

ICS Resistance thermometers



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Measuring inserts	
Common measuring insert	360
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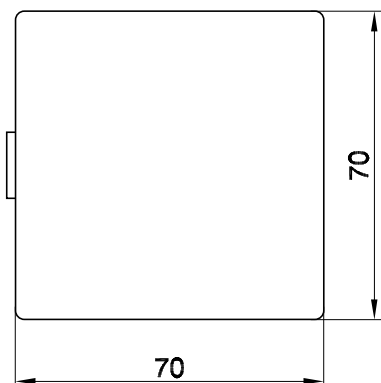
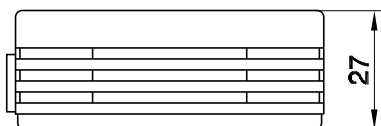
Precision resistance thermometer	
Precision resistance thermometer	Pt100, Pt100h

Cable sensors	
Without attaching parts	K1W, K10W, K12W, K13W
With attaching parts	K4W, K5W, K5WZ, K6W, K7W, K8W, K9W, K11W

Resistance thermometers

Room sensor

Series 308



Temperature measurement and monitoring in rooms; Implementation in a slitted plastic housing with 1 cable bushings \varnothing 7 and 2 mounting holes \varnothing 5,2

Protection classification

IP 20 according DIN 60529

Application temperature

-40°C to +85°C

Temperatursensor

1xPt 100 cl. F0,15 acc. to DIN EN 60751

1xPt 100 cl. F0,3 acc. to DIN EN 60751

2xPt 100 cl. F0,15 acc. to DIN EN 60751

2xPt 100 cl. F0,3 acc. to DIN EN 60751

on inquiry

Circuitry

2 wire circuit

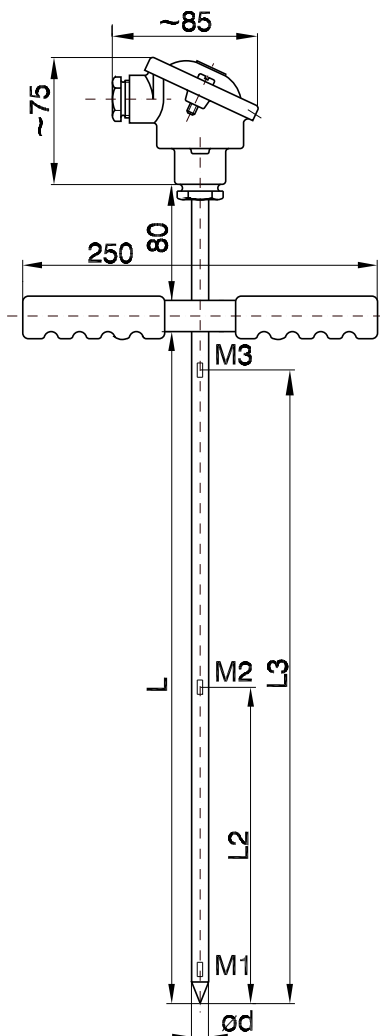
3 wire circuit

4 wire circuit

Resistance thermometers

Penetration sensor

Series 320



Temperature measurement and monitoring in hay- and straw-stack, several measuring points are available

Connection head

Form B according DIN 43 729
on inquiry

Protection classification

IP 54 according DIN 60529
on inquiry

Application temperature

-35 °C to +100 °C

Number of temperature measuring points

1
2
3

Temperatursensor

1xPt 100 cl. F0,15 acc. to DIN EN 60751
1xPt 100 cl. F0,3 acc. to DIN EN 60751
on inquiry

Circuitry

2 wire circuit
3 wire circuit (max. 2 measuring points)
4 wire circuit (max. 1 measuring points)

Protective tube material

1.4571
on inquiry

Sensor length L

2000 mm
on inquiry

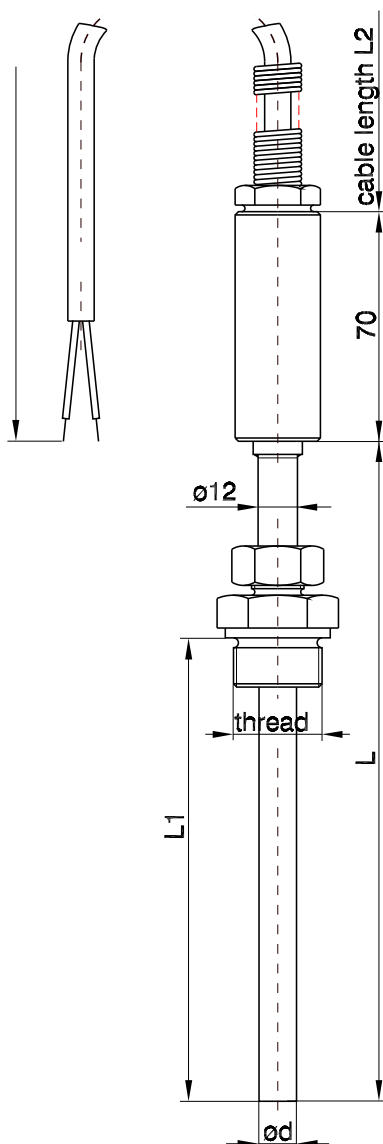
Distance of the measuring points L_2 , L_3

on inquiry

Diameter d

12 mm
14 mm

Resistance thermometers with connecting cable Series 325



Resistance thermometer with compensating cable;
for application in ship building

Construction

Basic implementation

Protection classification

IP 68 according DIN 60529

Application temperature

-200 to +600 °C

Temperatursensor

1xPt 100 cl. F0,15 or W0,15 acc. to DIN EN 60751
1xPt 100 cl. F0,3 or W0,3 acc. to DIN EN 60751
2xPt 100 cl. F0,15 or W0,15 acc. to DIN EN 60751
2xPt 100 cl. F0,3 or W0,3 acc. to DIN EN 60751
on inquiry

Circuitry

2 wire circuit
4 wire circuit for 1xPt100

Protective tube material

1.4571
on inquiry

Length of the connecting cable L₂

1500 mm
on inquiry

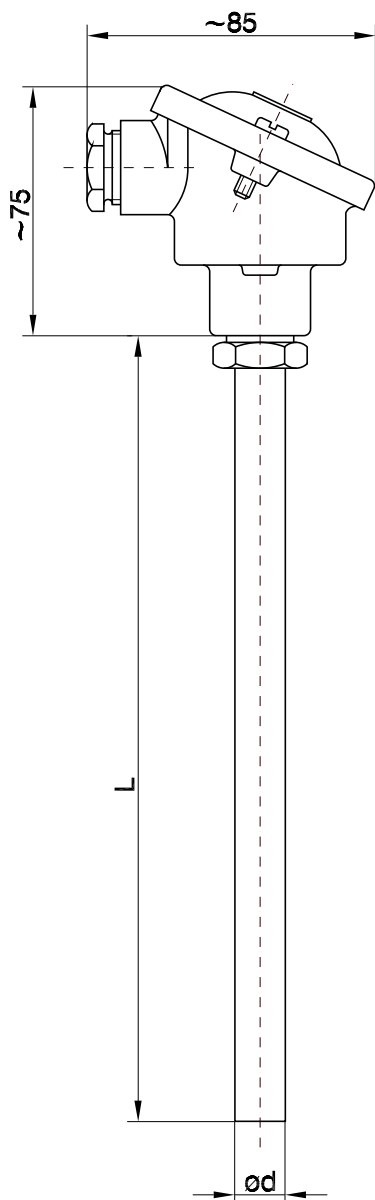
Type of connection cable

Oilflex Classic 100

Design

design 0 without fastener
design 1 with adjustable screwing
design 2 with additional protective tube

Resistance thermometers with connection head Series 340



Measuring the temperature in pipelines or containers; on request, implementations with flange or with adjustable thread joint are deliverable (→ chapter parts and accessories)

Construction

Basic implementation
Ex-implementation (intrinsically safe)

Connection head

Form B according DIN 43 729
Form BUZ for explosion-proof design according DIN 43 729
on inquiry

Protection classification

IP 54 according DIN 60529
on inquiry

Application temperature

-200 to +600 °C
-50 to +400 °C
on inquiry

Temperaturesensor

1xPt 100 cl. F0,15 or W0,15 acc. to DIN EN 60751
1xPt 100 cl. F0,3 or W0,3 acc. to DIN EN 60751
2xPt 100 cl. F0,15 or W0,15 acc. to DIN EN 60751
2xPt 100 cl. F0,3 or W0,3 acc. to DIN EN 60751
on inquiry

Circuitry

2 wire circuit
3 wire circuit
4 wire circuit

Protective tube material

1.4571
on inquiry

Protective tube diameter d

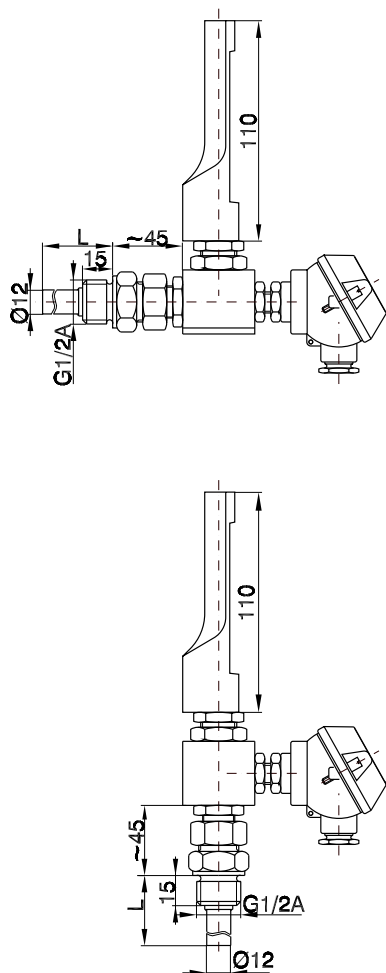
15 mm
on inquiry

Resistance thermometers
with connection head
Series 340

Nominal length L

on inquiry

Resistance thermometers with glass thermometer for displaying Series 342



Combination of resistance and glass thermometer for synchronous measuring and displaying of temperatures

Construction

straight glass thermometer
angle glass thermometer

Connection head

Form F according DIN 43 729

Protection classification

IP 20 according DIN 60529

Application temperature

0 °C to 60 °C
0 °C to 120 °C
0 °C to 200 °C

Temperatursensor

1xPt 100 cl. F0,3 acc. to DIN EN 60751

Circuitry

2 wire circuit
4 wire circuit

Protective tube material

1.4571
Brass

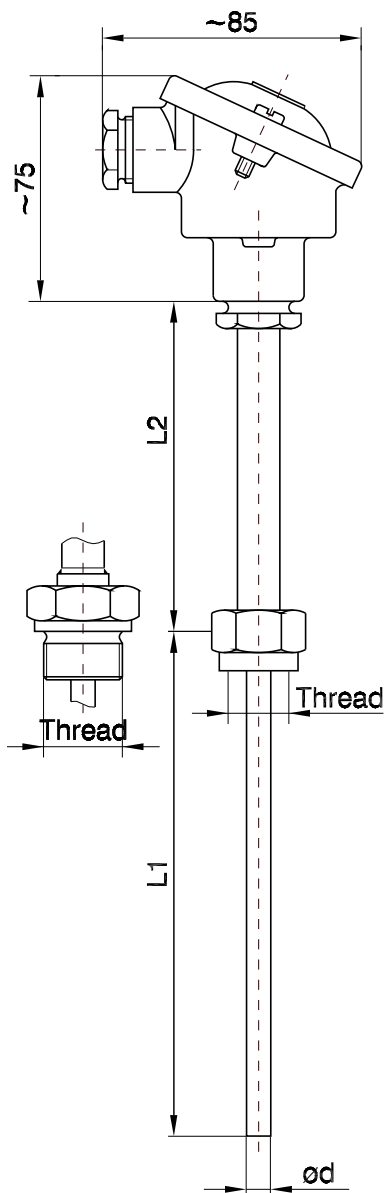
Insert length L_1

63 mm
100 mm
160 mm

Thread

G1/2A
on inquiry

Resistance thermometers with connection head Series 348



Resistance thermometer with exchangeable measuring insert, especially for combination with built-in protection tubes (otherwise no insulation between process-connection and interior connection head)

For observance: with directly built-in (without additional protective tube) can become the measuring insert in the neck tube soldered or welded (insulation between process-connection and interior connection head, measuring insert not exchangeable) - with order declares!

