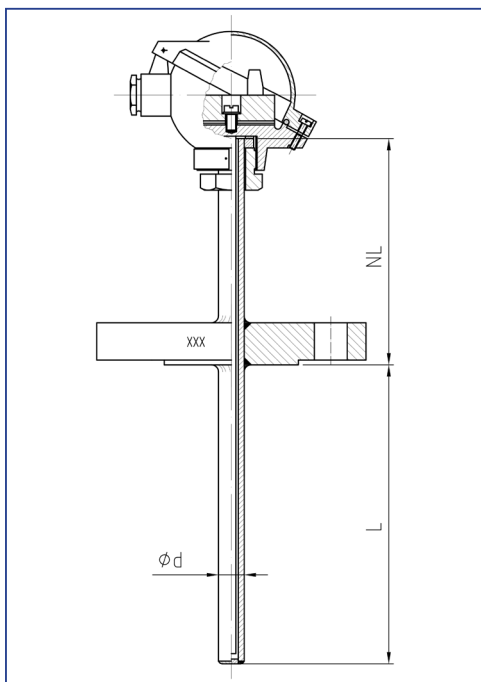


TER-PF-09

Straight Thermocouple (Type J, K, N) with flange



Straight thermocouple with flange TER-PF-09 is a sensing element for temperature measurement in industrial pipelines with high flow rates and in pressurized vessels, for liquids as well as for gases, in applications, which require flange connection.

Process fluid wetted parts allow corrosive process service application.

Type	Execution
TER-PF-09	Basic - acc to catalog card
TER-PF-09/ExiM1	Intrinsic safe for mining purposes – acc to Atex
TER-PF-09/Exi	Intrinsic safe – acc to Atex
TER-PF-09/Exe	Increased safety – acc to Atex

Technical specification

Sheathed sensor insert	Version	Temp. range - Class 1	Characteristic	Junction
1xFe-CuNi (J), 2xFe-CuNi (J) 1xNiCr-NiAl (K), 2xNiCr-NiAl (K) 1xNiCrSi-NiSiMg(N), 2xNiCrSi-NiSiMg (N)	ø 3	-40°C..+500°C -40°C..+700°C 0°C..+1100°C (- 270°C..+1300°C**)	acc. EN 60584-1	ungrounded
1xFe-CuNi (J), 2xFe-CuNi (J) 1xNiCr-NiAl (K), 2xNiCr-NiAl (K) 1xNiCrSi-NiSiMg(N), 2xNiCrSi-NiSiMg (N)	ø 6	-40°C..+600°C -40°C..+800 (+1000*)°C 0°C..+1100°C (- 270°C..+1300°C**)		grounded

* upper temp. depends on measuring conditions and temp. changes;

**short term

Protect. tube diam. d	Material acc. DIN/AISI	Max operating temp.
ø4, ø5, ø6, ø8, ø9, ø10, ø11, ø12, ø15	1.4571 / 316Ti	+700°C
ø10	1.4841 / 314	+1100°C
ø10, ø11, ø15	1.7335 / A182 Grade F11	+550°C
ø12, ø13,7	2.4602 / Hastelloy C22	+600°C

Flange	
on request (e.g. DN25 PN40 B1 acc. EN 1092-1, 2"150 RF acc. ASME B16,5)	
Connection head	Transmitter
on request (e.g. NA, DANA, DANAW, MA)	on request

Non-standard models available.

Ordering Information

TER-PF-09	A	B	C	D	E	F	G	H	I	J	K
-----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------

A Execution	
U	with non-replaceable insert
PS	with replaceable insert
PS/ExiM1	Intrinsic safe for mining purposes with replaceable insert
PS/Exi	Intrinsic safe with replaceable insert
PS/Exe	Increased safety with replaceable insert

B Type of thermocouple	
1xJ	Single Fe-CuNi
2xJ	Double Fe-CuNi
1xK	Single NiCr-NiAl
2xK	Double NiCr-NiAl
1xN	Single NiCrSi-NiSiMg
2xN	Double NiCrSi-NiSiMg

C Protection tube diameter	
4	d= 4 mm
5	d= 5 mm
6	d= 6 mm
8	d= 8 mm
9	d= 9 mm
10	d= 10 mm
11	d= 11 mm
12	d= 12 mm
13,7	d= 13,7 mm
15	d= 15 mm

D Protection tube length L	
	specify in [mm]

E Protection tube material	
1.4571	1.4571 / 316Ti
1.4841	1.4841 / 314
1.7335	1.7335 / A182 Grade F11
2.4602	2.4602 / Hastelloy C22

F Flange	
	specify type of flange

G Neck tube length NL	
	specify in [mm]

H Connection head	
	specify head type

I Junction	
O	ungrounded
Z	grounded

J Operating temperature	
	specify in °C

K Transmitter	
	specify type and temp. range in °C

Ordering Example

TER-PF-09-PS-1xK-10-400-1.4571-2"150 RF-145-NA-O-400

stands for: Single thermocouple with replaceable insert, 1 x Fe-CuNi, d=10mm, length 400 mm made of 1.4571, flange 2" 150 RF, neck tube length NL=145 mm, connection head type NA, junction ungrounded, operating temp. up to 400°C.