configuration: *(number of wires)*

☐ 2 ☐ Other:

3. Length L or L1 (mm):

L _____ L1 _____

4. Diameter Ø (mm):

5. Thread:

☐ 1/2'' BSPP ☐ 1/4'' BSPP ☐ 1/4'' BSPT ☐ M10

☐ 1/2'' NPT ☐ Other:

6. Connection head: *(see the part "Accessories")*

☐ Type B ☐ Type DAN ☐ Type M ☐ Type N

☐ Type Ex ☐ Type NS ☐ Other:

7. Mounting:

☐ Wires ☐ Terminal block ☐ Transmitter (°C):
Specify temperature range

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

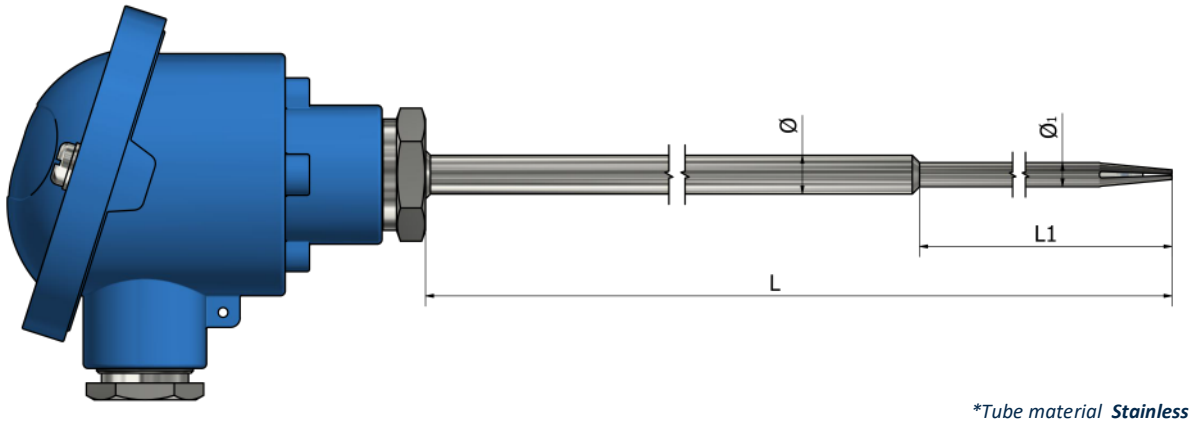
Quantity:

Note:

How to order?

Choose the desired characteristics of your sensor by marking the checkboxes and by filling up the text. You can provide sketches, images, personal notes, special requirements or any important data. For additional questions and assistance, feel free to contact us.

HH24 – Thermistors with terminal head
Open air with reduced tip



*Tube material **Stainless steel 316L***

Ordering information

1. Element type:

- ☐ PTC KTY 81/110 (-40°C / +150°C)
- ☐ PTC KTY 81/121 (-40°C / +150°C)
- ☐ NTC 10kΩ at 25°C ß3977 (-40°C / +125°C)
- ☐ NTC 20kΩ at 25°C ß4260 (-40°C / +125°C)
- ☐ NTC 3,3kΩ at 100°C ß3970 (-40°C / +200°C)
- ☐ Other:

(NTC / PTC , T° (min / max) , ß value, tolerance)

2. Wiring configuration: *(number of wires)*

☐ 2 ☐ Other:

3. Dimensions L and Ø (mm):

L _____ Ø _____

4. Dimensions L1 and Ø1 (mm):

L1 _____ Ø1 _____

5. Connection head: *(see the part "Accessories")*

☐ Type B ☐ Type DAN ☐ Type M ☐ Type N
☐ Type Ex ☐ Type NS ☐ Other:

6. Mounting:

☐ Wires ☐ Terminal block ☐ Transmitter (°C):
Specify temperature range

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

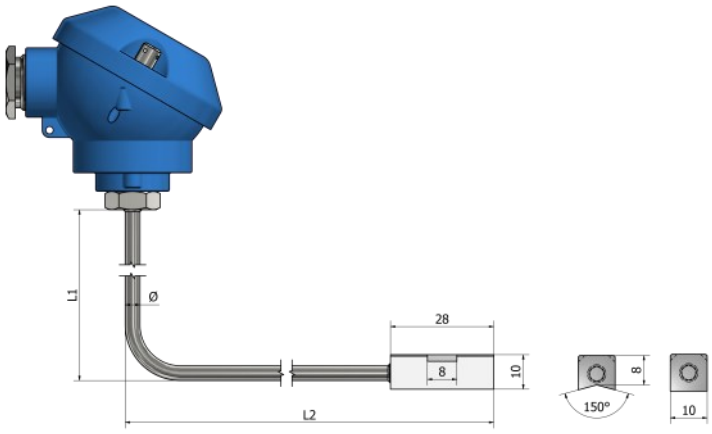
Quantity:

Note:

How to order?