Construction

Basic implementation
Ex-implementation (intrinsically safe)

Connection head

Form B according DIN 43 729
Form BUZ for explosion-proof design according DIN 43 729
on inquiry

Protection classification

IP 54 according DIN 60529
on inquiry

Application temperature

-200 to +600 °C
-50 to +400 °C
on inquiry

Temperatursensor

1xPt 100 cl. F0,15 or W0,15 acc. to DIN EN 60751
1xPt 100 cl. F0,3 or W0,3 acc. to DIN EN 60751
2xPt 100 cl. F0,15 or W0,15 acc. to DIN EN 60751
2xPt 100 cl. F0,3 or W0,3 acc. to DIN EN 60751
on inquiry

Circuitry

2 wire circuit
3 wire circuit
4 wire circuit

Protective tube material

1.4571
on inquiry

Resistance thermometers
with connection head
Series 348

Measuring insert diameter d1/ Extension tube diameter d2

6/9
6/11
8/12
on inquiry

Insert length L₁

on inquiry

extension tube length L₂

130 mm
on inquiry

Process connection

outside thread
cup nut

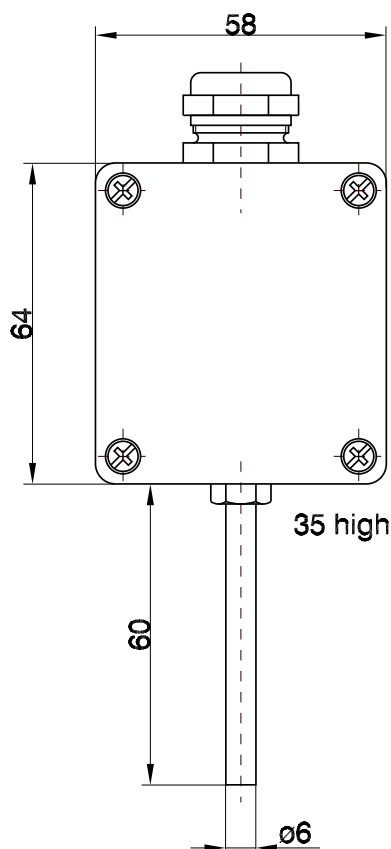
Thread

M18x1,5
M20x1,5
M27x2
G1/2
G3/4
on inquiry

Resistance thermometers

Room sensor

Series 350



Resistance thermometer with a plastic case for temperature measurement and -monitoring in cooling-, stock- and machinery rooms

Protection classification

IP 65 according DIN 60529

Application temperature

-40 °C to +90 °C

Temperatursensor

1xPt 100 cl. F0,15 acc. to DIN EN 60751

1xPt 100 cl. F0,3 acc. to DIN EN 60751

2xPt 100 cl. F0,15 acc. to DIN EN 60751

2xPt 100 cl. F0,3 acc. to DIN EN 60751

on inquiry

Circuitry

2 wire circuit

3 wire circuit

4 wire circuit for 1xPt100

Protective tube material

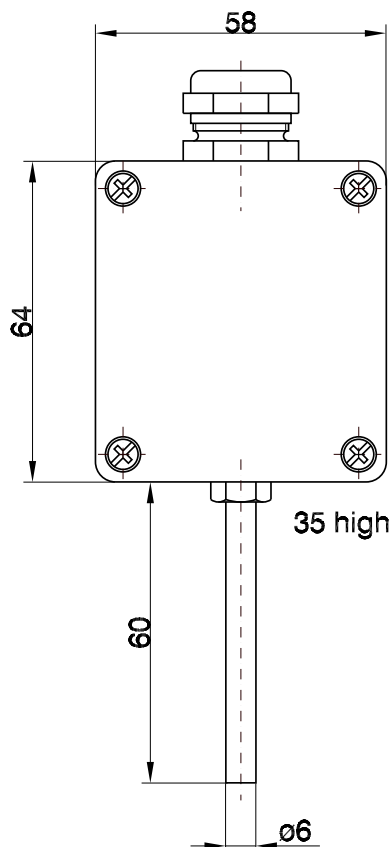
1.4571

on inquiry

Resistance thermometers

Room sensor

Series 351



Resistance thermometer inside a metal case;
for temperature measurement and -monitoring in cooling-, stock-
and machinery rooms

Protection classification

IP 65 according DIN 60529

Application temperature

-40 °C to +120 °C

Temperatursensor

1xPt 100 cl. F0,15 acc. to DIN EN 60751

1xPt 100 cl. F0,3 acc. to DIN EN 60751

2xPt 100 cl. F0,15 acc. to DIN EN 60751

2xPt 100 cl. F0,3 acc. to DIN EN 60751

on inquiry

Circuitry

2 wire circuit

3 wire circuit

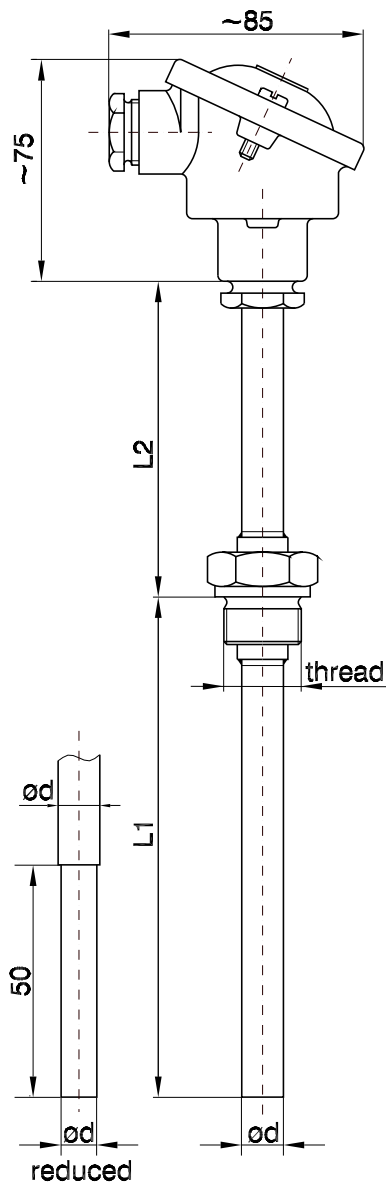
4 wire circuit for 1xPt100

Protective tube material

1.4571

on inquiry

Resistance thermometers with connection head Series 354



Resistance thermometer with exchangeable measuring insert

Construction

Basic implementation
Ex-implementation (intrinsically safe)

Connection head

Form B according DIN 43 729
Form BUZ for explosion-proof design according DIN 43 729
on inquiry

Protection classification

IP 54 according DIN 60529
on inquiry

Application temperature

-200 to +600 °C
-50 to +400 °C
on inquiry

Temperatursensor

1xPt 100 cl. F0,15 or W0,15 acc. to DIN EN 60751
1xPt 100 cl. F0,3 or W0,3 acc. to DIN EN 60751
2xPt 100 cl. F0,15 or W0,15 acc. to DIN EN 60751
2xPt 100 cl. F0,3 or W0,3 acc. to DIN EN 60751
on inquiry

Circuitry

2 wire circuit
3 wire circuit
4 wire circuit

Protective tube material

1.4571
on inquiry

Protective tube diameter d

9 mm
11 mm
9 mm / 7 mm stepped
11 mm / 9 mm stepped
on inquiry

Resistance thermometers
with connection head
Series 354

Insert length L₁

on inquiry

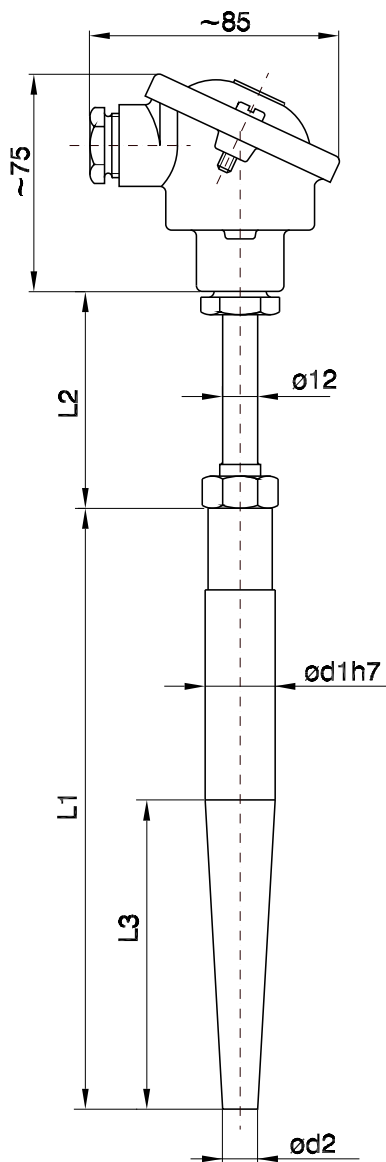
extension tube length L₂

130 mm
on inquiry

Thread

M20x1,5
M27x2
G1/2A
G3/4A
on inquiry

Resistance thermometers with connection head Series 357



Resistance thermometer with exchangeable measuring insert, for welding in, for high working pressure.

Construction

Basic implementation
Ex-implementation (intrinsically safe)

Connection head

Form B according DIN 43 729
Form BUZ for explosion-proof design according DIN 43 729
on inquiry

Protection classification

IP 54 according DIN 60529
on inquiry

Application temperature

-200 to +600 °C
-50 to +400 °C
on inquiry

Temperatursensor

1xPt 100 cl. F0,15 or W0,15 acc. to DIN EN 60751
1xPt 100 cl. F0,3 or W0,3 acc. to DIN EN 60751
2xPt 100 cl. F0,15 or W0,15 acc. to DIN EN 60751
2xPt 100 cl. F0,3 or W0,3 acc. to DIN EN 60751
on inquiry

Circuitry

2 wire circuit
3 wire circuit
4 wire circuit

Protective tube material

1.0460 (C22.8)
1.4571
on inquiry

Resistance thermometers
with connection head
Series 357

**Protective tube Form 4 for welding in
according DIN 43 772**

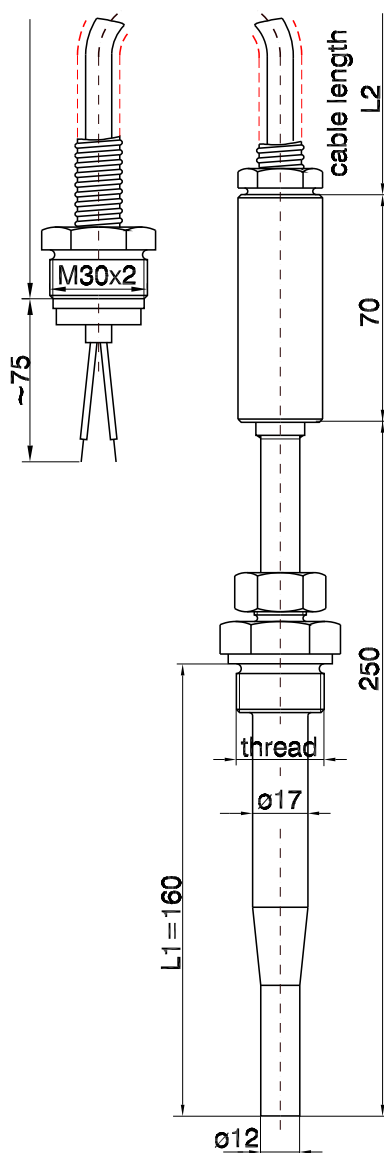
Form; L1; L3; \varnothing d1; \varnothing d2; measuring insert- \varnothing ; thread

D1; 140; 65; 24; 12,5; 6; M18x1,5
D2; 200; 125; 24; 12,5; 6; M18x1,5
D4; 200; 65; 24; 12,5; 6; M18x1,5
D4S*; 140; 65; 18; 9; 3; M14x1,5
D5; 260; 125; 24; 12,5; 6; M18x1,5

extension tube length L₂

130 mm
on inquiry

Resistance thermometers with connecting cable Series 358



Resistance thermometer with compensating cable and additional protective tube with clamp thread joint; for application in ship building

Construction

Basic implementation

Protection classification

IP 68 according DIN 60529

Application temperature

-200 to +600 °C

Temperatursensor

1xPt 100 cl. F0,15 or W0,15 acc. to DIN EN 60751
1xPt 100 cl. F0,3 or W0,3 acc. to DIN EN 60751
2xPt 100 cl. F0,15 or W0,15 acc. to DIN EN 60751
2xPt 100 cl. F0,3 or W0,3 acc. to DIN EN 60751
on inquiry

