EuroSensors

Surface temperature sensors

Contents

Surface thermocouples

Surface RTDs

Surface thermistors

EuroSensors

Surface thermocouples

Surface thermocouples - 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.
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.
Note that connector colors vary by standard and country. Check the ***"International Color Codes applied to temperature measuring engineering".***

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.

Material conductivity

Material	Thermal conductivity W/(m.K)
Air	≈ 0,25
Stainless steel	≈ 14
Brass	≈ 109
Aluminum	≈ 205
Copper	≈ 385
Silver	≈ 406

What are the characteristics of surface thermocouples ?

Surface temperature probes detect surface temperature.
The most important issue in surface temperature measurement is to keep measurement errors as small as possible.
This is achieved by an appropriate design of the measuring head, so that only very little heat is extracted from the measuring point and the measurement error is negligible.
The perfectly adapted geometry increases the contact surface.
At the same time, the low thermal mass of the measuring head ensures that comparatively fast response times can be achieved when measuring the surface temperature.

Different types of surface thermocouples

Attaching a thermocouple to a surface for an accurate reading can be difficult. The sensor must respond quickly to avoid heat dissipation and remain attached under vibration or other stress.

We offer a number of constructions to suit every surface application.

Washer and ring thermocouples can be attached to a stud welded to the surface or to an existing bolt on a section of machinery.

Bayonets are simply inserted through a drilled opening to a desired depth of a surface. The opening is then tapped to accept a number of mounting adapters. These adapters feature a locking pin allowing the thermocouple cap to be installed with a twist.

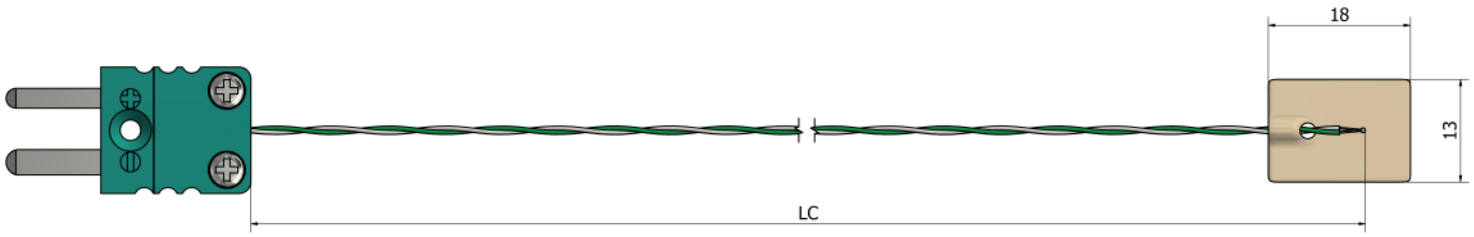
Weld pad thermocouples which need not require the more rugged industrial construction can be tig welded or soldered and held with a number of clamping devices.

Pipe-clamp thermocouples is ideal for temperature measurements on pipes in laboratories and industrial applications.

Magnet thermocouples are ideal for a temporary measurement to a magnetic surface or magnetic surface which doesn't allow any alteration.

EuroSensors

TS00 – Surface thermocouples
Adhesive tape



Adhesive tape material* ***Fiberglass/PTFE*

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. Cable prolongation:
☐ Teflon (260°C) ☐ Other:

5. Cable length LC (mm):

6. Junction type: Exposed

7. Connector:
☐ Miniature Plug ☐ Miniature Socket ☐ Standard Plug ☐ Standard Socket ☐ Without

8. Connector temperature: ☐ 200°C ☐ 350°C ☐ 650°C

9. Option:
☐ Cable clamp ☐ Custom ID label ☐ Without

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

Quantity:

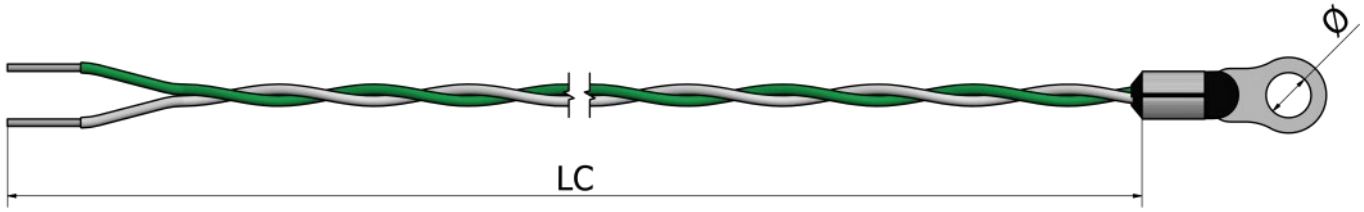
Note:

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

TS01 – Surface thermocouples
Washer mount



Washer mount material* ***Tinned copper*

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. Cable prolongation:
☐ Teflon (260°C) ☐ Other:

5. Cable length LC (mm):

6. Junction type:
☐ Ungrounded ☐ Grounded

7. Hole size Ø (mm):

8. Connector:
☐ Miniature Plug ☐ Miniature Socket ☐ Standard Plug ☐ Standard Socket ☐ Without

9. Connector temperature: ☐ 200°C ☐ 350°C ☐ 650°C

10. Option:
☐ Cable clamp ☐ Custom ID label ☐ Without

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

Quantity:

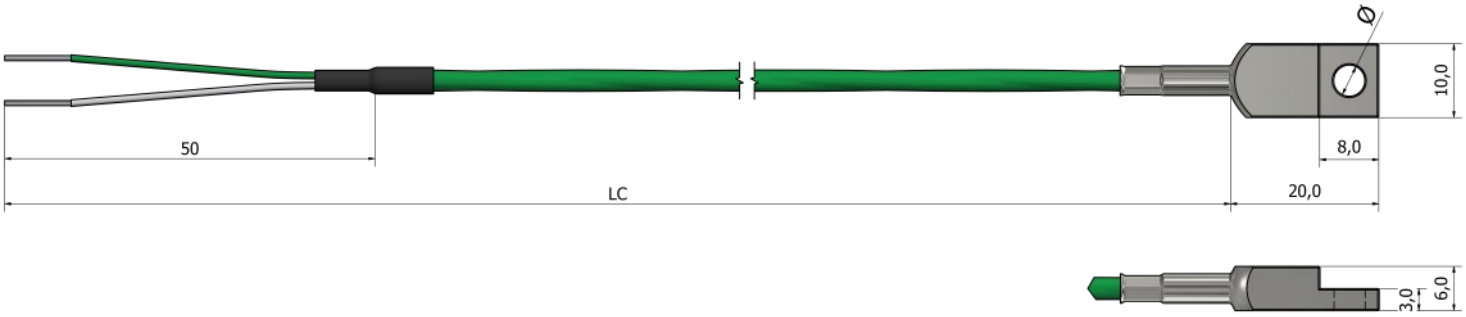
Note:

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

TS02 – Surface thermocouples
Reinforced washer mount



Washer mount 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. Cable prolongation:
☐ PVC (105°C) ☐ Silicone (180°C) ☐ Teflon (260°C)
☐ Fiberglass (400°C) ☐ Other:

5. Cable length LC (mm):

6. Junction type:
☐ Ungrounded ☐ Grounded

7. Hole diameter Ø (mm):

8. Crimp protection:
☐ Spring ☐ Heat shrink sleeve ☐ Without

9. Connector:
☐ Miniature Plug ☐ Miniature Socket ☐ Standard Plug ☐ Standard Socket ☐ Without

10. Connector temperature: ☐ 200°C ☐ 350°C ☐ 650°C

11. Option:
☐ Cable clamp ☐ Custom ID label ☐ Without

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

Quantity:

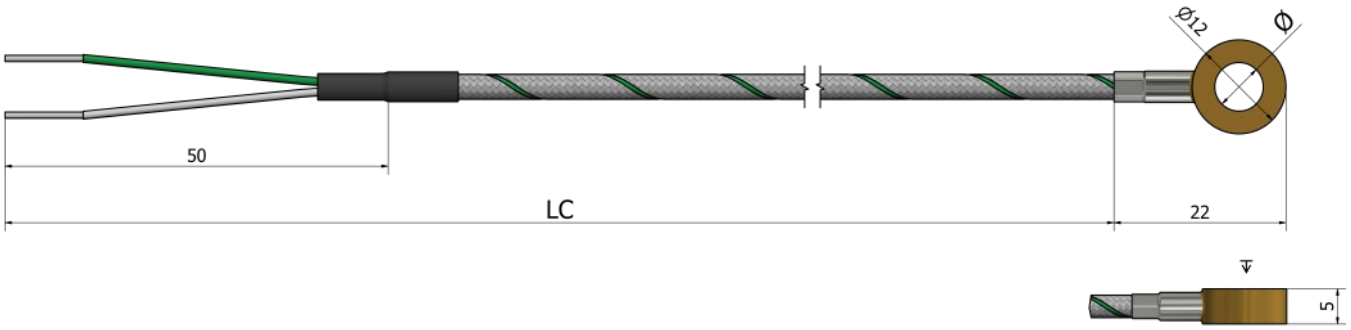
Note:

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

TS03 – Surface thermocouples
Ring mount



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. Cable prolongation:
☐ PVC (105°C) ☐ Silicone (180°C) ☐ Teflon (260°C)
☐ Fiberglass (400°C) ☐ Other:

5. Cable length LC (mm):

6. Junction type:
☐ Ungrounded ☐ Grounded

7. Ring material:
☐ Brass ☐ AISI 316L ☐ Other:

8. Ring size:
☐ M5 ☐ M6 ☐ Other:

9. Crimp protection:
☐ Spring ☐ Heat shrink sleeve ☐ Without

10. Connector:
☐ Miniature Plug ☐ Miniature Socket ☐ Standard Plug ☐ Standard Socket ☐ Without

11. Connector temperature: ☐ 200°C ☐ 350°C ☐ 650°C

12. Option:
☐ Cable clamp ☐ Custom ID label ☐ Without

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

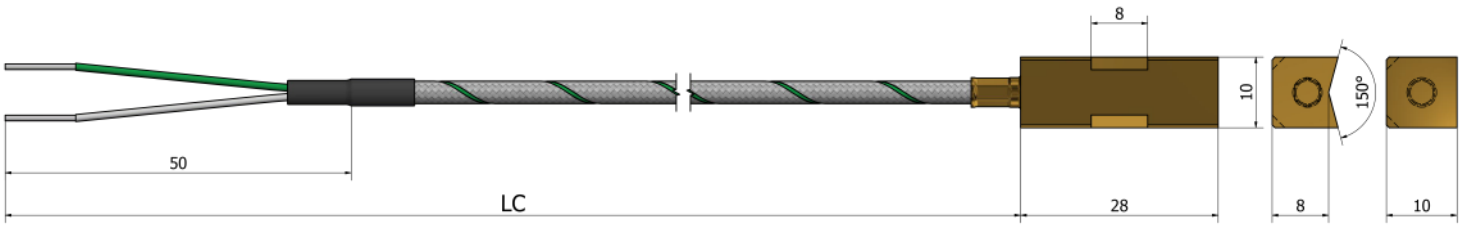
Quantity:

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.

TS05 – Surface thermocouples
Contact block



*Contact block material **Brass or aluminum***

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. Cable prolongation:
☐ PVC (105°C) ☐ Silicone (180°C) ☐ Teflon (260°C)
☐ Fiberglass (400°C) ☐ Other:

5. Cable length LC (mm):

6. Junction type:
☐ Ungrounded ☐ Grounded

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

8. Contact block shape:

☐ V-shape

☐ Flat

9. Crimp protection:
☐ Spring ☐ Heat shrink sleeve ☐ Without

10. Connector:
☐ Miniature Plug ☐ Miniature Socket ☐ Standard Plug ☐ Standard Socket ☐ Without

11. Connector temperature: ☐ 200°C ☐ 350°C ☐ 650°C

12. Option:
☐ Cable clamp ☐ Custom ID label ☐ Without

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

Quantity:

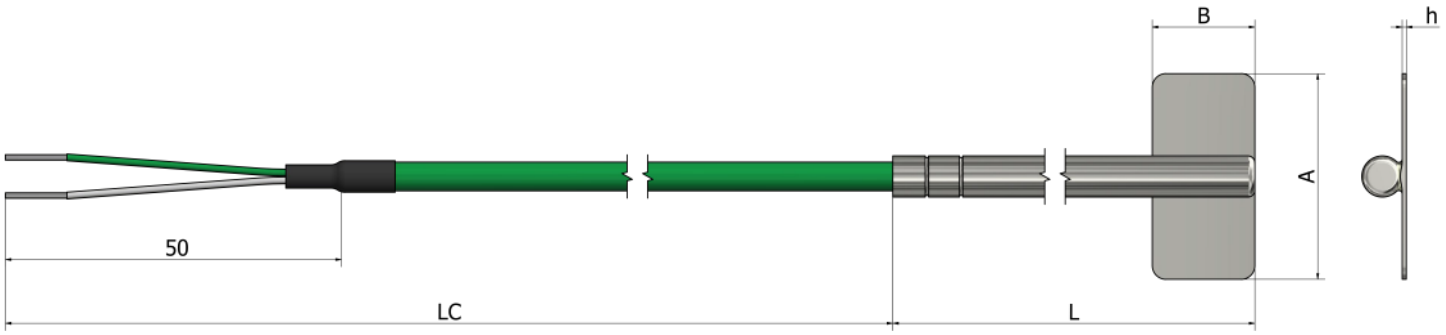
Note:

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

TS10 – Surface thermocouples
Weld pad



Weld pad and 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. Cable prolongation:
☐ PVC (105°C) ☐ Silicone (180°C) ☐ Teflon (260°C)
☐ Fiberglass (400°C) ☐ Other:

5. Cable length LC (mm):

6. Junction type:
☐ Ungrounded ☐ Grounded

7. Tube length L (mm):

8. Pad material: ☐ AISI 316L ☐ Other:

9. Pad dimensions A x B (mm):
☐ 15 x 10 ☐ 25 x 10 ☐ 30 x 10
☐ Other:

10. Pad thickness h (mm): ☐ 0,5 ☐ Other:

11. Crimp protection:
☐ Spring ☐ Heat shrink sleeve ☐ Without

12. Connector:
☐ Miniature Plug ☐ Miniature Socket ☐ Standard Plug ☐ Standard Socket ☐ Without

13. Connector temperature: ☐ 200°C ☐ 350°C ☐ 650°C

14. Option:
☐ Cable clamp ☐ Custom ID label ☐ Without

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

Quantity:

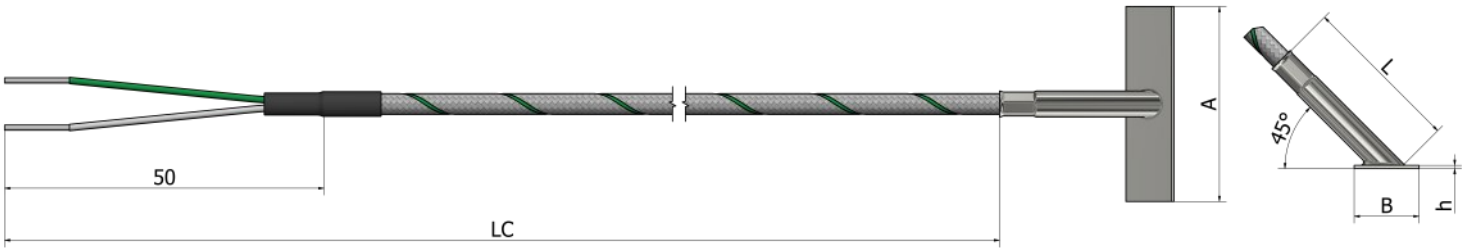
Note:

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

TS11 – Surface thermocouples
Weld pad (45° angle)



Weld pad and 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. Cable prolongation:
☐ PVC (105°C) ☐ Silicone (180°C) ☐ Teflon (260°C)
☐ Fiberglass (400°C) ☐ Other:

5. Cable length LC (mm):

6. Junction type:
☐ Ungrounded ☐ Grounded

7. Tube length L (mm):

8. Pad material: ☐ AISI 316L ☐ Other:

9. Pad dimensions A x B (mm):
☐ 15 x 10 ☐ 25 x 10 ☐ 30 x 10
☐ Other:

10. Pad thickness h (mm): ☐ 0,5 ☐ Other:

11. Crimp protection:
☐ Spring ☐ Heat shrink sleeve ☐ Without

12. Connector:
☐ Miniature Plug ☐ Miniature Socket ☐ Standard Plug ☐ Standard Socket ☐ Without

13. Connector temperature: ☐ 200°C ☐ 350°C ☐ 650°C

14. Option:
☐ Cable clamp ☐ Custom ID label ☐ Without

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

Quantity:

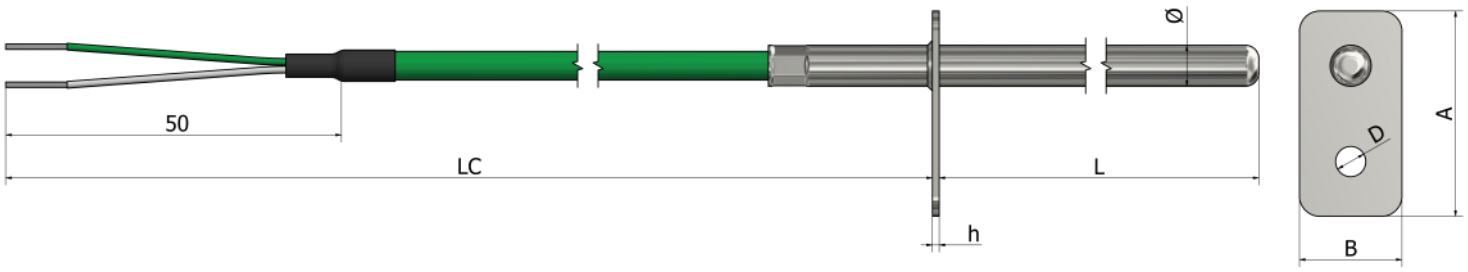
Note:

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

TS12 – Surface thermocouples
Weld pad (plug-in)



Weld pad and 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. Cable prolongation:
☐ PVC (105°C) ☐ Silicone (180°C) ☐ Teflon (260°C)
☐ Fiberglass (400°C) ☐ Other:

5. Cable length LC (mm):

6. Junction type:
☐ Ungrounded ☐ Grounded

7. Pad material: ☐ AISI 316L ☐ Other:

8. Pad dimensions A x B (mm):
☐ 15 x 10 ☐ 25 x 10 ☐ 30 x 10
☐ Other:

9. Pad thickness h (mm): ☐ 0,5 ☐ Other:

10. Hole size Ø D (mm):

11. Insertion diameter Ø (mm):
☐ 4 ☐ 5 ☐ 6 ☐ Other:

12. Insertion depth L (mm):

13. Crimp protection:
☐ Spring ☐ Heat shrink sleeve ☐ Without

14. Connector:
☐ Miniature Plug ☐ Miniature Socket ☐ Standard Plug ☐ Standard Socket ☐ Without

15. Connector temperature: ☐ 200°C ☐ 350°C ☐ 650°C

16. Option:
☐ Cable clamp ☐ Custom ID label ☐ Without

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

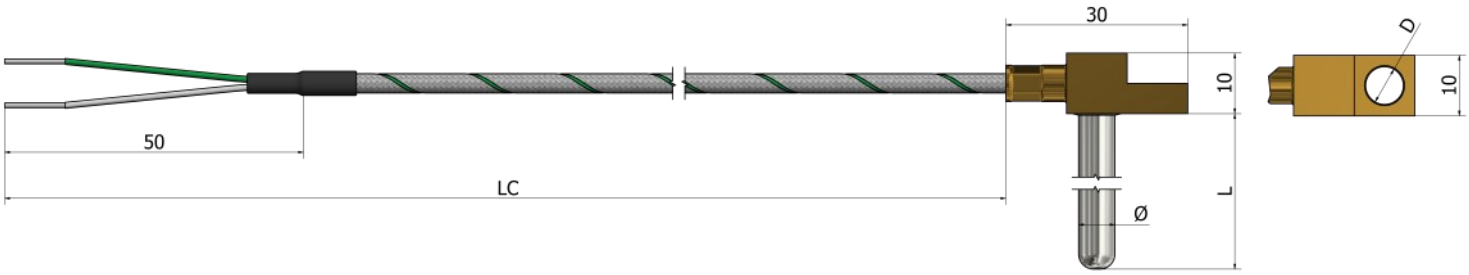
Quantity:

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.