Choose the desired characteristics of your sensor by marking the checkboxes and by filling up the text. You can provide sketches, images, personal notes, special requirements or any important data. For additional questions and assistance, feel free to contact us.

HH25 – Thermistors with terminal head
Contact block (surface mount)



*Tube material **Stainless steel 316L***

Ordering information

1. Element type:

- ☐ PTC KTY 81/110 (-40°C / +150°C)
- ☐ PTC KTY 81/121 (-40°C / +150°C)
- ☐ NTC 10kΩ at 25°C ß3977 (-40°C / +125°C)
- ☐ NTC 20kΩ at 25°C ß4260 (-40°C / +125°C)
- ☐ NTC 3,3kΩ at 100°C ß3970 (-40°C / +200°C)
- ☐ Other:

(NTC / PTC , T° (min / max) , ß value, tolerance)

2. Wiring configuration: *(number of wires)*

☐ 2 ☐ Other:

3. Lengths L1 and L2 (mm):

L1 _____ L2 _____

4. Diameter Ø (mm):

5. Connection head: *(see the part "Accessories")*

☐ Type B ☐ Type DAN ☐ Type M ☐ Type N
☐ Type Ex ☐ Type NS ☐ Other:

6. Mounting:

☐ Wires ☐ Terminal block ☐ Transmitter (°C):
Specify temperature range

7. Contact block material:

☐ Brass ☐ Aluminum ☐ Other:

8. Contact block shape:


☐ V-shape


☐ Flat

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

Quantity:

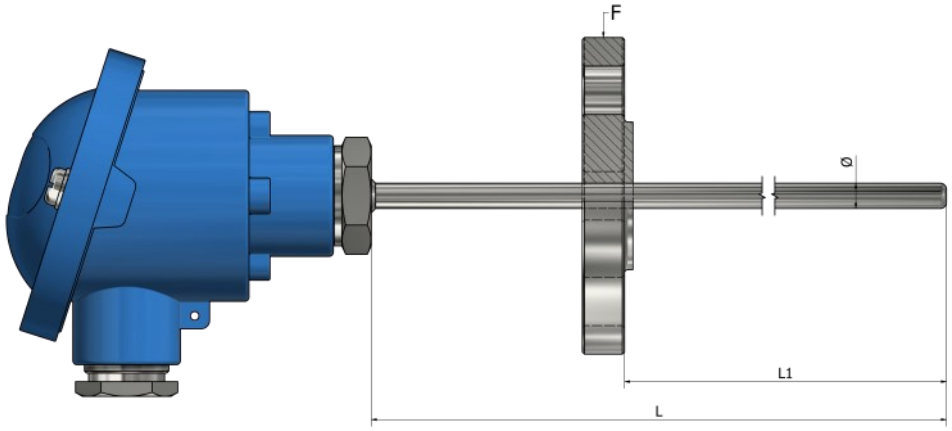
Note:

How to order?

Choose the desired characteristics of your sensor by marking the checkboxes and by filling up the text. You can provide sketches, images, personal notes, special requirements or any important data. For additional questions and assistance, feel free to contact us.

EuroSensors

HH30 – Thermistors with terminal head
Flange sanitary mounting



*Tube material **Stainless steel 316L***

Ordering information

1. Element type:

- ☐ PTC KTY 81/110 (-40°C / +150°C)
- ☐ PTC KTY 81/121 (-40°C / +150°C)
- ☐ NTC 10kΩ at 25°C ß3977 (-40°C / +125°C)
- ☐ NTC 20kΩ at 25°C ß4260 (-40°C / +125°C)
- ☐ NTC 3,3kΩ at 100°C ß3970 (-40°C / +200°C)
- ☐ Other:

(NTC / PTC , T° (min / max) , ß value, tolerance)

2. Wiring configuration: *(number of wires)*

☐ 2 ☐ Other:

3. Dimensions L and L1 (mm):

L _____ L1 _____

4. Diameter Ø (mm):

5. Connection head: *(see the part "Accessories")*

☐ Type B ☐ Type DAN ☐ Type M ☐ Type N

☐ Type Ex ☐ Type NS ☐ Other:

6. Mounting:

☐ Wires ☐ Terminal block ☐ Transmitter (°C):
Specify temperature range

7. Flange sanitary mounting:

☐ DIN2527 (DN10 – PN6) ☐ Other:

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

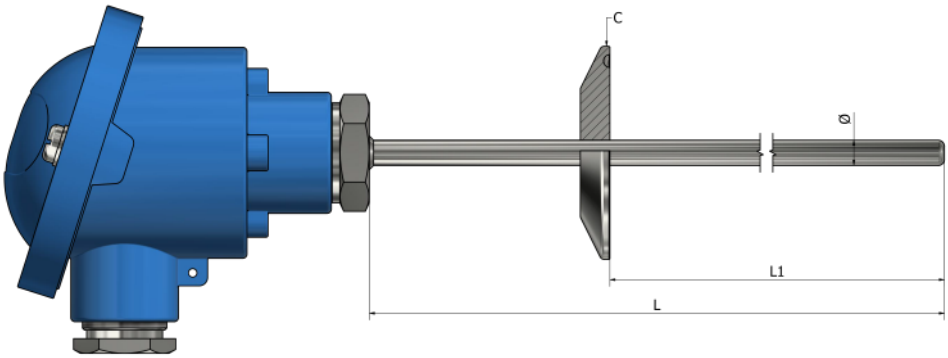
Quantity:

Note:

How to order?