Circuitry

2 wire circuit
4 wire circuit for 1xPt100

Protective tube material

1.4571
on inquiry

Insert length L_1

160 mm

Length of the connecting cable L_2

1500 mm
on inquiry

Type of connection cable

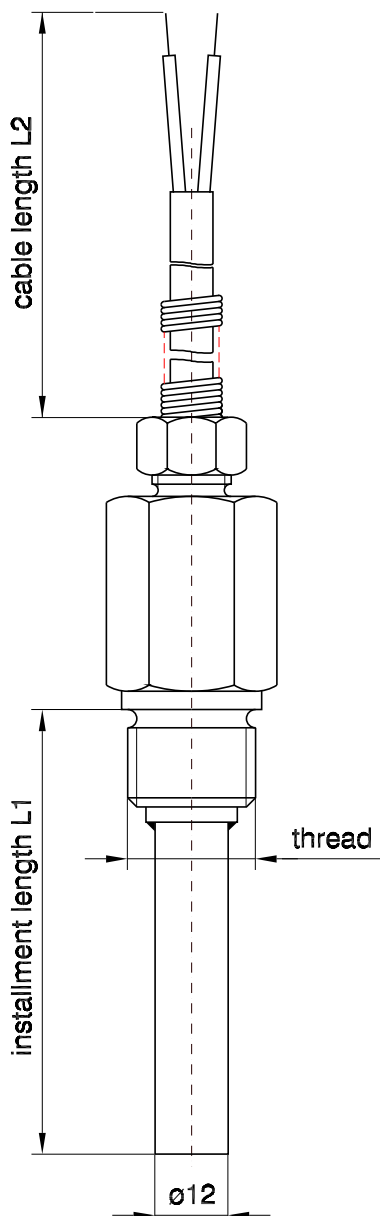
TeSi 2xAWG22
TeSi 4xAWG22
on inquiry

Resistance thermometers
with connecting cable
Series 358

Thread

M20x1,5
M27x2
G1/2A
G3/4A

Resistance thermometers with connecting cable Series 359



Resistance thermometer with exchangeable measuring insert;
for application in ship building

Construction

Basic implementation

Protection classification

IP 54 according DIN 60529

Application temperature

-200 to +600 °C

Temperatursensor

1xPt 100 cl. W0,15 acc. to DIN EN 60751
1xPt 100 cl. W0,3 acc. to DIN EN 60751
2xPt 100 cl. W0,15 acc. to DIN EN 60751
2xPt 100 cl. W0,3 acc. to DIN EN 60751
on inquiry

Circuitry

2 wire circuit
4 wire circuit for 1xPt100

Protective tube material

1.4571
on inquiry

Insert length L_1

on inquiry

Length of the connecting cable L_2

1500 mm
on inquiry

Type of connection cable

TeSi 2xAWG22
TeSi 4xAWG22
on inquiry

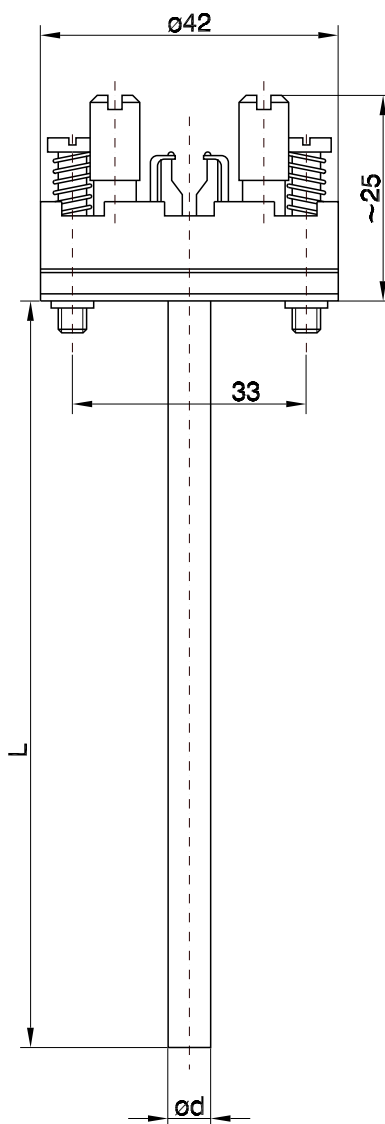
Thread

M20x1,5
G1/2A

Resistance thermometers

Measuring insert

Series 360



Measuring insert for built-in protective fittings.

Application temperature

-200 to +600 °C
-50 to +400 °C
on inquiry

Temperatursensor

1xPt 100 cl. F0,15 or W0,15 acc. to DIN EN 60751
1xPt 100 cl. F0,3 or W0,3 acc. to DIN EN 60751
2xPt 100 cl. F0,15 or W0,15 acc. to DIN EN 60751
2xPt 100 cl. F0,3 or W0,3 acc. to DIN EN 60751
on inquiry

Circuitry

2 wire circuit
3 wire circuit
4 wire circuit

Protective tube material

1.4571
on inquiry

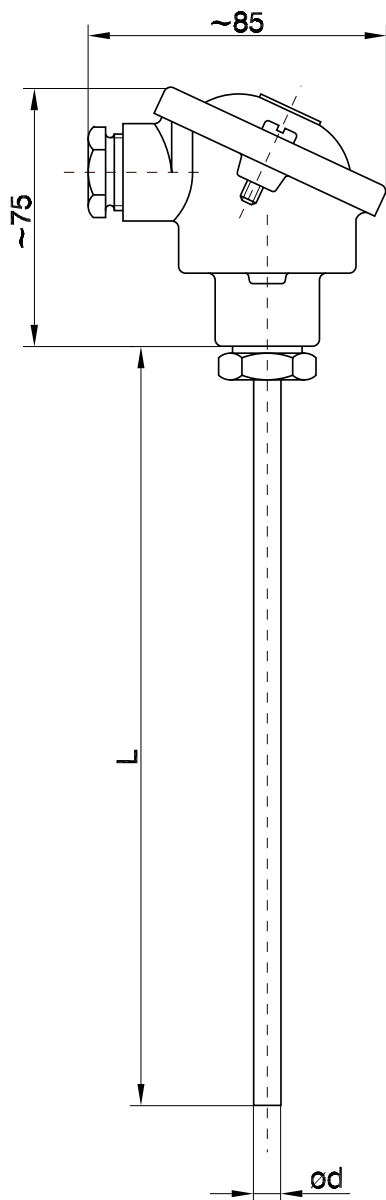
Protective tube diameter d

6 mm
8 mm
on inquiry

Nominal length L

on inquiry

Resistance thermometers with connection head Series 361



Measuring insert with connection head

Construction

Basic implementation
Ex-implementation (intrinsically safe)

Connection head

Form B according DIN 43 729
Form BUZ for explosion-proof design according DIN 43 729
on inquiry

Protection classification

IP 54 according DIN 60529
on inquiry

Application temperature

-200 to +600 °C
-50 to +400 °C
on inquiry

Temperatursensor

1xPt 100 cl. F0,15 or W0,15 acc. to DIN EN 60751
1xPt 100 cl. F0,3 or W0,3 acc. to DIN EN 60751
2xPt 100 cl. F0,15 or W0,15 acc. to DIN EN 60751
2xPt 100 cl. F0,3 or W0,3 acc. to DIN EN 60751
on inquiry

Circuitry

2 wire circuit
3 wire circuit
4 wire circuit

Protective tube material

1.4571

Protective tube diameter d

6 mm
8 mm
on inquiry

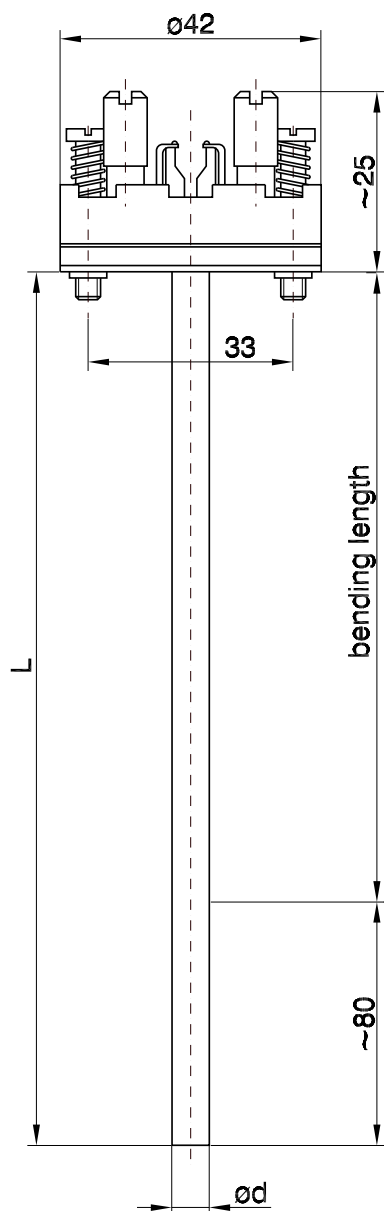
Nominal length L

on inquiry

Resistance thermometers

Sheathed resistance thermometer

Series 370



Measuring insert from sheathed material for built-in protective tubes. (bendable, $r > 5 \times \text{wire-}\varnothing$)

Application temperature

-200 to +600 °C
-50 to +400 °C
on inquiry

Temperatursensor

1xPt 100 cl. W0,15 acc. to DIN EN 60751
1xPt 100 cl. W0,3 acc. to DIN EN 60751
2xPt 100 cl. W0,15 acc. to DIN EN 60751
2xPt 100 cl. W0,3 acc. to DIN EN 60751
on inquiry

Circuitry

2 wire circuit
3 wire circuit
4 wire circuit

Protective tube material

1.4571
on inquiry

Protective tube diameter d

6 mm
on inquiry

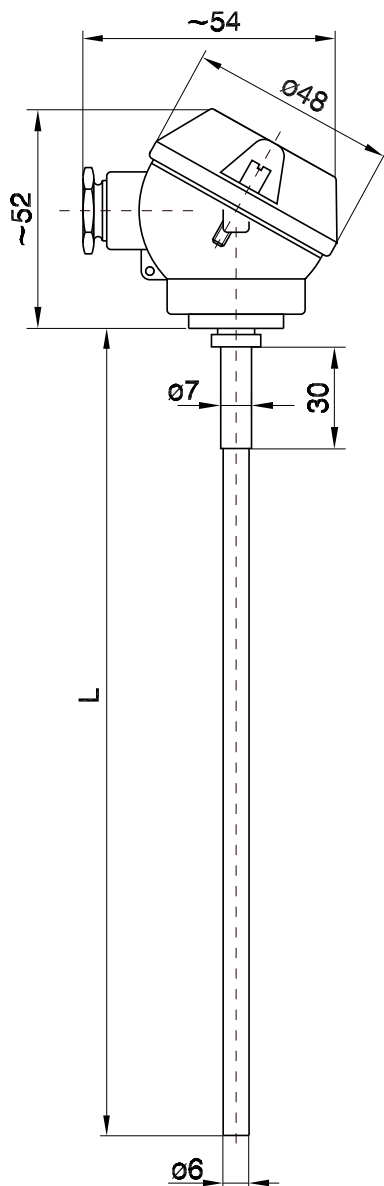
Nominal length L

on inquiry

Resistance thermometers

Average value probe

Series 371



This average thermometer has a wiring over the whole length in order to record the average temperature in large rooms or channels. It's very flexible and so especially suited for air and ventilation shafts or something like that.

Construction

- Carrier substance (core) with outside wiring, flexible insulating tubing $\varnothing 2,5 \pm 0,2$, bending radius 10mm,
- Cu-protection tube $\varnothing 4 \times 0,5$ bare or insulated with a shrink-hose-pipe (outside- $\varnothing 5$), bending radius 50mm

By request implementation without a Cu-protective tube and without connection head but with strong spilled connection wires is also available.