TS20 – Surface thermocouples
Angle / plug-in



Mounting block material* ***Brass* **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. Cable prolongation:
☐ PVC (105°C) ☐ Silicone (180°C) ☐ Teflon (260°C)
☐ Fiberglass (400°C) ☐ Other:

5. Cable length LC (mm):

6. Junction type:
☐ Ungrounded ☐ Grounded

7. Hole size Ø D (mm):

8. Insertion diameter Ø (mm):
☐ 4 ☐ 5 ☐ 6 ☐ Other:

9. Insertion depth L (mm):

10. Crimp protection:
☐ Spring ☐ Heat shrink sleeve ☐ Without

11. Connector:
☐ Miniature Plug ☐ Miniature Socket ☐ Standard Plug ☐ Standard Socket ☐ Without

12. Connector temperature: ☐ 200°C ☐ 350°C ☐ 650°C

13. Option:
☐ Cable clamp ☐ Custom ID label ☐ Without

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

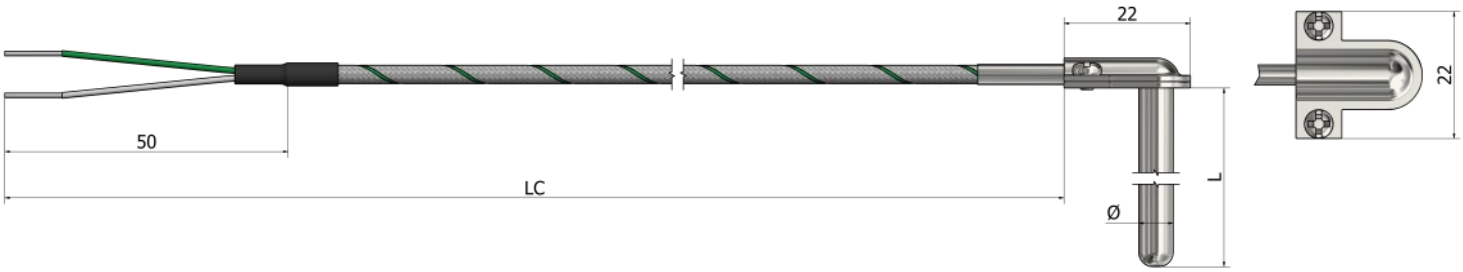
Quantity:

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.

TS21 – Surface thermocouples
Angle / plug-in (clamp)



Clamp and 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. Cable prolongation:
☐ PVC (105°C) ☐ Silicone (180°C) ☐ Teflon (260°C)
☐ Fiberglass (400°C) ☐ Other:

5. Cable length LC (mm):

6. Junction type:
☐ Ungrounded ☐ Grounded

7. Insertion diameter Ø (mm):
☐ 4 ☐ 5 ☐ 6 ☐ Other:

8. Insertion depth L (mm):

9. Crimp protection:
☐ Spring ☐ Heat shrink sleeve ☐ Without

10. Connector:
☐ Miniature Plug ☐ Miniature Socket ☐ Standard Plug ☐ Standard Socket ☐ Without

11. Connector temperature: ☐ 200°C ☐ 350°C ☐ 650°C

12. Option:
☐ Cable clamp ☐ Custom ID label ☐ Without

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

Quantity:

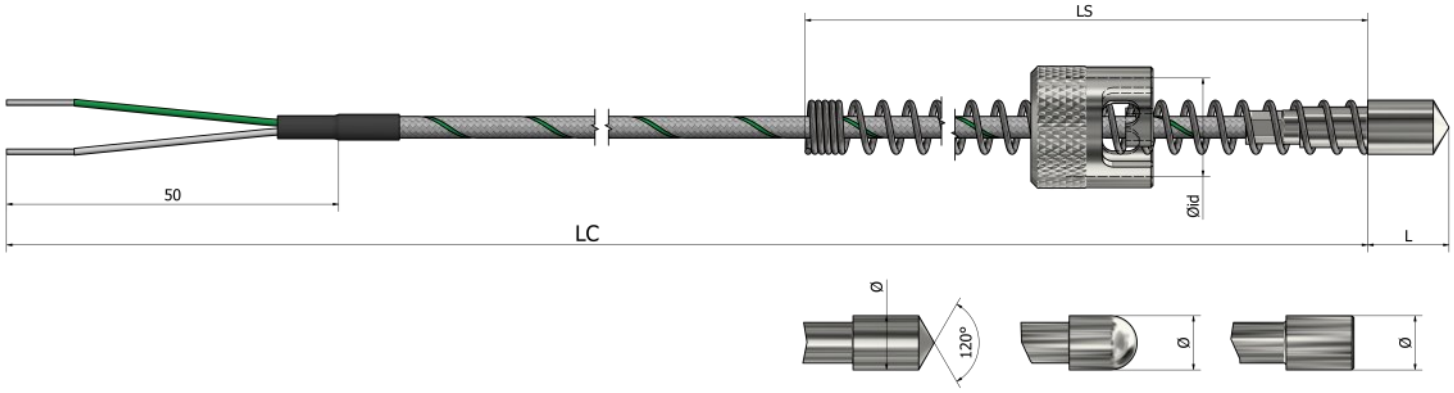
Note:

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

TS30 – Surface thermocouples
Bayonet



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. Cable prolongation:
☐ Fiberglass (400°C) ☐ Other:

5. Cable length LC (mm):

6. Junction type:
☐ Ungrounded ☐ Grounded

7. Sheath tip dimensions Ø x L (mm):
☐ 5 x 12 ☐ 6 x 10 ☐ 8 x 10 ☐ Other:

8. Sheath tip type: *(material **Stainless steel 316L**)*

☐ Round ☐ Conical ☐ Flat

9. Bayonet cap Øid (mm): *(material **Nickel-plated brass**)*
☐ 10,5 ☐ 12,5 ☐ 14,5 ☐ Other:

10. Spring length LS (mm):

11. Connector:
☐ Miniature Plug ☐ Miniature Socket ☐ Standard Plug ☐ Standard Socket ☐ Without

12. Connector temperature: ☐ 200°C ☐ 350°C ☐ 650°C

13. Option:
☐ Cable clamp ☐ Custom ID label ☐ Without

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

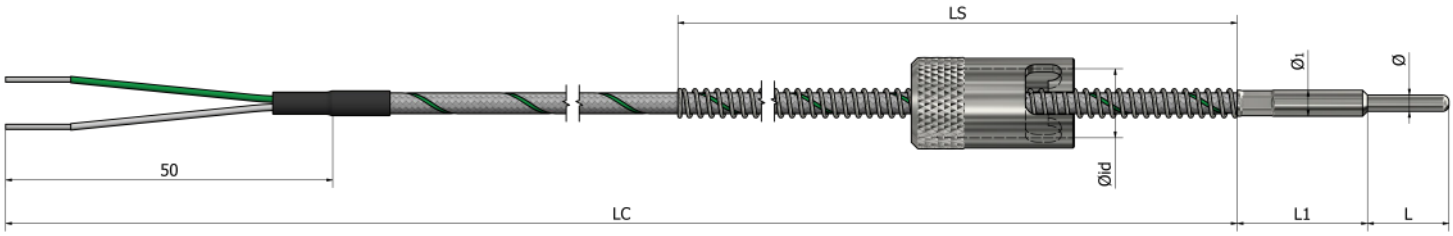
Quantity:

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.

TS31 – Surface thermocouples
Bayonet with reduced tip



Tube and tip 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. Cable prolongation:
☐ Fiberglass (400°C) ☐ Other:

5. Cable length LC (mm):

6. Junction type:
☐ Ungrounded ☐ Grounded

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

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

9. Bayonet cap Øid (mm): *(material* ***Nickel-plated brass****)*
☐ 10,5 ☐ 12,5 ☐ 14,5 ☐ Other:

10. Spring length LS (mm):

11. Connector:
☐ Miniature Plug ☐ Miniature Socket ☐ Standard Plug ☐ Standard Socket ☐ Without

12. Connector temperature: ☐ 200°C ☐ 350°C ☐ 650°C

13. Option:
☐ Cable clamp ☐ Custom ID label ☐ Without

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

Quantity:

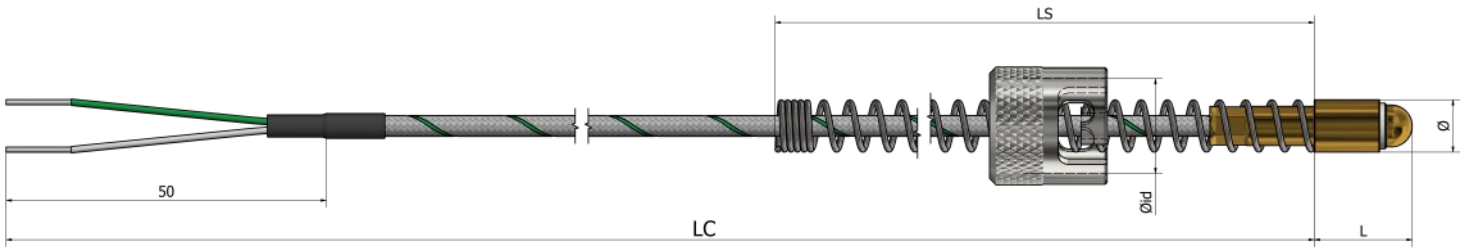
Note:

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

TS32 – Surface thermocouples
Bayonet with ceramic tip



Tip material* ***Ceramic*

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. Cable prolongation:
☐ Fiberglass (400°C) ☐ Other:

5. Cable length LC (mm):

6. Junction type:
☐ Ungrounded ☐ Grounded

7. Sheath tip dimensions Ø x L (mm):
☐ 5 x 12 ☐ 6 x 10 ☐ 8 x 10 ☐ Other:

8. Bayonet cap Øid (mm): *(material* ***Nickel-plated brass****)*
☐ 10,5 ☐ 12,5 ☐ 14,5 ☐ Other:

9. Spring length LS (mm):

10. Connector:
☐ Miniature Plug ☐ Miniature Socket ☐ Standard Plug ☐ Standard Socket ☐ Without

11. Connector temperature: ☐ 200°C ☐ 350°C ☐ 650°C

12. Option:
☐ Cable clamp ☐ Custom ID label ☐ Without

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

Quantity:

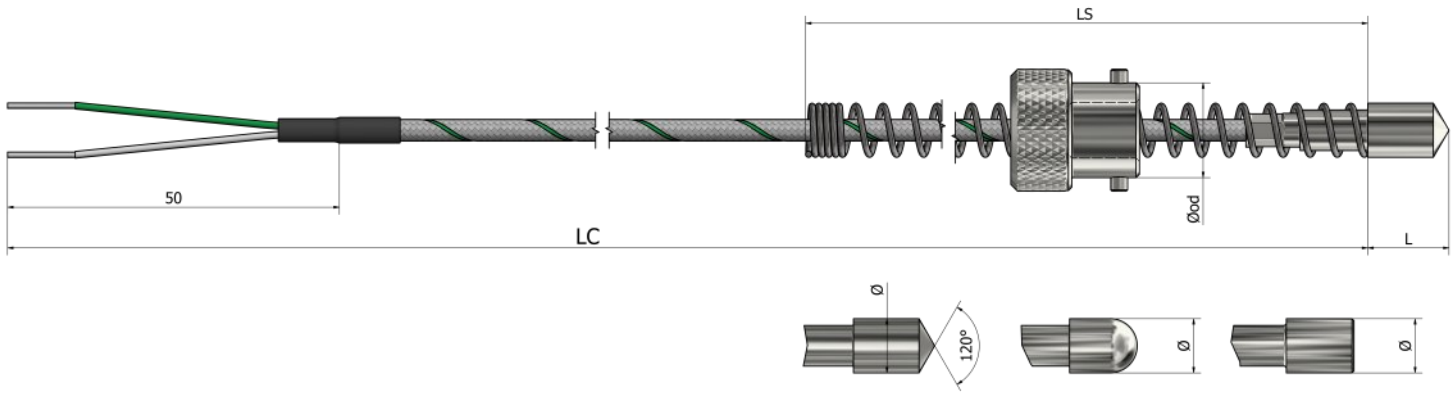
Note:

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

TS33 – Surface thermocouples
Bayonet (reverse)



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. Cable prolongation:
☐ Fiberglass (400°C) ☐ Other:

5. Cable length LC (mm):

6. Junction type:
☐ Ungrounded ☐ Grounded

7. Sheath tip dimensions Ø x L (mm):
☐ 5 x 12 ☐ 6 x 10 ☐ 8 x 10 ☐ Other:

8. Sheath tip type: *(material **Stainless steel 316L**)*

☐ Round ☐ Conical ☐ Flat

9. Bayonet adapter Ød (mm): *(material **Nickel-plated brass**)*
☐ 10,5 ☐ 12,5 ☐ 14,5 ☐ Other:

10. Spring length LS (mm):

11. Connector:
☐ Miniature Plug ☐ Miniature Socket ☐ Standard Plug ☐ Standard Socket ☐ Without

12. Connector temperature: ☐ 200°C ☐ 350°C ☐ 650°C

13. Option:
☐ Cable clamp ☐ Custom ID label ☐ Without

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

Quantity:

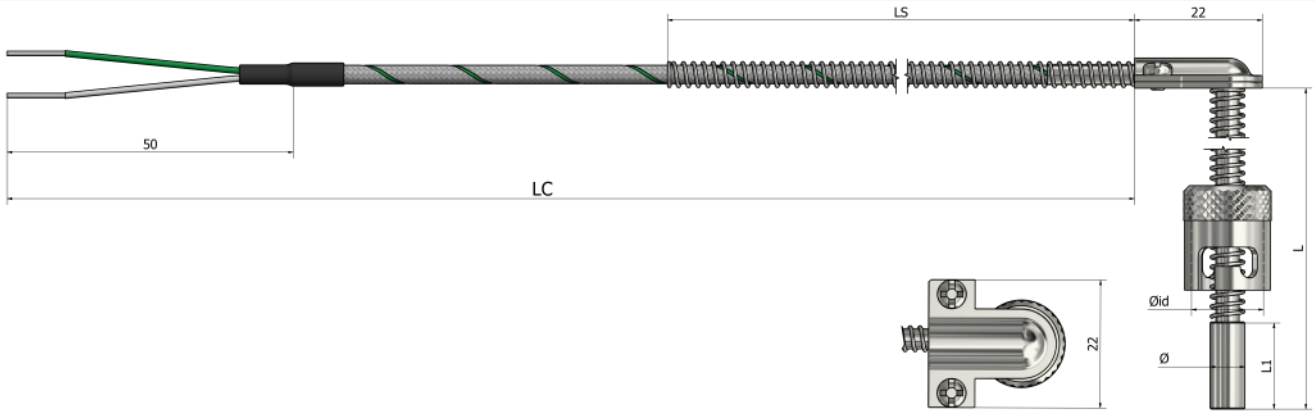
Note:

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

TS34 – Surface thermocouples
Bayonet with clamp (90° angle)



Clamp and 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. Cable prolongation:
☐ Fiberglass (400°C) ☐ Other:

5. Cable length LC (mm):

6. Cable length L (mm):

7. Junction type:
☐ Ungrounded ☐ Grounded

8. Sheath tip dimensions Ø x L1 (mm):
☐ 5 x 12 ☐ 6 x 10 ☐ 8 x 10 ☐ Other:

9. Sheath tip type: *(material* ***Stainless steel 316L****)*

☐ Round ☐ Conical ☐ Flat

10. Bayonet cap Øid (mm): *(material* ***Nickel-plated brass****)*
☐ 10,5 ☐ 12,5 ☐ 14,5 ☐ Other:

11. Spring length LS (mm):

12. Connector:
☐ Miniature Plug ☐ Miniature Socket ☐ Standard Plug ☐ Standard Socket ☐ Without

13. Connector temperature: ☐ 200°C ☐ 350°C ☐ 650°C

14. Option:
☐ Cable clamp ☐ Custom ID label ☐ Without

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

Quantity:

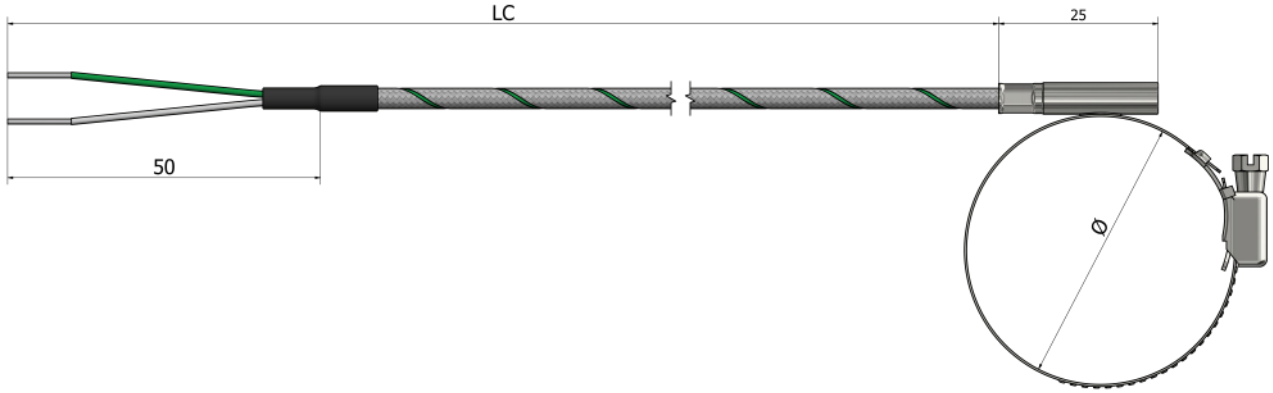
Note:

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

TS41 – Surface thermocouples
Pipe-Clamp (type 1)



Tube and clamp 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. Cable prolongation:
☐ PVC (105°C) ☐ Silicone (180°C) ☐ Teflon (260°C)
☐ Fiberglass (400°C) ☐ Other:

5. Cable length LC (mm):

6. Junction type:
☐ Ungrounded ☐ Grounded

7. Clamp size Ø (mm):

8. Clamp direction:

☐ V1

☐ V2

9. Crimp protection:
☐ Spring ☐ Heat shrink sleeve ☐ Without

10. Connector:
☐ Miniature Plug ☐ Miniature Socket ☐ Standard Plug ☐ Standard Socket ☐ Without

11. Connector temperature: ☐ 200°C ☐ 350°C ☐ 650°C

12. Option:
☐ Cable clamp ☐ Custom ID label ☐ Without

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

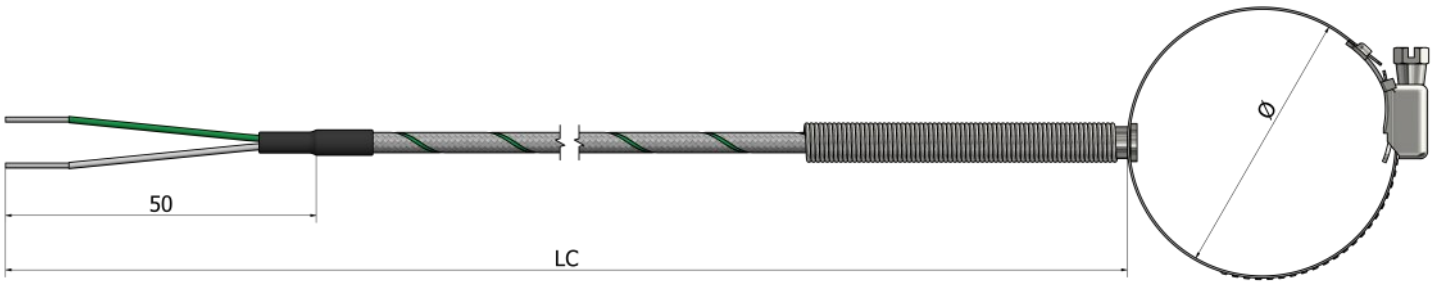
Quantity:

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.

