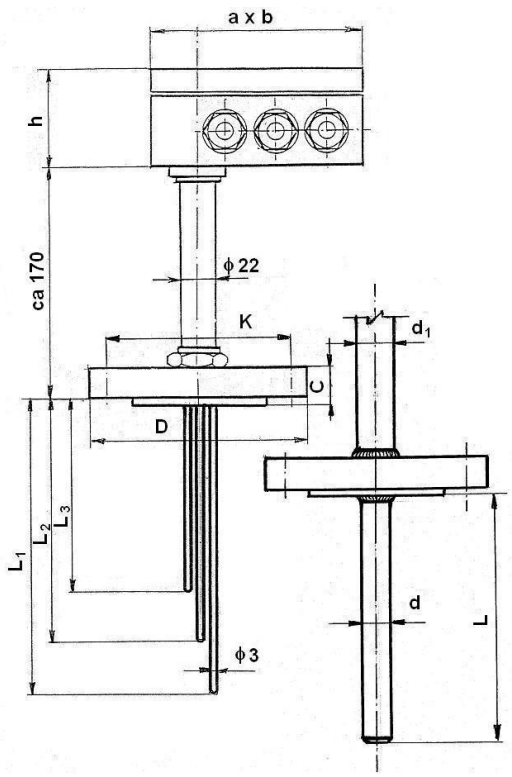

THERMOCOUPLE MULTIPOINT Type TER-PF/PKG-nxJ/K-189

Multipoint thermocouple type TER-PF/PKG-nxJ/K-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 of thermocouples with tips situated in different positions. Immersion length of thermocouple are made according to clients requirements.

Thermocouple can be equipped with process connection fitting or different flanged connections. Mantle thermoelement below threaded connection can be without protection tube or with protection tube.

Thermocouple can be equipped with transmitter fixed into connection head.

Model	Execution
PS	With replaceable insert
PS/Exi	Intrinsic safe with replaceable insert

THERMOCOUPLE SPECIFICATION

Sheated sensor insert	Temp. range – Class 1
1xFe-CuNi (J), 2xFe-CuNi (J)	-40°C..+600°C
1xNiCr-NiAl (K), 2xNiCr-NiAl (K)	-40°C..+800 (+1100*)°C

Characteristic
acc. PN-EN 60584-1

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

Protection tube

Diameter d	Temp. limits	Material acc. WNr / DIN	Material acc. ASTM / AISI	Length Ln [mm]
Ø10, Ø11, Ø12, Ø13,5, Ø15	+700°C	1.4571	316 Ti	As per client request
Ø10	+1100°C	1.4841	314	
Ø10, Ø11, Ø15	+550°C	1.7335	A182 Grade F11	
Ø13,7	+600°C	Hastelloy C22	A576 Grade 1020	

Threaded conn.
As per client request

Connection head

Type	Temp. limits	Cable inlet	
Depends on amount of measured points	40°C..+100°C	M20x1,5	NPT 1/2”
		As per client request	

Junction
insulated

Transmitter
As per client request with ATEX

NOTE: Non-standard models available.

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Ordering Information

TER - A - B x C - 189 - D - E - F - G - H - I - J - K - L

A. Type of Process connection		**A**
	Threaded connection	PKG
	Flanged connection	PF
B. Amount of measure points		**B**
	n	Specify amount
C. Type of thermocouple		**C**
	Fe-CuNi	J
	NiCr-NiAl	K
D. Execution		**D**
	With replaceable insert	PS
	Intrinsic safe with replaceable insert	PS / Exi
E. Diameter of mantle insert d_1		**E**
	Ø 2 mm	2
	Ø 3 mm	3
	Ø 6 mm	6
F. Protection tube diameter d		**F**
	Ø 10x1,5 mm	10
	Ø 11x2 mm	11
	Ø 12x1,5 mm	12
	Ø 13,5x2,3 mm	13,5
	Ø 13,7x2,3 mm	13,7
	Ø 15x3 mm	15
	Ø 22 mm	22
	Other	Specify in mm
G. Immersion lengths of multipoint thermocouples		**G**
	L_1 / L_2 / ... / Ln	Specify in mm
H. Protection tube material		**H**
	1.4571	1.4571
	1.4841	1.4841
	1.7335	1.7335
	Hastelloy C22	C22
	Other	Specify type
I. Threaded connection		**I**
	Type	Specify type and dimentions of the flange or process connection fitting
J. Cable inlet		**J**
	m x M20x1,5	amount x M20x1,5
	m x NPT 1/2”	amount x NPT 1/2
	Other	Specify type
K. Thermocouple operating temperature		**K**
	T	Specify in °C
L. Transmitter		**L**
		Specify type and temp. range in °C

Ordering Example

TER-PKG-3xK-189-PS/Exi-3-12-1500/1400/1300-1.4571-DN25 PN40-400-3xM20x1,5

Stands for : **Thermocouple type 189, with three thermoelements NiCr-NiAl, intrinsic safe with replaceable insert, mantle diameter ϕ3, protection tube diameter ϕ12, immersion lengths L_1=1500mm, L_2=1400mm, L_3=1300mm material 1.4571, flanged connection DN25 PN40, operating temperature 400°C, cable inlets 3 x M20x1,5, without transmitter.**