Protection classification

IP 54 according DIN 60529

Application temperature

- for Pt: -40 °C to +140 °C
- for Pt: -40 °C to +350 °C
- for Ni: -40 °C to + 140 °C
- for Ni: - 40 °C to + 250 °C

Temperatursensor

- 1xPt 100 cl. B acc. to DIN EN 60751
- 1xPt 500 cl. B acc. to DIN EN 60751
- 1xPt 1000 cl. B acc. to DIN EN 60751
- 1xNi 100 cl. B acc. to DIN EN 43760
- 1xNi 500 cl. B acc. to DIN EN 43760
- 1xNi 1000 cl. B acc. to DIN 43760
- on inquiry

Circuitry

- 2 wire circuit
- 3 wire circuit
- 4 wire circuit

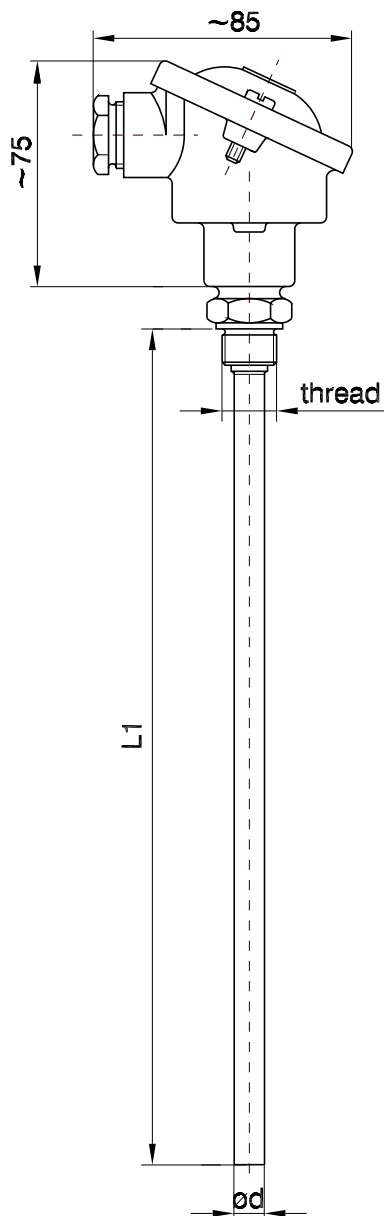
Protective tube material

- Cu tube blank
- Cu tube with heat shrink hose covered (only up to 140°C)

Nominal length L

on inquiry (up to 20 m)

Resistance thermometers with connection head Series 372



Resistance thermometer for screwing in ; with exchangeable measuring insert

Construction

Basic implementation
Ex-implementation (intrinsically safe)

Connection head

Form B according DIN 43 729
Form BUZ for explosion-proof design according DIN 43 729
on inquiry

Protection classification

IP 54 according DIN 60529
on inquiry

Application temperature

-200 to +600 °C
-50 to +400 °C
on inquiry

Temperatursensor

1xPt 100 cl. F0,15 or W0,15 acc. to DIN EN 60751
1xPt 100 cl. F0,3 or W0,3 acc. to DIN EN 60751
2xPt 100 cl. F0,15 or W0,15 acc. to DIN EN 60751
2xPt 100 cl. F0,3 or W0,3 acc. to DIN EN 60751
on inquiry

Circuitry

2 wire circuit
3 wire circuit
4 wire circuit

Protective tube material

1.4571
on inquiry

Protective tube diameter d

9 mm
11 mm
on inquiry

Resistance thermometers
with connection head
Series 372

Insert length L₁

on inquiry

Thread

M20x1,5

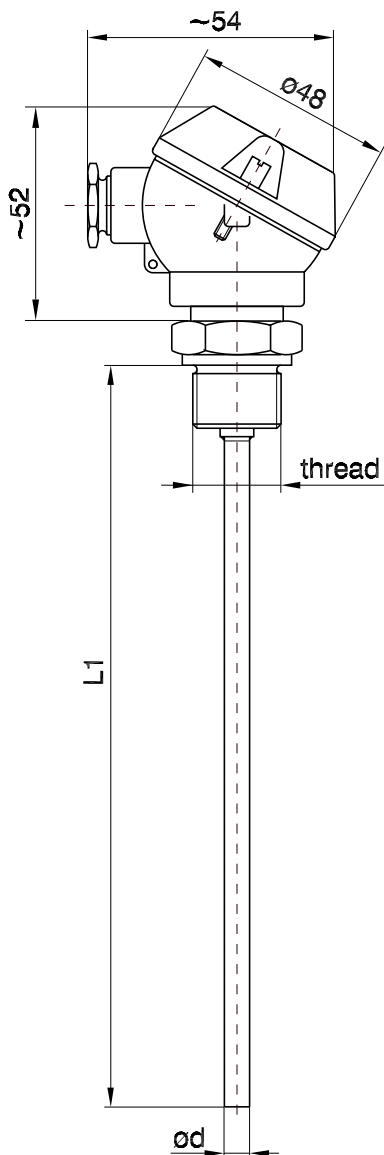
M27x2

G1/2A

G3/4A

on inquiry

Resistance thermometers with connection head Series 373



Resistance thermometer without exchangeable measuring insert; with higher response of sensitivity.

Connection head

Form F

Protection classification

IP 54 according DIN 60529
on inquiry

Application temperature

-200 to +600 °C
-50 to +400 °C
on inquiry

Temperatursensor

1xPt 100 cl. F0,15 or W0,15 acc. to DIN EN 60751
1xPt 100 cl. F0,3 or W0,3 acc. to DIN EN 60751
2xPt 100 cl. F0,15 or W0,15 acc. to DIN EN 60751
2xPt 100 cl. F0,3 or W0,3 acc. to DIN EN 60751
on inquiry

Circuitry

2 wire circuit
3 wire circuit for 1xPt100
4 wire circuit for 1xPt100

Protective tube material

1.4571
on inquiry

Protective tube diameter d

6 mm
on inquiry

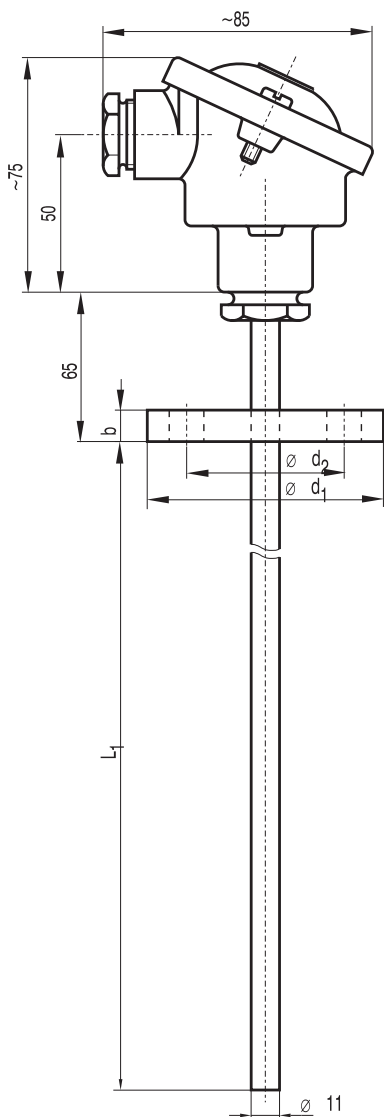
Insert length L_1

on inquiry

Thread

M20x1,5
G1/2A
on inquiry

Resistance thermometers with connection head Series 374



Resistance thermometer with flange and replaceable measuring insert

Construction

Basic implementation
Ex-implementation (intrinsically safe)

Connection head

Form B according DIN 43 729
Form BUZ for explosion-proof design according DIN 43 729
on inquiry

Protection classification

IP 54 according DIN 60529
on inquiry

Application temperature

-200 to +600 °C
-50 to +400 °C
on inquiry

Temperatursensor

1xPt 100 cl. F0,15 or W0,15 acc. to DIN EN 60751
1xPt 100 cl. F0,3 or W0,3 acc. to DIN EN 60751
2xPt 100 cl. F0,15 or W0,15 acc. to DIN EN 60751
2xPt 100 cl. F0,3 or W0,3 acc. to DIN EN 60751
on inquiry

Circuitry

2 wire circuit
3 wire circuit
4 wire circuit

Flange

flange design, flange dimensions as soon as flange material
on inquiry

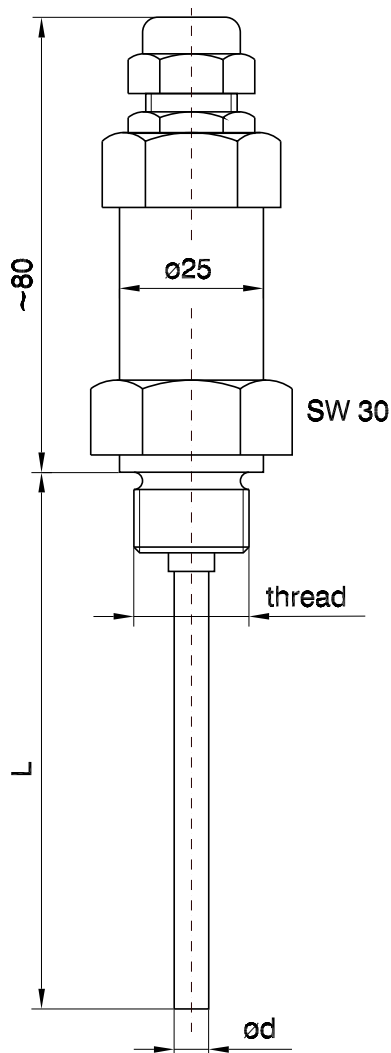
Protective tube material

1.4571
on inquiry

Insert length L_1

on inquiry

Resistance thermometers with connection head Series 380



Resistance thermometer with a little cylindrical connection head for screwing in; process sealed welded in

Construction

Basic implementation

Protection classification

IP 54 according DIN 60529

Application temperature

-200 up to +300 °C

-50 up to +300 °C

Temperatursensor

1xPt 100 cl. F0,15 acc. to DIN EN 60751

1xPt 100 cl. F0,3 acc. to DIN EN 60751

2xPt 100 cl. F0,15 acc. to DIN EN 60751

2xPt 100 cl. F0,3 acc. to DIN EN 60751

on inquiry

Circuitry

2 wire circuit

3 wire circuit for 1xPt100

4 wire circuit for 1xPt100

Protective tube material

1.4571

on inquiry

Protective tube diameter d

9 mm

on inquiry

Insert length L_1

45 mm

75 mm

on inquiry

Resistance thermometers
with connection head
Series 380

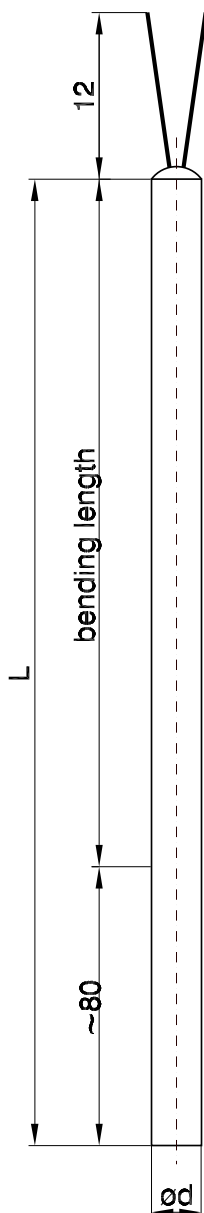
Thread

M18x1,5
M20x1,5
G1/2A
on inquiry

Resistance thermometers

Sheathed resistance thermometer

Series 388



Sheathed resistance thermometer without connector

Application temperature

-200 to +600 °C
-50 to +400 °C
on inquiry

Temperatursensor

1xPt 100 cl. W0,15 acc. to DIN EN 60751
1xPt 100 cl. W0,3 acc. to DIN EN 60751
2xPt 100 cl. W0,15 acc. to DIN EN 60751
2xPt 100 cl. W0,3 acc. to DIN EN 60751
on inquiry

Circuitry

2 wire circuit
3 wire circuit
4 wire circuit

Sheath diameter

2,0 mm
3,0 mm
4,5 mm
6,0 mm
on inquiry

Sheath material

1.4571
on inquiry

Nominal length L

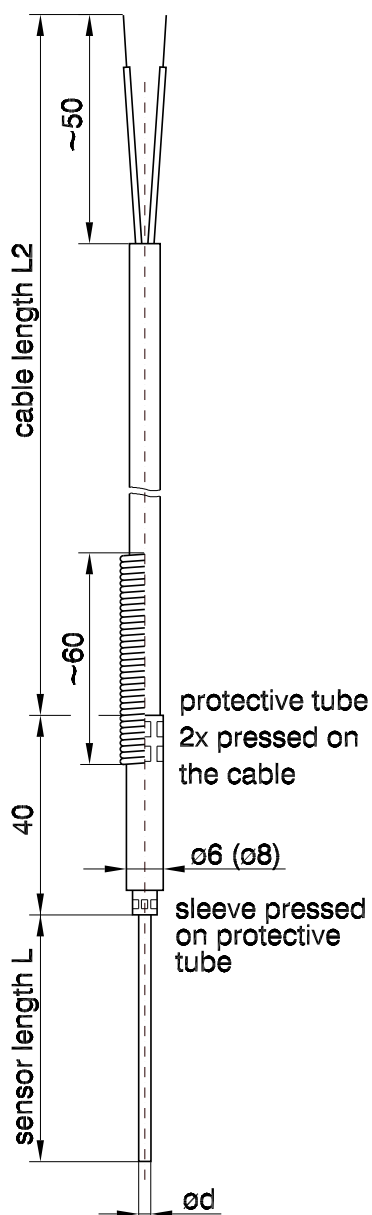
on inquiry

Bending radius of the sheath material $\geq 5 \times \varnothing d$;
do not bend from tip up to 80 mm

Resistance thermometers

Sheathed resistance thermometer

Series 394



Sheathed resistance thermometer with connecting sleeve and connection cable

Application temperature

-200 to +600 °C
-200 to +850 °C

Temperatursensor

1xPt 100 cl. W0,15 acc. to DIN EN 60751
1xPt 100 cl. W0,3 acc. to DIN EN 60751
2xPt 100 cl. W0,15 acc. to DIN EN 60751
2xPt 100 cl. W0,3 acc. to DIN EN 60751
on inquiry

