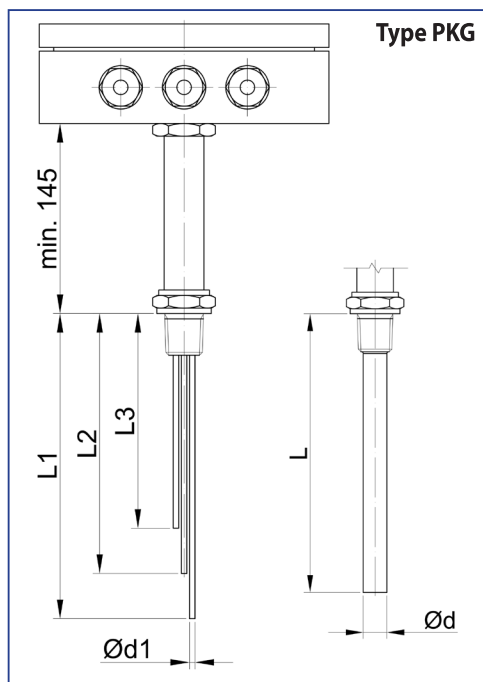


TER-PKG/PF/PD-189

Straight Thermocouple (Type J, K) Multipoint

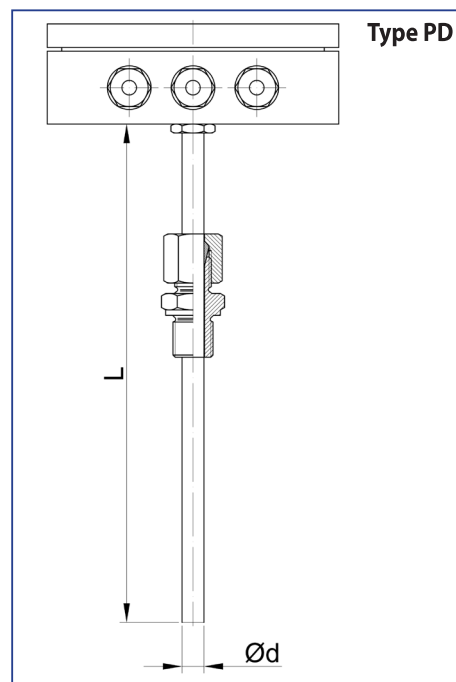
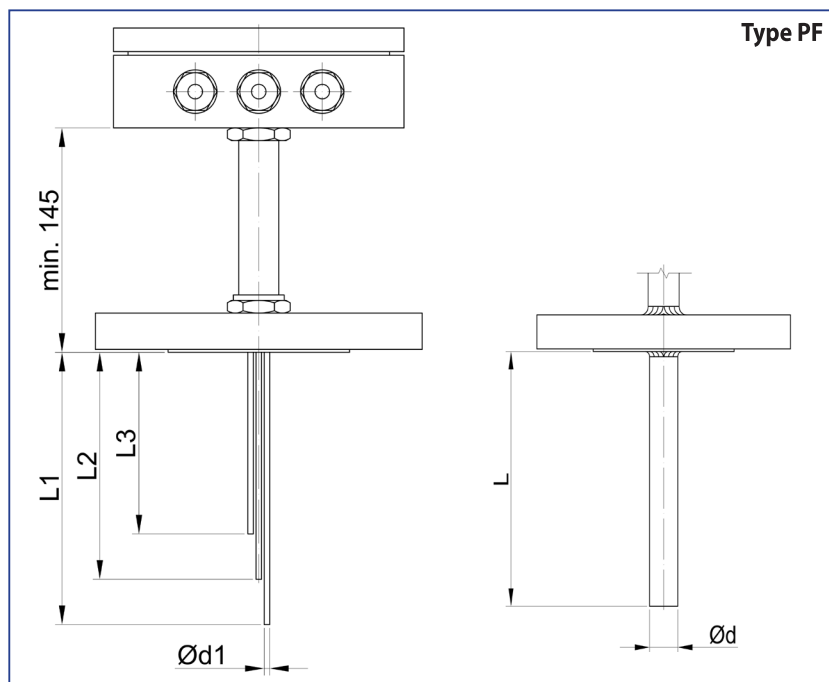


Multipoint thermocouple type TER-PKG/PF/PD-189 is designed for measurement of temperature distribution in containers, reactors and towers in the range of -40°C to +800 (+1100*)°C (depending on protection tube and thermocouple used) The measurement is done by several thermocouples with tips situated in different positions. Immersion lengths of thermocouples are made according to clients requirements.