TS42 – Surface thermocouples
Pipe-Clamp (type 2)



Tube and clamp 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. Cable prolongation:
☐ PVC (105°C) ☐ Silicone (180°C) ☐ Teflon (260°C)
☐ Fiberglass (400°C) ☐ Other:

5. Cable length LC (mm):

6. Junction type:
☐ Ungrounded ☐ Grounded

7. Clamp size Ø (mm):

8. Crimp protection:
☐ Spring ☐ Heat shrink sleeve ☐ Without

9. Connector:
☐ Miniature Plug ☐ Miniature Socket ☐ Standard Plug ☐ Standard Socket ☐ Without

10. Connector temperature: ☐ 200°C ☐ 350°C ☐ 650°C

11. Option:
☐ Cable clamp ☐ Custom ID label ☐ Without

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

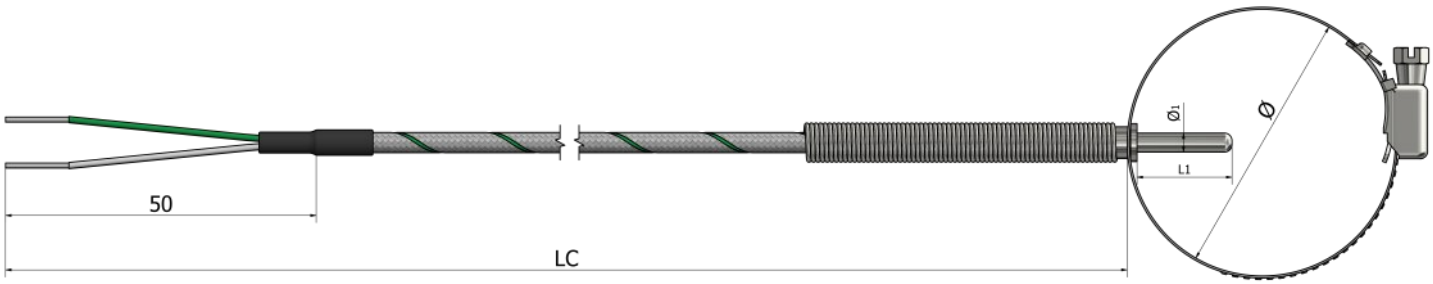
Quantity:

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.

TS43 – Surface thermocouples
Pipe-Clamp (type 3)



Tube and clamp 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. Cable prolongation:
☐ PVC (105°C) ☐ Silicone (180°C) ☐ Teflon (260°C)
☐ Fiberglass (400°C) ☐ Other:

5. Cable length LC (mm):

6. Junction type:
☐ Ungrounded ☐ Grounded

7. Clamp size Ø (mm):

8. Insertion diameter Ø1 (mm):
☐ 4 ☐ 5 ☐ 6 ☐ Other:

9. Insertion depth L1 (mm):

10. Crimp protection:
☐ Spring ☐ Heat shrink sleeve ☐ Without

11. Connector:
☐ Miniature Plug ☐ Miniature Socket ☐ Standard Plug ☐ Standard Socket ☐ Without

12. Connector temperature: ☐ 200°C ☐ 350°C ☐ 650°C

13. Option:
☐ Cable clamp ☐ Custom ID label ☐ Without

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

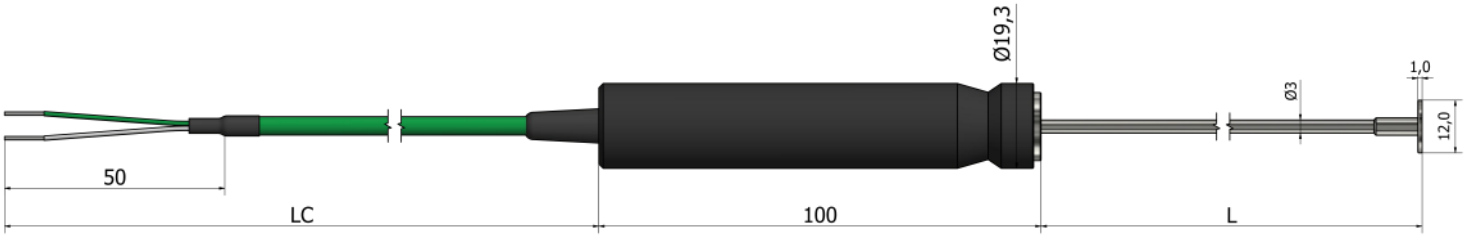
Quantity:

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.

TS50 – Surface thermocouples
Handheld



*Handle material **Plastic** *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. Cable prolongation:
☐ PVC (105°C) ☐ Silicone (180°C) ☐ Teflon (260°C)
☐ Fiberglass (400°C) ☐ Other:

5. Cable length LC (mm):

6. Junction type:
☐ Grounded ☐ Other:

7. Length L (mm):

8. Connector:
☐ Miniature Plug ☐ Miniature Socket ☐ Standard Plug ☐ Standard Socket ☐ Without

9. Connector temperature: ☐ 200°C ☐ 350°C ☐ 650°C

10. Option:
☐ Cable clamp ☐ Custom ID label ☐ Without

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.

TS60 – Surface thermocouples
Spring loaded magnet

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. Cable prolongation:
☐ PVC (105°C) ☐ Silicone (180°C) ☐ Teflon (260°C)
☐ Fiberglass (400°C) ☐ Other:

5. Cable length LC (mm):

6. Junction type:
☐ Ungrounded ☐ Grounded

7. Crimp protection:
☐ Spring ☐ Heat shrink sleeve ☐ Without

8. Connector:
☐ Miniature Plug ☐ Miniature Socket ☐ Standard Plug ☐ Standard Socket ☐ Without

9. Connector temperature: ☐ 200°C ☐ 350°C ☐ 650°C

10. Option:
☐ Cable clamp ☐ Custom ID label ☐ Without

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

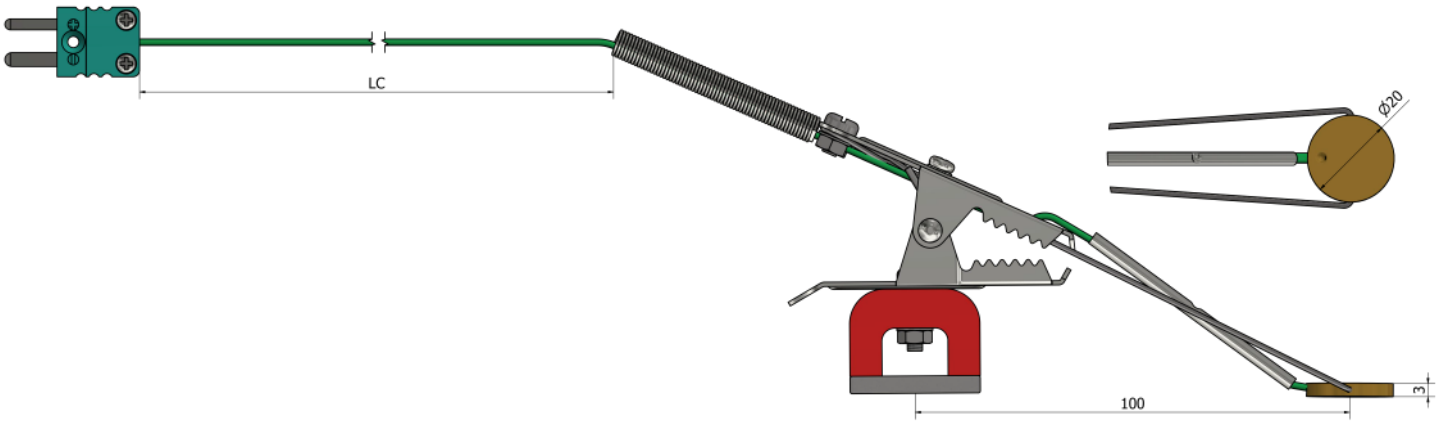
Quantity:

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.

TS61 – Surface thermocouples
Crocodile clip magnet



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. Cable prolongation:
☐ PVC (105°C) ☐ Silicone (180°C) ☐ Teflon (260°C)
☐ Fiberglass (400°C) ☐ Other:

5. Cable length LC (mm):

6. Junction type: Ungrounded

7. Crimp protection:
☐ Spring ☐ Heat shrink sleeve ☐ Without

8. Connector:
☐ Miniature Plug ☐ Miniature Socket ☐ Standard Plug ☐ Standard Socket ☐ Without

9. Connector temperature: ☐ 200°C ☐ 350°C ☐ 650°C

10. Option:
☐ Cable clamp ☐ Custom ID label ☐ Without

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

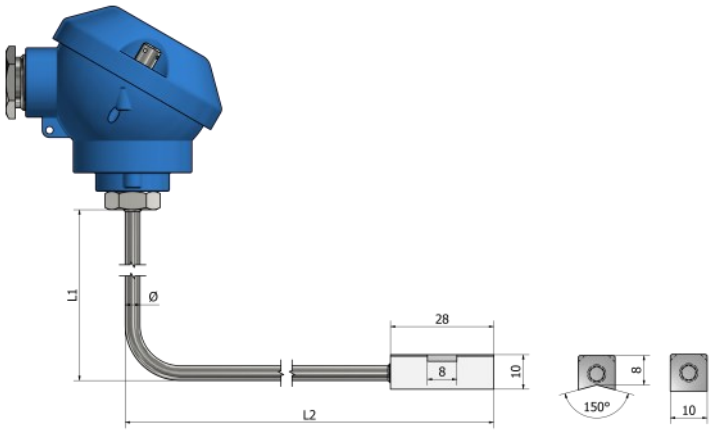
Quantity:

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 – Surface thermocouples
Contact block (surface mount) with therminal head



*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"

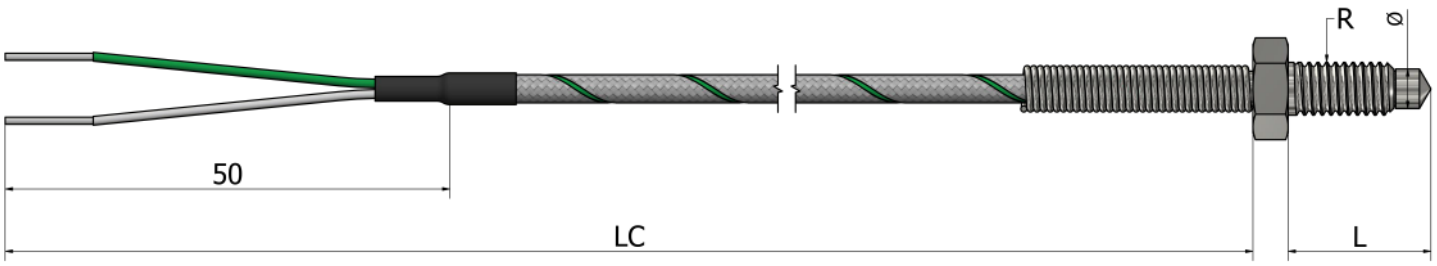
Quantity:

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.

TR20 – Thermocouples with thread connection
Nozzle



Nozzle and thread material* ***Stainless steel (304 / 304L / 316 / 316L)*

Ordering information

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

2. Class:
☐ Class 1 ☐ Class 2

3. Length L (mm):

4. Diameter Ø (mm):

5. Cable prolongation:
☐ PVC (105°C) ☐ Silicone (180°C) ☐ Teflon (260°C)
☐ Fiberglass (400°C) ☐ Other:

6. Cable length LC (mm):

7. Crimp protection:
☐ Spring ☐ Heat shrink sleeve ☐ Without

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

9. Connector:
☐ Miniature Plug ☐ Miniature Socket ☐ Standard Plug ☐ Standard Socket ☐ Without

10. Connector temperature: ☐ 200°C ☐ 350°C ☐ 650°C

11. Option:
☐ Cable clamp ☐ Custom ID label ☐ Without

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

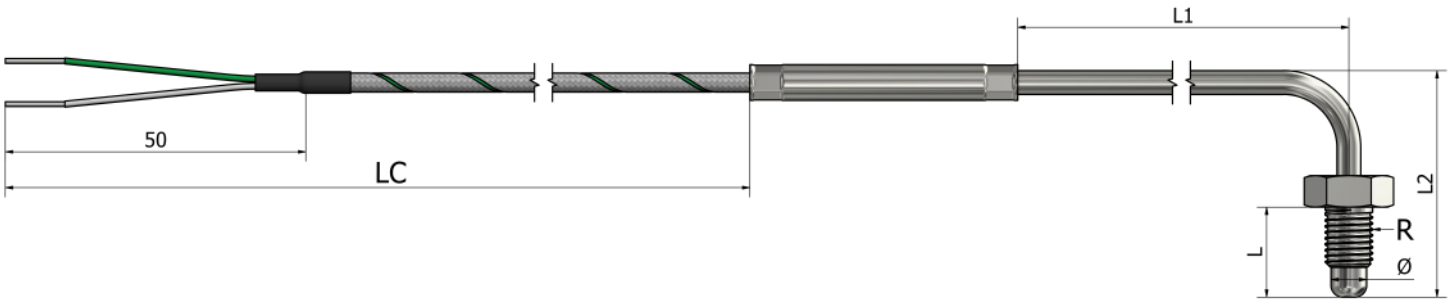
Quantity:

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.

TR21 – Thermocouples with thread connection
Nozzle (90° bend)



*Tube material **Stainless steel 316L** *Nozzle and thread material **Stainless steel (304 / 304L / 316 / 316L)***

Ordering information

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

2. Class:
☐ Class 1 ☐ Class 2

3. Lengths (mm):
L1 _____ L2 _____

4. Length L (mm):

5. Diameter Ø (mm):

6. Cable prolongation:
☐ PVC (105°C) ☐ Silicone (180°C) ☐ Teflon (260°C)
☐ Fiberglass (400°C) ☐ Other:

7. Cable length LC (mm):

8. Crimp protection:
☐ Spring ☐ Heat shrink sleeve ☐ Without

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

10. Connector:
☐ Miniature Plug ☐ Miniature Socket ☐ Standard Plug ☐ Standard Socket ☐ Without

11. Connector temperature: ☐ 200°C ☐ 350°C ☐ 650°C

12. Option:
☐ Cable clamp ☐ Custom ID label ☐ Without

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

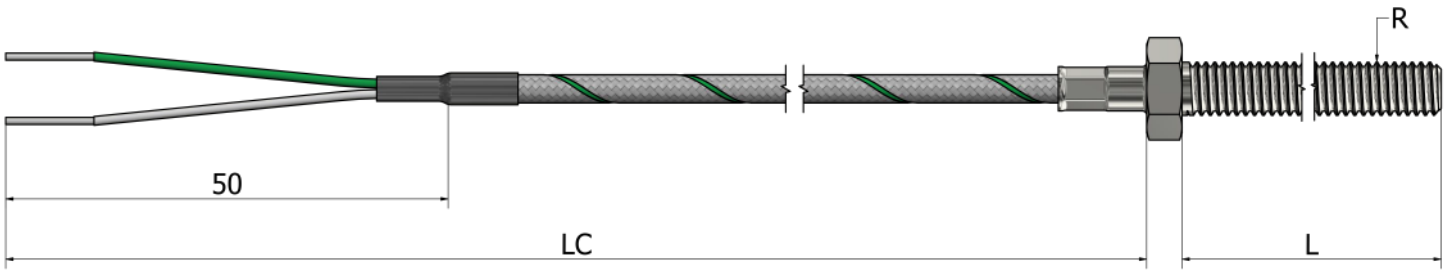
Quantity:

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.

TR22 – Thermocouples with thread connection
Bolt



*Bolt material **Stainless steel (304 / 304L / 316 / 316L)***

Ordering information

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

2. Class:
☐ Class 1 ☐ Class 2

3. Length L (mm):

4. Cable prolongation:
☐ PVC (105°C) ☐ Silicone (180°C) ☐ Teflon (260°C)
☐ Fiberglass (400°C) ☐ Other:

5. Cable length LC (mm):

6. Crimp protection:
☐ Spring ☐ Heat shrink sleeve ☐ Without

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

8. Connector:
☐ Miniature Plug ☐ Miniature Socket ☐ Standard Plug ☐ Standard Socket ☐ Without

9. Connector temperature: ☐ 200°C ☐ 350°C ☐ 650°C

10. Option:
☐ Cable clamp ☐ Custom ID label ☐ Without

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

Surface RTDs

Surface RTDs - Technical information

What are the characteristics of surface RTDs ?

Surface RTD probes detect surface temperature. The most important issue in surface temperature measurement is to keep measurement errors as small as possible. This is achieved by an appropriate design of the measuring head, so that only very little heat is extracted from the measuring point and the measurement error is negligible.
The perfectly adapted geometry increases the contact surface. At the same time, the low thermal mass of the measuring head ensures that comparatively fast response times can be achieved when measuring the surface temperature.

Different types of surface RTDs

Attaching a RTD to a surface for an accurate reading can be difficult. The sensor must respond quickly to avoid heat dissipation and remain attached under vibration or other stress.

We offer a number of constructions to suit every surface application.

Washer and ring RTDs can be attached to a stud welded to the surface or to an existing bolt on a section of machinery.

Bayonets are simply inserted through a drilled opening to a desired depth of a surface. The opening is then tapped to accept a number of mounting adapters. These adapters feature a locking pin allowing the RTDs cap to be installed with a twist.

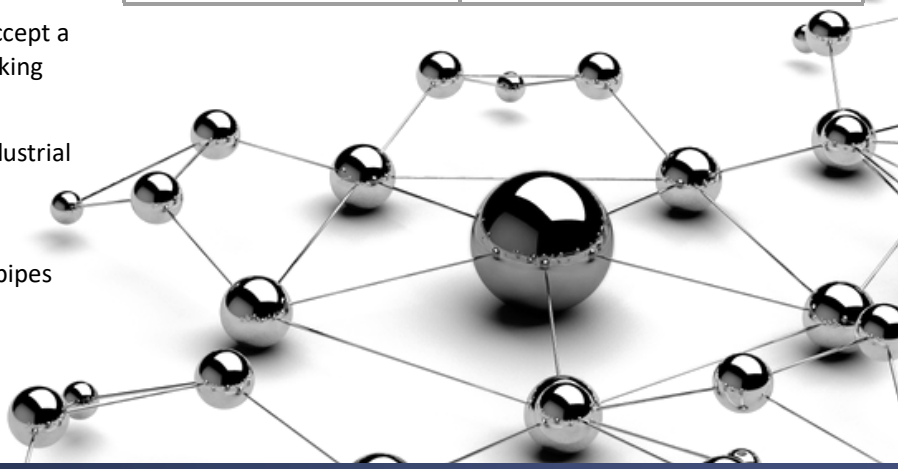
Weld pad RTDs which need not require the more rugged industrial construction can be tig welded or soldered and held with a number of clamping devices.

Pipe-clamp RTD is ideal for temperature measurements on pipes in laboratories and industrial applications.

Magnet RTDs are ideal for a temporary measurement to a magnetic surface or magnetic surface which doesn't allow any alteration.