Circuitry

2 wire circuit
3 wire circuit
4 wire circuit for 1xPt100

Sheath diameter

2,0 mm
3,0 mm
4,5 mm
6,0 mm
on inquiry

Sheath material

1.4541
1.4571

Sensor length L

min. 100mm
on inquiry

Length of the connecting cable L₂

on inquiry

Type of connection cable

on inquiry

Bend protection

without
with spiral spring

Resistance thermometers
Sheathed resistance thermometer
Series 394

Connector

free ends
connector on inquiry

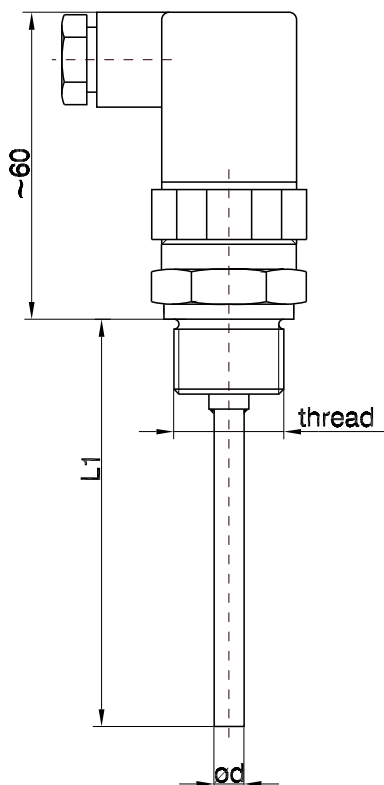
Bending radius of the sheath material $\geq 5x\varnothing$ d;
do not bend from tip up to 80 mm

declare desired temperature range for case of application

Resistance thermometers

Thermocouple with connector

Series 405



Small resistance thermometer for screwing in with connector

Connection head

Connector GSP/GDM DIN EN 175301-803

Protection classification

IP 65 according DIN 60529

Application temperature

-50 up to +400 °C (max. 120 °C near the connector)
on inquiry

Temperatursensor

1xPt 100 cl. F0,15 acc. to DIN EN 60751
1xPt 100 cl. F0,3 acc. to DIN EN 60751
2xPt 100 cl. F0,15 acc. to DIN EN 60751
2xPt 100 cl. F0,3 acc. to DIN EN 60751
on inquiry

Circuitry

2 wire circuit
3 wire circuit for 1xPt100
4 wire circuit for 1xPt100

Protective tube material

1.4571
on inquiry

Protective tube diameter d

6 mm
on inquiry

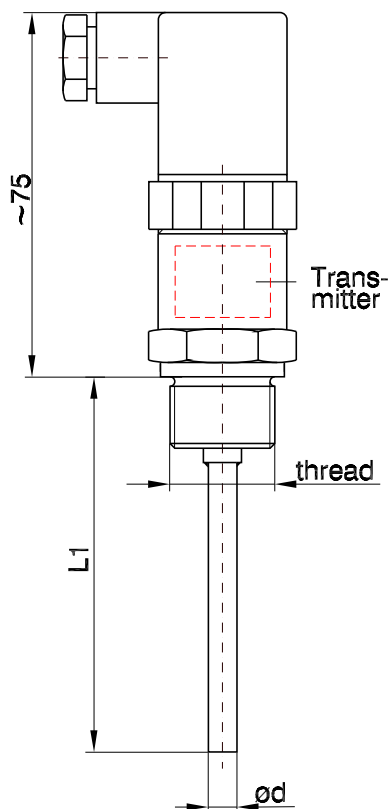
Insert length L_1

on inquiry

Thread

G1/2A
on inquiry

Resistance thermometers with connector and transmitter Series 406



Small resistance thermometer for screwing in with connector and built-in transmitter

output signal 4...20mA, measuring range on inquiry

Connection head

Connector GSP/GDM DIN EN 175301-803

Protection classification

IP 65 according DIN 60529

Application temperature

-50 up to +400 °C (max. 85 °C near the transmitter)
on inquiry

Measuring range of transmitter

on inquiry

Temperatursensor

1xPt 100 cl. F0,15 acc. to DIN EN 60751
1xPt 100 cl. F0,3 acc. to DIN EN 60751
on inquiry

Circuitry

2 wire circuit
3 wire circuit for 1xPt100

Protective tube material

1.4571
on inquiry

Protective tube diameter d

6 mm
on inquiry

Insert length L₁

on inquiry

Thread

G1/2A
on inquiry

Output

4 ... 20mA

Resistance thermometers
with connector and transmitter
Series 406

Loop voltage

10...35VDC, reverse protection

Linearity error

<0.1% FS*

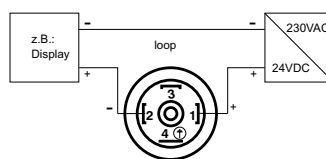
Operating temperature of transformer

-40 °C ... +85 °C

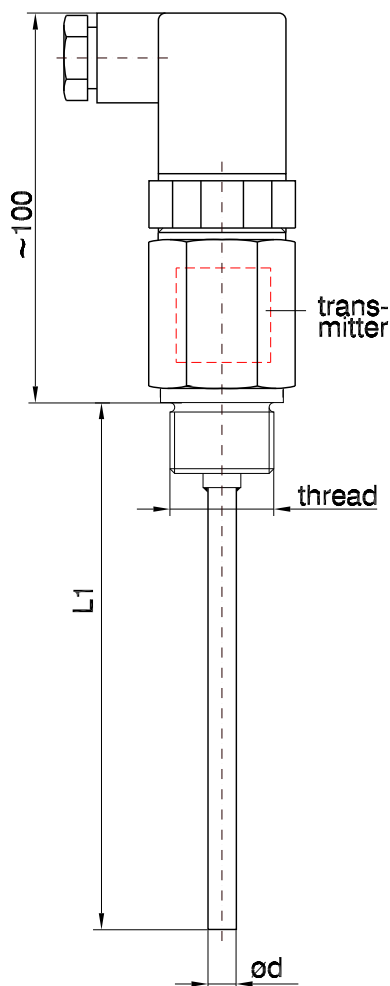
*FS - Temperature scale of transmitter

Resistance thermometers with connector and transmitter Series 406

Circuit - 1xPt100



Resistance thermometers with connector and switch transmitter Series 407



Small resistance thermometer for screwing in with connectors and built-in switching transmitter switch

temperature and range on inquiry

Connection head

Connector GSP/GDM DIN EN 175301-803

Protection classification

IP 65 according DIN 60529

Application temperature

-50 up to +400 °C (max. 85 °C near the transmitter)
on inquiry

switching range

on inquiry

Switching temperature

on inquiry

Temperatursensor

1xPt 100 cl. F0,15 acc. to DIN EN 60751
1xPt 100 cl. F0,3 acc. to DIN EN 60751
on inquiry

Circuitry

2 wire circuit

Protective tube material

1.4571
on inquiry

Protective tube diameter d

6 mm
on inquiry

Insert length L_1

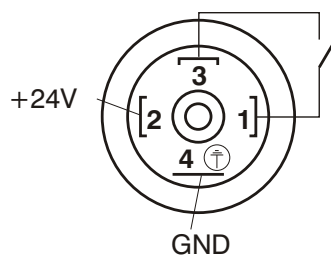
on inquiry

Thread

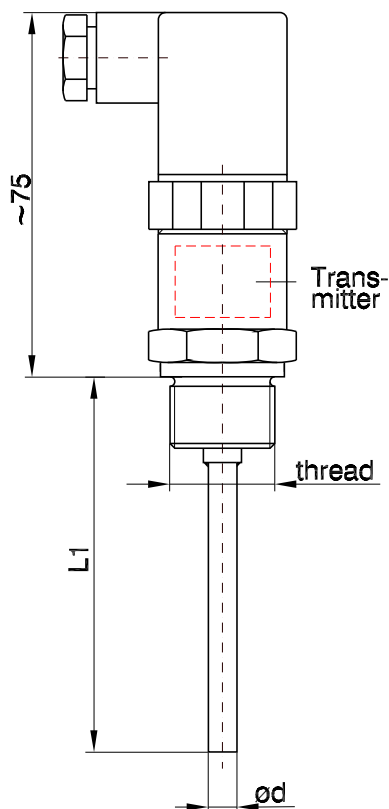
G1/2A
on inquiry

Resistance thermometers
with connector and switch transmitter
Series 407

Circuit



Resistance thermometers with connector and transmitter Series 408



Small resistance thermometer for screwing in with connector and switch built-in transmitter

output 0 ... 10 V, measuring range after order

Connection head

Connector GSP/GDM DIN EN 175301-803

Protection classification

IP 65 according DIN 60529

Application temperature

-50 up to +400 °C (max. 85 °C near the transmitter)
on inquiry

Measuring range of transmitter

on inquiry

Temperatursensor

1xPt 100 cl. F0,15 acc. to DIN EN 60751
1xPt 100 cl. F0,3 acc. to DIN EN 60751
on inquiry

Circuitry

2 wire circuit

Protective tube material

1.4571
on inquiry

Protective tube diameter d

6 mm
on inquiry

Insert length L_1

on inquiry

Thread

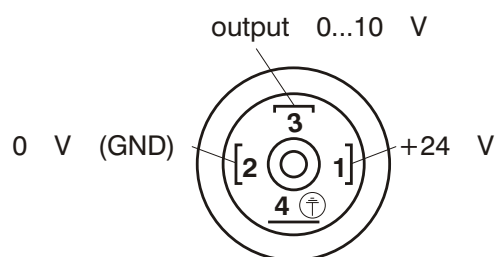
G1/2A
on inquiry

Output

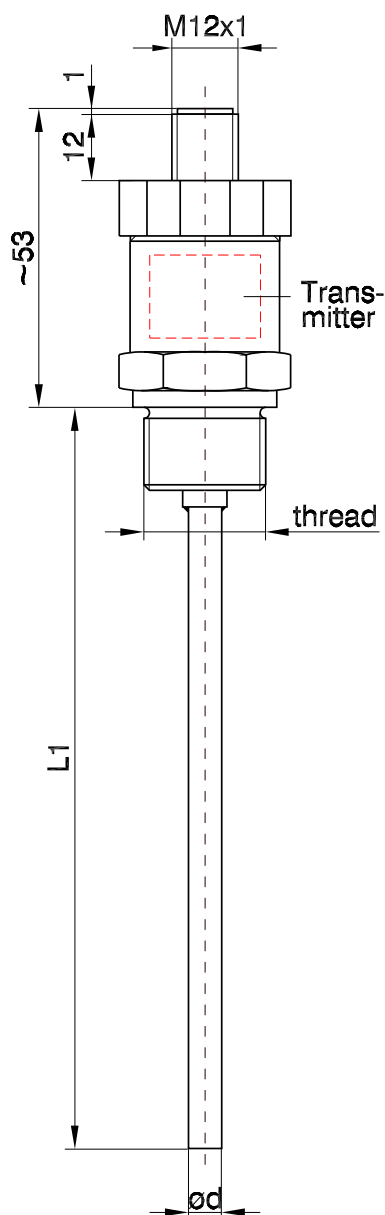
0 ... 10V

Resistance thermometers
with connector and transmitter
Series 408

Circuit



Resistance thermometers with connector M12 and transmitter Series 409



Small resistance thermometer for screwing in with connector M12x1 and built-in transmitter

output 4 ... 20 mA, measuring range after order

Connection head

build in connector M12x1 4-pin

Protection classification

IP 67 according to DIN 60529 when plugged in

Application temperature

-50 up to +400 °C (max. 85 °C near the transmitter)
on inquiry

Measuring range of transmitter

on inquiry

Temperaturesensor

1xPt 100 cl. F0,15 acc. to DIN EN 60751
1xPt 100 cl. F0,3 acc. to DIN EN 60751
on inquiry