Choose the desired characteristics of your sensor by marking the checkboxes and by filling up the text. You can provide sketches, images, personal notes, special requirements or any important data. For additional questions and assistance, feel free to contact us.

HH31 – Thermistors with terminal head
Tri-clamp sanitary mounting



*Tube material **Stainless steel 316L***

Ordering information

1. Element type:

- ☐ PTC KTY 81/110 (-40°C / +150°C)
- ☐ PTC KTY 81/121 (-40°C / +150°C)
- ☐ NTC 10kΩ at 25°C ß3977 (-40°C / +125°C)
- ☐ NTC 20kΩ at 25°C ß4260 (-40°C / +125°C)
- ☐ NTC 3,3kΩ at 100°C ß3970 (-40°C / +200°C)
- ☐ Other:

(NTC / PTC , T° (min / max) , ß value, tolerance)

2. Wiring configuration: *(number of wires)*

☐ 2 ☐ Other:

3. Dimensions L and L1 (mm):

L _____ L1 _____

4. Diameter Ø (mm):

5. Connection head: *(see the part "Accessories")*

☐ Type B ☐ Type DAN ☐ Type M ☐ Type N
☐ Type Ex ☐ Type NS ☐ Other:

6. Mounting:

☐ Wires ☐ Terminal block ☐ Transmitter (°C):
Specify temperature range

7. Flange sanitary mounting:

☐ DIN2527 (DN10 – PN6) ☐ Other:

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

Quantity:

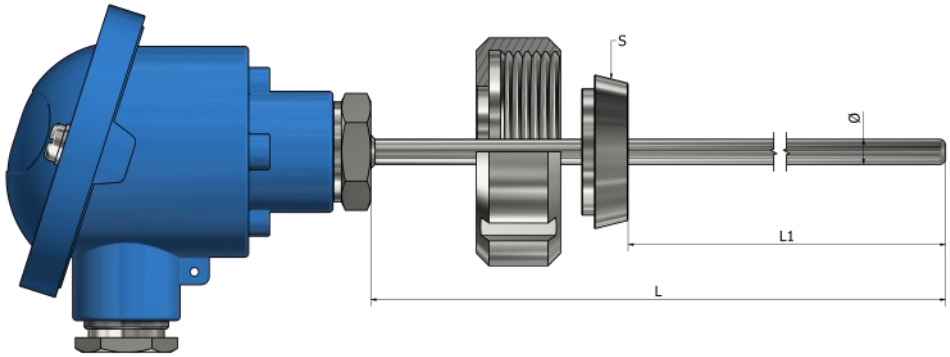
Note:

How to order?

Choose the desired characteristics of your sensor by marking the checkboxes and by filling up the text. You can provide sketches, images, personal notes, special requirements or any important data. For additional questions and assistance, feel free to contact us.

EuroSensors

HH32 – Thermistors with terminal head
Disc DIN11851 (screw-on) sanitary mounting



*Tube material **Stainless steel 316L***

Ordering information

1. Element type:

- ☐ PTC KTY 81/110 (-40°C / +150°C)
- ☐ PTC KTY 81/121 (-40°C / +150°C)
- ☐ NTC 10kΩ at 25°C ß3977 (-40°C / +125°C)
- ☐ NTC 20kΩ at 25°C ß4260 (-40°C / +125°C)
- ☐ NTC 3,3kΩ at 100°C ß3970 (-40°C / +200°C)
- ☐ Other:

(NTC / PTC , T° (min / max) , ß value, tolerance)

2. Wiring configuration: *(number of wires)*

☐ 2 ☐ Other:

3. Dimensions L and L1 (mm):

L _____ L1 _____

4. Diameter Ø (mm):

5. Connection head: *(see the part "Accessories")*

☐ Type B ☐ Type DAN ☐ Type M ☐ Type N

☐ Type Ex ☐ Type NS ☐ Other:

6. Mounting:

☐ Wires ☐ Terminal block ☐ Transmitter (°C):
Specify temperature range

7. Flange sanitary mounting:

☐ DIN2527 (DN10 – PN6) ☐ Other:

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

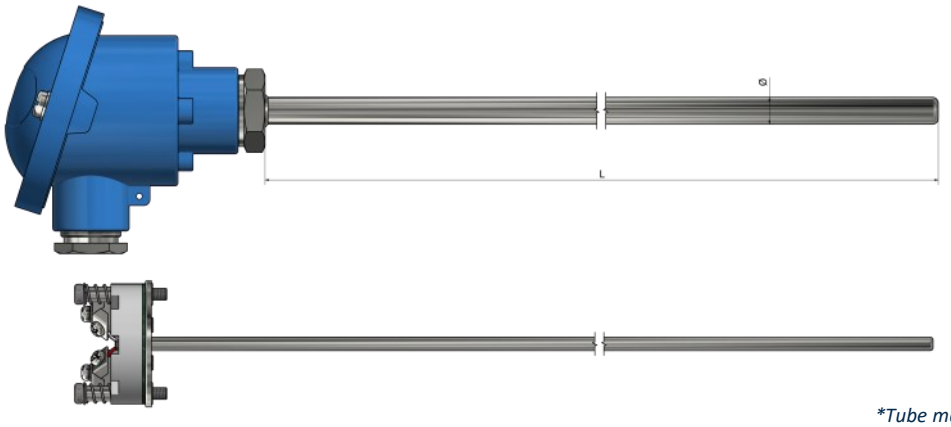
Quantity:

Note:

How to order?

Choose the desired characteristics of your sensor by marking the checkboxes and by filling up the text. You can provide sketches, images, personal notes, special requirements or any important data. For additional questions and assistance, feel free to contact us.

HH40 – Thermistors with terminal head
Exchangeable insert



*Tube material **Stainless steel 316L***

Ordering information

1. Element type:

- ☐ PTC KTY 81/110 (-40°C / +150°C)
- ☐ PTC KTY 81/121 (-40°C / +150°C)
- ☐ NTC 10kΩ at 25°C ß3977 (-40°C / +125°C)
- ☐ NTC 20kΩ at 25°C ß4260 (-40°C / +125°C)
- ☐ NTC 3,3kΩ at 100°C ß3970 (-40°C / +200°C)
- ☐ Other:

(NTC / PTC , T° (min / max) , ß value, tolerance)

2. Wiring configuration: *(number of wires)*

☐ 2 ☐ Other:

3. Length L (mm):

4. Diameter Ø (mm):

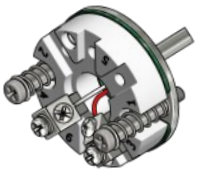
5. Connection head: *(see the part "Accessories")*

☐ Type B ☐ Type DAN ☐ Type M ☐ Type N

☐ Type Ex ☐ Type NS ☐ Other:

6. Type of exchangeable insert:

☐ Wires



☐ Terminal block

☐ Transmitter (°C):

T _____
Specify temperature range

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

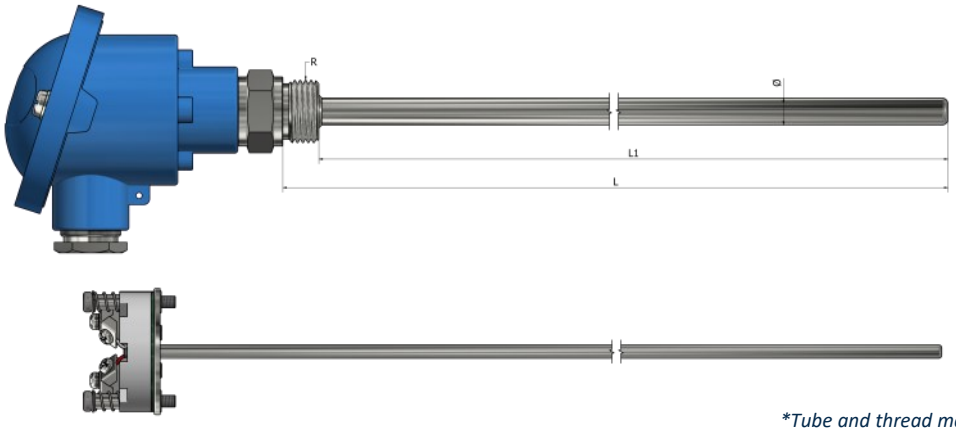
Quantity:

Note:

How to order?

Choose the desired characteristics of your sensor by marking the checkboxes and by filling up the text. You can provide sketches, images, personal notes, special requirements or any important data. For additional questions and assistance, feel free to contact us.

HH41 – Thermistors with terminal head
Exchangeable insert with fixed thread



*Tube and thread material **Stainless steel 316L***

Ordering information

1. Element type:

- ☐ PTC KTY 81/110 (-40°C / +150°C)
- ☐ PTC KTY 81/121 (-40°C / +150°C)
- ☐ NTC 10kΩ at 25°C ß3977 (-40°C / +125°C)
- ☐ NTC 20kΩ at 25°C ß4260 (-40°C / +125°C)
- ☐ NTC 3,3kΩ at 100°C ß3970 (-40°C / +200°C)
- ☐ Other:

(NTC / PTC , T° (min / max) , ß value, tolerance)

2. Wiring configuration: *(number of wires)*

☐ 2 ☐ Other:

3. Length L or L1 (mm):

L _____ L1 _____

4. Diameter Ø (mm):

5. Thread:

☐ 1/2'' BSPP ☐ 1/4'' BSPP ☐ 1/4'' BSPT ☐ M10

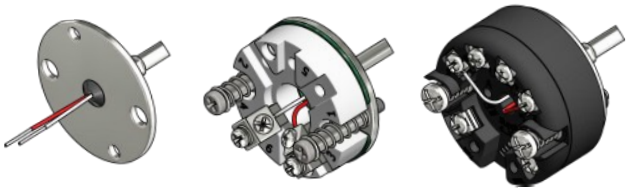
☐ 1/2'' NPT ☐ Other:

6. Connection head: *(see the part "Accessories")*

☐ Type B ☐ Type DAN ☐ Type M ☐ Type N

☐ Type Ex ☐ Type NS ☐ Other:

7. Type of exchangeable insert:



☐ Wires ☐ Terminal block ☐ Transmitter (°C):

T _____
Specify temperature range

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

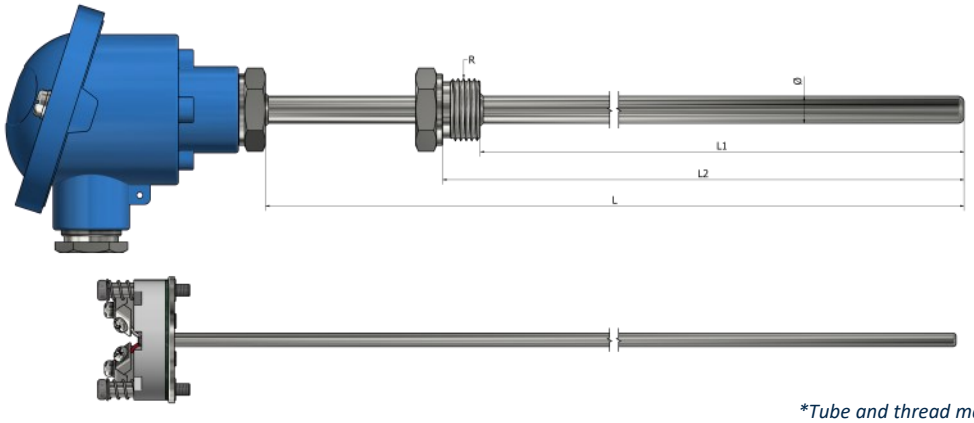
Quantity:

Note:

How to order?

Choose the desired characteristics of your sensor by marking the checkboxes and by filling up the text. You can provide sketches, images, personal notes, special requirements or any important data. For additional questions and assistance, feel free to contact us.

HH42 – Thermistors with terminal head
Exchangeable insert with fixed thread (offset)



*Tube and thread material **Stainless steel 316L***

Ordering information

1. Element type:

- ☐ PTC KTY 81/110 (-40°C / +150°C)
- ☐ PTC KTY 81/121 (-40°C / +150°C)
- ☐ NTC 10kΩ at 25°C ß3977 (-40°C / +125°C)
- ☐ NTC 20kΩ at 25°C ß4260 (-40°C / +125°C)
- ☐ NTC 3,3kΩ at 100°C ß3970 (-40°C / +200°C)
- ☐ Other:

(NTC / PTC , T° (min / max) , ß value, tolerance)

2. Wiring configuration: *(number of wires)*

☐ 2 ☐ Other:

3. Lengths L, L1, L2 (mm):

L _____ L1 _____ L2 _____

4. Diameter Ø (mm):

5. Thread:

☐ 1/2'' BSPP ☐ 1/4'' BSPP ☐ 1/4'' BSPT ☐ M10

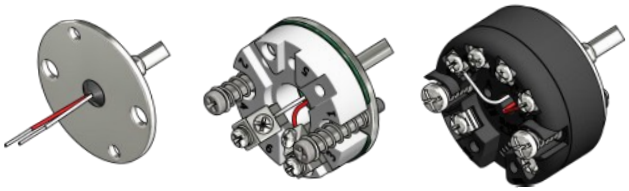
☐ 1/2'' NPT ☐ Other:

6. Connection head: *(see the part "Accessories")*

☐ Type B ☐ Type DAN ☐ Type M ☐ Type N

☐ Type Ex ☐ Type NS ☐ Other:

7. Type of exchangeable insert:



☐ Wires ☐ Terminal block ☐ Transmitter (°C):