Material conductivity

Material	Thermal conductivity W/(m.K)
Air	≈ 0,25
Stainless steel	≈ 14
Brass	≈ 109
Aluminum	≈ 205
Copper	≈ 385
Silver	≈ 406



EuroSensors

Surface RTDs - 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.

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.

How does an RTD work ?

An RTD (variable temperature resistor) 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.

Differences between Pt-s and thermistors

There are several differences between Pt and thermistors , these differences make them more suitable for different applications.

- **Construction material**

The main difference between thermistors and Pt-s is the material they are made of. Thermistors are typically composed of mixed metal oxides, while Pt-s are made of pure metal such as nickel or platinum. The material difference leads to different properties in temperature measurement. Thermistors are more accurate than Pt-s, even in the wiring of the associated devices.

- **Wire length**

Thermistors have higher resistance values at lower temperatures which gives them higher resolution. Because the wire increases resistance, using very long wires can alter the reading and can cause inaccuracies. Because they have high inherent resistances, thermistors can be used with very long wire strands, while Pt-s are only recommended up to 3m without further measures. This can make a difference when selecting which temperature is best for your application depending on the required wire length.

- **Temperature range**

A thermistor is better for lower temperatures whereas Pt-s are more suitable for higher temperatures. Thermistors can only be used in a temperature range up to +250°C, while Pt-s can be used up to +600°C.

- **Type of application**

Thermistors are typically used in more commonplace devices such as freezers, air conditioners or water heaters. This is because of their high resolution in lower temperature ranges. Because of this, thermistors are also well suited for use in medical devices.
Pt-s mainly used in industrial applications where higher temperatures can occur.

What are Pt-s and Thermistors ?

Thermistors and Pt-s are both types of temperature sensors that measure temperature by measuring electrical resistance.
They are both widely used for temperature measurement in various industries and applications.

Surface RTDs - Technical information

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.

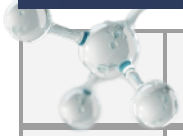
Understanding the naming of Pt100, PT500 and PT1000 sensors

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 Ωat 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.

Global cable insulation characteristics



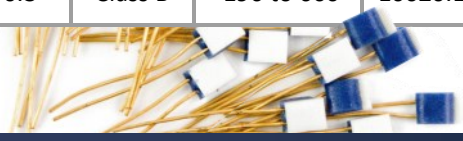
	PVC	Silicone	Teflon	Fiberglass
Abrasion resistance	Very good	Fair	Good	Fair
Chemical resistance	Very good	Poor	Excellent	Good
Moisture resistance	Good	Good	Excellent	Poor
Fire resistance	Good	Good	Excellent	Excellent

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.

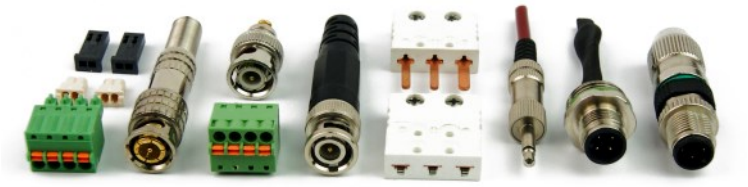
A system where these tolerances are classified is helpful for the end user and helps the interchangeability of these sensors. The IEC system is seen as the standard for the industry although there are other standards and other tolerance classes.

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



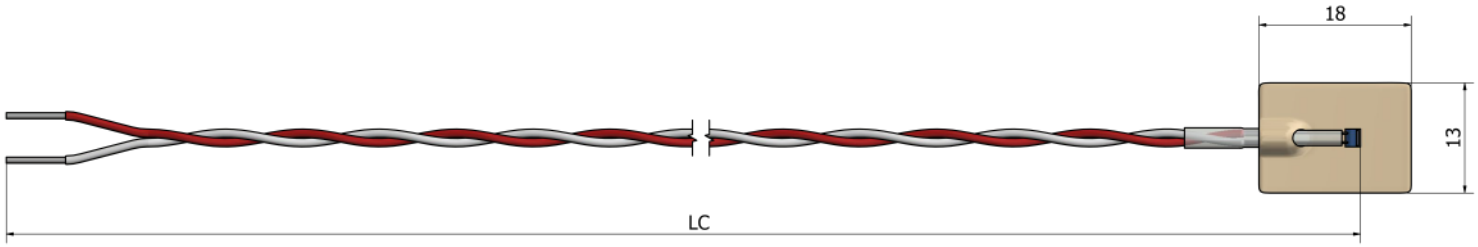
RTD connectors

Due to the lack of standardization in RTD connectors, our company takes pride in its ability to produce a wide range of RTD connectors. We understand that different industries and applications have unique requirements when it comes to temperature measurement, and that includes the connectors used. With our expertise and advanced manufacturing capabilities, we have the flexibility to design and produce various types of RTD connectors.



RTD standard connectors plugs and sockets are available in two sizes (miniature and standard).

PS00 – Surface RTDs
Adhesive tape



*Adhesive tape material **Fiberglass/PTFE***

Ordering information

1. Element type:

☐ Pt 100 ☐ Pt 500 ☐ Pt 1000

☐ Other:

2. Element class:

☐ A ☐ B ☐ Other:

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

☐ 2 ☐ 3 ☐ 4

4. Cable prolongation:

☐ Teflon (260°C) ☐ Other:

5. Cable length LC (mm):

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

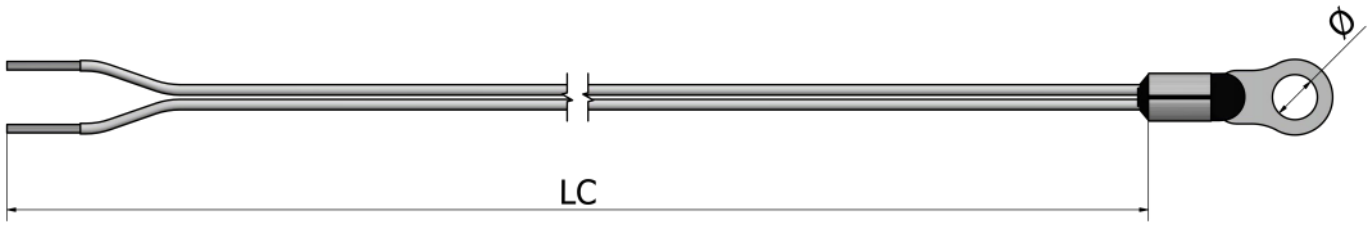
Quantity:

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.

PS01 – Surface RTDs
Washer mount



*Washer mount material ***Tinned copper***

Ordering information

1. Element type:

☐ Pt 100 ☐ Pt 500 ☐ Pt 1000

☐ Other:

2. Element class:

☐ A ☐ B ☐ Other:

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

☐ 2 ☐ 3 ☐ 4

4. Cable prolongation:

☐ Teflon (260°C) ☐ Other:

5. Cable length LC (mm):

6. Hole size Ø (mm):

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

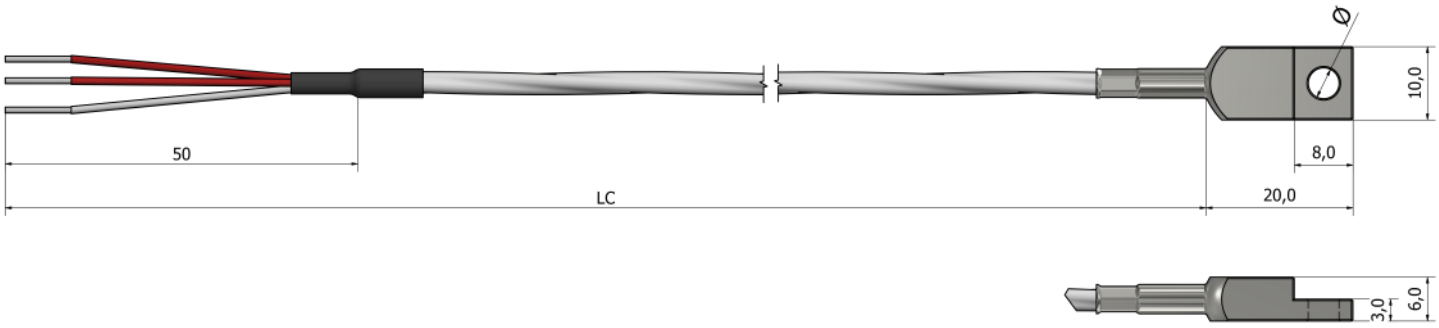
Quantity:

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.

PS02 – Surface RTDs
Reinforced washer mount



*Washer mount material **Stainless steel 316L***

Ordering information

1. Element type:

☐ Pt 100 ☐ Pt 500 ☐ Pt 1000

☐ Other:

2. Element class:

☐ A ☐ B ☐ Other:

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

☐ 2 ☐ 3 ☐ 4

4. Cable prolongation:

☐ PVC (105°C) ☐ Silicone (180°C) ☐ Teflon (260°C)

☐ Fiberglass (400°C) ☐ Other:

5. Cable length LC (mm):

6. Hole diameter Ø (mm):

7. Crimp protection:

☐ Spring ☐ Heat shrink sleeve ☐ Without

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

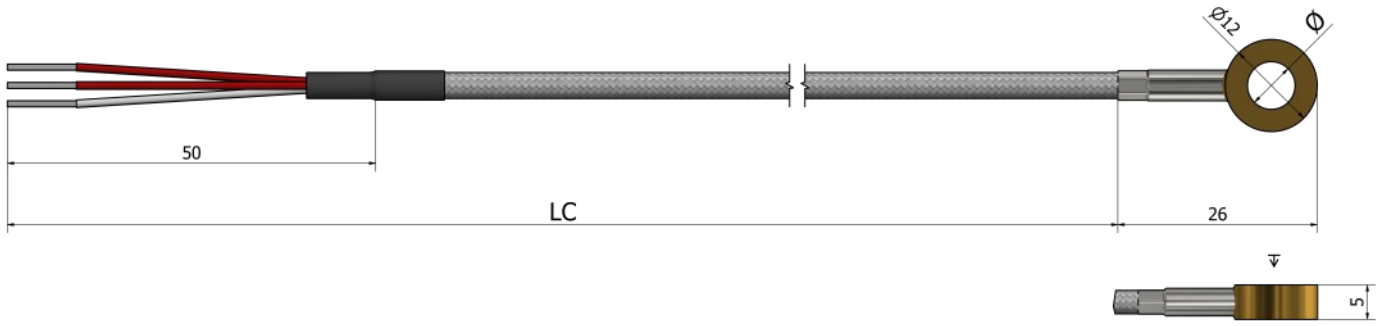
Quantity:

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.

PS03 – Surface RTDs
Ring mount



Ordering information

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

2. Element class:
☐ A ☐ B ☐ Other:

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

4. Cable prolongation:
☐ PVC (105°C) ☐ Silicone (180°C) ☐ Teflon (260°C)
☐ Fiberglass (400°C) ☐ Other:

5. Cable length LC (mm):

6. Ring material:
☐ Brass ☐ AISI 316L ☐ Other:

7. Ring size:
☐ M5 ☐ M6 ☐ Other:

8. Crimp protection:
☐ Spring ☐ Heat shrink sleeve ☐ Without

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

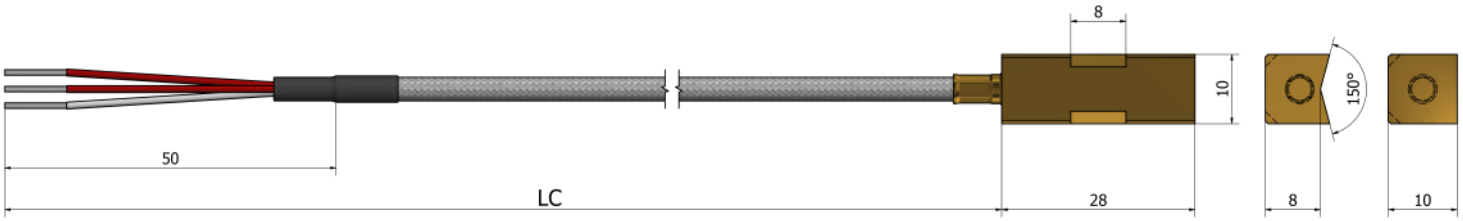
Quantity:

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.

PS05 – Surface RTDs
Contact block



*Contact block material **Brass or aluminum***

Ordering information

1. Element type:

☐ Pt 100 ☐ Pt 500 ☐ Pt 1000

☐ Other:

2. Element class:

☐ A ☐ B ☐ Other:

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

☐ 2 ☐ 3 ☐ 4

4. Cable prolongation:

☐ PVC (105°C) ☐ Silicone (180°C) ☐ Teflon (260°C)

☐ Fiberglass (400°C) ☐ Other:

5. Cable length LC (mm):

6. Contact block material:

☐ Brass ☐ Aluminum ☐ Other:

7. Contact block shape:

☐ V-shape

☐ Flat

8. Crimp protection:

☐ Spring ☐ Heat shrink sleeve ☐ Without

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

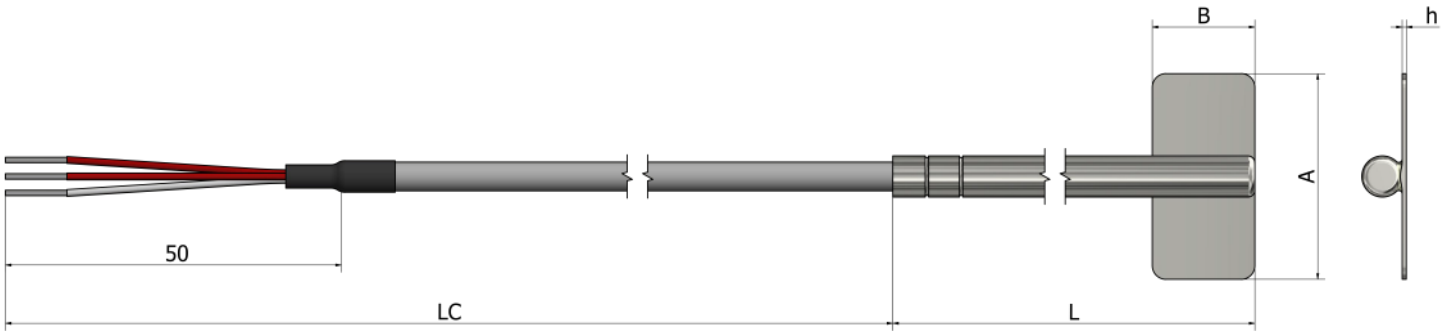
Quantity:

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.

PS10 – Surface RTDs
Weld pad



Weld pad and tube material* ***Stainless steel 316L*

Ordering information

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

2. Element class:
☐ A ☐ B ☐ Other:

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

4. Cable prolongation:
☐ PVC (105°C) ☐ Silicone (180°C) ☐ Teflon (260°C)
☐ Fiberglass (400°C) ☐ Other:

5. Cable length LC (mm):

6. Tube length L (mm):

7. Pad material: ☐ AISI 316L ☐ Other:

8. Pad dimensions A x B (mm):
☐ 15 x 10 ☐ 25 x 10 ☐ 30 x 10
☐ Other:

9. Pad thickness h (mm): ☐ 0,5 ☐ Other:

10. Crimp protection:
☐ Spring ☐ Heat shrink sleeve ☐ Without

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

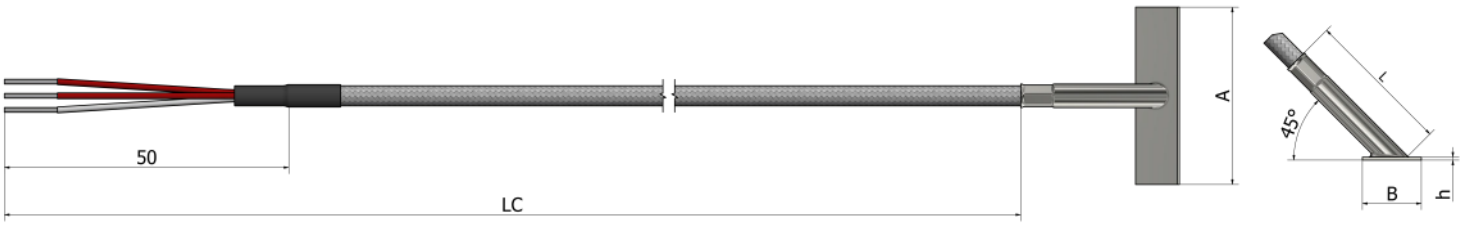
Quantity:

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.

PS11 – Surface RTDs
Weld pad (45° angle)



Weld pad and tube material* ***Stainless steel 316L*

Ordering information

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

2. Element class:
☐ A ☐ B ☐ Other:

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

4. Cable prolongation:
☐ PVC (105°C) ☐ Silicone (180°C) ☐ Teflon (260°C)
☐ Fiberglass (400°C) ☐ Other:

5. Cable length LC (mm):

6. Tube length L (mm):

7. Pad material: ☐ AISI 316L ☐ Other:

8. Pad dimensions A x B (mm):
☐ 15 x 10 ☐ 25 x 10 ☐ 30 x 10
☐ Other:

9. Pad thickness h (mm): ☐ 0,5 ☐ Other:

8. Crimp protection:
☐ Spring ☐ Heat shrink sleeve ☐ Without

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

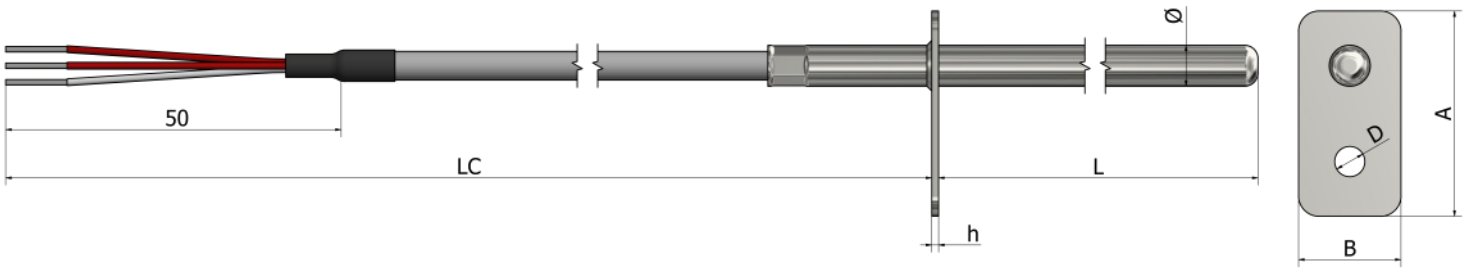
Quantity:

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.

PS12 – Surface RTDs
Weld pad (plug-in)



Weld pad and tube material* ***Stainless steel 316L*

Ordering information

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

2. Element class:
☐ A ☐ B ☐ Other:

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

4. Cable prolongation:
☐ PVC (105°C) ☐ Silicone (180°C) ☐ Teflon (260°C)
☐ Fiberglass (400°C) ☐ Other:

5. Cable length LC (mm):

6. Pad material: ☐ AISI 316L ☐ Other:

7. Pad dimensions A x B (mm):
☐ 15 x 10 ☐ 25 x 10 ☐ 30 x 10
☐ Other:

8. Pad thickness h (mm): ☐ 0,5 ☐ Other:

9. Hole size Ø D (mm):

10. Insertion diameter Ø (mm):
☐ 4 ☐ 5 ☐ 6 ☐ Other:

11. Insertion depth L (mm):

12. Crimp protection:
☐ Spring ☐ Heat shrink sleeve ☐ Without

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

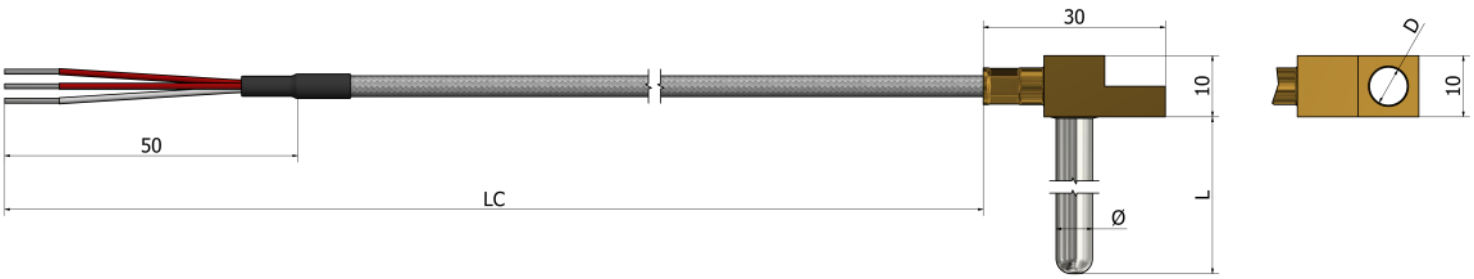
Quantity:

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.