Circuitry

2 wire circuit
3 wire circuit

Protective tube material

1.4571
on inquiry

Protective tube diameter d

6 mm
on inquiry

Insert length L₁

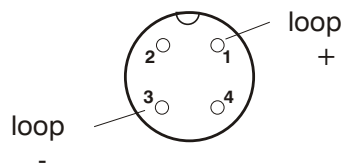
on inquiry

Thread

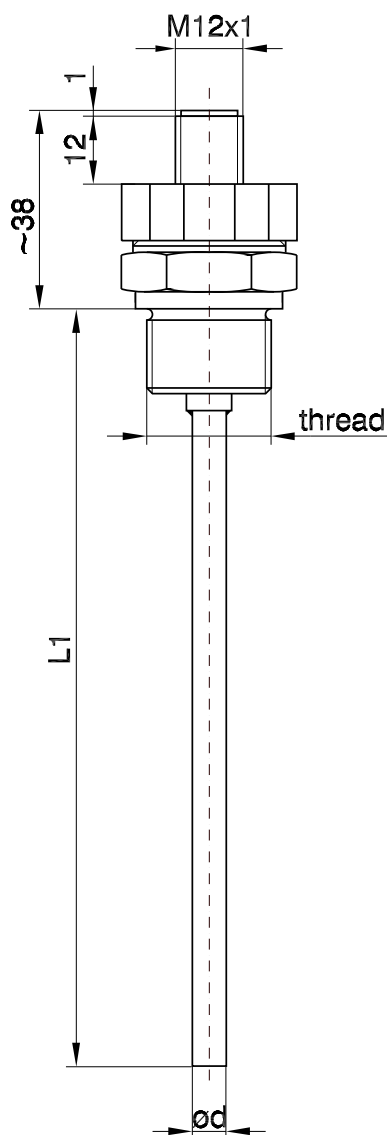
G1/2A
on inquiry

Resistance thermometers
with connector M12 and transmitter
Series 409

Circuit



Resistance thermometers with connector M12 Series 412



Small resistance thermometer for screwing in with connector M12x1

Connection head

build in connector M12x1 4-pin

Protection classification

IP 67 according to DIN 60529 when plugged in

Application temperature

-50 up to +400 °C (max. 85 °C near the connector)
on inquiry

Temperatursensor

1xPt 100 cl. F0,15 acc. to DIN EN 60751
1xPt 100 cl. F0,3 acc. to DIN EN 60751
2xPt 100 cl. F0,15 acc. to DIN EN 60751
2xPt 100 cl. F0,3 acc. to DIN EN 60751
on inquiry

Circuitry

2 wire circuit
3 wire circuit for 1xPt100
4 wire circuit for 1xPt100

Protective tube material

1.4571
on inquiry

Protective tube diameter d

6 mm
on inquiry

Insert length L₁

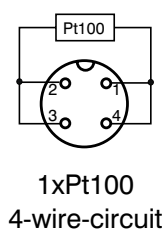
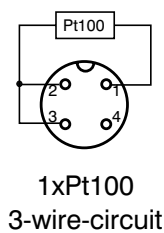
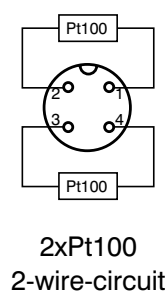
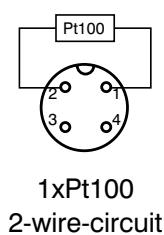
on inquiry

Thread

G1/2A
on inquiry

Resistance thermometers
with connector M12
Series 412

Circuit

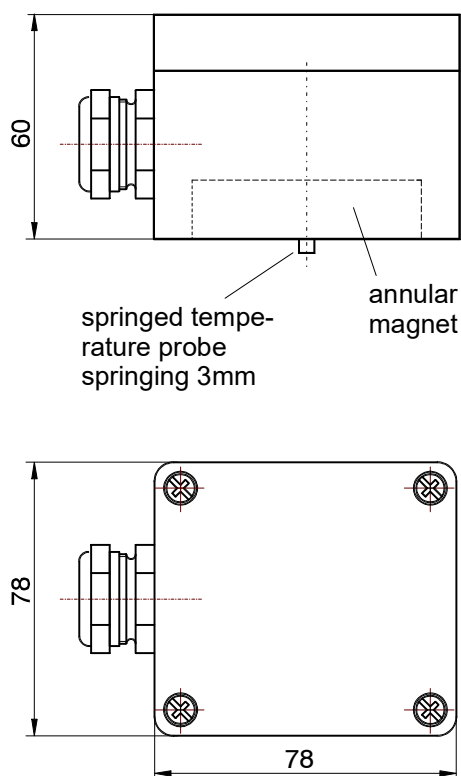


Resistance thermometer

Special types

Series 416

Resistance thermometer in an aluminium case for surface measurement with magnet; Application with built-in transmitter available (output signal 4...20mA or 0...10V)



Protection classification

IP54 acc. to DIN 60529

Application temperature

- 30 °C to + 80 °C

Temperatursensor

1 x Pt100 F0,15 acc. to DIN EN 60751
 1 x Pt100 F0,3 acc. to DIN EN 60751
 1 x Pt500 F0,3
 on inquiry

Circuitry

2-wire-circuit
 3-wire-circuit
 4-wire-circuit

Protective tube material

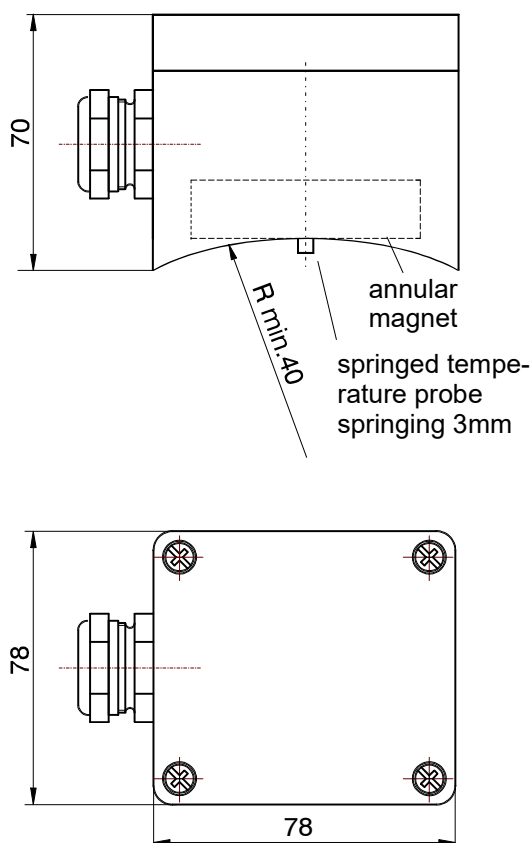
1.4571

Resistance thermometer

Special types

Series 417

Resistance thermometer in an aluminium case for surface measurement with magnet Application with built-in transmitter available (output signal 4...20mA or 0...10V)



Protection classification

IP54 acc. to DIN 60529

Application temperature

- 30 C to + 80°C

Temperatursensor

1 x Pt100 F0,15 acc. to DIN EN 60751
1 x Pt100 F0,3 acc. to DIN EN 60751
1 x Pt500 F0,3
on inquiry

Circuitry

2-wire-circuit
3-wire-circuit
4-wire-circuit

Protective tube material

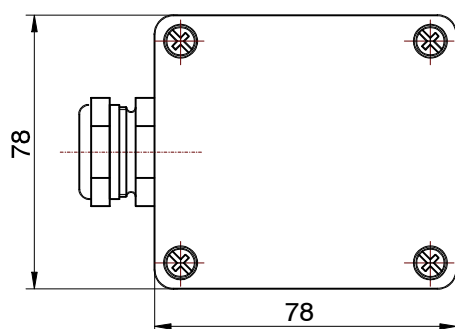
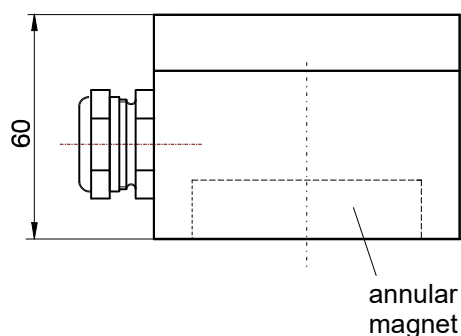
1.4571

Resistance thermometer

Special types

Series 418

Resistance thermometer in an aluminium case for surface measurement with magnet Application with built-in transmitter available (output signal 4...20mA or 0...10V)



Protection classification

IP65 acc. to DIN 60529

Application temperature

- 30 C to + 80°C

Temperatursensor

1 x Pt100 F0,15 acc. to DIN EN 60751
 1 x Pt100 F0,3 acc. to DIN EN 60751
 1 x Pt500 F0,3
 on inquiry

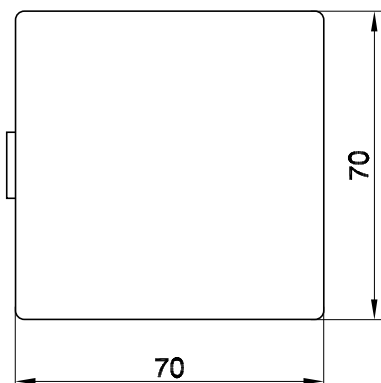
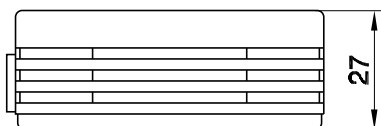
Circuitry

2-wire-circuit
 3-wire-circuit
 4-wire-circuit

Resistance thermometers

Room sensor with transmitter

Series 443



Temperature measurement and - monitoring in rooms;
designed as slotted plastic housing with cable feedthrough \varnothing 7
and 2 mounting holes \varnothing 4

Protection classification

IP 20 according DIN 60529

Application temperature

-30 °C to +85 °C

Temperatursensor

HL-sensor

Output

4 ... 20mA

Measuring error

typ. <0.5 °C max. 0.8 °C

Terminal type

screw terminal

Clamping range

0.13...1.5mm²

Humidity

< 95%

EMC emission

EN 61000-6-3:2001

EMC interference rejection ratio

EN 61000-6-3:2001

Working resistance

approx. 700 Ω at 24V

Supply voltage

15...35V DC reverse protection

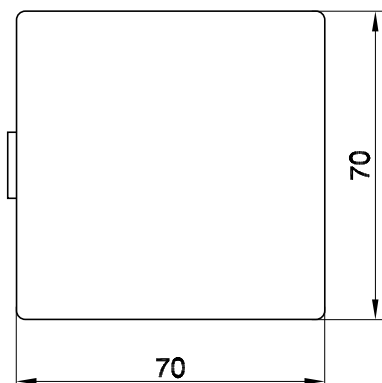
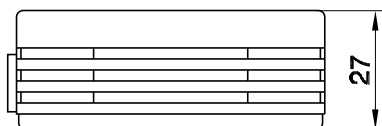
Storage temperature

-40 °C ...100 °C

Resistance thermometers

Room sensor with transmitter

Series 444



Temperature measurement and - monitoring in rooms;
designed as slotted plastic housing with cable feedthrough \varnothing 7
and 2 mounting holes \varnothing 4

Protection classification

IP 20 according DIN 60529

Application temperature

-30 °C to +85 °C

Temperatursensor

HL-sensor

Output

0 ... 10V

Output resistance

min. 3 k Ω

Measuring error

typ. <0.5 °C max. 0.8 °C

Terminal type

screw terminal

Clamping range

0.13...1.5mm²

Humidity

< 95%

EMC emission

EN 61000-6-3:2001

EMC interference rejection ratio

EN 61000-6-3:2001

Supply voltage

15...35V DC reverse protection

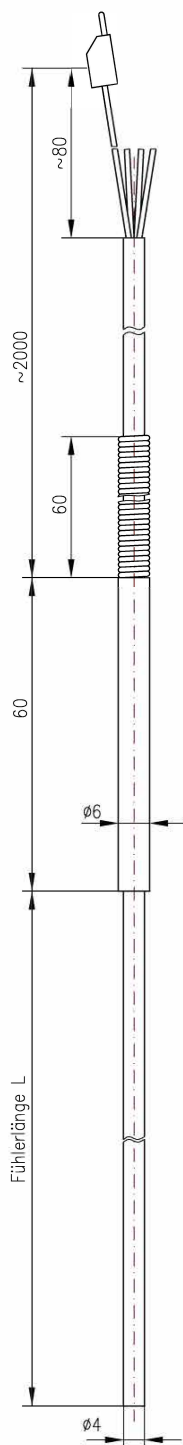
Storage temperature

-40 °C ... 100 °C

Resistance thermometers

Precision resistance thermometer

Series Pt100



Application areas:

- precision and fast measurements with an accuracy up to 0.02 K
- recommended for temperatures of -80...250°C, with carefully annealed and selected glass type sensing elements class A according to DIN EN 60751
- an optional DAkkS or inhouse calibration guarantees traceability to national standards