Thermocouple can be equipped with process connection fitting or different flanged connections. Sheathed thermo-element below threaded connection can be without protection tube or with protection tube.

Thermocouple can be equipped with transmitter fixed into connection head.

Type	Execution
TER-PKG/PF/PD-189	Basic - acc to catalog card
TER-PKG/PF/PD-189/Exi	Intrinsic safe – acc to Atex





TER-PKG/PF/PD-189

Technical specification

Sheathed sensor insert	Temp. range - Class 1	Characteristic	Junction
1xFe-CuNi (J), 2xFe-CuNi (J)	-40°C...+600°C	acc. EN 60584-1	ungrounded
1xNiCr-NiAl (K), 2xNiCr-NiAl (K)	-40°C...+800 °C (+1100 °C)*		

* upper temperature is limited by work environment and protection tube material

Protect. tube diam. d	Material acc. DIN/AISI	Max operating temp.	Sensor length L_n [mm]
ø10, ø11, ø12, ø13.5, ø15	1.4571 / 316Ti	+700°C	on request
ø10, ø22	1.4841 / 314	+1100°C	
ø10, ø11, ø15	1.7335 / A182 Grade F11	+550°C	
ø13,7	2.4602 / Hastelloy C22	+600°C	

Process connection		
Type PKG	threaded	on request (e.g. M24x1,5, G1/2", G1", 1"NPT)
Type PF	flanged	on request (e.g. DN25 PN40 B1 acc. EN 1092-1, 2"150 RF acc. ASME B16,5)

Junction/Protection box	Max. ambient temp.	Cable gland thread	Transmitter
depends on number of measure points	+150°C	on request (e.g. M20x1,5, 1/2"NPT)	on request

Threaded compression fitting type UZG-47

on request, acc. to catalog card – UZG-47

To help ensure you are quoted the correct product, please complete:

"Multipoint Thermometer process data sheet"



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Ordering Information

TER	A	189	B	x	C	D	E	F	G	H	I	J	K	L	M
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A Type of process connection

PKG	threaded connection
PF	flanged connection
PD	threaded compression fitting type UZG-47

B Number of measure points n

	specify amount
--	----------------

C Type of thermocouple

J	Fe-CuNi
K	NiCr-NiAl

D Execution

U	with non-replaceable insert
U/Exi	Intrinsic safe with non-replaceable insert
PS	with replaceable insert
PS/Exi	Intrinsic safe with replaceable insert

E Sheathed insert diameter d_i

3	$d_i = 3$ mm
4,5	$d_i = 4,5$ mm
6	$d_i = 6$ mm

F Protection tube diameter d

10	d= 10 mm
12	d= 12 mm
13,7	d= 13,7 mm
15	d= 15 mm
22	d= 22 mm
	specify other diam. in mm

G Immersion lengths $L_1 / L_2 / \dots / L_n$

	specify in mm
--	---------------

H Protection tube material

1.4571	1.4571 / 316Ti
1.4404	1.4404 / 316L
1.7335	1.7335 / A182 Grade F11
2.4602	2.4602 / Hastelloy C22
1.4841	1.4841 / 314
	specify other material

I Process connection

	specify type of thread or flange or compression fitting
--	---

J Cable gland number and size

m x M20x1,5	number x M20x1,5
m x 1/2"NPT	number x 1/2"NPT
	specify amount and type of thread

K Junction / Protection Box

	specify head type
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L Operating temperature

	specify in °C
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M Transmitter

	specify type and temp. range in °C
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Ordering Example

TER-PF-189-3xK-PS/Exi-3-12-1500/1400/1300-1.4571-DN25PN40B1-400-3xM20x1,5

stands for: Flanged multipoint thermocouple, with three thermoelements NiCr-NiAl, intrinsic safe with replaceable insert, sheath diam. $\varnothing 3$ mm, protection tube diam. $\varnothing 12$ mm, immersion lengths $L_1=1500$ mm, $L_2=1400$ mm, $L_3=1300$ mm material 1.4571, flanged connection DN25 PN40 form B1, cable inlets 3 x M20x1,5, operating temperature 400°C, w/o transmitter.