PS20 – Surface RTDs
Angle / plug-in



*Mounting block material **Brass** *Tube material **Stainless steel 316L***

Ordering information

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

2. Element class:
☐ A ☐ B ☐ Other:

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

4. Cable prolongation:
☐ PVC (105°C) ☐ Silicone (180°C) ☐ Teflon (260°C)
☐ Fiberglass (400°C) ☐ Other:

5. Cable length LC (mm):

6. Hole size Ø D (mm):

7. Insertion diameter Ø (mm):
☐ 4 ☐ 5 ☐ 6 ☐ Other:

8. Insertion depth L (mm):

9. Crimp protection:
☐ Spring ☐ Heat shrink sleeve ☐ Without

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

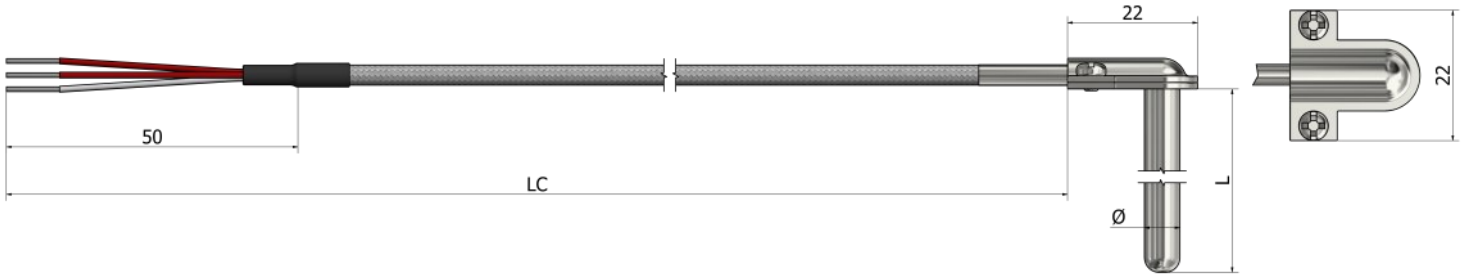
Quantity:

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.

PS21 – Surface RTDs
Angle / plug-in (clamp)



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

Ordering information

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

2. Element class:
☐ A ☐ B ☐ Other:

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

4. Cable prolongation:
☐ PVC (105°C) ☐ Silicone (180°C) ☐ Teflon (260°C)
☐ Fiberglass (400°C) ☐ Other:

5. Cable length LC (mm):

6. Insertion diameter Ø (mm):
☐ 4 ☐ 5 ☐ 6 ☐ Other:

7. Insertion depth L (mm):

8. Crimp protection:
☐ Spring ☐ Heat shrink sleeve ☐ Without

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

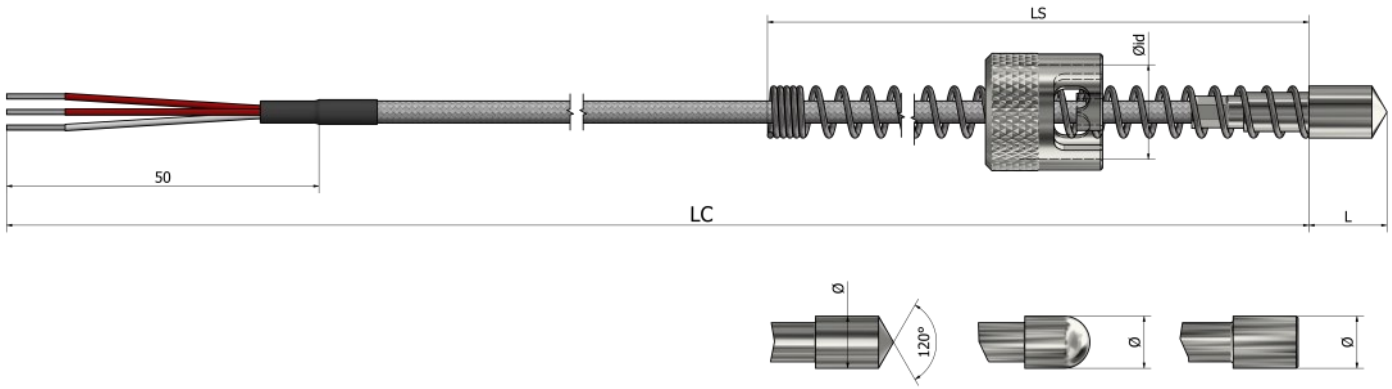
Quantity:

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.

PS30 – Surface RTDs
Bayonet



Ordering information

1. Element type:

☐ Pt 100 ☐ Pt 500 ☐ Pt 1000

☐ Other:

2. Element class:

☐ A ☐ B ☐ Other:

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

☐ 2 ☐ 3 ☐ 4

4. Cable prolongation:

☐ Fiberglass (400°C) ☐ Other:

5. Cable length LC (mm):

6. Dimensions Ø x L (mm):

☐ 5 x 12 ☐ 6 x 10 ☐ 8 x 10 ☐ Other:

7. Sheath tip: *(material **Stainless steel 316L**)*

☐ Round ☐ Conical ☐ Flat

8. Bayonet cap Øid (mm): *(material **Nickel-plated brass**)*

☐ 10,5 ☐ 12,5 ☐ 14,5 ☐ Other:

9. Spring length LS (mm):

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

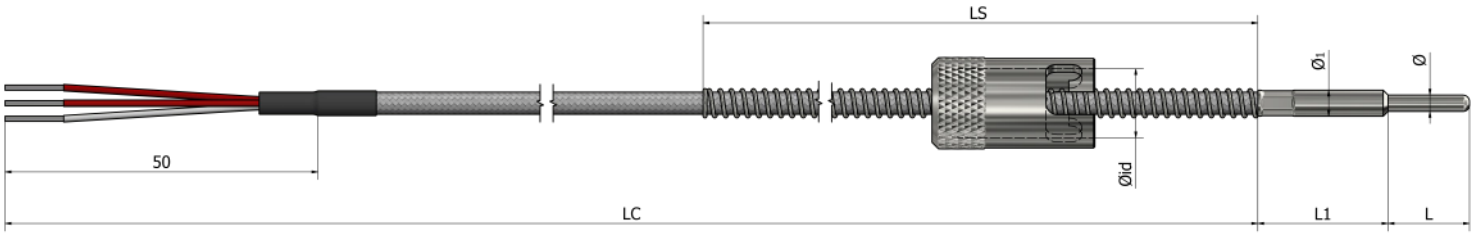
Quantity:

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.

PS31 – Surface RTDs
Bayonet with reduced tip



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

Ordering information

1. Element type:

☐ Pt 100 ☐ Pt 500 ☐ Pt 1000

☐ Other:

2. Element class:

☐ A ☐ B ☐ Other:

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

☐ 2 ☐ 3 ☐ 4

4. Cable prolongation:

☐ Fiberglass (400°C) ☐ Other:

5. Cable length LC (mm):

6. Dimensions L and Ø (mm):

L _____ Ø _____

7. Dimensions L1 and Ø1 (mm):

L1_____ Ø1 _____

8. Bayonet cap Øid (mm): *(material* ***Nickel-plated brass****)*

☐ 10,5 ☐ 12,5 ☐ 14,5 ☐ Other:

9. Spring length LS (mm):

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

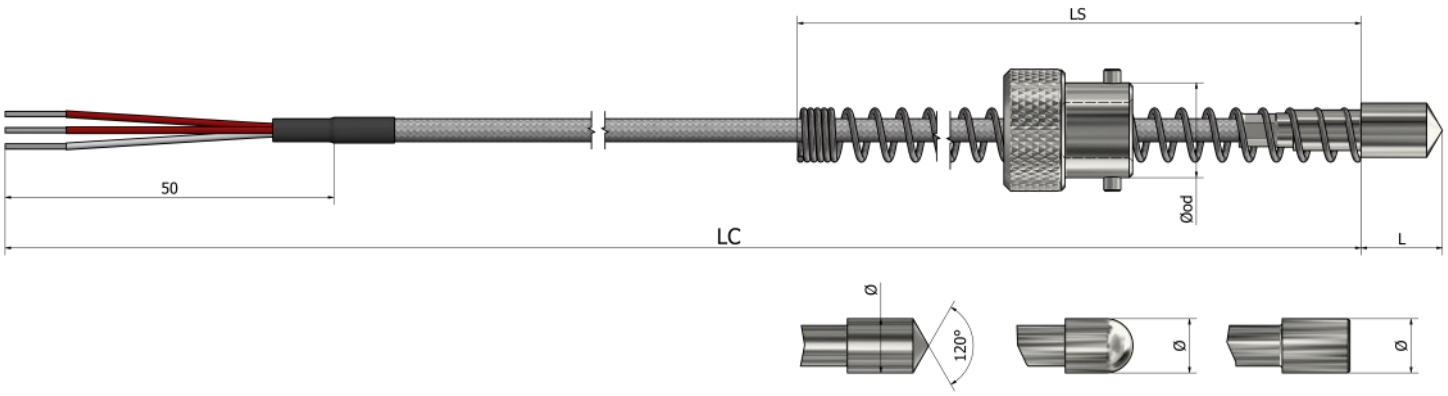
Quantity:

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.

PS33 – Surface RTDs
Bayonet (reverse)



Ordering information

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

2. Element class:
☐ A ☐ B ☐ Other:

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

4. Cable prolongation:
☐ Fiberglass (400°C) ☐ Other:

5. Cable length LC (mm):

6. Dimensions Ø x L (mm):
☐ 5 x 12 ☐ 6 x 10 ☐ 8 x 10 ☐ Other:

7. Sheath tip: *(material **Stainless steel 316L**)*

☐ Round ☐ Conical ☐ Flat

8. Bayonet adapter Ød (mm): *(material **Nickel-plated brass**)*
☐ 10,5 ☐ 12,5 ☐ 14,5 ☐ Other:

9. Spring length LS (mm):

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

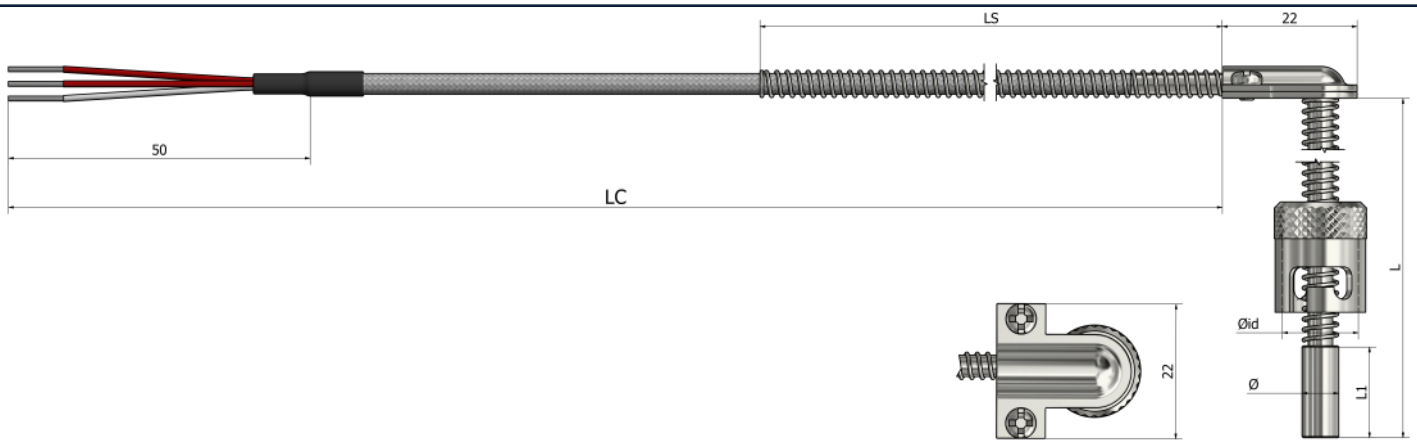
Quantity:

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.

PS34 – Surface RTDs
Bayonet with clamp (90° angle)



Ordering information

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

2. Element class:
☐ A ☐ B ☐ Other:

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

4. Cable prolongation:
☐ Fiberglass (400°C) ☐ Other:

5. Cable length LC (mm):

6. Cable length L (mm):

7. Dimensions Ø x L1 (mm):
☐ 5 x 12 ☐ 6 x 10 ☐ 8 x 10 ☐ Other:

8. Sheath tip: *(material **Stainless steel 316L**)*

☐ Round ☐ Conical ☐ Flat

9. Bayonet cap Øid (mm): *(material **Nickel-plated brass**)*
☐ 10,5 ☐ 12,5 ☐ 14,5 ☐ Other:

10. Spring length LS (mm):

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

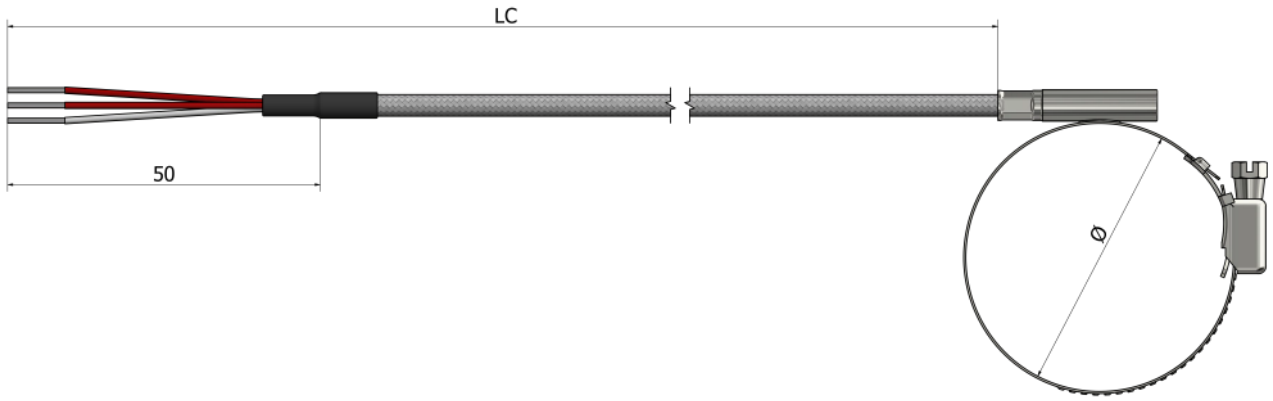
Quantity:

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.

PS41 – Surface RTDs
Pipe-Clamp (type 1)



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

Ordering information

1. Element type:

☐ Pt 100 ☐ Pt 500 ☐ Pt 1000

☐ Other:

2. Element class:

☐ A ☐ B ☐ Other:

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

☐ 2 ☐ 3 ☐ 4

4. Cable prolongation:

☐ PVC (105°C) ☐ Silicone (180°C) ☐ Teflon (260°C)

☐ Fiberglass (400°C) ☐ Other:

5. Cable length LC (mm):

6. Clamp size Ø (mm):

7. Clamp direction:

☐ V1

☐ V2

8. Crimp protection:

☐ Spring ☐ Heat shrink sleeve ☐ Without

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

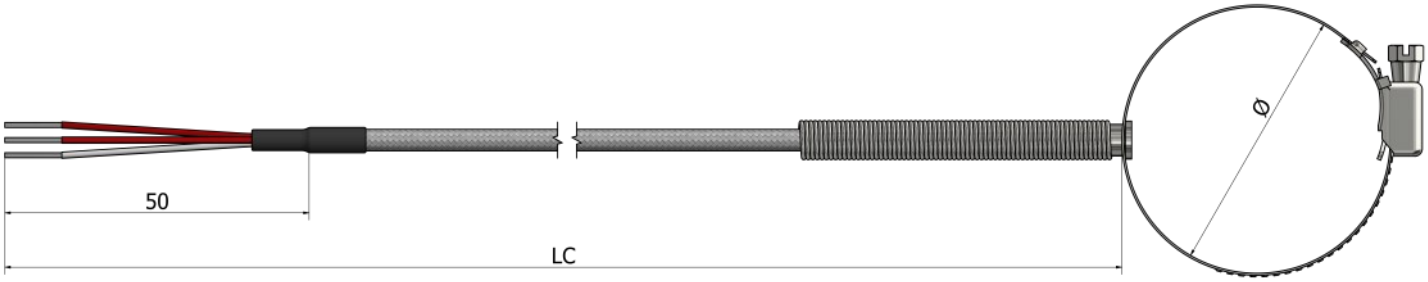
Quantity:

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.

PS42 – Surface RTDs
Pipe-Clamp (type 2)



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

Ordering information

1. Element type:

☐ Pt 100 ☐ Pt 500 ☐ Pt 1000

☐ Other:

2. Element class:

☐ A ☐ B ☐ Other:

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

☐ 2 ☐ 3 ☐ 4

4. Cable prolongation:

☐ PVC (105°C) ☐ Silicone (180°C) ☐ Teflon (260°C)

☐ Fiberglass (400°C) ☐ Other:

5. Cable length LC (mm):

6. Clamp size Ø (mm):

7. Crimp protection:

☐ Spring ☐ Heat shrink sleeve ☐ Without

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

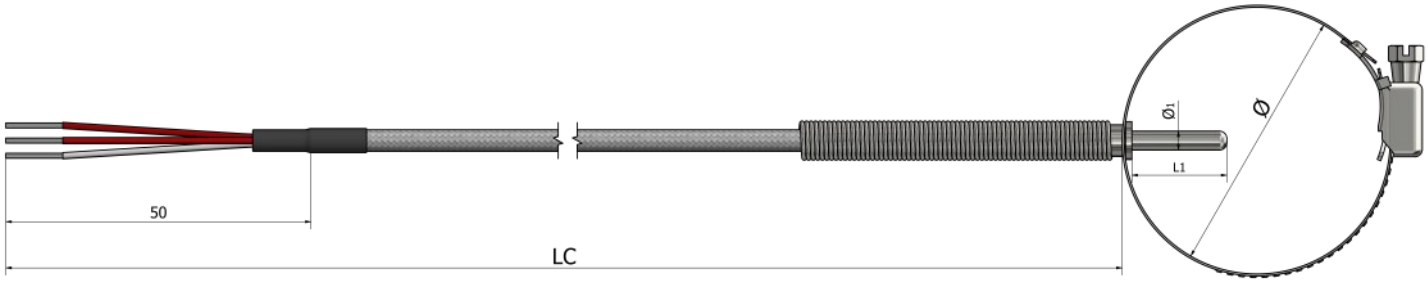
Quantity:

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.