RTD-type

Pt100

Yearly stability

typ. 0,04K

Protective tube material

1.4571
stainless steel

Protective tube diameter d

4 mm

Type of connection cable

Te C Si 4xAWG24, Cu-strand

Connector

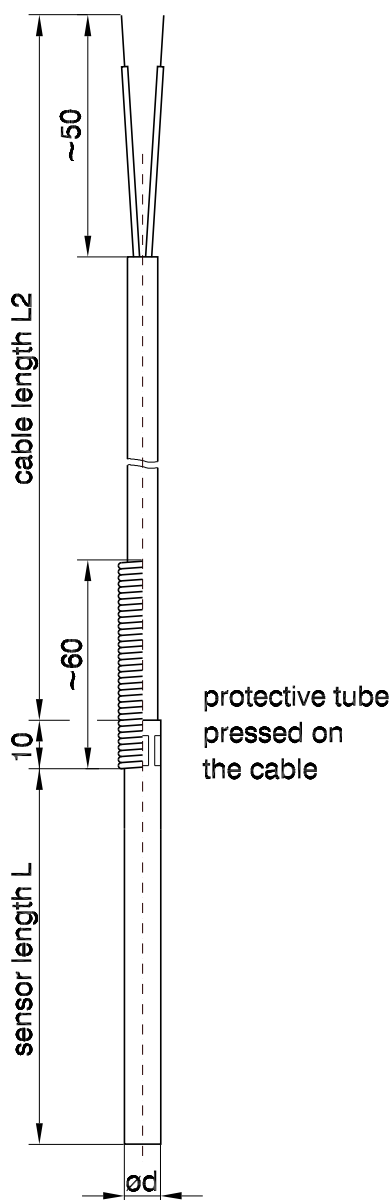
ø 4 mm hollow plugs, gold plated
others on inquiry

- delivered in attractive transport and safe box

Resistance thermometers

Cable sensors

Series K1W



Application temperature

on inquiry, dependent on sensor and protective tube material

Temperatursensor

1xPt 100 cl. F0,15 acc. to DIN EN 60751

1xPt 100 cl. F0,3 acc. to DIN EN 60751

2xPt 100 cl. F0,15 acc. to DIN EN 60751

2xPt 100 cl. F0,3 acc. to DIN EN 60751

on inquiry

Circuitry

2 wire circuit

3 wire circuit

4 wire circuit for 1xPt100

Protective tube material

1.4571

on inquiry

Protective tube diameter d

on inquiry 3 ... 10 mm

Sensor length L

on inquiry 30 ... 1000 mm

Type of connection cable

on inquiry

Cable length L₂

on inquiry min. 100 mm

Bend protection

without

with spiral spring

Connector

free ends

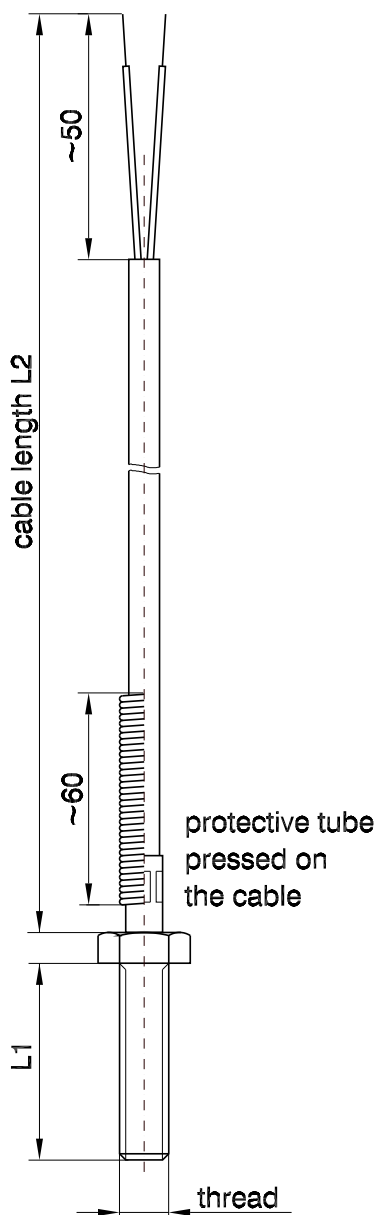
connector on inquiry

declare desired temperature range for case of application

Resistance thermometers

Cable sensors

Series K4W



Application temperature

on inquiry, dependent on sensor and protective tube material

Temperatursensor

1xPt 100 cl. F0,15 acc. to DIN EN 60751
 1xPt 100 cl. F0,3 acc. to DIN EN 60751
 2xPt 100 cl. F0,15 acc. to DIN EN 60751
 2xPt 100 cl. F0,3 acc. to DIN EN 60751
 on inquiry

Circuitry

2 wire circuit
 3 wire circuit
 4 wire circuit for 1xPt100

Protective tube material

stainless steel
 on inquiry

Insert length L_1

on inquiry 10 ... 40 mm

Type of connection cable

on inquiry

Cable length L_2

on inquiry min. 100 mm

Bend protection

without
 with spiral spring

Thread

M6
 M8
 M10
 G1/4A
 on inquiry

Connector

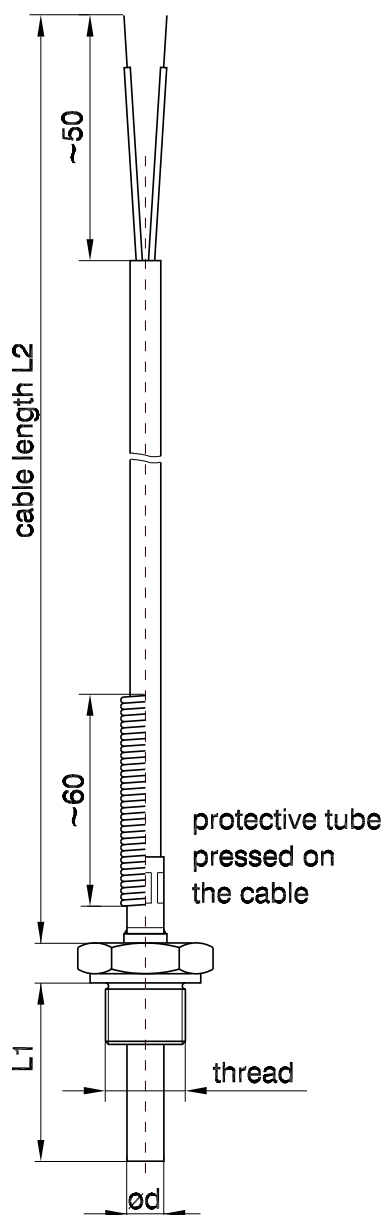
free ends
 connector on inquiry

declare desired temperature range for case of application

Resistance thermometers

Cable sensors

Series K5W



Construction

as Resistance Thermometer
as Sheathed Resistance Thermometer

Application temperature

on inquiry, dependent on sensor and protective tube material

Temperatursensor

1xPt 100 cl. F0,15 or W0,15 acc. to DIN EN 60751
1xPt 100 cl. F0,3 or W0,3 acc. to DIN EN 60751
2xPt 100 cl. F0,15 or W0,15 acc. to DIN EN 60751
2xPt 100 cl. F0,3 or W0,3 acc. to DIN EN 60751
on inquiry

Circuitry

2 wire circuit
3 wire circuit
4 wire circuit for 1xPt100

Protective tube material

1.4571
on inquiry

Protective tube diameter d

on inquiry 3 ... 6 mm

Insert length L₁

on inquiry min. length of thread + 10 ... 1000 mm

Type of connection cable

on inquiry

Cable length L₂

on inquiry min. 100 mm

Bend protection

without
with spiral spring

Thread

M10
G1/4A
G1/2A
on inquiry

Resistance thermometers

Cable sensors

Series K5W

Connector

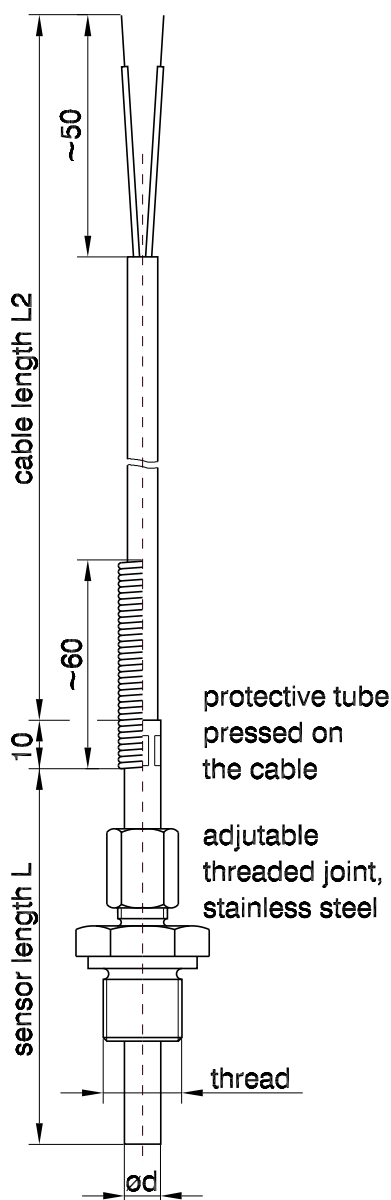
free ends
connector on inquiry

declare desired temperature range for case of application

Resistance thermometers

Cable sensors

Series K6W



Application temperature

on inquiry, dependent on sensor and protective tube material

Temperatursensor

1xPt 100 cl. F0,15 acc. to DIN EN 60751

1xPt 100 cl. F0,3 acc. to DIN EN 60751

2xPt 100 cl. F0,15 acc. to DIN EN 60751

2xPt 100 cl. F0,3 acc. to DIN EN 60751

on inquiry

Circuitry

2 wire circuit

3 wire circuit

4 wire circuit for 1xPt100

Protective tube material

1.4571

on inquiry

Protective tube diameter d

on inquiry 3 ... 10 mm

Sensor length L

on inquiry (length of screwing +10 ... 1000 mm)

Type of connection cable

on inquiry

Cable length L₂

on inquiry min. 100 mm

Bend protection

without

with spiral spring

Locking ring in the screw connection

teflon clamp ring

metal clamp ring

Thread

on inquiry M8x1 ... G1/2A

Connector

free ends

connector on inquiry

Resistance thermometers

Cable sensors

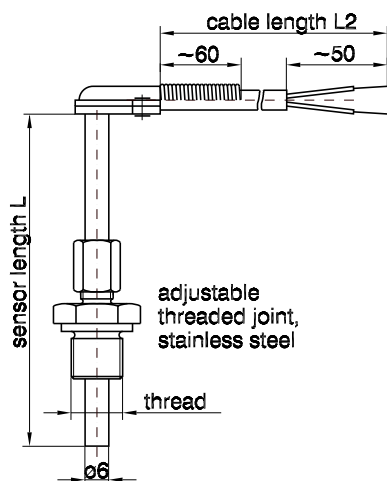
Series K6W

**declare desired temperature range for case of applica-
tion**

Resistance thermometers

Cable sensors

Series K7W



Application temperature

on inquiry, dependent on sensor and protective tube material

Temperatursensor

1xPt 100 cl. F0,15 acc. to DIN EN 60751

1xPt 100 cl. F0,3 acc. to DIN EN 60751

2xPt 100 cl. F0,15 acc. to DIN EN 60751

2xPt 100 cl. F0,3 acc. to DIN EN 60751

on inquiry

Circuitry

2 wire circuit

3 wire circuit

4 wire circuit for 1xPt100

Protective tube material

1.4571

on inquiry

Protective tube diameter d

6 mm

on inquiry

Sensor length L

on inquiry (length of screwing +10 ... 1000 mm)