T _____
Specify temperature range

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

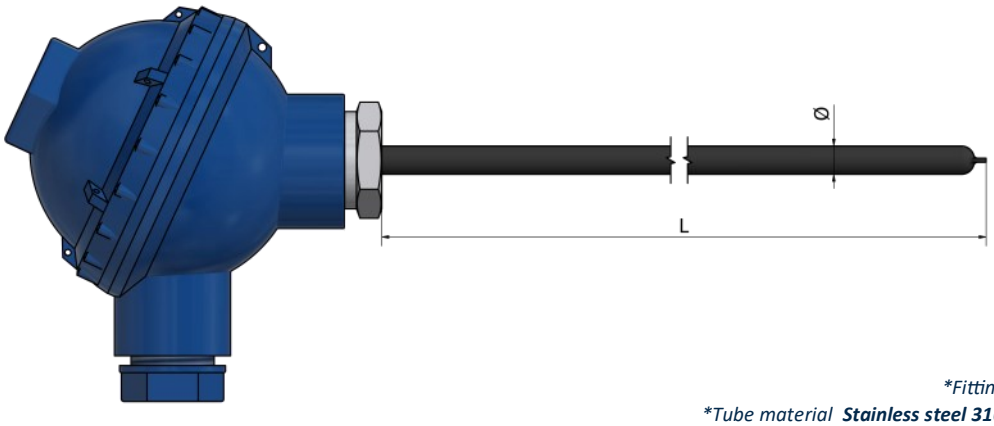
Quantity:

Note:

How to order?

Choose the desired characteristics of your sensor by marking the checkboxes and by filling up the text. You can provide sketches, images, personal notes, special requirements or any important data. For additional questions and assistance, feel free to contact us.

HH50 – Thermistors with terminal head
For aggressive environments



Fitting material* ***PTFE* *(260°C)*
Tube material* ***Stainless steel 316L* *with* ***PTFE*** *protection*

Ordering information

1. Element type:

- ☐ PTC KTY 81/110 (-40°C / +150°C)
- ☐ PTC KTY 81/121 (-40°C / +150°C)
- ☐ NTC 10kΩ at 25°C ß3977 (-40°C / +125°C)
- ☐ NTC 20kΩ at 25°C ß4260 (-40°C / +125°C)
- ☐ NTC 3,3kΩ at 100°C ß3970 (-40°C / +200°C)
- ☐ Other:

(NTC / PTC , T° (min / max) , ß value, tolerance)

2. Wiring configuration: *(number of wires)*

☐ 2 ☐ Other:

3. Length L (mm):

4. Diameter Ø (mm):

5. Connection head: *(see the part "Accessories")*

☐ Type B ☐ Type DAN ☐ Type M ☐ Type N
☐ Type Ex ☐ Type NS ☐ Other:

6. Mounting:

☐ Wires ☐ Terminal block ☐ Transmitter (°C):
Specify temperature range

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

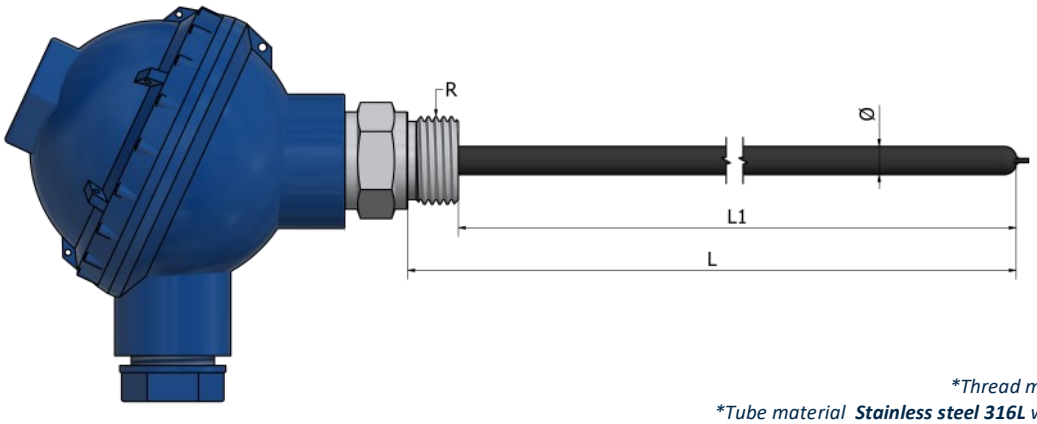
Quantity:

Note:

How to order?

Choose the desired characteristics of your sensor by marking the checkboxes and by filling up the text. You can provide sketches, images, personal notes, special requirements or any important data. For additional questions and assistance, feel free to contact us.

HH51 – Thermistors with terminal head
For aggressive environments with fixed thread



*Thread material **PTFE** (260°C)*
*Tube material **Stainless steel 316L** with **PTFE** protection*

Ordering information

1. Element type:

- ☐ PTC KTY 81/110 (-40°C / +150°C)
- ☐ PTC KTY 81/121 (-40°C / +150°C)
- ☐ NTC 10kΩ at 25°C ß3977 (-40°C / +125°C)
- ☐ NTC 20kΩ at 25°C ß4260 (-40°C / +125°C)
- ☐ NTC 3,3kΩ at 100°C ß3970 (-40°C / +200°C)
- ☐ Other:

(NTC / PTC , T° (min / max) , ß value, tolerance)

2. Wiring configuration: *(number of wires)*

☐ 2 ☐ Other:

3. Length L or L1 (mm):

L _____ L1 _____

4. Diameter Ø (mm):

5. Thread:

☐ 1/2'' BSPP ☐ 1/4'' BSPP ☐ 1/4'' BSPT ☐ M10
☐ 1/2'' NPT ☐ Other:

6. Connection head: *(see the part "Accessories")*

☐ Type B ☐ Type DAN ☐ Type M ☐ Type N
☐ Type Ex ☐ Type NS ☐ Other:

7. Mounting:

☐ Wires ☐ Terminal block ☐ Transmitter (°C):
Specify temperature range

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

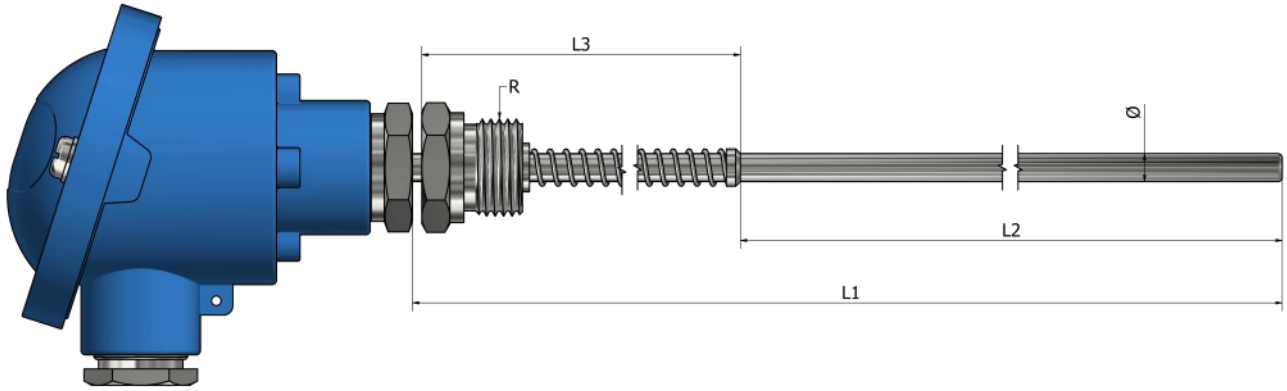
Quantity:

Note:

How to order?

Choose the desired characteristics of your sensor by marking the checkboxes and by filling up the text. You can provide sketches, images, personal notes, special requirements or any important data. For additional questions and assistance, feel free to contact us.

HH60 – Thermistors with terminal head
Spring loaded



Tube and thread material* ***Stainless steel 316L*

Ordering information

1. Element type:

- ☐ PTC KTY 81/110 (-40°C / +150°C)
- ☐ PTC KTY 81/121 (-40°C / +150°C)
- ☐ NTC 10kΩ at 25°C ß3977 (-40°C / +125°C)
- ☐ NTC 20kΩ at 25°C ß4260 (-40°C / +125°C)
- ☐ NTC 3,3kΩ at 100°C ß3970 (-40°C / +200°C)
- ☐ Other:

(NTC / PTC , T° (min / max) , ß value, tolerance)

2. Wiring configuration: *(number of wires)*

☐ 2 ☐ Other:

3. Lengths L1, L2, L3 (mm):

L1 _____ L2 _____ L3 _____

4. Diameter Ø (mm):

5. Thread:

☐ 1/2'' BSPP ☐ 1/4'' BSPP ☐ 1/4'' BSPT ☐ M10

☐ 1/2'' NPT ☐ Other:

6. Connection head: *(see the part "Accessories")*

☐ Type B ☐ Type DAN ☐ Type M ☐ Type N

☐ Type Ex ☐ Type NS ☐ Other:

7. Mounting:

☐ Wires ☐ Terminal block ☐ Transmitter (°C):
Specify temperature range

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

Quantity:

Note:

How to order?

Choose the desired characteristics of your sensor by marking the checkboxes and by filling up the text. You can provide sketches, images, personal notes, special requirements or any important data. For additional questions and assistance, feel free to contact us.

HI00 – Thermistors with terminal head
Disc plate insert

*Tube material **Stainless steel 316L***

Ordering information

1. Element type:

- ☐ PTC KTY 81/110 (-40°C / +150°C)
- ☐ PTC KTY 81/121 (-40°C / +150°C)
- ☐ NTC 10kΩ at 25°C ß3977 (-40°C / +125°C)
- ☐ NTC 20kΩ at 25°C ß4260 (-40°C / +125°C)
- ☐ NTC 3,3kΩ at 100°C ß3970 (-40°C / +200°C)
- ☐ Other:

(NTC / PTC , T° (min / max) , ß value, tolerance)

2. Wiring configuration: *(number of wires)*

☐ 2 ☐ Other:

3. Sheath length L (mm):

4. Diameter Ø (mm):

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

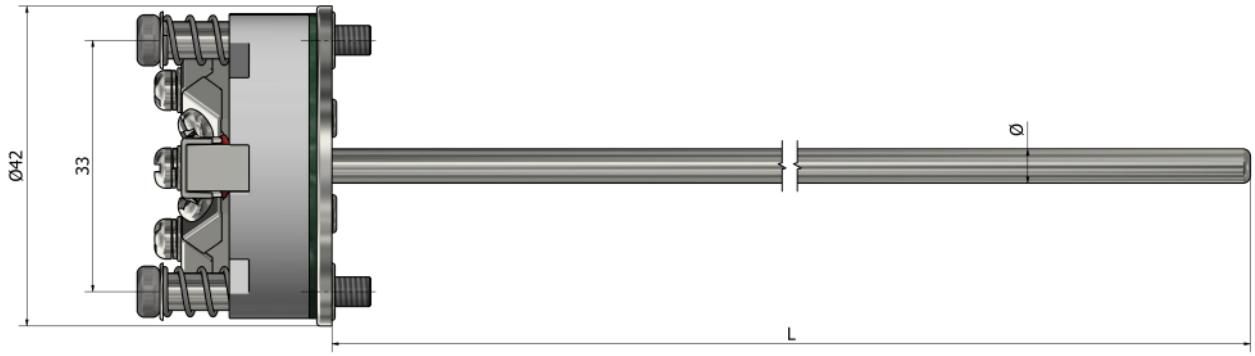
Quantity:

Note:

How to order?

Choose the desired characteristics of your sensor by marking the checkboxes and by filling up the text. You can provide sketches, images, personal notes, special requirements or any important data. For additional questions and assistance, feel free to contact us.

HI01 – Thermistors with terminal head
Insert with terminal block (spring loaded)



*Tube material **Stainless steel 316L***

Ordering information

1. Element type:

- ☐ PTC KTY 81/110 (-40°C / +150°C)
- ☐ PTC KTY 81/121 (-40°C / +150°C)
- ☐ NTC 10kΩ at 25°C ß3977 (-40°C / +125°C)
- ☐ NTC 20kΩ at 25°C ß4260 (-40°C / +125°C)
- ☐ NTC 3,3kΩ at 100°C ß3970 (-40°C / +200°C)
- ☐ Other:

(NTC / PTC , T° (min / max) , ß value, tolerance)

2. Wiring configuration: *(number of wires)*

☐ 2 ☐ Other:

3. Sheath length L (mm):

4. Diameter Ø (mm):

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

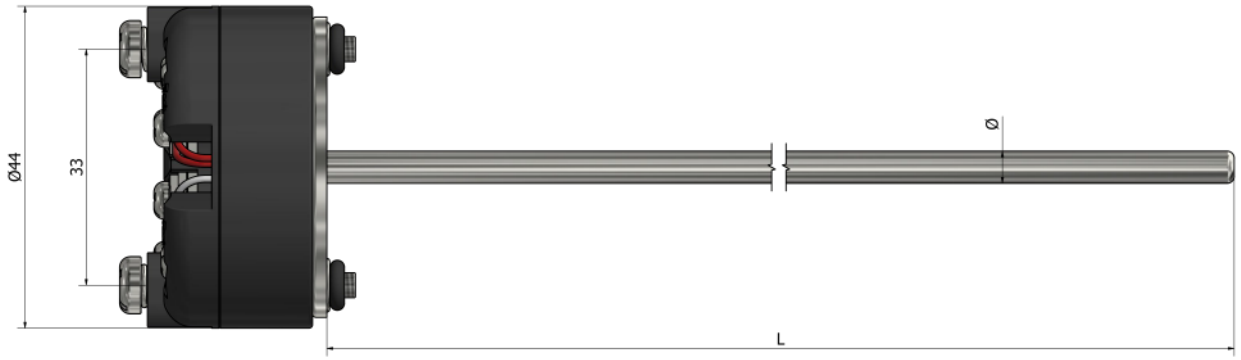
Quantity:

Note:

How to order?

Choose the desired characteristics of your sensor by marking the checkboxes and by filling up the text. You can provide sketches, images, personal notes, special requirements or any important data. For additional questions and assistance, feel free to contact us.

HI02 – Thermistors with terminal head
Insert with transmitter block (spring loaded)



*Tube material **Stainless steel 316L***

Ordering information

1. Element type:

- ☐ PTC KTY 81/110 (-40°C / +150°C)
- ☐ PTC KTY 81/121 (-40°C / +150°C)
- ☐ NTC 10kΩ at 25°C ß3977 (-40°C / +125°C)
- ☐ NTC 20kΩ at 25°C ß4260 (-40°C / +125°C)
- ☐ NTC 3,3kΩ at 100°C ß3970 (-40°C / +200°C)
- ☐ Other:

(NTC / PTC , T° (min / max) , ß value, tolerance)

2. Wiring configuration: *(number of wires)*

☐ 2 ☐ Other:

3. Sheath length L (mm):

4. Diameter Ø (mm):

5. Transmitter (°C):
Specify temperature range

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

Quantity:

Note:

How to order?

Choose the desired characteristics of your sensor by marking the checkboxes and by filling up the text. You can provide sketches, images, personal notes, special requirements or any important data. For additional questions and assistance, feel free to contact us.