PS43 – Surface RTDs
Pipe-Clamp (type 3)



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

Ordering information

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

2. Element class:
☐ A ☐ B ☐ Other:

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

4. Cable prolongation:
☐ PVC (105°C) ☐ Silicone (180°C) ☐ Teflon (260°C)
☐ Fiberglass (400°C) ☐ Other:

5. Cable length LC (mm):

6. Clamp size Ø (mm):

7. Insertion diameter Ø1 (mm):
☐ 4 ☐ 5 ☐ 6 ☐ Other:

8. Insertion depth L1 (mm):

9. Crimp protection:
☐ Spring ☐ Heat shrink sleeve ☐ Without

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

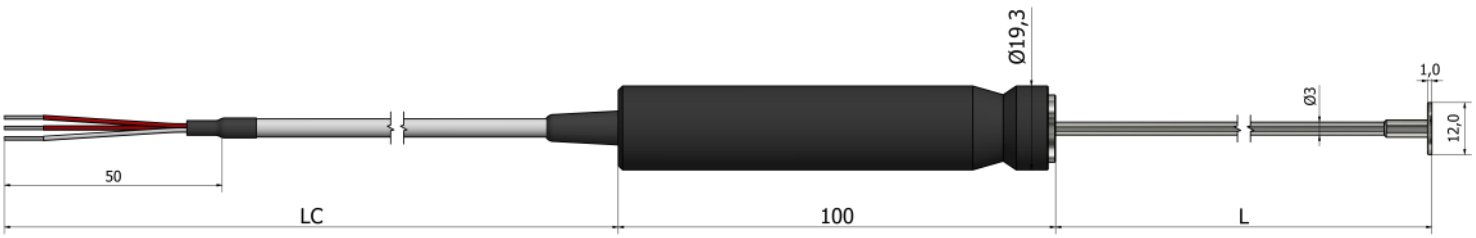
Quantity:

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.

PS50 – Surface RTDs
Handheld



*Handle material **Plastic** *Tube material **Stainless steel 316L***

Ordering information

1. Element type:

☐ Pt 100 ☐ Pt 500 ☐ Pt 1000

☐ Other:

2. Element class:

☐ A ☐ B ☐ Other:

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

☐ 2 ☐ 3 ☐ 4

4. Cable prolongation:

☐ PVC (105°C) ☐ Silicone (180°C) ☐ Teflon (260°C)

☐ Fiberglass (400°C) ☐ Other:

5. Cable length LC (mm):

6. Length L (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.

PS60 – Surface RTDs
Spring loaded magnet

Ordering information

1. Element type:

☐ Pt 100 ☐ Pt 500 ☐ Pt 1000

☐ Other:

2. Element class:

☐ A ☐ B ☐ Other:

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

☐ 2 ☐ 3 ☐ 4

4. Cable prolongation:

☐ PVC (105°C) ☐ Silicone (180°C) ☐ Teflon (260°C)

☐ Fiberglass (400°C) ☐ Other:

5. Cable length LC (mm):

6. Crimp protection:

☐ Spring ☐ Heat shrink sleeve ☐ Without

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

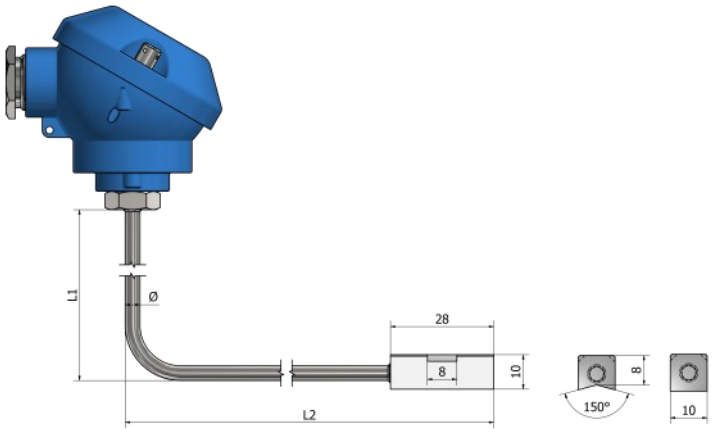
Quantity:

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



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

Ordering information

1. Element type:

☐ Pt 100 ☐ Pt 500 ☐ Pt 1000

☐ Other:

2. Element class:

☐ A ☐ B ☐ Other:

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

☐ 2 ☐ 3 ☐ 4

4. Lengths L1 and L2 (mm):

L1 _____ L2 _____

5. Diameter Ø (mm):

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

8. Contact block material:

☐ Brass ☐ Aluminum ☐ Other:

9. Contact block shape:

☐ V-shape ☐ Flat

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

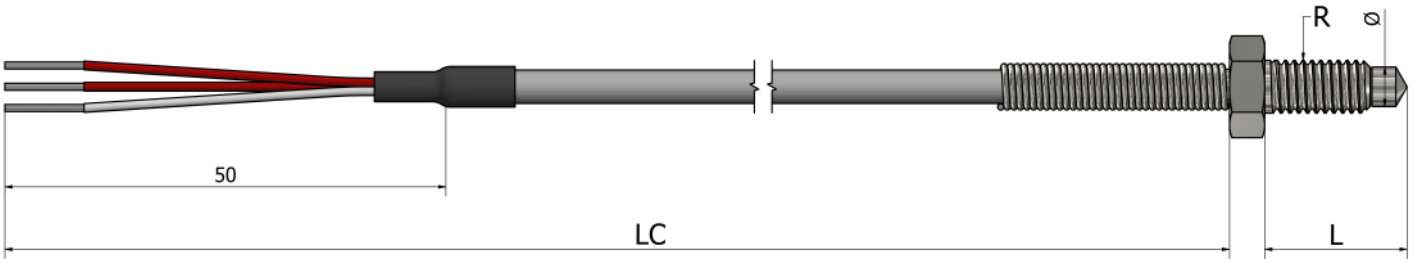
Quantity:

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.

PR20 – Surface RTDs
Nozzle



*Nozzle and thread material **Stainless steel (304 / 304L / 316 / 316L)***

Ordering information

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

2. Element class:
☐ A ☐ B ☐ Other:

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

4. Length L (mm):

5. Diameter Ø (mm):

6. Cable prolongation:
☐ PVC (105°C) ☐ Silicone (180°C) ☐ Teflon (260°C)
☐ Fiberglass (400°C) ☐ Other:

7. Cable length LC (mm):

8. Crimp protection:
☐ Spring ☐ Heat shrink sleeve ☐ Without

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

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

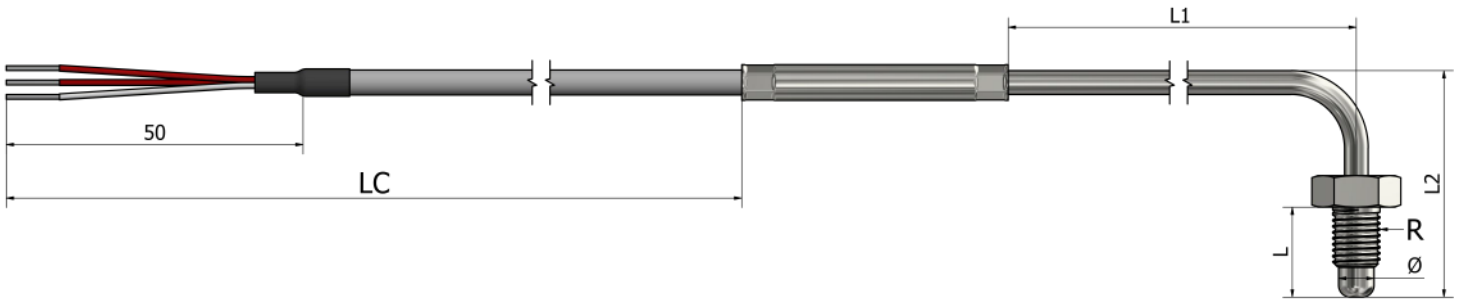
Quantity:

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.

PR21 – Surface RTDs
Nozzle (90° bend)



*Tube material **Stainless steel 316L*** *Nozzle and thread material **Stainless steel (304 / 304L / 316 / 316L)***

Ordering information

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

2. Element class:
☐ A ☐ B ☐ Other:

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

4. Lengths (mm):
L1 _____ L2 _____

5. Length L (mm):

6. Diameter Ø (mm):

7. Cable prolongation:
☐ PVC (105°C) ☐ Silicone (180°C) ☐ Teflon (260°C)
☐ Fiberglass (400°C) ☐ Other:

8. Cable length LC (mm):

9. Crimp protection:
☐ Spring ☐ Heat shrink sleeve ☐ Without

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

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

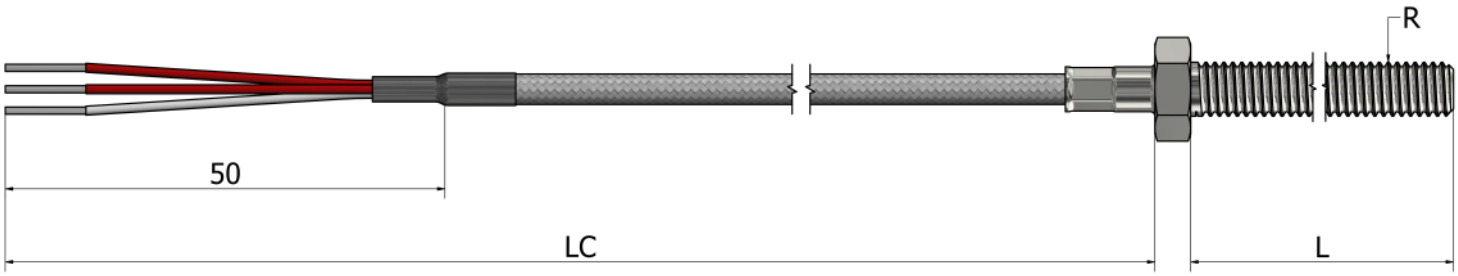
Quantity:

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.

PR22 – Surface RTDs
Bolt



*Bolt material **Stainless steel (304 / 304L / 316 / 316L)***

Ordering information

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

2. Element class:
☐ A ☐ B ☐ Other:

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

4. Length L (mm):

5. Cable prolongation:
☐ PVC (105°C) ☐ Silicone (180°C) ☐ Teflon (260°C)
☐ Fiberglass (400°C) ☐ Other:

6. Cable length LC (mm):

7. Crimp protection:
☐ Spring ☐ Heat shrink sleeve ☐ Without

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

Surface thermistors

Surface thermistors - Technical information

What are the characteristics of surface thermistors ?

Surface thermistors detect surface temperature. The most important issue in surface temperature measurement is to keep measurement errors as small as possible. This is achieved by an appropriate design of the measuring head, so that only very little heat is extracted from the measuring point and the measurement error is negligible.
The perfectly adapted geometry increases the contact surface. At the same time, the low thermal mass of the measuring head ensures that comparatively fast response times can be achieved when measuring the surface temperature.

Different types of surface thermistors

Attaching a thermistor to a surface for an accurate reading can be difficult. The sensor must respond quickly to avoid heat dissipation and remain attached under vibration or other stress.

We offer a number of constructions to suit every surface application.

Washer and ring thermistors can be attached to a stud welded to the surface or to an existing bolt on a section of machinery.

Bayonets are simply inserted through a drilled opening to a desired depth of a surface. The opening is then tapped to accept a number of mounting adapters. These adapters feature a locking pin allowing the thermistors cap to be installed with a twist.

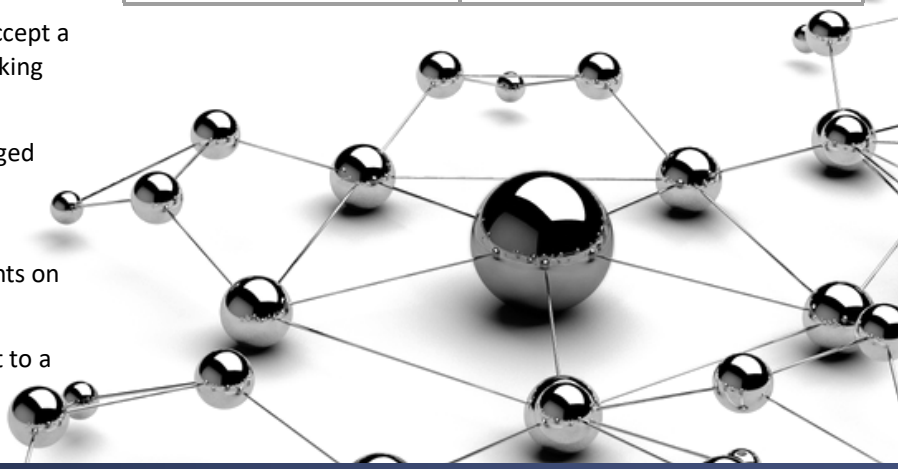
Weld pad thermistors which need not require the more rugged industrial construction can be tig welded or soldered and held with a number of clamping devices.

Pipe-clamp thermistor is ideal for temperature measurements on pipes in laboratories and industrial applications.

Magnet thermistors are ideal for a temporary measurement to a magnetic surface or magnetic surface which doesn't allow any alteration.

Material conductivity

Material	Thermal conductivity W/(m.K)
Air	≈ 0,25
Stainless steel	≈ 14
Brass	≈ 109
Aluminum	≈ 205
Copper	≈ 385
Silver	≈ 406



EuroSensors

Surface thermistors - 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.

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.

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.

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 ?

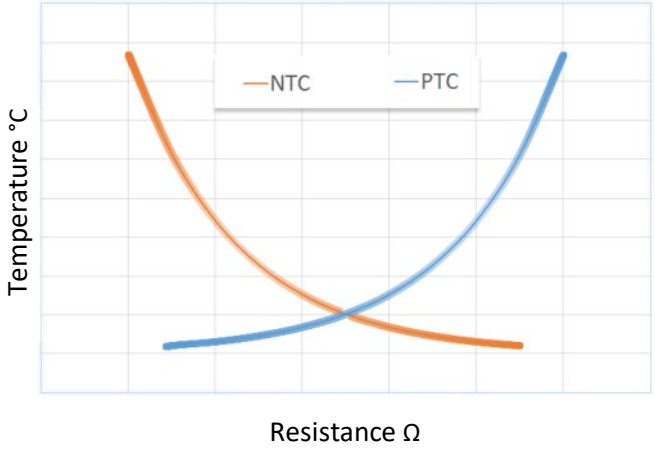
NTCs and PTCs are both thermistors, i.e. temperature sensors that change resistance depending on the temperature.
However, there is a major difference between these two types of thermistors:

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.

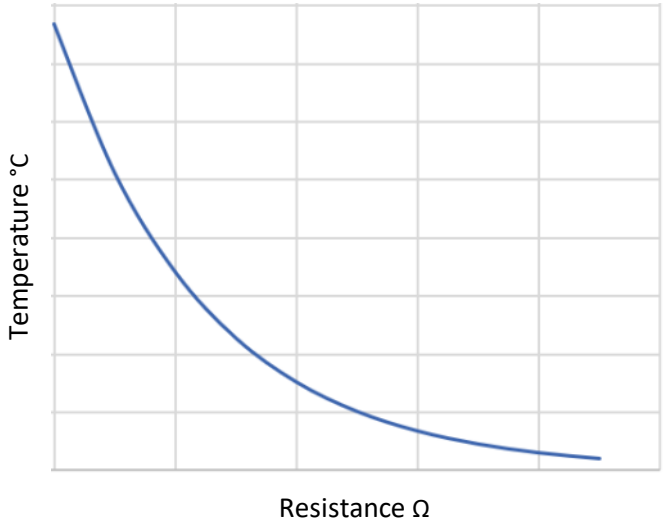


Surface thermistors - Technical information

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.



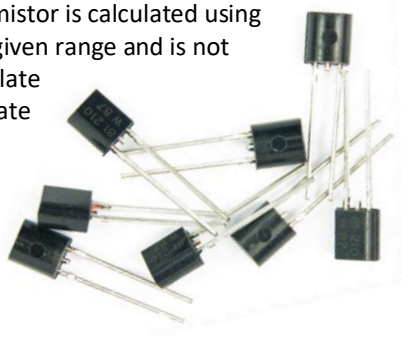
NTC thermistors are non-linear resistors that alter their resistance characteristics with temperature. Simply put, as temperature increases the thermistor's resistance decreases.

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)

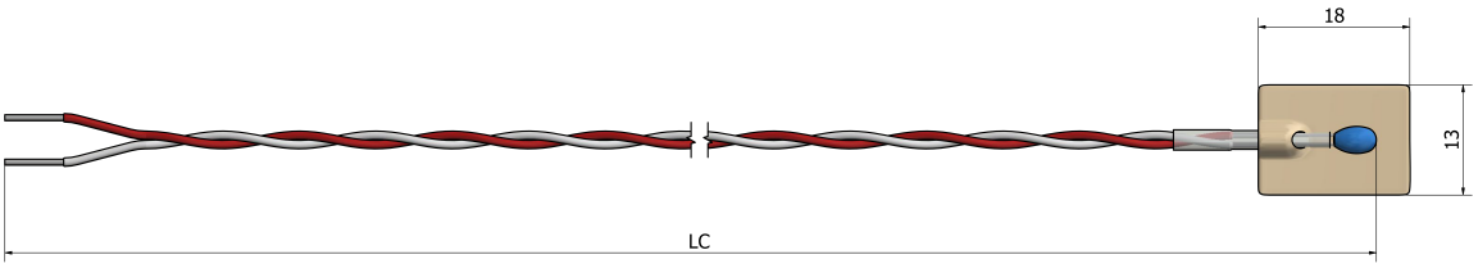
Thermistor connectors

Due to the lack of standardization in RTD connectors, our company takes pride in its ability to produce a wide range of RTD connectors. We understand that different industries and applications have unique requirements when it comes to temperature measurement, and that includes the connectors used. With our expertise and advanced manufacturing capabilities, we have the flexibility to design and produce various types of RTD connectors.

Global cable insulation characteristics

	PVC	Silicone	Teflon	Fiberglass
Abrasion resistance	Very good	Fair	Good	Fair
Chemical resistance	Very good	Poor	Excellent	Good
Moisture resistance	Good	Good	Excellent	Poor
Fire resistance	Good	Good	Excellent	Excellent

HS00 – Surface thermistors
Adhesive tape



*Adhesive tape material **Fiberglass/PTFE***

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. Cable prolongation:

☐ Teflon (260°C) ☐ Other:

4. Cable length LC (mm):

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

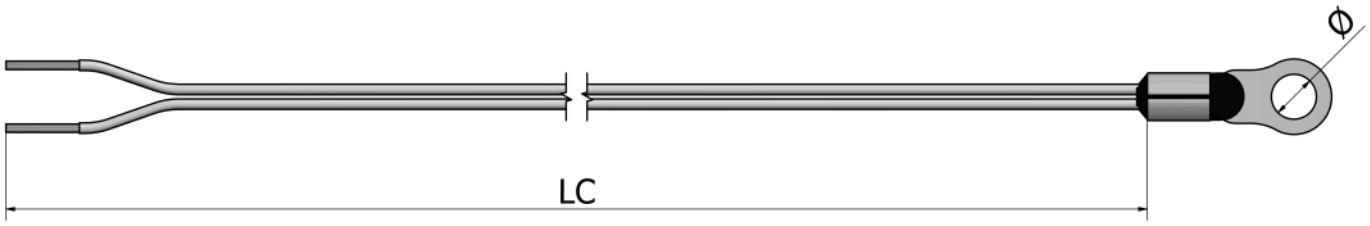
Quantity:

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.