Type of connection cable

on inquiry

Cable length L₂

on inquiry min. 100 mm

Bend protection

without

with spiral spring

Thread

M10x1

G1/4A

G1/2A

on inquiry

Connector

free ends

connector on inquiry

Resistance thermometers

Cable sensors

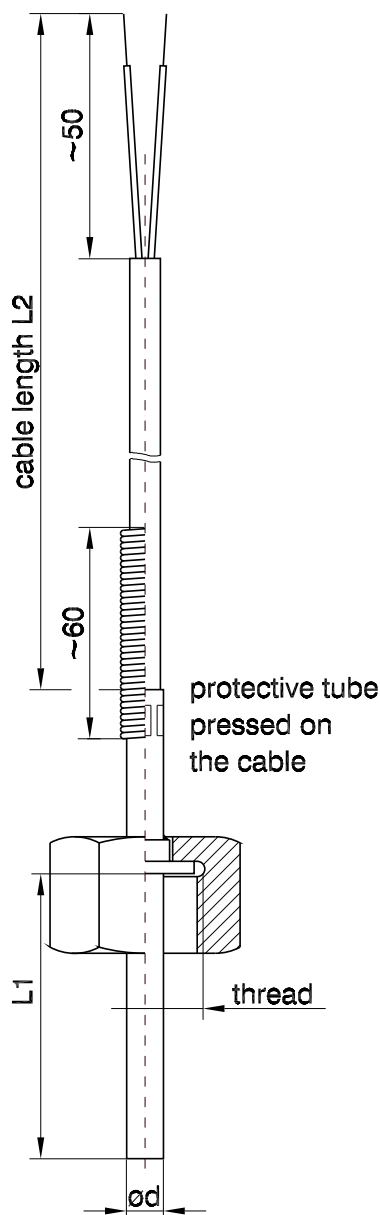
Series K7W

declare desired temperature range for case of application

Resistance thermometers

Cable sensors

Series K8W



Application temperature

on inquiry, dependent on sensor and protective tube material

Temperatursensor

1xPt 100 cl. F0,15 acc. to DIN EN 60751

1xPt 100 cl. F0,3 acc. to DIN EN 60751

2xPt 100 cl. F0,15 acc. to DIN EN 60751

2xPt 100 cl. F0,3 acc. to DIN EN 60751

on inquiry

Protective tube material

1.4571

on inquiry

Protective tube diameter d

on inquiry 3 ... 10 mm

Insert length L₁

on inquiry min. length of thread + 10 ... 1000 mm

Type of connection cable

on inquiry

Cable length L₂

on inquiry min. 100 mm

Bend protection

without

with spiral spring

Thread

M10x1

G1/2A

on inquiry

Connector

free ends

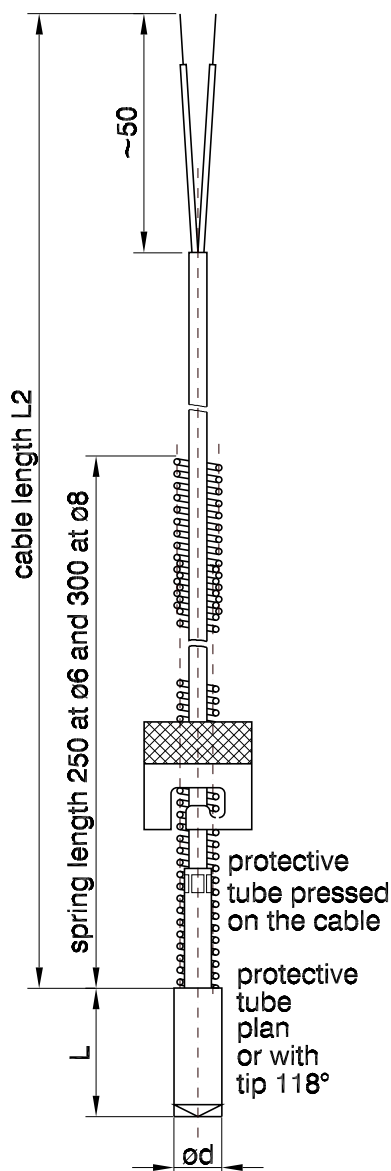
connector on inquiry

declare desired temperature range for case of application

Resistance thermometers

Cable sensors

Series K9W



Application temperature

on inquiry, dependent on sensor and protective tube material

Temperatursensor

1xPt 100 cl. F0,15 acc. to DIN EN 60751

1xPt 100 cl. F0,3 acc. to DIN EN 60751

2xPt 100 cl. F0,15 acc. to DIN EN 60751

2xPt 100 cl. F0,3 acc. to DIN EN 60751

on inquiry

Circuitry

2 wire circuit

3 wire circuit

4 wire circuit for 1xPt100

Protective tube form

planar

pointed 118°

Protective tube material

1.4305

on inquiry

Protective tube diameter d

6 mm

8 mm

on inquiry

Sensor length L

on inquiry 10 ... 30 mm

Type of connection cable

on inquiry

Cable length L₂

on inquiry min. 100 mm

Construction of bajonett cap

for thread nipple (bayonett matching part) \varnothing 12

for thread nipple (bayonett matching part) \varnothing 14

Connector

free ends

connector on inquiry

Resistance thermometers

Cable sensors

Series K9W

Thread nipple

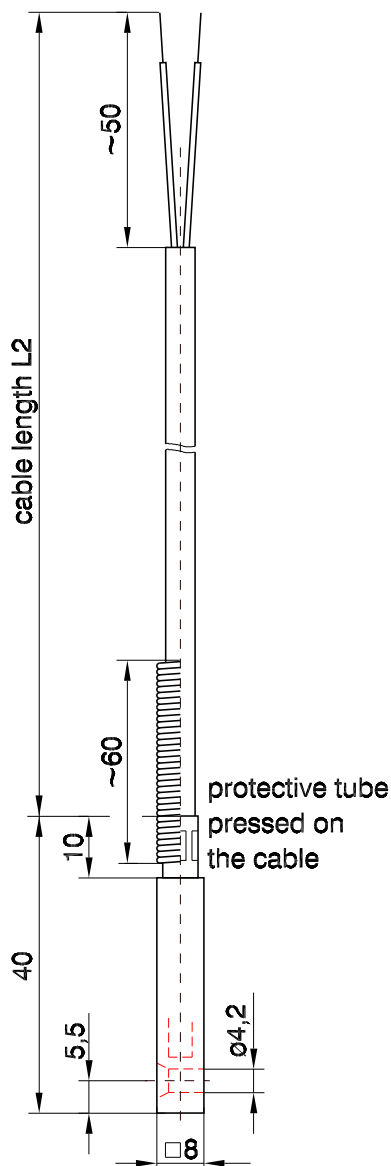
none
on inquiry

declare desired temperature range for case of application

Resistance thermometers

Cable sensors

Series K10W



Application temperature

on inquiry, dependent on sensor and protective tube material

Temperatursensor

1xPt 100 cl. F0,15 acc. to DIN EN 60751

1xPt 100 cl. F0,3 acc. to DIN EN 60751

2xPt 100 cl. F0,15 acc. to DIN EN 60751

2xPt 100 cl. F0,3 acc. to DIN EN 60751

on inquiry

Circuitry

2 wire circuit

3 wire circuit

4 wire circuit for 1xPt100

Protective tube material

aluminium

stainless steel

Brass

on inquiry

Type of connection cable

on inquiry

Cable length L_2

on inquiry min. 100 mm

Bend protection

without

with spiral spring

Connector

free ends

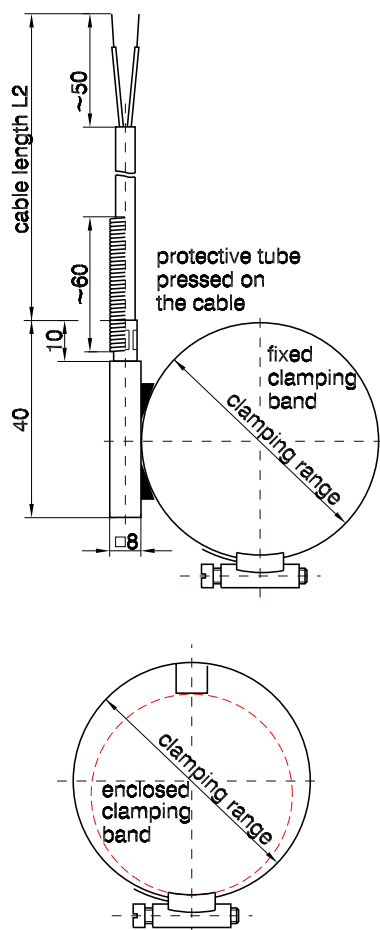
connector on inquiry

declare desired temperature range for case of application

Resistance thermometers

Cable sensors

Series K11W



Application temperature

on inquiry, dependent on sensor and protective tube material

Temperatursensor

1xPt 100 cl. F0,15 acc. to DIN EN 60751

1xPt 100 cl. F0,3 acc. to DIN EN 60751

2xPt 100 cl. F0,15 acc. to DIN EN 60751

2xPt 100 cl. F0,3 acc. to DIN EN 60751

on inquiry

Circuitry

2 wire circuit

3 wire circuit

4 wire circuit for 1xPt100

Protective tube material

stainless steel

Brass

on inquiry

Type of connection cable

on inquiry

Cable length L_2

on inquiry min. 100 mm

Clamping band

fixed

enclosed

Clamping range

20 - 32 mm

32 - 50 mm

50 - 70 mm

70 - 90 mm

90 - 100 mm

on inquiry

Bend protection

without

with spiral spring

Connector

free ends

connector on inquiry

Resistance thermometers

Cable sensors

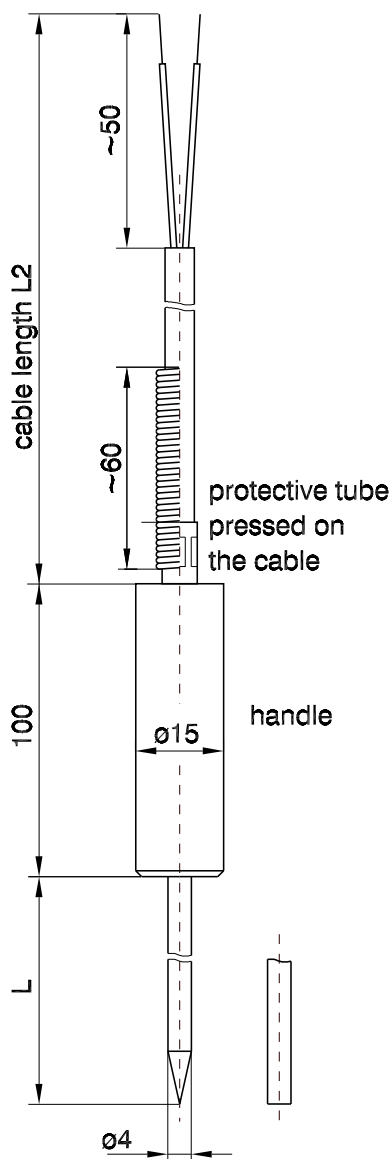
Series K11W

declare desired temperature range for case of application

Resistance thermometers

Cable sensors

Series K12W



Application temperature

on inquiry, dependent on sensor and protective tube material

Temperatursensor

1xPt 100 cl. F0,15 acc. to DIN EN 60751
 1xPt 100 cl. F0,3 acc. to DIN EN 60751
 2xPt 100 cl. F0,15 acc. to DIN EN 60751
 2xPt 100 cl. F0,3 acc. to DIN EN 60751
 on inquiry

Circuitry

2 wire circuit
 3 wire circuit
 4 wire circuit for 1xPt100

Handle material

stainless steel
 PTFE (Teflon, max. 260°C)

Protective tube form

planar
 with penetration point

Protective tube material

stainless steel
 on inquiry

Protective tube diameter d

4 mm
 on inquiry

Sensor length L

on inquiry 20 ... 190 mm

Type of connection cable

on inquiry

Cable length L₂

on inquiry min. 100 mm

Bend protection

without
 with spiral spring

Resistance thermometers

Cable sensors

Series K12W

Connector

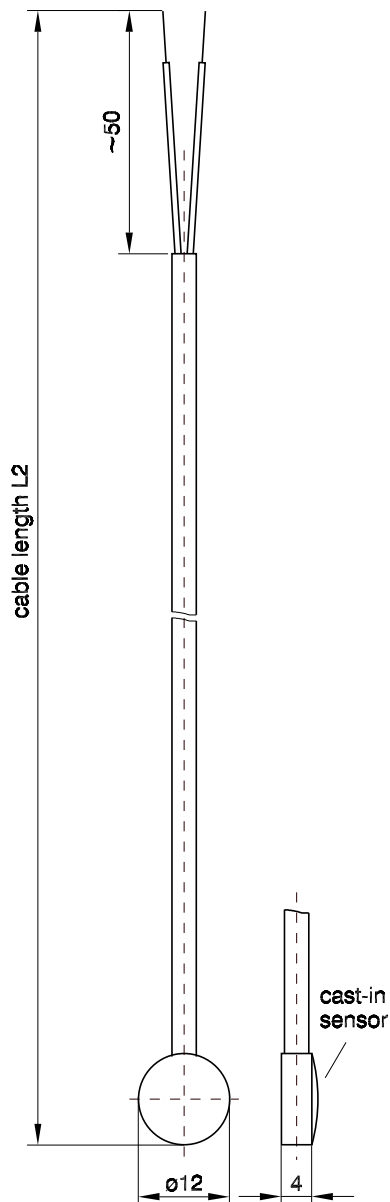
free ends
connector on inquiry

declare desired temperature range for case of application

Resistance thermometers

Cable sensors

Series K13W



Construction

as Resistance Thermometer

Temperatursensor

1xPt 100 cl. F0,15 acc. to DIN EN 60751

1xPt 100 cl. F0,3 acc. to DIN EN 60751

on inquiry

Circuitry

2 wire circuit

3 wire circuit

4 wire circuit

Housing material

stainless steel

on inquiry

Case dimensions

ø 12 X 4

Sealing compound

for temperature range -40 ... 80 °C

for temperature range -40 ... 180 °C

Type of connection cable

TeSi 2xAWG24

TeSi 3xAWG26

TeSi 4xAWG26

on inquiry

Cable length L₂

on inquiry min. 100 mm

Connector

free ends

connector on inquiry

declare desired temperature range for case of application