HS01 – Surface thermistors
Washer mount



*Washer mount material **Tinned copper***

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. Cable prolongation:

☐ Teflon (260°C) ☐ Other:

4. Cable length LC (mm):

5. Hole size Ø (mm):

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

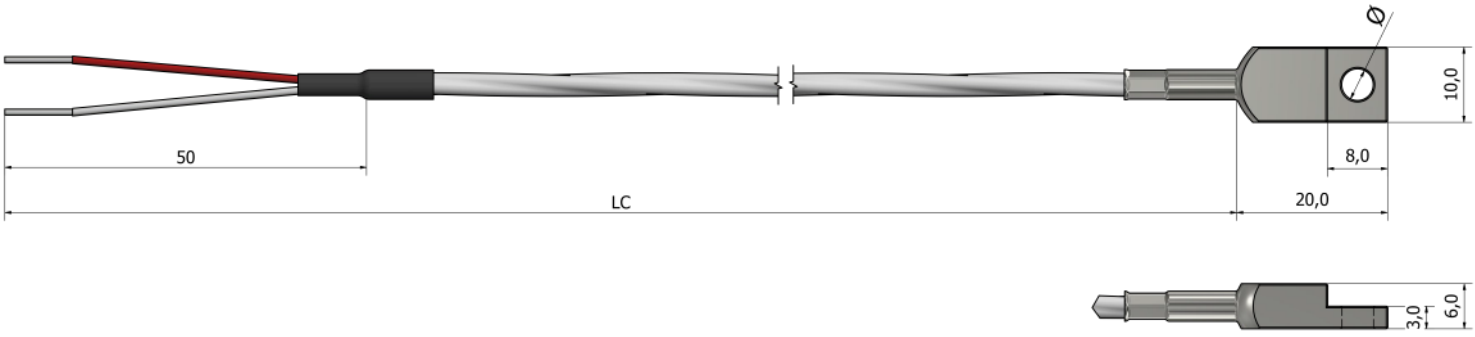
Quantity:

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.

HS02 – Surface thermistors
Reinforced washer mount



*Washer mount 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. Cable prolongation:

☐ PVC (105°C) ☐ Silicone (180°C) ☐ Teflon (260°C)

☐ Fiberglass (400°C) ☐ Other:

4. Cable length LC (mm):

5. Hole diameter Ø (mm):

6. Crimp protection:

☐ Spring ☐ Heat shrink sleeve ☐ Without

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

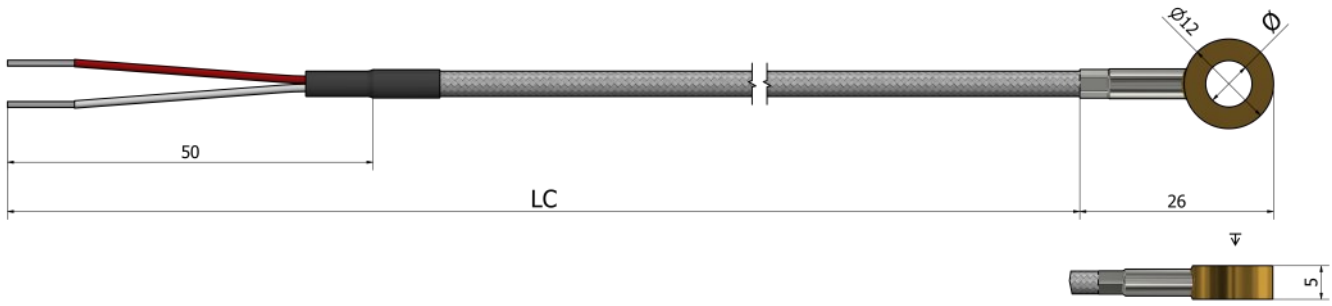
Quantity:

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.

HS03 – Surface thermistors
Ring mount



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:

4. Cable prolongation:

☐ PVC (105°C) ☐ Silicone (180°C) ☐ Teflon (260°C)

☐ Fiberglass (400°C) ☐ Other:

5. Cable length LC (mm):

6. Ring material:

☐ Brass ☐ AISI 316L ☐ Other:

7. Ring size:

☐ M5 ☐ M6 ☐ Other:

8. Crimp protection:

☐ Spring ☐ Heat shrink sleeve ☐ Without

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

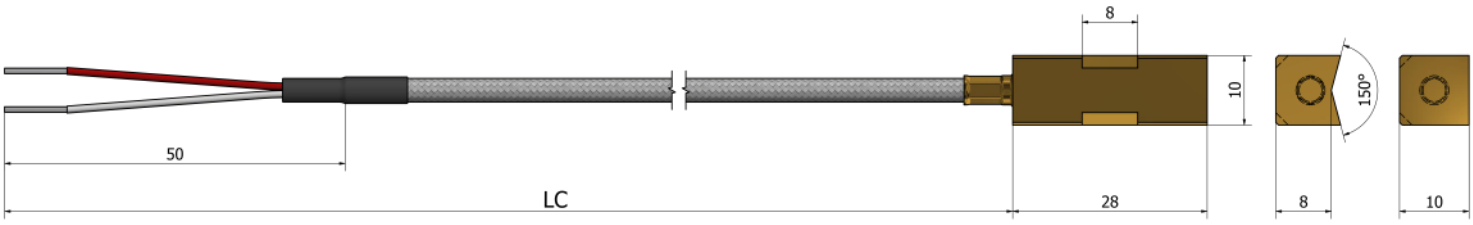
Quantity:

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.

HS05 – Surface thermistors
Contact block



*Contact block material **Brass or aluminum***

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. Cable prolongation:

☐ PVC (105°C) ☐ Silicone (180°C) ☐ Teflon (260°C)

☐ Fiberglass (400°C) ☐ Other:

4. Cable length LC (mm):

5. Contact block material:

☐ Brass ☐ Aluminum ☐ Other:

6. Contact block shape:

☐ V-shape

☐ Flat

7. Crimp protection:

☐ Spring ☐ Heat shrink sleeve ☐ Without

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

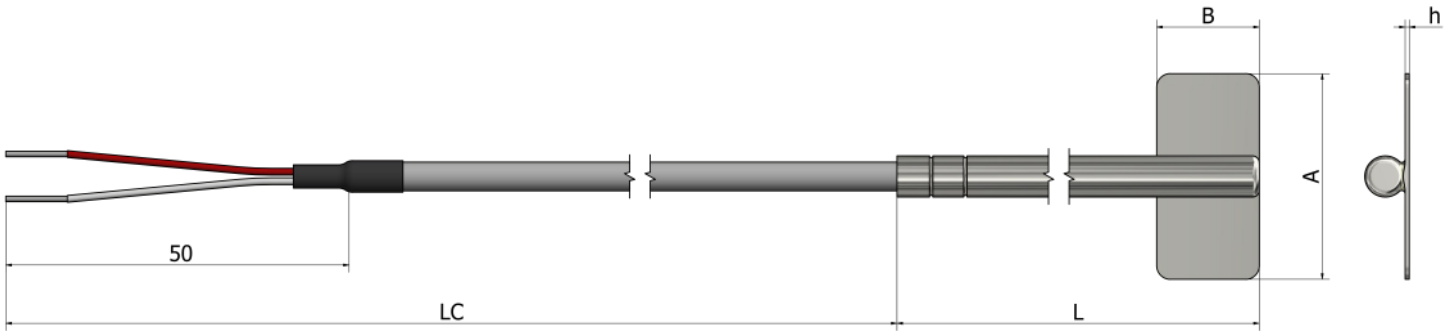
Quantity:

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.

HS10 – Surface thermistors
Weld pad



Weld pad and 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. Cable prolongation:

☐ PVC (105°C) ☐ Silicone (180°C) ☐ Teflon (260°C)

☐ Fiberglass (400°C) ☐ Other:

4. Cable length LC (mm):

5. Tube length L (mm):

6. Pad material: ☐ AISI 316L ☐ Other:

7. Pad dimensions A x B (mm):

☐ 15 x 10 ☐ 25 x 10 ☐ 30 x 10

☐ Other:

8. Pad thickness h (mm): ☐ 0,5 ☐ Other:

9. Crimp protection:

☐ Spring ☐ Heat shrink sleeve ☐ Without

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

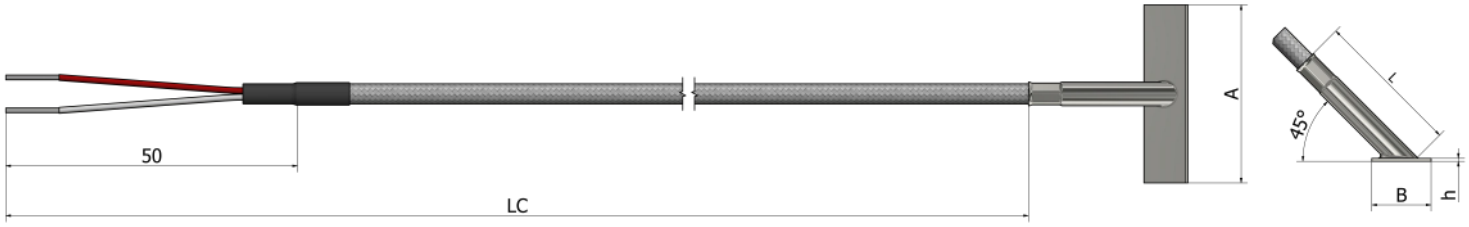
Quantity:

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.

HS11 – Surface thermistors
Weld pad (45° angle)



Weld pad and 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. Cable prolongation:

☐ PVC (105°C) ☐ Silicone (180°C) ☐ Teflon (260°C)

☐ Fiberglass (400°C) ☐ Other:

4. Cable length LC (mm):

5. Tube length L (mm):

6. Pad material: ☐ AISI 316L ☐ Other:

7. Pad dimensions A x B (mm):

☐ 15 x 10 ☐ 25 x 10 ☐ 30 x 10

☐ Other:

8. Pad thickness h (mm): ☐ 0,5 ☐ Other:

9. Crimp protection:

☐ Spring ☐ Heat shrink sleeve ☐ Without

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

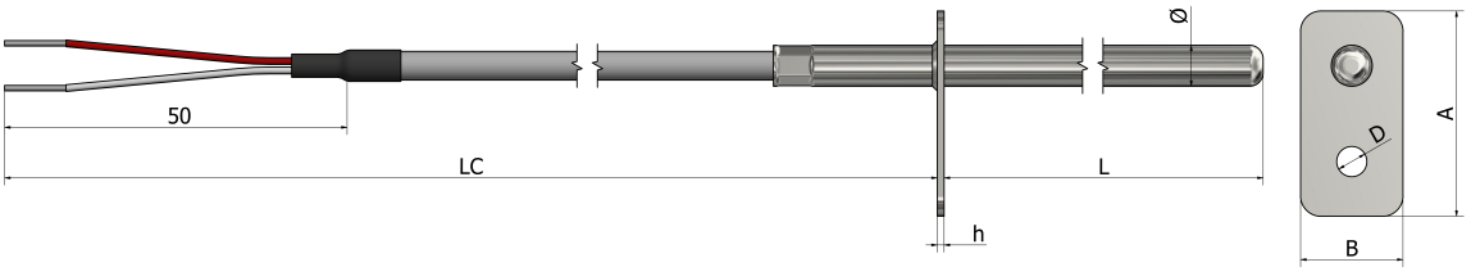
Quantity:

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.

HS12 – Surface thermistors
Weld pad (plug-in)



Weld pad and 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. Cable prolongation:
☐ PVC (105°C) ☐ Silicone (180°C) ☐ Teflon (260°C)
☐ Fiberglass (400°C) ☐ Other:

4. Cable length LC (mm):

5. Pad material: ☐ AISI 316L ☐ Other:

6. Pad dimensions A x B (mm):
☐ 15 x 10 ☐ 25 x 10 ☐ 30 x 10
☐ Other:

7. Pad thickness h (mm): ☐ 0,5 ☐ Other:

8. Hole size Ø D (mm):

9. Insertion diameter Ø (mm):
☐ 4 ☐ 5 ☐ 6 ☐ Other:

10. Insertion depth L (mm):

11. Crimp protection:
☐ Spring ☐ Heat shrink sleeve ☐ Without

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

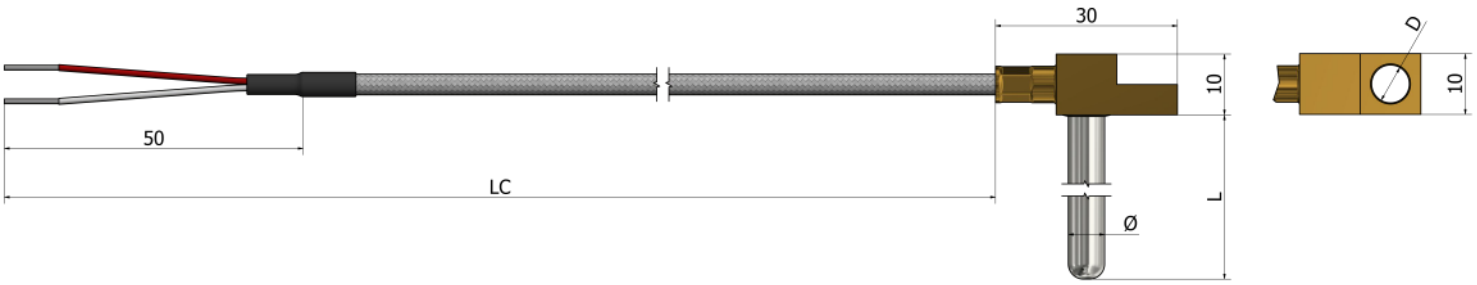
Quantity:

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.

HS20 – Surface thermistors
Angle / plug-in



Mounting block material* ***Brass* **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. Cable prolongation:

☐ PVC (105°C) ☐ Silicone (180°C) ☐ Teflon (260°C)

☐ Fiberglass (400°C) ☐ Other:

4. Cable length LC (mm):

5. Hole size Ø D (mm):

6. Insertion diameter Ø (mm):

☐ 4 ☐ 5 ☐ 6 ☐ Other:

7. Insertion depth L (mm):

8. Crimp protection:

☐ Spring ☐ Heat shrink sleeve ☐ Without

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

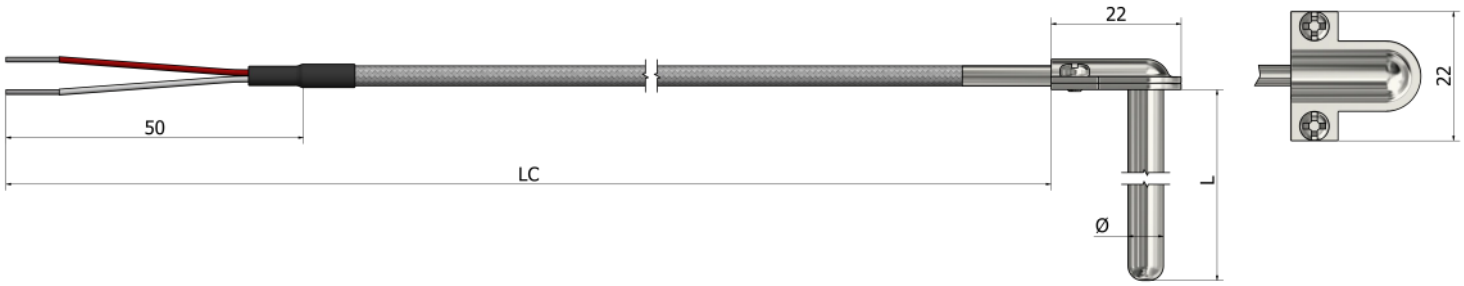
Quantity:

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.

HS21 – Surface thermistors
Angle / plug-in (clamp)



*Clamp material **Stainless steel 316L** *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. Cable prolongation:

☐ PVC (105°C) ☐ Silicone (180°C) ☐ Teflon (260°C)

☐ Fiberglass (400°C) ☐ Other:

4. Cable length LC (mm):

5. Insertion diameter Ø (mm):

☐ 4 ☐ 5 ☐ 6 ☐ Other:

6. Insertion depth L (mm):

7. Crimp protection:

☐ Spring ☐ Heat shrink sleeve ☐ Without

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

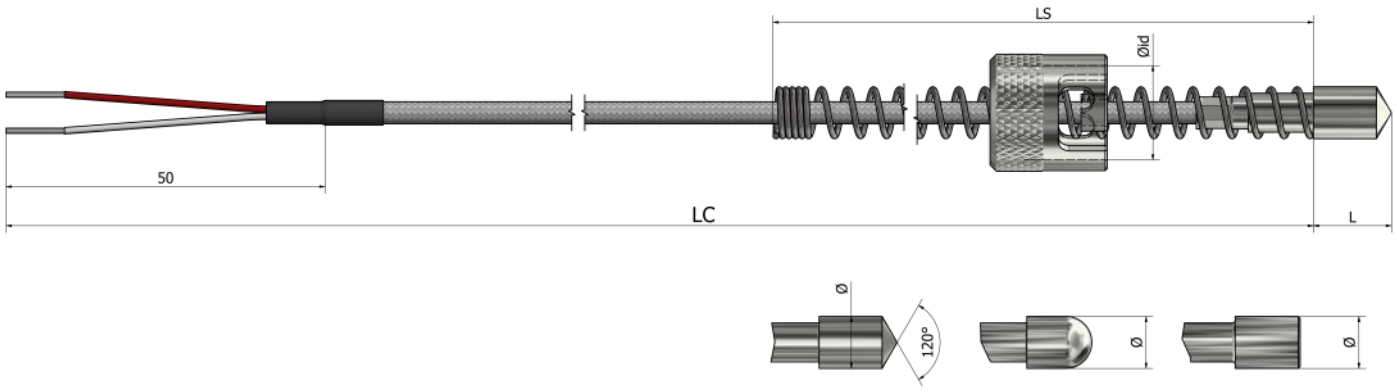
Quantity:

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.

HS30 – Surface thermistors
Bayonet



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. Cable prolongation:

☐ Fiberglass (400°C) ☐ Other:

4. Cable length LC (mm):

5. Dimensions Ø x L (mm):

☐ 5 x 12 ☐ 6 x 10 ☐ 8 x 10 ☐ Other:

6. Sheath tip: *(material **Stainless steel 316L**)*

☐ Round ☐ Conical ☐ Flat

7. Bayonet cap Øid (mm): *(material **Nickel-plated brass**)*

☐ 10,5 ☐ 12,5 ☐ 14,5 ☐ Other:

8. Spring length LS (mm):

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

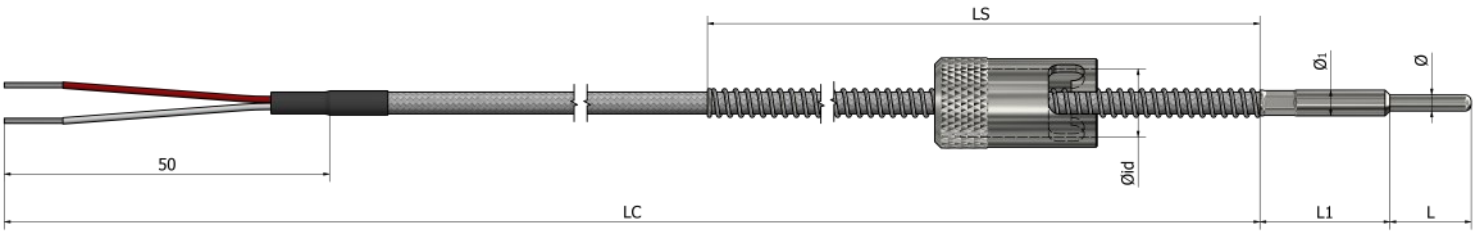
Quantity:

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.

HS31 – Surface thermistors
Bayonet with reduced tip



*Tube and tip 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. Cable prolongation:

☐ Fiberglass (400°C) ☐ Other:

4. Cable length LC (mm):

5. Dimensions L and Ø (mm):

L _____ Ø _____

6. Dimensions L1 and Ø1 (mm):

L1 _____ Ø1 _____

7. Bayonet cap Øid (mm): *(material **Nickel-plated brass**)*

☐ 10,5 ☐ 12,5 ☐ 14,5 ☐ Other:

8. Spring length LS (mm):

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

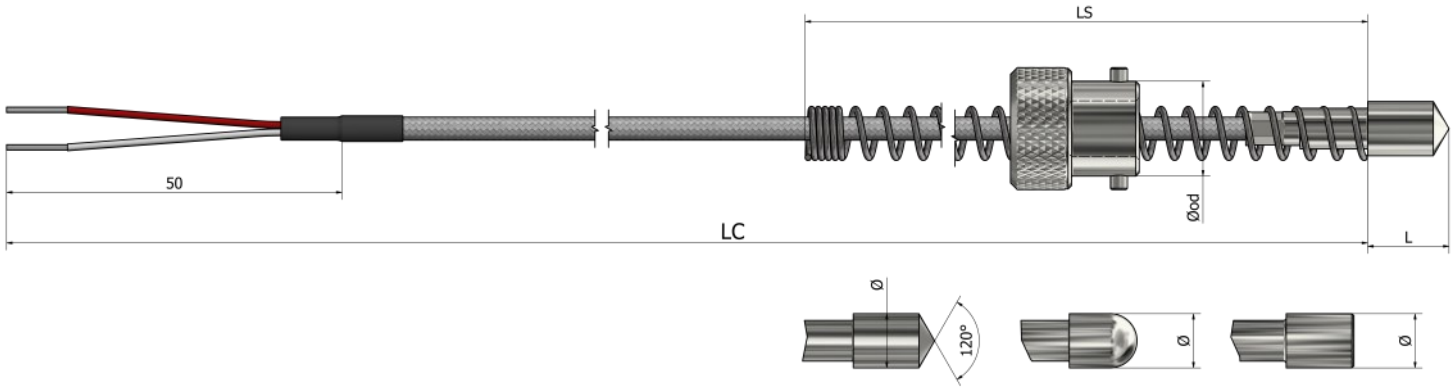
Quantity:

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.

HS33 – Surface thermistors
Bayonet (reverse)



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. Cable prolongation:

☐ Fiberglass (400°C) ☐ Other:

4. Cable length LC (mm):

5. Dimensions Ø x L (mm):

☐ 5 x 12 ☐ 6 x 10 ☐ 8 x 10 ☐ Other:

6. Sheath tip: *(material **Stainless steel 316L**)*

☐ Round ☐ Conical ☐ Flat

7. Bayonet adapter Ød (mm): *(material **Nickel-plated brass**)*

☐ 10,5 ☐ 12,5 ☐ 14,5 ☐ Other:

8. Spring length LS (mm):

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

Quantity:

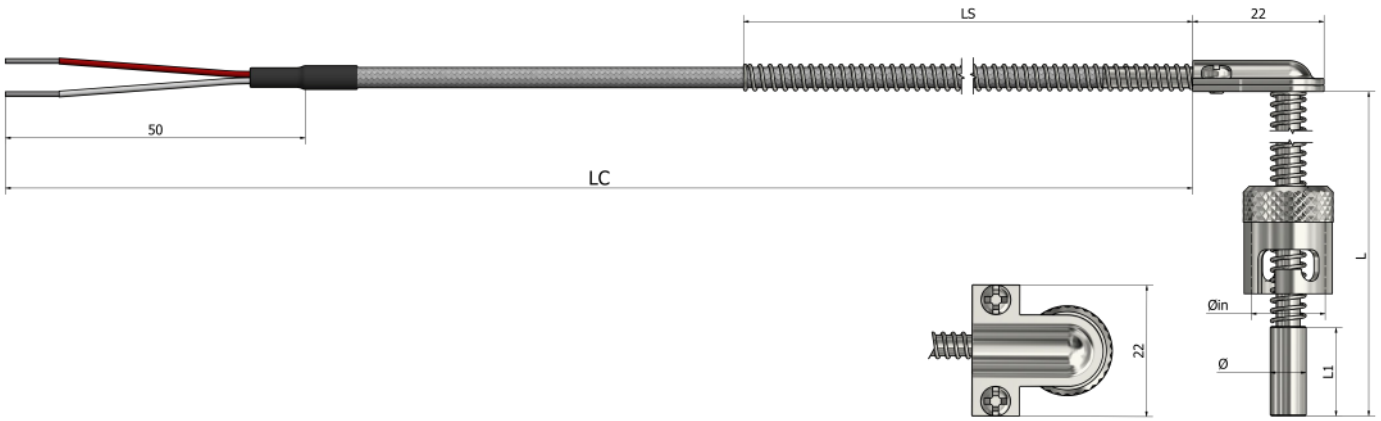
Note:

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.

EuroSensors

HS34 – Surface thermistors
Bayonet with clamp (90° angle)



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. Cable prolongation:

☐ Fiberglass (400°C) ☐ Other:

4. Cable length LC (mm):

5. Cable length L (mm):

6. Dimensions Ø x L1 (mm):

☐ 5 x 12 ☐ 6 x 10 ☐ 8 x 10 ☐ Other:

7. Sheath tip: *(material **Stainless steel 316L**)*

☐ Round ☐ Conical ☐ Flat

8. Bayonet cap Øid (mm): *(material **Nickel-plated brass**)*

☐ 10,5 ☐ 12,5 ☐ 14,5 ☐ Other:

9. Spring length LS (mm):

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

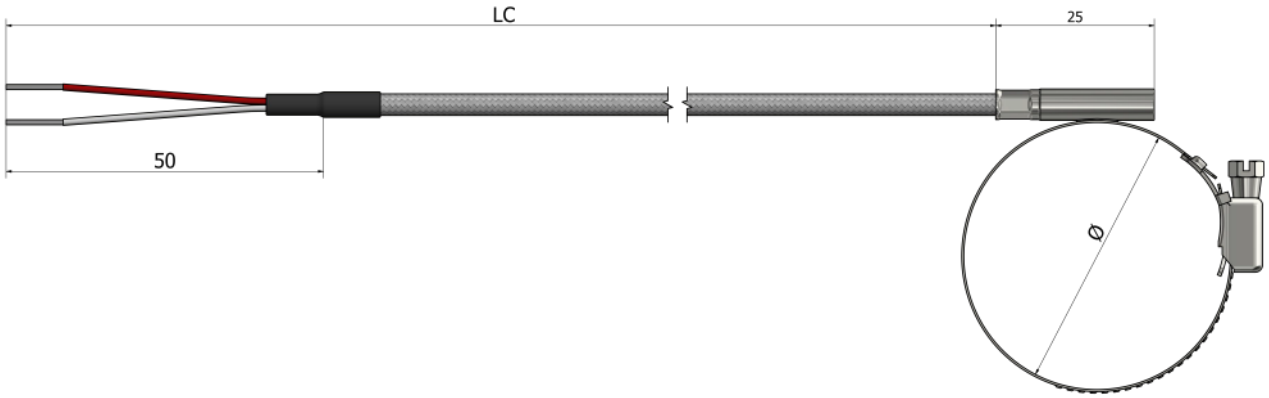
Quantity:

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.

HS41 – Surface thermistors
Pipe-Clamp (type 1)



*Tube and clamp 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. Cable prolongation:

☐ PVC (105°C) ☐ Silicone (180°C) ☐ Teflon (260°C)

☐ Fiberglass (400°C) ☐ Other:

4. Cable length LC (mm):

5. Clamp size Ø (mm):

6. Clamp direction:

☐ V1

☐ V2

7. Crimp protection:

☐ Spring ☐ Heat shrink sleeve ☐ Without

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

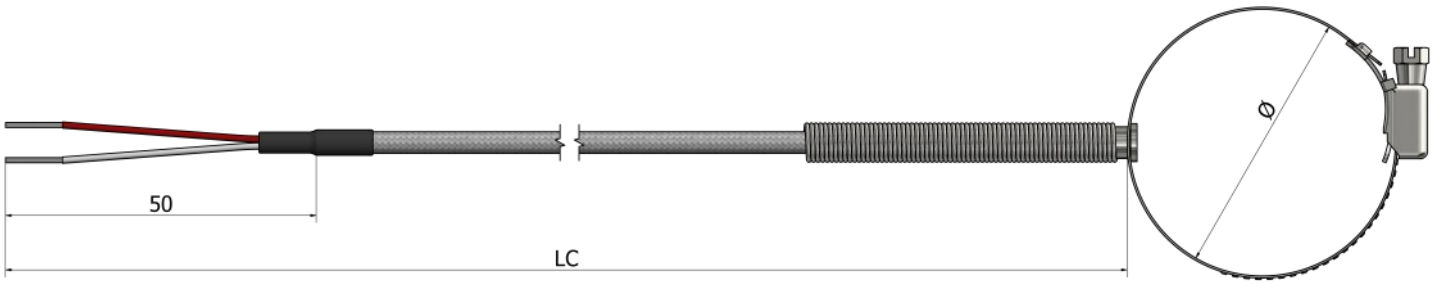
Quantity:

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.

HS42 – Surface thermistors
Pipe-Clamp (type 2)



*Tube and clamp 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. Cable prolongation:

☐ PVC (105°C) ☐ Silicone (180°C) ☐ Teflon (260°C)

☐ Fiberglass (400°C) ☐ Other:

4. Cable length LC (mm):

5. Clamp size Ø (mm):

6. Crimp protection:

☐ Spring ☐ Heat shrink sleeve ☐ Without

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

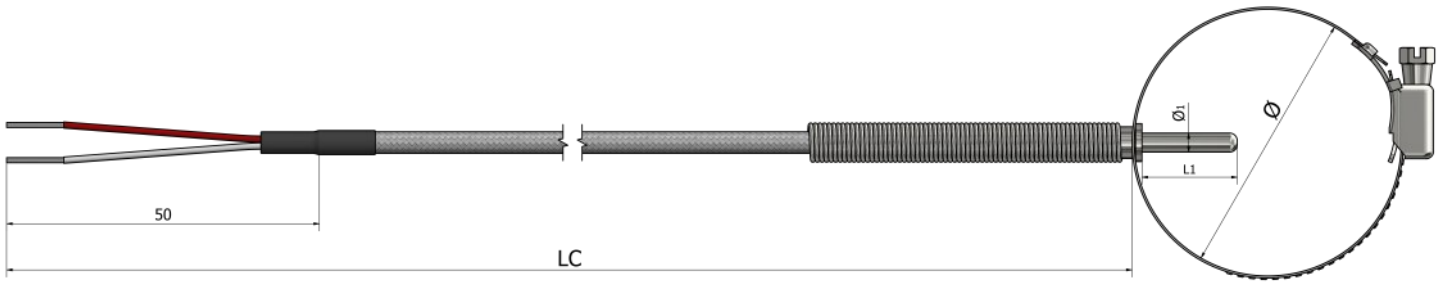
Quantity:

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.

HS43 – Surface thermistors
Pipe-Clamp (type 3)



*Clamp material **Stainless steel 316L** *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. Cable prolongation:

☐ PVC (105°C) ☐ Silicone (180°C) ☐ Teflon (260°C)

☐ Fiberglass (400°C) ☐ Other:

4. Cable length LC (mm):

5. Clamp size Ø (mm):

6. Insertion diameter Ø1 (mm):

☐ 4 ☐ 5 ☐ 6 ☐ Other:

7. Insertion depth L1 (mm):

8. Crimp protection:

☐ Spring ☐ Heat shrink sleeve ☐ Without

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

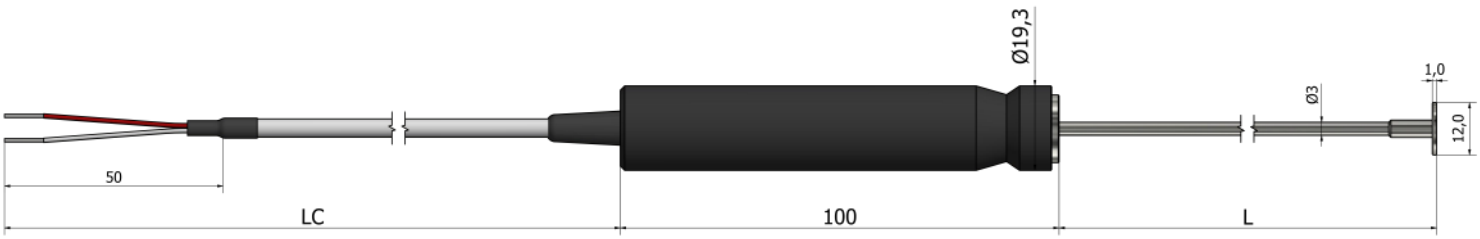
Quantity:

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.

HS50 – Surface thermistors
Handheld



*Handle material **Plastic** *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. Cable prolongation:

☐ PVC (105°C) ☐ Silicone (180°C) ☐ Teflon (260°C)

☐ Fiberglass (400°C) ☐ Other:

4. Cable length LC (mm):

5. Length L (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.

HS60 – Surface thermistors
Spring loaded magnet

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. Cable prolongation:

☐ PVC (105°C) ☐ Silicone (180°C) ☐ Teflon (260°C)

☐ Fiberglass (400°C) ☐ Other:

4. Cable length LC (mm):

5. Crimp protection:

☐ Spring ☐ Heat shrink sleeve ☐ Without

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

Quantity:

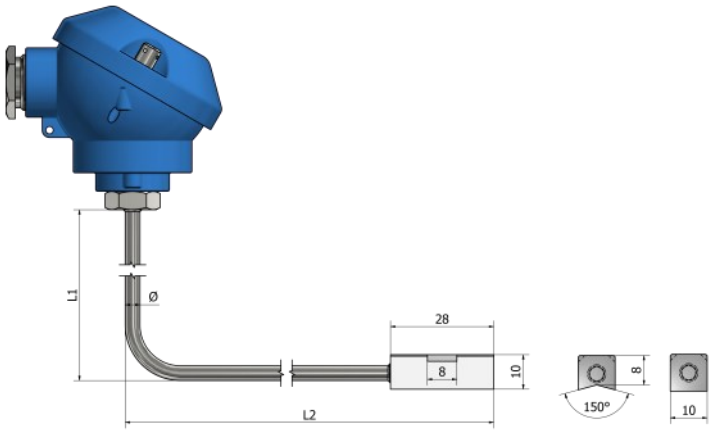
Note:

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

HH25 – Surface thermistors
Contact block (surface mount) with therminal head



*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"

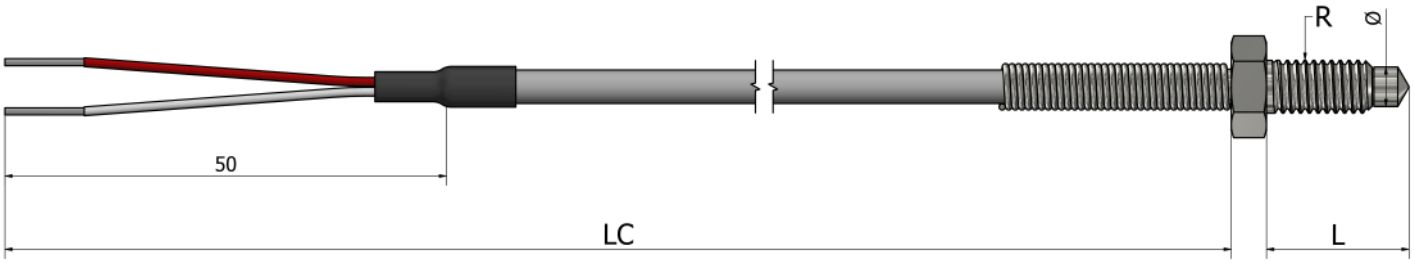
Quantity:

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.

HR20 – Surface thermistors
Nozzle



Nozzle and thread material* ***Stainless steel (304 / 304L / 316 / 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. Cable prolongation:

☐ PVC (105°C) ☐ Silicone (180°C) ☐ Teflon (260°C)

☐ Fiberglass (400°C) ☐ Other:

6. Cable length LC (mm):

7. Crimp protection:

☐ Spring ☐ Heat shrink sleeve ☐ Without

8. Thread:

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

☐ 1/2'' NPT ☐ Other:

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

Quantity:

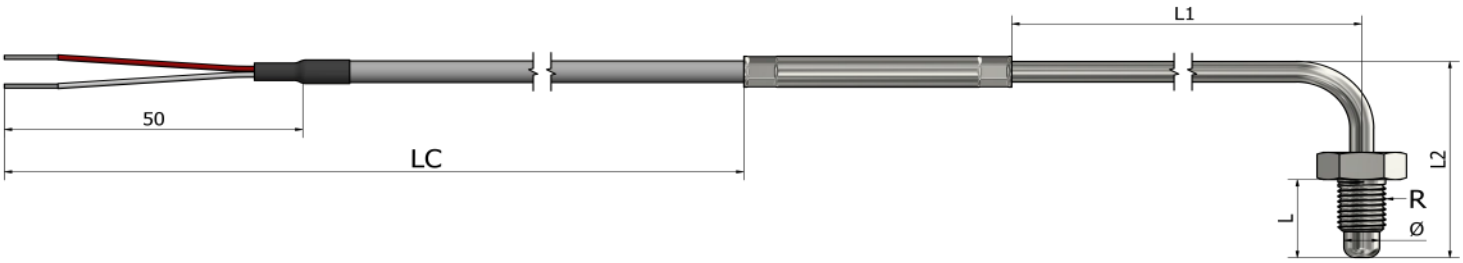
Note:

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

HR21 – Surface thermistors
Nozzle (90° bend)



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

*Nozzle and thread material **Stainless steel (304 / 304L / 316 / 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 (mm):

L1 _____ L2 _____

4. Length L (mm):

5. Diameter Ø (mm):

6. Cable prolongation:

☐ PVC (105°C) ☐ Silicone (180°C) ☐ Teflon (260°C)

☐ Fiberglass (400°C) ☐ Other:

7. Cable length LC (mm):

8. Crimp protection:

☐ Spring ☐ Heat shrink sleeve ☐ Without

10. Thread:

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

☐ 1/2'' NPT ☐ Other:

Additional:

Application:

Operating temperature (min/max):

Type of environment:

Accessories:
See the part "Accessories"

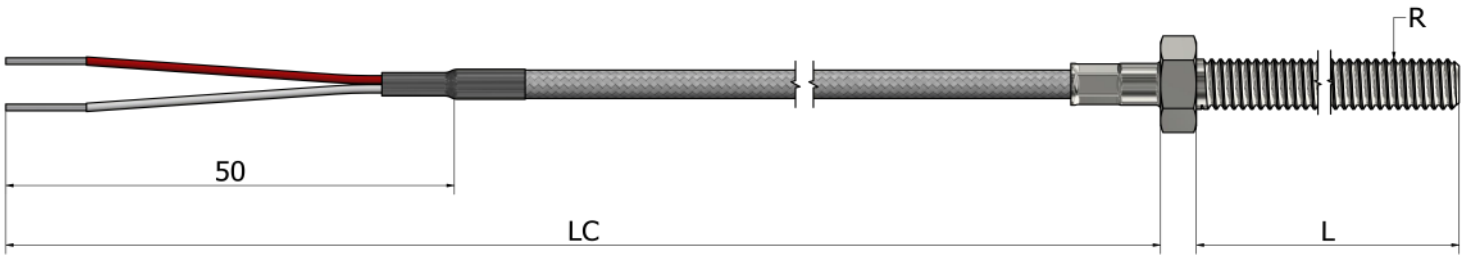
Quantity:

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.

HR22 – Surface thermistors
Bolt



*Bolt material **Stainless steel (304 / 304L / 316 / 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. Cable prolongation:

☐ PVC (105°C) ☐ Silicone (180°C) ☐ Teflon (260°C)

☐ Fiberglass (400°C) ☐ Other:

5. Cable length LC (mm):

6. Crimp protection:

☐ Spring ☐ Heat shrink sleeve ☐ Without

7. Thread:

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

☐ 1/2'' NPT ☐ 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.